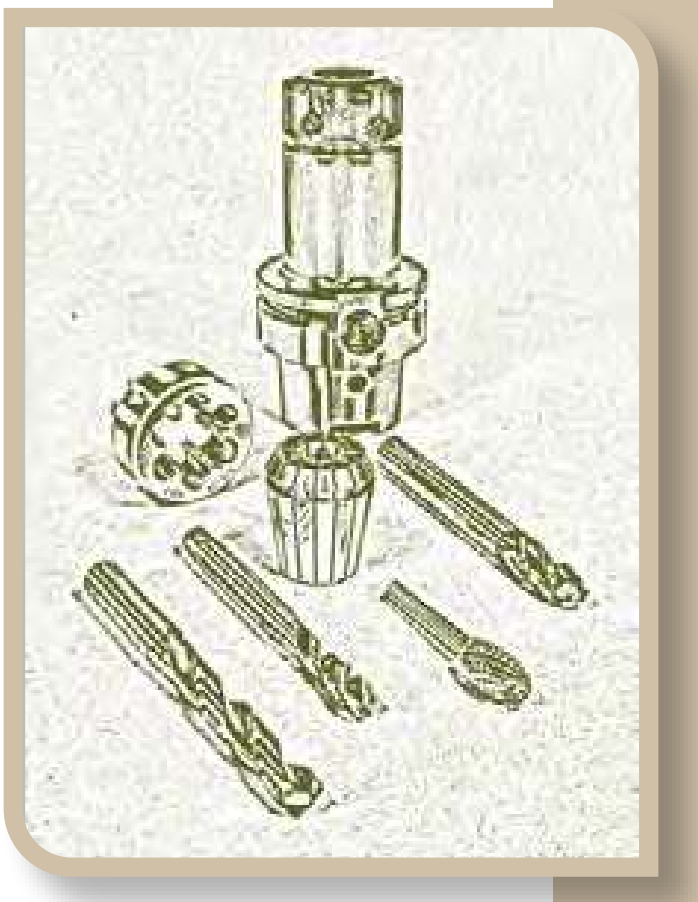


2023

GENERAL TOOLING CATALOGUE
GENEL TAKIM KATALOĞU

gürkan®

59 years of experience...
59 yıllık tecrübe…



GENERAL TOOLING CATALOGUE
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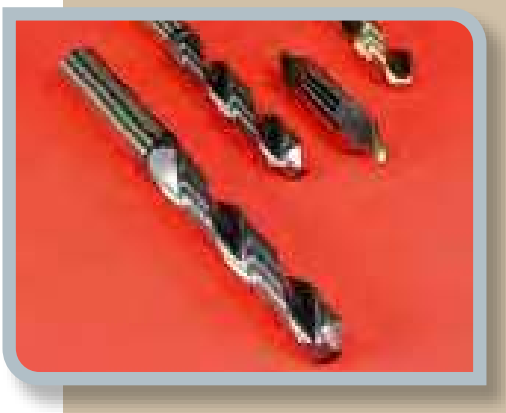
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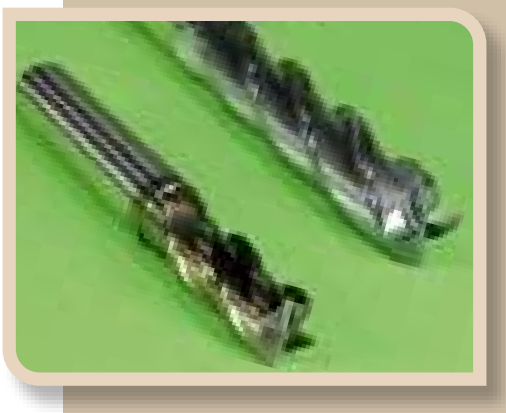
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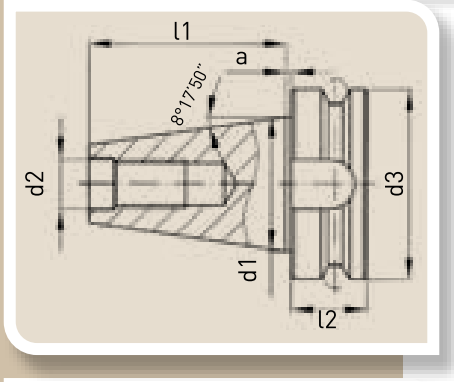
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TOOLHOLDERS & COLLETS

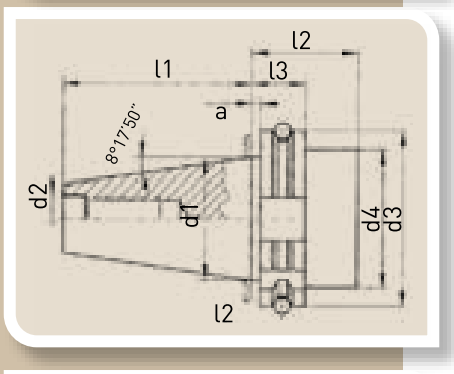
TAKIM TUTUCULAR & PENSLER

TOOLHOLDERS TAPER STANDARDS
TAKIM TUTUCU KONİK STANDARTLARI



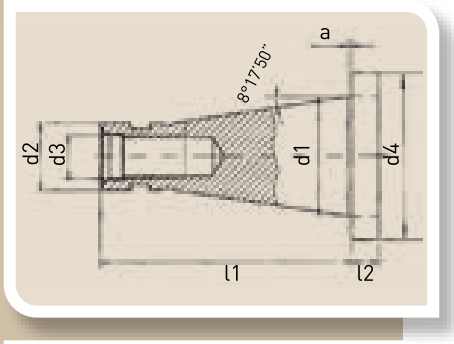
MAS 403 BT (JIS B 6339)

TAPER	a +/- 0.2	d1	d2	d3	l2	l1 +/- 0.2
BT30	2	31.75	M12	46	20	48.4
BT40	2	44.45	M16	63	25	65.4
BT50	3	69.85	M24	100	35	101.8



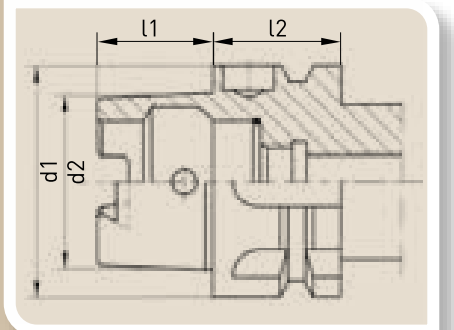
DIN 69871 A (ISO 7388-1)

TAPER	a +/- 0.1	d1	d2	d3 0/- 0.1	d4 max.	l2 min.	l3 0/- 0.1	l1 0/- 0.3
DIN 30	3.2	31.75	M12	50.0	44	35	19.1	47.8
DIN 40	3.2	44.45	M16	63.55	50	35	19.1	68.4
DIN 50	3.2	69.85	M24	97.5	80	35	19.1	101.75



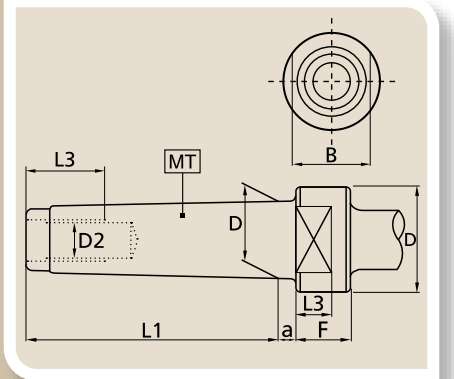
DIN 2080 (ISO)

TAPER	a +/- 0.2	d1	d2 a10	d3	d4 0/-0.4	l2 +/- 0.15	l1
ISO 30	1.6	31.75	17.4	M12	50	8	68.4
ISO 40	1.6	44.45	25.3	M16	63	10	93.4
ISO 50	3.2	69.85	39.6	M24	97.5	12	126.8



HSK DIN69893-1 A (ISO 12164-1)

TAPER	d1	d2	l1	l2
HSK 50	50	38	25	26
HSK 63	63	48	32	26
HSK 80	80	60	40	26



DIN228-A MORSE TAPER MT

MT	L1	L2	L3	D	D1	D2	F	B	a
1	53,5	16			12,065	M6			3,5
2	64,0	24			17,780	M10			5,0
3	81,0	24	12	36	23,825	M12	18	24	5,0
4	102,5	32	15	43	31,267	M16	23	32	6,5
5	129,5	40	18	60	44,399	M20	28	45	6,5
6	182,0	47	25	84	63,348	M24	39	65	8,0

BT&DIN Tapers are according to AT3 specifications
On the collet chucks the run out between outside taper to the taper of collet cavity is max. 5µ.
Tutuculardaki konik hassasiyeti AT3 standardındadır.
Pens tutucularındaki pens yuvası ile dış konik arası salgı max. 5µ.

gürkan

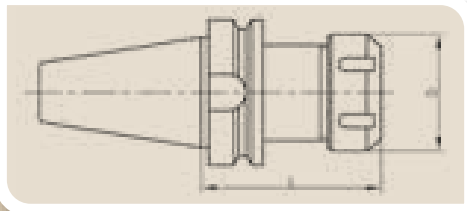


JIS B 6339 (MAS 403 BT)

TOOLHOLDERS
TAKIM TUTUCULARI

ER COLLET CHUCKS
ER PENS BAŞLIKLARI





JIS B 6339 (MAS403 BT) AD&B Balanced G6.3

CODE / *KOD* BT 30	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
BT30 ER11 100M	100	16	ER11 Ø1-8mm	38.00
BT30 ER16	60	28	ER16 Ø1-12mm	29.00
BT30 ER16 100	100	28	ER16 Ø1-12mm	38.00
BT30 ER25	60	42	ER25 Ø1-20mm	29.00
BT30 ER32	60	50	ER32 Ø1-25mm	29.00
BT30 ER32 100	100	50	ER32 Ø1-25mm	38.00
BT30 ER40	70	63	ER40 Ø1-32mm	40.00

CODE / *KOD* BT 40	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
BT40 ER11 100M	100	16	ER11 Ø1-8mm	38.00
BT40 ER16	60	28	ER16 Ø1-12mm	28.00
BT40 ER16 100	100	28	ER16 Ø1-12mm	37.00
BT40 ER16 130M	130	22	ER16 Ø1-12mm	45.00
BT40 ER16 160	160	28	ER16 Ø1-12mm	58.00
BT40 ER20	70	34	ER20 Ø2-16mm	28.00
BT40 ER20 100	100	34	ER20 Ø2-16mm	37.00
BT40 ER25	70	42	ER25 Ø1-20mm	28.00
BT40 ER25 100	100	42	ER25 Ø1-20mm	37.00
BT40 ER25 160	160	42	ER25 Ø1-20mm	59.00
BT40 ER32	70	50	ER32 Ø1-25mm	28.00
BT40 ER32 100	100	50	ER32 Ø1-25mm	37.00
BT40 ER32 160	160	50	ER32 Ø1-25mm	61.00
BT40 ER40	70	63	ER40 Ø1-32mm	30.00
BT40 ER40 100	100	63	ER40 Ø1-32mm	39.00
BT40 ER40 160	160	63	ER40 Ø1-32mm	63.00

CODE / *KOD* BT 50	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
BT50 ER16	100	28	ER16 Ø1-12mm	58.00
BT50 ER16 160	160	28	ER16 Ø1-12mm	77.00
BT50 ER25	100	42	ER25 Ø1-20mm	58.00
BT50 ER25 160	160	42	ER25 Ø1-20mm	77.00
BT50 ER32	100	50	ER32 Ø1-25mm	58.00
BT50 ER32 160	160	50	ER32 Ø1-25mm	77.00
BT50 ER40	100	63	ER40 Ø1-32mm	60.00
BT50 ER40 160	160	63	ER40 Ø1-32mm	79.00
BT50 ER50	100	78	ER50 Ø6-40mm	86.00



BT40 OZ25 DIN6388 Collet Chuck / *Pens Başlığı*

CODE / *KOD* BT 40	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
BT40 OZ25	70	60	OZ25 Ø2-32mm	42.00

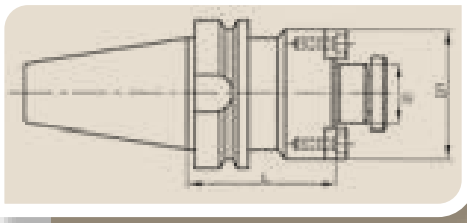
G2.5 Balanced : available on request / istek üzerine mevcuttur.

FACE MILL ADAPTORS
ALINDAN SIKMALI FREZE TUTUCULAR

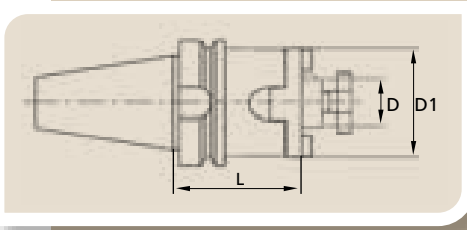
JIS B 6339 (MAS403 BT) AD&B Balanced G6.3



CODE / *KOD* BT 30	D	D1	L	EURO
BT30 FM16	16	38	40	31.00
BT30 FM22	22	48	40	31.00
BT30 FM27	27	58	40	31.00
BT30 FM32	27	78	50	33.00



CODE / *KOD* BT 40	D	D1	L	EURO
BT40 FM16	16	38	40	31.00
BT40 FM16 100	16	38	100	41.00
BT40 FM16 160	16	38	160	62.00
BT40 FM22	22	48	45	31.00
BT40 FM22 100	22	48	100	41.00
BT40 FM22 160	22	48	160	62.00
BT40 FM27	27	58	45	32.00
BT40 FM27 100	27	58	100	42.00
BT40 FM27 160	27	58	160	63.00
BT40 FM32	32	78	50	34.00
BT40 FM32 100	32	78	100	44.00
BT40 FM32 160	32	78	160	65.00
BT40 FM40	40	88	55	37.00
BT40 FM40 100	40	88	100	47.00



CODE / *KOD* BT 50	D	D1	L	EURO
BT50 FM16	16	38	55	55.00
BT50 FM16 100	16	38	100	65.00
BT50 FM22	22	48	55	55.00
BT50 FM22 100	22	48	100	65.00
BT50 FM27	27	58	55	56.00
BT50 FM27 100	27	58	100	66.00
BT50 FM32	32	78	55	58.00
BT50 FM32 100	32	78	100	68.00
BT50 FM40	40	88	55	60.00
BT50 FM40 100	40	88	100	70.00

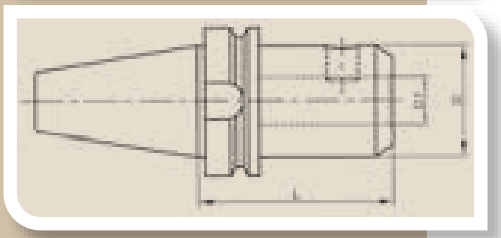
COMBI SHELL MILL ADAPTORS (with drive ring and key)
KOMBİNE FREZE TUTUCULAR (İstavroz pul ve kamalı)



CODE / *KOD* BT 40	D	D1	L	EURO
BT40 CM16	16	32	55	35.00
BT40 CM22	22	40	55	35.00
BT40 CM27	27	48	55	36.00
BT40 CM32	32	58	60	38.00
BT40 CM40	40	70	60	41.00

WELDON ADAPTORS
WELDON TUTUCULAR





JIS B 6339 (MAS403 BT) AD&B Balanced G6.3

CODE / *KOD* BT 30	D1	D	L	EURO
BT30 W06	6	25	50	27.00
BT30 W08	8	28	50	27.00
BT30 W10	10	35	50	27.00
BT30 W12	12	42	50	27.00
BT30 W16	16	48	63	27.00
BT30 W20	20	52	63	28.00

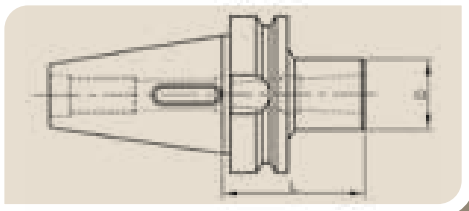
CODE / *KOD* BT 40	D1	D	L	EURO
BT40 W06	6	25	50	27.00
BT40 W06 100	6	25	100	34.00
BT40 W08	8	28	50	27.00
BT40 W08 100	8	28	100	34.00
BT40 W10	10	35	63	27.00
BT40 W10 100	10	35	100	34.00
BT40 W12	12	42	63	27.00
BT40 W12 100	12	42	100	34.00
BT40 W14	14	44	63	27.00
BT40 W16	16	48	63	27.00
BT40 W16 100	16	48	100	34.00
BT40 W18	18	50	63	27.00
BT40 W20	20	52	63	27.00
BT40 W20 100	20	52	100	34.00
BT40 W25	25	65	90	32.00
BT40 W32	32	72	100	36.00
BT40 W40	40	80	120	41.00

CODE / *KOD* BT 50	D1	D	L	EURO
BT50 W06	6	25	63	49.00
BT50 W08	8	28	63	49.00
BT50 W10	10	35	63	49.00
BT50 W12	12	42	80	50.00
BT50 W14	14	44	80	50.00
BT50 W16	16	48	80	50.00
BT50 W18	18	50	80	50.00
BT50 W20	20	52	80	50.00
BT50 W25	25	65	100	54.00
BT50 W32	32	72	105	56.00
BT50 W40	40	80	120	60.00

MORSE TAPER ADAPTORS
MORS KONİK TUTUCUSU

JIS B 6339 (MAS403 BT) Balanced G6.3





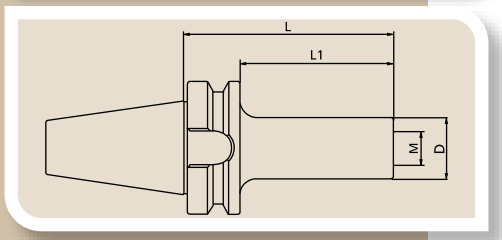
CODE / *KOD* BT 40	MT	D	L	EURO
BT40 MT1	1	25	50	27.00
BT40 MT2	2	32	50	27.00
BT40 MT2 DB *	2	32	50	29.00
BT40 MT3	3	40	70	29.00
BT40 MT3 DB *	3	40	70	31.00
BT40 MT4	4	48	95	31.00
BT40 MT4 DB *	4	48	95	33.00

* DB types are drawbar type for holding morse taper shank with screwed end, all others are for tang type morse tapers.
* *DB tipi çektirme vidalı* mors k*onik* saplar *içindir, tüm diğerleri çakmalı tip mors konik saplar içindir.*

CODE / *KOD* BT 50	MT	D	L	EURO
BT50 MT1	1	25	45	49.00
BT50 MT2	2	32	60	49.00
BT50 MT3	3	40	65	50.00
BT50 MT4	4	48	95	51.00
BT50 MT5	5	63	105	55.00

TOOLHODER FOR SCREW IN TYPE CUTTERS
VİDALI TİP TAKIM TUTUCUSU



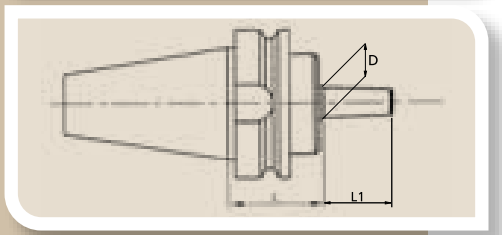


JIS B 6339 (MAS403 BT) AD&B Balanced G6.3

CODE / *KOD* BT 40	M	D	L	L1	EURO
BT40 M12 75	M12	21	75	48	**45.00**
BT40 M12 100	M12	21	100	73	**50.00**
BT40 M12 130	M12	21	130	103	**56.00**
BT40 M16 75	M16	29	75	48	**45.00**
BT40 M16 100	M16	29	100	73	**50.00**
BT40 M16 130	M16	29	130	103	**56.00**

DRILL CHUCK ADAPTORS
MANDREN TUTUCUSU





JIS B 6339 (MAS403 BT)

CODE / *KOD* BT 40	D	L	L1	EURO
BT40 B12	B12	25	18.5	**27.00**
BT40 B16	B16	25	24	**27.00**
BT40 B18	B18	32	32	**27.00**

CODE / *KOD* BT 50	D	L	L1	EURO
BT50 B16	B16	32	24	**48.00**
BT50 B18	B18	32	32	**48.00**

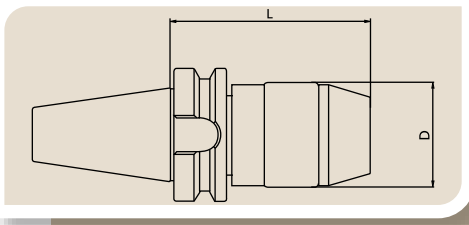
PRECISION DRILL CHUCK HOLDER
HASSAS MATKAP MANDRENLİ TUTUCU

JIS B 6339 (MAS403 BT) AD Balanced G6.3

CODE / *KOD* **BT40**	Clamping Range *Sıkma Aralığı*	D	L	**EURO**
BT40 PD13	1-13mm	50	90	**160.00**
BT40 PD16	1-16mm	50	90	**175.00**

CODE / *KOD* **BT 50**	Clamping Range *Sıkma Aralığı*	D	L	**EURO**
BT50 PD16	1-16mm	50	100	**210.00**





DRILL CHUCK HOLDER (Eco Type)*
*MATKAP MANDRENLİ TUTUCU (Eko Tip)**

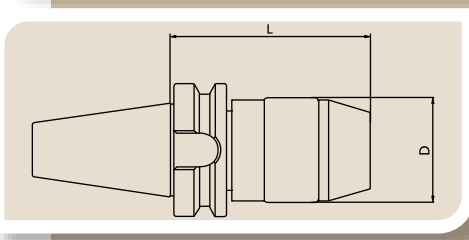
JIS B 6339 (MAS403 BT)

CODE / *KOD* **BT40**	Clamping Range *Sıkma Aralığı*	D	L	**EURO**
BT40 DC13	1-13mm	48	100	**80.00**
BT40 DC16	3-16mm	53	110	**84.00**

CODE / *KOD* **BT50**	Clamping Range *Sıkma Aralığı*	D	L	**EURO**
BT50 DC16	3-16mm	53	115	**120.00**

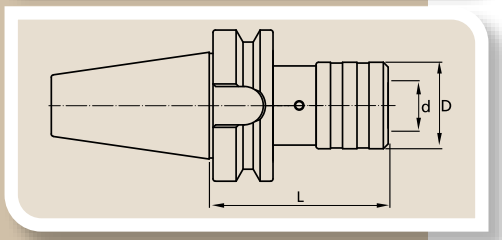
* Suitable when high prcision is not required. */ Yüksek hassasiyet gerektirmeyen durumlarada uygundur.*





QUICK CHANGE TAPPING CHUCKS
KOLAY DEĞİŞEBİLİR KILAVUZ ÇEKME BAŞLIKLARI





JIS B 6339 (MAS403 BT)

CODE / *KOD* BT 40	M	d	D	L	EURO
BT40 TC1	M3 - M14	19	36	76	**95.00**
BT40 TC2	M5 - M24	31	53	96	**105.00**
BT40 TC3	M14 - M36	48	78	138	**170.00**

CODE / *KOD* BT 50	M	d	D	L	EURO
BT50 TC1	M3 - M14	19	36	86	**125.00**
BT50 TC2	M5 - M24	31	53	106	**145.00**
BT50 TC3	M14 - M36	48	78	148	**215.00**

TAP HOLDERS Quick Change
KILAVUZ TUTUCULARI Kolay değişebilir



WITHOUT CLUTCH (FIXED) / *SABİT TİP*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.



WITH SAFETY CLUTCH / *EMNİYETLİ TİP*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.



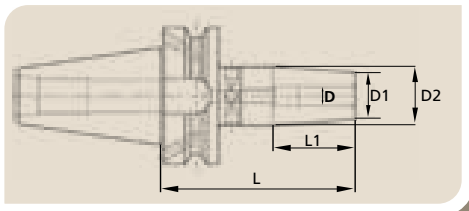
TAP HOLDER REDUCTION / *KILAVUZ TUTUCU REDÜKSİYONU*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.

SHRINK FIT TOOLHOLDERS
ISITMALI TUTUCULAR

JIS B 6339 (MAS403 BT) AD&B G2.5 Balanced





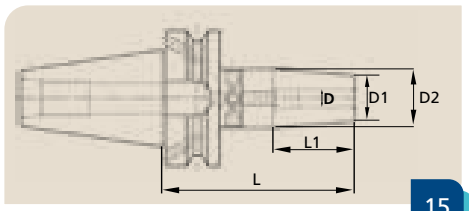
CODE / KOD BT40	D	D1	D2	L	L1	EURO
BT40 SF04 80	4	15	20	80	-	90.00
BT40 SF06 90	6	21	27	90	36	80.00
BT40 SF08 90	8	21	27	90	36	80.00
BT40 SF10 90	10	24	32	90	42	80.00
BT40 SF12 90	12	24	32	90	47	80.00
BT40 SF16 90	16	27	34	90	50	80.00
BT40 SF20 90	20	33	42	90	52	80.00
BT40 SF25 100	25	44	53	100	58	84.00
BT40 SF32 100	32	44	53	100	62	88.00

CODE / KOD BT50	D	D1	D2	L	L1	EURO
BT50 SF06 100	6	21	27	100	36	155.00
BT50 SF08 100	8	21	27	100	36	155.00
BT50 SF10 100	10	24	32	100	42	155.00
BT50 SF12 100	12	24	32	100	47	155.00
BT50 SF16 100	16	27	34	100	50	155.00
BT50 SF20 100	20	33	42	100	52	155.00
BT50 SF25 110	25	44	53	110	58	165.00
BT50 SF32 110	32	44	53	110	72	165.00

SHRINK FIT TOOLHOLDERS LONG TYPE
ISITMALI TUTUCULAR UZUN TİP

JIS B 6339 (MAS403 BT) AD&B G2.5 Balanced

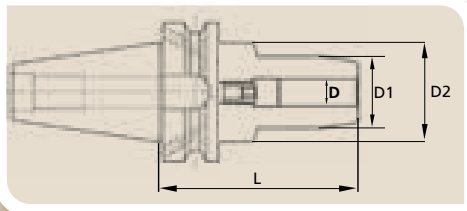




CODE / KOD BT40	D	D1	D2	L	L1	EURO
BT40 SF04 160	4	15	20	160	20	139.00
BT40 SF06 160	6	21	32	160	36	129.00
BT40 SF08 160	8	21	32	160	36	129.00
BT40 SF10 160	10	24	34	160	42	129.00
BT40 SF12 160	12	24	34	160	47	129.00

HYDRAULIC CHUCKS
HİDROLİK TUTUCULAR





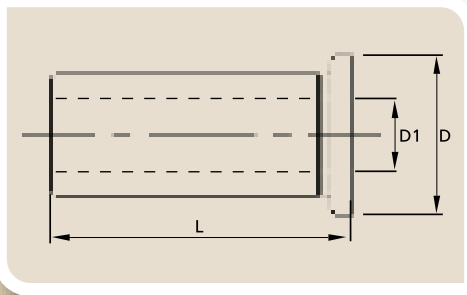
JIS B 6339 (MAS403 BT) AD&B G2.5 Balanced

CODE / *KOD* BT 40	D	D1	D2	L1	EURO
BT40 HY06 80	6	26	50	80	130.00
BT40 HY08 80	8	28	50	80	130.00
BT40 HY10 80	10	30	50	80	130.00
BT40 HY12 90	12	32	50	90	120.00
BT40 HY16 90	16	38	50	90	130.00
BT40 HY20 95	20	42	50	95	120.00
BT40 HY25 105	25	50	50	105	130.00
BT40 HY32 110	32	60	60	110	150.00

CODE / *KOD* BT 50	D	D1	D2	L1	EURO
BT50 HY12 110	12	32	50	110	200.00
BT50 HY20 110	20	42	50	110	200.00

REDUCTION COLLETS FOR HYDRAULIC CHUCKS (High Precision) Runout: Max. 5 Micron
HİDROLİK TUTUCU İÇİN REDÜKSİYON PENSLER (Yüksek Hassasiyet) Salgı: Max. 5 Micron





RH12 Ø12

D	D1 Clamping Range / Sıkma Aralığı	L
12	2 - 10	40

RH20 Ø20

D	D1 Clamping Range / Sıkma Aralığı	L
20	2 - 18	50

RH25 Ø25

D	D1 Clamping Range / Sıkma Aralığı	L
25	3 - 20	54

RH32 Ø32

D	D1 Clamping Range / Sıkma Aralığı	L
32	3 - 28	58

Suitable for internal and external cooling / *İçten ve dıştan soğutmaya uygundur.*
Please see details at pages nr. 126-129 / *Detaylar için 126-129 sayfalara bakınız.*

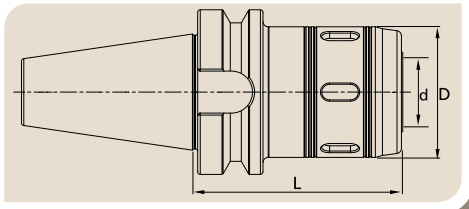
HIGH POWER HP MILLING CHUCK
YÜKSEK SIKMA GÜÇLÜ HP FREZE TUTUCUSU

JIS B 6339 (MAS403 BT) AD G6.3 Balanced

CODE / *KOD* BT 40	TAPER / *KONİK*	d	D	L	EURO
BT40HP20	BT40	20	50	90	132.00
BT40HP25	BT40	25	59	105	138.00
BT40HP32	BT40	32	70	105	145.00

CODE / *KOD* BT 50	TAPER / *KONİK*	d	D	L	EURO
BT50HP25	BT50	25	59	105	180.00
BT50HP32	BT50	32	70	110	190.00

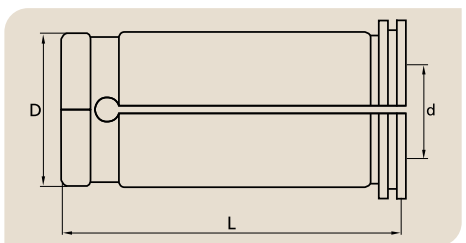




STRAIGHT (CYLINDRICAL) REDUCTION COLLETS FOR HP MILLING CHUCKS
DÜZ (SİLİNDİRİK) REDÜKSİYON PENSLER, HP FREZE TUTUCULARI İÇİN

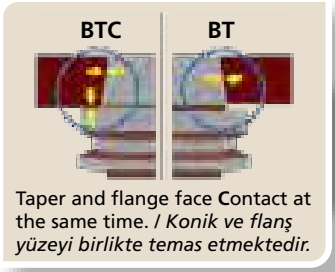
CODE / *KOD*	D outside dia dış çap	d inside dia iç çap	L	EURO
SC2003	20	3	50	11.00
SC2004	20	4	50	11.00
SC2005	20	5	50	11.00
SC2006	20	6	50	11.00
SC2008	20	8	50	11.00
SC2010	20	10	50	11.00
SC2012	20	12	50	11.00
SC2014	20	14	50	11.00
SC2016	20	16	50	11.00
SC2503	25	3	60	11.00
SC2504	25	4	60	11.00
SC2505	25	5	60	11.00
SC2506	25	6	60	11.00
SC2508	25	8	60	11.00
SC2510	25	10	60	11.00
SC2512	25	12	60	11.00
SC2514	25	14	60	11.00
SC2516	25	16	60	11.00
SC2518	25	18	60	11.00
SC2520	25	20	60	11.00
SC3204	32	4	65	12.00
SC3205	32	5	65	12.00
SC3206	32	6	65	12.00
SC3208	32	8	65	12.00
SC3210	32	10	65	12.00
SC3212	32	12	65	12.00
SC3214	32	14	65	12.00
SC3216	32	16	65	12.00
SC3218	32	18	65	12.00
SC3220	32	20	65	12.00
SC3225	32	25	65	12.00





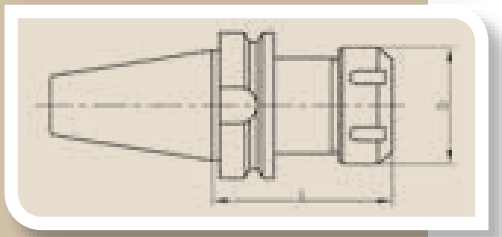
Not suitable for Hydraulic chucks
Hidrolik tutucu için uygun değildir

BTC40 (BT40) FACE & TAPER CONTACT TOOLHOLDERS
BTC40 (BT40) ALIN & KONİK TEMAS YÜZEYLİ TUTUCULAR
JIS B 6339 (MAS403) BTC40 AD&B Balanced G2.5



Taper and flange face Contact at the same time. / *Konik ve flanş yüzeyi birlikte temas etmektedir.*

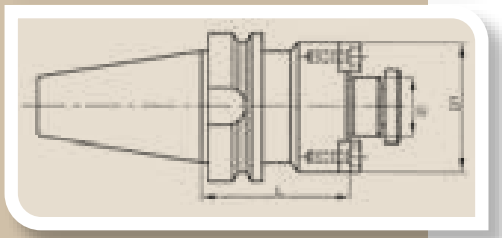




BTC40 ER COLLET CHUCKS / *ER PENS BAŞLIKLARI*

CODE / KOD BTC 40	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
BTC40 ER16	60	28	ER16 Ø1-12mm	49.00
BTC40 ER16 100	100	28	ER16 Ø1-12mm	59.00
BTC40 ER25	70	42	ER25 Ø1-20mm	49.00
BTC40 ER25 100	100	42	ER25 Ø1-20mm	59.00
BTC40 ER32	70	50	ER32 Ø1-25mm	49.00
BTC40 ER32 100	100	50	ER32 Ø1-25mm	59.00
BTC40 ER40	70	63	ER40 Ø1-32mm	51.00
BTC40 ER40 100	100	63	ER40 Ø1-32mm	61.00

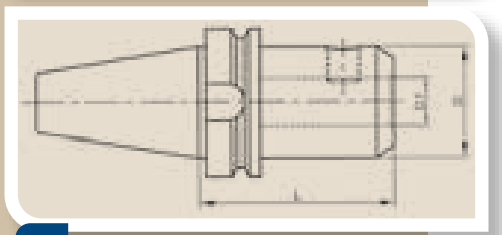




BTC40 FACE MILL ADAPTORS / *ALINDAN SIKMALI FREZE TUTUCULAR*

CODE / KOD BTC 40	D1	D	L	EURO
BTC40 FM16	16	38	40	46.00
BTC40 FM16 100	16	38	100	57.00
BTC40 FM22	22	48	45	46.00
BTC40 FM22 100	22	48	100	57.00
BTC40 FM27	27	58	45	46.00
BTC40 FM27 100	27	58	100	57.00
BTC40 FM32	32	78	50	48.00
BTC40 FM40	40	88	55	50.00





BTC40 WELDON ADAPTORS / *WELDON TUTUCULAR*

CODE / KOD BTC 40	D1	D	L	EURO
BTC40 W06	6	25	50	44.00
BTC40 W08	8	28	50	44.00
BTC40 W10	10	35	63	44.00
BTC40 W12	12	42	63	44.00
BTC40 W16	16	48	63	44.00
BTC40 W20	20	52	63	44.00
BTC40 W25	25	65	90	47.00
BTC40 W32	32	72	100	57.00

gürkan

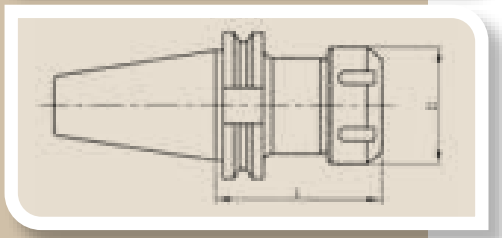


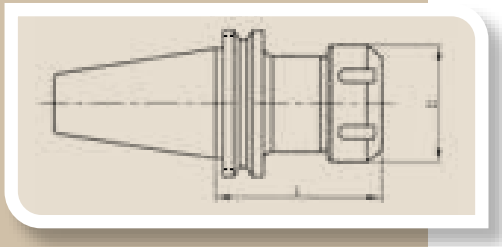
DIN 69871 (ISO 7388-1)

TOOLHOLDERS
TAKIM TUTUCULARI

COLLET CHUCKS
PENS BAŞLIKLARI









DIN 69871 (ISO7388-1) AD&B Balanced G6.3

CODE / *KOD* DIN 30	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
DIN30 ER11 100M	100	16	ER11 Ø1-8mm	38.00
DIN30 ER16	60	28	ER16 Ø1-12mm	29.00
DIN30 ER16 100	100	28	ER16 Ø1-12mm	38.00
DIN30 ER25	60	42	ER25 Ø1-20mm	29.00
DIN30 ER32	60	50	ER32 Ø1-25mm	29.00
DIN30 ER32 100	100	50	ER32 Ø1-25mm	38.00
DIN30 ER40	70	63	ER40 Ø1-32mm	40.00

CODE / *KOD* DIN 40	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
DIN40 ER11 100M	100	16	ER11 Ø1-8mm	38.00
DIN40 ER16	60	28	ER16 Ø1-12mm	28.00
DIN40 ER16 100	100	28	ER16 Ø1-12mm	37.00
DIN40 ER16 130M	130	22	ER16 Ø1-12mm	45.00
DIN40 ER16 160	160	28	ER16 Ø1-12mm	58.00
DIN40 ER20	70	34	ER20 Ø2-16mm	28.00
DIN40 ER20 100	100	34	ER20 Ø2-16mm	37.00
DIN40 ER25	70	42	ER25 Ø1-20mm	28.00
DIN40 ER25 100	100	42	ER25 Ø1-20mm	37.00
DIN40 ER25 160	160	42	ER25 Ø1-20mm	59.00
DIN40 ER32	70	50	ER32 Ø1-25mm	28.00
DIN40 ER32 100	100	50	ER32 Ø1-25mm	37.00
DIN40 ER32 160	160	50	ER32 Ø1-25mm	61.00
DIN40 ER40	70	63	ER40 Ø1-32mm	30.00
DIN40 ER40 100	100	63	ER40 Ø1-32mm	39.00
DIN40 ER40 160	160	63	ER40 Ø1-32mm	63.00

CODE / *KOD* DIN 50	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
DIN50 ER16	100	28	ER16 Ø1-12mm	58.00
DIN50 ER16 160	160	28	ER16 Ø1-12mm	77.00
DIN50 ER25	100	42	ER25 Ø1-20mm	58.00
DIN50 ER25 160	160	42	ER25 Ø1-20mm	77.00
DIN50 ER32	100	50	ER32 Ø1-25mm	58.00
DIN50 ER32 160	160	50	ER32 Ø1-25mm	77.00
DIN50 ER40	100	63	ER40 Ø1-32mm	60.00
DIN50 ER40 160	160	63	ER40 Ø1-32mm	79.00
DIN50 ER50	100	78	ER50 Ø6-40mm	86.00

G2.5 Balanced : available on request / istek üzerine mevcuttur.

TOOLHOLDER FOR CNC ROUTER MACHINE SK30 G2.5 Balanced
CNC ROUTER TEZGAH TUTUCUSU SK30 G2.5 Balanced

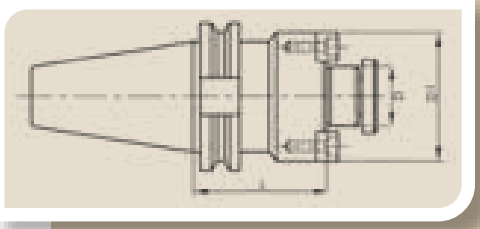
CODE / *KOD* SK 30	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
SK30 ER32	60	50	ER32 Ø1-25mm	30.00

FACE MILL ADAPTORS
ALINDAN SIKMALI FREZE TUTUCULAR

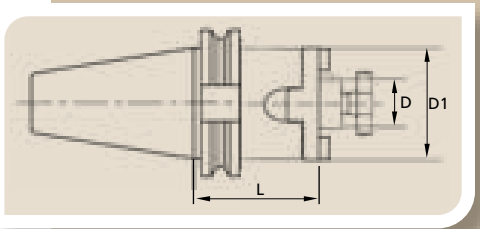
DIN 69871 (ISO7388-1) AD&B Balanced G6.3



CODE / *KOD* DIN 30	D	D1	L	EURO
DIN30 FM16	16	38	40	31.00
DIN30 FM22	22	48	40	31.00
DIN30 FM27	27	58	40	31.00
DIN30 FM32	32	78	50	33.00



CODE / *KOD* DIN 40	D	D1	L	EURO
DIN40 FM16	16	38	35	31.00
DIN40 FM16 100	16	38	100	41.00
DIN40 FM16 160	16	38	160	62.00
DIN40 FM22	22	48	35	31.00
DIN40 FM22 100	22	48	100	41.00
DIN40 FM22 160	22	48	160	62.00
DIN40 FM27	27	58	40	32.00
DIN40 FM27 100	27	58	100	42.00
DIN40 FM27 160	27	58	160	63.00
DIN40 FM32	32	78	50	34.00
DIN40 FM32 100	32	78	100	44.00
DIN40 FM32 160	32	78	160	65.00
DIN40 FM40	40	88	50	37.00
DIN40 FM40 100	40	88	100	47.00



CODE / *KOD* DIN 50	D	D1	L	EURO
DIN50 FM16	16	38	45	55.00
DIN50 FM16 100	16	38	100	65.00
DIN50 FM22	22	48	45	55.00
DIN50 FM22 100	22	48	100	65.00
DIN50 FM27	27	58	45	56.00
DIN50 FM27 100	27	58	100	66.00
DIN50 FM32	32	78	55	58.00
DIN50 FM32 100	32	78	100	68.00
DIN50 FM40	40	88	55	60.00
DIN50 FM40 100	40	88	100	70.00

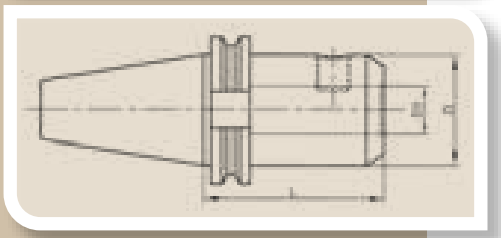
COMBI SHELL MILL ADAPTORS (with drive ring and key)
KOMBİNE FREZE TUTUCULAR (İstavroz pul ve kamalı)



CODE / *KOD* DIN 40	D	D1	L	EURO
DIN40 CM16	16	32	55	35.00
DIN40 CM22	22	40	55	35.00
DIN40 CM27	27	48	55	36.00
DIN40 CM32	32	58	60	38.00
DIN40 CM40	40	70	60	41.00

WELDON ADAPTORS
WELDON TUTUCULAR





DIN 69871 (ISO7388-1) AD&B Balanced G6.3

CODE / *KOD* DIN 30	D	D1	L	EURO
DIN30 W06	6	25	50	27.00
DIN30 W08	8	28	50	27.00
DIN30 W10	10	35	50	27.00
DIN30 W12	12	42	50	27.00
DIN30 W16	16	48	63	27.00
DIN30 W20	20	52	63	28.00

CODE / *KOD* DIN 40	D	D1	L	EURO
DIN40 W06	6	25	50	27.00
DIN40 W06 100	6	25	100	34.00
DIN40 W08	8	28	50	27.00
DIN40 W08 100	8	28	100	34.00
DIN40 W10	10	35	50	27.00
DIN40 W10 100	10	35	100	34.00
DIN40 W12	12	42	50	27.00
DIN40 W12 100	12	42	100	34.00
DIN40 W14	14	44	50	27.00
DIN40 W16	16	48	63	27.00
DIN40 W16 100	16	48	100	34.00
DIN40 W18	18	50	63	27.00
DIN40 W20	20	52	63	27.00
DIN40 W20 100	20	52	100	34.00
DIN40 W25	25	65	100	32.00
DIN40 W32	32	72	100	36.00
DIN40 W40	40	80	120	41.00

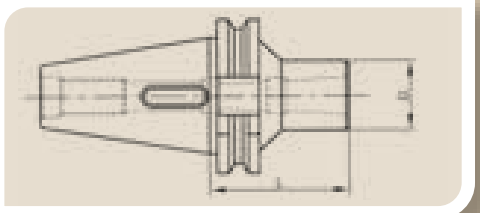
CODE / *KOD* DIN 50	D	D1	L	EURO
DIN50 W06	6	25	63	49.00
DIN50 W08	8	28	63	49.00
DIN50 W10	10	35	63	49.00
DIN50 W12	12	42	63	50.00
DIN50 W14	14	44	63	50.00
DIN50 W16	16	48	63	50.00
DIN50 W18	18	50	63	50.00
DIN50 W20	20	52	63	50.00
DIN50 W25	25	65	80	54.00
DIN50 W32	32	72	100	56.00
DIN50 W40	40	80	120	60.00

MORSE TAPER ADAPTORS
MORS KONİK TUTUCUSU

DIN 69871 (ISO7388-1) AD&B Balanced G6.3

CODE / *KOD* DIN 40	MT	D	L	EURO
DIN40 MT1	1	25	50	27.00
DIN40 MT2	2	32	50	27.00
DIN40 MT2 DB *	2	32	50	29.00
DIN40 MT3	3	40	70	29.00
DIN40 MT3 DB *	3	40	70	31.00
DIN40 MT4	4	48	95	31.00
DIN40 MT4 DB *	4	48	95	33.00





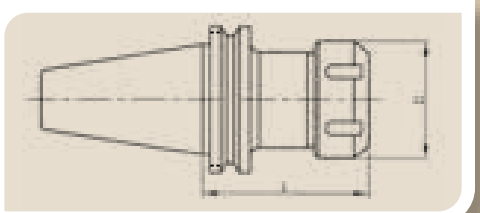
* DB types are drawbar type for holding morse taper shank with screwed end, all others are for tang type morse tapers.
* *DB tipi çektirme vidalı* mors konik saplar *içindir, tüm diğerleri çakmalı tip mors konik saplar içindir.*

CODE / *KOD* DIN 50	MT	D	L	EURO
DIN50 MT1	1	25	45	49.00
DIN50 MT2	2	32	60	49.00
DIN50 MT3	3	40	65	50.00
DIN50 MT4	4	48	95	51.00
DIN50 MT5	5	63	105	55.00

DIN 69871 (ISO7388-1) OZ DIN6388 COLLET CHUCK
PENS BAŞLIĞI OZ DIN6388

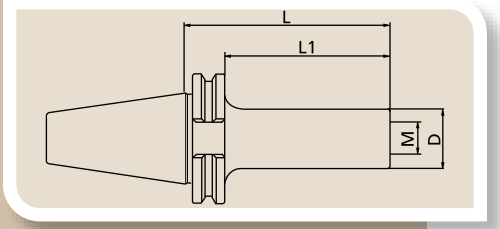
CODE / *KOD* DIN 40	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
DIN40 OZ25	70	60	OZ25 Ø2-32mm	42.00
DIN40 OZ32	80	72	OZ32 Ø4-32mm	54.00





TOOLHODER FOR SCREW IN TYPE CUTTERS
VİDALI TİP TAKIM TUTUCUSU



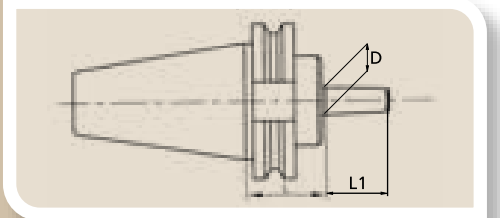


DIN 69871 (ISO7388-1) AD&B Balanced G6.3

CODE / *KOD* DIN 40	M	D	L	L1	EURO
DIN40 M12 75	M12	21	75	56	45.00
DIN40 M12 100	M12	21	100	81	50.00
DIN40 M12 130	M12	21	130	111	56.00
DIN40 M16 75	M16	29	75	56	45.00
DIN40 M16 100	M16	29	100	81	50.00
DIN40 M16 130	M16	29	130	111	56.00

DRILL CHUCK ADAPTORS
MANDREN TUTUCUSU





DIN 69871 (ISO7388-1)

CODE / *KOD* DIN 40	D	L	L1	EURO
DIN40 B12	B12	25	18.5	27.00
DIN40 B16	B16	25	24	27.00
DIN40 B18	B18	35	32	27.00

CODE / *KOD* DIN 50	D	L	L1	EURO
DIN50 B16	B16	25	24	48.00
DIN50 B18	B18	35	32	48.00

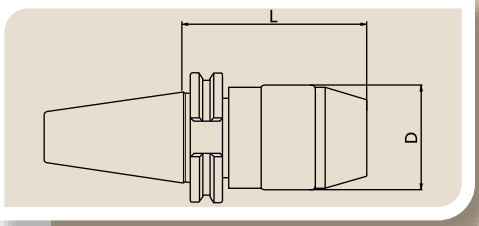
PRECISION DRILL CHUCK HOLDER
HASSAS MATKAP MANDRENLİ TUTUCU

DIN 69871 (ISO7388-1) AD Balanced G6.3

CODE / *KOD* DIN 40	Clamping Range *Sıkma Aralığı*	D	L	EURO
DIN40 PD13	1-13mm	50	90	160.00
DIN40 PD16	1-16mm	50	90	175.00

CODE / *KOD* DIN 50	Clamping Range *Sıkma Aralığı*	D	L	EURO
DIN50 PD16	1-16mm	50	100	210.00





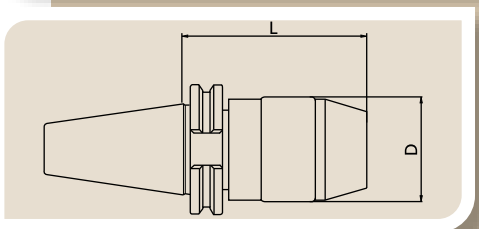
DRILL CHUCK HOLDER (Eco Type)*
*MATKAP MANDRENLİ TUTUCU (Eko Tip)**

DIN 69871 (ISO7388-1)

CODE / *KOD* DIN 40	Clamping Range *Sıkma Aralığı*	D	L	EURO
DIN40 DC13	1-13mm	48	100	80.00
DIN40 DC16	3-16mm	53	110	84.00

CODE / *KOD* DIN 50	Clamping Range *Sıkma Aralığı*	D	L	EURO
DIN50 DC16	3-16mm	53	115	120.00

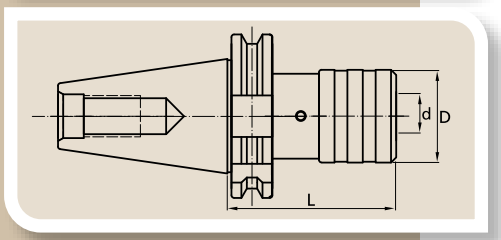




* Suitable when high prcision is not required. / *Yüksek hassasiyet gerektirmeyen durumlarada uygundur.*

TAPPING CHUCKS
KILAVUZ ÇEKME BAŞLIKLARI





DIN 69871 (ISO7388-1)

CODE / *KOD* DIN 40	M	d	D	L	EURO
DIN40 TC1	M3 - M14	19	36	67	95.00
DIN40 TC2	M5 - M24	31	53	87	105.00
DIN40 TC3	M14 - M36	48	78	130	170.00

CODE / *KOD* DIN 50	M	d	D	L	EURO
DIN50 TC1	M3 - M14	19	36	67	125.00
DIN50 TC2	M5 - M24	31	53	87	145.00
DIN50 TC3	M14 - M36	48	78	130	215.00

TAP HOLDERS Quick Change
KILAVUZ TUTUCULARI Kolay değişebilir



WITHOUT CLUTCH (FIXED) / *SABİT TİP*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.



WITH SAFETY CLUTCH / *EMNİYETLİ TİP*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.



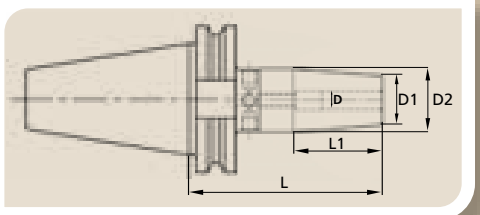
TAP HOLDER REDUCTION / *KILAVUZ TUTUCU REDÜKSİYONU*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.

SHRINK FIT TOOLHOLDERS
ISITMALI TUTUCULAR

DIN 69871 (ISO7388-1) AD&B Balanced G2.5





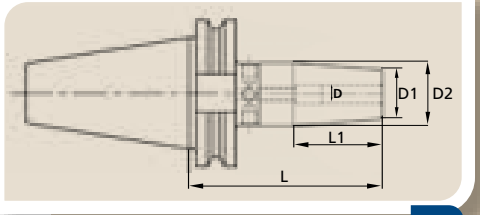
CODE / *KOD* DIN 40	D	D1	D2	L	L1	EURO
DIN40 SF04 80	4	15	20	80	-	90.00
DIN40 SF06 80	6	21	27	80	36	80.00
DIN40 SF08 80	8	21	27	80	36	80.00
DIN40 SF10 80	10	24	32	80	42	80.00
DIN40 SF12 80	12	24	32	80	47	80.00
DIN40 SF16 80	16	27	34	80	50	80.00
DIN40 SF20 80	20	33	42	80	52	80.00
DIN40 SF25 100	25	44	50	100	58	84.00
DIN40 SF32 100	32	44	50	100	62	88.00

CODE / *KOD* DIN 50	D	D1	D2	L	L1	EURO
DIN50 SF06 80	6	21	27	80	36	155.00
DIN50 SF08 80	8	21	27	80	36	155.00
DIN50 SF10 80	10	24	32	80	42	155.00
DIN50 SF12 80	12	24	32	80	47	155.00
DIN50 SF16 80	16	27	34	80	50	155.00
DIN50 SF20 80	20	33	42	80	52	155.00
DIN50 SF25 100	25	44	53	100	58	165.00
DIN50 SF32 100	32	44	53	100	62	165.00

SHRINK FIT TOOLHOLDERS LONG TYPE
ISITMALI TUTUCULAR UZUN TİP

DIN 69871 (ISO7388-1) AD&B Balanced G2.5

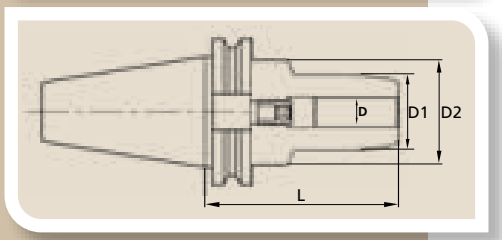




CODE / *KOD* DIN 40	D	D1	D2	L	L1	EURO
DIN40 SF04 160	4	15	20	160	20	139.00
DIN40 SF06 160	6	21	32	160	36	129.00
DIN40 SF08 160	8	21	32	160	36	129.00
DIN40 SF10 160	10	24	34	160	42	129.00
DIN40 SF12 160	12	24	34	160	47	129.00

HYDRAULIC CHUCKS
HİDROLİK TUTUCULAR





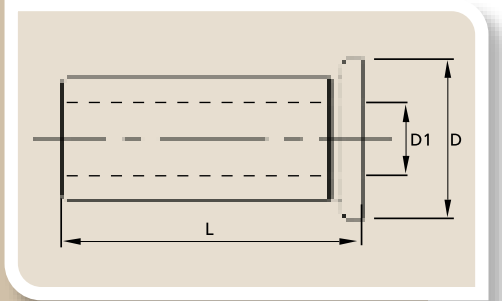
DIN 69871 (ISO7388-1) AD&B Balanced G2.5

CODE / *KOD* DIN 40	D	D1	D2	L1	EURO
DIN40 HY06 75	6	26	50	75	130.00
DIN40 HY08 75	8	28	50	75	130.00
DIN40 HY10 75	10	30	50	75	130.00
DIN40 HY12 80	12	32	50	80	120.00
DIN40 HY16 85	16	38	50	85	130.00
DIN40 HY20 90	20	42	50	90	120.00
DIN40 HY25 110	25	50	50	110	130.00
DIN40 HY32 115	32	60	60	115	150.00

CODE / *KOD* DIN 50	D	D1	D2	L1	EURO
DIN50 HY12 110	12	32	50	110	200.00
DIN50 HY20 110	20	42	50	110	200.00

REDUCTION COLLETS FOR HYDRAULIC CHUCKS (High Precision) Runout: Max. 5 Micron
HİDROLİK TUTUCU İÇİN REDÜKSİYON PENSLER (Yüksek Hassasiyet) Salgı: Max. 5 Micron





RH12 Ø12

D	D1 Clamping Range / Sıkma Aralığı	L
12	2 - 10	40

RH20 Ø20

D	D1 Clamping Range / Sıkma Aralığı	L
20	2 - 18	50

RH25 Ø25

D	D1 Clamping Range / Sıkma Aralığı	L
25	3 - 20	54

RH32 Ø32

D	D1 Clamping Range / Sıkma Aralığı	L
32	3 - 28	58

Suitable for internal and external cooling / *İçten ve dıştan soğutmaya uygundur.*
Please see details at pages nr. 126-129 / *Detaylar için 126-129 sayfalara bakınız.*

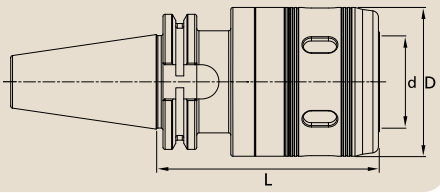
HIGH POWER HP MILLING CHUCK
YÜKSEK SIKMA GÜÇLÜ HP FREZE TUTUCUSU

DIN 69871 (ISO7388-1) AD Balanced G6.3

CODE / *KOD* DIN 40	TAPER / *KONİK*	d	D	L	EURO
DIN40HP20	DIN40	20	50	85	132.00
DIN40HP25	DIN40	25	59	100	138.00
DIN40HP32	DIN40	32	70	105	145.00

CODE / *KOD* DIN 50	TAPER / *KONİK*	d	D	L	EURO
DIN50HP25	DIN50	25	59	100	180.00
DIN50HP32	DIN50	32	70	110	190.00

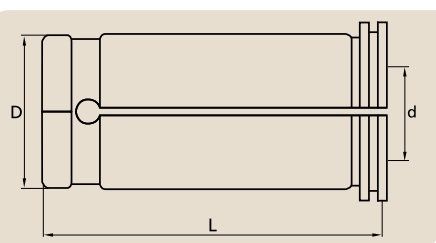




STRAIGHT (CYLINDRICAL) REDUCTION COLLETS FOR HP MILLING CHUCKS
DÜZ (SİLİNDİRİK) REDÜKSİYON PENSLER, HP FREZE TUTUCULARI İÇİN

CODE / *KOD*	D outside dia dış çap	d inside dia iç çap	L	EURO
SC2003	20	3	50	11.00
SC2004	20	4	50	11.00
SC2005	20	5	50	11.00
SC2006	20	6	50	11.00
SC2008	20	8	50	11.00
SC2010	20	10	50	11.00
SC2012	20	12	50	11.00
SC2014	20	14	50	11.00
SC2016	20	16	50	11.00
SC2503	25	3	60	11.00
SC2504	25	4	60	11.00
SC2505	25	5	60	11.00
SC2506	25	6	60	11.00
SC2508	25	8	60	11.00
SC2510	25	10	60	11.00
SC2512	25	12	60	11.00
SC2514	25	14	60	11.00
SC2516	25	16	60	11.00
SC2518	25	18	60	11.00
SC2520	25	20	60	11.00
SC3204	32	4	65	12.00
SC3205	32	5	65	12.00
SC3206	32	6	65	12.00
SC3208	32	8	65	12.00
SC3210	32	10	65	12.00
SC3212	32	12	65	12.00
SC3214	32	14	65	12.00
SC3216	32	16	65	12.00
SC3218	32	18	65	12.00
SC3220	32	20	65	12.00
SC3225	32	25	65	12.00





Not suitable for Hydraulic chucks
Hidrolik tutucu için uygun değildir

gürkan



gürhan



DIN 2080 ISO

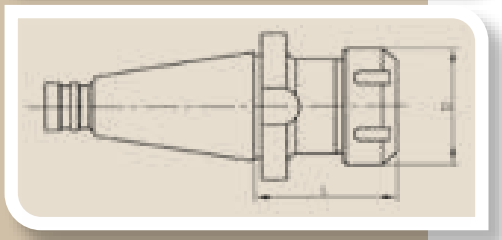
TOOLHOLDERS
TAKIM TUTUCULARI

COLLET CHUCKS
PENS BAŞLIKLARI



DIN 2080 ISO

CODE / *KOD* ISO 30 DIN2080	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
ISO30 ER16	50	28	ER16 Ø1-12mm	29.00
ISO30 ER25	50	42	ER25 Ø1-20mm	29.00
ISO30 ER32	50	50	ER32 Ø1-25mm	29.00
ISO30 ER40	60	63	ER40 Ø1-32mm	40.00



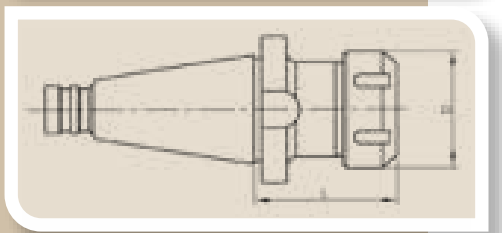
CODE / *KOD* ISO 40 DIN2080	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
ISO40 ER16	50	28	ER16 Ø1-12mm	28.00
ISO40 ER25	60	42	ER25 Ø1-20mm	28.00
ISO40 ER32	60	50	ER32 Ø1-25mm	28.00
ISO40 ER40	60	63	ER40 Ø1-32mm	30.00

CODE / *KOD* ISO 50 DIN2080	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
ISO50 ER25	70	42	ER25 Ø1-20mm	58.00
ISO50 ER32	70	50	ER32 Ø1-25mm	58.00
ISO50 ER40	70	63	ER40 Ø1-32mm	60.00
ISO50 ER50	90	78	ER50 Ø6-40mm	86.00



DIN 2080 ISO DIN6388 (OZ) COLLET CHUCK / *PENS BAŞLIĞI*

CODE / *KOD* ISO 40 DIN2080	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
ISO40 OZ25	70	60	OZ25 Ø2-32mm	42.00
ISO40 OZ32	80	72	OZ32 Ø4-32mm	54.00



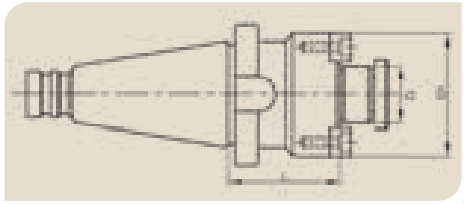
CODE / *KOD* ISO 50 DIN2080	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
ISO50 OZ32	75	72	OZ32 Ø4-32mm	73.00

FACE MILL ADAPTORS
ALINDAN SIKMALI FREZE TUTUCULAR

DIN 2080 ISO



CODE / *KOD* ISO 30 DIN2080	D	D1	L	EURO
ISO30 FM16	16	38	30	31.00
ISO30 FM22	22	48	30	31.00
ISO30 FM27	27	58	30	31.00
ISO30 FM32	32	78	30	33.00

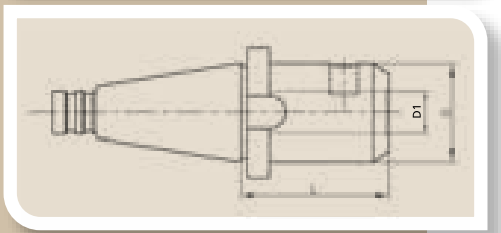


CODE / *KOD* ISO 40 DIN2080	D	D1	L	EURO
ISO40 FM16	16	38	30	31.00
ISO40 FM22	22	48	30	31.00
ISO40 FM27	27	58	30	32.00
ISO40 FM32	32	78	30	34.00
ISO40 FM40	40	88	30	37.00

CODE / *KOD* ISO 50 DIN2080	D	D1	L	EURO
ISO50 FM16	16	38	30	55.00
ISO50 FM22	22	48	35	55.00
ISO50 FM27	27	58	35	56.00
ISO50 FM32	32	78	40	58.00
ISO50 FM40	40	88	40	60.00

WELDON ADAPTORS
WELDON TUTUCULAR





DIN 2080 ISO

CODE / *KOD* ISO 30 DIN2080	D1	D	L	EURO
ISO30 W06	6	25	40	27.00
ISO30 W08	7	28	40	27.00
ISO30 W10	10	35	40	27.00
ISO30 W12	12	42	40	27.00
ISO30 W16	16	48	50	27.00
ISO30 W20	20	52	63	28.00

CODE / *KOD* ISO 40 DIN2080	D1	D	L	EURO
ISO40 W06	6	25	50	27.00
ISO40 W08	8	28	50	27.00
ISO40 W10	10	35	50	27.00
ISO40 W12	12	42	50	27.00
ISO40 W16	16	48	63	27.00
ISO40 W20	20	52	63	27.00
ISO40 W25	25	65	80	32.00
ISO40 W32	32	72	80	36.00
ISO40 W40	40	80	90	41.00

CODE / *KOD* ISO 50 DIN2080	D1	D	L	EURO
ISO50 W10	10	35	63	49.00
ISO50 W12	12	42	63	50.00
ISO50 W16	16	48	63	50.00
ISO50 W20	20	52	63	50.00
ISO50 W25	25	65	80	54.00
ISO50 W32	32	72	80	56.00
ISO50 W40	40	80	90	60.00

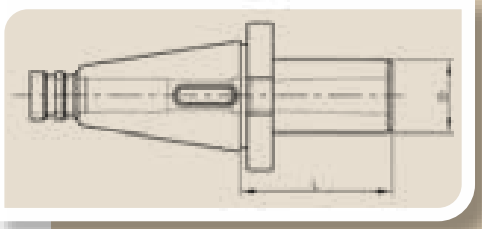
MORSE TAPER ADAPTORS
MORS KONİK TUTUCUSU

DIN 2080 ISO

CODE / *KOD* ISO 40 DIN2080	MT	D	L	EURO
ISO40 MT1	1	25	50	27.00
ISO40 MT2	2	32	50	27.00
ISO40 MT3	3	40	65	29.00
ISO40 MT4	4	48	95	31.00



CODE / *KOD* ISO 50 DIN2080	MT	D	L	EURO
ISO50 MT2	2	32	60	49.00
ISO50 MT3	3	40	65	49.00
ISO50 MT4	4	48	70	50.00
ISO50 MT5	5	63	105	55.00

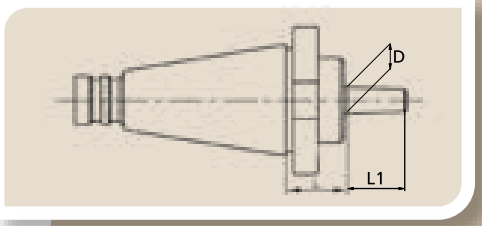


DRILL CHUCK ADAPTORS
MANDREN TUTUCUSU

DIN 2080 ISO

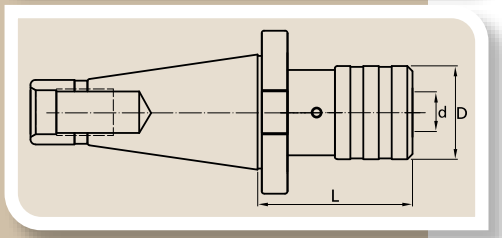
CODE / *KOD* ISO 40 DIN2080	D	L	L1	EURO
ISO40 B12	B12	15	18.5	27.00
ISO40 B16	B16	17	24	27.00
ISO40 B18	B18	17	32	27.00





TAPPING CHUCKS
KILAVUZ ÇEKME BAŞLIKLARI





DIN 2080 ISO

CODE / *KOD* ISO 40 DIN2080	M	d	D	L	EURO
ISO40 TC1	M3 - M14	19	36	61	**95.00**
ISO40 TC2	M5 - M24	31	53	81	**105.00**
ISO40 TC3	M14 - M36	48	78	123	**170.00**

CODE / *KOD* ISO 50 DIN2080	M	d	D	L	EURO
ISO50 TC2	M5 - M24	31	53	83	**145.00**
ISO50 TC3	M14 - M36	48	78	125	**215.00**

TAP HOLDERS Quick Change
KILAVUZ TUTUCULARI Kolay değişebilir



WITHOUT CLUTCH (FIXED) / *SABİT TİP*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.



WITH SAFETY CLUTCH / *EMNİYETLİ TİP*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.



TAP HOLDER REDUCTION / *KILAVUZ TUTUCU REDÜKSİYONU*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.

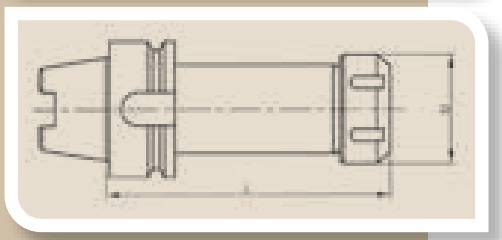
gürhan



HSK DIN69893 / ISO 12164
TOOLHOLDERS

HSK DIN69893 / ISO 12164
TAKIM TUTUCULAR





HSK A DIN69893 / ISO 12164 FORM A Balanced G2.5

CODE / *KOD* HSK50A	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
HSK50A ER16	100	28	ER16 Ø1-12mm	60.00
HSK50A ER25	100	42	ER25 Ø1-20mm	60.00
HSK50A ER32	100	50	ER32 Ø1-25mm	60.00

CODE / *KOD* HSK63A	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
HSK63A ER16	100	28	ER16 Ø1-12mm	60.00
HSK63A ER25	100	42	ER25 Ø1-20mm	60.00
HSK63A ER32	100	50	ER32 Ø1-25mm	60.00
HSK63A ER40	100	63	ER40 Ø1-32mm	63.00

CODE / *KOD* HSK100A	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
HSK100A ER32	100	50	ER32 Ø1-25mm	90.00
HSK100A ER40	120	63	ER40 Ø1-32mm	94.00



HSK63 COOLANT TUBE / *SOĞUTUCU BORUSU*

CODE / *KOD*	EURO
CTHSK63	6.70



HSK63 SPANNER FOR COOLANT TUBE
SOĞUTUCU BORUSU ANAHTARI

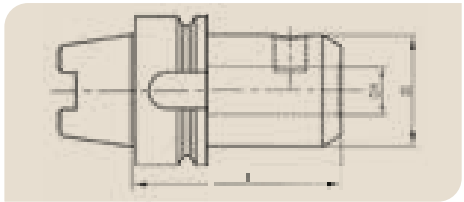
CODE / *KOD*	EURO
SPHSK63	14.50

WELDON ADAPTORS
WELDON TUTUCULAR

HSK63 A DIN69893 / ISO 12164 Balanced G2.5

CODE / *KOD* HSK63A	D1	D	L	EURO
HSK63A W06	6	25	65	59.00
HSK63A W08	8	28	65	59.00
HSK63A W10	10	35	65	59.00
HSK63A W12	12	42	80	59.00
HSK63A W16	16	48	80	59.00
HSK63A W20	20	52	80	59.00
HSK63A W25	25	65	110	65.00
HSK63A W32	32	72	110	72.00



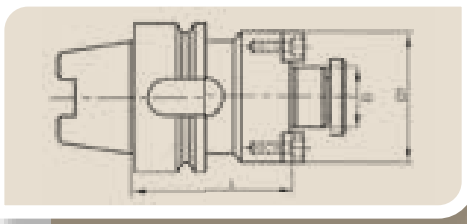


FACE MILL ADAPTORS
ALINDAN SIKMALI FREZE TUTUCULAR

HSK63 A DIN69893 / ISO 12164 Balanced G2.5

CODE / *KOD* HSK63A	D1	D	L	EURO
HSK63A FM16	16	38	50	69.00
HSK63A FM22	22	48	50	69.00
HSK63A FM27	27	58	60	70.00
HSK63A FM32	32	78	60	73.00
HSK63A FM40	40	88	60	76.00



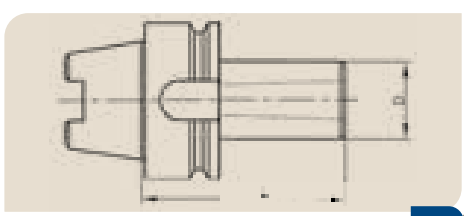


MORSE TAPER ADAPTORS
MORS KONİK TUTUCUSU

HSK63 A DIN69893 / ISO 12164 Balanced G2.5

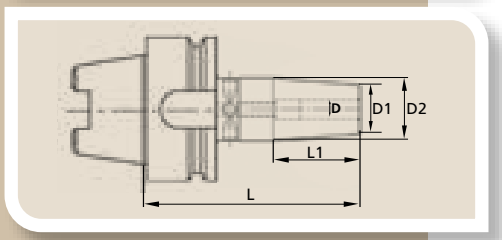
CODE / *KOD* HSK63A	D1	D	L	EURO
HSK63A MT2	2	32	120	67.00
HSK63A MT3	3	40	140	69.00
HSK63A MT4	4	48	160	72.00





SHRINK FIT TOOLHOLDERS
ISITMALI TUTUCULAR



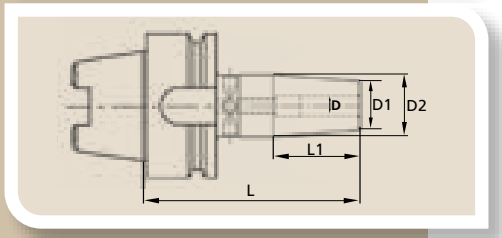


HSK63A DIN69893 / ISO 12164 Balanced G2.5

CODE / *KOD* HSK63A	D	D1	D2	L	L1	EURO
HSK63A SF04 80	4	15	20	80	-	102.00
HSK63A SF06 80	6	21	27	80	36	92.00
HSK63A SF08 80	8	21	27	80	36	92.00
HSK63A SF10 85	10	24	32	85	42	92.00
HSK63A SF12 90	12	24	32	90	47	92.00
HSK63A SF16 95	16	27	34	95	50	92.00
HSK63A SF20 100	20	33	42	100	52	92.00
HSK63A SF25 115	25	44	53	115	58	95.00

SHRINK FIT TOOLHOLDERS LONG TYPE
ISITMALI TUTUCULAR UZUN TİP





HSK63A DIN69893 / ISO 12164 Balanced G2.5

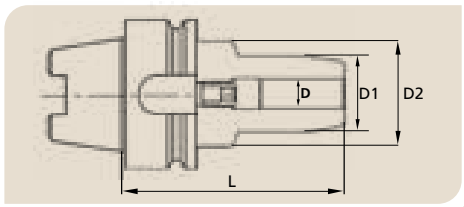
CODE / *KOD* HSK63A	D	D1	D2	L	L1	EURO
HSK63A SF04 160	4	15	25	160	-	145.00
HSK63A SF06 160	6	21	32	160	36	135.00
HSK63A SF08 160	8	21	32	160	36	135.00
HSK63A SF10 160	10	24	34	160	42	135.00
HSK63A SF12 160	12	24	34	160	47	135.00

HYDRAULIC CHUCKS
HİDROLİK TUTUCULAR

HSK63A DIN69893 / ISO 12164 Balanced G2.5

CODE / *KOD* HSK63A	D	D1	D2	L	EURO
HSK63A HY06 80	6	26	50	80	160.00
HSK63A HY08 80	8	28	50	80	160.00
HSK63A HY10 85	10	30	50	85	160.00
HSK63A HY12 90	12	32	50	90	150.00
HSK63A HY16 95	16	38	50	95	160.00
HSK63A HY20 100	20	42	50	100	160.00
HSK63A HY25 105	25	50	50	105	170.00
HSK63A HY32 125	32	60		125	180.00





REDUCTION COLLETS FOR HYDRAULIC CHUCKS (High Precision) Runout: Max. 5 Micron
HİDROLİK TUTUCU İÇİN REDÜKSİYON PENSLER (Yüksek Hassasiyet) Salgı: Max. 5 Micron

RH12 Ø12

D	D1 Clamping Range / Sıkma Aralığı	L
12	2 - 10	40

RH20 Ø20

D	D1 Clamping Range / Sıkma Aralığı	L
20	2 - 18	50

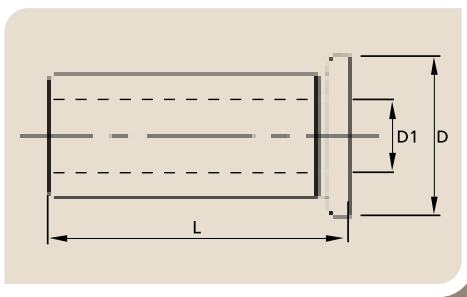
RH25 Ø25

D	D1 Clamping Range / Sıkma Aralığı	L
25	3 - 20	54

RH32 Ø32

D	D1 Clamping Range / Sıkma Aralığı	L
32	3 - 28	58

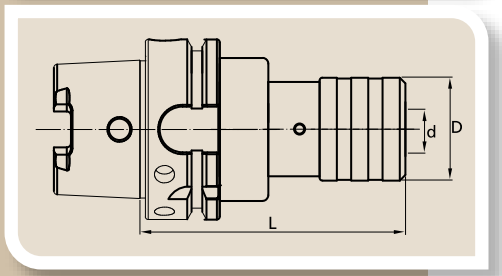




Suitable for internal and external cooling / *İçten ve dıştan soğutmaya uygundur.*
Please see details at pages nr. 126-129 / *Detaylar için 126-129 sayfalara bakınız.*

TAPPING CHUCKS
KILAVUZ ÇEKME BAŞLIKLARI





HSK63 A DIN69893 / ISO 12164

CODE / *KOD* HSK63A	M	d	D	L	EURO
HSK63A TC1	M3 - M14	19	36	94	**145.00**
HSK63A TC2	M5 - M24	31	53	135	**160.00**

TAP HOLDERS Quick Change
KILAVUZ TUTUCULARI Kolay değişebilir



WITHOUT CLUTCH (FIXED) / *SABİT TİP*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.



WITH SAFETY CLUTCH / *EMNİYETLİ TİP*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.



TAP HOLDER REDUCTION / *KILAVUZ TUTUCU REDÜKSİYONU*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.

gürkan



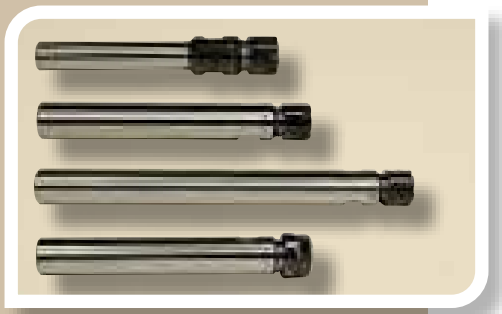
STRAIGHT SHANK COLLET CHUCKS
SİLİNDİRİK SAPLI PENS TUTUCULARI

STRAIGHT SHANK ER COLLET HOLDERS
SİLİNDİRİK SAPLI ER PENS TUTUCULARI



ER8

CODE / *KOD*	D	D1	L	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
ER0808085M	8	12	85	ER8 Ø1-5.5mm	25.00
ER0810095M	10	12	95	ER8 Ø1-5.5mm	25.00
ER0812095M	12	12	95	ER8 Ø1-5.5mm	25.00
ER0812140M	12	12	140	ER8 Ø1-5.5mm	35.00



ER11

CODE / *KOD*	D	D1	L	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
ER1112100M	12	16	100	ER11 Ø1-8mm	24.00
ER1116115M	16	16	115	ER11 Ø1-8mm	24.00
ER1116165M	16	16	165	ER11 Ø1-8mm	34.00
ER1116115H	16	19	115	ER11 Ø1-8mm	24.00
ER11127178M	12.7 (1/2" inch)	16	178 (7" inch)	ER11 Ø1-8mm	46.00



ER16

CODE / *KOD*	D	D1	L	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
ER1616090M	16	22	90	ER16 Ø1-12mm	24.00
ER1620130M	20	22	130	ER16 Ø1-12mm	24.00
ER1620200M	20	22	200	ER16 Ø1-12mm	34.00
ER1620130H	20	28	130	ER16 Ø1-12mm	24.00
ER1620130S	20	32	130	ER16 Ø1-12mm	24.00
ER1619178M	19.05 (3/4" inch)	22	178 (7" inch)	ER16 Ø1-12mm	42.00



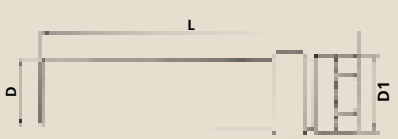
ER20

CODE / *KOD*	D	D1	L	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
ER2020140M	20	28	140	ER20 Ø2-16mm	25.00
ER2020140H	20	34	140	ER20 Ø2-16mm	25.00
ER2020140S	20	35	140	ER20 Ø2-16mm	25.00
ER2025110H	25	34	110	ER20 Ø2-16mm	25.00
ER2025110S	25	35	110	ER20 Ø2-16mm	25.00
ER2025200M	25	28	200	ER20 Ø2-16mm	35.00
ER20254178H	25.4 (1" inch)	28	178 (7" inch)	ER20 Ø2-16mm	42.00

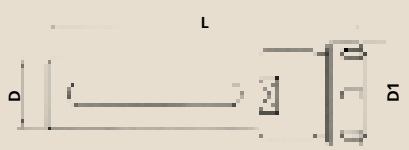
Straight shank collet holders have through hole for internal coolant and stop screw inside.
Silindrik saplı pens tutucuları içten soğutma için boydan boya deliktir ayrıca dayama vidası vardır.



M: Mini



H: Hexagon



S: Standard

STRAIGHT SHANK ER COLLET HOLDERS
SİLİNDİRİK SAPLI ER PENS TUTUCULARI

ER25

CODE / *KOD*	D	D1	L	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
ER2520145M	20	35	145	ER25 Ø1-20mm	**26.00**
ER2525145M	25	35	145	ER25 Ø1-20mm	**26.00**
ER2525200M	25	35	200	ER25 Ø1-20mm	**36.00**
ER2532110S	32	42	110	ER25 Ø1-20mm	**26.00**
ER25254200M	25.4 (1" inch)	35	200	ER25 Ø1-20mm	**36.00**
ER25254190M	25.4 (1" inch)	35	190 (7-1/2" inch)	ER25 Ø1-20mm	**42.00**



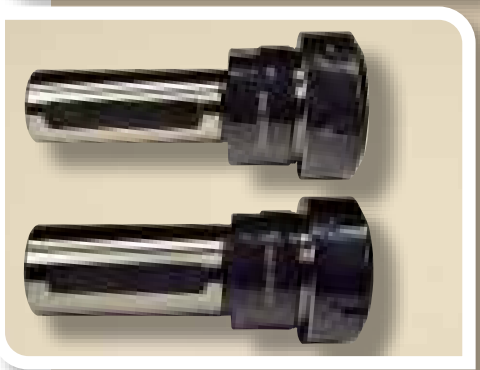
ER32

CODE / *KOD*	D	D1	L	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
ER3225110S	25	50	110	ER32 Ø1-25mm	**26.00**
ER3232110S	32	50	110	ER32 Ø1-25mm	**26.00**
ER3240110S	40	50	110	ER32 Ø1-25mm	**28.00**
ER3219152S	19.05 (3/4" inch)	50	152 (6" inch)	ER32 Ø1-25mm	**53.00**
ER32254190S	25.4 (1" inch)	50	190 (7-1/2" inch)	ER32 Ø1-25mm	**45.00**
ER32318114S	31.75 (1-1/4" inch)	50	114 (4-1/2" inch)	ER32 Ø1-25mm	**41.00**
ER32318152S	31.75 (1-1/4" inch)	50	152 (6" inch)	ER32 Ø1-25mm	**43.00**



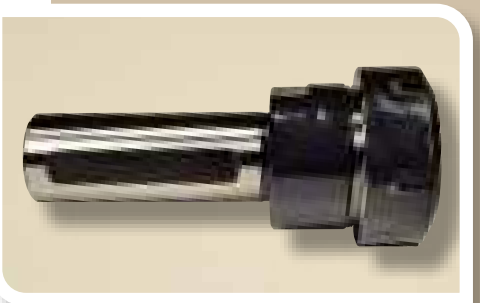
ER40

CODE / *KOD*	D	D1	L	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
ER4032140S	32	63	140	ER40 Ø1-32mm	**35.00**
ER4040140S	40	63	140	ER40 Ø1-32mm	**36.00**
ER40254114S	25.4 (1" inch)	63	114 (4-1/2" inch)	ER40 Ø1-32mm	**52.00**
ER40254178S	25.4 (1" inch)	63	178 (7" inch)	ER40 Ø1-32mm	**64.00**
ER40318114S	31.75 (1-1/4" inch)	63	114 (4-1/2" inch)	ER40 Ø1-32mm	**51.00**
ER40318165S	31.75 (1-1/4" inch)	63	165 (6-1/2" inch)	ER40 Ø1-32mm	**62.00**

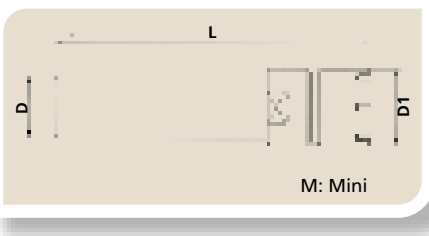


ER50

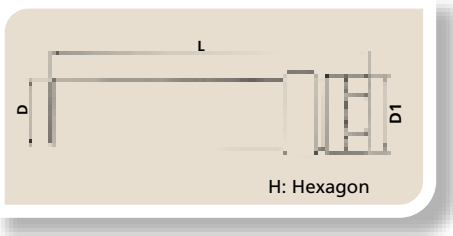
CODE / *KOD*	D	D1	L	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
ER5040175S	40	78	175	ER50 Ø6-40mm	**88.00**



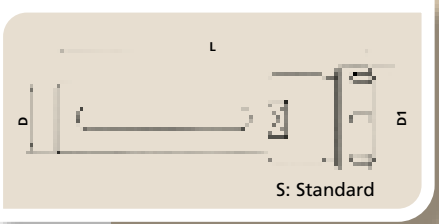
Straight shank collet holders have through hole for internal coolant and stop screw inside.
Silindrik saplı pens tutucuları içten soğutma için boydan boya deliktir ayrıca dayama vidası vardır.



M: Mini



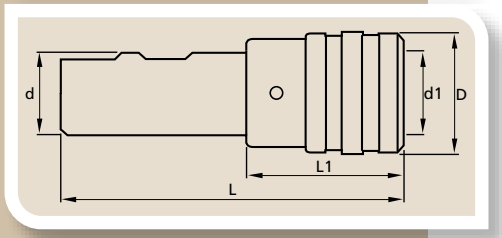
H: Hexagon



S: Standard

STRAIGHT WELDON SHANK TAPPING CHUCKS
SİLİNDRİK WELDON SAPLI KILAVUZ ÇEKME BAŞLIKLARI





CODE / *KOD*	M	d	d1	D	L	L1	EURO
SS20 TC1	M3 - M14	20	19	36	99	49	**90.00**
SS25 TC1	M3 - M14	25	19	36	105	49	**95.00**
SS25 TC2	M5 - M24	25	31	53	125	69	**100.00**
SS32 TC1	M3 - M14	32	19	36	110	49	**100.00**
SS32 TC2	M5 - M24	32	31	53	129	69	**105.00**
SS40 TC2	M5 - M24	40	31	53	135	69	**110.00**

TAP HOLDERS Quick Change
KILAVUZ TUTUCULARI Kolay değişebilir



WITHOUT CLUTCH (FIXED) / *SABİT TİP*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.



WITH SAFETY CLUTCH / *EMNİYETLİ TİP*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.



TAP HOLDER REDUCTION / *KILAVUZ TUTUCU REDÜKSİYONU*

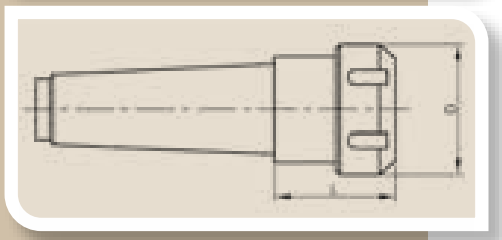
Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.



DIN 228 MORSE TAPER TOOLHOLDERS
DIN 228 MORS KONİK TAKIM TUTUCULARI

COLLET CHUCKS
PENS BAŞLIKLARI

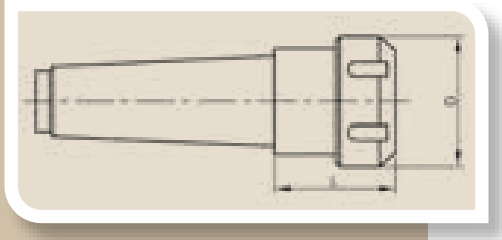




DIN228 A ER COLLET CHUCKS / *ER PENS BAŞLIKLARI*

CODE / *KOD* MT	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
MT2 ER20	50	34	ER20 Ø2-16mm	**27.00**
MT2 ER25	55	42	ER25 Ø1-20mm	**27.00**
MT2 ER32	70	50	ER32 Ø1-25mm	**28.00**
MT3 ER25	55	42	ER25 Ø1-20mm	**28.00**
MT3 ER32	70	50	ER32 Ø1-25mm	**29.00**
MT3 ER40	75	63	ER40 Ø1-32mm	**30.00**
MT4 ER32	70	50	ER32 Ø1-25mm	**30.00**
MT4 ER40	75	63	ER40 Ø1-32mm	**31.00**





DIN228 A OZ25 DIN6388 COLLET CHUCK / *PENS BAŞLIĞI*

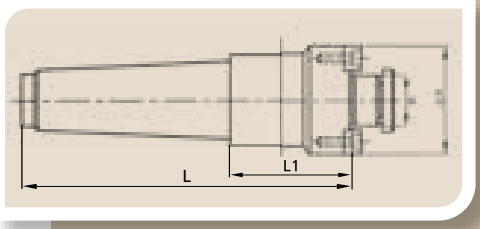
CODE / *KOD* MT	L	D	collet type and Ø clamping range *pens tipi ve Ø sıkma aralığı*	EURO
MT2 OZ25	85	60	OZ25 Ø2-32mm	**40.00**
MT3 OZ25	70	60	OZ25 Ø2-32mm	**40.00**
MT4 OZ25	70	60	OZ25 Ø2-32mm	**42.00**

FACE MILL ADAPTORS
ALINDAN SIKMALI FREZE TUTUCULAR

DIN228 A MORSE TAPER / *MORS KONİK*

CODE / *KOD* MT	D	D1	L	L1	EURO
MT2 FM16	16	32	124	42	29.00
MT2 FM22	22	40	126	44	29.00
MT2 FM27	27	48	128	46	30.00
MT2 FM32	32	58	128	46	31.00
MT2 FM40	40	66	128	46	32.00
MT3 FM16	16	32	146	42	30.00
MT3 FM22	22	40	148	44	30.00
MT3 FM27	27	48	150	46	31.00
MT3 FM32	32	58	153	49	32.00
MT3 FM40	40	66	153	53	33.00
MT4 FM16	16	32	174	42	31.00
MT4 FM22	22	40	176	44	31.00
MT4 FM27	27	48	178	46	32.00
MT4 FM32	32	58	181	49	33.00
MT4 FM40	40	70	185	53	34.00



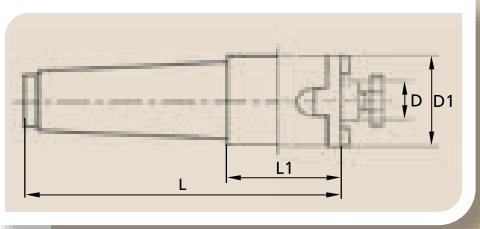


COMBI SHELL MILL ADAPTORS (with drive ring and key)
KOMBİNE FREZE TUTUCULAR (İstavroz pul ve kamalı)

DIN228 A MORSE TAPER / *MORS KONİK*

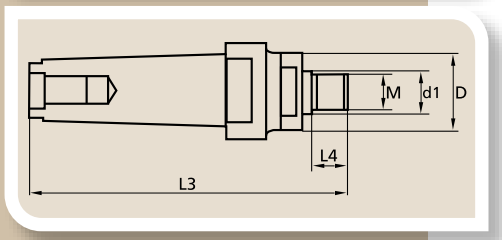
CODE / *KOD* MT	D	D1	L	L1	EURO
MT2 CM16	16	32	124	44	32.00
MT2 CM22	22	40	126	50	32.00
MT2 CM27	27	48	128	54	33.00
MT2 CM32	32	58	128	57	34.00
MT2 CM40	40	70	128	60	35.00
MT3 CM16	16	32	146	44	33.00
MT3 CM22	22	40	148	50	33.00
MT3 CM27	27	48	150	54	34.00
MT3 CM32	32	58	153	62	35.00
MT3 CM40	40	68	153	62	36.00
MT4 CM16	16	32	172	44	34.00
MT4 CM22	22	40	175	50	34.00
MT4 CM27	27	48	178	54	35.00
MT4 CM32	32	58	196	62	36.00
MT4 CM40	40	70	196	62	38.00





THREADED BORE TOOL HOLDERS
VİDALI ARKA DELİKLİ TAKIM TUTUCULARI



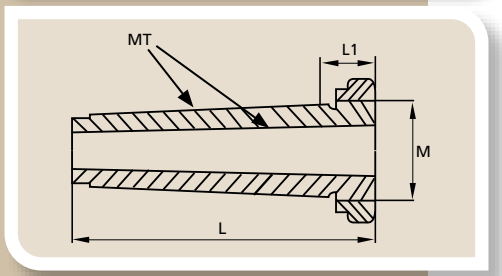


DIN228 A MORSE TAPER / *MORS KONİK*

CODE / *KOD* MT	L3	L4	D	d1	EURO
MT3 M12	151	17	22	14	24.00
MT3 M16	154	19	32	18	24.00
MT3 M20	157	22	40	22	25.00
MT3 M24	159	24	48	26	26.00
MT4 M12	179	17	22	14	26.00
MT4 M16	182	19	32	18	27.00
MT4 M20	185	22	40	22	28.00

REDUCTION WITH EXTRACTING NUT
ÇIKARMA SOMUNLU REDÜKSİYON KOVANLAR





DIN228 A MORSE TAPER / *MORS KONİK*

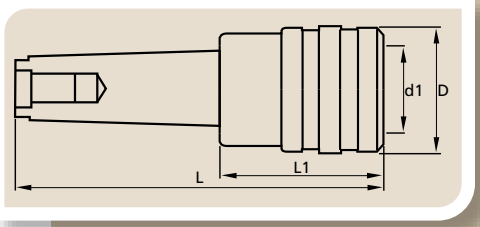
CODE / *KOD* MT	L	L1	M	EURO
MT2 MT1 XN	85	18	M22X1.5	27.00
MT3 MT1 XN	101	20	M27X1.5	27.00
MT3 MT2 XN	101	20	M27X1.5	25.00
MT4 MT1 XN	127	24	M34X2.0	27.00
MT4 MT2 XN	127	24	M34X2.0	25.00
MT4 MT3 XN	127	24	M34X2.0	25.00
MT5 MT3 XN	157	27	M48X2.0	27.00
MT5 MT4 XN	157	27	M48X2.0	27.00

TAPPING CHUCKS
KILAVUZ ÇEKME BAŞLIKLARI

DIN228 A MORSE TAPER / *MORS KONİK*

CODE / *KOD* DIN228A MT	M	d1	D	L	L1	EURO
MT2 TC1	M3 - M14	19	36	113	49	**100.00**
MT3 TC1	M3 - M14	19	36	130	49	**100.00**
MT3 TC2	M5 - M24	31	53	150	69	**105.00**
MT4 TC1	M3 - M14	19	36	152	49	**105.00**
MT4 TC2	M5 - M24	31	53	172	69	**110.00**





TAP HOLDERS Quick Change
KILAVUZ TUTUCULARI Kolay değişebilir

WITHOUT CLUTCH (FIXED) / *SABİT TİP*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.



WITH SAFETY CLUTCH / *EMNİYETLİ TİP*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.



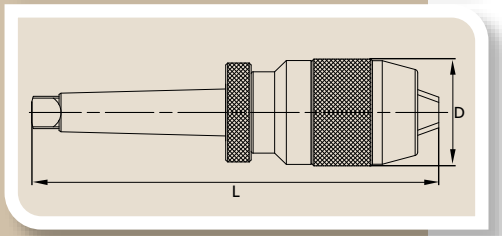
TAP HOLDER REDUCTION / *KILAVUZ TUTUCU REDÜKSİYONU*

Please see details at page nr. 131
Detaylar için sayfa 131 e bakınız.



DRILL CHUCK HOLDERS
MANDRENLİ TUTUCU





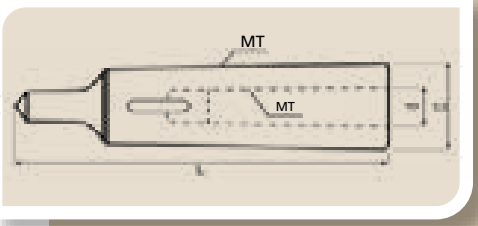
DIN228 B MORSE TAPER / *MORS KONİK*

CODE / *KOD* DIN228B MT	Ø	D	L	EURO
MT2 DC13	1-13	51	185	**69.00**
MT2 DC16	3-16	55	190	**72.00**
MT3 DC13	1-13	51	205	**71.00**
MT3 DC16	3-16	55	210	**74.00**
MT4 DC13	1-13	51	210	**74.00**
MT4 DC16	3-16	55	235	**79.00**

MORSE TAPER REDUCTION SLEEVE DIN2185
MORS KONİK REDÜKSİYON KOVANLAR

CODE / *KOD* DIN 2185	Outside Taper *Dış Konik*	Inside Taper *İç Konik*	L	EURO
MT2 MT1	MT2	MT1	92	6.60
MT3 MT1	MT3	MT1	99	7.20
MT3 MT2	MT3	MT2	112	6.60
MT4 MT1	MT4	MT1	124	10.00
MT4 MT2	MT4	MT2	124	9.00
MT4 MT3	MT4	MT3	140	8.80
MT5 MT1	MT5	MT1	156	16.50
MT5 MT2	MT5	MT2	156	15.50
MT5 MT3	MT5	MT3	156	15.00
MT5 MT4	MT5	MT4	171	15.00
MT6 MT3	MT6	MT3	218	44.00
MT6 MT4	MT6	MT4	218	43.00
MT6 MT5	MT6	MT5	218	43.00

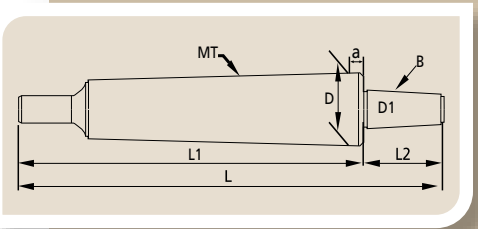




MORSE TAPER DRILL CHUCK ARBOR : MT DIN 228 B - DIN 238 B
MORS KONİK MATKAP MANDREN ADAPTÖRÜ

CODE / *KOD* MT - B	Shank Taper *Sap Koniği* MT	Front Taper *Uç Koniği* B	L	L1	L2	D	D1	EURO
MT1 B10	MT1	B10	86	65	21	12,065	10,094	4.60
MT1 B12	MT1	B12	90	65	25	12,065	12,065	4.60
MT2 B10	MT2	B10	101	80	21	17,780	10,094	5.30
MT2 B12	MT2	B12	105	80	25	17,780	12,065	5.30
MT2 B16	MT2	B16	112	80	32	17,780	15,733	5.30
MT2 B18	MT2	B18	120	80	40	17,780	17,780	5.30
MT3 B12	MT3	B12	124	99	25	23,825	12,065	6.00
MT3 B16	MT3	B16	131	99	32	23,825	15,733	6.00
MT3 B18	MT3	B18	139	99	40	23,825	17,780	6.10
MT3 B22	MT3	B22	147	99	48	23,825	21,793	6.20
MT4 B16	MT4	B16	156	124	32	31,267	15,733	7.20
MT4 B18	MT4	B18	164	124	40	31,267	17,780	7.30
MT4 B22	MT4	B22	172	124	48	31,267	21,793	7.40
MT5 B16	MT5	B16	188	156	32	44,399	17,733	16.00
MT5 B18	MT5	B18	196	156	40	44,399	17,780	16.00
MT5 B22	MT5	B22	204	156	48	44,399	21,793	16.50
MT5 B24	MT5	B24	214	156	58	44,399	23,825	17.00





gürkan



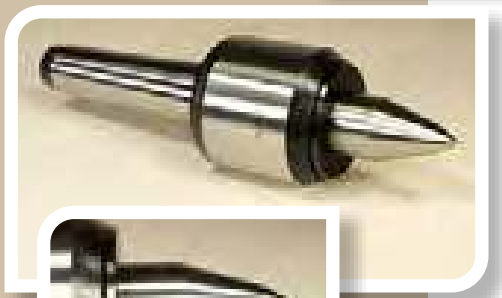
gürkan



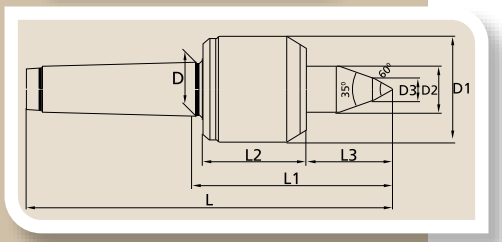
LIVE CENTRES
DRILL CHUCKS
SOLID CENTRES
CYLINDRICAL REDUCTION SLEEVES

DÖNER PUNTALAR
MATKAP MANDRENLERİ
SABİT PUNTALAR
SİLİNDİRİK REDÜKSİYON KOVANLAR

PRECISION CNC LIVE CENTRES
HASSAS CNC DÖNER PUNTALAR

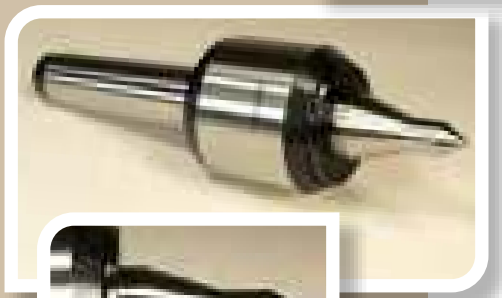




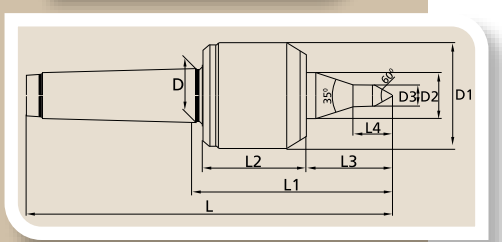


CODE / *KOD*	Taper *Konik*	D	D1	D2	D3	L	L1	L2	L3	Max Rpm *Devir*	EURO
LCMT3	MT 3	23.825	53	22	10	184	103	42	54	8000	**160.00**
LCMT4	MT 4	31.267	63	28	12	225.5	124	53	64	6000	**180.00**
LCMT5	MT 5	44.399	83	38	16	284	155	63	79	4000	**200.00**

PRECISION CNC LIVE CENTRES XP EXTENDED POINT
HASSAS CNC DÖNER PUNTALAR XP UZUN BURUNLU







CODE / *KOD*	Taper *Konik*	D	D1	D2	D3	L	L1	L2	L3	L4	Max Rpm *Devir*	EURO
LCMT3XP	MT 3	23,825	53	22	10	184	103	42	54	15	8000	**160.00**
LCMT4XP	MT 4	31,267	63	28	14	225.5	124	53	64	25	6000	**180.00**
LCMT5XP	MT 5	44,399	83	38	16	284	155	69	79.5	25	4000	**200.00**

PRECISION SOLID CENTRE
HASSAS SABİT PUNTA



DIN 806

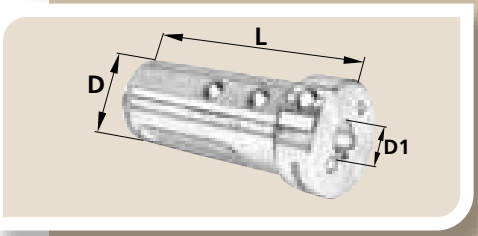
CODE / *KOD* DIN 806	Taper *Konik*	D	L	EURO
SC806MT2	MT 2	18	100	**25.00**
SC806MT3	MT 3	24.1	125	**27.00**
SC806MT4	MT 4	31.6	160	**35.00**
SC806MT5	MT 5	44.7	200	**65.00**

REDUCTION SLEEVES FOR CNC TURNING MACHINES
CNC TORNALAR İÇİN REDÜKSİYON KOVANLAR

CODE / *KOD*	D	D1	L	FORM	EURO
RS2006	20	6	62	FORM 1	**18.00**
RS2008	20	8	62	FORM 1	**18.00**
RS2010	20	10	62	FORM 1	**18.00**
RS2012	20	12	62	FORM 2	**18.00**
RS2014	20	14	62	FORM 2	**18.00**
RS2016	20	16	62	FORM 2	**18.00**
RS2506	25	6	63	FORM 1	**18.00**
RS2508	25	8	63	FORM 1	**18.00**
RS2510	25	10	63	FORM 1	**18.00**
RS2512	25	12	63	FORM 2	**18.00**
RS2514	25	14	63	FORM 2	**18.00**
RS2516	25	16	63	FORM 2	**18.00**
RS2518	25	18	63	FORM 2	**18.00**
RS2520	25	20	63	FORM 2	**18.00**
RS3206	32	6	89	FORM 1	**19.50**
RS3208	32	8	89	FORM 1	**19.50**
RS3210	32	10	89	FORM 1	**19.50**
RS3212	32	12	89	FORM 1	**19.50**
RS3214	32	14	89	FORM 1	**19.50**
RS3216	32	16	89	FORM 1	**19.50**
RS3218	32	18	89	FORM 2	**19.50**
RS3220	32	20	89	FORM 2	**19.50**
RS3225	32	25	89	FORM 2	**19.50**
RS4006	40	6	100	FORM 1	**21.00**
RS4008	40	8	100	FORM 1	**21.00**
RS4010	40	10	100	FORM 1	**21.00**
RS4012	40	12	100	FORM 1	**21.00**
RS4014	40	14	100	FORM 1	**21.00**
RS4016	40	16	100	FORM 1	**21.00**
RS4018	40	18	100	FORM 1	**21.00**
RS4020	40	20	100	FORM 1	**21.00**
RS4025	40	25	100	FORM 2	**21.00**
RS4032	40	32	100	FORM 2	**21.00**


FORM 1

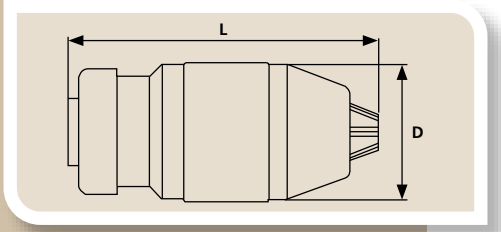

FORM 2



SELF CENTERING DRILL CHUCK
ELLE SIKMA MATKAP MANDRENİ



CODE / *KOD*	L	D	Clamping Range *Sıkma Aralığı*	Inner Rear Taper *Arka Konik*	EURO
DC10 B12	82	42	1-10MM	B12	**19.50**
DC13 B16	96	49	1-13MM	B16	**21.00**
DC16 B18	105	54	3-16MM	B18	**24.00**
DC20 B22	120	62	5-20MM	B22	**38.00**



DIN 238 B TAPERED COLLET CHUCK
DIN 238 B KONİKLİ PENS BAŞLIĞI



Suitable for B16 - B18 drill taper / *B16 - B18 Matkap koniğine uygun*

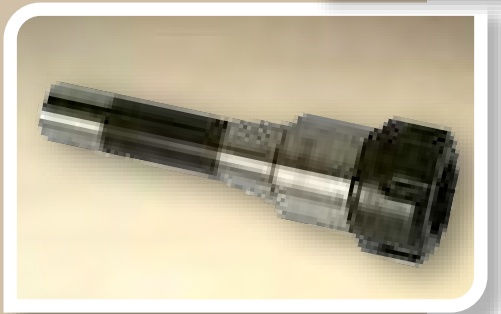
CODE / *KOD*	Inner Rear Taper *Arka Konik*	Collet *Pens*	Clamping Range *Sıkma Aralığı*	EURO
B16 ER25	B 16	ER25	2-16MM	**29.00**
B18 ER32	B 18	ER32	3-20MM	**30.00**

Performs better than the drill chuck in applications where high torque and higher precision required.
Yüksek tork ve yüksek hassasiyet gereken uygulamalarda matkap mandreninden daha iyi netice verir.
Suplied with extraction bolt / Çıkarma vidası ile verilir.

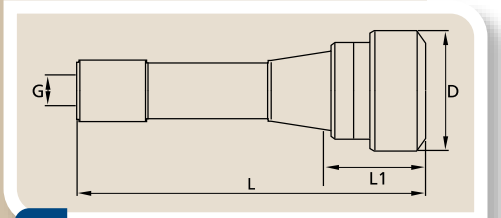




R8 (BRIDGEPORT) ER COLLET CHUCKS
R8 (BRIDGEPORT) ER PENS BAŞLIKLARI



CODE / *KOD*	L	L1	D	G	EURO
R8 ER32	160	60	50	7/16x20 UNF	**34.00**
R8 ER40	170	70	63	7/16x20 UNF	**36.00**

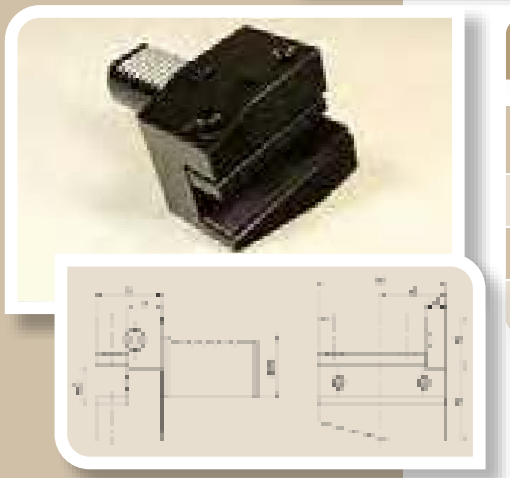




DIN 69880 VDI TOOLHOLDERS

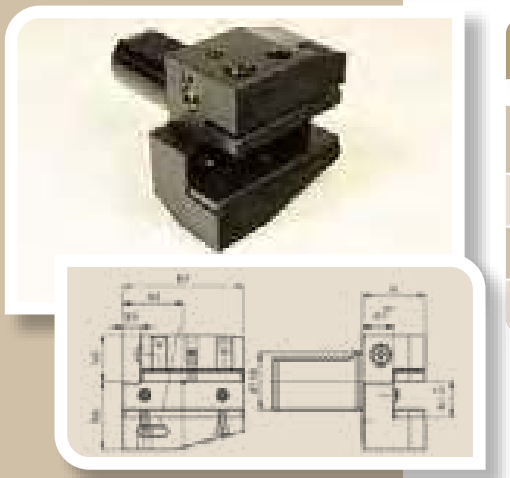
DIN 69880 VDI TAKIM TUTUCULAR

DIN 69880 VDI TOOL HOLDERS
DIN 69880 VDI TUTUCULAR



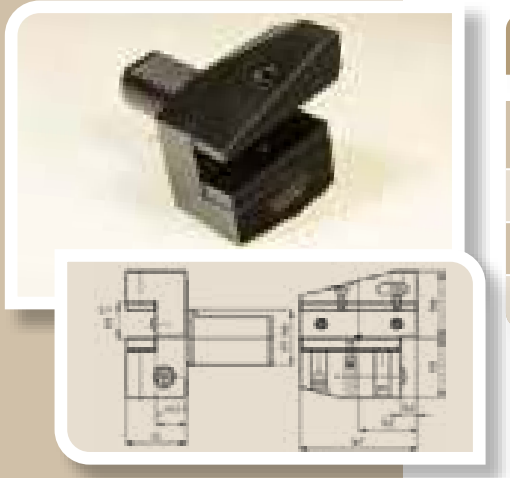
Form B1 Radial Toolholder Right / *Radyal Kater Tutucu Sağ*

CODE / *KOD*	VDI d1	b1	b2	b3	h1	h5	h6	l1	l2	EURO
B1-20x16x30	VDI 20	55	30	7	12/16	25	30	16	30	**59.00**
B1-30x20x40	VDI 30	70	35	10	20/16	28	38	22	40	**64.00**
B1-40x25x44	VDI 40	85	42.5	12.5	25/20	32.5	48	22	44	**70.00**



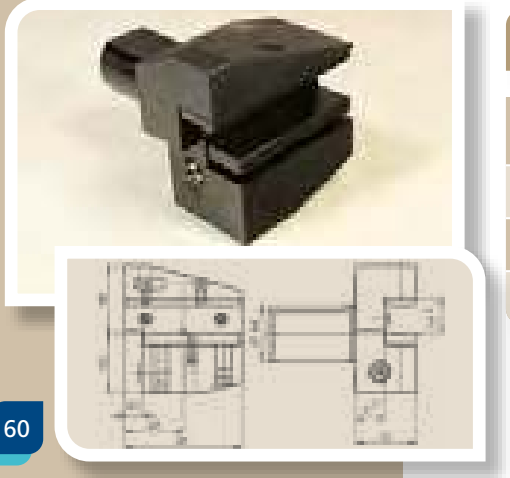
Form B2 Radial Toolholder Left / *Radyal Kater Tutucu Sol*

CODE / *KOD*	VDI d1	b1	b2	b3	h1	h5	h6	l1	l2	EURO
B2-20x16x30	VDI 20	55	30	7	16/12	25	30	16	30	**59.00**
B2-30x20x40	VDI 30	70	35	10	20/16	28	38	22	40	**64.00**
B2-40x25x44	VDI 40	85	42.5	12.5	25/20	32.5	48	22	44	**70.00**



Form B3 Radial Inverted Right / *Radyal Kater Tutucu Ters Sağ*

CODE / *KOD*	VDI d1	b1	b2	b3	h1	h5	h6	l1	l2	EURO
B3-20x16x30	VDI 20	55	30	7	16/12	25	30	16	30	**59.00**
B3-30x20x40	VDI 30	70	35	10	20/16	35	38	22	40	**64.00**
B3-40x25x44	VDI 40	85	42.5	12.5	25/20	42.5	48	22	44	**70.00**



Form B4 Radial Inverted Left / *Radyal Kater Tutucu Ters Sol*

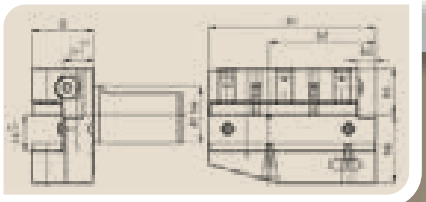
CODE / *KOD*	VDI d1	b1	b2	b3	h1	h5	h6	l1	l2	EURO
B4-20x16x30	VDI 20	55	30	7	16/12	25	30	16	30	**59.00**
B4-30x20x40	VDI 30	70	35	10	20/16	35	38	22	40	**64.00**
B4-40x25x44	VDI 40	85	42.5	12.5	25/20	42.5	48	22	44	**70.00**

DIN 69880 VDI TOOL HOLDERS
DIN 69880 VDI TUTUCULAR

Form B5 Radial Toolholder Long Right / *Radyal Kater Tutucu Uzun Sağ*

CODE / *KOD*	VDI d1	b1	b2	b3	h1	h5	h6	l1	l2	EURO
B5-20x16x30	VDI 20	75	50	7	16/12	25	30	16	30	**78.00**
B5-30x20x40	VDI 30	100	65	10	20/16	28	38	22	40	**101.00**
B5-40x25x44	VDI 40	118	75.5	12.5	25/20	33	48	22	44	**143.00**

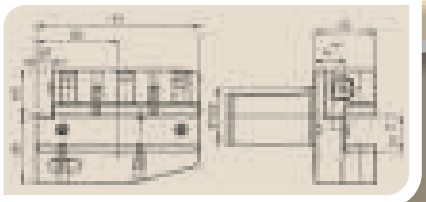




Form B6 Radial Toolholder Long Left / *Radyal Kater Tutucu Uzun Sol*

CODE / *KOD*	VDI d1	b1	b2	b3	h1	h5	h6	l1	l2	EURO
B6-20x16x30	VDI 20	75	50	7	16/12	25	30	16	30	**78.00**
B6-30x20x40	VDI 30	100	65	10	20/16	28	38	22	40	**101.00**
B6-40x25x44	VDI 40	118	75.5	12.5	25/20	33	48	22	44	**143.00**

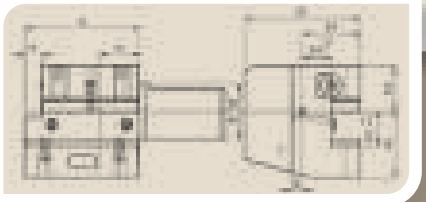




Form C1 Axial Toolholder Right / *Eksenel Kater Tutucu Sağ*

CODE / *KOD*	VDI d1	b1	b2	b3	h1	h5	h6	l1	l2	l3	EURO
C1-20x16x55	VDI 20	52	27	13	16/12	25	30	55	7	30	**62.00**
C1-30x20x70	VDI 30	70	35	17	20/16	28	38	70	10	30	**76.00**
C1-40x25x85	VDI 40	85	42.5	21	25/20	32.5	48	85	12.5	30	**90.00**

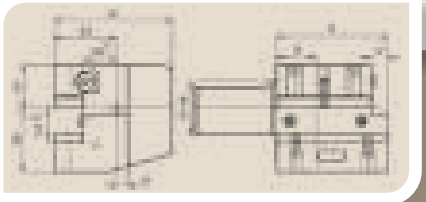




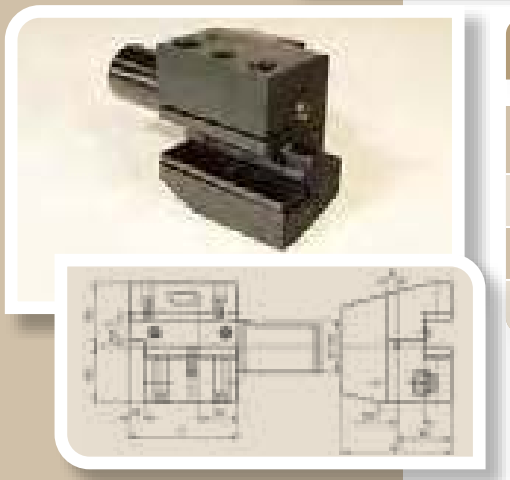
Form C2 Axial Toolholder Left / *Eksenel Kater Tutucu Sol*

CODE / *KOD*	VDI d1	b1	b2	b3	h1	h5	h6	l1	l2	l3	EURO
C2-20x16x55	VDI 20	52	27	13	16/12	25	30	55	7	30	**62.00**
C2-30x20x70	VDI 30	70	35	17	20/16	28	38	70	10	30	**76.00**
C2-40x25x85	VDI 40	85	42.5	21	25/20	32.5	48	85	12.5	30	**90.00**



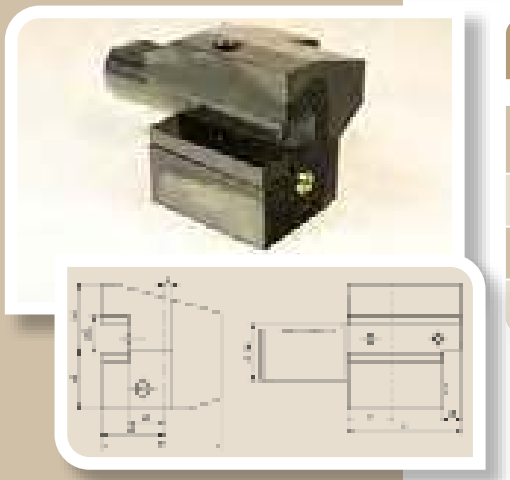


DIN 69880 VDI TOOL HOLDERS
DIN 69880 VDI TUTUCULAR



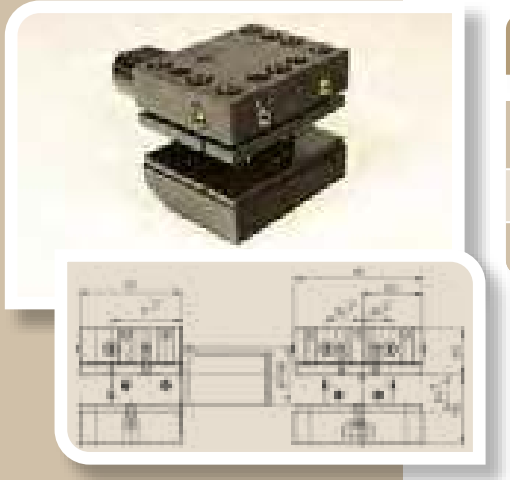
Form C3 Axial Toolholder Inverted Right / *Eksenel Kater Tutucu Ters Sağ*

CODE / *KOD*	VDI d1	b1	b2	b3	h1	h5	h6	l1	l2	l3	EURO
C3-20x16x55	VDI 20	52	27	13	16/12	25	30	55	7	30	**62.00**
C3-30x20x70	VDI 30	70	35	17	20/16	35	38	70	10	30	**76.00**
C3-40x25x85	VDI 40	85	42.5	21	25/20	42.5	48	85	12.5	30	**90.00**



Form C4 Axial Toolholder Inverted Left / *Eksenel Kater Tutucu Ters Sol*

CODE / *KOD*	VDI d1	b1	b2	b3	h1	h5	h6	l1	l2	l3	EURO
C4-20x16x50	VDI 20	65	40	26	16/12	25	30	50	-	30	**62.00**
C4-30x20x70	VDI 30	76	41	23	20/16	35	38	70	10	30	**76.00**
C4-40x25x85	VDI 40	90	47.5	25.5	25/20	42.5	48	85	12.5	30	**90.00**



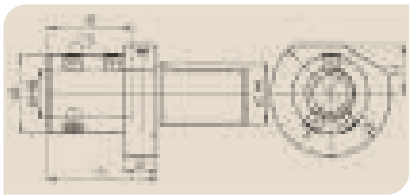
Form D1 Multiple Toolholder / *Çok Yönlü Kater Tutucu*

CODE / *KOD*	VDI d1	b1	b2	b3	h1	h5	h6	l1	l2	l3	EURO
D1-30x20x60	VDI 30	35	17	23	20/16	28	38	42	60	76	**165.00**
D1-40x25x72	VDI 40	42.5	21	25.5	25/20	32.5	48	50	72	90	**190.00**

DIN 69880 VDI TOOL HOLDERS
DIN 69880 VDI TUTUCULAR

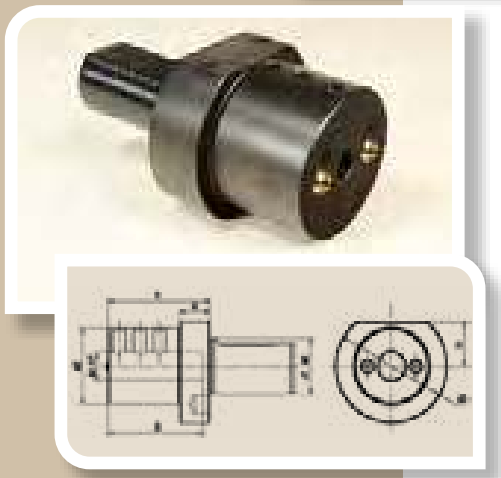
Form E1 U-Drill Indexable Drill Holder / *U-Drill Takma Uçlu Matkap Tutucu*





CODE / *KOD*	d1 VDI	d2	d3	d4	h1	l1	l2	l3	EURO
E1-20x16	VDI 20	36	50	16	-	66	18	54	**58.00**
E1-20x20	VDI 20	40	50	20	-	67	18	54	**58.00**
E1-30x16	VDI 30	36	68	16	28	66	22	54	**62.00**
E1-30x20	VDI 30	40	68	20	28	67	22	54	**62.00**
E1-30x25	VDI 30	45	68	25	28	71	22	58	**62.00**
E1-30x32	VDI 30	52	68	32	28	75	22	61	**62.00**
E1-30x40	VDI 30	65	68	40	28	90	22	72	**68.00**
E1-40x16	VDI 40	36	83	16	32.5	66	22	54	**78.00**
E1-40x20	VDI 40	40	83	20	32.5	67	22	54	**78.00**
E1-40x25	VDI 40	45	83	25	32.5	75	22	59	**78.00**
E1-40x32	VDI 40	52	83	32	32.5	75	22	61	**78.00**
E1-40x40	VDI 40	65	83	40	32.5	90	22	73	**85.00**
E1-50x20	VDI 50	40	98	20	35	67	30	54	**103.00**
E1-50x25	VDI 50	45	98	25	35	80	30	59	**103.00**
E1-50x32	VDI 50	52	98	32	35	80	30	63	**103.00**
E1-50x40	VDI 50	65	98	40	35	90	30	73	**106.00**

DIN 69880 VDI TOOL HOLDERS
DIN 69880 VDI TUTUCULAR



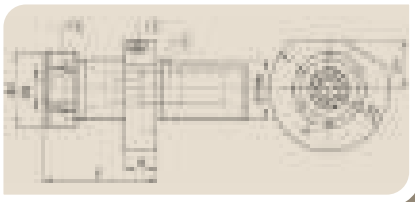
Form E2 Boring Bar Holder / *Delik Kateri Tutucu*

CODE / *KOD*	d1 VDI	d2	d3	d4	h1	l1	l2	l3	EURO
E2-20x8	VDI 20	40	50	8	23	50	18	42	**58.00**
E2-20x10	VDI 20	40	50	10	23	50	18	42	**58.00**
E2-20x12	VDI 20	40	50	12	23	50	18	42	**58.00**
E2-20x16	VDI 20	42	50	16	23	50	18	42	**58.00**
E2-20x20	VDI 20	49	50	20	23	50	18	42	**58.00**
E2-30x8	VDI 30	55	68	8	28	60	22	43	**62.00**
E2-30x10	VDI 30	55	68	10	28	60	22	43	**62.00**
E2-30x12	VDI 30	55	68	12	28	60	22	43	**62.00**
E2-30x16	VDI 30	55	68	16	28	60	22	55	**62.00**
E2-30x20	VDI 30	55	68	20	28	60	22	54	**62.00**
E2-30x25	VDI 30	55	68	25	28	60	22	54	**62.00**
E2-30x32	VDI 30	67	68	32	28	75	22	61	**62.00**
E2-40x10	VDI 40	55	83	10	32.5	75	22	43	**71.00**
E2-40x12	VDI 40	55	83	12	32.5	75	22	58	**71.00**
E2-40x16	VDI 40	55	83	16	32.5	75	22	61	**71.00**
E2-40x20	VDI 40	55	83	20	32.5	75	22	61	**71.00**
E2-40x25	VDI 40	55	83	25	32.5	75	22	61	**71.00**
E2-40x32	VDI 40	82	83	32	32.5	75	22	61	**71.00**
E2-40x40	VDI 40	82	83	40	32.5	90	22	76	**71.00**
E2-50x16	VDI 50	68	98	16	35	90	30	76	**108.00**
E2-50x20	VDI 50	68	98	20	35	90	30	76	**108.00**
E2-50x25	VDI 50	68	98	25	35	90	30	76	**108.00**
E2-50x32	VDI 50	69	98	32	35	90	30	76	**108.00**
E2-50x40	VDI 50	98	98	40	35	90	-	76	**108.00**

DIN 69880 VDI TOOL HOLDERS
DIN 69880 VDI TUTUCULAR

Form E4 ER Collet Holder / *ER Pens Tutucu*





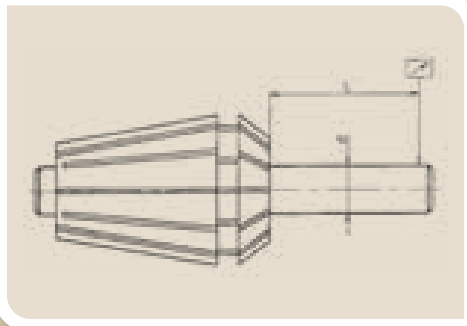
CODE / *KOD*	d1 VDI	d1	d2	d3	d4	h1	l1	l2	EURO
E4-20xER16	VDI 20	20	32	50	1-10	23	44	18	**80.00**
E4-20xER25	VDI 20	20	42	50	2-16	23	50	18	**80.00**
E4-30xER16	VDI 30	30	32	68	1-10	28	48	22	**90.00**
E4-30xER25	VDI 30	30	42	68	2-16	28	57	22	**90.00**
E4-30xER32	VDI 30	30	50	68	3-20	28	75	22	**90.00**
E4-30xER40	VDI 30	30	63	68	4-26	28	80	22	**92.00**
E4-40xER25	VDI 40	40	42	83	2-16	32.5	57	22	**100.00**
E4-40xER32	VDI 40	40	50	83	3-20	32.5	75	22	**100.00**
E4-40xER40	VDI 40	40	63	83	4-26	32.5	75	22	**102.00**
E4-50xER40	VDI 50	50	63	98	4-26	35	75	30	**115.00**

PRECISION STANDARDS
HASSASİYET STANDARTLARI



3 DIFFERENT PRECISION LEVELS / *3 AYRI HASSASİYET SINIFI*

CLASS 2	**Precise and economic, according to DIN6499 Class 2** **Max 15-20 micron run out.** *Hassas ve ekonomik, DIN 6499 Class 2 standardında* *Max.15-20 mikron salgı.*
CLASS 1	**Upper precision level according to DIN 6499 Class 1** **Max. 10 micron run out.** *Daha Hassas, DIN 6499 Class 1 standardında* *Max.10 mikron salgı.*
TOPAC	**TOP level ACcuracy with max. run out to 5 micron, suitable for very high precision , tight tolerance , high speed applications.** *Süper Hassas, max 5 mikron salgı.Çok hassas takımlar, dar toleranslı işler, yüksek hızlı işlemeye uygun.*

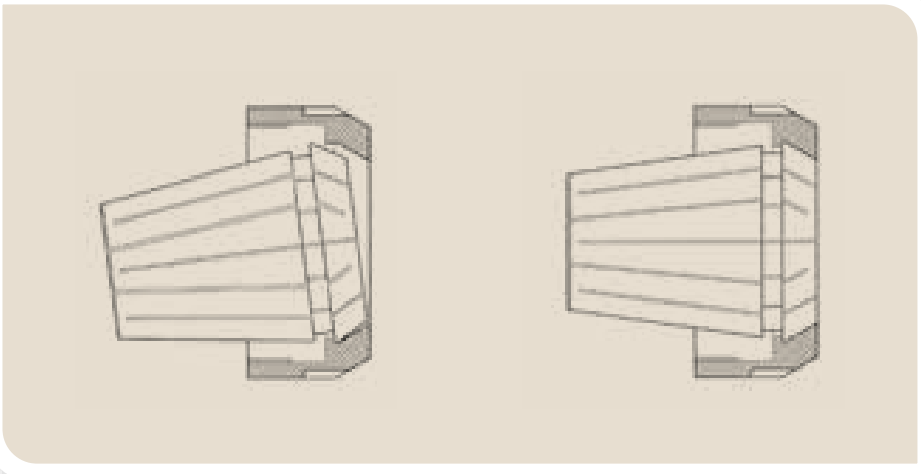


CONCENTRYCITY MAX. RUN OUT / *HASSASİYET MAX. SALGI*

Ø d	L	DIN 6499 CLASS 2	DIN 6499 CLASS 1	gürhan TOPAC
1 - 1.6	6	0.015	0.010	0.005
1.6 - 3	10	0.015	0.010	0.005
3 - 7	16	0.015	0.010	0.005
7 - 10	25	0.015	0.010	0.005
10 - 18	40	0.020	0.010	0.005
18 - 25	50	0.020	0.010	0.005
25 - 34	60	0.020	0.015	0.010

COLLET MOUNTING INSTRUCTION
PENS BAĞLAMA YÖNTEMİ





gürkan



ER COLLETS
ER PENSLER

COLLETS
PENSLER



All Gurkan collets
… are guaranteed within the run out indicated for each class
… are 100% run out checked
….are not deformed when clamped to their minimum diameter.
….do not break with small shocks.
… are friendly to your toolholder in term of their smooth surface free of sharp edges and their exact angle geometry to suit the chuck taper and its clamping nut.

Tüm Gürkan pensleri :
Belirtilen hassasiyetleri garanti eder.
% 100 kalite kontrolünden geçmiştir.
Alt çaplarını sıktığında deforme olmaz.
Küçük darbelerden kırılmaz.
Çapaksız ve hassas yüzey kalitesi ile tutucunuza zarar vermez ve kusursuz açısal geometrisiyle tutucunuza mükemmel uyum sağlar.

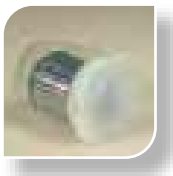
COLLETS PACKAGING / *PENS AMBALAJLARI*

The different precision levels are distinguished with different colors of caps on the plastic collets boxes.
The bodies of the plastic packs are transparent.
The transparent light blue colour bodies are only used for coolant sealed collets.

Belirtilen 3 ayrı hassasiyet grubu penslerin plastik ambalajlarındaki kapak renkleri ile ayrılmaktadır.
Plastik kutuların gövdeleri şeffaftır.
Açık mavi renkli gövdeler sadece sızdırmaz penslerde kullanılmıştır.



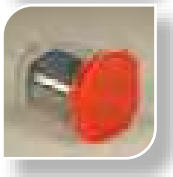
Transparent cap : CLASS 2 (max.15-20 micron run out)
Seffaf kapak : CLASS 2 (max.15-20 mikron salgı)



Yellow cap : CLASS 1 (max.10 micron run out)
Sarı Kapak : CLASS 1 (max.10 mikron salgı)



Red cap : TOPAC (max.5 micron run out)
Kırmızı kapak : TOPAC (süper hassas 5 Mikron salgı)



Green cap : Only specifies it is a tapping ER collet
Yeşil Kapak : Sadece kılavuz pensi olduğunu belli eder



Light Blue Body : Specifies it is a coolant sealed collet
Açık mavi gövde : Sızdırmaz pens olduğunu belirtir



ER 8 COLLETS
ER 8 PENSLER

DIN 6499 / ISO 15488-B

ER 8 CLASS 2

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER080102	1.0-0.5	8.10
ER080152	1.5-1.0	8.10
ER080202	2.0-1.5	7.00
ER080252	2.5-2.0	7.00
ER080302	3.0-2.5	5.40
ER080352	3.5-3.0	5.40
ER080402	4.0-3.5	5.40
ER080452	4.5-4.0	5.40
ER080502	5.0-4.5	5.40
ER080552*	5.5-5.4	13.50

ER 8 CLASS 1

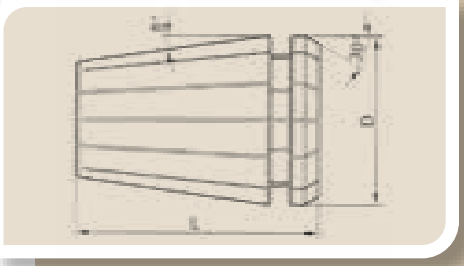
CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER080101	1.0-0.5	9.70
ER080151	1.5-1.0	9.70
ER080201	2.0-1.5	8.40
ER080251	2.5-2.0	8.40
ER080301	3.0-2.5	6.70
ER080351	3.5-3.0	6.70
ER080401	4.0-3.5	6.70
ER080451	4.5-4.0	6.70
ER080501	5.0-4.5	6.70
ER080551*	5.5-5.4	17.50

ER 8 TOPAC (5 micron)

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER08010T	1.0-0.5	13.90
ER08015T	1.5-1.0	13.90
ER08020T	2.0-1.5	11.60
ER08025T	2.5-2.0	11.60
ER08030T	3.0-2.5	9.00
ER08035T	3.5-3.0	9.00
ER08040T	4.0-3.5	9.00
ER08045T	4.5-4.0	9.00
ER08050T	5.0-4.5	9.00
ER08055T*	5.5-5.4	23.50

* Ø 5.5mm collet is shorter then standard. It can only clamp down 0.1mm
* *Ø 5.5mm pens standarttan daha kısadır. Sadece 0.1mm daralabilir.*
Inch sized collets are also available please see its section / *İnç ölçü pensler için lütfen ilgili bölüme bakınız.*





D	8.5mm
L	13mm
CLAMPING RANGE *TUTMA ARALIĞI*	1.0-5.5mm
COLLAPSING CAPACITY *TUTMA DARALMA KAPASİTESİ*	0.5mm

ER 8 COLLET SETS
ER 8 PENS TAKIMLARI

ER 8 COLLET SETS (Ø1-5mm 9 pcs.) / *ER 8 Pens Takımları (Ø1-5mm 9Ad.)*

ER 8 COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ER08SET2	**9pcs ER8 collets Class 2 Ø1-5mm in 0.5mm increment in plastic box** *9ad. ER8 pens Class 2 Ø1-5mm arası 0.5mm atlamalı plastik kutuda*	62.20

ER 8 COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ER08SET1	**9pcs ER8 collets Class 1 Ø1-5mm in 0.5mm increment in plastic box** *9ad. ER8 pens Class 1 Ø1-5mm arası 0.5mm atlamalı plastik kutuda*	74.70

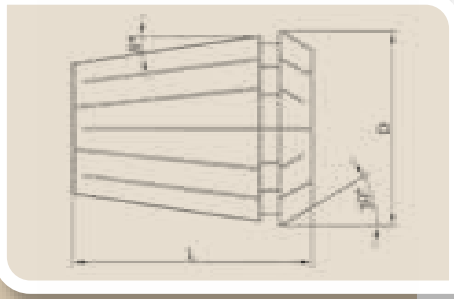
ER 8 COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ER08SETT	**9pcs ER8 collets TOPAC Ø1-5mm in 0.5mm increment in plastic box** *9ad. ER8 pens TOPAC Ø1-5mm arası 0.5mm atlamalı plastik kutuda*	101.00



ER 11 COLLETS
ER 11 PENSLER





D	11.5mm
L	18mm
CLAMPING RANGE *TUTMA ARALIĞI*	1.0-8.0mm
COLLAPSING CAPACITY* *TUTMA DARALMA KAPASİTESİ**	0.5mm

DIN 6499 / ISO 15488-B

ER 11 CLASS 2

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER110102	1.0-0.5	7.50
ER110152	1.5-1.0	7.50
ER110202	2.0-1.5	6.40
ER110252	2.5-2.0	6.40
ER110302	3.0-2.5	4.70
ER110352	3.5-3.0	4.70
ER110402	4.0-3.5	4.70
ER110452	4.5-4.0	4.70
ER110502	5.0-4.5	4.70
ER110552	5.5-5.0	4.70
ER110602	6.0-5.5	4.70
ER110652	6.5-6.0	4.70
ER110702	7.0-6.5	4.70
ER110752*	7.5-7.3	12.80
ER110802*	8.0-7.8	12.80

ER 11 CLASS 1

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER110101	1.0-0.5	9.10
ER110151	1.5-1.0	9.10
ER110201	2.0-1.5	7.80
ER110251	2.5-2.0	7.80
ER110301	3.0-2.5	6.00
ER110351	3.5-3.0	6.00
ER110401	4.0-3.5	6.00
ER110451	4.5-4.0	6.00
ER110501	5.0-4.5	6.00
ER110551	5.5-5.0	6.00
ER110601	6.0-5.5	6.00
ER110651	6.5-6.0	6.00
ER110701	7.0-6.5	6.00
ER110751*	7.5-7.3	15.80
ER110801*	8.0-7.8	15.80

ER 11 TOPAC (5 micron)

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER11010T	1.0-0.5	13.30
ER11015T	1.5-1.0	13.30
ER11020T	2.0-1.5	11.00
ER11025T	2.5-2.0	11.00
ER11030T	3.0-2.5	8.30
ER11035T	3.5-3.0	8.30
ER11040T	4.0-3.5	8.30
ER11045T	4.5-4.0	8.30
ER11050T	5.0-4.5	8.30
ER11055T	5.5-5.0	8.30
ER11060T	6.0-5.5	8.30
ER11065T	6.5-6.0	8.30
ER11070T	7.0-6.5	8.30
ER11075T*	7.5-7.3	20.30
ER11080T*	8.0-7.8	20.30

* Ø>7 (over Ø7mm dia) collets are shorter then stardard. They can only clamp down Ø -0,2mm
* Ø>7 (Ø7mm üstü çap) pensler standarttan daha kısadır. Daralma kapasitesi sadece Ø -0,2mm dir.

Inch sized collets are also available please see its section / *İnç ölçü pensler için lütfen ilgili bölüme bakınız.*

ER 11 COLLET SET
ER 11 PENS TAKIMLARI

ER 11 COLLET SETS (Ø1-7mm 13 pcs.) / *ER 11 Pens Takımları (Ø1-7mm 13Ad.)*



ER 11 COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ER11SET2	**13pcs ER11 collets Class 2 Ø1-7mm in 0.5mm increment in plastic box** *13ad. ER11 pens Class 2 Ø1-7mm arası 0.5mm atlamalı plastik kutuda*	75.10

ER 11 COLLET SET CLASS 1

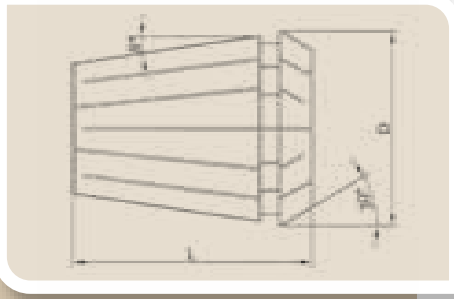
CODE/*KOD*	content - *içeriği*	EURO
ER11SET1	**13pcs ER11 collets Class 1 Ø1-7mm in 0.5mm increment in plastic box** *13ad. ER11 pens Class 1 Ø1-7mm arası 0.5mm atlamalı plastik kutuda*	92.80

ER 11 COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ER11SETT	**13pcs ER11 collets TOPAC Ø1-7mm in 0.5mm increment in plastic box** *13ad. ER11 pens TOPAC Ø1-7mm arası 0.5mm atlamalı plastik kutuda*	128.30

ER 16 COLLETS
ER 16 PENSLER





D	17.0mm
L	27.5mm
CLAMPING RANGE *TUTMA ARALIĞI*	1.0-12.5mm
COLLAPSING CAPACITY* *TUTMA DARALMA KAPASİTESİ**	1.0mm

DIN 6499 / ISO 15488-B

ER 16 CLASS 2

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER160102	1.0-0.5	5.80
ER160152	1.5-1.0	5.80
ER160202	2.0-1.5	4.80
ER160252	2.5-2.0	4.80
ER160302	3.0-2.5	3.60
ER160352	3.5-2.5	4.60
ER160402	4.0-3.0	3.60
ER160452	4.5-3.5	4.60
ER160502	5.0-4.0	3.60
ER160552	5.5-4.5	4.60
ER160602	6.0-5.0	3.60
ER160652	6.5-5.5	4.60
ER160702	7.0-6.0	3.60
ER160752	7.5-6.5	4.60
ER160802	8.0-7.0	3.60
ER160852	8.5-7.5	4.60
ER160902	9.0-8.0	3.60
ER160952	9.5-8.5	4.60
ER161002	10.0-9.0	3.60
ER161052*	10.5-10.3	12.50
ER161102*	11.0-10.8	12.50
ER161152*	11.5-11.3	12.50
ER161202*	12.0-11.8	12.50
ER161252*	12.5-12.3	12.50

ER 16 CLASS 1

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER160101	1.0-0.5	7.40
ER160151	1.5-1.0	7.40
ER160201	2.0-1.5	6.20
ER160251	2.5-2.0	6.20
ER160301	3.0-2.5	4.90
ER160351	3.5-2.5	5.90
ER160401	4.0-3.0	4.90
ER160451	4.5-3.5	5.90
ER160501	5.0-4.0	4.90
ER160551	5.5-4.5	5.90
ER160601	6.0-5.0	4.90
ER160651	6.5-5.5	5.90
ER160701	7.0-6.0	4.90
ER160751	7.5-6.5	5.90
ER160801	8.0-7.0	4.90
ER160851	8.5-7.5	5.90
ER160901	9.0-8.0	4.90
ER160951	9.5-8.5	5.90
ER161001	10.0-9.0	4.90
ER161051*	10.5-10.3	15.50
ER161101*	11.0-10.8	15.50
ER161151*	11.5-11.3	15.50
ER161201*	12.0-11.8	15.50
ER161251*	12.5-12.3	15.50

ER 16 TOPAC (5 micron)

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER16010T	1.0-0.5	11.60
ER16015T	1.5-1.0	11.60
ER16020T	2.0-1.5	9.40
ER16025T	2.5-2.0	9.40
ER16030T	3.0-2.5	7.20
ER16035T	3.5-2.5	8.20
ER16040T	4.0-3.0	7.20
ER16045T	4.5-3.5	8.20
ER16050T	5.0-4.0	7.20
ER16055T	5.5-4.5	8.20
ER16060T	6.0-5.0	7.20
ER16065T	6.5-5.5	8.20
ER16070T	7.0-6.0	7.20
ER16075T	7.5-6.5	8.20
ER16080T	8.0-7.0	7.20
ER16085T	8.5-7.5	8.20
ER16090T	9.0-8.0	7.20
ER16095T	9.5-8.5	8.20
ER16100T	10.0-9.0	7.20
ER16105T*	10.5-10.3	20.00
ER16110T*	11.0-10.8	20.00
ER16115T*	11.5-11.3	20.00
ER16120T*	12.0-11.8	20.00
ER16125T*	12.5-12.3	20.00

* Ø>10 (over Ø10mm dia) collets are shorter then stardard. They can only clamp down Ø -0,2mm
* Ø>10 (Ø10mm üstü çap) pensler standarttan daha kısadır. Daralma kapasitesi sadece Ø -0,2mm dir.

For Ø1-3mm collets, the clamping capacity is Ø-0,5mm
Ø1-3mm arası penslerde daralma kapasitesi Ø -0.5 mm dir

Inch sized collets are also available please see its section / *İnç ölçü pensler için lütfen ilgili bölüme bakınız.*

ER 16 COLLET SETS
ER 16 PENS TAKIMLARI

ER 16 COLLET SETS (Ø1-10mm 10 pcs.) / *ER 16 Pens Takımları (Ø1-10mm 10Ad.)*



ER 16 COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ER16SET2	10pcs ER16 collets Class 2 Ø1-10mm in 1.0mm increment in plastic box *10ad. ER16 pens Class 2 Ø1-10mm arası 1.0mm atlamalı plastik kutuda*	44.40

ER 16 COLLET SET CLASS 1

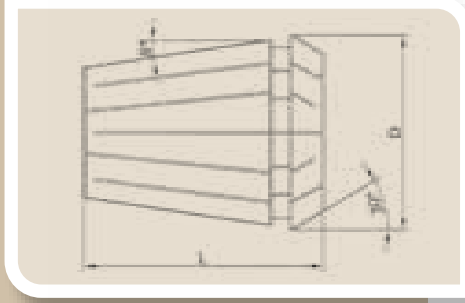
CODE/*KOD*	content - *içeriği*	EURO
ER16SET1	10pcs ER16 collets Class 1 Ø1-10mm in 1.0mm increment in plastic box *10ad. ER16 pens Class 1 Ø1-10mm arası 1.0mm atlamalı plastik kutuda*	57.80

ER 16 COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ER16SETT	10pcs ER16 collets TOPAC Ø1-10mm in 1.0mm increment in plastic box *10ad. ER16 pens TOPAC Ø1-10mm arası 1.0mm atlamalı plastik kutuda*	83.60

ER 20 COLLETS
ER 20 PENSLER





D	21.0mm
L	31.5mm
CLAMPING RANGE *TUTMA ARALIĞI*	1.0-16.0mm
COLLAPSING CAPACITY* *TUTMA DARALMA KAPASİTESİ**	1.0mm

DIN 6499 / ISO 15488-B

ER 20 CLASS 2

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER200102	1.0-0.5	6.40
ER200152	1.5-1.0	6.40
ER200202	2.0-1.5	5.60
ER200252	2.5-2.0	5.60
ER200302	3.0-2.5	4.10
ER200352	3.5-2.5	5.40
ER200402	4.0-3.0	4.10
ER200452	4.5-3.5	5.40
ER200502	5.0-4.0	4.10
ER200552	5.5-4.5	5.40
ER200602	6.0-5.0	4.10
ER200652	6.5-5.5	5.40
ER200702	7.0-6.0	4.10
ER200752	7.5-6.5	5.40
ER200802	8.0-7.0	4.10
ER200852	8.5-7.5	5.40
ER200902	9.0-8.0	4.10
ER200952	9.5-8.5	5.40
ER201002	10.0-9.0	4.10
ER201052	10.5-9.5	5.40
ER201102	11.0-10.0	4.10
ER201152	11.5-10.5	5.40
ER201202	12.0-11.0	4.10
ER201252	12.5-11.5	5.40
ER201302	13.0-12.0	4.10
ER201352*	13.5-13.3	12.50
ER201402*	14.0-13.8	12.50
ER201452*	14.5-14.3	12.50
ER201502*	15.0-14.8	12.50
ER201552*	15.5-15.3	12.50
ER201602*	16.0-15.8	12.50

ER 20 CLASS 1

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER200101	1.0-0.5	8.00
ER200151	1.5-1.0	8.00
ER200201	2.0-1.5	7.00
ER200251	2.5-2.0	7.00
ER200301	3.0-2.5	5.40
ER200351	3.5-2.5	6.70
ER200401	4.0-3.0	5.40
ER200451	4.5-3.5	6.70
ER200501	5.0-4.0	5.40
ER200551	5.5-4.5	6.70
ER200601	6.0-5.0	5.40
ER200651	6.5-5.5	6.70
ER200701	7.0-6.0	5.40
ER200751	7.5-6.5	6.70
ER200801	8.0-7.0	5.40
ER200851	8.5-7.5	6.70
ER200901	9.0-8.0	5.40
ER200951	9.5-8.5	6.70
ER201001	10.0-9.0	5.40
ER201051	10.5-9.5	6.70
ER201101	11.0-10.0	5.40
ER201151	11.5-10.5	6.70
ER201201	12.0-11.0	5.40
ER201251	12.5-11.5	6.70
ER201301	13.0-12.0	5.40
ER201351*	13.5-13.3	15.50
ER201401*	14.0-13.8	15.50
ER201451*	14.5-14.3	15.50
ER201501*	15.0-14.8	15.50
ER201551*	15.5-15.3	15.50
ER201601*	16.0-15.8	15.50

ER 20 TOPAC (5 micron)

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER20010T	1.0-0.5	12.20
ER20015T	1.5-1.0	12.20
ER20020T	2.0-1.5	10.20
ER20025T	2.5-2.0	10.20
ER20030T	3.0-2.5	7.70
ER20035T	3.5-2.5	9.00
ER20040T	4.0-3.0	7.70
ER20045T	4.5-3.5	9.00
ER20050T	5.0-4.0	7.70
ER20055T	5.5-4.5	9.00
ER20060T	6.0-5.0	7.70
ER20065T	6.5-5.5	9.00
ER20070T	7.0-6.0	7.70
ER20075T	7.5-6.5	9.00
ER20080T	8.0-7.0	7.70
ER20085T	8.5-7.5	9.00
ER20090T	9.0-8.0	7.70
ER20095T	9.5-8.5	9.00
ER20100T	10.0-9.0	7.70
ER20105T	10.5-9.5	9.00
ER20110T	11.0-10.0	7.70
ER20115T	11.5-10.5	9.00
ER20120T	12.0-11.0	7.70
ER20125T	12.5-11.5	9.00
ER20130T	13.0-12.0	7.70
ER20135T*	13.5-13.3	20.00
ER20140T*	14.0-13.8	20.00
ER20145T*	14.5-14.3	20.00
ER20150T*	15.0-14.8	20.00
ER20155T*	15.5-15.3	20.00
ER20160T*	16.0-15.8	20.00

* Ø>13 (over Ø13mm dia) collets are shorter then stardard. They can only clamp down Ø -0,2mm
* Ø>13 (Ø13mm üstü çap) pensler standarttan daha kısadır. Daralma kapasitesi sadece Ø -0,2mm dir.

For Ø1-3mm collets, the clamping capacity is Ø-0,5mm
Ø1-3mm arası penslerde daralma kapasitesi Ø -0.5 mm dir

Inch sized collets are also available please see its section / *İnç ölçü pensler için lütfen ilgili bölüme bakınız.*

ER 20 COLLET SETS
ER 20 PENS TAKIMLARI

ER 20 COLLET SETS (Ø2-13mm 12pcs.) / *ER 20 Pens Takımları (Ø2-13mm 12 Ad.)*



ER 20 COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ER20SET2	**12pcs ER20 collets Class 2 Ø2-13mm in 1.0mm increment in plastic box** *12Ad. ER20 pens Class 2 Ø2-13mm arası 1.0mm atlamalı plastik kutuda*	55.70

ER 20 COLLET SET CLASS 1

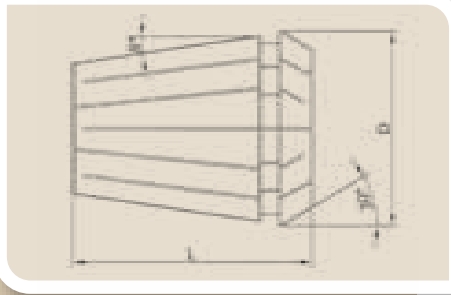
CODE/*KOD*	content - *içeriği*	EURO
ER20SET1	**12pcs ER20 collets Class 1 Ø2-13mm in 1.0mm increment in plastic box** *12Ad. ER20 pens Class 1 Ø2-13mm arası 1.0mm atlamalı plastik kutuda*	71.40

ER 20 COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ER20SETT	**12pcs ER20 collets TOPAC Ø2-13mm in 1.0mm increment in plastic box** *12Ad. ER20 pens TOPAC Ø2-13mm arası 1.0mm atlamalı plastik kutuda*	99.90

ER 25 COLLETS
ER 25 PENSLER





D	26.0mm
L	34.0mm
CLAMPING RANGE *TUTMA ARALIĞI*	1.0-20.0mm
COLLAPSING CAPACITY* *TUTMA DARALMA KAPASİTESİ**	1.0mm

DIN 6499 / ISO 15488-B

ER 25 CLASS 2

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER250102	1.0-0.5	7.70
ER250152	1.5-1.0	7.70
ER250202	2.0-1.5	5.90
ER250252	2.5-2.0	5.90
ER250302	3.0-2.5	4.40
ER250352	3.5-2.5	5.90
ER250402	4.0-3.0	4.40
ER250452	4.5-3.5	5.90
ER250502	5.0-4.0	4.40
ER250552	5.5-4.5	5.90
ER250602	6.0-5.0	4.40
ER250652	6.5-5.5	5.90
ER250702	7.0-6.0	4.40
ER250752	7.5-6.5	5.90
ER250802	8.0-7.0	4.40
ER250852	8.5-7.5	5.90
ER250902	9.0-8.0	4.40
ER250952	9.5-8.5	5.90
ER251002	10.0-9.0	4.40
ER251052	10.5-9.5	5.90
ER251102	11.0-10.0	4.40
ER251152	11.5-10.5	5.90
ER251202	12.0-11.0	4.40
ER251252	12.5-11.5	5.90
ER251302	13.0-12.0	4.40
ER251352	13.5-12.5	5.90
ER251402	14.0-13.0	4.40
ER251452	14.5-13.5	5.90
ER251502	15.0-14.0	4.40
ER251552	15.5-14.5	5.90
ER251602	16.0-15.0	4.40
ER251652*	16.5-16.3	12.50
ER251702*	17.0-16.8	12.50
ER251752*	17.5-17.3	12.50
ER251802*	18.0-17.8	12.50
ER251852*	18.5-18.3	12.50
ER251902*	19.0-18.8	12.50
ER251952*	19.5-19.3	12.50
ER252002*	20.0-19.8	12.50

ER 25 CLASS 1

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER250101	1.0-0.5	9.40
ER250151	1.5-1.0	9.40
ER250201	2.0-1.5	7.40
ER250251	2.5-2.0	7.40
ER250301	3.0-2.5	5.80
ER250351	3.5-2.5	7.30
ER250401	4.0-3.0	5.80
ER250451	4.5-3.5	7.30
ER250501	5.0-4.0	5.80
ER250551	5.5-4.5	7.30
ER250601	6.0-5.0	5.80
ER250651	6.5-5.5	7.30
ER250701	7.0-6.0	5.80
ER250751	7.5-6.5	7.30
ER250801	8.0-7.0	5.80
ER250851	8.5-7.5	7.30
ER250901	9.0-8.0	5.80
ER250951	9.5-8.5	7.30
ER251001	10.0-9.0	5.80
ER251051	10.5-9.5	7.30
ER251101	11.0-10.0	5.80
ER251151	11.5-10.5	7.30
ER251201	12.0-11.0	5.80
ER251251	12.5-11.5	7.30
ER251301	13.0-12.0	5.80
ER251351	13.5-12.5	7.30
ER251401	14.0-13.0	5.80
ER251451	14.5-13.5	7.30
ER251501	15.0-14.0	5.80
ER251551	15.5-14.5	7.30
ER251601	16.0-15.0	5.80
ER251651	16.5-16.3	15.50
ER251701*	17.0-16.8	15.50
ER251751*	17.5-17.3	15.50
ER251801*	18.0-17.8	15.50
ER251851*	18.5-18.3	15.50
ER251901*	19.0-18.8	15.50
ER251951*	19.5-19.3	15.50
ER252001*	20.0-19.8	15.50

ER 25 TOPAC (5 micron)

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER25010T	1.0-0.5	13.60
ER25015T	1.5-1.0	13.60
ER25020T	2.0-1.5	10.60
ER25025T	2.5-2.0	10.60
ER25030T	3.0-2.5	8.10
ER25035T	3.5-2.5	9.60
ER25040T	4.0-3.0	8.10
ER25045T	4.5-3.5	9.60
ER25050T	5.0-4.0	8.10
ER25055T	5.5-4.5	9.60
ER25060T	6.0-5.0	8.10
ER25065T	6.5-5.5	9.60
ER25070T	7.0-6.0	8.10
ER25075T	7.5-6.5	9.60
ER25080T	8.0-7.0	8.10
ER25085T	8.5-7.5	9.60
ER25090T	9.0-8.0	8.10
ER25095T	9.5-8.5	9.60
ER25100T	10.0-9.0	8.10
ER25105T	10.5-9.5	9.60
ER25110T	11.0-10.0	8.10
ER25115T	11.5-10.5	9.60
ER25120T	12.0-11.0	8.10
ER25125T	12.5-11.5	9.60
ER25130T	13.0-12.0	8.10
ER25135T	13.5-12.5	9.60
ER25140T	14.0-13.0	8.10
ER25145T	14.5-13.5	9.60
ER25150T	15.0-14.0	8.10
ER25155T	15.5-14.5	9.60
ER25160T	16.0-15.0	8.10
ER25165T	16.5-16.3	20.00
ER25170T*	17.0-16.8	20.00
ER25175T*	17.5-17.3	20.00
ER25180T*	18.0-17.8	20.00
ER25185T*	18.5-18.3	20.00
ER25190T*	19.0-18.8	20.00
ER25195T*	19.5-19.3	20.00
ER25200T*	20.0-19.8	20.00

* Ø>16 (over Ø16mm dia) collets are shorter then stardard. They can only clamp down Ø -0,2mm
* Ø>16 (Ø16mm üstü çap) pensler standarttan daha kısadır. Daralma kapasitesi sadece Ø -0,2mm dir.

For Ø1-3mm collets, the clamping capacity is Ø-0,5mm
Ø1-3mm arası penslerde daralma kapasitesi Ø -0.5 mm dir

Inch sized collets are also available please see its section / *İnç ölçü pensler için lütfen ilgili bölüme bakınız.*

ER 25 COLLET SETS
ER 25 PENS TAKIMLARI

ER 25 COLLET SETS (Ø2-16mm 15pcs.) / *ER 25 Pens Takımları (Ø2-16mm 15Ad.)*



ER 25 COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ER25SET2	**15pcs ER25 collets Class 2 Ø2-16mm in 1.0mm increment in plastic box** *15Ad. ER25 pens Class 2 Ø2-16mm arası 1.0mm atlamalı plastik kutuda*	76.30

ER 25 COLLET SET CLASS 1

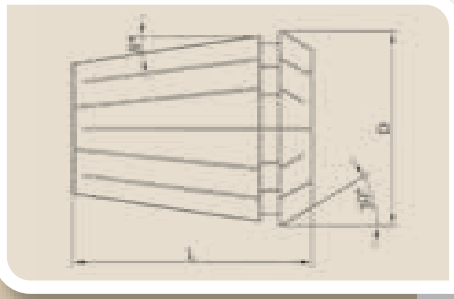
CODE/*KOD*	content - *içeriği*	EURO
ER25SET1	**15pcs ER25 collets Class 1 Ø2-16mm in 1.0mm increment in plastic box** *15Ad. ER25 pens Class 1 Ø2-16mm arası 1.0mm atlamalı plastik kutuda*	97.40

ER 25 COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ER25SETT	**15pcs ER25 collets TOPAC Ø2-16mm in 1.0mm increment in plastic box** *15Ad. ER25 pens TOPAC Ø2-16mm arası 1.0mm atlamalı plastik kutuda*	132.80

ER 32 COLLETS
ER 32 PENSLER





D	33.0mm
L	40.0mm
CLAMPING RANGE *TUTMA ARALIĞI*	1.0-25.0mm
COLLAPSING CAPACITY* *TUTMA DARALMA KAPASİTESİ**	1.0mm

DIN 6499 / ISO 15488-B

ER 32 CLASS 2

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER320102	1.0-0.5	9.60
ER320152	1.5-1.0	9.60
ER320202	2.0-1.5	7.90
ER320252	2.5-2.0	7.90
ER320302	3.0-2.5	4.60
ER320352	3.5-2.5	6.40
ER320402	4.0-3.0	4.60
ER320452	4.5-3.5	6.40
ER320502	5.0-4.0	4.60
ER320552	5.5-4.5	6.40
ER320602	6.0-5.0	4.60
ER320652	6.5-5.5	6.40
ER320702	7.0-6.0	4.60
ER320752	7.5-6.5	6.40
ER320802	8.0-7.0	4.60
ER320852	8.5-7.5	6.40
ER320902	9.0-8.0	4.60
ER320952	9.5-8.5	6.40
ER321002	10.0-9.0	4.60
ER321052	10.5-9.5	6.40
ER321102	11.0-10.0	4.60
ER321152	11.5-10.5	6.40
ER321202	12.0-11.0	4.60
ER321252	12.5-11.5	6.40
ER321302	13.0-12.0	4.60
ER321352	13.5-12.5	6.40
ER321402	14.0-13.0	4.60
ER321452	14.5-13.5	6.40
ER321502	15.0-14.0	4.60
ER321552	15.5-14.5	6.40
ER321602	16.0-15.0	4.60
ER321652	16.5-15.5	6.40
ER321702	17.0-16.0	4.60
ER321752	17.5-16.5	6.40
ER321802	18.0-17.0	4.60
ER321852	18.5-17.5	6.40
ER321902	19.0-18.0	4.60
ER321952	19.5-18.5	6.40
ER322002	20.0-19.0	4.60
ER322102*	21.0-20.8	12.50
ER322202*	22.0-21.8	12.50
ER322302*	23.0-22.8	12.50
ER322402*	24.0-23.8	12.50
ER322502*	25.0-24.8	12.50

ER 32 CLASS 1

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER320101	1.0-0.5	11.90
ER320151	1.5-1.0	11.90
ER320201	2.0-1.5	10.10
ER320251	2.5-2.0	10.10
ER320301	3.0-2.5	6.20
ER320351	3.5-2.5	8.00
ER320401	4.0-3.0	6.20
ER320451	4.5-3.5	8.00
ER320501	5.0-4.0	6.20
ER320551	5.5-4.5	8.00
ER320601	6.0-5.0	6.20
ER320651	6.5-5.5	8.00
ER320701	7.0-6.0	6.20
ER320751	7.5-6.5	8.00
ER320801	8.0-7.0	6.20
ER320851	8.5-7.5	8.00
ER320901	9.0-8.0	6.20
ER320951	9.5-8.5	8.00
ER321001	10.0-9.0	6.20
ER321051	10.5-9.5	8.00
ER321101	11.0-10.0	6.20
ER321151	11.5-10.5	8.00
ER321201	12.0-11.0	6.20
ER321251	12.5-11.5	8.00
ER321301	13.0-12.0	6.20
ER321351	13.5-12.5	8.00
ER321401	14.0-13.0	6.20
ER321451	14.5-13.5	8.00
ER321501	15.0-14.0	6.20
ER321551	15.5-14.5	8.00
ER321601	16.0-15.0	6.20
ER321651	16.5-15.5	8.00
ER321701	17.0-16.0	6.20
ER321751	17.5-16.5	8.00
ER321801	18.0-17.0	6.20
ER321851	18.5-17.5	8.00
ER321901	19.0-18.0	6.20
ER321951	19.5-18.5	8.00
ER322001	20.0-19.0	6.20
ER322101*	21.0-20.8	15.50
ER322201*	22.0-21.8	15.50
ER322301*	23.0-22.8	15.50
ER322401*	24.0-23.8	15.50
ER322501*	25.0-24.8	15.50

ER 32 TOPAC (5 micron)

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER32010T	1.0-0.5	16.00
ER32015T	1.5-1.0	16.00
ER32020T	2.0-1.5	13.20
ER32025T	2.5-2.0	13.20
ER32030T	3.0-2.5	8.50
ER32035T	3.5-2.5	10.30
ER32040T	4.0-3.0	8.50
ER32045T	4.5-3.5	10.30
ER32050T	5.0-4.0	8.50
ER32055T	5.5-4.5	10.30
ER32060T	6.0-5.0	8.50
ER32065T	6.5-5.5	10.30
ER32070T	7.0-6.0	8.50
ER32075T	7.5-6.5	10.30
ER32080T	8.0-7.0	8.50
ER32085T	8.5-7.5	10.30
ER32090T	9.0-8.0	8.50
ER32095T	9.5-8.5	10.30
ER32100T	10.0-9.0	8.50
ER32105T	10.5-9.5	10.30
ER32110T	11.0-10.0	8.50
ER32115T	11.5-10.5	10.30
ER32120T	12.0-11.0	8.50
ER32125T	12.5-11.5	10.30
ER32130T	13.0-12.0	8.50
ER32135T	13.5-12.5	10.30
ER32140T	14.0-13.0	8.50
ER32145T	14.5-13.5	10.30
ER32150T	15.0-14.0	8.50
ER32155T	15.5-14.5	10.30
ER32160T	16.0-15.0	8.50
ER32165T	16.5-15.5	10.30
ER32170T	17.0-16.0	8.50
ER32175T	17.5-16.5	10.30
ER32180T	18.0-17.0	8.50
ER32185T	18.5-17.5	10.30
ER32190T	19.0-18.0	8.50
ER32195T	19.5-18.5	10.30
ER32200T	20.0-19.0	8.50
ER32210T*	21.0-20.8	20.00
ER32220T*	22.0-21.8	20.00
ER32230T*	23.0-22.8	20.00
ER32240T*	24.0-23.8	20.00
ER32250T*	25.0-24.8	20.00

ER 32 COLLET SETS
ER 32 PENS TAKIMLARI

ER 32 COLLET SETS (Ø3-20mm 18pcs.) / *ER 32 Pens Takımları (Ø3-20mm 18Ad.)*



ER 32 COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ER32SET2	**18pcs ER32 collets Class 2 Ø3-20mm in 1.0mm increment in plastic box** *18Ad. ER25 pens Class 2 Ø3-20mm arası 1.0mm atlamalı plastik kutuda*	92.80

ER 32 COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ER32SET1	**18pcs ER32 collets Class 1 Ø3-20mm in 1.0mm increment in plastic box** *18Ad. ER25 pens Class 1 Ø3-20mm arası 1.0mm atlamalı plastik kutuda*	121.60

ER 32 COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ER32SETT	**18pcs ER32 collets TOPAC Ø3-20mm in 1.0mm increment in plastic box** *18Ad. ER25 pens TOPAC Ø3-20mm arası 1.0mm atlamalı plastik kutuda*	163.00

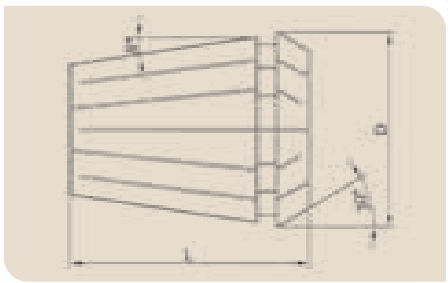
* Ø>20 (over Ø20mm dia) collets are shorter then stardard. They can only clamp down Ø -0,2mm
* Ø>20 (Ø20mm üstü çap) pensler standarttan daha kısadır. Daralma kapasitesi sadece Ø -0,2mm dir.

For Ø1-3mm collets, the clamping capacity is Ø-0,5mm
Ø1-3mm arası penslerde daralma kapasitesi Ø -0.5 mm dir

Inch sized collets are also available please see its section / *İnç ölçü pensler için lütfen ilgili bölüme bakınız.*

ER 40 COLLETS
ER 40 PENSLER





D	41.0mm
L	46.0mm
CLAMPING RANGE *TUTMA ARALIĞI*	1.0-32.0mm
CLAMMPING STEPS* *TUTMA KAPASİTESİ**	1.0mm

DIN 6499 / ISO 15488-B

ER 40 CLASS 2

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER400102	1.0-0.5	12.50
ER400152	1.5-1.0	12.50
ER400202	2.0-1.5	10.20
ER400252	2.5-2.0	10.20
ER400302	3.0-2.5	8.20
ER400352	3.5-2.5	8.20
ER400402	4.0-3.0	5.80
ER400452	4.5-3.5	8.10
ER400502	5.0-4.0	5.80
ER400602	6.0-5.0	5.80
ER400702	7.0-6.0	5.80
ER400802	8.0-7.0	5.80
ER400902	9.0-8.0	5.80
ER401002	10.0-9.0	5.80
ER401102	11.0-10.0	5.80
ER401202	12.0-11.0	5.80
ER401302	13.0-12.0	5.80
ER401402	14.0-13.0	5.80
ER401502	15.0-14.0	5.80
ER401602	16.0-15.0	5.80
ER401702	17.0-16.0	5.80
ER401802	18.0-17.0	5.80
ER401902	19.0-18.0	5.80
ER402002	20.0-19.0	5.80
ER402102	21.0-20.0	5.80
ER402202	22.0-21.0	5.80
ER402302	23.0-22.0	5.80
ER402402	24.0-23.0	5.80
ER402502	25.0-24.0	5.80
ER402602	26.0-25.0	5.80
ER402702*	27.0-26.8	13.50
ER402802*	28.0-27.8	13.50
ER402902*	29.0-28.8	13.50
ER403002*	30.0-29.8	13.50
ER403102*	31.0-30.8	13.50
ER403202*	32.0-31.8	13.50

ER 40 CLASS 1

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER400101	1.0-0.5	14.50
ER400151	1.5-1.0	14.50
ER400201	2.0-1.5	12.10
ER400251	2.5-2.0	12.10
ER400301	3.0-2.5	10.20
ER400351	3.5-2.5	10.20
ER400401	4.0-3.0	7.70
ER400451	4.5-3.5	10.10
ER400501	5.0-4.0	7.70
ER400601	6.0-5.0	7.70
ER400701	7.0-6.0	7.70
ER400801	8.0-7.0	7.70
ER400901	9.0-8.0	7.70
ER401001	10.0-9.0	7.70
ER401101	11.0-10.0	7.70
ER401201	12.0-11.0	7.70
ER401301	13.0-12.0	7.70
ER401401	14.0-13.0	7.70
ER401501	15.0-14.0	7.70
ER401601	16.0-15.0	7.70
ER401701	17.0-16.0	7.70
ER401801	18.0-17.0	7.70
ER401901	19.0-18.0	7.70
ER402001	20.0-19.0	7.70
ER402101	21.0-20.0	7.70
ER402201	22.0-21.0	7.70
ER402301	23.0-22.0	7.70
ER402401	24.0-23.0	7.70
ER402501	25.0-24.0	7.70
ER402601	26.0-25.0	7.70
ER402701*	27.0-26.8	16.50
ER402801*	28.0-27.8	16.50
ER402901*	29.0-28.8	16.50
ER403001*	30.0-29.8	16.50
ER403101*	31.0-30.8	16.50
ER403201*	32.0-31.8	16.50

ER 40 TOPAC (5 micron)

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER40010T	1.0-0.5	18.50
ER40015T	1.5-1.0	18.50
ER40020T	2.0-1.5	15.30
ER40025T	2.5-2.0	15.30
ER40030T	3.0-2.5	13.00
ER40035T	3.5-2.5	13.00
ER40040T	4.0-3.0	10.00
ER40045T	4.5-3.5	12.50
ER40050T	5.0-4.0	10.00
ER40060T	6.0-5.0	10.00
ER40070T	7.0-6.0	10.00
ER40080T	8.0-7.0	10.00
ER40090T	9.0-8.0	10.00
ER40100T	10.0-9.0	10.00
ER40110T	11.0-10.0	10.00
ER40120T	12.0-11.0	10.00
ER40130T	13.0-12.0	10.00
ER40140T	14.0-13.0	10.00
ER40150T	15.0-14.0	10.00
ER40160T	16.0-15.0	10.00
ER40170T	17.0-16.0	10.00
ER40180T	18.0-17.0	10.00
ER40190T	19.0-18.0	10.00
ER40200T	20.0-19.0	10.00
ER40210T	21.0-20.0	10.00
ER40220T	22.0-21.0	10.00
ER40230T	23.0-22.0	10.00
ER40240T	24.0-23.0	10.00
ER40250T	25.0-24.0	10.00
ER40260T	26.0-25.0	10.00
ER40270T*	27.0-26.8	21.00
ER40280T*	28.0-27.8	21.00
ER40290T*	29.0-28.8	21.00
ER40300T*	30.0-29.8	21.00
ER40310T*	31.0-30.8	21.00
ER40320T*	32.0-31.8	21.00

* Ø>26 (over Ø26mm dia) collets are shorter then stardard. They can only clamp down Ø -0,2mm
* Ø>26 (Ø26mm üstü çap) pensler standarttan daha kısadır. Daralma kapasitesi sadece Ø -0,2mm dir.

For Ø1-3mm collets, the clamping capacity is Ø-0,5mm
Ø1-3mm arası penslerde daralma kapasitesi Ø -0.5 mm dir

Inch sized collets are also available please see its section / *İnç ölçü pensler için lütfen ilgili bölüme bakınız.*

ER 40 COLLET SETS
ER 40 PENS TAKIMLARI

ER 40 COLLET SETS (Ø4-26mm 23pcs.) / *ER 40 Pens Takımları (Ø4-26mm 23Ad.)*



ER 40 COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ER40SET2	**23pcs ER40 collets Class 2 Ø4-26mm in 1.0mm increment in plastic box** *23Ad. ER40 pens Class 2 Ø4-26mm arası 1.0mm atlamalı plastik kutuda*	153.40

ER 40 COLLET SET CLASS 1

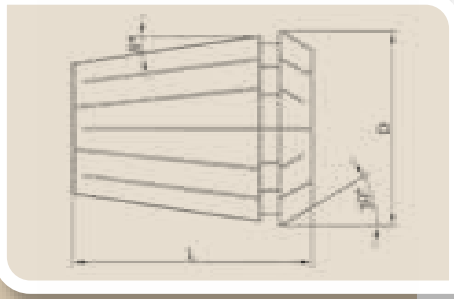
CODE/*KOD*	content - *içeriği*	EURO
ER40SET1	**23pcs ER40 collets Class 1 Ø4-26mm in 1.0mm increment in plastic box** *23Ad. ER40 pens Class 1 Ø4-26mm arası 1.0mm atlamalı plastik kutuda*	197.10

ER 40 COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ER40SETT	**23pcs ER40 collets TOPAC Ø4-26mm in 1.0mm increment in plastic box** *23Ad. ER40 pens TOPAC Ø4-26mm arası 1.0mm atlamalı plastik kutuda*	250.00

ER 50 COLLETS
ER 50 PENSLER





D	52.0mm
L	60.0mm
CLAMPING RANGE *TUTMA ARALIĞI*	6.0-40.0mm
CLAMMPING STEPS* *TUTMA KAPASİTESİ**	2.0mm

DIN 6499 / ISO 15488-B

ER 50 CLASS 2

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER500602	6.0-5.0	22.00
ER500702	7.0-6.0	22.00
ER500802	8.0-7.0	22.00
ER500902	9.0-8.0	22.00
ER501002	10.0-9.0	22.00
ER501102	11.0-10.0	22.00
ER501202	12.0-10.0	17.00
ER501302	13.0-11.0	22.00
ER501402	14.0-12.0	17.00
ER501502	15.0-13.0	22.00
ER501602	16.0-14.0	17.00
ER501702	17.0-15.0	22.00
ER501802	18.0-16.0	17.00
ER501902	19.0-17.0	22.00
ER502002	20.0-18.0	17.00
ER502102	21.0-19.0	22.00
ER502202	22.0-20.0	17.00
ER502302	23.0-21.0	22.00
ER502402	24.0-22.0	17.00
ER502502	25.0-23.0	17.00
ER502602	26.0-24.0	17.00
ER502702	27.0-25.0	22.00
ER502802	28.0-26.0	17.00
ER502902	29.0-27.0	22.00
ER503002	30.0-28.0	17.00
ER503102	31.0-29.0	22.00
ER503202	32.0-30.0	17.00
ER503302	33.0-31.0	22.00
ER503402	34.0-32.0	17.00
ER503502*	35.0-34.8	30.00
ER503602*	36.0-35.8	30.00
ER503702*	37.0-36.8	30.00
ER503802*	38.0-37.8	30.00
ER503902*	32.0-31.8	30.00
ER504002*	40.0-39.8	30.00

ER 50 CLASS 1

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER500601	6.0-5.0	25.00
ER500701	7.0-6.0	25.00
ER500801	8.0-7.0	25.00
ER500901	9.0-8.0	25.00
ER501001	10.0-9.0	25.00
ER501101	11.0-10.0	25.00
ER501201	12.0-10.0	20.00
ER501301	13.0-11.0	25.00
ER501401	14.0-12.0	20.00
ER501501	15.0-13.0	25.00
ER501601	16.0-14.0	20.00
ER501701	17.0-15.0	25.00
ER501801	18.0-16.0	20.00
ER501901	19.0-17.0	25.00
ER502001	20.0-18.0	20.00
ER502101	21.0-19.0	25.00
ER502201	22.0-20.0	20.00
ER502301	23.0-21.0	25.00
ER502401	24.0-22.0	20.00
ER502501	25.0-23.0	20.00
ER502601	26.0-24.0	20.00
ER502701	27.0-25.0	25.00
ER502801	28.0-26.0	20.00
ER502901	29.0-27.0	25.00
ER503001	30.0-28.0	20.00
ER503101	31.0-29.0	25.00
ER503201	32.0-30.0	20.00
ER503301	33.0-31.0	25.00
ER503401	34.0-32.0	20.00
ER503501*	35.0-34.8	33.00
ER503601*	36.0-35.8	33.00
ER503701*	37.0-36.8	33.00
ER503801*	38.0-37.8	33.00
ER503901*	32.0-31.8	33.00
ER504001*	40.0-39.8	33.00

ER 50 TOPAC (5 micron)

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ER50060T	6.0-5.0	29.00
ER50070T	7.0-6.0	29.00
ER50080T	8.0-7.0	29.00
ER50090T	9.0-8.0	29.00
ER50100T	10.0-9.0	29.00
ER50110T	11.0-10.0	29.00
ER50120T	12.0-10.0	24.00
ER50130T	13.0-11.0	29.00
ER50140T	14.0-12.0	24.00
ER50150T	15.0-13.0	29.00
ER50160T	16.0-14.0	24.00
ER50170T	17.0-15.0	29.00
ER50180T	18.0-16.0	24.00
ER50190T	19.0-17.0	29.00
ER50200T	20.0-18.0	24.00
ER50210T	21.0-19.0	29.00
ER50220T	22.0-20.0	24.00
ER50230T	23.0-21.0	29.00
ER50240T	24.0-22.0	24.00
ER50250T	25.0-23.0	24.00
ER50260T	26.0-24.0	24.00
ER50270T	27.0-25.0	29.00
ER50280T	28.0-26.0	24.00
ER50290T	29.0-27.0	29.00
ER50300T	30.0-28.0	24.00
ER50310T	31.0-29.0	29.00
ER50320T	32.0-30.0	24.00
ER50330T	33.0-31.0	29.00
ER50340T	34.0-32.0	24.00
ER50350T*	35.0-34.8	37.00
ER50360T*	36.0-35.8	37.00
ER50370T*	37.0-36.8	37.00
ER50380T*	38.0-37.8	37.00
ER50390T*	32.0-31.8	37.00
ER50400T*	40.0-39.8	37.00

ER 50 COLLET SETS
ER 50 PENS TAKIMLARI

ER 50 COLLET SETS (Ø12-34mm 12pcs.) / *ER 50 Pens Takımları (Ø12-34mm 12Ad.)*



ER 50 COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ER50SET2	**12pcs ER50 collets Class 2 Ø12-34mm in 2.0mm increment in plastic box** *12Ad. ER50 pens Class 2 Ø12-34mm arası 2.0mm atlamalı plastik kutuda*	224.00

ER 50 COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ER50SET1	**12pcs ER50 collets Class 1 Ø12-34mm in 2.0mm increment in plastic box** *12Ad. ER50 pens Class 1 Ø12-34mm arası 2.0mm atlamalı plastik kutuda*	260.00

ER 50 COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ER50SETT	**12pcs ER50 collets TOPAC Ø12-34mm in 2.0mm increment in plastic box** *12Ad. ER50 pens TOPAC Ø12-34mm arası 2.0mm atlamalı plastik kutuda*	308.00

Normally ER50 sets do not contain 25 mm collet. It can be included in the set instead of 26mm if requested.
Normalde ER50 pens takımlarında 25mm pens yoktur. Bu pens istendiğinde 26mm nin yerine takıma konulabilir.

* Ø>35 (over Ø35mm dia) collets are shorter then stardard. They can only clamp down Ø -0,2mm
* Ø>35 (Ø35mm üstü çap) pensler standarttan daha kısadır. Daralma kapasitesi sadece Ø -0,2mm dir.

For Ø6-11mm collets, the clamping capacity is Ø -1.0mm
Ø6-11mm arası penslerde daralma kapasitesi Ø -1.0 mm dir

Inch sized collets are also available please see its section / *İnç ölçü pensler için lütfen ilgili bölüme bakınız.*

gürkan





ER COLLET SETS WITH CHUCKS

BAŞLIKLI ER PENS TAKIMLARI

ER COLLET SET WITH CHUCKS
BAŞLIKLI ER PENS TAKIMLARI



CONTENT - *İÇERİĞİ*	CODE/*KOD*	EURO
10 pcs ER16 collets Class 2 (Ø1-2-3-4-5-6-7-8-9-10) 1 pce ER16 collet chuck 1 pce ER16 spanner in wooden box *10 Ad. ER16 pens Class 2 (Ø1-2-3-4-5-6-7-8-9-10) 1 Ad. ER16 Pens Başlığı 1 Ad. ER16 anahtar ahşap kutuda*	**BT30ER16S10**	**92.40**
	BT40ER16S10	**91.40**
	DIN30ER16S10	**92.40**
	DIN40ER16S10	**91.40**
	ISO30ER16S10	**92.40**
	ISO40ER16S10	**91.40**
	HSK63ER16S10	**123.40**
	ER1620130HS10	**87.40**



12pcs ER20 collets Class 2 (Ø2-3-4-5-6-7-8-9-10-11-12-13) 1 pce ER20 collet chuck 1 pce ER20 spanner in wooden box *12 Ad. ER20 Pens Class 2 (Ø2-3-4-5-6-7-8-9-10-11-12-13) 1 Ad. ER20 Pens Başlığı 1 Ad. ER20 anahtar ahşap kutuda*	**BT40ER20S12**	**102.90**
	DIN40ER20S12	**102.90**
	MT2ER20S12	**101.90**
	ER2020140HS12	**99.90**
	ER2025110HS12	**99.90**



14pcs ER25 collets Class 2 (Ø3-4-5-6-7-8-9-10-11-12-13-14-15-16) 1 pce ER25 collet chuck 1 pce ER25 spanner in wooden box *14 Ad. ER25 pens Class 2 (Ø3-4-5-6-7-8-9-10-11-12-13-14-15-16) 1 Ad. ER25 Pens Başlığı 1 Ad ER25 anahtar ahşap kutuda*	**BT30ER25S14**	**118.40**
	BT40ER25S14	**117.40**
	DIN30ER25S14	**118.40**
	DIN40ER25S14	**117.40**
	ISO30ER25S14	**118.40**
	ISO40ER25S14	**117.40**
	MT2ER25S14	**116.40**
	MT3ER25S14	**117.40**
	ER2532110S14	**115.40**
	HSK63ER25S14	**149.40**



14pcs ER32 collets Class 2 (Ø3-4-5-6-7-8-9-10-11-12-14-16-18-20) 1 pce ER32 collet chuck 1 pce ER32 spanner in wooden box *14 Ad. ER32 pens Class 2 (Ø3-4-5-6-7-8--9-10-11-12-14-16-18-20) 1 Ad. ER32 Pens Başlığı 1 Ad. ER32 anahtar ahşap kutuda*	**BT30ER32S14**	**123.70**
	BT40ER32S14	**122.70**
	DIN30ER32S14	**123.70**
	DIN40ER32S14	**122.70**
	ISO30ER32S14	**123.70**
	ISO40ER32S14	**122.70**
	MT2ER32S14	**122.70**
	MT3ER32S14	**123.70**
	MT4ER32S14	**124.70**
	ER3232110S14	**120.70**
	ER3240110S14	**122.70**
	HSK63ER32S14	**154.70**

Other sets and other precisions, such as Class 1 or TOPAC, are available on request.
Farklı takımlar ve farklı hassasiyetler, Class 1 veya TOPAC olarak, şipariş üzerine yapılabilir.

ER COLLET SET WITH CHUCKS
BAŞLIKLI ER PENS TAKIMLARI

CONTENT - *İÇERİĞİ*	CODE/*KOD*	EURO
18pcs ER32 collets Class 2 (Ø3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20) 1 pce ER32 collet chuck 1 pce ER32 spanner in wooden box *18 Ad. ER32 pens Class 2 (Ø3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20) 1 Ad. ER32 Pens Başlığı 1 Ad. ER32 anahtar ahşap kutuda*	**BT30ER32S18**	**142.10**
	BT40ER32S18	**141.10**
	DIN30ER32S18	**142.10**
	DIN40ER32S18	**141.10**
	ISO30ER32S18	**142.10**
	ISO40ER32S18	**141.10**
	MT2ER32S18	**141.10**
	MT3ER32S18	**142.10**
	MT4ER32S18	**143.10**
	ER3232110S18	**139.10**
	ER3240110S18	**141.10**
	HSK63ER32S18	**173.10**
21pcs ER32 collets Class 2 (Ø2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-22-25) 1 pce ER32 collet chuck 1 pce ER32 spanner in wooden box *21Ad. ER32 pens Class 2 (Ø2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-22-25) 1 pce ER32 Pens Başlığı 1 pce ER32 anahtar ahşap kutuda*	**BT30ER32S21**	**178.00**
	BT40ER32S21	**177.00**
	DIN30ER32S21	**178.00**
	DIN40ER32S21	**177.00**
	ISO30ER32S21	**178.00**
	ISO40ER32S21	**177.00**
	MT2ER32S21	**177.00**
	MT3ER32S21	**178.00**
	MT4ER32S21	**179.00**
	ER3232110S21	**175.00**
	ER3240110S21	**177.00**
	HSK63ER32S21	**209.00**
23pcs ER40 collets Class 2 (Ø4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26) 1 pce ER40 collet chuck 1 pce ER40 spanner in wooden box *23 Ad. ER40 pens Class 2 (Ø4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26) 1 Ad. ER40 Pens Başlığı 1 Ad. ER40 anahtar ahşap kutuda*	**BT40ER40S23**	**198.00**
	DIN40ER40S23	**198.00**
	ISO40ER40S23	**198.00**
	MT3ER40S23	**198.00**
	MT4ER40S23	**199.00**
	ER4032140S23	**203.00**
	ER4040140S23	**204.00**
	HSK63ER40S23	**231.00**









Other sets and other precisions, such as Class 1 or TOPAC, are available on request.
Farklı takımlar ve farklı hassasiyetler, Class 1 veya TOPAC olarak, şipariş üzerine yapılabilir.

gürkan



gürkan



COOLANT SEALED ER COLLETS
TAPPING ER COLLETS
INCH SIZES ER COLLETS
DIN 6388 / ISO10897 (OZ) COLLETS

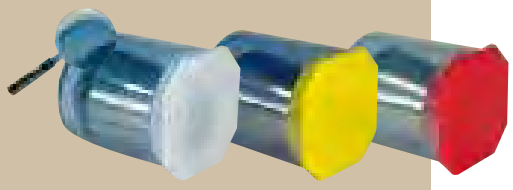
SIZDIRMAZ ER PENSLER
ER KILAVUZ PENSLERİ
İNÇ ÖLÇÜ ER PENSLER
DIN 6388 / ISO10897 (OZ) PENSLER

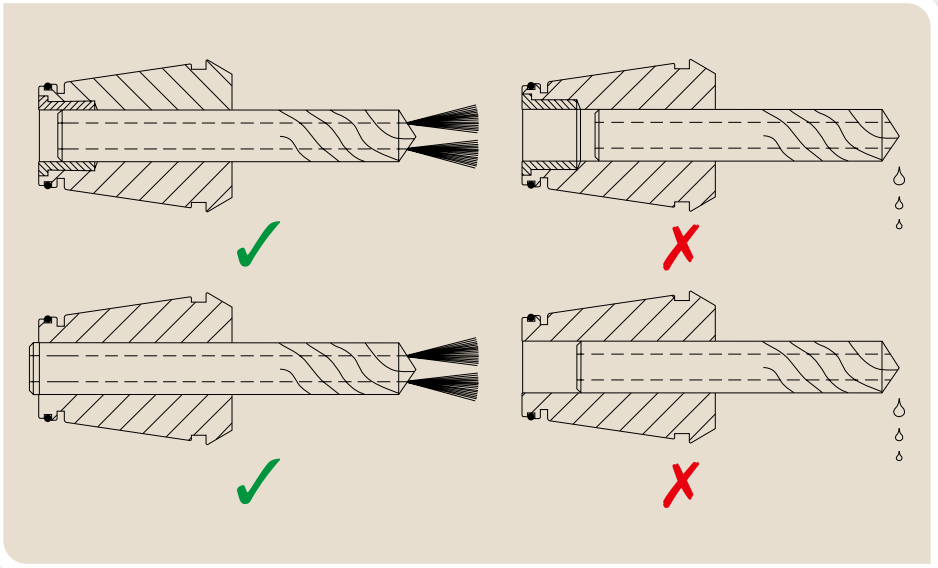
COOLANT SEALED ER COLLETS (For internal coolant tools)
SIZDIRMAZ ER PENSLER (içten soğutmalı takımlar için)



Coolant Sealed performance is only achieved when clamped the nominal diameter.
The shank should be inserted till the back end of the collet as shown in the instruction.
May collaps down 0.2mm but will have leakage when holding undersize.
Suitable for all kinds of ER collet holders.
May also be used as standard ER collet for the nominal diameter cutters without internal coolant.
Less flexible with harder structure compared with standard ER collets.
Other sizes are available on request.

Sızdırmaz özelliği sadece kendi çapını sıktığında geçerlidir.
Takım sapı, aşağıda görüldüğü gibi, pensin arkasına kadar sokulmalıdır.
0.2mm daralma yapabilir, ancak alt ölçüyü sıkarken sızdırır.
Her türlü ER pens tutucusuna uygundur.
Nominal çapta standart pens olarak ta kullanılabilir.
Daha sert gövde yapısıyla standart ER penslere göre daha az esnektir.
Diğer çaplar şiparişe yapılabilir.





COOLANT SEALED ER COLLETS (For internal coolant tools) DIN 6499 / ISO 15488
SIZDIRMAZ ER PENSLER (içten soğutmalı takımlar için) Pat. Nr. 2013/00719

ERC11 COOLANT SEALED COLLETS
ERC11 SIZDIRMAZ PENSLER

CLASS 2

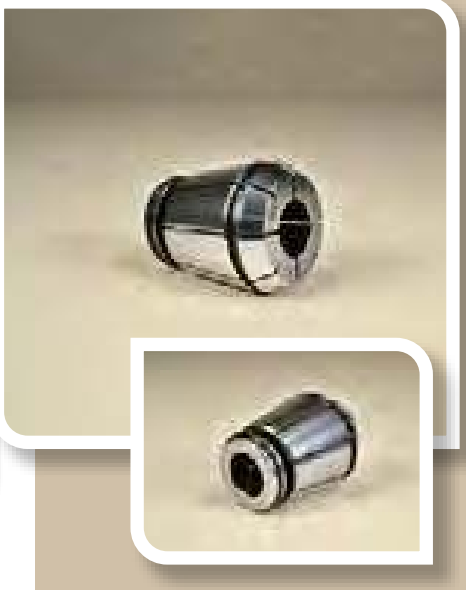
CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC110302	3	15.00
ERC110402	4	15.00
ERC110502	5	15.00
ERC110602	6	15.00

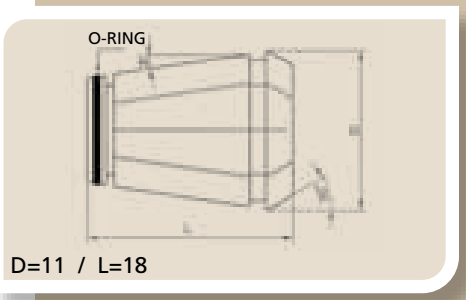
CLASS 1

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC110301	3	16.50
ERC110401	4	16.50
ERC110501	5	16.50
ERC110601	6	16.50

TOPAC (5 micron)

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC11030T	3	19.00
ERC11040T	4	19.00
ERC11050T	5	19.00
ERC11060T	6	19.00





D=11 / L=18

ERC11 COOLANT SEALED COLLET SETS
ERC11 SIZDIRMAZ PENS TAKIMLARI



ERC11 COOLANT SEALED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ERC11SET2	4pcs ERC11 Collant sealed collets Class 2 Ø3-6mm in 1.0mm increment in plastic box *4ad. ERC11 sızdırmaz pens Class 2 Ø3-6mm arası 1.0mm atlamalı plastik kutuda*	65.00

ERC11 COOLANT SEALED COLLET SET CLASS 1

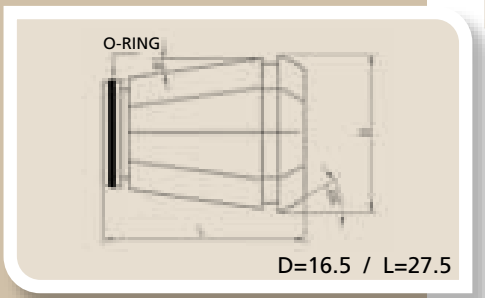
CODE/*KOD*	content - *içeriği*	EURO
ERC11SET1	4pcs ERC11 Collant sealed collets Class 1 Ø3-6mm in 1.0mm increment in plastic box *4ad. ERC11 sızdırmaz pens Class 1 Ø3-6mm arası 1.0mm atlamalı plastik kutuda*	71.00

ERC11 COOLANT SEALED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ERC11SETT	4pcs ERC11 Collant sealed collets TOPAC Ø3-6mm in 1.0mm increment in plastic box *4ad. ERC11 sızdırmaz pens TOPAC Ø3-6mm arası 1.0mm atlamalı plastik kutuda*	81.00

COOLANT SEALED ER COLLETS (For internal coolant tools) DIN 6499 / ISO 15488
SIZDIRMAZ ER PENSLER (içten soğutmalı takımlar için) Pat. Nr. 2013/00719





ERC16 COOLANT SEALED COLLETS
ERC16 SIZDIRMAZ PENSLER

CLASS 2

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC160302	3	10.80
ERC160402	4	10.80
ERC160502	5	10.80
ERC160602	6	10.80
ERC160702	7	10.80
ERC160802	8	10.80
ERC160902	9	10.80
ERC161002	10	10.80

CLASS 1

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC160301	3	12.30
ERC160401	4	12.30
ERC160501	5	12.30
ERC160601	6	12.30
ERC160701	7	12.30
ERC160801	8	12.30
ERC160901	9	12.30
ERC161001	10	12.30

TOPAC (5 micron)

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC16030T	3	15.20
ERC16040T	4	15.20
ERC16050T	5	15.20
ERC16060T	6	15.20
ERC16070T	7	15.20
ERC16080T	8	15.20
ERC16090T	9	15.20
ERC16100T	10	15.20



ERC16 COOLANT SEALED COLLET SETS
ERC16 SIZDIRMAZ PENS TAKIMLARI

ERC16 COOLANT SEALED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ERC16SET2	8pcs ERC16 Collant sealed collets Class 2 Ø3-10mm in 1.0mm increment in plastic box *8ad. ERC16 sızdırmaz pens Class 2 Ø3-10mm arası 1.0mm atlamalı plastik kutuda*	91.40

ERC16 COOLANT SEALED COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ERC16SET1	8pcs ERC16 Collant sealed collets Class 1 Ø3-10mm in 1.0mm increment in plastic box *8ad. ERC16 sızdırmaz pens Class 1 Ø3-10mm arası 1.0mm atlamalı plastik kutuda*	103.40

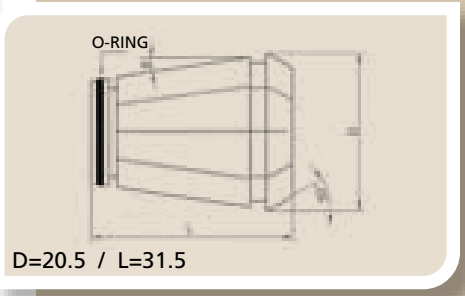
ERC16 COOLANT SEALED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ERC16SETT	8pcs ERC16 Collant sealed collets TOPAC Ø3-10mm in 1.0mm increment in plastic box *8ad. ERC16 sızdırmaz pens TOPAC Ø3-10mm arası 1.0mm atlamalı plastik kutuda*	126.60

COOLANT SEALED ER COLLETS (For internal coolant tools) DIN 6499 / ISO 15488
SIZDIRMAZ ER PENSLER (içten soğutmalı takımlar için) Pat. Nr. 2013/00719

ERC20 COOLANT SEALED COLLETS
ERC20 SIZDIRMAZ PENSLER





CLASS 2

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC200302	3	10.90
ERC200402	4	10.90
ERC200502	5	10.90
ERC200602	6	10.90
ERC200702	7	10.90
ERC200802	8	10.90
ERC200902	9	10.90
ERC201002	10	10.90
ERC201102	11	10.90
ERC201202	12	10.90
ERC201302	13	10.90

CLASS 1

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC200301	3	12.40
ERC200401	4	12.40
ERC200501	5	12.40
ERC200601	6	12.40
ERC200701	7	12.40
ERC200801	8	12.40
ERC200901	9	12.40
ERC201001	10	12.40
ERC201101	11	12.40
ERC201201	12	12.40
ERC201301	13	12.40

TOPAC (5 micron)

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC20030T	3	15.30
ERC20040T	4	15.30
ERC20050T	5	15.30
ERC20060T	6	15.30
ERC20070T	7	15.30
ERC20080T	8	15.30
ERC20090T	9	15.30
ERC20100T	10	15.30
ERC20110T	11	15.30
ERC20120T	12	15.30
ERC20130T	13	15.30

ERC20 COOLANT SEALED COLLET SETS
ERC20 SIZDIRMAZ PENS TAKIMLARI



ERC20 COOLANT SEALED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ERC20SET2	11pcs ERC20 Collant sealed collets Class 2 Ø3-13mm in 1.0mm increment in plastic box *11ad. ERC20 sızdırmaz pens Class 2 Ø3-13mm arası 1.0mm atlamalı plastik kutuda*	124.90

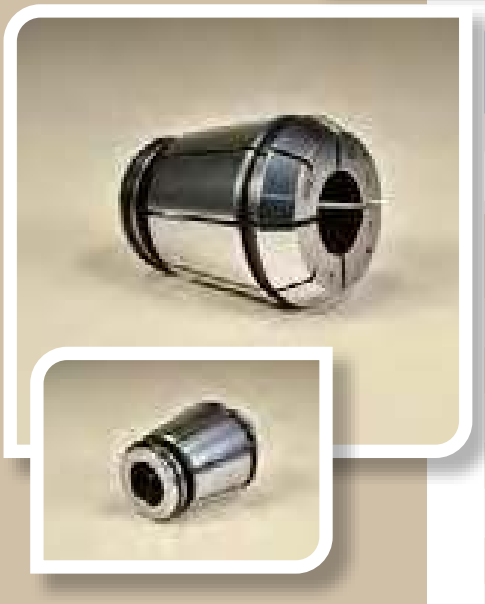
ERC20 COOLANT SEALED COLLET SET CLASS 1

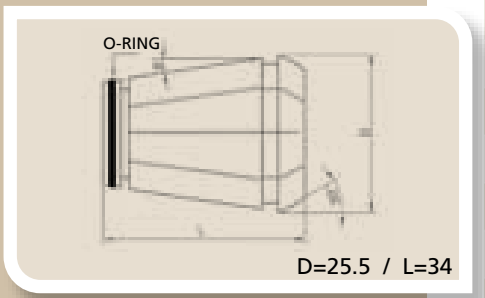
CODE/*KOD*	content - *içeriği*	EURO
ERC20SET1	11pcs ERC20 Collant sealed collets Class 1 Ø3-13mm in 1.0mm increment in plastic box *11ad. ERC20 sızdırmaz pens Class 1 Ø3-13mm arası 1.0mm atlamalı plastik kutuda*	141.40

ERC20 COOLANT SEALED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ERC20SETT	11pcs ERC20 Collant sealed collets TOPAC Ø3-13mm in 1.0mm increment in plastic box *11ad. ERC20 sızdırmaz pens TOPAC Ø3-13mm arası 1.0mm atlamalı plastik kutuda*	173.30

COOLANT SEALED ER COLLETS (For internal coolant tools) DIN 6499 / ISO 15488
SIZDIRMAZ ER PENSLER (içten soğutmalı takımlar için) Pat. Nr. 2013/00719





ERC25 COOLANT SEALED COLLETS
ERC25 SIZDIRMAZ PENSLER

CLASS 2

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC250302	3	11.60
ERC250402	4	11.60
ERC250502	5	11.60
ERC250602	6	11.60
ERC250702	7	11.60
ERC250802	8	11.60
ERC250902	9	11.60
ERC251002	10	11.60
ERC251102	11	11.60
ERC251202	12	11.60
ERC251302	13	11.60
ERC251402	14	11.60
ERC251502	15	11.60
ERC251602	16	11.60

CLASS 1

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC250301	3	13.10
ERC250401	4	13.10
ERC250501	5	13.10
ERC250601	6	13.10
ERC250701	7	13.10
ERC250801	8	13.10
ERC250901	9	13.10
ERC251001	10	13.10
ERC251101	11	13.10
ERC251201	12	13.10
ERC251301	13	13.10
ERC251401	14	13.10
ERC251501	15	13.10
ERC251601	16	13.10

TOPAC (5 micron)

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC25030T	3	16.00
ERC25040T	4	16.00
ERC25050T	5	16.00
ERC25060T	6	16.00
ERC25070T	7	16.00
ERC25080T	8	16.00
ERC25090T	9	16.00
ERC25100T	10	16.00
ERC25110T	11	16.00
ERC25120T	12	16.00
ERC25130T	13	16.00
ERC25140T	14	16.00
ERC25150T	15	16.00
ERC25160T	16	16.00



ERC25 COOLANT SEALED COLLET SETS
ERC25 SIZDIRMAZ PENS TAKIMLARI

ERC25 COOLANT SEALED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ERC25SET2	14pcs ERC25 Coolant sealed collets Class 2 Ø3-16mm in 1.0mm increment in plastic box *14Ad. ERC25 sızdırmaz pens Class 2 Ø3-16mm arası 1.0mm atlamalı plastik kutuda*	171.20

ERC25 COOLANT SEALED COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ERC25SET1	14pcs ERC25 Coolant sealed collets Class 1 Ø3-16mm in 1.0mm increment in plastic box *14Ad. ERC25 sızdırmaz pens Class 1 Ø3-16mm arası 1.0mm atlamalı plastik kutuda*	192.20

ERC25 COOLANT SEALED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ERC25SETT	14pcs ERC25 Coolant sealed collets TOPAC Ø3-16mm in 1.0mm increment in plastic box *14Ad. ERC25 sızdırmaz pens TOPAC Ø3-16mm arası 1.0mm atlamalı plastik kutuda*	232.80

COOLANT SEALED ER COLLETS (For internal coolant tools) DIN 6499 / ISO 15488
SIZDIRMAZ ER PENSLER (içten soğutmalı takımlar için) Pat. Nr. 2013/00719

ERC32 COOLANT SEALED COLLETS
ERC32 SIZDIRMAZ PENSLER



CLASS 2

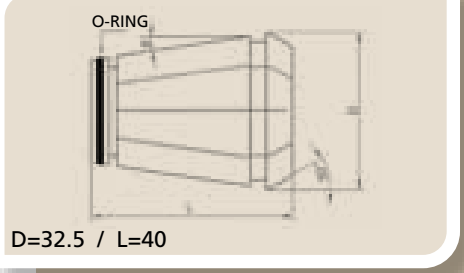
CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC320302	3	12.30
ERC320402	4	12.30
ERC320502	5	12.30
ERC320602	6	12.30
ERC320702	7	12.30
ERC320802	8	12.30
ERC320902	9	12.30
ERC321002	10	12.30
ERC321102	11	12.30
ERC321202	12	12.30
ERC321302	13	12.30
ERC321402	14	12.30
ERC321502	15	12.30
ERC321602	16	12.30
ERC321702	17	12.30
ERC321802	18	12.30
ERC321902	19	12.30
ERC322002	20	12.30

CLASS 1

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC320301	3	13.80
ERC320401	4	13.80
ERC320501	5	13.80
ERC320601	6	13.80
ERC320701	7	13.80
ERC320801	8	13.80
ERC320901	9	13.80
ERC321001	10	13.80
ERC321101	11	13.80
ERC321201	12	13.80
ERC321301	13	13.80
ERC321401	14	13.80
ERC321501	15	13.80
ERC321601	16	13.80
ERC321701	17	13.80
ERC321801	18	13.80
ERC321901	19	13.80
ERC322001	20	13.80

TOPAC (5 micron)

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC32030T	3	16.70
ERC32040T	4	16.70
ERC32050T	5	16.70
ERC32060T	6	16.70
ERC32070T	7	16.70
ERC32080T	8	16.70
ERC32090T	9	16.70
ERC32100T	10	16.70
ERC32110T	11	16.70
ERC32120T	12	16.70
ERC32130T	13	16.70
ERC32140T	14	16.70
ERC32150T	15	16.70
ERC32160T	16	16.70
ERC32170T	17	16.70
ERC32180T	18	16.70
ERC32190T	19	16.70
ERC32200T	20	16.70



D=32.5 / L=40

ERC32 COOLANT SEALED COLLET SETS
ERC32 SIZDIRMAZ PENS TAKIMLARI



ERC32 COOLANT SEALED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ERC32SET2	18pcs ERC32 Coolant sealed collets Class 2 Ø3-20mm in 1.0mm increment in plastic box *18Ad. ERC32 sızdırmaz pens Class 2 Ø3-20m arası 1.0mm atlamalı plastik kutuda*	231.40

ERC32 COOLANT SEALED COLLET SET CLASS 1

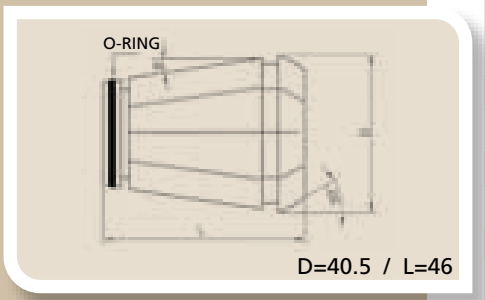
CODE/*KOD*	content - *içeriği*	EURO
ERC32SET1	18pcs ERC32 Coolant sealed collets Class 1 Ø3-20mm in 1.0mm increment in plastic box *18Ad. ERC32 sızdırmaz pens Class 1 Ø3-20m arası 1.0mm atlamalı plastik kutuda*	258.40

ERC32 COOLANT SEALED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ERC32SETT	18pcs ERC32 Coolant sealed collets TOPAC Ø3-20mm in 1.0mm increment in plastic box *18Ad. ERC32 sızdırmaz pens TOPAC Ø3-20m arası 1.0mm atlamalı plastik kutuda*	310.60

COOLANT SEALED ER COLLETS (For internal coolant tools) DIN 6499 / ISO 15488
SIZDIRMAZ ER PENSLER (içten soğutmalı takımlar için) Pat. Nr. 2013/00719





ERC40 COOLANT SEALED COLLETS
ERC40 SIZDIRMAZ PENSLER

CLASS 2

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC400302	3	16.30
ERC400402	4	14.30
ERC400502	5	14.30
ERC400602	6	14.30
ERC400702	7	14.30
ERC400802	8	14.30
ERC400902	9	14.30
ERC401002	10	14.30
ERC401102	11	14.30
ERC401202	12	14.30
ERC401302	13	14.30
ERC401402	14	14.30
ERC401502	15	14.30
ERC401602	16	14.30
ERC401702	17	14.30
ERC401802	18	14.30
ERC401902	19	14.30
ERC402002	20	14.30
ERC402102	21	14.30
ERC402202	22	14.30
ERC402302	23	14.30
ERC402402	24	14.30
ERC402502	25	14.30
ERC402602	26	14.30

CLASS 1

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC400301	3	17.80
ERC400401	4	15.80
ERC400501	5	15.80
ERC400601	6	15.80
ERC400701	7	15.80
ERC400801	8	15.80
ERC400901	9	15.80
ERC401001	10	15.80
ERC401101	11	15.80
ERC401201	12	15.80
ERC401301	13	15.80
ERC401401	14	15.80
ERC401501	15	15.80
ERC401601	16	15.80
ERC401701	17	15.80
ERC401801	18	15.80
ERC401901	19	15.80
ERC402001	20	15.80
ERC402101	21	15.80
ERC402201	22	15.80
ERC402301	23	15.80
ERC402401	24	15.80
ERC402501	25	15.80
ERC402601	26	15.80

TOPAC (5 micron)

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC40030T	3	20.70
ERC40040T	4	18.70
ERC40050T	5	18.70
ERC40060T	6	18.70
ERC40070T	7	18.70
ERC40080T	8	18.70
ERC40090T	9	18.70
ERC40100T	10	18.70
ERC40110T	11	18.70
ERC40120T	12	18.70
ERC40130T	13	18.70
ERC40140T	14	18.70
ERC40150T	15	18.70
ERC40160T	16	18.70
ERC40170T	17	18.70
ERC40180T	18	18.70
ERC40190T	19	18.70
ERC40200T	20	18.70
ERC40210T	21	18.70
ERC40220T	22	18.70
ERC40230T	23	18.70
ERC40240T	24	18.70
ERC40250T	25	18.70
ERC40260T	26	18.70



ERC40 COOLANT SEALED COLLET SETS
ERC40 SIZDIRMAZ PENS TAKIMLARI

ERC40 COOLANT SEALED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ERC40SET2	23pcs ERC40 Coolant sealed collets Class 2 Ø3-25mm in plastic box *23Ad. ERC40 sızdırmaz pens Class 2 Ø3-25m arası plastik kutuda*	350.90

ERC40 COOLANT SEALED COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ERC40SET1	23pcs ERC40 Coolant sealed collets Class 1 Ø3-25mm in plastic box *23Ad. ERC40 sızdırmaz pens Class 1 Ø3-25m arası plastik kutuda*	385.40

ERC40 COOLANT SEALED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ERC40SETT	23pcs ERC40 Coolant sealed collets TOPAC Ø3-25mm in plastic box *23Ad. ERC40 sızdırmaz pens TOPAC Ø3-25m arası plastik kutuda*	452.10

COOLANT SEALED ER COLLETS (For internal coolant tools) DIN 6499 / ISO 15488
SIZDIRMAZ ER PENSLER (içten soğutmalı takımlar için) Pat. Nr. 2012 07739

ERC50 COOLANT SEALED COLLETS
ERC50 SIZDIRMAZ PENSLER



CLASS 2

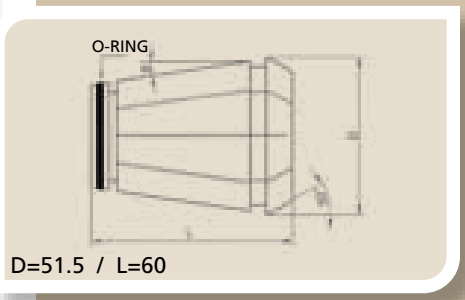
CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC500602	6	36.00
ERC500802	8	36.00
ERC501002	10	36.00
ERC501202	12	36.00
ERC501402	14	36.00
ERC501602	16	36.00
ERC501802	18	36.00
ERC502002	20	36.00
ERC502502	25	36.00
ERC503202	32	36.00

CLASS 1

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC500601	6	39.00
ERC500801	8	39.00
ERC501001	10	39.00
ERC501201	12	39.00
ERC501401	14	39.00
ERC501601	16	39.00
ERC501801	18	39.00
ERC502001	20	39.00
ERC502501	25	39.00
ERC503201	32	39.00

TOPAC (5 micron)

CODE *KOD*	clamping dia *sıkma çapı* Ømm	EURO
ERC50060T	6	43.00
ERC50080T	8	43.00
ERC50100T	10	43.00
ERC50120T	12	43.00
ERC50140T	14	43.00
ERC50160T	16	43.00
ERC50180T	18	43.00
ERC50200T	20	43.00
ERC50250T	25	43.00
ERC50320T	32	43.00



D=51.5 / L=60

ERC50 COOLANT SEALED COLLETS SETS
ERC50 SIZDIRMAZ PENS TAKIMLARI



ERC50 COOLANT SEALED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ERC50SET2	10pcs ERC50 Coolant sealed collets Class 2 Ø6-32mm in plastic box *10Ad. ERC50 sızdırmaz pens Class 2 Ø6-32mm arası plastik kutuda*	380.00

ERC50 COOLANT SEALED COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ERC50SET1	10pcs ERC50 Coolant sealed collets Class 1 Ø6-32mm in plastic box *10Ad. ERC50 sızdırmaz pens Class 1 Ø6-32mm arası plastik kutuda*	410.00

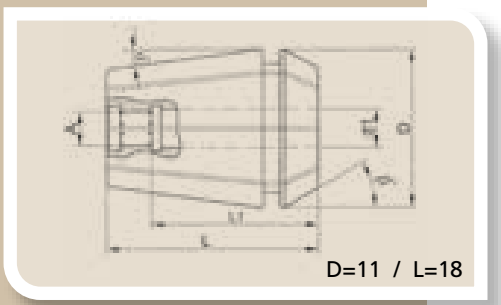
ERC50 COOLANT SEALED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ERC50SETT	10pcs ERC50 Coolant sealed collets TOPAC Ø6-32mm in plastic box *10Ad. ERC50 sızdırmaz pens TOPAC Ø6-32mm arası plastik kutuda*	450.00

TAPPING ER COLLETS
ER KILAVUZ PENSLERİ

DIN 6499 / ISO 15488





D=11 / L=18

ERT11

CODE / *KOD*	d1	square size *kare ölçüsü* □ mm	Tap Specs* - *Klavuz detayı**	EURO
ERT11025	2.5	2.1	DIN376 M3.5	13.50
ERT11028	2.8	2.1	DIN371 M2-M2,5 - DIN376 M4	13.50
ERT11035	3.5	2.7	DIN371 M3 - DIN376 M5	13.50
ERT11040	4	3,15/3,2	ISO M4/M5 - JIS M3/M3.5	13.50
ERT11045	4.5	3.4	DIN371 M4 - DIN376 M6	13.50
ERT11050	5	4	ISO M5 - JIS M4	13.50
ERT11055	5.5	4.5	DIN374/376 M7	13.50
ERT11060	6	4.9	DIN371 M4,5/M5/M6 DIN374/376 M8	13.50



ERT11 TAPPING ER COLLET SET / *ERT11 KILAVUZ PENSi TAKIMI*

CODE / *KOD*	content - *içeriği*	EURO
ERT11SET	8 pcs ERT11 tappıng ER collets suitable for taps with shank Ø2.5-6.0mm in plastic box *8 adet ERT11 kılavuz pensleri sapı Ø2.5-6.0mm kılavuzlara uygun plastik kutuda* *Ø2.5x2.1 - Ø2.8x2.1 - Ø3.5x2.7 - Ø4x3.2 - Ø4.5x3.4 - Ø5x4 Ø5.5x4.5 - Ø6x4.9*	113.00



* Tap specs indicated are some of the suitable sizes only.
Tapping ER collets are all made to CL1 (Class 1 - 10 Micron) Precision Standard.
They are packed with green cap.

** Belirtilen kılavuz detaylarında uygun ölçülerin sadece bir kısmı belirtilmiştir.*
Tüm kılavuz pensleri CL1 (Class 1 - 10 Micron) hassasiyet sınıfına göre üretilmiştir.
Ambalajları yeşil kapaklıdır.

TAPPING ER COLLETS
ER KILAVUZ PENSLERİ

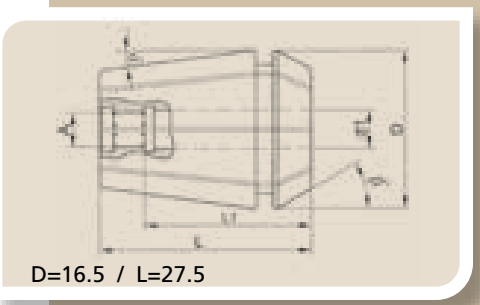
DIN 6499 / ISO 15488

ERT16

CODE / *KOD*	d1	square size *kare ölçüsü* □ mm	Tap Specs* - *Klavuz detayı**	EURO
ERT16028	2.8	2.1	DIN371 M2-M2,5 - DIN376 M4	12.80
ERT16035	3.5	2.7	DIN371 M3 - DIN376 M5	12.80
ERT16040	4	3,15/3,2	ISO M4/M5 - JIS M3/M3.5	12.80
ERT16045	4.5	3.4	DIN371 M4 - DIN376 M6	12.80
ERT16050**	5	4	ISO M5 - JIS M4	12.80
ERT16055	5.5	4.5	DIN374/376 M7	12.80
ERT16060	6	4.9	DIN371 M4,5/M5/M6 DIN374/376 M8	12.80
ERT16063	6.3	5	DIN374/376 M8	12.80
ERT16070	7	5.5	DIN371 M7 DIN374/376 M9-M10 JIS M9-M10	12.80
ERT16080	8	6,2/6,3	DIN371 M8 ISO M8 / M10 / 7/16 / 5/16	12.80
ERT16090	9	7.0/7.1	DIN 374/376 M12 ISO M12 / 1/2	12.80

** This item is not included in the set / *Bu ürün setin içinde yoktur* .





D=16.5 / L=27.5

ERT16 TAPPING ER COLLET SET / *ERT16 KILAVUZ PENSi TAKIMI*

CODE / *KOD*	content - *içeriği*	EURO
ERT16SET	10 pcs ERT16 tappıng ER collets suitable for taps with shank Ø2.8-9.0mm in plastic box *10 adet ERT16 kılavuz pensleri sapı Ø2.8-9.0mm kılavuzlara uygun plastik kutuda* *Ø2.8x2.1 - Ø3.5x2.7 - Ø4x3.2 - Ø4.5x3.4 - Ø5.5x4.5 Ø6x4.9 Ø6.3x5 - Ø7x5.5 - Ø8x6.3 - Ø9x7.1*	133.00



* Tap specs indicated are some of the suitable sizes only.
Tapping ER collets are all made to CL1 (Class 1 - 10 Micron) Precision Standard.
They are packed with green cap.

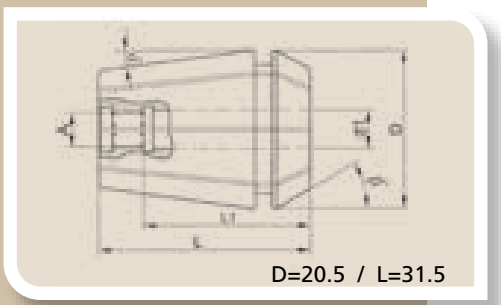
** Belirtilen kılavuz detaylarında uygun ölçülerin sadece bir kısmı belirtilmiştir.*
Tüm kılavuz pensleri CL1 (Class 1 - 10 Micron) hassasiyet sınıfına göre üretilmiştir.
Ambalajları yeşil kapaklıdır.



TAPPING ER COLLETS
ER KILAVUZ PENSLERİ

DIN 6499 / ISO 15488





ERT20

CODE / *KOD*	d1	square size *kare ölçüsü* □ mm	Tap Specs* - *Klavuz detayı**	EURO
ERT20035	3.5	2.7	DIN371 M3 - DIN376 M5	13.00
ERT20040	4	3,15/3,2	ISO M4/M5 - JIS M3/M3.5	13.00
ERT20045	4.5	3.4	DIN371 M4 - DIN376 M6	13.00
ERT20050**	5	4	ISO M5 - JIS M4	13.00
ERT20055	5.5	4.5	DIN374/376 M7	13.00
ERT20060	6	4.9	DIN371 M4,5/M5/M6 DIN374/376 M8	13.00
ERT20063	6.3	5	ISO M6-M8-1/4-5/16	13.00
ERT20070	7	5.5	DIN371 M7 DIN374/376 M9-M10 JIS M9-M10	13.00
ERT20080	8	6,2/6,3	DIN371 M8 ISO M8 - M10 - 7/16 - 5/16	13.00
ERT20090	9	7.0/7.1	DIN 374/376 M12 ISO M12 - 1/2	13.00
ERT20100	10	8	DIN371 M10 ISO M10 - 3/8	13.00
ERT20110	11	9	DIN 374/376 M14 - 9/16	13.00
ERT20120	12	9	DIN 374/376 M16 - 5/8	13.00

** This item is not included in the set / *Bu ürün setin içinde yoktur .*



ERT20 TAPPING ER COLLET SET / *ERT20 KILAVUZ PENSi TAKIMI*

CODE / *KOD*	content - *içeriği*	EURO
ERT20SET	12 pcs ERT20 tappıng ER collets suitable for taps with shank Ø3.5-12.0mm in plastic box *12 adet ERT20 kılavuz pensleri sapı Ø3.5-12.0mm kılavuzlara uygun plastik kutuda* *Ø3.5x2.7 - Ø4x3.2 - Ø4.5x3.4 - Ø5.5x4.5 Ø6x4.9 - Ø6.3x5 Ø7x5.5 - Ø8x6.3 Ø9x7.1 - Ø10x8 - Ø11x9 - Ø12x9*	161.00



* Tap specs indicated are some of the suitable sizes only.
Tapping ER collets are all made to CL1 (Class 1 - 10 Micron) Precision Standard.
They are packed with green cap.

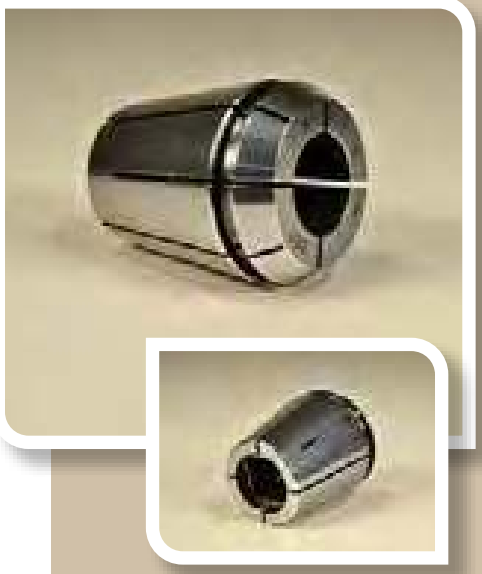
** Belirtilen kılavuz detaylarında uygun ölçülerin sadece bir kısmı belirtilmiştir.*
Tüm kılavuz pensleri CL1 (Class 1 - 10 Micron) hassasiyet sınıfına göre üretilmiştir.
Ambalajları yeşil kapaklıdır.

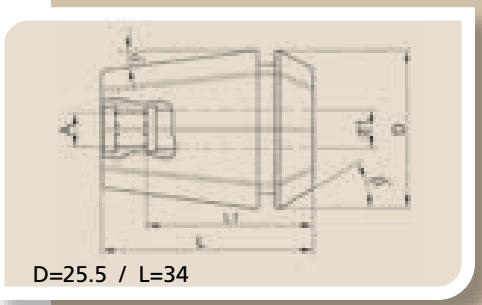
TAPPING ER COLLETS
ER KILAVUZ PENSLERİ

DIN 6499 / ISO 15488

ERT25

CODE / *KOD*	d1	square size *kare ölçüsü* □ mm	Tap Specs* - *Klavuz detayı**	EURO
ERT25035	3.5	2.7	DIN371 M3 - DIN376 M5	13.40
ERT25040	4	3.15/3.2	ISO M4/M5 - JIS M3/M3.5	13.40
ERT25045	4.5	3.4	DIN371 M4 - DIN376 M6	13.40
ERT25050	5	4	ISO M5 - JIS M4	13.40
ERT25055	5.5	4.5	DIN374/376 M7	13.40
ERT25060	6	4.9	DIN371 M4,5/M5/M6 DIN374/376 M8	13.40
ERT25063	6.3	5	ISO M6-M8-1/4-5/16	13.40
ERT25070	7	5.5	DIN371 M7 DIN374/376 M9-M10 JIS M9-M10	13.40
ERT25080	8	6.2/6.3	DIN371 M8 ISO M8 - M10 - 7/16 - 5/16	13.40
ERT25090	9	7.0/7.1	DIN 374/376 M12 ISO M12 - 1/2	13.40
ERT25100	10	8	DIN371 M10 ISO M10 - 3/8	13.40
ERT25110	11	9	DIN 374/376 M14 - 9/16	13.40
ERT25120	12	9	DIN 374/376 M16 - 5/8	13.40
ERT25125**	12.5	10	ISO M16 - 5/8 JIS M16	13.40
ERT25140	14	11.0/11.2	DIN 374/376 M18 - JIS M18 ISO M18/M20 3/4	13.40
ERT25160	16	12	DIN 374/376 M20	13.40





D=25.5 / L=34

** This item is not included in the set / *Bu ürün setin içinde yoktur .*

ERT25 TAPPING ER COLLET SET / *ERT25 KILAVUZ PENSi TAKIMI*

CODE / *KOD*	content - *içeriği*	EURO
ERT25SET	15 pcs ERT25 tappıng ER collets suitable for taps with shank Ø3.5-16.0mm in plastic box *15 adet ERT25 kılavuz pensleri sapı Ø3.5-16.0mm kılavuzlara uygun plastik kutuda* *Ø3.5x2.7 - Ø4x3.2 - Ø4.5x3.4 - Ø5x4 Ø5.5x4.5 - Ø6x4.9* *Ø6.3x5 - Ø7x5.5 - Ø8x6.3 - Ø9x7.1 - Ø10x8 - Ø11x9 - Ø12x9* *Ø14x11.2 - Ø16x12*	209.80



* Tap specs indicated are some of the suitable sizes only.
Tapping ER collets are all made to CL1 (Class 1 - 10 Micron) Precision Standard.
They are packed with green cap.

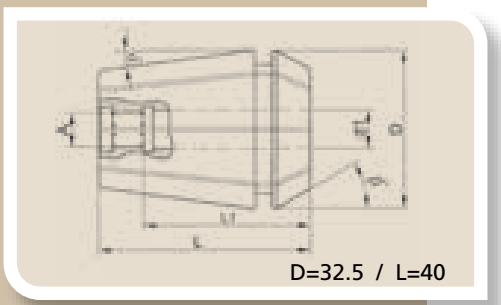
** Belirtilen kılavuz detaylarında uygun ölçülerin sadece bir kısmı belirtilmiştir.*
Tüm kılavuz pensleri CL1 (Class 1 - 10 Micron) hassasiyet sınıfına göre üretilmiştir.
Ambalajları yeşil kapaklıdır.



TAPPING ER COLLETS
ER KILAVUZ PENSLERİ

DIN 6499 / ISO 15488





ERT32

CODE / *KOD*	d1	square size *kare ölçüsü* □ mm	Tap Specs* - *Klavuz detayı**	EURO
ERT32035	3.5	2.7	DIN371 M3 - DIN376 M5	14.50
ERT32040	4	3.15/3.2	ISO M4/M5 - JIS M3/M3.5	14.50
ERT32045	4.5	3.4	DIN371 M4 - DIN376 M6	14.50
ERT32050	5	4	ISO M5 - JIS M4	14.50
ERT32055	5.5	4.5	DIN374/376 M7	14.50
ERT32060	6	4.9	DIN371 M4,5/M5/M6 DIN374/376 M8	14.50
ERT32063	6.3	5	ISO M6-M8-1/4"-5/16"	14.50
ERT32070	7	5.5	DIN371 M7 DIN374/376 M9-M10 JIS M9-M10	14.50
ERT32080	8	6.2/6.3	DIN371 M8 ISO M8 - M10 - 7/16" - 5/16"	14.50
ERT32090	9	7.0/7.1	DIN 374/376 M12 ISO M12 - 1/2"	14.50
ERT32100	10	8	DIN371 M10 ISO M10 - 3/8"	14.50
ERT32110	11	9	DIN 374/376 M14 - 9/16"	14.50
ERT32120	12	9	DIN 374/376 M16 - 5/8"	14.50
ERT32125	12.5	10	ISO M16 - 5/8" JIS M16	14.50
ERT32140	14	11.0/11.2	DIN 374/376 M18 - JIS M18 ISO M18-M20 3/4"	14.50
ERT32160	16	12	DIN 374/376 M20	14.50
ERT32180	18	14.0/14.5	DIN 374/376 M22- M24 -7/8" ISO M24 - 1"	14.50
ERT32200	20	16	DIN 374/376 M27 - 1" ISO M27-M30 - 1 1/8"	14.50



ERT32 TAPPING ER COLLET SET / *ERT32 KILAVUZ PENSi TAKIMI*

CODE / *KOD*	content - *içeriği*	EURO
ERT32SET	18 pcs ERT32 tappıng ER collets suitable for taps with shank Ø3.5-20.0mm in plastic box *18 adet ERT32 kılavuz pensleri sapı Ø3.5-20.0mm kılavuzlara uygun plastik kutuda* *Ø3.5x2.7 - Ø4x3.2 - Ø4.5x3.4 - Ø5x4 Ø5.5x4.5 - Ø6x4.9* *Ø6.3x5 - Ø7x5.5 Ø8x6.3 - Ø9x7.1 - Ø10x8 - Ø11x9 - Ø12x9* *Ø14x11.2 - Ø16x12 - Ø18x14.5 - Ø20x16*	271.00



* Tap specs indicated are some of the suitable sizes only.
Tapping ER collets are all made to CL1 (Class 1 - 10 Micron) Precision Standard.
They are packed with green cap.

** Belirtilen kılavuz detaylarında uygun ölçülerin sadece bir kısmı belirtilmiştir.*
Tüm kılavuz pensleri CL1 (Class 1 - 10 Micron) hassasiyet sınıfına göre üretilmiştir.
Ambalajları yeşil kapaklıdır.

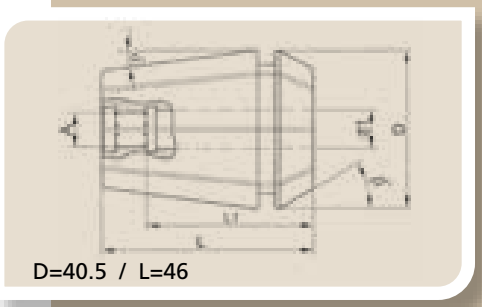
TAPPING ER COLLETS
ER KILAVUZ PENSLERİ

DIN 6499 / ISO 15488

ERT40

CODE / *KOD*	d1	square size *kare ölçüsü* □ mm	Tap Specs* - *Klavuz detayı**	EURO
ERT40040	4	3.15/3.2	ISO M4/M5 - JIS M3/M3.5	16.60
ERT40045	4.5	3.4	DIN371 M4 - DIN376 M6	16.60
ERT40050	5	4	ISO M5 - JIS M4	16.60
ERT40055	5.5	4.5	DIN371 M4,5/M5/M6 DIN374/376 M8	16.60
ERT40060	6	4.9	DIN371 M4,5/M5/M6 DIN374/376 M8	16.60
ERT40063	6.3	5	ISO M6-M8-1/4"-5/16"	16.60
ERT40070	7	5.5	DIN371 M7 DIN374/376 M9-M10 JIS M9-M10	16.60
ERT40080	8	6.2/6.3	DIN371 M8 ISO M8 - M10 - 7/16" - 5/16"	16.60
ERT40090	9	7.0/7.1	DIN 374/376 M12 ISO M12 - 1/2"	16.60
ERT40100	10	8	DIN371 M10 ISO M10 - 3/8"	16.60
ERT40110	11	9	DIN 374/376 M14 - 9/16"	16.60
ERT40120	12	9	DIN 374/376 M16 - 5/8"	16.60
ERT40125	12.5	10	ISO M16 - 5/8" JIS M16	16.60
ERT40140	14	11.0/11.2	DIN 374/376 M18 - JIS M18 ISO M18-M20 3/4"	16.60
ERT40160	16	12	DIN 374/376 M20	16.60
ERT40180	18	14.0/14.5	DIN 374/376 M22- M24 -7/8" ISO M24 - 1"	16.60
ERT40200	20	16	DIN 374/376 M27 - 1" ISO M27-M30 - 1 1/8"	16.60
ERT40220	22	18	DIN 374/376 M30 - 1 1/8"	16.60
ERT40250	25	20	DIN 374/376 M33 - 1 1/4" ISO M36	16.60





D=40.5 / L=46

ERT40 TAPPING ER COLLET SET / *ERT40 KILAVUZ PENSİ TAKIMI*

CODE / *KOD*	content - *içeriği*	EURO
ERT40SET	19 pcs ERT40 tappıng ER collets suitable for taps with shank Ø4.0-25.0mm in plastic box *19 adet ERT40 kılavuz pensleri sapı Ø4.0-25.0mm kılavuzlara uygun plastik kutuda* *Ø4x3.2 - Ø4.5x3.4 - Ø5x4 - Ø5.5x4.5 - Ø6x4.9 - Ø6.3x5* *Ø7x5.5 - Ø8x6.3 - Ø9x7.1 - Ø10x8 - Ø11x9 - Ø12x9* *Ø14x11.2 - Ø16x12 - Ø18x14.5 - Ø20x16 - Ø22x18 - Ø25x20*	335.40



* Tap specs indicated are some of the suitable sizes only.
Tapping ER collets are all made to CL1 (Class 1 - 10 Micron) Precision Standard.
They are packed with green cap.

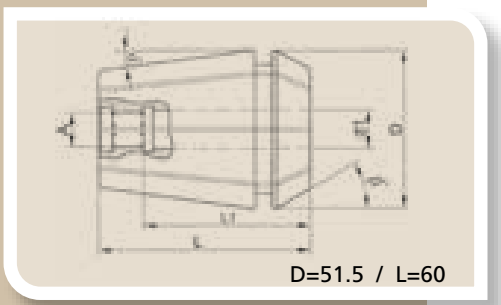
** Belirtilen kılavuz detaylarında uygun ölçülerin sadece bir kısmı belirtilmiştir.*
Tüm kılavuz pensleri CL1 (Class 1 - 10 Micron) hassasiyet sınıfına göre üretilmiştir.
Ambalajları yeşil kapaklıdır.



TAPPING ER COLLETS
ER KILAVUZ PENSLERİ

DIN 6499 / ISO 15488





ERT50

CODE / *KOD*	d1	square size *kare ölçüsü* □ mm	Tap Specs* - *Klavuz detayı**	EURO
ERT50090	9	7.0/7.1	DIN 374/376 M12 ISO M12 - 1/2"	38.00
ERT50100	10	8	DIN371 M10 ISO M10 - 3/8"	38.00
ERT50110	11	9	DIN 374/376 M14 - 9/16"	38.00
ERT50120	12	9	DIN 374/376 M16 - 5/8"	38.00
ERT50140	14	11.0/11.2	DIN 374/376 M18 - JIS M18 ISO M18-M20 3/4"	38.00
ERT50160	16	12	DIN 374/376 M20	38.00
ERT50180	18	14.0/14.5	DIN 374/376 M22- M24 -7/8" ISO M24 - 1"	38.00
ERT50200	20	16	DIN 374/376 M27 - 1" ISO M27-M30 - 1 1/8"	38.00
ERT50220	22	18	DIN 374/376 M30 - 1 1/8"	38.00
ERT50250	25	20	DIN 374/376 M33 - 1 1/4" ISO M36	38.00
ERT50280	28	22	DIN 374/376 M36 - 1 3/8" -1 1/2"	38.00
ERT50320	32	24	DIN 374/376 M39-M42 - 1 1/2"	38.00



ERT50 TAPPING ER COLLET SET / *ERT50 KILAVUZ PENSi TAKIMI*

CODE / *KOD*	content - *içeriği*	EURO
ERT50SET	12 pcs ERT50 tappıng ER collets suitable for taps with shank Ø9-32mm in plastic box *12 adet ERT50 kılavuz pensleri sapı Ø9-32mm kılavuzlara uygun plastik kutuda* *Ø9x7.1 - Ø10x8 - Ø11x9 - Ø12x9 - Ø14x11.2 - Ø16x12* *Ø18x14.5 - Ø20x16 - Ø22x18 - Ø25x20 - Ø28x22 - Ø32x24*	476.00

* Tap specs indicated are some of the suitable sizes only.
Tapping ER collets are all made to CL1 (Class 1 - 10 Micron) Precision Standard.

** Belirtilen kılavuz detaylarında uygun ölçülerin sadece bir kısmı belirtilmiştir.*
Tüm kılavuz pensleri CL1 (Class 1 - 10 Micron) hassasiyet sınıfına göre üretilmiştir.

ERTC COOLANT SEALED TAPPING COLLETS For internal coolant taps
ERTC SIZDIRMAZ KILAVUZ PENSLERİ İçten soğutmalı kılavuzlar için

DIN 6499 / ISO 15488 / Pat. Nr. 2012 07739



ERTC16

CODE / *KOD*	d1	square size *kare ölçüsü* □ mm	Tap Specs* - *Klavuz detayı**	EURO
ERTC16035	3.5	2.7	DIN371 M3 - DIN376 M5	21.80
ERTC16040	4	3.2	ISO M4/M5 - JIS M3/M3.5	21.80
ERTC16045	4.5	3.4	DIN371 M4 - DIN376 M6	21.80
ERTC16055	5.5	4.5	DIN374/376 M7	21.80
ERTC16060	6	4.9	DIN371 M4,5/M5/M6 DIN374/376 M8	21.80
ERTC16070	7	5.5	DIN371 M7 DIN374/376 M9-M10 JIS M9-M10	21.80
ERTC16080	8	6,2/6,3	DIN371 M8 ISO M8 - M10 - 7/16 - 5/16	21.80
ERTC16090	9	7.0/7.1	DIN 374/376 M12 ISO M12 - 1/2"	21.80

ERTC20

CODE / *KOD*	d1	square size *kare ölçüsü* □ mm	Tap Specs* - *Klavuz detayı**	EURO
ERTC20035	3.5	2.7	DIN371 M3 - DIN376 M5	22.00
ERTC20045	4.5	3.4	DIN371 M4 - DIN376 M6	22.00
ERTC20055	5.5	4.5	DIN374/376 M7	22.00
ERTC20060	6	4.9	DIN371 M4,5/M5/M6 DIN374/376 M8	22.00
ERTC20070	7	5.5	DIN371 M7 DIN374/376 M9-M10 JIS M9-M10	22.00
ERTC20080	8	6,2/6,3	DIN371 M8 ISO M8 - M10 - 7/16 - 5/16	22.00
ERTC20090	9	7.0/7.1	DIN 374/376 M12 ISO M12 - 1/2	22.00
ERTC20100	10	8	DIN371 M10 ISO M10 - 3/8	22.00
ERTC20110	11	9	DIN 374/376 M14 - 9/16	22.00
ERTC20120	12	9	DIN 374/376 M16 - 5/8	22.00

* Tap specs indicated are some of the suitable sizes only.
Coolant sealed Tapping ER collets are all made to CL1 (Class 1 - 10 Micron) Precision Standard
They are packed with green cap and the body is transparent blue
Sets are available on request

** Belirtilen kılavuz detaylarında uygun ölçülerin sadece bir kısmı belirtilmiştir*
Tüm sızdırmaz kılavuz pensleri CL1 (Class 1 - 10 Micron) hassasiyet sınıfına göre üretilmiştir.
Ambalajlarının kapağı yeşil , gövdesi saydam mavidir.
Sipariş edildiğinde set yapılabilir.



ERTC COOLANT SEALED TAPPING COLLETS For internal coolant taps
ERTC SIZDIRMAZ KILAVUZ PENSLERİ İçten soğutmalı kılavuzlar için



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ERTC25

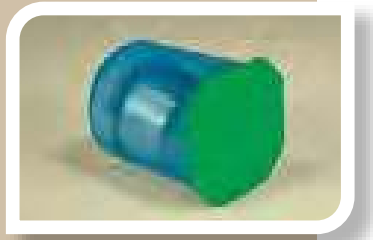
CODE / *KOD*	d1	square size *kare ölçüsü* □ mm	Tap Specs* - *Klavuz detayı**	EURO
ERTC25035	3.5	2.7	DIN371 M3 - DIN376 M5	22.70
ERTC25045	4.5	3.4	DIN371 M4 - DIN376 M6	22.70
ERTC25055	5.5	4.5	DIN374/376 M7	22.70
ERTC25060	6	4.9	DIN371 M4,5/M5/M6 DIN374/376 M8	22.70
ERTC25070	7	5.5	DIN371 M7 DIN374/376 M9-M10 JIS M9-M10	22.70
ERTC25080	8	6,2/6,3	DIN371 M8 ISO M8 - M10 - 7/16 - 5/16	22.70
ERTC25090	9	7.0/7.1	DIN 374/376 M12 ISO M12 - 1/2	22.70
ERTC25100	10	8	DIN371 M10 ISO M10 - 3/8	22.70
ERTC25110	11	9	DIN 374/376 M14 - 9/16	22.70
ERTC25120	12	9	DIN 374/376 M16 - 5/8	22.70
ERTC25140	14	11.0/11.2	DIN 374/376 M18 - JIS M18 ISO M18/M20 3/4	22.70
ERTC25160	16	12	DIN 374/376 M20	22.70

ERTC32

CODE / *KOD*	d1	square size *kare ölçüsü* □ mm	Tap Specs* - *Klavuz detayı**	EURO
ERTC32035	3.5	2.7	DIN371 M3 - DIN376 M5	24.00
ERTC32045	4.5	3.4	DIN371 M4 - DIN376 M6	24.00
ERTC32055	5.5	4.5	DIN374/376 M7	24.00
ERTC32060	6	4.9	DIN371 M4,5/M5/M6 DIN374/376 M8	24.00
ERTC32070	7	5.5	DIN371 M7 DIN374/376 M9-M10 JIS M9-M10	24.00
ERTC32080	8	6,2/6,3	DIN371 M8 ISO M8 - M10 - 7/16" - 5/16"	24.00
ERTC32090	9	7.0/7.1	DIN 374/376 M12 ISO M12 - 1/2"	24.00
ERTC32100	10	8	DIN371 M10 ISO M10 - 3/8"	24.00
ERTC32110	11	9	DIN 374/376 M14 - 9/16"	24.00
ERTC32120	12	9	DIN 374/376 M16 - 5/8"	24.00
ERTC32140	14	11.0/11.2	DIN 374/376 M18 - JIS M18 ISO M18-M20 3/4"	24.00
ERTC32160	16	12	DIN 374/376 M20	24.00
ERTC32180	18	14.0/14.5	DIN 374/376 M22- M24 -7/8" ISO M24 - 1"	24.00
ERTC32200	20	16	DIN 374/376 M27 - 1" ISO M27-M30 - 1 1/8"	24.00

* Tap specs indicated are some of the suitable sizes only.
Coolant sealed Tapping ER collets are all made to CL1 (Class 1 - 10 Micron) Precision Standard
They are packed with green cap and the body is transparent blue
Sets are available on request

** Belirtilen kılavuz detaylarında uygun ölçülerin sadece bir kısmı belirtilmiştir*
Tüm sızdırmaz kılavuz pensleri CL1 (Class 1 - 10 Micron) hassasiyet sınıfına göre üretilmiştir.
Ambalajlarının kapağı yeşil , gövdesi saydam mavidir.
Sipariş edildiğinde set yapılabilir.



ERTC COOLANT SEALED TAPPING COLLETS For internal coolant taps
ERTC SIZDIRMAZ KILAVUZ PENSLERİ İçten soğutmalı kılavuzlar için

DIN 6499 / ISO 15488 / Pat. Nr. 2012 07739



ERTC40

CODE / *KOD*	d1	square size *kare ölçüsü* □ mm	Tap Specs* - *Klavuz detayı**	EURO
ERTC40045	4.5	3.4	DIN371 M4 - DIN376 M6	26.70
ERTC40060	6	4.9	DIN371 M4,5/M5/M6 DIN374/376 M8	26.70
ERTC40070	7	5.5	DIN371 M7 DIN374/376 M9-M10 JIS M9-M10	26.70
ERTC40080	8	6,2/6,3	DIN371 M8 ISO M8 - M10 - 7/16" - 5/16"	26.70
ERTC40090	9	7.0/7.1	DIN 374/376 M12 ISO M12 - 1/2"	26.70
ERTC40100	10	8	DIN371 M10 ISO M10 - 3/8"	26.70
ERTC40110	11	9	DIN 374/376 M14 – 9/16"	26.70
ERTC40120	12	9	DIN 374/376 M16 - 5/8"	26.70
ERTC40140	14	11.0/11.2	DIN 374/376 M18 - JIS M18 ISO M18-M20 3/4"	26.70
ERTC40160	16	12	DIN 374/376 M20	26.70
ERTC40180	18	14.0/14.5	DIN 374/376 M22- M24 -7/8" ISO M24 - 1"	26.70
ERTC40200	20	16	DIN 374/376 M27 - 1" ISO M27-M30 - 1 1/8"	26.70
ERTC40220	22	18	DIN 374/376 M30 - 1 1/8"	26.70
ERTC40250	25	20	DIN 374/376 M33 - 1 1/4" ISO M36	26.70

* Tap specs indicated are some of the suitable sizes only.
Coolant sealed Tapping ER collets are all made to CL1 (Class 1 - 10 Micron) Precision Standard
They are packed with green cap and the body is transparent blue
Sets are available on request

** Belirtilen kılavuz detaylarında uygun ölçülerin sadece bir kısmı belirtilmiştir*
Tüm sızdırmaz kılavuz pensleri CL1 (Class 1 - 10 Micron) hassasiyet sınıfına göre üretilmiştir.
Ambalajlarının kapağı yeşil , gövdesi saydam mavidir.
Sipariş edildiğinde set yapılabilir.



INCH SIZED ER COLLETS
İNÇ ÖLÇÜ ER PENSLER

DIN 6499 / ISO 15488-B



ER8 INCH SIZED COLLETS / *ER8 İNÇ ÖLÇÜ PENSLER*

ER8	CLASS 2		CLASS 1		TOPAC (5 micron)	
clamping dia *sıkma çapı* Ø inch	CODE / *KOD*	EURO	CODE / *KOD*	EURO	CODE / *KOD*	EURO
1/16	ER0801592	8.50	ER0801591	10.10	ER080159T	14.30
3/32	ER0802382	7.40	ER0802381	8.80	ER080238T	12.00
1/8	ER0803182	5.80	ER0803181	7.10	ER080318T	9.40
5/32	ER0803972	5.80	ER0803971	7.10	ER080397T	9.40
3/16	ER0804762	5.80	ER0804761	7.10	ER080476T	9.40



ER11 INCH SIZED COLLETS / *ER11 İNÇ ÖLÇÜ PENSLER*

ER11	CLASS 2		CLASS 1		TOPAC (5 micron)	
clamping dia *sıkma çapı* Ø inch	CODE / *KOD*	EURO	CODE / *KOD*	EURO	CODE / *KOD*	EURO
1/16	ER1101592	7.90	ER1101591	9.50	ER110159T	13.70
3/32	ER1102382	6.80	ER1102381	8.20	ER110238T	11.40
1/8	ER1103182	5.10	ER1103181	6.40	ER110318T	8.70
5/32	ER1103972	5.10	ER1103971	6.40	ER110397T	8.70
3/16	ER1104762	5.10	ER1104761	6.40	ER110476T	8.70
7/32	ER1105562	5.10	ER1105561	6.40	ER110556T	8.70
1/4	ER1106352	5.10	ER1106351	6.40	ER110635T	8.70
9/32*	ER1107142	13.20	ER1107141	16.20	ER110714T	20.70
5/16*	ER1107942	13.20	ER1107941	16.20	ER110794T	20.70

Other inch sized collets are available on request / *Diğer inç ölçü pensler siparişe yapılabilir.*

* Ø>1/4" (over Ø1/4" dia) collets are shorter then stardard. They can only clamp down Ø -0,008"
* Ø>1/4" (Ø1/4" üstü çap) pensler standarttan daha kısadır. Daralma kapasitesi sadece Ø -0,008" dir.



ER11 INCH SIZED COLLET SETS / *ER11 INÇ ÖLÇÜ PENS TAKIMLARI*

ER11 INCH SIZED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ER11SETIN2	**9pcs ER11 Inch sized collets Ø1/16-5/16 Class 2 in plastic box** *9Ad. ER10 İnç ölçü pens Ø1/16-5/16 Class 2 plastik kutuda* *1/16-3/32-1/8-5/32-3/16-7/32-1/4-9/32-5/16*	71.60

ER11 INCH SIZED COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ER11SETIN1	**9pcs ER11 Inch sized collets Ø1/16-5/16 Class 1 in plastic box** *9Ad. ER11 İnç ölçü pens Ø1/16-5/16 Class 1 plastik kutuda* *1/16-3/32-1/8-5/32-3/16-7/32-1/4-9/32-5/16*	87.10

ER11 INCH SIZED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ER11SETINT	**9pcs ER11 Inch sized collets Ø1/16-5/16 TOPAC in plastic box** *9Ad. ER11 İnç ölçü pens Ø1/16-5/16 TOPAC plastik kutuda* *1/16-3/32-1/8-5/32-3/16-7/32-1/4-9/32-5/16*	115.00

INCH SIZED ER COLLETS
İNÇ ÖLÇÜ ER PENSLER

DIN 6499 / ISO 15488-B

ER16 INCH SIZED COLLETS / *ER16 İNÇ ÖLÇÜ PENSLER*



ER16	CLASS 2		CLASS 1		TOPAC (5 micron)	
clamping dia *sıkma çapı* Ø inch	CODE / *KOD*	EURO	CODE / *KOD*	EURO	CODE / *KOD*	EURO
1/16	ER1601592	6.10	ER1601591	7.70	ER160159T	11.90
3/32	ER1602382	5.10	ER1602381	6.50	ER160238T	9.70
1/8	ER1603182	3.90	ER1603181	5.20	ER160318T	7.50
5/32	ER1603972	3.90	ER1603971	5.20	ER160397T	7.50
3/16	ER1604762	3.90	ER1604761	5.20	ER160476T	7.50
7/32	ER1605562	3.90	ER1605561	5.20	ER160556T	7.50
1/4	ER1606352	3.90	ER1606351	5.20	ER160635T	7.50
9/32	ER1607142	3.90	ER1607141	5.20	ER160714T	7.50
5/16	ER1607942	3.90	ER1607941	5.20	ER160794T	7.50
11/32	ER1608732	3.90	ER1608731	5.20	ER160873T	7.50
3/8	ER1609532	3.90	ER1609531	5.20	ER160953T	7.50
13/32*	ER1610322	12.80	ER1610321	15.80	ER161032T	20.30
7/16*	ER1611112	12.80	ER1611111	15.80	ER161111T	20.30
15/32*	ER1611912	12.80	ER1611911	15.80	ER161191T	20.30
1/2*	ER1612702	12.80	ER1612701	15.80	ER161270T	20.30

* Ø>3/8" (over Ø3/8" dia) collets are shorter then stardard. They can only clamp down Ø -0,008"
* Ø>3/8" (Ø3/8" üstü çap) pensler standarttan daha kısadır. Daralma kapasitesi sadece Ø -0,008" dir.

Other inch sized collets are available on request / *Diğer inç ölçü pensler siparişe yapılabilir.*

ER16 INCH SIZED COLLET SETS / *ER16 İNÇ ÖLÇÜ PENS TAKIMLARI*



ER16 INCH SIZED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ER16SETIN2	**10pcs ER16 Inch sized collets Ø1/16-3/8 Class 2 in plastic box** *10Ad. ER16 İnç ölçü pens Ø1/16-3/8 Class 2 plastik kutuda* *1/16-3/32-1/8-5/32-3/16-7/32-1/4-9/32-5/16-3/8*	47.40

ER16 INCH SIZED COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ER16SETIN1	**10pcs ER16 Inch sized collets Ø1/16-3/8 Class 1 in plastic box** *10Ad. ER16 İnç ölçü pens Ø1/16-3/8 Class 1 plastik kutuda* *1/16-3/32-1/8-5/32-3/16-7/32-1/4-9/32-5/16-3/8*	60.80

ER16 INCH SIZED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ER16SETINT	**10pcs ER16 Inch sized collets Ø1/16-3/8 TOPAC in plastic box** *10Ad. ER16 İnç ölçü pens Ø1/16-3/8 TOPAC plastik kutuda* *1/16-3/32-1/8-5/32-3/16-7/32-1/4-9/32-5/16-3/8*	86.60



ER20 INCH SIZED COLLETS / *ER20 İNÇ ÖLÇÜ PENSLER*

ER20	CLASS 2		CLASS 1		TOPAC (5 micron)	
clamping dia *sıkma çapı* Ø inch	CODE / *KOD*	EURO	CODE / *KOD*	EURO	CODE / *KOD*	EURO
1/16	ER2001592	6.70	ER2001591	8.30	ER200159T	12.50
3/32	ER2002382	5.90	ER2002381	7.30	ER200238T	10.50
1/8	ER2003182	4.40	ER2003181	5.70	ER200318T	8.00
5/32	ER2003972	4.40	ER2003971	5.70	ER200397T	8.00
3/16	ER2004762	4.40	ER2004761	5.70	ER200476T	8.00
7/32	ER2005562	4.40	ER2005561	5.70	ER200556T	8.00
1/4	ER2006352	4.40	ER2006351	5.70	ER200635T	8.00
9/32	ER2007142	4.40	ER2007141	5.70	ER200714T	8.00
5/16	ER2007942	4.40	ER2007941	5.70	ER200794T	8.00
11/32	ER2008732	4.40	ER2008731	5.70	ER200873T	8.00
3/8	ER2009532	4.40	ER2009531	5.70	ER200953T	8.00
13/32	ER2010322	4.40	ER2010321	5.70	ER201032T	8.00
7/16	ER2011112	4.40	ER2011111	5.70	ER201111T	8.00
15/32	ER2011912	4.40	ER2011911	5.70	ER201191T	8.00
1/2	ER2012702	4.40	ER2012701	5.70	ER201270T	8.00
17/32*	ER2013492	12.80	ER2013491	15.80	ER201349T	20.30
9/16*	ER2014292	12.80	ER2014291	15.80	ER201429T	20.30
19/32*	ER2015082	12.80	ER2015081	15.80	ER201508T	20.30
5/8*	ER2015882	12.80	ER2015881	15.80	ER201588T	20.30

* Ø>1/2" (over Ø1/2" dia) collets are shorter then stardard. They can only clamp down Ø -0,008"
* Ø>1/2" (Ø1/2" üstü çap) pensler standarttan daha kısadır. Daralma kapasitesi sadece Ø -0,008" dir.

Other inch sized collets are available on request / *Diğer inç ölçü pensler siparişe yapılabilir.*



ER20 INCH SIZED COLLET SETS / *ER20 İNÇ ÖLÇÜ PENS TAKIMLARI*

ER20 INCH SIZED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ER20SETIN2	**12pcs ER20 Inch sized collets Ø1/16-1/2 Class 2 in plastic box** *12Ad. ER20 İnç ölçü pens Ø1/16-1/2 Class 2 plastik kutuda* *1/16-3/32-1/8-5/32-3/16-7/32-1/4-9/32-5/16-3/8-7/16-1/2*	61.60

ER20 INCH SIZED COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ER20SETIN1	**12pcs ER20 Inch sized collets Ø1/16-1/2 Class 1 in plastic box** *12Ad. ER20 İnç ölçü pens Ø1/16-1/2 Class 1 plastik kutuda* *1/16-3/32-1/8-5/32-3/16-7/32-1/4-9/32-5/16-3/8-7/16-1/2*	77.60

ER20 INCH SIZED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ER20SETINT	**12pcs ER20 Inch sized collets Ø1/16-1/2 TOPAC in plastic box** *12Ad. ER20 İnç ölçü pens Ø1/16-1/2 TOPAC plastik kutuda* *1/16-3/32-1/8-5/32-3/16-7/32-1/4-9/32-5/16-3/8-7/16-1/2*	108.00

INCH SIZED ER COLLETS
İNÇ ÖLÇÜ ER PENSLER

DIN 6499 / ISO 15488-B

ER25 INCH SIZED COLLETS / *ER25 İNÇ ÖLÇÜ PENSLER*



ER25	CLASS 2		CLASS 1		TOPAC (5 micron)	
clamping dia *sıkma çapı* Ø inch	CODE / *KOD*	EURO	CODE / *KOD*	EURO	CODE / *KOD*	EURO
1/16	ER2501592	8.00	ER2501591	9.70	ER250159T	13.90
3/32	ER2502382	6.20	ER2502381	7.70	ER250238T	10.90
1/8	ER2503182	4.70	ER2503181	6.10	ER250318T	8.40
5/32	ER2503972	4.70	ER2503971	6.10	ER250397T	8.40
3/16	ER2504762	4.70	ER2504761	6.10	ER250476T	8.40
7/32	ER2505562	4.70	ER2505561	6.10	ER250556T	8.40
1/4	ER2506352	4.70	ER2506351	6.10	ER250635T	8.40
9/32	ER2507142	4.70	ER2507141	6.10	ER250714T	8.40
5/16	ER2507942	4.70	ER2507941	6.10	ER250794T	8.40
11/32	ER2508732	4.70	ER2508731	6.10	ER250873T	8.40
3/8	ER2509532	4.70	ER2509531	6.10	ER250953T	8.40
13/32	ER2510322	4.70	ER2510321	6.10	ER251032T	8.40
7/16	ER2511112	4.70	ER2511111	6.10	ER251111T	8.40
15/32	ER2511912	4.70	ER2511911	6.10	ER251191T	8.40
1/2	ER2512702	4.70	ER2512701	6.10	ER251270T	8.40
17/32	ER2513492	4.70	ER2513491	6.10	ER251349T	8.40
9/16	ER2514292	4.70	ER2514291	6.10	ER251429T	8.40
19/32	ER2515082	4.70	ER2515081	6.10	ER251508T	8.40
5/8	ER2515882	4.70	ER2515881	6.10	ER251588T	8.40
21/32*	ER2516672	12.80	ER2516671	15.80	ER251667T	20.30
11/16*	ER2517462	12.80	ER2517461	15.80	ER251746T	20.30
23/32*	ER2518262	12.80	ER2518261	15.80	ER251826T	20.30
3/4*	ER2519052	12.80	ER2519051	15.80	ER251905T	20.30

* Ø>5/8" (over Ø5/8" dia) collets are shorter then stardard. They can only clamp down Ø -0,008"
* Ø>5/8" (Ø5/8" üstü çap) pensler standarttan daha kısadır. Daralma kapasitesi sadece Ø -0,008" dir.

Other inch sized collets are available on request / *Diğer inç ölçü pensler siparişe yapılabilir.*

ER25 INCH SIZED COLLET SETS / *ER25 İNÇ ÖLÇÜ PENS TAKIMLARI*



ER25 INCH SIZED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ER25SETIN2	**15pcs ER25 Inch sized collets Ø1/16-5/8 Class 2 in plastic box** *15Ad. ER25 İnç ölçü pens Ø1/16-5/8 Class 2 plastik kutuda* *1/16-3/32-1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-7/16-1/2-9/16-5/8*	84.10

ER25 INCH SIZED COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ER25SETIN1	**15pcs ER25 Inch sized collets Ø1/16-5/8 Class 1 in plastic box** *15Ad. ER25 İnç ölçü pens Ø1/16-5/8 Class 1 plastik kutuda* *1/16-3/32-1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-7/16-1/2-9/16-5/8*	105.50

ER25 INCH SIZED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ER25SETINT	**15pcs ER25 Inch sized collets Ø1/16-5/8 TOPAC in plastic box** *15Ad. ER25 İnç ölçü pens Ø1/16-5/8 TOPAC plastik kutuda* *1/16-3/32-1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-7/16-1/2-9/16-5/8*	142.80

INCH SIZED ER COLLETS
İNÇ ÖLÇÜ ER PENSLER

DIN 6499 / ISO 15488-B



ER32 INCH SIZED COLLETS / *ER32 İNÇ ÖLÇÜ PENSLER*

ER32	CLASS 2		CLASS 1		TOPAC (5 micron)	
clamping dia *sıkma çapı* Ø inch	CODE / *KOD*	EURO	CODE / *KOD*	EURO	CODE / *KOD*	EURO
1/16	ER3201592	9.90	ER3201591	12.20	ER320159T	16.30
3/32	ER3202382	8.20	ER3202381	10.40	ER320238T	13.50
1/8	ER3203182	4.90	ER3203181	6.50	ER320318T	8.80
5/32	ER3203972	4.90	ER3203971	6.50	ER320397T	8.80
3/16	ER3204762	4.90	ER3204761	6.50	ER320476T	8.80
7/32	ER3205562	4.90	ER3205561	6.50	ER320556T	8.80
1/4	ER3206352	4.90	ER3206351	6.50	ER320635T	8.80
9/32	ER3207142	4.90	ER3207141	6.50	ER320714T	8.80
5/16	ER3207942	4.90	ER3207941	6.50	ER320794T	8.80
11/32	ER3208732	4.90	ER3208731	6.50	ER320873T	8.80
3/8	ER3209532	4.90	ER3209531	6.50	ER320953T	8.80
13/32	ER3210322	4.90	ER3210321	6.50	ER321032T	8.80
7/16	ER3211112	4.90	ER3211111	6.50	ER321111T	8.80
15/32	ER3211912	4.90	ER3211911	6.50	ER321191T	8.80
1/2	ER3212702	4.90	ER3212701	6.50	ER321270T	8.80
17/32	ER3213492	4.90	ER3213491	6.50	ER321349T	8.80
9/16	ER3214292	4.90	ER3214291	6.50	ER321429T	8.80
19/32	ER3215082	4.90	ER3215081	6.50	ER321508T	8.80
5/8	ER3215882	4.90	ER3215881	6.50	ER321588T	8.80
21/32	ER3216672	4.90	ER3216671	6.50	ER321667T	8.80
11/16	ER3217462	4.90	ER3217461	6.50	ER321746T	8.80
23/32	ER3218262	4.90	ER3218261	6.50	ER321826T	8.80
3/4	ER3219052	4.90	ER3219051	6.50	ER321905T	8.80
25/32	ER3219842	4.90	ER3219841	6.50	ER321984T	8.80
13/16*	ER3220642	12.80	ER3220641	15.80	ER322064T	20.30
7/8*	ER3222232	12.80	ER3222231	15.80	ER322223T	20.30
15/16*	ER3223812	12.80	ER3223811	15.80	ER322381T	20.30
1*	ER3225402	12.80	ER3225401	15.80	ER322540T	20.30

* Ø>25/32" (over Ø25/32" dia) collets are shorter then stardard. They can only clamp down Ø -0,008"
* Ø>25/32" (Ø25/32" üstü çap) pensler standarttan daha kısadır. Daralma kapasitesi sadece Ø -0,008" dir.

Other inch sized collets are available on request / *Diğer inç ölçü pensler siparişe yapılabilir.*



ER32 INCH SIZED COLLETS SETS / *ER32 İNÇ ÖLÇÜ PENS TAKIMLARI*

ER32 INCH SIZED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ER32SETIN2	**18pcs ER32 Inch sized collets Ø1/8-3/4 Class 2 in plastic box** *18Ad. ER32 İnç ölçü pens Ø1/8-3/4 Class 2 plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-15/32-1/2* *17/32-9/16-5/8-11/16-3/4*	98.20

ER32 INCH SIZED COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ER32SETIN1	**18pcs ER32 Inch sized collets Ø1/8-3/4 Class 1 in plastic box** *18Ad. ER32 İnç ölçü pens Ø1/8-3/4 Class 1 plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-15/32-1/2* *17/32-9/16-5/8-11/16-3/4*	127.00

ER32 INCH SIZED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ER32SETINT	**18pcs ER32 Inch sized collets Ø1/8-3/4 TOPAC in plastic box** *18Ad. ER32 İnç ölçü pens Ø1/8-3/4 TOPAC plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-15/32-1/2* *17/32-9/16-5/8-11/16-3/4*	168.40

INCH SIZED ER COLLETS
İNÇ ÖLÇÜ ER PENSLER

DIN 6499 / ISO 15488-B

ER40 INCH SIZED COLLETS / *ER40 İNÇ ÖLÇÜ PENSLER*



ER40	CLASS 2		CLASS 1		TOPAC (5 micron)	
clamping dia *sıkma çapı* Ø inch	CODE / *KOD*	EURO	CODE / *KOD*	EURO	CODE / *KOD*	EURO
1/16	ER4001592	13.00	ER4001591	15.00	ER400159T	19.00
3/32	ER4002382	10.60	ER4002381	12.50	ER400238T	15.70
1/8	ER4003182	8.60	ER4003181	10.60	ER400318T	13.40
5/32	ER4003972	6.20	ER4003971	8.10	ER400397T	10.40
3/16	ER4004762	6.20	ER4004761	8.10	ER400476T	10.40
7/32	ER4005562	6.20	ER4005561	8.10	ER400556T	10.40
1/4	ER4006352	6.20	ER4006351	8.10	ER400635T	10.40
9/32	ER4007142	6.20	ER4007141	8.10	ER400714T	10.40
5/16	ER4007942	6.20	ER4007941	8.10	ER400794T	10.40
11/32	ER4008732	6.20	ER4008731	8.10	ER400873T	10.40
3/8	ER4009532	6.20	ER4009531	8.10	ER400953T	10.40
13/32	ER4010322	6.20	ER4010321	8.10	ER401032T	10.40
7/16	ER4011112	6.20	ER4011111	8.10	ER401111T	10.40
15/32	ER4011912	6.20	ER4011911	8.10	ER401191T	10.40
1/2	ER4012702	6.20	ER4012701	8.10	ER401270T	10.40
17/32	ER4013492	6.20	ER4013491	8.10	ER401349T	10.40
9/16	ER4014292	6.20	ER4014291	8.10	ER401429T	10.40
19/32	ER4015082	6.20	ER4015081	8.10	ER401508T	10.40
5/8	ER4015882	6.20	ER4015881	8.10	ER401588T	10.40
21/32	ER4016672	6.20	ER4016671	8.10	ER401667T	10.40
11/16	ER4017462	6.20	ER4017461	8.10	ER401746T	10.40
23/32	ER4018262	6.20	ER4018261	8.10	ER401826T	10.40
3/4	ER4019052	6.20	ER4019051	8.10	ER401905T	10.40
25/32	ER4019842	6.20	ER4019841	8.10	ER401984T	10.40
13/16	ER4020642	6.20	ER4020641	8.10	ER402064T	10.40
7/8	ER4022232	6.20	ER4022231	8.10	ER402223T	10.40
15/16	ER4023812	6.20	ER4023811	8.10	ER402381T	10.40
1"	ER4025402	6.20	ER4025401	8.10	ER402540T	10.40
1-1/8*	ER4028582	13.90	ER4028581	16.90	ER402858T	21.40
1-1/4*	ER4031752	13.90	ER4031751	16.90	ER403175T	21.40

* Ø>1" (over Ø1" dia) collets are shorter then stardard. They can only clamp down Ø -0,008"
* Ø>1" (Ø1" üstü çap) pensler standarttan daha kısadır. Daralma kapasitesi sadece Ø -0,008" dir.

Other inch sized collets are available on request / *Diğer inç ölçü pensler siparişe yapılabilir.*

ER40 INCH SIZED COLLETS SETS / *ER40 İNÇ ÖLÇÜ PENS TAKIMLARI*



ER40 INCH SIZED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ER40SETIN2	**23pcs ER40 Inch sized collets Ø1/8-1" Class 2 in plastic box** *23Ad. ER40 İnç ölçü pens Ø1/8-1" Class 2 plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-15/32-1/2* *17/32-9/16-19/32-5/8-11/16-3/4-13/16-7/8-15/16-1"*	165.00

ER40 INCH SIZED COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ER40SETIN1	**23pcs ER40 Inch sized collets Ø1/8-1" Class 1 in plastic box** *23Ad. ER40 İnç ölçü pens Ø1/8-1" Class 1 plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-15/32-1/2-17/32* *9/16-19/32-5/8-11/16-3/4-13/16-7/8-15/16-1"*	208.80

ER40 INCH SIZED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ER40SETINT	**23pcs ER40 Inch sized collets Ø1/8-1" TOPAC in plastic box** *23Ad. ER40 İnç ölçü pens Ø1/8-1" TOPAC plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-15/32-1/2* *17/32-9/16-19/32-5/8-11/16-3/4-13/16-7/8-15/16-1"*	262.20

INCH SIZED ER COLLETS
İNÇ ÖLÇÜ ER PENSLER

DIN 6499 / ISO 15488-B



ER50 INCH SIZED COLLETS / *ER50 INÇ ÖLÇÜ PENSLER*

ER50	CLASS 2		CLASS 1		TOPAC (5 micron)	
clamping dia *sıkma çapı* Ø inch	CODE / *KOD*	EURO	CODE / *KOD*	EURO	CODE / *KOD*	EURO
1/4	ER5006352	23.00	ER5006351	26.00	ER500635T	30.00
5/16	ER5007942	23.00	ER5007941	26.00	ER500794T	30.00
3/8	ER5009532	23.00	ER5009531	26.00	ER500953T	30.00
7/16	ER5011112	23.00	ER5011111	26.00	ER501111T	30.00
1/2	ER5012702	22.00	ER5012701	25.00	ER501270T	29.00
9/16	ER5014292	22.00	ER5014291	25.00	ER501429T	29.00
5/8	ER5015882	22.00	ER5015881	25.00	ER501588T	29.00
11/16	ER5017462	22.00	ER5017461	25.00	ER501746T	29.00
3/4	ER5019052	22.00	ER5019051	25.00	ER501905T	29.00
13/16	ER5020642	22.00	ER5020641	25.00	ER502064T	29.00
7/8	ER5022232	22.00	ER5022231	25.00	ER502223T	29.00
15/16	ER5023812	22.00	ER5023811	25.00	ER502381T	29.00
1"	ER5025402	22.00	ER5025401	25.00	ER502540T	29.00
1-1/8	ER5028582	22.00	ER5028581	25.00	ER502858T	29.00
1-1/4	ER5031752	22.00	ER5031751	25.00	ER503175T	29.00
1-3/8*	ER5034922	34.00	ER5034921	38.00	ER503492T	42.00
1-1/2*	ER5038102	34.00	ER5038101	38.00	ER503810T	42.00

* Ø>1-1/4" (over Ø1-1/4" dia) collets are shorter then stardard. They can only clamp down Ø -0,008"
* Ø>1-1/4" (Ø1-1/4" üstü çap) pensler standarttan daha kısadır. Daralma kapasitesi sadece Ø -0,008" dir.

Other inch sized collets are available on request / *Diğer inç ölçü pensler siparişe yapılabilir.*



ER50 INCH SIZED COLLETS SETS / *ER50 İNÇ ÖLÇÜ PENS TAKIMLARI*

ER50 INCH SIZED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ER50SETIN2	**12pcs ER50 Inch sized collets Ø3/8"-1-1/4" Class 2 in plastic box** *12Ad. ER50 İnç ölçü pens Ø3/8"-1-1/4" Class 2 plastik kutuda* *Ø3/8-1/2-9/16-5/8-11/16-3/4-13/16-7/8-15/16-1"- 1.1/8"-1.1/4"*	285.00

ER50 INCH SIZED COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ER50SETIN1	**12pcs ER50 Inch sized collets Ø3/8"-1-1/4" Class 1 in plastic box** *12Ad. ER50 İnç ölçü pens Ø3/8"-1-1/4" Class 1 plastik kutuda* *Ø3/8-1/2-9/16-5/8-11/16-3/4-13/16-7/8-15/16-1"- 1.1/8"-1.1/4"*	321.00

ER50 INCH SIZED COLLET SET TOPAC (5 micron)

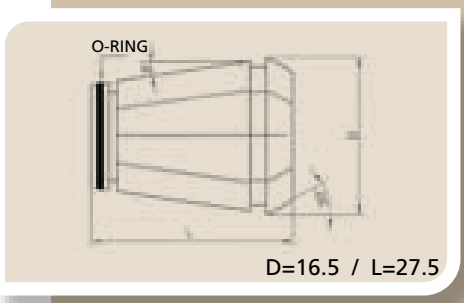
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ER50SETINT	**12pcs ER50 Inch sized collets Ø3/8"-1-1/4" TOPAC in plastic box** *12Ad. ER50 İnç ölçü pens Ø3/8"-1-1/4" TOPAC plastik kutuda* *Ø3/8-1/2-9/16-5/8-11/16-3/4-13/16-7/8-15/16-1"- 1.1/8"-1.1/4"*	369.00

INCH SIZED COOLANT SEALED ER COLLETS for internal coolant tools
İNÇ ÖLÇÜ SIZDIRMAZ PENSLER İçten soğutmalı takımlar için

ERC16 DIN 6499 / ISO 15488 Pat. Nr. 2012 07739

ERC16	CLASS 2		CLASS 1		TOPAC (5 micron)	
clamping dia *sıkma çapı* Ø inch	CODE / *KOD*	EURO	CODE / *KOD*	EURO	CODE / *KOD*	EURO
1/8	ERC1603182	12.00	ERC1603181	13.50	ERC160318T	16.40
5/32	ERC1603972	12.00	ERC1603971	13.50	ERC160397T	16.40
3/16	ERC1604762	12.00	ERC1604761	13.50	ERC160476T	16.40
7/32	ERC1605562	12.00	ERC1605561	13.50	ERC160556T	16.40
1/4	ERC1606352	12.00	ERC1606351	13.50	ERC160635T	16.40
9/32	ERC1607142	12.00	ERC1607141	13.50	ERC1607147	16.40
5/16	ERC1607942	12.00	ERC1607941	13.50	ERC160794T	16.40
11/32	ERC1608732	12.00	ERC1608731	13.50	ERC160873T	16.40
3/8	ERC1609532	12.00	ERC1609531	13.50	ERC160953T	16.40





ERC16 INCH SIZED COOLANT SEALED COLLETS SETS
ERC16 İNÇ ÖLÇÜ SIZDIRMAZ PENS TAKIMLARI



ERC16 INCH SIZED COOLANT SEALED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ERC16SETIN2	9pcs ERC16 Inch sized coolant sealed collets Ø1/8-3/8 Class 2 in plastic box *9Ad. ERC16 İnç ölçü pens Ø1/8-3/8 Class 2 plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8*	113.00

ERC16 INCH SIZED COOLANT SEALED COLLET SET CLASS 1

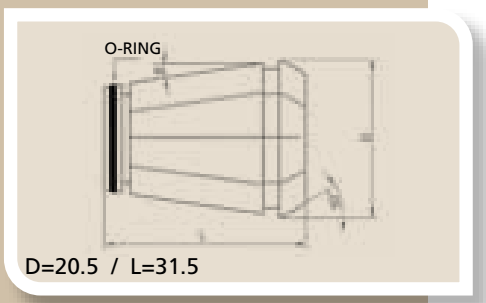
CODE/*KOD*	content - *içeriği*	EURO
ERC16SETIN1	9pcs ERC16 Inch sized coolant sealed collets Ø1/8-3/8 Class 1 in plastic box *9Ad. ERC16 İnç ölçü pens Ø1/8-3/8 Class 1 plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8*	126.50

ERC16 INCH SIZED COOLANT SEALED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ERC16SETINT	9pcs ERC16 Inch sized coolant sealed collets Ø1/8-3/8 TOPAC in plastic box *9Ad. ERC16 İnç ölçü pens Ø1/8-3/8 TOPAC plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8*	152.60

INCH SIZED COOLANT SEALED ER COLLETS for internal coolant tools
İNÇ ÖLÇÜ SIZDIRMAZ PESLER İçten soğutmalı takımlar için





ERC20 DIN 6499 / ISO 15488
Pat. Nr. 2012 07739

ERC20	CLASS 2		CLASS 1		TOPAC (5 micron)	
clamping dia *sıkma çapı* Ø inch	CODE / *KOD*	EURO	CODE / *KOD*	EURO	CODE / *KOD*	EURO
1/8	ERC2003182	12.10	ERC2003181	13.60	ERC200318T	16.50
5/32	ERC2003972	12.10	ERC2003971	13.60	ERC200397T	16.50
3/16	ERC2004762	12.10	ERC2004761	13.60	ERC200476T	16.50
7/32	ERC2005562	12.10	ERC2005561	13.60	ERC200556T	16.50
1/4	ERC2006352	12.10	ERC2006351	13.60	ERC200635T	16.50
9/32	ERC2007142	12.10	ERC2007141	13.60	ERC200714T	16.50
5/16	ERC2007942	12.10	ERC2007941	13.60	ERC200794T	16.50
11/32	ERC2008732	12.10	ERC2008731	13.60	ERC200873T	16.50
3/8	ERC2009532	12.10	ERC2009531	13.60	ERC200953T	16.50
13/32	ERC2010322	12.10	ERC2010321	13.60	ERC201032T	16.50
7/16	ERC2011112	12.10	ERC2011111	13.60	ERC201111T	16.50
1/2	ERC2012702	12.10	ERC2012701	13.60	ERC201270T	16.50



ERC20 INCH SIZED COOLANT SEALED COLLETS SETS
ERC20 İNÇ ÖLÇÜ SIZDIRMAZ PENS TAKIMLARI

ERC20 INCH SIZED COOLANT SEALED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ERC20SETIN2	12pcs ERC20 Inch sized coolant sealed collets Ø1/8-1/2 Class 2 in plastic box *12Ad. ERC20 İnç ölçü sızdırma pens Ø1/8-1/2 Class 2 plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-1/2*	150.20

ERC20 INCH SIZED COOLANT SEALED COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ERC20SETIN1	12pcs ERC20 Inch sized coolant sealed collets Ø1/8-1/2 Class 1 in plastic box *12Ad. ERC20 İnç ölçü sızdırma pens Ø1/8-1/2 Class 1 plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-1/2*	168.20

ERC20 INCH SIZED COOLANT SEALED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ERC20SETINT	12pcs ERC20 Inch sized coolant sealed collets Ø1/8-1/2 TOPAC in plastic box *12Ad. ERC20 İnç ölçü sızdırma pens Ø1/8-1/2 TOPAC plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-1/2*	203.00

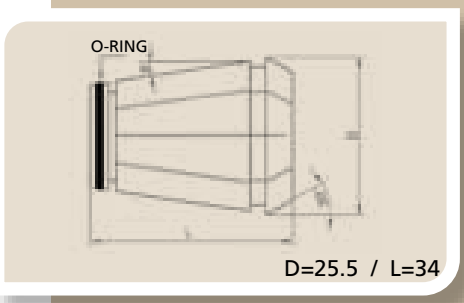
INCH SIZED COOLANT SEALED ER COLLETS for internal coolant tools
İNÇ ÖLÇÜ SIZDIRMAZ PENSLER İçten soğutmalı takımlar için

ERC25 DIN 6499 / ISO 15488

Pat. Nr. 2012 07739

ERC25	CLASS 2		CLASS 1		TOPAC (5 micron)	
clamping dia *sıkma çapı* Ø inch	CODE / *KOD*	EURO	CODE / *KOD*	EURO	CODE / *KOD*	EURO
1/8	ERC2503182	13.00	ERC2503181	14.50	ERC250318T	17.40
5/32	ERC2503972	13.00	ERC2503971	14.50	ERC250397T	17.40
3/16	ERC2504762	13.00	ERC2504761	14.50	ERC250476T	17.40
7/32	ERC2505562	13.00	ERC2505561	14.50	ERC250556T	17.40
1/4	ERC2506352	13.00	ERC2506351	14.50	ERC250635T	17.40
9/32	ERC2507142	13.00	ERC2507141	14.50	ERC250714T	17.40
5/16	ERC2507942	13.00	ERC2507941	14.50	ERC250794T	17.40
11/32	ERC2508732	13.00	ERC2508731	14.50	ERC250873T	17.40
3/8	ERC2509532	13.00	ERC2509531	14.50	ERC250953T	17.40
13/32	ERC2510322	13.00	ERC2510321	14.50	ERC251032T	17.40
7/16	ERC2511112	13.00	ERC2511111	14.50	ERC251111T	17.40
15/32	ERC2511912	13.00	ERC2511911	14.50	ERC251191T	17.40
1/2	ERC2512702	13.00	ERC2512701	14.50	ERC251270T	17.40
9/16	ERC2514292	13.00	ERC2514291	14.50	ERC251429T	17.40
5/8	ERC2515882	13.00	ERC2515881	14.50	ERC251588T	17.40





ERC25 INCH SIZED COOLANT SEALED COLLETS SETS
ERC25 İNÇ ÖLÇÜ SIZDIRMAZ PENS TAKIMLARI



ERC25 INCH SIZED COOLANT SEALED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ERC25SETIN2	15pcs ERC25 Inch sized coolant sealed collets Ø1/8-5/8 Class 2 in plastic box *15Ad. ERC25 İnç ölçü sızdırma pens Ø1/8-5/8 Class 2 plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-15/32-1/2-9/16-5/8*	203.80

ERC25 INCH SIZED COOLANT SEALED COLLET SET CLASS 1

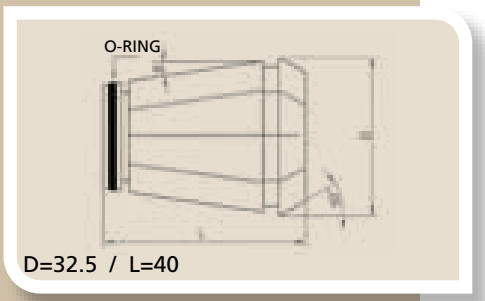
CODE/*KOD*	content - *içeriği*	EURO
ERC25SETIN1	15pcs ERC25 Inch sized coolant sealed collets Ø1/8-5/8 Class 1 in plastic box *15 Ad. ERC25 İnç ölçü sızdırma pens Ø1/8-5/8 Class 1 plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-15/32-1/2-9/16-5/8*	226.30

ERC25 INCH SIZED COOLANT SEALED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ERC25SETINT	15pcs ERC25 Inch sized coolant sealed collets Ø1/8-5/8 TOPAC in plastic box *15Ad. ERC25 İnç ölçü sızdırma pens Ø1/8-5/8 TOPAC plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-15/32-1/2-9/16-5/8*	269.80

INCH SIZED COOLANT SEALED ER COLLETS for internal coolant tools
İNÇ ÖLÇÜ SIZDIRMAZ PESLER İçten soğutmalı takımlar için





ERC32 DIN 6499 / ISO 15488 — Pat. Nr. 2012 07739

ERC32	CLASS 2		CLASS 1		TOPAC (5 micron)	
clamping dia *sıkma çapı* Ø inch	CODE / *KOD*	EURO	CODE / *KOD*	EURO	CODE / *KOD*	EURO
1/8	ERC3203182	13.70	ERC3203181	15.20	ERC320318T	18.10
5/32	ERC3203972	13.70	ERC3203971	15.20	ERC320397T	18.10
3/16	ERC3204762	13.70	ERC3204761	15.20	ERC320476T	18.10
7/32	ERC3205562	13.70	ERC3205561	15.20	ERC320556T	18.10
1/4	ERC3206352	13.70	ERC3206351	15.20	ERC320635T	18.10
9/32	ERC3207142	13.70	ERC3207141	15.20	ERC320714T	18.10
5/16	ERC3207942	13.70	ERC3207941	15.20	ERC320794T	18.10
11/32	ERC3208732	13.70	ERC3208731	15.20	ERC320873T	18.10
3/8	ERC3209532	13.70	ERC3209531	15.20	ERC320953T	18.10
13/32	ERC3210322	13.70	ERC3210321	15.20	ERC321032T	18.10
7/16	ERC3211112	13.70	ERC3211111	15.20	ERC321111T	18.10
15/32	ERC3211912	13.70	ERC3211911	15.20	ERC321191T	18.10
1/2	ERC3212702	13.70	ERC3212701	15.20	ERC321270T	18.10
17/32	ERC3213492	13.70	ERC3213491	15.20	ERC321349T	18.10
9/16	ERC3214292	13.70	ERC3214291	15.20	ERC321429T	18.10
5/8	ERC3215882	13.70	ERC3215881	15.20	ERC321588T	18.10
11/16	ERC3217462	13.70	ERC3217461	15.20	ERC321746T	18.10
3/4	ERC3219052	13.70	ERC3219051	15.20	ERC321905T	18.10



ERC32 INCH SIZED COOLANT SEALED COLLETS SETS
ERC32 İNÇ ÖLÇÜ SIZDIRMAZ PENS TAKIMLARI

ERC32 INCH SIZED COOLANT SEALED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ERC32SETIN2	**18pcs ERC32 Inch sized coolant sealed collets Ø1/8-3/4 Class 2 in plastic box** *18Ad. ERC32 İnç ölçü sızdırma pens Ø1/8-3/4 Class 2 plastik kutuda 1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-15/32-1/2-17/32-9/16-5/8-11/16-3/4*	256.60

ERC32 INCH SIZED COOLANT SEALED COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ERC32SETIN1	**18pcs ERC32 Inch sized coolant sealed collets Ø1/8-3/4 Class 2 in plastic box** *18Ad. ERC32 İnç ölçü sızdırma pens Ø1/8-3/4 Class 2 plastik kutuda 1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-15/32-1/2-17/32-9/16-5/8-11/16-3/4*	283.60

ERC32 INCH SIZED COOLANT SEALED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ERC32SETINT	**18pcs ERC32 Inch sized coolant sealed collets Ø1/8-3/4 Class 2 in plastic box** *18Ad. ERC32 İnç ölçü sızdırma pens Ø1/8-3/4 Class 2 plastik kutuda 1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-15/32-1/2-17/32-9/16-5/8-11/16-3/4*	335.80

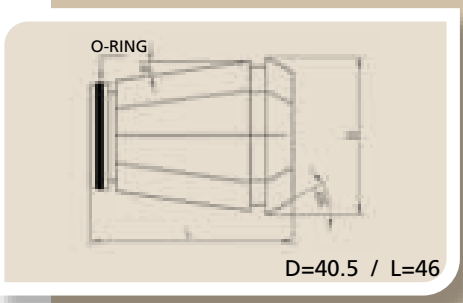
INCH SIZED COOLANT SEALED ER COLLETS for internal coolant tools
İNÇ ÖLÇÜ SIZDIRMAZ PENSLER İçten soğutmalı takımlar için

ERC40 DIN 6499 / ISO 15488

Pat. Nr. 2012 07739

ERC40	CLASS 2		CLASS 1		TOPAC (5 micron)	
clamping dia *sıkma çapı* Ø inch	CODE / *KOD*	EURO	CODE / *KOD*	EURO	CODE / *KOD*	EURO
1/8	ERC4003182	17.70	ERC4003181	19.20	ERC400318T	22.10
5/32	ERC4003972	15.70	ERC4003971	17.20	ERC400397T	20.10
3/16	ERC4004762	15.70	ERC4004761	17.20	ERC400476T	20.10
7/32	ERC4005562	15.70	ERC4005561	17.20	ERC400556T	20.10
1/4	ERC4006352	15.70	ERC4006351	17.20	ERC400635T	20.10
9/32	ERC4007142	15.70	ERC4007141	17.20	ERC400714T	20.10
5/16	ERC4007942	15.70	ERC4007941	17.20	ERC400794T	20.10
11/32	ERC4008732	15.70	ERC4008731	17.20	ERC400873T	20.10
3/8	ERC4009532	15.70	ERC4009531	17.20	ERC400953T	20.10
13/32	ERC4010322	15.70	ERC4010321	17.20	ERC401032T	20.10
7/16	ERC4011112	15.70	ERC4011111	17.20	ERC401111T	20.10
15/32	ERC4011912	15.70	ERC4011911	17.20	ERC401191T	20.10
1/2	ERC4012702	15.70	ERC4012701	17.20	ERC401270T	20.10
17/32	ERC4013492	15.70	ERC4013491	17.20	ERC401349T	20.10
9/16	ERC4014292	15.70	ERC4014291	17.20	ERC401429T	20.10
19/32	ERC4015082	15.70	ERC4015081	17.20	ERC401508T	20.10
5/8	ERC4015882	15.70	ERC4015881	17.20	ERC401588T	20.10
11/16	ERC4017462	15.70	ERC4017461	17.20	ERC401746T	20.10
3/4	ERC4019052	15.70	ERC4019051	17.20	ERC401905T	20.10
13/16	ERC4020642	15.70	ERC4020641	17.20	ERC402064T	20.10
7/8	ERC4022232	15.70	ERC4022231	17.20	ERC402223T	20.10
15/16	ERC4023812	15.70	ERC4023811	17.20	ERC402381T	20.10
1"	ERC4025402	15.70	ERC4025401	17.20	ERC402540T	20.10





ERC40 INCH SIZED COOLANT SEALED COLLETS SETS
ERC40 İNÇ ÖLÇÜ SIZDIRMAZ PENS TAKIMLARI

ERC40 INCH SIZED COOLANT SEALED COLLET SET CLASS 2

CODE/*KOD*	content - *içeriği*	EURO
ERC40SETIN2	23pcs ERC40 Inch sized coolant sealed collets Ø1/8-1" Class 2 in plastic box *23Ad. ERC40 İnç ölçü sızdırma pens Ø1/8-1" Class 2 plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-15/32-1/2-17/32-9/16-19/32-5/8-11/16-3/4-13/16-7/8-15/16-1"*	383.10

ERC40 INCH SIZED COOLANT SEALED COLLET SET CLASS 1

CODE/*KOD*	content - *içeriği*	EURO
ERC40SETIN1	23pcs ERC40 Inch sized coolant sealed collets Ø1/8-1" Class 1 in plastic box *23Ad. ERC40 İnç ölçü sızdırma pens Ø1/8-1" Class 1 plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-15/32-1/2-17/32-9/16-19/32-5/8-11/16-3/4-13/16-7/8-15/16-1"*	427.60

ERC40 INCH SIZED COOLANT SEALED COLLET SET TOPAC (5 micron)

CODE/*KOD*	content - *içeriği*	EURO
ERC40SETINT	23pcs ERC40 Inch sized coolant sealed collets Ø1/8-1" TOPAC in plastic box *23Ad. ERC40 İnç ölçü sızdırma pens Ø1/8-1" TOPAC plastik kutuda* *1/8-5/32-3/16-7/32-1/4-9/32-5/16-11/32-3/8-13/32-7/16-15/32-1/2-17/32-9/16-19/32-5/8-11/16-3/4-13/16-7/8-15/16-1"*	484.30

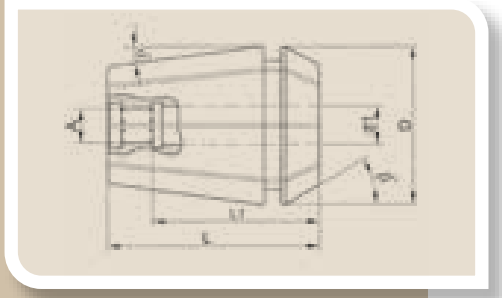


INCH SIZED TAPPING ER COLLETS
İNÇ ÖLÇÜ ER KILAVUZ PENSLERİ



ERT16 (INCH SIZED / *İNÇ ÖLÇÜ*) D=16,5mm / L=27,5mm

CODE / *KOD*	d1 mm (inch)	Square size *kare ölçüsü* □ mm (inch)	Tap Specs - *Klavuz detayı*	EURO
ERT16IN0358	3,58 (0.141")	2,79 (0.110")	0-6"	12.80
ERT16IN0427	4,27 (0.168")	3,33 (0.131")	#8	12.80
ERT16IN0493	4,93 (0.194")	3,86 (0.152")	#10	12.80
ERT16IN0559	5,59 (0.220")	4,12 (0.162")	#12	12.80
ERT16IN0648	6,48 (0.255")	4,85 (0.191")	1/4"	12.80
ERT16IN0808	8,08 (0.318")	6,05 (0.238"),	5/16"	12.80



ERT20 (INCH SIZED / *İNÇ ÖLÇÜ*) D=20,5mm / L=31,5mm

CODE / *KOD*	d1 mm (inch)	Square size *kare ölçüsü* □ mm (inch)	Tap Specs - *Klavuz detayı*	EURO
ERT20IN0358	3,58 (0.141")	2,79 (0.110")	0-6"	13.00
ERT20IN0427	4,27 (0.168")	3,33 (0.131")	#8	13.00
ERT20IN0493	4,93 (0.194")	3,86 (0.152")	#10	13.00
ERT20IN0559	5,59 (0.220")	4,12 (0.162")	#12	13.00
ERT20IN0648	6,48 (0.255")	4,85 (0.191")	1/4"	13.00
ERT20IN0808	8,08 (0.318")	6,05 (0.238"),	5/16"	13.00
ERT20IN0968	9.68 (0.381")	7.26 (0.238")	3/8"	13.00
ERT20IN0820	8.20 (0.323")	6.15 (0.242")	7/16"	13.00
ERT20IN0932	9.32 (0.367")	6.99 (0.275")	1/2"	13.00

ERT25 (INCH SIZED / *İNÇ ÖLÇÜ*) D=25,5mm / L=34mm

CODE / *KOD*	d1 mm (inch)	Square size *kare ölçüsü* □ mm (inch)	Tap Specs - *Klavuz detayı*	EURO
ERT25IN0358	3,58 (0.141")	2,79 (0.110")	0-6"	13.40
ERT25IN0427	4,27 (0.168")	3,33 (0.131")	#8	13.40
ERT25IN0493	4,93 (0.194")	3,86 (0.152")	#10	13.40
ERT25IN0559	5,59 (0.220")	4,12 (0.162")	#12	13.40
ERT25IN0648	6,48 (0.255")	4,85 (0.191")	1/4"	13.40
ERT25IN0808	8,08 (0.318")	6,05 (0.238"),	5/16"	13.40
ERT25IN0968	9.68 (0.381")	7.26 (0.238")	3/8"	13.40
ERT25IN0820	8.20 (0.323")	6.15 (0.242")	7/16"	13.40
ERT25IN0932	9.32 (0.367")	6.99 (0.275")	1/2"	13.40
ERT25IN1090	10.90 (0.429")	8.18 (0.322")	9/16"	13.40
ERT25IN1219	12.19 (0.480")	9.14 (0.360")	5/8"	13.40
ERT25IN0793	7.93 (0.312")	5.94 (0.234")	1/8" pipe ss	13.40
ERT25IN1113	11.13 (0.438")	8.33 (0.328")	1/8" pipe ls	13.40

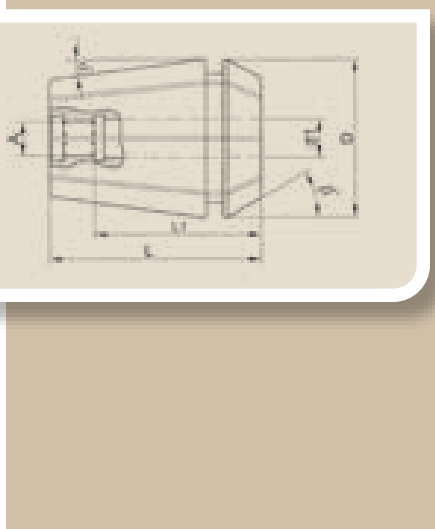


INCH SIZED TAPPING ER COLLETS
İNÇ ÖLÇÜ ER KILAVUZ PENSLERİ

ERT32 (INCH SIZED / *İNÇ ÖLÇÜ*) D=32,5mm / L=40mm

CODE / *KOD*	d1 mm (inch)	Square size *kare ölçüsü* □ mm (inch)	Tap Specs - *Klavuz detayı*	EURO
ERT32IN0358	3,58 (0.141")	2,79 (0.110")	0-6"	14.50
ERT32IN0427	4,27 (0.168")	3,33 (0.131")	#8	14.50
ERT32IN0493	4,93 (0.194")	3,86 (0.152")	#10	14.50
ERT32IN0559	5,59 (0.220")	4,12 (0.162")	#12	14.50
ERT32IN0648	6,48 (0.255")	4,85 (0.191")	1/4"	14.50
ERT32IN0808	8,08 (0.318")	6,05 (0.238"),	5/16"	14.50
ERT32IN0968	9.68 (0.381")	7.26 (0.238")	3/8"	14.50
ERT32IN0820	8.20 (0.323")	6.15 (0.242")	7/16"	14.50
ERT32IN0932	9.32 (0.367")	6.99 (0.275")	1/2"	14.50
ERT32IN1090	10.90 (0.429")	8.18 (0.322")	9/16"	14.50
ERT32IN1219	12.19 (0.480")	9.14 (0.360")	5/8"	14.50
ERT32IN1499	14.99 (0.590")	11.23 (0.447")	3/4"	14.50
ERT32IN0793	7.93 (0.312")	5.94 (0.234")	1/8" pipe ss	14.50
ERT32IN1113	11.13 (0.438")	8.33 (0.328")	1/8" pipe ls	14.50
ERT32IN1428	14.28 (0.562")	10.69 (0.421")	1/4" pipe	14.50





ERT40 (INCH SIZED / *İNÇ ÖLÇÜ*) D=40,5mm / L=46mm

CODE / *KOD*	d1 mm (inch)	Square size *kare ölçüsü* □ mm (inch)	Tap Specs - *Klavuz detayı*	EURO
ERT40IN0358	3,58 (0.141")	2,79 (0.110")	0-6"	16.60
ERT40IN0427	4,27 (0.168")	3,33 (0.131")	#8	16.60
ERT40IN0493	4,93 (0.194")	3,86 (0.152")	#10	16.60
ERT40IN0559	5,59 (0.220")	4,12 (0.162")	#12	16.60
ERT40IN0648	6,48 (0.255")	4,85 (0.191")	1/4"	16.60
ERT40IN0808	8,08 (0.318")	6,05 (0.238"),	5/16"	16.60
ERT40IN0968	9.68 (0.381")	7.26 (0.238")	3/8"	16.60
ERT40IN0820	8.20 (0.323")	6.15 (0.242")	7/16"	16.60
ERT40IN0932	9.32 (0.367")	6.99 (0.275")	1/2"	16.60
ERT40IN1090	10.90 (0.429")	8.18 (0.322")	9/16"	16.60
ERT40IN1219	12.19 (0.480")	9.14 (0.360")	5/8"	16.60
ERT40IN1499	14.99 (0.590")	11.23 (0.447")	3/4"	16.60
ERT40IN1770	17.70 (0.697")	13.28 (0.523")	7/8"	16.60
ERT40IN2032	20.32 (0.800")	15.24 (0.600")	1"	16.60
ERT40IN0793	7.93 (0.312")	5.94 (0.234")	1/8" pipe ss	16.60
ERT40IN1113	11.13 (0.438")	8.33 (0.328")	1/8" pipe ls	16.60
ERT40IN1428	14.28 (0.562")	10.69 (0.421")	1/4" pipe	16.60
ERT40IN1778	17.78 (0.700")	13.49 (0.531")	3/8" pipe	16.60
ERT40IN1745	17.45 (0.687")	13.08 (0.515")	1/2"pipe	16.60



gürkan







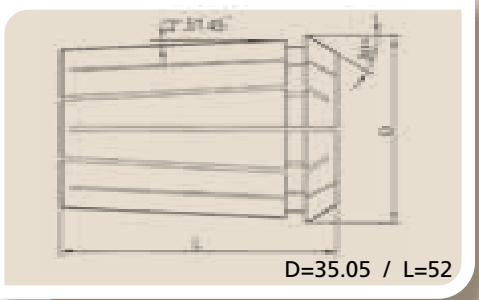
DIN 6388 / ISO 10897 (OZ) COLLETS
REDUCTION COLLETS

DIN 6388 / ISO 10897 (OZ) PENSLER
REDÜKSİYON PENSLERİ

DIN 6388 B-25 / ISO 10897-B (OZ25) 462E COLLETS / *PENSLER*

OZ25	DIN 6388 / ISO10897-B (OZ25) CLASS 2		DIN 6388 / ISO10897-B (OZ25) CLASS 1		DIN 6388 / ISO10897-B (OZ25) TOPAC (5 micron)	
clamping dia *sıkma çapı*	CODE / *KOD*	EURO	CODE / *KOD*	EURO	CODE / *KOD*	EURO
2.0-1.5	OZ250202	12.00	OZ250201	13.40	OZ25020T	15.60
2.5-2.0	OZ250252	12.00	OZ250251	13.40	OZ25025T	15.60
3.0-2.5	OZ250302	11.40	OZ250301	12.70	OZ25030T	14.90
1/8" (3.175)	OZ2503182	11.40	OZ2503181	12.70	OZ250318T	14.90
3.5-3.0	OZ250352	11.40	OZ250351	12.70	OZ25035T	14.90
4.0-3.5	OZ250402	8.40	OZ250401	9.80	OZ25040T	12.10
4.5-4.0	OZ250452	10.40	OZ250451	11.80	OZ25045T	14.10
5.0-4.5	OZ250502	8.40	OZ250501	9.80	OZ25050T	12.10
5.5-5.0	OZ250552	10.40	OZ250551	11.80	OZ25055T	14.10
6.0-5.5	OZ250602	8.40	OZ250601	9.80	OZ25060T	12.10
1/4" (6.35)	OZ2506352	10.40	OZ2506351	11.80	OZ250635T	14.10
6.5-6.0	OZ250652	10.40	OZ250651	11.80	OZ25065T	14.10
7.0-6.5	OZ250702	8.40	OZ250701	9.80	OZ25070T	12.10
7.5-7.0	OZ250752	10.40	OZ250751	11.80	OZ25075T	14.10
8.0-7.5	OZ250802	8.40	OZ250801	9.80	OZ25080T	12.10
8.5-8.0	OZ250852	10.40	OZ250851	11.80	OZ25085T	14.10
9.0-8.5	OZ250902	8.40	OZ250901	9.80	OZ25090T	12.10
9.5-9.0	OZ250952	10.40	OZ250951	11.80	OZ25095T	14.10
3/8" (9.53)	OZ2509532	10.40	OZ2509531	11.80	OZ250953T	14.10
10.0-9.5	OZ251002	8.40	OZ251001	9.80	OZ25100T	12.10
10.5-10.0	OZ251052	10.40	OZ251051	11.80	OZ25105T	14.10
11.0-10.5	OZ251102	8.40	OZ251101	9.80	OZ25110T	12.10
11.5-11.0	OZ251152	10.40	OZ251151	11.80	OZ25115T	14.10
12.0-11.5	OZ251202	8.40	OZ251201	9.80	OZ25120T	12.10
12.5-12.0	OZ251252	10.40	OZ251251	11.80	OZ25125T	14.10
1/2" (12.70)	OZ2512702	10.40	OZ2512701	11.80	OZ251270T	14.10
13.0-12.5	OZ251302	8.40	OZ251301	9.80	OZ25130T	12.10
13.5-13.0	OZ251352	10.40	OZ251351	11.80	OZ25135T	14.10
14.0-13.5	OZ251402	8.40	OZ251401	9.80	OZ25140T	12.10
14.5-14.0	OZ251452	10.40	OZ251451	11.80	OZ25145T	14.10
15.0-14.5	OZ251502	8.40	OZ251501	9.80	OZ25150T	12.10
15.5-15.0	OZ251552	10.40	OZ251551	11.80	OZ25155T	14.10
5/8" (15.88)	OZ2515882	10.40	OZ2515881	11.80	OZ251588T	14.10
16.0-15.5	OZ251602	8.40	OZ251601	9.80	OZ25160T	12.10
16.5-16.0	OZ251652	10.40	OZ251651	11.80	OZ25165T	14.10
17.0-16.5	OZ251702	8.40	OZ251701	9.80	OZ25170T	12.10
17.5-17.0	OZ251752	10.40	OZ251751	11.80	OZ25175T	14.10
18.0-17.5	OZ251802	8.40	OZ251801	9.80	OZ25180T	12.10
18.5-18.0	OZ251852	10.40	OZ251851	11.80	OZ25185T	14.10
19.0-18.5	OZ251902	8.40	OZ251901	9.80	OZ25190T	12.10
3/4" (19.05)	OZ2519052	10.40	OZ2519051	11.80	OZ251905T	14.10
19.5-19.0	OZ251952	10.40	OZ251951	11.80	OZ25195T	14.10
20.0-19.5	OZ252002	8.40	OZ252001	9.80	OZ25200T	12.10
20.5-20.0	OZ252052	10.40	OZ252051	11.80	OZ25205T	14.10
21.0-20.5	OZ252102	8.40	OZ252101	9.80	OZ25210T	12.10
21.5-21.0	OZ252152	10.40	OZ252151	11.80	OZ25215T	14.10
22.0-21.5	OZ252202	8.40	OZ252201	9.80	OZ25220T	12.10
22.5-22.0	OZ252252	10.40	OZ252251	11.80	OZ25225T	14.10
23.0-22.5	OZ252302	8.40	OZ252301	9.80	OZ25230T	12.10
23.5-23.0	OZ252352	10.40	OZ252351	11.80	OZ25235T	14.10
24.0-23.5	OZ252402	8.40	OZ252401	9.80	OZ25240T	12.10
24.5-24.0	OZ252452	10.40	OZ252451	11.80	OZ25245T	14.10
25.0-24.5	OZ252502	8.40	OZ252501	9.80	OZ25250T	12.10
1" (25.4)	OZ2525402	10.40	OZ2525401	11.80	OZ252540T	14.10
26.0-25.8*	OZ252602	16.00	OZ252601	19.00	OZ25260T	23.00
27.0-26.8*	OZ252702	16.00	OZ252701	19.00	OZ25270T	23.00
28.0-27.8*	OZ252802	16.00	OZ252801	19.00	OZ25280T	23.00
29.0-28.8*	OZ252902	16.00	OZ252901	19.00	OZ25290T	23.00
30.0-29.8*	OZ253002	16.00	OZ253001	19.00	OZ25300T	23.00
31.0-30.8*	OZ253102	16.00	OZ253101	19.00	OZ25310T	23.00
1-1/4" (31.75)*	OZ2531752	16.00	OZ2531751	19.00	OZ253175T	23.00
32.0-31.8*	OZ253202	16.00	OZ253201	19.00	OZ25320T	23.00





D	35.05mm
L	52.0mm
a	2^0 51'45"
ß	30^0
CLAMPING RANGE *TUTMA ARALIĞI*	2.0-32.0
CLAMPING STEPS *TUTMA KAPASİTESİ*	0.5mm

* Ø>25.4 (over Ø25.4mm dia) collets are shorter then stardard. They can only clamp down Ø -0,2mm
* Ø>25.4 (Ø25.4mm üstü çap) pensler standarttan daha kısadır. Daralma kapasitesi sadece Ø -0,2mm dir.

DIN6388 B-25 (OZ25) COLLET SETS / *DIN6388B-25 (OZ25) PENS TAKIMLARI*

OZ25	OZ25 COLLET SET CLASS 2		OZ25 COLLET SET CLASS 2		OZ25 COLLET SET TOPAC (5 micron)	
content / *içeriği*	CODE / *KOD*	EURO	CODE / *KOD*	EURO	CODE / *KOD*	EURO
24pcs DIN6388B-25 collets Ø2-25mm in 1mm increments in plastic box *24 Ad. DIN6388-25 Pens Ø2-25mm 1mm atlamalı plastik kutuda*	OZ25SET2	228.20	OZ25SET1	261.70	OZ25SETT	316.70



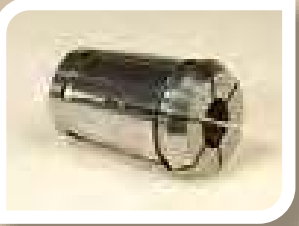
DIN 6388 A / ISO 10897-A* COLLETS
DIN 6388 A / ISO 10897-A PENSLER*



D	19.9mm
L	34mm
a	2⁰ 51’45”
ß	30⁰
CLAMPING RANGE *TUTMA ARALIĞI*	1.0-12.0

DIN 6388 A / ISO10897-A 407E (OZ12-A) CLASS 2

CODE / *KOD* OZ12A	clamping dia *sıkma çapı* Ømm	EURO
OZ12A0102	1	19.00
OZ12A0202	2	18.00
OZ12A0302	3	16.00
OZ12A0402	4	16.00
OZ12A0502	5	16.00
OZ12A0602	6	16.00
OZ12A0702	7	16.00
OZ12A0802	8	16.00
OZ12A0902	9	16.00
OZ12A1002	10	16.00
OZ12A1102	11	16.00
OZ12A1202	12	16.00



D	35.05mm
L	52mm
a	2⁰ 51’45”
ß	30⁰
CLAMPING RANGE *TUTMA ARALIĞI*	2.0-25.0

DIN 6388 A / ISO10897-A 444E (OZ25-A) CLASS 2

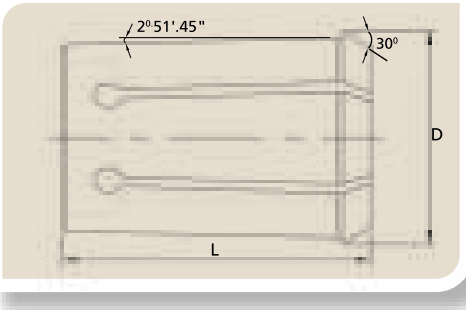
CODE / *KOD* OZ25A	clamping dia *sıkma çapı* Ømm	EURO
OZ25A0202	2	12.00
OZ25A0302	3	11.40
OZ25A0402	4	9.00
OZ25A0502	5	9.00
OZ25A0602	6	9.00
OZ25A0702	7	9.00
OZ25A0802	8	9.00
OZ25A0902	9	9.00
OZ25A1002	10	9.00
OZ25A1102	11	9.00
OZ25A1202	12	9.00
OZ25A1302	13	9.00
OZ25A1402	14	9.00
OZ25A1502	15	9.00
OZ25A1602	16	9.00
OZ25A1702	17	9.00
OZ25A1802	18	9.00
OZ25A1902	19	9.00
OZ25A2002	20	9.00
OZ25A2102	21	9.00
OZ25A2202	22	9.00
OZ25A2302	23	9.00
OZ25A2402	24	9.00
OZ25A2502	25	9.00

DIN 6388 A / ISO10897-A 450E (OZ32-A) CLASS 2

CODE / *KOD* OZ32A	clamping dia *sıkma çapı* Ømm	EURO
OZ32A0402	4	16.50
OZ32A0502	5	16.50
OZ32A0602	6	16.50
OZ32A0702	7	16.50
OZ32A0802	8	16.50
OZ32A0902	9	16.50
OZ32A1002	10	16.50
OZ32A1102	11	16.50
OZ32A1202	12	16.50
OZ32A1302	13	16.50
OZ32A1402	14	16.50
OZ32A1502	15	16.50
OZ32A1602	16	16.50
OZ32A1702	17	16.50
OZ32A1802	18	16.50
OZ32A1902	19	16.50
OZ32A2002	20	16.50
OZ32A2102	21	16.50
OZ32A2202	22	16.50
OZ32A2302	23	16.50
OZ32A2402	24	16.50
OZ32A2502	25	16.50
OZ32A2602	26	16.50
OZ32A2702	27	16.50
OZ32A2802	28	16.50
OZ32A2902	29	16.50
OZ32A3002	30	16.50
OZ32A3102	31	16.50
OZ32A3202	32	16.50



D	44mm
L	60mm
a	2⁰ 51’45”
ß	30⁰
CLAMPING RANGE *TUTMA ARALIĞI*	4.0-32.0



* Form A OZ collets only clamps its nominal diameter, slotted from one side.
* *Form A OZ pensler sadece kendi çapını sıkar, tek taraftan yarılmıştır.*

DIN 6388 B / ISO 10897-B* COLLETS
DIN 6388 B / ISO 10897-B PENSLER*



D	15.5mm
L	40mm
a	2⁰ 51'45"
ß	30⁰
CLAMPING RANGE *TUTMA ARALIĞI*	1.0-16.0
CLAMPING STEPS *TUTMA KAPASİTESİ*	0. 5mm*

DIN 6388 B / ISO10897-B 415E (OZ16-B) CLASS 2

CODE / *KOD* OZ16B	clamping dia *sıkma çapı* Ømm	EURO
OZ160102	1.0-0.5	12.00
OZ160202	2.0-1.5	11.00
OZ160302	3.0-2.5	9.00
OZ160402	4.0-3.5	9.00
OZ160502	5.0-4.5	9.00
OZ160602	6.0-5.5	9.00
OZ160702	7.0-6.5	9.00
OZ160802	8.0-7.5	9.00
OZ160902	9.0-8.5	9.00
OZ161002	10.0-9.5	9.00
OZ161102	11.0-10.5	9.00
OZ161202	12.0-11.5	9.00
OZ161302	13.0-12.5	9.00
OZ161402	14.0-13.5	9.00
OZ161502	15.0-14.5	9.00
OZ161602	16.0-15.5	9.00



D	30mm
L	45mm
a	2⁰ 51'45"
ß	30⁰
CLAMPING RANGE *TUTMA ARALIĞI*	2.0-20.0
CLAMPING STEPS *TUTMA KAPASİTESİ*	0.5mm*

DIN 6388 B / ISO10897-B 4541E (OZ20-B) CLASS 2

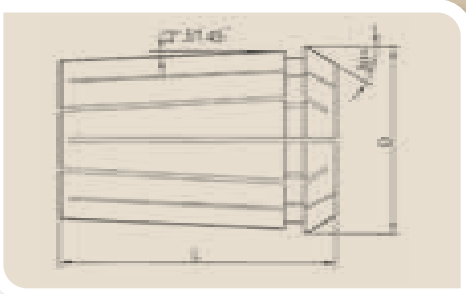
CODE / *KOD* OZ20B	clamping dia *sıkma çapı* Ømm	EURO
OZ200202	2.0-1.5	16.00
OZ200302	3.0-2.5	15.00
OZ200402	4.0-3.5	14.00
OZ200502	5.0-4.5	14.00
OZ200602	6.0-5.5	14.00
OZ200702	7.0-6.5	14.00
OZ200802	8.0-7.5	14.00
OZ200902	9.0-8.5	14.00
OZ201002	10.0-9.5	14.00
OZ201102	11.0-10.5	14.00
OZ201202	12.0-11.5	14.00
OZ201302	13.0-12.5	14.00
OZ201402	14.0-13.5	14.00
OZ201502	15.0-14.5	14.00
OZ201602	16.0-15.5	14.00
OZ201702	17.0-16.5	14.00
OZ201802	18.0-17.5	14.00
OZ201902	19.0-18.5	14.00
OZ202002	20.0-19.5	14.00

DIN 6388 B / ISO10897-B 467E (OZ32-B) CLASS 2

CODE / *KOD* OZ32B	clamping dia *sıkma çapı* Ømm	EURO
OZ320402	4.0-3.5	16.50
OZ320502	5.0-4.5	16.50
OZ320602	6.0-5.5	16.50
OZ320702	7.0-6.5	16.50
OZ320802	8.0-7.5	16.50
OZ320902	9.0-8.5	16.50
OZ321002	10.0-9.5	16.50
OZ321102	11.0-10.5	16.50
OZ321202	12.0-11.5	16.50
OZ321302	13.0-12.5	16.50
OZ321402	14.0-13.5	16.50
OZ321502	15.0-14.5	16.50
OZ321602	16.0-15.5	16.50
OZ321702	17.0-16.5	16.50
OZ321802	18.0-17.5	16.50
OZ321902	19.0-18.5	16.50
OZ322002	20.0-19.5	16.50
OZ322102	21.0-20.5	16.50
OZ322202	22.0-21.5	16.50
OZ322302	23.0-22.5	16.50
OZ322402	24.0-23.5	16.50
OZ322502	25.0-24.5	16.50
OZ322602	26.0-25.5	16.50
OZ322802	28.0-27.5	16.50
OZ323002	30.0-29.5	16.50
OZ323202	32.0-31.5	16.50



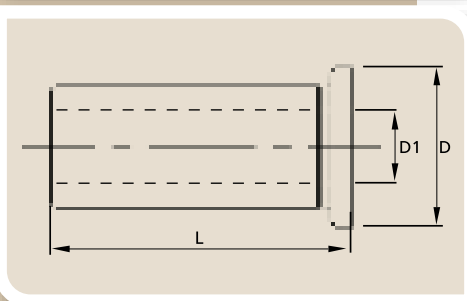
D	44mm
L	60mm
a	2⁰ 51'45"
ß	30⁰
CLAMPING RANGE *TUTMA ARALIĞI*	4.0-32.0
CLAMPING STEPS *TUTMA KAPASİTESİ*	0.5mm*



* Form B OZ collets can clamp upto 0.5mm down from the its diameter, they are sloted from both sides.
* *Form B OZ pensler çapının 0.5mm altına kadar sıkar, çift taraftan yarıklıdır.*

REDUCTION COLLETS FOR HYDRAULIC CHUCKS (High Precision)
HİDROLİK TUTUCU İÇİN REDÜKSİYON PENSLER (Yüksek hassasiyetli)





RH12 Ø12
(Runout / *Salgı:* Max. 5 Micron)

CODE / *KOD*	D	d1	L	EURO
RH12020	12	2	40	**50.00**
RH12025	12	2.5	40	**45.00**
RH12030	12	3	40	**35.00**
RH120318	12	1/8" (3.18)	40	**35.00**
RH12040	12	4	40	**33.00**
RH120476	12	3/16" (4.76)	40	**33.00**
RH12050	12	5	40	**30.00**
RH12060	12	6	40	**28.00**
RH120635	12	1/4" (6.35)	40	**28.00**
RH12070	12	7	40	**28.00**
RH120794	12	5/16" (7.94)	40	**28.00**
RH12080	12	8	40	**28.00**
RH12090	12	9	40	**28.00**
RH120953	12	3/8" (9.53)	40	**28.00**
RH12100*	12	10	40	**35.00**

* Run out for RH12100 is max. 0.01mm / *RH12100 için salgı 0.01mm dir.*

REDUCTION COLLETS SETS FOR HYDRAULIC CHUCKS (High Precision)
HİDROLİK TUTUCU İÇİN REDÜKSİYON PENS TAKIMLARI (Yüksek hassasiyetli)

CODE/*KOD*	**content** - *içeriği*	EURO
RH12SETM	**8pcs RH12 Metric sized collets Ø3-10mm in box** *8 Adet RH12 metrik ölçü pens Ø3-10mm kutu içinde* **Ø3-4-5-6-7-8-9-10mm**	**260.00**
RH12SETIN	**5pcs RH12 Inch sized collets Ø1/8-3/8" in box** *5 Adet RH12 İnç ölçü pens Ø1/8-3/8" kutu içinde* **Ø1/8-3/16-1/4-5/16-3/8"**	**172.00**

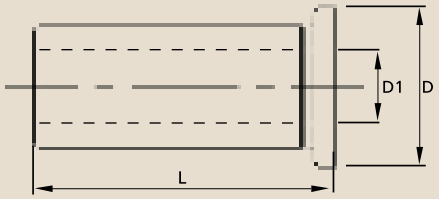
Suitable for internal and external cooling / *İçten ve dıştan soğutmaya uygundur.*

REDUCTION COLLETS FOR HYDRAULIC CHUCKS (High Precision)
HİDROLİK TUTUCU İÇİN REDÜKSİYON PENSLER (Yüksek hassasiyetli)

RH20 Ø20
(Runout / *Salgı:* Max. 5 Micron)

CODE / *KOD*	D	d1	L	EURO
RH20020	20	2	50	50.00
RH20025	20	2.5	50	45.00
RH20030	20	3	50	35.00
RH200318	20	1/8" (3.18)	50	35.00
RH20040	20	4	50	33.00
RH200476	20	3/16" (4.76)	50	33.00
RH20050	20	5	50	30.00
RH20060	20	6	50	28.00
RH200635	20	1/4" (6.35)	50	28.00
RH20070	20	7	50	28.00
RH200794	20	5/16" (7.94)	50	28.00
RH20080	20	8	50	28.00
RH20090	20	9	50	28.00
RH200953	20	3/8" (9.53)	50	28.00
RH20100	20	10	50	28.00
RH20110	20	11	50	28.00
RH201111	20	7/16" (11.11)	50	28.00
RH20120	20	12	50	28.00
RH20127	20	1/2" (12.7)	50	28.00
RH20130	20	13	50	28.00
RH20140	20	14	50	28.00
RH201429	20	9/16" (14.29)	50	28.00
RH20150	20	15	50	28.00
RH201588	20	5/8" (15.88)	50	28.00
RH20160	20	16	50	28.00
RH20170	20	17	50	35.00
RH20180 *	20	18	50	35.00





* Run out for RH20180 is max. 0.01mm / *RH20180 için salgı 0.01mm dir.*

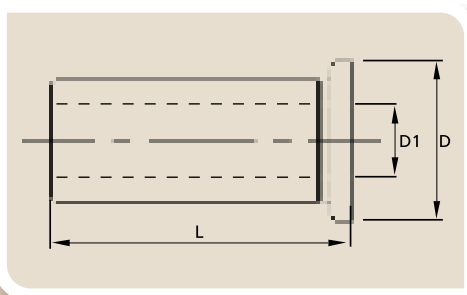
REDUCTION COLLETS SETS FOR HYDRAULIC CHUCKS (High Precision)
HİDROLİK TUTUCU İÇİN REDÜKSİYON PENS TAKIMLARI (Yüksek hassasiyetli)

CODE/*KOD*	content - *içeriği*	EURO
RH20SETM	**16pcs RH20 Metric sized collets Ø3-18mm in box** *16 Adet RH20 metrik ölçü pens Ø3-18mm kutu içinde* **Ø3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18mm**	484.00
RH20SETIN	**9pcs RH20 Inch sized collets Ø1/8-5/8" in box** *9 Adet RH20 İnç ölçü pens Ø1/8-5/8" kutu içinde* **Ø1/8-3/16-1/4-5/16-3/8-7/16-1/2-9/16-5/8"**	284.00

Suitable for internal and external cooling / *İçten ve dıştan soğutmaya uygundur.*

REDUCTION COLLETS FOR HYDRAULIC CHUCKS (High Precision)
HİDROLİK TUTUCU İÇİN REDÜKSİYON PENSLER (Yüksek hassasiyetli)





RH25 Ø25
(Runout / *Salgı:* Max. 5 Micron)

CODE / *KOD*	D	d1	L	EURO
RH25030	25	3	54	39.00
RH250318	25	1/8" (3.18)	54	39.00
RH25040	25	4	54	37.00
RH250476	25	3/16" (4.76)	54	37.00
RH25050	25	5	54	34.00
RH25060	25	6	54	32.00
RH250635	25	1/4" (6.35)	54	32.00
RH25070	25	7	54	32.00
RH250794	25	5/16" (7.94)	54	32.00
RH25080	25	8	54	32.00
RH25090	25	9	54	32.00
RH250953	25	3/8" (9.53)	54	32.00
RH25100	25	10	54	32.00
RH25110	25	11	54	32.00
RH251111	25	7/16" (11.11)	54	32.00
RH25120	25	12	54	32.00
RH25127	25	1/2" (12.7)	54	32.00
RH25130	25	13	54	32.00
RH25140	25	14	54	32.00
RH251429	25	9/16" (14.29)	54	32.00
RH25150	25	15	54	32.00
RH251588	25	5/8" (15.88)	54	32.00
RH25160	25	16	54	32.00
RH25180	25	18	54	32.00
RH251905	25	3/4" (19.05)	54	32.00
RH25200	25	20	54	32.00

REDUCTION COLLETS SETS FOR HYDRAULIC CHUCKS (High Precision)
HİDROLİK TUTUCU İÇİN REDÜKSİYON PENS TAKIMLARI (Yüksek hassasiyetli)

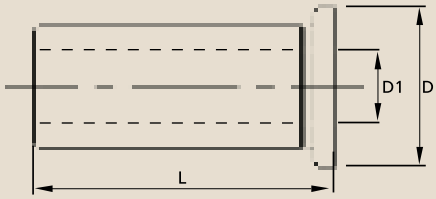
CODE/*KOD*	content - *içeriği*	EURO
RH25SETM	**16pcs RH25 Metric sized collets Ø3-25mm in box** *16 Adet RH25 metrik ölçü pens Ø3-20mm kutu içinde* **Ø3-4-5-6-7-8-9-10-11-12-13-14-15-16-18-20mm**	529.00
RH25SETIN	**10pcs RH25 Inch sized collets Ø1/8-3/4" in box** *10 Adet RH25 İnç ölçü pens Ø1/8-3/4" kutu içinde* **Ø1/8-3/16-1/4-5/16-3/8-7/16-1/2-9/16-5/8-3/4"**	352.00

Suitable for internal and external cooling / *İçten ve dıştan soğutmaya uygundur.*

REDUCTION COLLETS FOR HYDRAULIC CHUCKS (High Precision)
HİDROLİK TUTUCU İÇİN REDÜKSİYON PENSLER (Yüksek hassasiyetli)

RH32 Ø32
(Runout / *Salgı:* Max. 5 Micron)





CODE / *KOD*	D	d1	L	EURO
RH32030	32	3	58	44.00
RH320318	32	1/8" (3.18)	58	44.00
RH32040	32	4	58	42.00
RH320476	32	3/16" (4.76)	58	42.00
RH32050	32	5	58	39.00
RH32060	32	6	58	36.00
RH320635	32	1/4" (6.35)	58	36.00
RH32070	32	7	58	36.00
RH320794	32	5/16" (7.94)	58	36.00
RH32080	32	8	58	36.00
RH32090	32	9	58	36.00
RH320953	32	3/8" (9.53)	58	36.00
RH32100	32	10	58	36.00
RH32110	32	11	58	36.00
RH321111	32	7/16" (11.11)	58	36.00
RH32120	32	12	58	36.00
RH32127	32	1/2" (12.7)	58	36.00
RH32130	32	13	58	36.00
RH32140	32	14	58	36.00
RH321429	32	9/16" (14.29)	58	36.00
RH32150	32	15	58	36.00
RH321588	32	5/8" (15.88)	58	36.00
RH32160	32	16	58	36.00
RH32180	32	18	58	36.00
RH321905	32	3/4" (19.05)	58	36.00
RH32200	32	20	58	36.00
RH32220	32	22	58	36.00
RH322223	32	7/8" (22.23)	58	36.00
RH32240	32	24	58	36.00
RH32250	32	25	58	36.00
RH32254	32	1" (25.4)	58	36.00
RH32260	32	26	58	36.00
RH32280	32	28	58	36.00

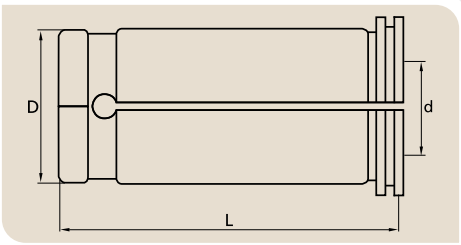
REDUCTION COLLETS FOR HYDRAULIC CHUCKS (High Precision)
HİDROLİK TUTUCU İÇİN REDÜKSİYON PENSLER (Yüksek hassasiyetli)

CODE/*KOD*	content - *içeriği*	EURO
RH32SETM	**17pcs RH32 Metric sized collets Ø3-25mm in box** *17 Adet RH32 metrik ölçü pens Ø3-25mm kutu içinde* **Ø3-4-5-6-7-8-9-10-11-12-13-14-15-16-18-20mm**	654.00
RH32SETIN	**12pcs RH32 Inch sized collets Ø1/8-3/4" in box** *12 Adet RH32 İnç ölçü pens Ø1/8-3/4" ahşap kutu içinde* **Ø1/8-3/16-1/4-5/16-3/8-7/16-1/2-9/16-5/8-3/4"-7/8-1"**	471.00

Suitable for internal and external cooling / *İçten ve dıştan soğutmaya uygundur.*

STRAIGHT (CYLINDRICAL) REDUCTION COLLETS FOR HP MILLING CHUCKS
DÜZ (SİLİNDİRİK) REDÜKSİYON PENSLER, HP FREZE TUTUCULARI İÇİN





CODE / *KOD*	D outside dia dış çap	d inside dia iç çap	L	EURO
SC2003	20	3	50	**11.00**
SC2004	20	4	50	**11.00**
SC2005	20	5	50	**11.00**
SC2006	20	6	50	**11.00**
SC2008	20	8	50	**11.00**
SC2010	20	10	50	**11.00**
SC2012	20	12	50	**11.00**
SC2014	20	14	50	**11.00**
SC2016	20	16	50	**11.00**
SC2503	25	3	60	**11.00**
SC2504	25	4	60	**11.00**
SC2505	25	5	60	**11.00**
SC2506	25	6	60	**11.00**
SC2508	25	8	60	**11.00**
SC2510	25	10	60	**11.00**
SC2512	25	12	60	**11.00**
SC2514	25	14	60	**11.00**
SC2516	25	16	60	**11.00**
SC2518	25	18	60	**11.00**
SC2520	25	20	60	**11.00**
SC3204	32	4	65	**12.00**
SC3205	32	5	65	**12.00**
SC3206	32	6	65	**12.00**
SC3208	32	8	65	**12.00**
SC3210	32	10	65	**12.00**
SC3212	32	12	65	**12.00**
SC3214	32	14	65	**12.00**
SC3216	32	16	65	**12.00**
SC3218	32	18	65	**12.00**
SC3220	32	20	65	**12.00**
SC3225	32	25	65	**12.00**

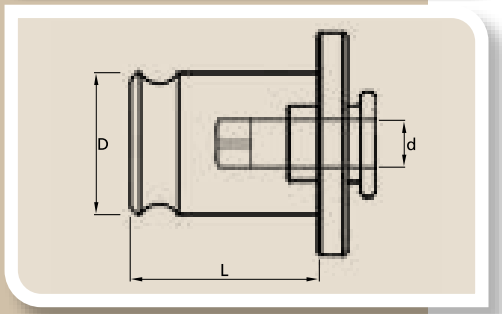
Not suitable for Hydraulic chucks / *Hidrolik tutucu için uygun değildir*



QUICK CHANGE TAP HOLDERS
KOLAY DEĞİŞİR KILAVUZ TUTUCULARI

TAP HOLDER Quick Change / *KILAVUZ TUTUCULARI Kolay değişebilir*
Without clutch (Fixed) / *Sabit tip*

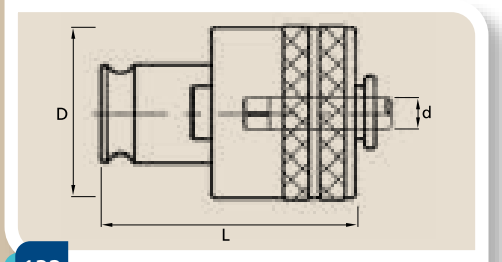




CODE / *KOD*	Description Ø x square mm *Tanım Ø x kare mm*	Suitable taps *uyumlu kılavuzlar*	d	D	L	EURO
TC103527	TC1 3.5x2.7	M3/371 M5/376	19	30	28.5	**13.00**
TC104534	TC1 4.5x3.4	M4/371 M6/376	19	30	28.5	**13.00**
TC106049	TC1 6x4.9	M5-M6/371 M8/376	19	30	28.5	**13.00**
TC108062	TC1 8x6.2	M8/371	19	30	28.5	**13.00**
TC107055	TC1 7x5.5	M10/376	19	30	28.5	**13.00**
TC110080	TC1 10x8	M10/371	19	30	28.5	**13.00**
TC109070	TC1 9X7	M12/376	19	30	28.5	**13.00**
TC111090	TC1 11x9	M14/376	19	30	28.5	**13.00**
TC206049	TC2 6x4.9	M5-M6/371 M8/376	31	48	46	**16.00**
TC208062	TC2 8x6.2	M8/371	31	48	46	**16.00**
TC207055	TC2 7x5.5	M10/376	31	48	46	**16.00**
TC210080	TC2 10x8	M10/371	31	48	46	**16.00**
TC209070	TC2 9X7	M12/376	31	48	46	**16.00**
TC211090	TC2 11x9	M14/376	31	48	46	**16.00**
TC212090	TC2 12x9	M16/376	31	48	46	**16.00**
TC214110	TC2 14x11	M18/376	31	48	46	**16.00**
TC216120	TC2 16x12	M20/376	31	48	46	**16.00**
TC218145	TC2 18x14.5	M22-M24/376	31	48	46	**16.00**

TAP HOLDER Quick Change / *KILAVUZ TUTUCULARI Kolay değişebilir*
With safety clutch / *Emniyetli tip*



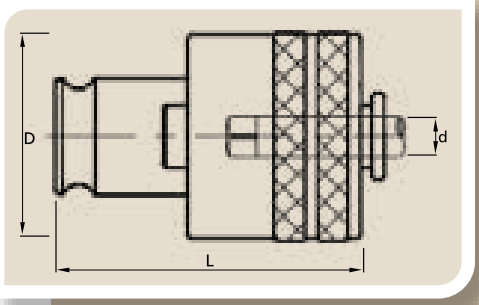


CODE / *KOD*	Description Ø x square mm *Tanım Ø x kare mm*	Suitable taps *uyumlu kılavuzlar*	d	D	L	EURO
TCS1M0303527	TCS1 M3 3.5x2.7	M3/371	19	33	46.5	**25.00**
TCS1M0503527	TCS1 M5 3.5x2.7	M5/376	19	33	46.5	**25.00**
TCS1M0404534	TCS1 M4 4.5x3.4	M4/371	19	33	46.5	**25.00**
TCS1M0604534	TCS1 M6 4.5x3.4	M6/376	19	33	46.5	**25.00**
TCS1M0506049	TCS1 M5 6x4.9	M5/371	19	33	46.5	**25.00**
TCS1M0606049	TCS1 M6 6x4.9	M6/371	19	33	46.5	**25.00**
TCS1M0806049	TCS1 M8 6x4.9	M8/376	19	33	46.5	**25.00**
TCS1M1007055	TCS1 M10 7x5.5	M10/376	19	33	46.5	**25.00**
TCS1M0808062	TCS1 M8 8x6.2	M8/371	19	33	46.5	**25.00**
TCS1M1010080	TCS1 M10 10X8	M10/371	19	33	46.5	**25.00**
TCS1M1209070	TCS1 M12 9x7	M12/376	19	33	46.5	**25.00**
TCS1M1411090	TCS1 M14 11X9	M14/376	19	33	46.5	**25.00**

TAP HOLDER Quick Change / *KILAVUZ TUTUCULARI Kolay değişebilir*
With safety clutch / *Emniyetli tip*

CODE / *KOD*	Description Ø x square mm *Tanım Ø x kare mm*	Suitable taps *uyumlu kılavuzlar*	d	D	L	EURO
TCS2M0506049	TCS2 M5 6x4.9	M5/371	31	51	70	**30.00**
TCS2M0606049	TCS2 M6 6x4.9	M6/371	31	51	70	**30.00**
TCS2M0806049	TCS2 M8 6x4.9	M8/376	31	51	70	**30.00**
TCS2M1007055	TCS2 M10 7x5.5	M10/376	31	51	70	**30.00**
TCS2M0808062	TCS2 M8 8x6.2	M8/371	31	51	70	**30.00**
TCS2M1010080	TCS2 M10 10X8	M10/371	31	51	70	**30.00**
TCS2M1209070	TCS2 M12 9x7	M12/376	31	51	70	**30.00**
TCS2M1411090	TCS2 M14 11X9	M14/376	31	51	70	**30.00**
TCS2M1612090	TCS2 M16 12X9	M16/376	31	51	70	**30.00**
TCS2M1814110	TCS2 M18 14X11	M18/376	31	51	70	**30.00**
TCS2M2016120	TCS2 M20 16X12	M20/376	31	51	70	**30.00**
TCS2M2218145	TCS2 M22 18X14.5	M22/376	31	51	70	**30.00**
TCS2M2418145	TCS2 M24 18X14.5	M24/376	31	51	70	**30.00**



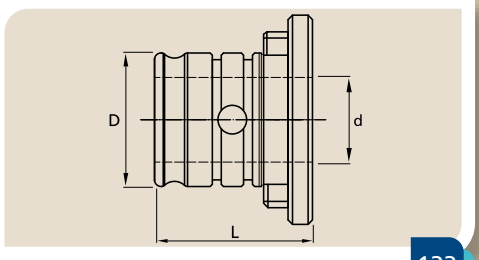


CODE / *KOD*	Description Ø x square mm *Tanım Ø x kare mm*	Suitable taps *uyumlu kılavuzlar*	d	D	L	EURO
TCS3M1411090	TCS3 M14 11X9	M14/376	48	73	100.5	**70.00**
TCS3M1612090	TCS3 M16 12X9	M16/376	48	73	100.5	**70.00**
TCS3M1814110	TCS3 M18 14X11	M18/376	48	73	100.5	**70.00**
TCS3M2016120	TCS3 M20 16X12	M20/376	48	73	100.5	**70.00**
TCS3M2218145	TCS3 M22 18X14.5	M22/376	48	73	100.5	**70.00**
TCS3M2418145	TCS3 M24 18X14.5	M24/376	48	73	100.5	**70.00**
TCS3M2720160	TCS3 M27 20X16	M27/376	48	73	100.5	**70.00**
TCS3M3022180	TCS3 M30 22X18	M30/376	48	73	100.5	**70.00**
TCS3M3325200	TCS3 M33 25X20	M33/376	48	73	100.5	**70.00**
TCS3M3628220	TCS3 M36 28X22	M36/376	48	73	100.5	**70.00**



TAP HOLDER REDUCTION
KILAVUZ TUTUCU REDÜKSİYONU

CODE / *KOD*	Description *Açıklama*	d	D	L	EURO
TC2 TC1	Adapts TC1/TCS1 to a TC2/TCS2 holder *TC1/TCS1 tutucuyu TC2/TCS2' ye adapte eder*	19	31	35	**24.00**



QUICK CHANGE TAPPING CHUCKS
KOLAY DEĞİŞİR KLAVUZ ÇEKME BAŞLIKLARI



Please see page 14 / Bakınız sayfa 14



Please see page 26 / Bakınız sayfa 26



Please see page 36 / Bakınız sayfa 36



Please see page 42 / Bakınız sayfa 42



Please see page 46 / Bakınız sayfa 46



Please see page 51 / Bakınız sayfa 51

gürkan



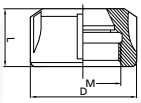
TOOLHOLDER ACCESSORIES

TUTUCU AKSESUARLARI

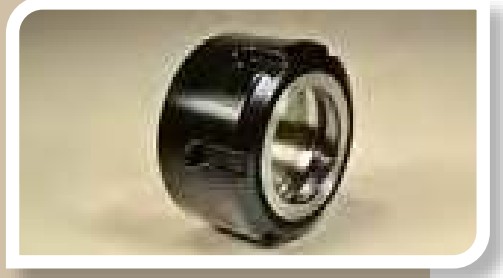
LOCKNUTS
PENS SOMUNLARI



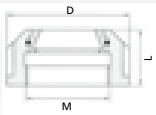
ER STANDARD LOCKNUT / *ER STANDART SOMUN*
DIN 6499 / ISO 15488



CODE / *KOD*	ER SIZE / *ER ÖLÇÜSÜ*	D	L	M	EURO
NER16S	ER 16	32	17.5	M22x1.5	5.50
NER20S	ER 20	35	19	M25x1.5	5.50
NER25S	ER 25	42	20	M32x1.5	5.80
NER32S	ER 32	50	22.5	M40x1.5	6.00
NER40S	ER 40	63	25.5	M50x1.5	7.90
NER50S	ER 50	78	35	M64x2	14.50



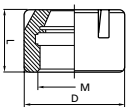
ER BEARING TYPE LOCKNUT / *ER BİLYALI TİP SOMUN*
DIN 6499 / ISO 15488



CODE / *KOD*	ER SIZE / *ER ÖLÇÜSÜ*	D	L	M	EURO
NER25B	ER 25	42	23	M32x1.5	15.50
NER32B	ER 32	50	25	M40x1.5	15.50
NER40B	ER 40	63	28.5	M50x1.5	16.50



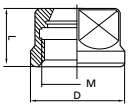
ER MINI LOCKNUT / *ER MİNİ SOMUN*
DIN 6499 / ISO 15488



CODE / *KOD*	ER SIZE / *ER ÖLÇÜSÜ*	D	L	M	EURO
NER08M	ER 8 MINI	12	11	M10x0.75	6.00
NER11M	ER 11 MINI	16	12	M13x0.75	5.50
NER16M	ER 16 MINI	22	19	M19x1	5.50
NER20M	ER 20 MINI	28	19	M24x1	5.60
NER25M	ER 25 MINI	35	20	M30x1	5.90



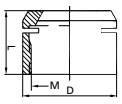
ER HEXAGON LOCKNUT / *ER ALTIKÖŞE SOMUN*
DIN 6499 / ISO 15488



CODE / *KOD*	ER SIZE / *ER ÖLÇÜSÜ*	D	L	M	EURO
NER11H	ER 11	19	11.3	M14x0.75	5.50
NER16H	ER 16	28	17	M22x1.5	5.50
NER20H	ER 20	34	19	M25x1.5	5.60



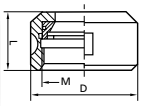
ER HIGH SPEED LOCKNUT (Suitable for ER MINI Toolholders)
ER YÜKSEK HIZ SOMUNU (ER MINI tutuculara uygundur)



CODE / *KOD*	ER SIZE / *ER ÖLÇÜSÜ*	D	L	M	EURO
NER11HS	ER11 MINI	16	12	M13x0.75	11.80
NER16HS	ER16 MINI	22	18	M19x1	11.80
NER20HS	ER20 MINI	28	19	M24x1	11.80



OZ TYPE LOCKNUT / *OZ TİP SOMUN*
DIN 6388 / ISO 10897-D



CODE / *KOD*	ER SIZE / *ER ÖLÇÜSÜ*	D	L	M	EURO
NOZ12	OZ12 407E	35	20	M27x1,5	24.00
NOZ16B	OZ16 410E-415E	43	24	M33x1.5	24.00
NOZ20B	OZ20 4541E	50	28	M42x2	24.00
NOZ25B	OZ25 444E-462E	60	30	M48x2	18.00
NOZ32B	OZ32 450E-467E	72	34	M60x2.5	25.00

ER STANDARD SPANNER / *ER STANDART ANAHTAR*

CODE / *KOD*	ER SIZE / *ER ÖLÇÜSÜ*	EURO
SPER16S	ER 16	4.50
SPER20S	ER 20	4.50
SPER25S	ER 25	4.80
SPER32S	ER 32	5.30
SPER40S	ER 40	6.60
SPER50S	ER 50	14.50



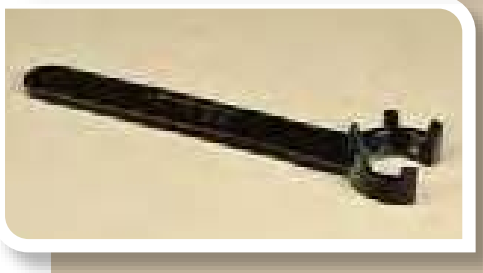
ER MOON TYPE SPANNER / *ER AY TİPİ ANAHTAR*

CODE / *KOD*	ER SIZE / *ER ÖLÇÜSÜ*	EURO
SPER25C	ER 25	4.80
SPER32C	ER 32	5.30
SPER40C	ER 40	6.60



ER MINI SPANNER / *ER MINI ANAHTAR*

CODE / *KOD*	ER SIZE / *ER ÖLÇÜSÜ*	EURO
SPER08M	ER 8 MINI	5.50
SPER11M	ER 11 MINI	5.50
SPER16M	ER 16 MINI	5.50
SPER20M	ER 20 MINI	6.20
SPER25M	ER 25 MINI	6.90



ER HEXAGON SPANNER / *ER ALTIKÖŞE ANAHTAR*

CODE / *KOD*	ER SIZE / *ER ÖLÇÜSÜ*	EURO
SPER11H	ER 11	3.80
SPER16H	ER 16	4.00
SPER20H	ER 20	4.20



OZ SPANNER DIN 6388 / ISO 10897 - *OZ AY ANAHTAR DIN 6388 / ISO 10897*

CODE / *KOD*	TYPE / *TİP*	EURO
SPOZ12	DIN6388D-12	7.50
SPOZ16	DIN6388D-16	7.50
SPOZ20	DIN6388D-12	7.50
SPOZ25	DIN6388D-25	5.30
SPOZ32	DIN6388D-32	13.50



HSK63A COOLANT TUBE SPANNER / *HSK63A SOĞUTUCU BORUSU ANAHTARI*

CODE / *KOD*	HOLDER TYPE *TUTUCU TİPİ*	EURO
SPHSK63	HSK63A	14.50



SPANNERS
ANAHTARLAR



FACE MILL SPANNER / *ALIN FREZE TUTUCU ANAHTARI*

CODE / *KOD*	TYPE / *TİP*	EURO
SPFM16	FM16	12.00
SPFM22	FM22	13.00
SPFM27	FM27	14.50
SPFM32	FM32	17.50
SPFM40	FM40	24.50



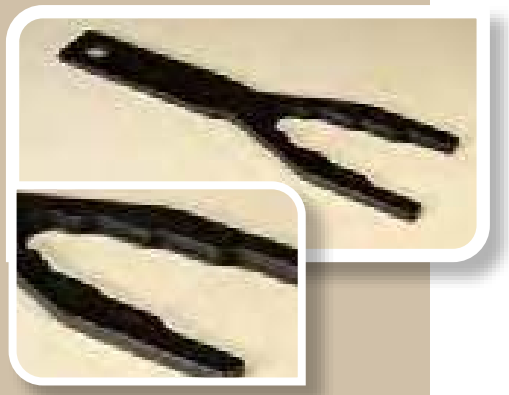
HP HOLDER SPANNER / *HP TUTUCU ANAHTARI*

CODE / *KOD*	HOLDER TYPE *TUTUCU TİPİ*	EURO
SPHP20	HP20	13.00
SPHP25	HP25	13.00
SPHP32	HP32	14.50



ER HIGH SPEED NUT SPANNER / *ER YÜKSEK HIZ SOMUNU ANAHTARI*

CODE / *KOD*	ER NUT TYPE *ER SOMUN TİPİ*	EURO
SPER11HS	NER11HS	16.00
SPER16HS	NER16HS	16.50
SPER20HS	NER20HS	17.50



EXTRACTION SPANNER FOR HYDRAULIC REDUCTION COLLET
HİDROLİK REDÜKSİYON PENSİ ÇIKARMA ANAHTARI

CODE / *KOD*	SUITABLE FOR COLLETS *UYUMLU PENSLER*	EURO
SPRH	RH12 - RH20 RH25 - RH32	18.00

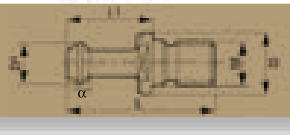


DRILL CHUCK SPANNER / *MANDREN ANAHTARI*

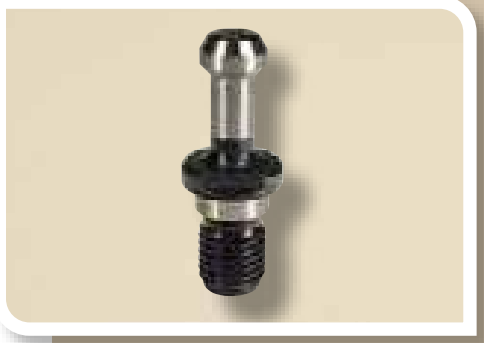
CODE / *KOD*	HOLDER TYPE *TUTUCU TİPİ*	EURO
SPDC13	DC13	12.50
SPDC16	DC16	13.50
SPDC20	DC20	17.00

PULL STUDS
ÇEKTİRME CİVATALARI

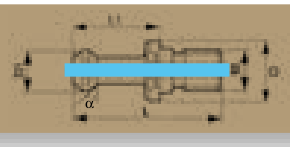
MAS 403 BT without coolant hole
Soğutma deliksiz



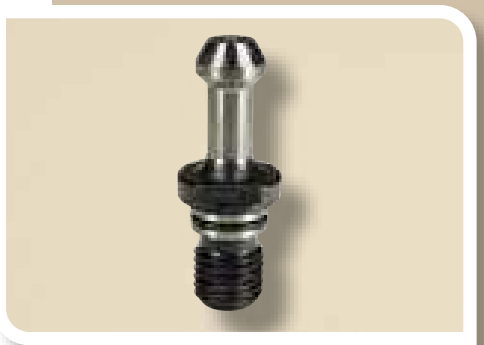
CODE *KOD*	Toolholder Taper *Tutucu Konik*	M	D	D1	L	L1	α	EURO
PSBT3045	BT30	M12	16.5	11	43	23	45°	**3.80**
PSBT3060	BT30	M12	16.5	11	43	23	60°	**3.80**
PSBT3090	BT30	M12	16.5	11	43	23	90°	**3.80**
PSBT4045	BT40	M16	23	15	60	35	45°	**3.80**
PSBT4060	BT40	M16	23	15	60	35	60°	**3.80**
PSBT4090	BT40	M16	23	15	60	35	90°	**3.80**
PSBT5045	BT50	M24	38	23	85	45	45°	**5.50**
PSBT5060	BT50	M24	38	23	85	45	60°	**5.50**
PSBT5090	BT50	M24	38	23	85	45	90°	**5.50**



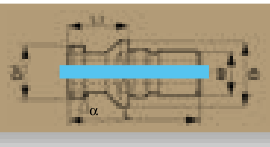
MAS 403 BT - Internal coolant
İçten soğutma delikli



CODE *KOD*	Toolholder Taper *Tutucu Konik*	M	D	D1	L	L1	α	EURO
PSBT3045B	BT30	M12	16.5	11	43	23	45°	**4.20**
PSBT4045B	BT40	M16	23	15	60	35	45°	**4.20**
PSBT4060B	BT40	M16	23	15	60	35	60°	**4.20**
PSBT4090B	BT40	M16	23	15	60	35	90°	**4.20**
PSBT5045B	BT50	M24	38	23	85	45	45°	**6.00**



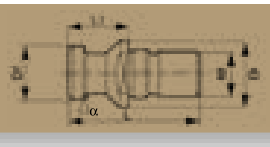
DIN 69872A - Internal coolant
İçten soğutma delikli



CODE *KOD*	Toolholder Taper *Tutucu Konik*	M	D	D1	L	L1	α	EURO
PS698723A	DIN30 (69871)	M12	17	13	44	24	15°	**4.20**
PS698724A	DIN40 (69871)	M16	23	19	54	26	15°	**4.20**
PS698725A	DIN50 (69871)	M24	36	28	74	34	15°	**6.00**



DIN 69872B without coolant hole
Soğutma deliksiz



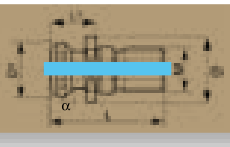
CODE *KOD*	Toolholder Taper *Tutucu Konik*	M	D	D1	L	L1	α	EURO
PS698724B	DIN40 (69871)	M16	23	19	54	26	15°	**3.80**
PS698725B	DIN50 (69871)	M24	36	28	74	34	15°	**5.50**



PULL STUDS
ÇEKTİRME CİVATALARI



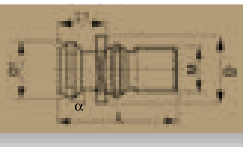
ISO 7388/2 (1984/B) - Internal coolant
İçten soğutma delikli



CODE *KOD*	Toolholder Taper *Tutucu Konik*	M	D	D1	L	L1	α	EURO
PS738840A	DIN40 (69871)	M16	22.5	18.9	44.5	16.25	45°	**4.20**
PS738850A	DIN50 (69871)	M24	36	29.1	65.5	25.55	45°	**6.00**



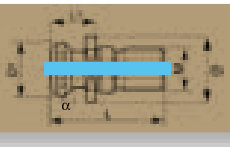
ISO 7388/2 (1984/B) - without coolant hole
Soğutma deliksiz



CODE *KOD*	Toolholder Taper *Tutucu Konik*	M	D	D1	L	L1	α	EURO
PS738840B	DIN40 (69871)	M16	22.5	18.9	44.5	16.25	45°	**3.80**
PS738850B	DIN50 (69871)	M24	36	29.1	65.5	25.55	45°	**5.50**



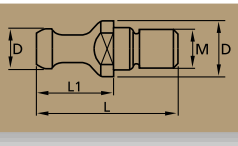
FOR MAZAK MACHINES - Internal coolant
MAZAK Tezgahlar için - İçten soğutma delikli



CODE *KOD*	Toolholder Taper *Tutucu Konik*	M	D	D1	L	L1	α	EURO
PS738840MZ	DIN40 (69871)	M16	22	18.8	44.1	19.1	45°	**4.90**



SK30 FOR CNC ROUTER MACHINES
SK30 CNC ROUTER TEZGAHLAR İÇİN



CODE *KOD*	Toolholder Taper *Tutucu Konik*	M	D	D1	L	L1	α	EURO
PSSK30	SK30	M12	17	12	44	24	R	**5.00**





TOOL CLAMPING UNITS
TAKIM BAĞLAMA ÜNİTELERİ



UNIVERSAL TOOL CLAMPING SET
ÜNİVERSAL TAKIM BAĞLAMA SETİ

Pat.

CODE / *KOD*	Description / *Tanımı*	EURO
TBAUNI	**All in one, Universal design massive steel construction, usable both vertical and horizantal position, suitable tapers:** **BT-DIN-ISO-SK-CAT 30-40-50** **HSK A 40-50-63-80-100** *Hepsi bir arada, üniversal tasarım, masif çelik yapı,* *dikey ve yatay kullanım ve bağlama imkanı takılan konikler* *BT-DIN-ISO-SK-CAT 30-40-50* *HSK A 40-50-63-80-100* **Dimensions**/*Boyutlar: 174x191x169mm*	165.00



TOOL CLAMPING UNIT 30-40-50 TAPER
TAKIM BAĞLAMA APARATI 30-40-50 KONİK



CODE / *KOD*	Description / *Tanımı*	EURO
TBA304050	**Massive steel construction, usable both vertical and horizantal position Suitable for holders:** **BT-DIN-ISO-SK-CAT 30-40-50 tapers** *Masif çelik yapı Dikey ve yatay konumda kullanım ve bağlama imkanı Bağladığı tutucular :* *BT-DIN-ISO-SK-CAT 30-40-50 konikler* **Dimensions**/*Boyutlar: 165x190x165mm*	70.00

TOOL CLAMPING UNIT WITH SINGLE TAPER
TAKIM BAĞLAMA APARATI TEK KONİKLİ



CODE / *KOD*	Description / *Tanımı*	EURO
TBA30	**Tool clamping unit 30 Taper** *Takım bağlama aparatı 30 konik* **BT-DIN-ISO-SK-CAT 30** **Dimensions**/*Boyutlar: 75x95x75mm*	40.00
TBA40	**Tool clamping unit 40 Taper** *Takım bağlama aparatı 40 konik* **BT-DIN-ISO-SK-CAT 40** **Dimensions**/*Boyutlar: 90x110x105mm*	45.00
TBA50	**Tool clamping unit 50 Taper** *Takım bağlama aparatı 50 konik* **BT-DIN-ISO-SK-CAT 50** **Dimensions**/*Boyutlar: 110x148x150mm*	55.00

Massive steel construction, usable both vertical and horizantal position,
Masif çelik yapı, dikey ve yatay bağlama imkanı

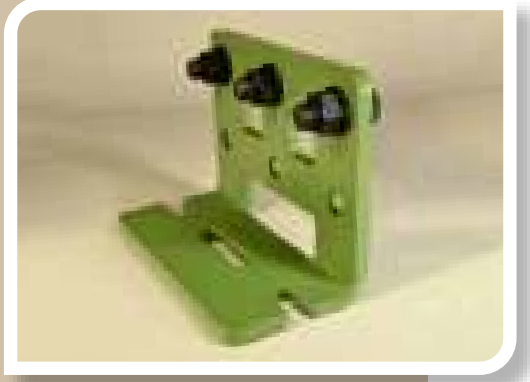
TOOL CLAMPING UNITS
TAKIM BAĞLAMA ÜNİTELERİ



TOOL CLAMPING UNIT FOR HSK-A TAPERS / *TAKIM BAĞLAMA APARATI HSK-A KONİKLER İÇİN*

CODE / *KOD*	Description / *Tanımı*	EURO
TBAHSK40	**Tool clamping unit HSK-A 40 Taper** *Takım bağlama aparatı HSK-A 40 konik* **Dimensions**/*Boyutlar: 60x80x60mm*	60.00
TBAHSK50	**Tool clamping unit HSK-A 50 Taper** *Takım bağlama aparatı HSK-A 50 konik* **Dimensions**/*Boyutlar: 75x90x65mm*	65.00
TBAHSK63	**Tool clamping unit HSK-A 63 Taper** *Takım bağlama aparatı HSK-A 63 konik* **Dimensions**/*Boyutlar: 85x100x70mm*	65.00
TBAHSK80	**Tool clamping unit HSK-A 80 Taper** *Takım bağlama aparatı HSK-A 80 konik* **Dimensions**/*Boyutlar: 100x120x70mm*	85.00
TBAHSK100	**Tool clamping unit HSK-A 100 Taper** *Takım bağlama aparatı HSK-A 100 konik* **Dimensions**/*Boyutlar: 120x130x70mm*	100.00

Massive steel construction, usable both vertical and horizantal position,
Masif çelik yapı, dikey ve yatay bağlama imkanı



MULTI PURPOSE MITER FIXTURE / *ÇOK AMAÇLI GÖNYE APARATI*

CODE / *KOD*	Description / *Tanımı*	EURO
MITFIX	**Massive steel construction, usable both vertical and horizantal position, fixing and workpice or fixture, suitable for our tool clamping set / unit** **Dimensions: WidthxLenghtxHeight 100x190x140mm** *Masif çelik yapı, dikey ve yatay konumda kullanım ve her tür iş parçası ve aparat bağlamaya uygun, ayrıca takım bağlama aparat ve setlerimize de uygundur* *Boyutlar: EnxBoyxYükseklik 100x190x140mm*	30.00



TOOLHOLDER STORAGE STAND / *TAKIM TUTUCU STANDI*

CODE / *KOD*	Description / *Tanımı*	EURO
TSUNI16	**Toolholder storage stand 16 holes** **Universal design suits all tapers** **BT-DIN-ISO-SK 30-40-50** **HSK 40-50-63-80** **Dimensions: WidthxLenghtxHeight 57x50x30mm** *Takım tutucu standı 16 hazneli* *Universal tasarım tüm koniklere uygun* *BT-DIN-ISO-SK 30-40-50* *HSK 40-50-63-80* *Boyutlar: EnxBoyxYükseklik 57x50x30mm*	80.00

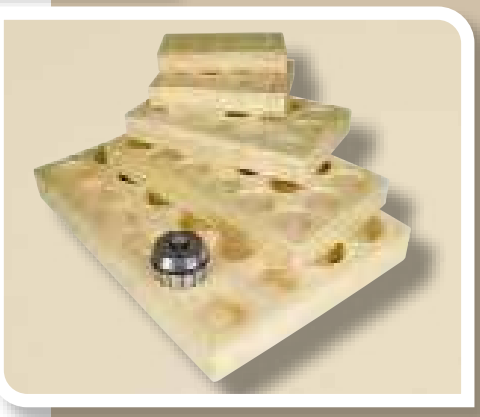


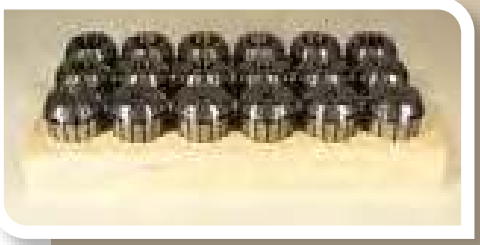
TAPER CLEANER / *KONİK TEMİZLEYİCİ*

CODE / *KOD*	Description / *Tanımı*	EURO
TCL30	**TAPER CLEANER SK30** / *KONİK TEMİZLEYİCİ SK30*	6.50
TCL40	**TAPER CLEANER SK40** / *KONİK TEMİZLEYİCİ SK40*	7.00
TCL50	**TAPER CLEANER SK50** / *KONİK TEMİZLEYİCİ SK50*	8.00
TCLHSK63	**TAPER CLEANER HSK63** / *KONİK TEMİZLEYİCİ HSK63*	11.50

WOODEN COLLET STANDS
AHŞAP PENS STANTLARI

CODE / *KOD*	Collet to fit / *Uygun pens tipi*	EURO
WCS08	ER 8	6.50
WCS11	ER 11	6.50
WCS16	ER 16	6.50
WCS20	ER 20	6.50
WCS25	ER 25	8.80
WCS32	ER 32	10.00
WCS40	ER 40	14.50
WCS50	ER 50	14.50
WCSOZ	OZ25 DIN6388-25	14.50





COLLET SETS ON WOODEN STANDS (Available on Request)
AHŞAP STAND ÜZERİ PENS TAKIMLARI (Siparişe Yapılabilir)

TOOLHOLDERS SPARES
TAKIM TUTUCU YEDEKLERİ

FACE MILL ADAPTOR LOCK SCREW / *ALIN FREZE TUTUCU SABİTLEME CİVATASI*

CODE / *KOD*	TOOLHOLDER REF. / *TUTUCU REF.*	SIZE / *ÖLÇÜ*	EURO
SCFM16	FACE MILL Ø16MM	M8	3.70
SCFM22	FACE MILL Ø22MM	M10	4.60
SCFM27	FACE MILL Ø27MM	M12	4.90
SCFM32	FACE MILL Ø32MM	M16	6.20
SCFM40	FACE MILL Ø40MM	M20	8.40



WELDON ADAPTOR SIDE LOCK SCREW / WELDON TUTUCU SABİTLEME CİVATASI

CODE / *KOD*	TOOLHOLDER REF. / *TUTUCU REF.*	SIZE / *ÖLÇÜ*	EURO
SCW06	WELDON Ø6MM	M6X10	1.20
SCW08	WELDON Ø8MM	M8X10	1.20
SCW10	WELDON Ø10MM	M10X12	1.75
SCW12	WELDON Ø12MM	M12X16	1.75
SCW14	WELDON Ø14MM	M12X16	1.75
SCW16	WELDON Ø16MM	M14X16	1.85
SCW18	WELDON Ø18MM	M14X16	1.85
SCW20	WELDON Ø20MM	M16X16	2.00
SCW25	WELDON Ø25MM	M18X2X20	3.30
SCW32	WELDON Ø32MM	M20X2X20	3.50
SCW40	WELDON Ø40MM	M20X2X20	3.50





DRIVE RINGS FOR CM (COMBI) ADAPTORS
KOMBİNE FREZE TUTUCU İÇİN İSTAVROZ PUL

CODE / *KOD*	SUITABLE HOLDER / *UYGUN TUTUCULAR*	EURO
DRCM16	DRIVE RING FOR CM16	7.50
DRCM22	DRIVE RING FOR CM22	8.60
DRCM27	DRIVE RING FOR CM27	9.80
DRCM32	DRIVE RING FOR CM32	10.90
DRCM40	DRIVE RING FOR CM40	12.00





DRIVE KEY FOR FACE MILL HOLDER / *ALIN FREZE KAMA VE VİDASI*

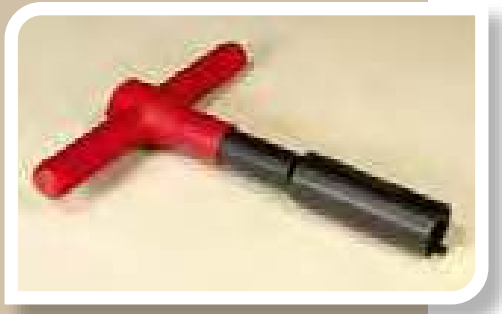
CODE / *KOD*	SUITABLE HOLDER / *UYGUN TUTUCULAR*	EURO
DKFM16	FACE MILL Ø16MM	3.70
DKFM22	FACE MILL Ø22MM	4.20
DKFM27	FACE MILL Ø27MM	5.50
DKFM32	FACE MILL Ø32MM	5.00
DKFM40	FACE MILL Ø40MM	5.50

Prices for 1 key + 1 screw / *Fiyatlar 1 kama + 1 vida içindir*



HSK63 COOLANT TUBE / *SOĞUTUCU BORUSU*

CODE / *KOD*	SUITABLE HOLDER / *UYGUN TUTUCULAR*	EURO
CTHSK63	HSK63	6.70



HSK63 COOLANT TUBE SPANNER / *HSK63 SOĞUTUCU BORUSU ANAHTARI*

CODE / *KOD*	HOLDER TYPE *TUTUCU TİPİ*	EURO
SPHSK63	HSK63A	14.50

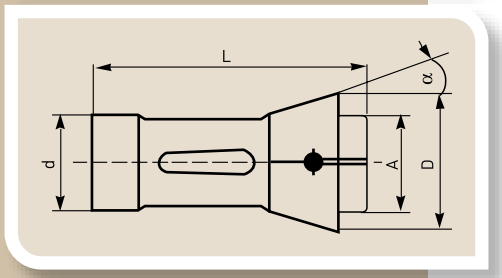


DIN6343 WORKHOLDING COLLETS

DIN6343 OTOMAT PENSLERİ

DIN 6343 WORKHOLDING COLLETS
DIN 6343 OTOMAT PENSLERİ





136E (F20-201)

d:20 D:26 A:19 L:54 α :15°

CODE / *KOD*	BORE DETAILS / *DELİK DETAYI*	EURO
136E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 1-1.9mm	35.00
136E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 2-2.9mm	29.00
136E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 3-16mm	18.00
136E_ _ _ RS	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLAK KANALSIZ YARIM VE ONDALI ÇAPLAR* Ø 3-16mm	29.00
136E_ _ _ RG	ROUND GROOVED / *YUVARLAK KANALLI* Ø 8-16mm	18.00
136E_ _ _ RG	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLAK KANALLI YARIM VE ONDALI ÇAPLAR* Ø 8-16mm	29.00
136E_ _ _ RLS	ROUND LONG NOSE SMOOTH *YUVARLAK UZUN BURUNLU KANALSIZ* Ø 3-16MM	58.00
136E_ _ _ H	HEXAGON / *ALTIKÖŞE* Ø 4-14mm	33.00
136E_ _ _ S	SQUARE / *KARE* Ø 4-10mm	35.00

138E (F20-87)

d:20 D:28 A:21 L:67 α :16°

CODE / *KOD*	BORE DETAILS / *DELİK DETAYI*	EURO
138E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 1-1.9mm	35.00
138E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 2-2.9mm	29.00
138E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 3-16mm	18.00
138E_ _ _ RS	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLAK KANALSIZ YARIM VE ONDALI ÇAPLAR* Ø 3-16mm	29.00
138E_ _ _ RG	ROUND GROOVED / *YUVARLAK KANALLI* Ø 8-16mm	18.00
138E_ _ _ RG	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLAK KANALLI YARIM VE ONDALI ÇAPLAR* Ø 8-16mm	29.00
138E_ _ _ RLS	ROUND LONG NOSE SMOOTH *YUVARLAK UZUN BURUNLU KANALSIZ* Ø 3-16MM	58.00
138E_ _ _ H	HEXAGON / *ALTIKÖŞE* Ø 4-14mm	33.00
138E_ _ _ S	SQUARE / *KARE* Ø 4-10mm	35.00

Ordering example / *Sipariş örneği:*
138E085RS - 138E Ø 8.5mm Round Smooth
138E120H - 138E 12mm Hexagon
138E080S - 138E 8mm Square

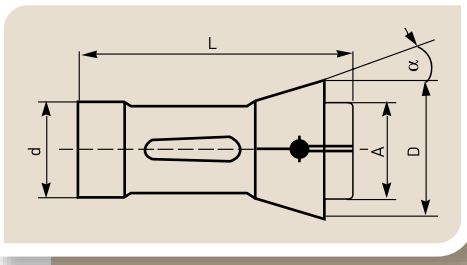
DIN 6343 WORKHOLDING COLLETS
DIN 6343 OTOMAT PENSLERİ

140E (F22)

d:22 D:30 A:21 L:55 α :15°

CODE / *KOD*	BORE DETAILS / *DELİK DETAYI*	EURO
140E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 1-1.9mm	35.00
140E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 2-2.9mm	29.00
140E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 3-17mm	18.00
140E_ _ _ RS	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLAK KANALSIZ YARIM VE ONDALI ÇAPLAR* Ø 3-17mm	29.00
140E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 17.5-18.0mm	31.00
140E_ _ _ RG	ROUND GROOVED / *YUVARLAK KANALLI* Ø 8-17mm	18.00
140E_ _ _ RG	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLAK KANALLI YARIM VE ONDALI ÇAPLAR* Ø 8-17mm	29.00
140E_ _ _ RG	ROUND GROOVED / *YUVARLAK KANALLI* Ø 17.5-18.0mm	31.00
140E_ _ _ H	HEXAGON / *ALTIKÖŞE* Ø 4-14mm	33.00
140E_ _ _ S	SQUARE / *KARE* Ø 4-12mm	35.00





145E (F25)

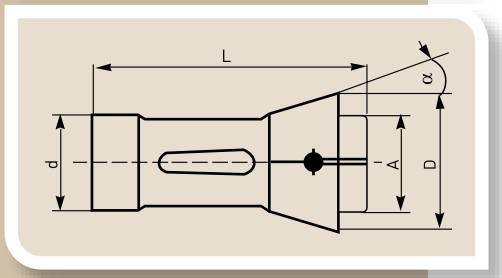
d:25 D:35 A:27 L:77 α :16°

CODE / *KOD*	BORE DETAILS / *DELİK DETAYI*	EURO
145E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 1-1.9mm	36.00
145E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 2-2.9mm	30.00
145E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 3-20mm	19.00
145E_ _ _ RS	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLAK KANALSIZ YARIM VE ONDALI ÇAPLAR* Ø 3-20mm	30.00
145E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 20.5-21mm	32.00
145E_ _ _ RG	ROUND GROOVED / *YUVARLAK KANALLI* Ø 8-20mm	19.00
145E_ _ _ RG	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLAK KANALLI YARIM VE ONDALI ÇAPLAR* Ø 8-20mm	30.00
145E_ _ _ RG	ROUND GROOVED / *YUVARLAK KANALLI* Ø 20.5-21mm	32.00
145E_ _ _ RLS	ROUND LONG NOSE SMOOTH *YUVARLAK UZUN BURUNLU KANALSIZ* Ø 3-20MM	59.00
145E_ _ _ H	HEXAGON / *ALTIKÖŞE* Ø 4-16mm	34.00
145E_ _ _ S	SQUARE / *KARE* Ø 4-14mm	36.00

Ordering example / *Sipariş örneği:*
145E085RS - 145E Ø 8.5mm Round Smooth
145E120H - 145E 12mm Hexagon
145E080S - 145E 8mm Square

DIN 6343 WORKHOLDING COLLETS
DIN 6343 OTOMAT PENSLERİ





148E (F28)

d:28 D:38 A:28 L:70 α:15°

CODE / *KOD*	BORE DETAILS / *DELİK DETAYI*	EURO
148E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 1-1.9mm	36.00
148E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 2-2.9mm	30.00
148E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 3-23mm	19.00
148E_ _ _ RS	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLAK KANALSIZ YARIM VE ONDALI ÇAPLAR* Ø 3-23mm	30.00
148E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 23.5-24mm	32.00
148E_ _ _ RG	ROUND GROOVED / *YUVARLAK KANALLI* Ø 8-23mm	19.00
148E_ _ _ RG	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLA KANALLI YARIM VE ONDALI ÇAPLAR* Ø 8-23mm	30.00
148E_ _ _ RG	ROUND GROOVED / *YUVARLAK KANALLI* Ø 23.5-24mm	32.00
148E_ _ _ H	HEXAGON / *ALTIKÖŞE* Ø 4-20mm	34.00
148E_ _ _ S	SQUARE / *KARE* Ø 4-16mm	36.00

1446E (EF30)

d:30 D:38 A:32 L:65 α:15°

CODE / *KOD*	BORE DETAILS / *DELİK DETAYI*	EURO
1446E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 1-1.9mm	41.00
1446E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 2-2.9mm	35.00
1446E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 3-25mm	24.00
1446E_ _ _ RS	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLAK KANALSIZ YARIM VE ONDALI ÇAPLAR* Ø 3-25mm	35.00
1446E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 25.5-26mm	39.00
1446E_ _ _ RG	ROUND GROOVED / *YUVARLAK KANALLI* Ø 8-25mm	24.00
1446E_ _ _ RG	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLAK KANALLI YARIM VE ONDALI ÇAPLAR* Ø 8-25mm	35.00
1446E_ _ _ RG	ROUND GROOVED / *YUVARLAK KANALLI* Ø 25.5-26mm	39.00
1446E_ _ _ RLS	ROUND LONG NOSE SMOOTH *YUVARLAK UZUN BURUNLU KANALSIZ* Ø 3-25MM	64.00
1446E_ _ _ H	HEXAGON / *ALTIKÖŞE* Ø 4-22mm	41.00
1446E_ _ _ S	SQUARE / *KARE* Ø 4-18mm	43.00

Ordering example / *Sipariş örneği:*
148E085RS - 148E Ø 8.5mm Round Smooth
148E120H - 148E 12mm Hexagon
1446E010S - 1446E 10mm Square

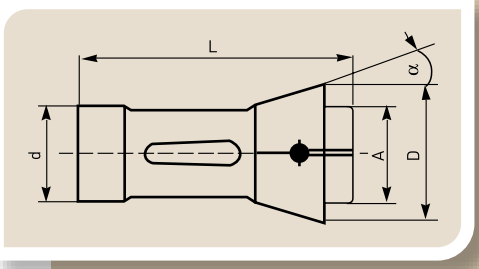
DIN 6343 WORKHOLDING COLLETS
DIN 6343 OTOMAT PENSLERİ

161E (F32)

d:32 D:45 A:34 L:75 α :15°

CODE / *KOD*	BORE DETAILS / *DELİK DETAYI*	EURO
161E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 1-1.9mm	37.00
161E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 2-2.9mm	31.00
161E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 3-27mm	20.00
161E_ _ _ RS	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLAK KANALSIZ YARIM VE ONDALI ÇAPLAR* Ø 3-27mm	31.00
161E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 27.5-28mm	35.00
161E_ _ _ RG	ROUND GROOVED / *YUVARLAK KANALLI* Ø 8-27mm	20.00
161E_ _ _ RG	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLAK KANALLI YARIM VE ONDALI ÇAPLAR* Ø 8-27mm	31.00
161E_ _ _ RG	ROUND GROOVED / *YUVARLAK KANALLI* Ø 27.5-28mm	35.00
161E_ _ _ RLS	ROUND LONG NOSE SMOOTH *YUVARLAK UZUN BURUNLU KANALSIZ* Ø 3-27MM	60.00
161E_ _ _ H	HEXAGON / *ALTIKÖŞE* Ø 4-21mm	35.00
161E_ _ _ S	SQUARE / *KARE* Ø 4-18mm	37.00





162E (F35 76-2010 INDEX 25)

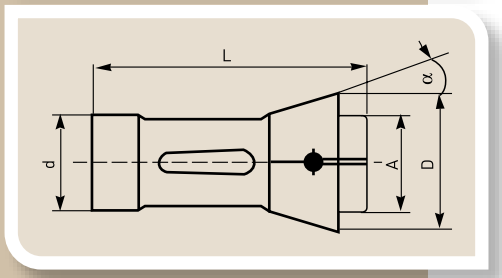
d:35 D:43 A:34 L:70 α :15°

CODE / *KOD*	BORE DETAILS / *DELİK DETAYI*	EURO
162E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 1-1.9mm	39.00
162E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 2-2.9mm	33.00
162E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 3-30mm	22.00
162E_ _ _ RS	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLAK KANALSIZ YARIM VE ONDALI ÇAPLAR* Ø 3-30mm	33.00
162E_ _ _ RS	ROUND SMOOTH / *YUVARLAK KANALSIZ* Ø 30.5-31mm	37.00
162E_ _ _ RG	ROUND GROOVED / *YUVARLAK KANALLI* Ø 8-30mm	22.00
162E_ _ _ RG	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS *YUVARLAK KANALLI YARIM VE ONDALI ÇAPLAR* Ø 8-30mm	33.00
162E_ _ _ RG	ROUND GROOVED / *YUVARLAK KANALLI* Ø 30.5-31mm	37.00
162E_ _ _ H	HEXAGON / *ALTIKÖŞE* Ø 4-25mm	37.00
162E_ _ _ S	SQUARE / *KARE* Ø 4-20mm	39.00

Ordering example / *Sipariş örneği:*
161E085RS - 161E Ø 8.5mm Round Smooth
161E120H - 161E 12mm Hexagon
161E120S - 161E 12mm Square

DIN 6343 WORKHOLDING COLLETS
DIN 6343 OTOMAT PENSLERİ





163E (F35)

d:35 D:48 A:38 L:80 α:15°

CODE / *KOD*	BORE DETAILS / *DELİK DETAYI*	EURO
163E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 1-1.9mm	38.00
163E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 2-2.9mm	32.00
163E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 3-30mm	21.00
163E_ _ _ RS	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS YUVARLAK KANALSIZ YARIM VE ONDALI ÇAPLAR Ø 3-30mm	32.00
163E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 30.5-31mm	36.00
163E_ _ _ RG	ROUND GROOVED / YUVARLAK KANALLI Ø 8-30mm	21.00
163E_ _ _ RG	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS YUVARLAK KANALLI YARIM VE ONDALI ÇAPLAR Ø 8-30mm	32.00
163E_ _ _ RG	ROUND GROOVED / YUVARLAK KANALLI Ø 30.5-31mm	36.00
163E_ _ _ RLS	ROUND LONG NOSE SMOOTH YUVARLAK UZUN BURUNLU KANALSIZ 3-30MM	61.00
163E_ _ _ H	⬢ HEXAGON / ALTIKÖŞE Ø 4-25mm	36.00
163E_ _ _ S	■ SQUARE / KARE Ø 4-20mm	38.00

1536E (F37)

d:37 D:47 A:40 L:92 α:16°

CODE / *KOD*	BORE DETAILS / *DELİK DETAYI*	EURO
1536E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 1-1.9mm	46.00
1536E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 2-2.9mm	40.00
1536E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 3-32mm	29.00
1536E_ _ _ RS	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS YUVARLAK KANALSIZ YARIM VE ONDALI ÇAPLAR Ø 3-32mm	40.00
1536E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 32.5-33mm	44.00
1536E_ _ _ RG	ROUND GROOVED / YUVARLAK KANALLI Ø 8-32mm	29.00
1536E_ _ _ RG	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS YUVARLAK KANALLI YARIM VE ONDALI ÇAPLAR Ø 8-32mm	40.00
1536E_ _ _ RG	ROUND GROOVED / YUVARLAK KANALLI Ø 32.5-33mm	44.00
1536E_ _ _ RLS	ROUND LONG NOSE SMOOTH YUVARLAK UZUN BURUNLU KANALSIZ 3-32MM	69.00
1536E_ _ _ H	⬢ HEXAGON / ALTIKÖŞE Ø 4-27mm	46.00
1536E_ _ _ S	■ SQUARE / KARE Ø 4-22mm	48.00

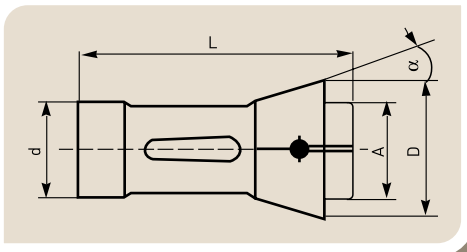
Ordering example / *Sipariş örneği:*
163E085RS - 163E Ø 8.5mm Round Smooth
163E120H - 163E 12mm Hexagon
1536E120S - 1536E 12mm Square

DIN 6343 WORKHOLDING COLLETS
DIN 6343 OTOMAT PENSLERİ

164E (F38)

d:38.08 D:49 A:38 L:108 α :15°





CODE / *KOD*	BORE DETAILS / *DELİK DETAYI*	EURO
164E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 1-1.9mm	56.00
164E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 2-2.9mm	48.00
164E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 3-32mm	35.00
164E_ _ _ RS	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS YUVARLAK KANALSIZ YARIM VE ONDALI ÇAPLAR Ø 3-32mm	46.00
164E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 32.5-34mm	50.00
164E_ _ _ RG	ROUND GROOVED / YUVARLAK KANALLI Ø 8-32mm	35.00
164E_ _ _ RG	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS YUVARLAK KANALLI YARIM VE ONDALI ÇAPLAR Ø 8-32mm	46.00
164E_ _ _ RG	ROUND GROOVED / YUVARLAK KANALLI Ø 32.5-34mm	50.00
164E_ _ _ RLS	ROUND LONG NOSE SMOOTH YUVARLAK UZUN BURUNLU KANALSIZ 3-32MM	75.00
164E_ _ _ H	HEXAGON / ALTIKÖŞE Ø 4-27mm	55.00
164E_ _ _ S	SQUARE / KARE Ø 4-22mm	58.00

171E (F42)

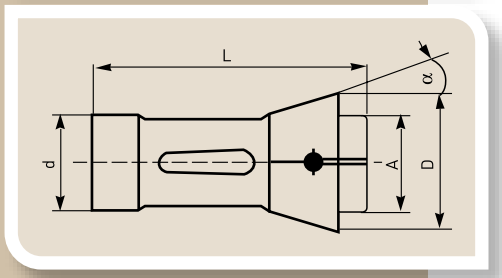
d:42 D:55 A:42 L:94 α :15°

CODE / *KOD*	BORE DETAILS / *DELİK DETAYI*	EURO
171E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 1-1.9mm	46.00
171E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 2-2.9mm	40.00
171E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 3-36mm	29.00
171E_ _ _ RS	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS YUVARLAK KANALSIZ YARIM VE ONDALI ÇAPLAR Ø 3-36mm	40.00
171E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 36.5-38mm	44.00
171E _ _ RG	ROUND GROOVED / YUVARLAK KANALLI Ø 8-36mm	29.00
171E_ _ _ RG	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS YUVARLAK KANALLI YARIM VE ONDALI ÇAPLAR Ø 8-36mm	40.00
171E_ _ _ RG	ROUND GROOVED / YUVARLAK KANALLI Ø 36.5-38mm	44.00
171E_ _ _ H	HEXAGON / ALTIKÖŞE Ø 4-32mm	46.00
171E_ _ _ S	SQUARE / KARE Ø 4-25mm	48.00

Ordering example / *Sipariş örneği:*
164E085RS - 164E Ø 8.5mm Round Smooth
164E120H - 164E 12mm Hexagon
171E120S - 171E 12mm Square

DIN 6343 WORKHOLDING COLLETS
DIN 6343 OTOMAT PENSLERİ





173E (F48)

d:48 D:60 A:50 L:94 α :15°

CODE / *KOD*	BORE DETAILS / *DELİK DETAYI*	EURO
173E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 1-1.9mm	46.00
173E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 2-2.9mm	40.00
173E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 3-42mm	29.00
173E_ _ _ RS	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS YUVARLAK KANALSIZ YARIM VE ONDALI ÇAPLAR Ø 3-42mm	40.00
173E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 42.5-44mm	44.00
173E _ _ RG	ROUND GROOVED / YUVARLAK KANALLI Ø 8-42mm	29.00
173E_ _ _ RG	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS YUVARLAK KANALLI YARIM VE ONDALI ÇAPLAR Ø 8-42mm	40.00
173E_ _ _ RG	ROUND GROOVED / YUVARLAK KANALLI Ø 42.5-44mm	44.00
173E_ _ _ RLS	ROUND LONG NOSE SMOOTH YUVARLAK UZUN BURUNLU KANALSIZ 3-42MM	69.00
173E_ _ _ H	⬢ HEXAGON / ALTIKÖŞE Ø 4-36mm	46.00
173E_ _ _ S	■ SQUARE / KARE Ø 4-30mm	48.00

177E (F58)

d:58 D:70 A:60 L:94 α :15°

CODE / *KOD*	BORE DETAILS / *DELİK DETAYI*	EURO
177E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 1-1.9mm	58.00
177E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 2-2.9mm	52.00
177E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 3-52mm	41.00
177E_ _ _ RS	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS YUVARLAK KANALSIZ YARIM VE ONDALI ÇAPLAR Ø 3-52mm	52.00
177E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 52.5-54mm	56.00
177E _ _ RG	ROUND GROOVED / YUVARLAK KANALLI Ø 8-52mm	41.00
177E_ _ _ RG	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS YUVARLAK KANALLI YARIM VE ONDALI ÇAPLAR Ø 8-52mm	52.00
177E_ _ _ RG	ROUND GROOVED / YUVARLAK KANALLI Ø 52.5-54mm	56.00
177E_ _ _ H	⬢ HEXAGON / ALTIKÖŞE Ø 4-45mm	64.00
177E_ _ _ S	■ SQUARE / KARE Ø 4-36mm	66.00

Ordering example / *Sipariş örneği:*
173E085RS - 173E Ø 8.5mm Round Smooth
173E120H - 173E 12mm Hexagon
177E100S - 177E 10mm Square

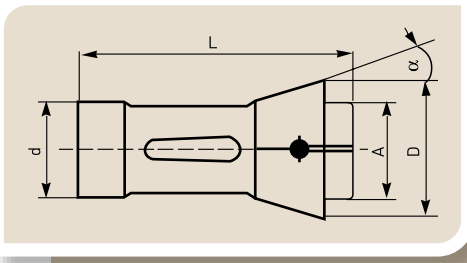
DIN 6343 WORKHOLDING COLLETS
DIN 6343 OTOMAT PENSLERİ

185E (F66)

d:66 D:84 A:73 L:110 α :15°

CODE / *KOD*	BORE DETAILS / *DELİK DETAYI*	EURO
185E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 1-1.9mm	70.00
185E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 2-2.9mm	62.00
185E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 3-60mm	51.00
185E_ _ _ RS	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS YUVARLAK KANALSIZ YARIM VE ONDALI ÇAPLAR Ø 3-60mm	62.00
185E_ _ _ RS	ROUND SMOOTH / YUVARLAK KANALSIZ Ø 60.5-62mm	70.00
185E _ _ RG	ROUND GROOVED / YUVARLAK KANALLI Ø 8-60mm	51.00
185E_ _ _ RG	ROUND SMOOTH HALF AND INTERMEDIATE (0.1mm) DIAMETERS YUVARLAK KANALLI YARIM VE ONDALI ÇAPLAR Ø 8-60mm	62.00
185E_ _ _ RG	ROUND GROOVED / YUVARLAK KANALLI Ø 60.5-62mm	70.00
185E_ _ _ H	HEXAGON / ALTIKÖŞE Ø 4-52mm	73.00
185E_ _ _ S	SQUARE / KARE Ø 4-42mm	75.00





Ordering example / *Sipariş örneği:*
185E085RS - 185E Ø 8.5mm Round Smooth
185E120H - 185E 12mm Hexagon
185E120S - 185E 12mm Square

DIN 6343 WORKHOLDING COLLETS Multi Size clamping
DIN 6343 OTOMAT PENSLERİ Çoklu ölçü sıkma



173E (F48) MULTI SIZE / *ÇOKLU ÖLÇÜ*

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
173E050RMS	5.0 - 4.0	68.00
173E060RMS	6.0 - 5.0	68.00
173E070RMS	7.0 - 6.0	68.00
173E080RMS	8.0 - 7.0	68.00
173E090RMS	9.0 - 8.0	68.00
173E100RMS	10.0 - 9.0	68.00
173E110RMS	11.0 - 10.0	68.00
173E120RMS	12.0 - 11.0	68.00
173E130RMS	13.0 - 12.0	68.00
173E140RMS	14.0 - 13.0	68.00
173E150RMS	15.0 - 14.0	68.00
173E160RMS	16.0 - 15.0	68.00
173E170RMS	17.0 - 16.0	68.00
173E180RMS	18.0 - 17.0	68.00
173E190RMS	19.0 - 17.0	68.00
173E200RMS	20.0 - 19.0	68.00
173E210RMS	21.0 - 20.0	68.00
173E220RMS	22.0 - 21.0	68.00
173E230RMS	23.0 - 22.0	68.00

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
173E240RMS	24.0 - 23.0	68.00
173E250RMS	25.0 - 24.0	68.00
173E260RMS	26.0 - 25.0	68.00
173E270RMS	27.0 - 26.0	68.00
173E280RMS	28.0 - 27.0	68.00
173E290RMS	29.0 - 28.0	68.00
173E300RMS	30.0 - 29.0	68.00
173E310RMS	31.0 - 30.0	68.00
173E320RMS	32.0 - 31.0	68.00
173E330RMS	33.0 - 32.0	68.00
173E340RMS	34.0 - 33.0	68.00
173E350RMS	35.0 - 34.0	68.00
173E360RMS	36.0 - 35.0	68.00
173E370RMS	37.0 - 36.0	68.00
173E380RMS	38.0 - 37.0	68.00
173E390RMS	39.0 - 38.0	68.00
173E400RMS	40.0 - 39.0	68.00
173E410RMS	41.0 - 40.0	68.00
173E420RMS	42.0 - 41.0	68.00

1.0mm clamping range / *1.0mm sıkma aralığı*
Super elastic body clamps all diameters within 1.0mm range
Süper esnek yapı 1.0mm aralıkta tüm çapları sıkmayı sağlar.

DIN 6343 WORKHOLDING COLLETS Multi Size clamping
DIN 6343 OTOMAT PENSLERİ Çoklu ölçü sıkma

185E (F66) MULTI SIZE / *ÇOKLU ÖLÇÜ*



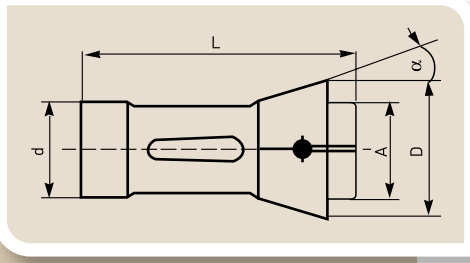
CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
185E050RMS	5.0 - 4.0	92.00
185E060RMS	6.0 - 5.0	92.00
185E070RMS	7.0 - 6.0	92.00
185E080RMS	8.0 - 7.0	92.00
185E090RMS	9.0 - 8.0	92.00
185E100RMS	10.0 - 9.0	92.00
185E110RMS	11.0 - 10.0	92.00
185E120RMS	12.0 - 11.0	92.00
185E130RMS	13.0 - 12.0	92.00
185E140RMS	14.0 - 13.0	92.00
185E150RMS	15.0 - 14.0	92.00
185E160RMS	16.0 - 15.0	92.00
185E170RMS	17.0 - 16.0	92.00
185E180RMS	18.0 - 17.0	92.00
185E190RMS	19.0 - 17.0	92.00
185E200RMS	20.0 - 19.0	92.00
185E210RMS	21.0 - 20.0	92.00
185E220RMS	22.0 - 21.0	92.00
185E230RMS	23.0 - 22.0	92.00
185E240RMS	24.0 - 23.0	92.00
185E250RMS	25.0 - 24.0	92.00
185E260RMS	26.0 - 25.0	92.00
185E270RMS	27.0 - 26.0	92.00
185E280RMS	28.0 - 27.0	92.00
185E290RMS	29.0 - 28.0	92.00
185E300RMS	30.0 - 29.0	92.00
185E310RMS	31.0 - 30.0	92.00
185E320RMS	32.0 - 31.0	92.00

CODE / *KOD*	clamping dia *sıkma çapı* Ømm	EURO
185E330RMS	33.0 - 32.0	92.00
185E340RMS	34.0 - 33.0	92.00
185E350RMS	35.0 - 34.0	92.00
185E360RMS	36.0 - 35.0	92.00
185E370RMS	37.0 - 36.0	92.00
185E380RMS	38.0 - 37.0	92.00
185E390RMS	39.0 - 38.0	92.00
185E400RMS	40.0 - 39.0	92.00
185E410RMS	41.0 - 40.0	92.00
185E420RMS	42.0 - 41.0	92.00
185E430RMS	43.0 - 42.0	92.00
185E440RMS	44.0 - 43.0	92.00
185E450RMS	45.0 - 44.0	92.00
185E460RMS	46.0 - 45.0	92.00
185E470RMS	47.0 - 46.0	92.00
185E480RMS	48.0 - 47.0	92.00
185E490RMS	49.0 - 48.0	92.00
185E500RMS	50.0 - 49.0	92.00
185E510RMS	51.0 - 50.0	92.00
185E520RMS	52.0 - 51.0	92.00
185E530RMS	53.0 - 52.0	92.00
185E540RMS	54.0 - 53.0	92.00
185E550RMS	55.0 - 54.0	92.00
185E560RMS	56.0 - 55.0	92.00
185E570RMS	57.0 - 56.0	92.00
185E580RMS	58.0 - 57.0	92.00
185E590RMS	59.0 - 58.0	92.00
185E600RMS	60.0 - 59.0	92.00

1.0mm clamping range / *1.0mm sıkma aralığı*
Super elastic body clamps all diameters within 1.0mm range
Süper esnek yapı 1.0mm aralıkta tüm çapları sıkmayı sağlar.

DIN 6343 WORKHOLDING COLLETS OTHER TYPES
DIN 6343 OTOMAT PENSLERİ DİĞER TİPLER





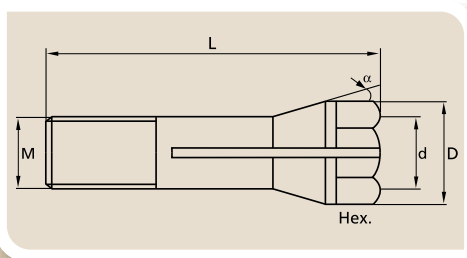
CODE *KOD*	Type *Tip*	clamping dia *sıkma çapı*	d	D	A	L	α	EURO
405F_ _ _ RS	F4.5	Ø 1-2	4.5	6.75	4.5	17.3	15°	48.00
405F_ _ _ RS	F4.5	Ø 2.5-4	4.5	6.75	4.5	17.3	15°	38.00
101E_ _ _ RS	101E (F8)	Ø 1-2	8	12	8	42	16°	38.00
101E_ _ _ RS	101E (F8)	Ø 2.5-6	8	12	8	42	16°	29.00
109E_ _ _ RS	109E (F10)	Ø 1-2	10	15.5	10	47.5	20°	38.00
109E_ _ _ RS	109E (F10)	Ø 2.5-8	10	15.5	10	47.5	20°	29.00
116E_ _ _ RS	116E (F13)	Ø 1-2	13	19	13	64	16°	38.00
116E_ _ _ RS	116E (F13)	Ø 2.5-10	13	19	13	64	16°	29.00
120E_ _ _ RS	120E (F15)	Ø 1-2	15	21	15	64	16°	38.00
120E_ _ _ RS	120E (F15)	Ø 2.5-12	15	21	15	64	16°	29.00
1212E_ _ _ RS	1212E (F16)	Ø 1-2	16	21	16	64	16°	38.00
1212E_ _ _ RS	1212E (F16)	Ø 2.5-13	16	21	16	64	16°	29.00

Ø 8mm and above is also available with grooved bore
Ø 8mm ve üstü için kanallı delik te mevcuttur

Ordering example / *Sipariş örneği:*
120E085RS - 120E Ø 8.5mm Round Smooth

600E COLLETS With Hexagon Head
600E PENSLER Altıköşe Başlı





600E — d:6 D:9 L:28.5 M.6X0.75 HEX:7 α :10°

CODE *KOD*	Clamping Dia Sıkma Çapı Ø mm	EURO
600E010	1.0	48.00
600E015	1.5	48.00
600E020	2.0	42.00
600E025	2.5	42.00
600E030	3.0	34.00
600E0318	1/8"	34.00
600E035	3.5	34.00
600E040	4.0	34.00

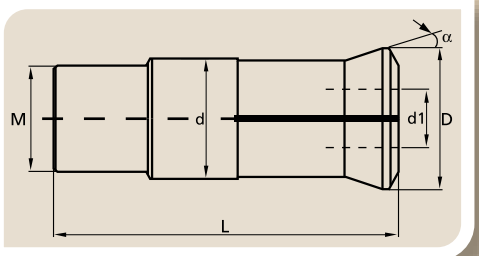
GUIDE BUSHES WITH CARBIDE BORE
YATAKLAMA SÜRÜCÜ PENSLER KARBÜR DELİKLİ

CODE *KOD*	d1 range Ø2-20mm	d	D	L	M	α	EURO
T223..R	2-3-4-5mm	28	34	82	M25x1	16°	**115.00**
T223..R	6-7-8mm	28	34	82	M25x1	16°	**125.00**
T223..R	9-10-11mm	28	34	82	M25x1	16°	**135.00**
T223..R	12-13-14mm	28	34	82	M25x1	16°	**145.00**
T223..R	15-16-17mm	28	34	82	M25x1	16°	**160.00**
T223..R	18-19-20mm	28	34	82	M25x1	16°	**185.00**



Ordering example for T223 Ø12mm Code: T223120R
Sipariş örneği T223 Ø12mm için Kod: T223120R

Other guide bushes are available on request
Diğer yataklama pensleri sipariş için arayınız.

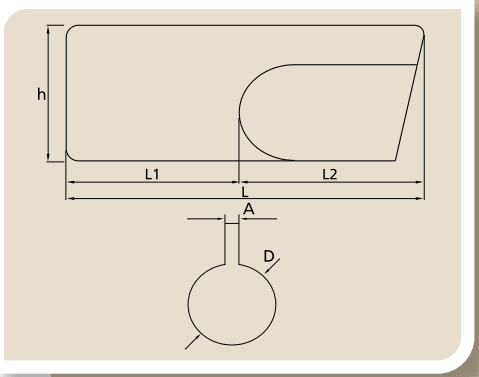


DIN 6343 COLLET RUBBER PLUGS
DIN 6343 PENS LASTİK TIPALARI

CODE *KOD*	NR	SUITABLE COLLETS *TAKILAN PENSLER*	D	A	h	L	L1	L2	Euro
RP63431	NR. 1	136E-138E-140E 145E 145E	5.3	1.0	7.0	18.0	15.0	3.0	**0.25**
RP63432	NR. 2	140E-145E-148E 161E-1446E	5.4	1.6	7.5	16.0	11.0	5.0	**0.25**
RP63433	NR. 3	148E-161E-163E 164E-1536E	5.5	1.3	7.0	24.0	18.0	6.0	**0.25**
RP63434	NR. 4	163E-164E 1536E-171E	5.6	2.0	7.5	18.0	12.0	6.0	**0.25**
RP63435	NR. 5	171E-173E-177E	5.7	2.0	7.0	27.0	19.0	8.0	**0.25**
RP63436	NR. 6	173E-177E-185E	6.0	2.0	8.0	35.0	25.0	10.0	**0.25**
RP63437	NR. 7	177E-185E	6.5	2.5	9.0	40.0	26.0	14.0	**0.30**







gürkan

EXTENDED COLLET DIAMETERS
GENİŞLETİLMİŞ PENS ÇAPLARI

ER8 - Ø 5.5	**ER25 - Ø 20**
ER11 - Ø 8	**ER32 - Ø 25**
ER16 - Ø 12.5	**ER40 - Ø 32**
ER20 - Ø 16	**ER50 - Ø 40**

OZ25 - Ø 32



ENABLES YOU TO HOLD BIGGER DIAMETERS WITH YOUR EXISTING TOOLHOLDERS

MEVCUT TUTUCULARINIZ İLE DAHA BÜYÜK ÇAPLARI TUTMANIZI SAĞLAR



ALL TYPES OF TOOLHOLDERS IN ONE CLAMPING UNIT
TÜM TAKIM TUTUCULAR TEK BIR BAĞLAMA UNITESINDE
PAGE/*SAYFA.141*

TBAUNI
165.00 €

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TAPS
KILAVUZLAR

MACHINE TAPS STRAIGHT FLUTE HSS-E
MAKİNA KILAVUZLARI DÜZ KANALLI HSS-E



DIN371 METRIC COARSE THREAD / *METRİK NORMAL DİŞ*

Metric *Metrik*	Pitch *Hatve*	Code *Kod*	Type *Tip*	EURO
M 1 *	0.25	371010	DIN371-C	**37.00**
M 1.2 *	0.25	371012	DIN371-C	**36.00**
M 1.4	0.30	371014	DIN371-C	**31.00**
M 1.6	0.35	371016	DIN371-C	**29.00**
M 1.7	0.35	371017	DIN371-C	**29.00**
M 1.8	0.35	371018	DIN371-C	**30.00**
M 2	0.40	371020	DIN371-C	**11.20**
M 2.2	0.45	371022	DIN371-C	**13.00**
M 2.3	0.40	371023	DIN371-C	**13.00**
M 2.5	0.45	371025	DIN371-C	**11.00**
M 2.6	0.45	371026	DIN371-C	**12.20**
M 3	0.5	371030	DIN371-B	**6.00**
M 3.5	0.6	371035	DIN371-C	**8.70**
M 4	0.7	371040	DIN371-B	**6.10**
M 4.5	0.75	371045	DIN371-C	**14.00**
M 5	0.8	371050	DIN371-B	**6.60**
M 6	1.0	371060	DIN371-B	**6.60**
M 7	1.0	371070	DIN371-C	**10.00**
M 8	1.25	371080	DIN371-B	**8.10**
M 9	1.25	371090	DIN371-C	**15.00**
M 10	1.5	371100	DIN371-B	**10.20**

* fluteless / * *kanalsızdır*



DIN376 METRIC COARSE THREAD / *METRİK NORMAL DİŞ*

Metric *Metrik*	Pitch *Hatve*	Code *Kod*	Type *Tip*	EURO
M 12	1.75	376120	DIN376-B	**13.00**
M 14	2	376140	DIN376-C	**19.70**
M 16	2	376160	DIN376-B	**20.20**
M 18	2.5	376180	DIN376-C	**33.50**
M 20	2.5	376200	DIN376-C	**33.50**
M 22	2.5	376220	DIN376-C	**46.50**
M 24	3	376240	DIN376-C	**46.50**
M 27	3	376270	DIN376-C	**59.00**
M 30	3.5	376300	DIN376-C	**75.00**
M 33	3.5	376330	DIN376-C	**102.00**
M 36	4	376360	DIN376-C	**122.00**
M 39	4	376390	DIN376-C	**190.00**
M 42	4.5	376420	DIN376-C	**200.00**
M 45	4.5	376450	DIN376-C	**240.00**
M 48	5	376480	DIN376-C	**270.00**
M 52	5	376520	DIN376-C	**330.00**

Type C : Bottoming - Type B : Spiral Point / Tip C : *Düz Uçlu - Tip B : Eğik Ağız Bileme*

MACHINE TAPS STRAIGHT FLUTE HSS-E + TIN
MAKİNA KILAVUZLARI DÜZ KANALLI HSS-E + TIN

DIN371 METRIC COARSE THREAD / *METRİK NORMAL DİŞ* TIN



Metric *Metrik*	Pitch *Hatve*	Code *Kod*	Type *Tip*	EURO
M 2	0.4	371020T	DIN371-C	**14.20**
M 2.5	0.45	371025T	DIN371-C	**14.00**
M 3	0.5	371030T	DIN371-B	**8.70**
M 3.5	0.6	371035T	DIN371-C	**13.00**
M 4	0.7	371040T	DIN371-B	**8.90**
M 5	0.8	371050T	DIN371-B	**9.60**
M 6	1.0	371060T	DIN371-B	**9.60**
M 8	1.25	371080T	DIN371-B	**12.20**
M 10	1.5	371100T	DIN371-B	**15.00**

DIN376 METRIC COARSE THREAD / *METRİK NORMAL DİŞ* TIN



Metric *Metrik*	Pitch *Hatve*	Code *Kod*	Type *Tip*	EURO
M 12	1.75	376120T	DIN376-B	**18.60**
M 14	2	376140T	DIN376-C	**26.00**
M 16	2	376160T	DIN376-B	**28.50**
M 18	2.5	376180T	DIN376-C	**43.00**
M 20	2.5	376200T	DIN376-C	**43.00**
M 22	2.5	376220T	DIN376-C	**59.00**
M 24	3	376240T	DIN376-C	**59.00**
M 27	3	376270T	DIN376-C	**77.00**
M 30	3.5	376300T	DIN376-C	**93.00**
M 33	3.5	376330T	DIN376-C	**125.00**
M 36	4	376360T	DIN376-C	**149.00**

Type C : Bottoming - Type B : Spiral Point / Tip C : *Düz Uçlu - Tip B : Eğik Ağız Bileme*

MACHINE TAPS SPIRAL FLUTE HSS-E
MAKİNA KILAVUZLARI HELİS KANALLI HSS-E



DIN371 METRIC COARSE PITCH / *METRİK NORMAL DİŞ*

Metric / *Metrik*	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
M 2	0.4	371020H	DIN371-C	12.80
M 2.5	0.45	371025H	DIN371-C	12.60
M 3	0.5	371030H	DIN371-C	6.10
M 3.5	0.6	371035H	DIN371-C	11.70
M 4	0.7	371040H	DIN371-C	6.20
M 5	0.8	371050H	DIN371-C	6.70
M 6	1	371060H	DIN371-C	6.70
M 7	1	371070H	DIN371-C	13.90
M 8	1.25	371080H	DIN371-C	8.50
M 10	1.5	371100H	DIN371-C	10.60



DIN376 METRIC COARSE PITCH / *METRİK NORMAL DİŞ*

Metric / *Metrik*	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
M 12	1.75	376120H	DIN376-C	13.80
M 14	2	376140H	DIN376-C	24.90
M 16	2	376160H	DIN376-C	23.60
M 18	2.5	376180H	DIN376-C	42.00
M 20	2.5	376200H	DIN376-C	42.00
M 22	2.5	376220H	DIN376-C	60.00
M 24	3	376240H	DIN376-C	56.00
M 27	3	376270H	DIN376-C	70.00
M 30	3.5	376300H	DIN376-C	90.00
M 33	3.5	376330H	DIN376-C	135.00
M 36	4	376360H	DIN376-C	135.00
M 39	4	376390H	DIN376-C	215.00
M 42	4.5	376420H	DIN376-C	240.00



DIN371 METRIC COARSE THREAD / *METRİK NORMAL DİŞ* TIN

Metric / *Metrik*	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
M 2	0.4	371020HT	DIN371-C	15.80
M 2.5	0.45	371025HT	DIN371-C	15.60
M 3	0.5	371030HT	DIN371-C	8.80
M 3.5	0.6	371035HT	DIN371-C	16.00
M 4	0.7	371040HT	DIN371-C	9.00
M 5	0.8	371050HT	DIN371-C	9.70
M 6	1	371060HT	DIN371-C	9.70
M 8	1.25	371080HT	DIN371-C	12.60
M 10	1.5	371100HT	DIN371-C	15.40



DIN376 METRIC COARSE THREAD / *METRİK NORMAL DİŞ* TIN

Metric / *Metrik*	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
M 12	1.75	376120HT	DIN376-C	19.40
M 14	2	376140HT	DIN376-C	31.20
M 16	2	376160HT	DIN376-C	31.90
M 18	2.5	376180HT	DIN376-C	51.50
M 20	2.5	376200HT	DIN376-C	51.50
M 22	2.5	376220HT	DIN376-C	72.50
M 24	3	376240HT	DIN376-C	69.00
M 27	3	376270HT	DIN376-C	88.00
M 30	3.5	376300HT	DIN376-C	108.00
M 33	3.5	376330HT	DIN376-C	158.00
M 36	4	376360HT	DIN376-C	162.00

MACHINE TAPS STRAIGHT FLUTE FOR HARDER STEELS (< HRC 50) AND STAINLESS STEEL
MAKİNA KILAVUZLARI DÜZ KANALLI SERT MALZEME (< HRC 50) ve PASLANMAZ İÇİN

DIN371-376 METRIC COARSE THREAD STRAIGHT FLUTE HSS-EP + TICN
METRİK NORMAL DİŞ DÜZ KANALLI

Metric / *Metrik*	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
M 3	0.5	371030EP	DIN371-B	15.50
M 4	0.7	371040EP	DIN371-B	16.00
M 5	0.8	371050EP	DIN371-B	17.00
M 6	1	371060EP	DIN371-B	17.00
M 8	1.25	371080EP	DIN371-B	22.00
M 10	1.5	371100EP	DIN371-B	27.00
M 12	1.75	376120EP	DIN376-B	32.00
M 14	2	376140EP	DIN376-B	46.00
M 16	2	376160EP	DIN376-B	48.00
M 18	2.5	376180EP	DIN376-B	69.00
M 20	2.5	376200EP	DIN376-B	69.00
M 24	3	376240EP	DIN376-B	92.00
M 27	3	376270EP	DIN376-B	115.00
M 30	3.5	376300EP	DIN376-B	140.00
M 36	4	376360EP	DIN376-B	215.00


DIN 371


DIN 376

DIN371-376 METRIC COARSE THREAD SPIRAL FLUTE HSS-EP + TICN
METRİK NORMAL DİŞ HELİS KANALLI

Metric / *Metrik*	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
M 3	0.5	371030HEP	DIN371-C	16.50
M 4	0.7	371040HEP	DIN371-C	17.00
M 5	0.8	371050HEP	DIN371-C	18.00
M 6	1	371060HEP	DIN371-C	18.00
M 8	1.25	371080HEP	DIN371-C	23.50
M 10	1.5	371100HEP	DIN371-C	29.00
M 12	1.75	376120HEP	DIN376-C	34.00
M 14	2	376140HEP	DIN376-C	48.00
M 16	2	376160HEP	DIN376-C	50.00
M 18	2,5	376180HEP	DIN376-C	72.00
M 20	2,5	376200HEP	DIN376-C	72.00
M 24	3	376240HEP	DIN376-C	95.00
M 27	3	376270HEP	DIN376-C	120.00
M 30	3.5	376300HEP	DIN376-C	150.00
M 36	4	376360HEP	DIN376-C	220.00


DIN 371


DIN 376

DIN374 METRIC FINE THREAD STRAIGHT FLUTE HSS-EP + TICN
METRİK İNCE DİŞ DÜZ KANALLI

M.Fine/*M.İnce*	Code / *Kod*	Type / *Tip*	EURO
M 8x1	37408010EP	DIN374-B	29.00
M 10x1	37410010EP	DIN374-B	30.00
M 12x1	37412010EP	DIN374-B	36.00
M 12x1.5	37412015EP	DIN374-B	34.00
M 14x1.5	37414150EP	DIN374-B	47.00
M 16x1.5	37416150EP	DIN374-B	53.00
M 18x1.5	37418150EP	DIN374-B	62.00
M 20x1.5	37420150EP	DIN374-B	71.00

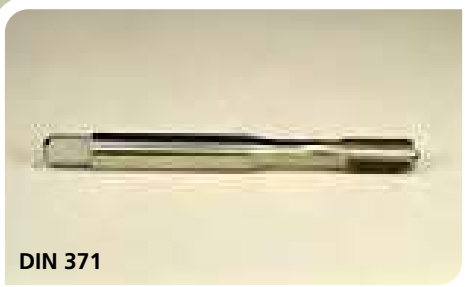

DIN 374

DIN374 METRIC FINE THREAD SPIRAL FLUTE HSS-EP + TICN
METRİK İNCE DİŞ HELİS KANALLI

M.Fine/*M.İnce*	Code / *Kod*	Type / *Tip*	EURO
M 8x1	37408010HEP	DIN374-C	30.00
M 10x1	37410010HEP	DIN374-C	32.00
M 12x1	37412010HEP	DIN374-C	39.00
M 12x1,5	37412015HEP	DIN374-C	37.00
M 14x1,5	37414150HEP	DIN374-C	50.00
M 16x1,5	37416150HEP	DIN374-C	58.00
M 18x1,5	37418150HEP	DIN374-C	65.00
M 20x1,5	37420150HEP	DIN374-C	74.00


DIN 374

MACHINE TAPS METRIC FINE THREAD STAIRGHT FLUTE HSS-E
MAKİNA KILAVUZLARI METRIK İNCE DİŞ DÜZ KANALLI HSS-E



DIN 371



DIN 374

DIN371-DIN374-DIN2181 METRIC FINE / METRİK İNCE

Metric Fine *Metrik ince*	Code *Kod*	Type *Tip*	EURO
M 2x0.25	37102002	DIN371-C	23.00
M 2.5x0.35	37102503	DIN371-C	20.00
M 3x0.35	37103003	DIN371-C	15.00
M 4x0,5	37104005	DIN371-C	14.00
M 4,5x0,5	37104505	DIN371-C	24.00
M 5x0,5	37105005	DIN371-C	15.00
M 6x0,5	37106005	DIN371-C	15.00
M 6x0,75	37106007	DIN371-C	14.50
M 7x0,75	37107007	DIN371-C	17.00
M 8x0.5	37108005	DIN374-C	21.50
M 8x0,75	37408007	DIN374-C	16.00
M 8x1	37108010	DIN371-C	14.50
M 9x1	37409010	DIN374-C	20.50
M 10x0,75	37410007	DIN374-C	21.50
M 10x1	37110010	DIN371-C	14.50
M 10x1,25	37410012	DIN374-C	19.00
M 11x1	37411010	DIN374-C	24.00
M 12x1	37412010	DIN374-C	17.50
M 12x1,25	37412012	DIN374-C	19.50
M 12x1,5	37412015	DIN374-C	17.00
M 13x1	37413010	DIN374-C	26.00
M 14x1	37414010	DIN374-C	22.50
M 14x1,25	37414012	DIN374-C	22.50
M 14x1,5	37414015	DIN374-C	22.00
M 15x1	37415010	DIN374-C	29.50
M 15x1,5	37415015	DIN374-C	29.50
M 16x1	37416010	DIN374-C	26.50
M 16x1,5	37416015	DIN374-C	24.50
M 18x1	37418010	DIN374-C	35.00
M 18x1,5	37418015	DIN374-C	29.00
M 18x2	37418020	DIN374-C	33.50
M 20x1	37420010	DIN374-C	40.00
M 20x1,5	37420015	DIN374-C	36.00
M 20x2	37420020	DIN374-C	50.00
M 22x1	37422010	DIN374-C	57.00
M 22x1,5	37422015	DIN374-C	39.00
M 22x2	37422020	DIN374-C	54.00
M 24x1	37424010	DIN374-C	57.00
M 24x1,5	37424015	DIN374-C	44.00
M 24x2	37424020	DIN374-C	48.00

MACHINE TAPS METRIC FINE THREAD STAIRGHT FLUTE HSS-E
MAKİNA KILAVUZLARI METRIK İNCE DİŞ DÜZ KANALLI HSS-E

DIN371-DIN374-DIN2181 METRIC FINE / METRİK İNCE



DIN 374

Metric Fine *Metrik ince*	Code *Kod*	Type *Tip*	EURO
M 25x1	218125010	DIN2181-C	52.00
M 25x1,5	37425015	DIN374-C	79.00
M 26x1,5	37426015	DIN374-C	55.00
M 27x1,5	37427015	DIN374-C	66.00
M 27x2	37427020	DIN374-C	68.00
M 28x1,5	37428015	DIN374-C	67.00
M 28x2	218128020	DIN2181-C	75.00
M 30x1	218130010	DIN2181-C	68.00
M 30x1,5	37430015	DIN374-C	68.00
M 30x2	37430020	DIN374-C	76.00
M 32x1,5	37432015	DIN374-C	85.00
M 33x1,5	37433015	DIN374-C	97.00
M 33x2	37433020	DIN374-C	98.00
M 34x1,5	37434015	DIN374-C	118.00
M 35x1,5	37435015	DIN374-C	119.00
M 36x1,5	37436015	DIN374-C	105.00
M 36x2	37436020	DIN374-C	118.00
M 36x3	37436030	DIN374-C	132.00
M 38x1,5	37438015	DIN374-C	113.00
M 39x2	37439020	DIN374-C	155.00
M 39x3	37439030	DIN374-C	160.00
M 40x1,5	21840015	DIN374-C	125.00
M 40x2	37440020	DIN374-C	146.00
M 40x3	37440020	DIN374-C	160.00
M 42x1,5	37442015	DIN374-C	140.00
M 42x2	37442020	DIN374-C	164.00
M 42x3	37442030	DIN374-C	191.00
M 45x1,5	37445015	DIN374-C	153.00
M 45x2	37445020	DIN374-C	198.00
M 45x3	37445030	DIN374-C	215.00
M 48x1,5	37448015	DIN374-C	190.00
M 48x2	37448020	DIN374-C	245.00
M 48x3	37448030	DIN374-C	260.00
M 50x1,5	37450015	DIN374-C	200.00
M 50x2	37450020	DIN374-C	260.00
M 50x3	37450030	DIN374-C	290.00
M 52x1,5	37452015	DIN374-C	232.00
M 52x2	37452020	DIN374-C	272.00
M 52x3	37452030	DIN374-C	300.00

MACHINE TAPS METRIC FINE THREAD SPIRAL FLUTE HSS-E
MAKİNA KILAVUZLARI METRIK İNCE DİŞ HELİS KANALLI HSS-E



DIN 371



DIN 374

DIN371-DIN374 METRIC FINE / METRİK İNCE

Metric Fine *Metrik ince*	Code *Kod*	Type *Tip*	EURO
M 3x0,35	37103003H	DIN371-C	18.00
M 4x0,5	37104005H	DIN371-C	17.00
M 5x0,5	37105005H	DIN371-C	17.00
M 6x0,5	37106005H	DIN371-C	17.00
M 6x0,75	37106007H	DIN371-C	17.00
M 8x0,75	37408007H	DIN374-C	19.00
M 8x1	37108010H	DIN371-C	17.00
M 10x1	37110010H	DIN371-C	19.00
M 10x1,25	37410012H	DIN374-C	25.00
M 12x1	37412010H	DIN374-C	22.00
M 12x1,25	37412012H	DIN374-C	29.00
M 12x1,5	37412015H	DIN374-C	20.00
M 14x1	37414010H	DIN374-C	29.00
M 14x1,25	37414012H	DIN374-C	30.00
M 14x1,5	37414015H	DIN374-C	27.00
M 16x1	37416010H	DIN374-C	34.00
M 16x1,5	37416015H	DIN374-C	33.00
M 18x1,5	37418015H	DIN374-C	36.00
M 18x2.0	37418020H	DIN374-C	41.00
M 20x1,5	37420015H	DIN374-C	43.00
M 20x2	37420020H	DIN374-C	60.00
M 22x1,5	37422015H	DIN374-C	50.00
M 22x2	37422020H	DIN374-C	63.00
M 24x1,5	37424015H	DIN374-C	57.00
M 24x2	37424020H	DIN374-C	64.00
M 25x1,5	37425015H	DIN374-C	92.00
M 26x1,5	37426015H	DIN374-C	76.00
M 27x1,5	37427015H	DIN374-C	82.00
M 27x2	37427020H	DIN374-C	91.00
M 28x1,5	37428015H	DIN374-C	89.00
M 30x1,5	37430015H	DIN374-C	89.00
M 30x2	37430020H	DIN374-C	93.00
M 32x1,5	37432015H	DIN374-C	107.00
M 33x1,5	37433015H	DIN374-C	129.00
M 33x2	37433020H	DIN374-C	132.00
M 34x1,5	37434015H	DIN374-C	132.00
M 35x1,5	37435015H	DIN374-C	135.00
M 36x1,5	37436015H	DIN374-C	130.00
M 36x2	37436020H	DIN374-C	170.00
M 36x3	37436030H	DIN374-C	158.00
M 38x1,5	37438015H	DIN374-C	135.00
M 40x1,5	37440015H	DIN374-C	166.00
M 42x1,5	37442015H	DIN374-C	175.00
M 42x2	37442020H	DIN374-C	205.00
M 42x3	37442030H	DIN374-C	215.00
M 45x1,5	37445015H	DIN374-C	200.00
M 48X1,5	37448020H	DIN374-C	225.00
M 48X2	37448020H	DIN374-C	270.00
M 48X3	37448030H	DIN374-C	270.00
M 50X1,5	37450015H	DIN374-C	250.00
M 52X1,5	37452015H	DIN374-C	290.00

MACHINE TAPS METRIC FINE THREAD STRAIGHT FLUTE HSS-E + TIN
MAKİNA KILAVUZLARI METRIK İNCE DİŞ DÜZ KANALLI HSS-E + TIN

DIN371-DIN374 METRIC FINE / METRİK İNCE TIN

Metric Fine *Metrik ince*	Code *Kod*	Type *Tip*	EURO
M 4x0.5	37104005T	DIN371-C	17.00
M 6x0.5	37106005T	DIN371-C	18.00
M 6x0,75	37106007T	DIN371-C	18.50
M 8x0,75	37408007T	DIN374-C	20.50
M 8x1	37108010T	DIN371-C	19.00
M 10x1	37110010T	DIN371-C	19.50
M 10x1,25	37110012T	DIN374-C	24.00
M 12x1	37412010T	DIN374-C	23.50
M 12x1,25	37412012T	DIN374-C	25.50
M 12x1,5	37412015T	DIN374-C	23.00
M 14x1	37414010T	DIN374-C	29.50
M 14x1,25	37414012T	DIN374-C	29.50
M 14x1,5	37414015T	DIN374-C	29.00
M 16x1,5	37416015T	DIN374-C	33.50
M 18x1,5	37418015T	DIN374-C	39.00
M 20x1,5	37420015T	DIN374-C	46.00
M 22x1,5	37422015T	DIN374-C	52.00
M 24x1,5	37424015T	DIN374-C	57.00


DIN 371


DIN 374

MACHINE TAPS METRIC FINE THREAD SPIRAL FLUTE HSS-E + TIN
MAKİNA KILAVUZLARI METRIK İNCE DİŞ HELİS KANALLI HSS-E + TIN

DIN371-DIN374 METRIC FINE / METRİK İNCE TIN

Metric Fine *Metrik ince*	Code *Kod*	Type *Tip*	EURO
M 4x0.5	37104005HT	DIN371-C	20.00
M 6x0.5	37106005HT	DIN371-C	20.00
M 6x0,75	37106007HT	DIN371-C	20.00
M 8x0,75	37408007HT	DIN374-C	23.50
M 8x1	37108010HT	DIN371-C	21.50
M 10x1	37110010HT	DIN371-C	24.00
M 10x1,25	37410012HT	DIN374-C	30.00
M 12x1	37412010HT	DIN374-C	28.00
M 12x1,25	37412012HT	DIN374-C	35.00
M 12x1,5	37412015HT	DIN374-C	26.00
M 14x1	37414010HT	DIN374-C	33.00
M 14x1,25	37414012HT	DIN374-C	37.00
M 14x1,5	37414015HT	DIN374-C	34.00
M 16x1,5	37416015HT	DIN374-C	42.00
M 18x1,5	37418015HT	DIN374-C	46.00
M 20x1,5	37420015HT	DIN374-C	53.00
M 22x1,5	37422015HT	DIN374-C	63.00
M 24x1,5	37424015HT	DIN374-C	70.00


DIN 371


DIN 374

HAND TAPS METRIC COARSE THREAD SETS OF 3 PCS HSS - HSS E
3 LÜ TAKIM EL KILAVUZU METRİK NORMAL DİŞ HSS - HSS E



DIN352 Nr1-2-3
Set of 3 pcs / 3 lü takım

DIN 352 HSS

Metric *Metrik*	Pitch *Hatve*	Code *Kod*	Type *Tip*	EURO
M 3	0.5	35203	DIN352 Nr.1-2-3	15.00
M 4	0.7	35204	DIN352 Nr.1-2-3	15.00
M 5	0.8	35205	DIN352 Nr.1-2-3	16.00
M 6	1	35206	DIN352 Nr.1-2-3	17.00
M 8	1.25	35208	DIN352 Nr.1-2-3	19.00
M 10	1.5	35210	DIN352 Nr.1-2-3	25.00
M 12	1.75	35212	DIN352 Nr.1-2-3	32.00
M 14	2	35214	DIN352 Nr.1-2-3	42.00
M 16	2	35216	DIN352 Nr.1-2-3	52.00
M 18	2.5	35218	DIN352 Nr.1-2-3	84.00
M 20	2.5	35220	DIN352 Nr.1-2-3	84.00
M 22	2.5	35222	DIN352 Nr.1-2-3	100.00
M 24	3	35224	DIN352 Nr.1-2-3	105.00
M 27	3	35227	DIN352 Nr.1-2-3	160.00
M 30	3.5	35230	DIN352 Nr.1-2-3	200.00
M 33	3.5	35233	DIN352 Nr.1-2-3	246.00
M 36	4	35233	DIN352 Nr.1-2-3	292.00
M 39	4	35239	DIN352 Nr.1-2-3	381.00
M 42	4.5	35242	DIN352 Nr.1-2-3	420.00
M 45	4.5	35248	DIN352 Nr.1-2-3	492.00
M 48	5	35248	DIN352 Nr.1-2-3	554.00
M 52	5	35252	DIN352 Nr.1-2-3	638.00



DIN352 Nr1-2-3
Set of 3 pcs / 3 lü takım

DIN 352 HSS-E COBALT

Metric *Metrik*	Pitch *Hatve*	Code *Kod*	Type *Tip*	EURO
M 4	0.7	35204C	DIN352 Nr.1-2-3	25.00
M 5	0.8	35205C	DIN352 Nr.1-2-3	28.00
M 6	1	35206C	DIN352 Nr.1-2-3	29.00
M 8	1.25	35208C	DIN352 Nr.1-2-3	31.00
M 10	1.5	35210C	DIN352 Nr.1-2-3	41.00
M 12	1.75	35212C	DIN352 Nr.1-2-3	52.00
M 14	2	35214C	DIN352 Nr.1-2-3	66.00
M 16	2	35216C	DIN352 Nr.1-2-3	82.00
M 18	2.5	35218C	DIN352 Nr.1-2-3	120.00
M 20	2.5	35220C	DIN352 Nr.1-2-3	125.00

LEFT HAND TAPS METRIC COARSE THREAD HSS-E
SOL DİŞ KILAVUZLAR METRİK NORMAL HSS-E

DIN371 - 376 LEFT HAND M. COARSE / *SOL DİŞ M. NORMAL*

Metric *Metrik*	Pitch *Hatve*	Code *Kod*	Type *Tip*	EURO
M 3	0.5	37103L	DIN371-C	**14.00**
M 4	0.7	37104L	DIN371-C	**14.00**
M 5	0.8	37105L	DIN371-C	**15.00**
M 6	1	37106L	DIN371-C	**15.00**
M 8	1.25	37108L	DIN371-C	**16.00**
M 10	1.5	37110L	DIN371-C	**20.00**
M 12	1.75	37612L	DIN376-C	**25.00**
M 14	2	37614L	DIN376-C	**32.00**
M 16	2	37616L	DIN376-C	**37.00**
M 20	2.5	37620L	DIN376-C	**54.00**
M 24	3	37624L	DIN376-C	**74.00**



DIN 371



DIN 376

LEFT HAND TAPS METRIC FINE THREAD HSS-E
SOL DİŞ KILAVUZLAR METRİK İNCE HSS-E

DIN374 LEFT HAND METRIC FINE / *SOL DİŞ METRİK İNCE*

Metric Fine *Metrik ince*	Code *Kod*	Type *Tip*	EURO
M 6 x 0.75	3740607L	DIN374-C	**23.00**
M 8 x 0.75	3740807L	DIN374-C	**25.00**
M 8 x 1	3740810L	DIN374-C	**22.00**
M 10 x 1	3741010L	DIN374-C	**22.00**
M 12 x 1	3741210L	DIN374-C	**26.00**
M 12 x 1.5	3741215L	DIN374-C	**27.00**
M 14 x 1	3741410L	DIN374-C	**35.00**
M 14 x 1.5	3741415L	DIN374-C	**35.00**
M 16 x 1.5	3741615L	DIN374-C	**38.00**
M 18 x 1.5	3741815L	DIN374-C	**45.00**
M 20 x 1.5	3742015L	DIN374-C	**58.00**
M 24 x 1.5	3742415L	DIN374-C	**70.00**



Other sizes available on request / *Diğer ölçüler için lütfen arayınız*

COLD FORMING (FLUTELESS) TAPS METRIC COARSE THREAD HSS-E + TIN
OVALAMA (KANALSIZ) KILAVUZLARI METRİK NORMAL DİŞ HSS-E + TIN



DIN 371



DIN 376

DIN371-376 COLD FORMING M. COARSE / *OVALAMA M. NORMAL* TIN

Metric *Metrik*	Pitch *Hatve*	Code *Kod*	Type *Tip*	EURO
M 1.2	0.25	243012	DIN371	59.00
M 1.4	0.3	243014	DIN371	58.00
M 1.6	0.35	243016	DIN371	55.00
M 1.8	0.35	243018	DIN371	48.00
M 2	0.4	243020	DIN371	38.00
M 2.5	0.45	243025	DIN371	38.00
M 3	0.5	245030	DIN371	22.00
M 3.5	0.6	245035	DIN371	43.00
M 4	0.7	245040	DIN371	23.00
M 5	0.8	245050	DIN371	24.00
M 6	1.0	245060	DIN371	28.00
M 8	1.25	245080	DIN371	32.00
M 10	1.5	245100	DIN371	41.00
M 12	1.75	345120	DIN376	85.00
M 14	2.0	345140	DIN376	130.00
M 16	2.0	345160	DIN376	137.00
M 18	2.5	345180	DIN376	215.00
M 20	2.5	345200	DIN376	226.00
M 22	2.5	345220	DIN376	226.00
M 24	3	345240	DIN376	226.00

COLD FORMING (FLUTELESS) TAPS METRIC FINE THREAD HSS-E + TIN
OVALAMA (KANALSIZ) KILAVUZLARI METRİK İNCE DİŞ HSS-E + TIN



DIN 374

DIN374 COLD FORMING METRIC FINE / *OVALAMA METRİK İNCE* TIN

Metric Fine *Metrik ince*	Code *Kod*	Type *Tip*	EURO
M 6X0.75	34506007	DIN374-C	90.00
M 8X075	34508007	DIN374-C	100.00
M 8X1	34508010	DIN374-C	77.00
M 10X1	34510010	DIN374-C	78.00
M 10X1.25	34510012	DIN374-C	100.00
M 12X1	34512010	DIN374-C	100.00
M 12X1.25	34512012	DIN374-C	103.00
M 12X1.5	34512015	DIN374-C	103.00
M 14X1.5	34514015	DIN374-C	125.00
M 16X1.5	34516015	DIN374-C	140.00
M 18X1.5	34518015	DIN374-C	172.00
M 20X1.5	34520015	DIN374-C	195.00

INTERRUPTED TEETH METRIC CORSE THREAD TAPS DIN371-376 HSS-E
ATLAMALI DİŞ KILAVUZLAR METRİK NORMAL DİŞ DIN371-376 HSS-E

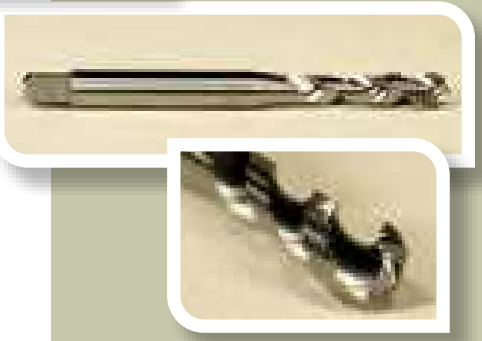
Metric / *Metrik*	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
M 3	0.5	209030	DIN371-B	13.50
M 4	0.7	209040	DIN371-B	13.50
M 5	0.8	209050	DIN371-B	14.50
M 6	1.0	209060	DIN371-B	14.50
M 8	1.25	209080	DIN371-B	16.50
M 10	1.5	209100	DIN371-B	20.50
M 12	1.75	309120	DIN376-B	25.00
M 14	2.0	309140	DIN376-B	34.00
M 16	2.0	309160	DIN376-B	36.00
M 18	2.5	309180	DIN376-B	58.00
M 20	2.5	309200	DIN376-B	58.00
M 22	2.5	309220	DIN376-B	83.00
M 24	3	309240	DIN376-B	75.00



For soft materials, aluminium, brass, cupper etc.
Yumuşak malzemeler için Aluminyum, Pirinç, Bakır vs...

2 SPIRAL FLUTED METRIC CORSE THREAD ALUMİNİUM TAPS DIN371 HSS-E
2 KANALLI HELİS METRİK NORMAL DİŞ ALUMİNYUM KILAVUZU DIN371 HSS-E

Metric / *Metrik*	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
M 2.5	0.45	252025	DIN371-C	13.00
M 3	0.5	252030	DIN371-C	12.00
M 4	0.7	252040	DIN371-C	12.00
M 5	0.8	252050	DIN371-C	12.80
M 6	1.0	252060	DIN371-C	13.00
M 8	1.25	252080	DIN371-C	15.00
M 10	1.5	252100	DIN371-C	17.00



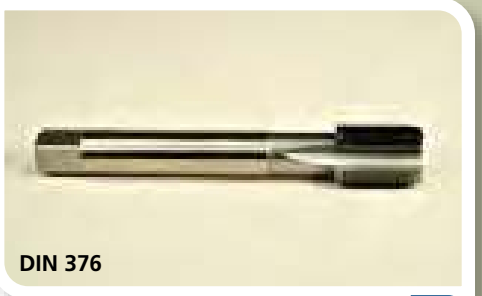
For Aluminium blind hole
Aluminyum kör delik için

EG-M FOR WIRE INSERTS DIN8140/2 METRIC COARSE THREAD TAPS DIN371-376 HSS-E
EG-M HELİ-COİL KILAVUZLAR DIN8140/2 METRİK NORMAL DIN371-376 HSS-E

Metric / *Metrik*	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
EG M 2.5	0.45	EGM025	DIN371-B	15.00
EG M 3	0.5	EGM030	DIN371-B	13.00
EG M 4	0.7	EGM040	DIN371-B	13.00
EG M. 5	0.8	EGM050	DIN371-B	13.50
EG M 6	1.0	EGM060	DIN371-B	13.50
EG M 8	1.25	EGM080	DIN371-B	15.50
EG M 10	1.5	EGM100	DIN376-B	19.50
EG M 12	1.75	EGM120	DIN376-B	23.00
EG M 14	2.0	EGM140	DIN376-B	32.00
EG M 16	2.0	EGM160	DIN376-B	34.00
EG M 18	2.5	EGM180	DIN376-B	54.00
EG M 20	2.5	EGM200	DIN376-B	51.00
EG M 22	2.5	EGM220	DIN376-B	78.00
EG M 24	3	EGM240	DIN376-B	69.00



DIN 371



DIN 376

OVERSIZE TAPS Tol. 6G STRAIGTH FLUTE METRIC COARSE THREAD HSS-E
KAPLAMA PAYLI Tol. 6G KILAVUZLAR DÜZ KANALLI METRİK NORMAL DİŞ HSS-E


DIN 371


DIN 376

DIN371-376 Tol. 6G OVERSIZE M.COARSE / *KAPLAMA PAYLI M.NORMAL*

Metric *Metrik*	Pitch *Hatve*	Code *Kod*	+ Oversize *+ Ölçüsü*	Type *Tip*	EURO
M 3 6G	0.5	2010306G	+ 0.016mm	DIN371-C	8.80
M 4 6G	0.7	2010406G	+ 0.019mm	DIN371-C	9.00
M 5 6G	0.8	2010506G	+ 0.020mm	DIN371-C	9.10
M 6 6G	1.0	2010606G	+ 0.024mm	DIN371-C	9.40
M 8 6G	1.25	2010806G	+ 0.025mm	DIN371-C	10.40
M 10 6G	1.5	2011006G	+ 0.028mm	DIN371-C	12.80
M 12 6G	1.75	3011206G	+ 0.032mm	DIN376-C	16.90
M 16 6G	2.0	3011606G	+ 0.034mm	DIN376-C	25.50

OVERSIZE TAPS Tol. 6G SPIRAL FLUTE METRIC COARSE THREAD HSS-E
KAPLAMA PAYLI Tol. 6G KILAVUZLAR HELİS KANALLI METRİK NORMAL DİŞ HSS-E


DIN 371


DIN 376

DIN371-376 Tol. 6G OVERSIZE M.COARSE / *KAPLAMA PAYLI M.NORMAL*

Metric *Metrik*	Pitch *Hatve*	Code *Kod*	+ Oversize *+ Ölçüsü*	Type *Tip*	EURO
M 3 6G	0.5	2290306G	+ 0.016mm	DIN371-C	10.70
M 4 6G	0.7	2290406G	+ 0.019mm	DIN371-C	10.70
M 5 6G	0.8	2290506G	+ 0.020mm	DIN371-C	10.90
M 6 6G	1.0	2290606G	+ 0.024mm	DIN371-C	11.40
M 8 6G	1.25	2290806G	+ 0.025mm	DIN371-C	14.00
M 10 6G	1.5	2291006G	+ 0.028mm	DIN371-C	16.00
M 12 6G	1.75	3291206G	+ 0.032mm	DIN376-C	21.00
M 14 6G	2.0	3291406G	+ 0.034mm	DIN376-C	28.00
M 16 6G	2.0	3291606G	+ 0.034mm	DIN376-C	29.00

OVERSIZE +0.1mm TAPS SPIRAL FLUTE METRIC COARSE THREAD HSS-E
KAPLAMA PAYLI +0.1mm KILAVUZLAR HELİS KANALLI METRİK NORMAL DİŞ HSS-E

Effective diameter (pitch diameter) of these taps are oversized according to standard taps with indicated "+ oversize". Please choose the tap "+ oversize" the most suitable to your coating thickness. Please note this "+ oversize" is "+" on diameter.

Metrik Normal diş kılavuzlara göre çapları (bölüm dairesi çapları) tabloda "+ ölçüsü" olarak belirtilen miktarda büyük olan kılavuzlardır kaplama kalınlığınıza en uygun olanı tercih ediniz.Dikkat, belirtilen "+ ölçüsü" çaptaki artı ölçüsüdür.

DIN371-376 +0.1mm OVERSIZE M.COARSE / *KAPLAMA PAYLI M.NORMAL*

Metric *Metrik*	Pitch *Hatve*	Code *Kod*	+ Oversize *+ Ölçüsü*	Type *Tip*	EURO
M 3 +0.1	0.5	233030K1	+ 0.10mm	DIN371-C	13.50
M 4 +0.1	0.7	233040K1	+ 0.10mm	DIN371-C	13.50
M 5 +0.1	0.8	233050K1	+ 0.10mm	DIN371-C	13.50
M 6 +0.1	1.0	233060K1	+ 0.10mm	DIN371-C	14.50
M 8 +0.1	1.25	233080K1	+ 0.10mm	DIN371-C	16.50
M 10 +0.1	1.5	233100K1	+ 0.10mm	DIN371-C	20.00
M 12 +0.1	1.75	333120K1	+ 0.10mm	DIN376-C	22.00
M 16 +0.1	2.0	333160K1	+ 0.10mm	DIN376-C	31.00
M 20 +0.1	2.5	333200K1	+ 0.10mm	DIN376-C	46.00
M 24 +0.1	3.0	333240K1	+ 0.10mm	DIN376-C	58.00

BRASS CUTTING TAPS MS METRIC COARSE THREAD HSS-E
PİRİNÇ MALZEME KILAVUZLARI MS METRİK NORMAL DİŞ HSS-E

MS BRASS PİRİNÇ

DIN371-376 MS BRASS M. COARSE / *MS PİRİNÇ M. NORMAL*

Metric *Metrik*	Pitch *Hatve*	Code *Kod*	Type *Tip*	EURO
M 2	0.4	283020MS	DIN371-E	**12.00**
M 2.5	0.45	283025MS	DIN371-E	**12.00**
M 3	0.5	283030MS	DIN371-E	**9.50**
M 4	0.7	283040MS	DIN371-E	**9.80**
M 5	0.8	283050MS	DIN371-E	**9.80**
M 6	1	283060MS	DIN371-E	**10.00**
M 8	1.25	283080MS	DIN371-E	**11.00**
M 10	1.5	283100MS	DIN371-E	**14.00**
M 12	1.75	383120MS	DIN376-E	**17.00**
M 14	2	383140MS	DIN376-E	**21.00**
M 16	2	383160MS	DIN376-E	**25.00**



DIN 371



DIN 376

DIN371 MS BRASS M. COARSE / *MS PİRİNÇ M. NORMAL*
Tol. 6G OVERSIZE / *KAPLAMA PAYLI*

Metric *Metrik*	Pitch *Hatve*	Code *Kod*	+ Oversize *+ Ölçüsü*	Type *Tip*	EURO
M 2 6G	0.4	285020MS6G	+ 0.014mm	DIN371-E	**12.50**
M 2.5 6G	0.45	285025MS6G	+ 0.015mm	DIN371-E	**12.50**
M 3 6G	0.5	285030MS6G	+ 0.016mm	DIN371-E	**10.00**
M 4 6G	0.7	285040MS6G	+ 0.019mm	DIN371-E	**10.50**
M 5 6G	0.8	285050MS6G	+ 0.020mm	DIN371-E	**10.50**
M 6 6G	1.0	285060MS6G	+ 0.024mm	DIN371-E	**11.00**
M 8 6G	1.25	285080MS6G	+ 0.025mm	DIN371-E	**12.00**
M 10 6G	1.5	285100MS6G	+ 0.028mm	DIN371-E	**15.00**

Effective diameter (pitch diameter) of these taps are oversized according to standard taps with indicated "+ oversize". Please choose the tap "+ oversize" the most suitable to your coating thickness. Please note this "+ oversize" is "+" on diameter.

Metrik Normal diş kılavuzlara göre çapları (bölüm dairesi çapları) tabloda "+ ölçüsü" olarak belirtilen miktarda büyük olan kılavuzlardır kaplama kalınlığınıza en uygun olanı tercih ediniz.Dikkat, belirtilen "+ ölçüsü" çaptaki artı ölçüsüdür.

BRASS CUTTING TAPS MS METRIC FINE THREAD HSS-E
PİRİNÇ MALZEME KILAVUZLARI MS METRİK İNCE DİŞ HSS-E

MS BRASS PİRİNÇ



MS BRASS METRIC FINE / *MS PİRİNÇ METRİK İNCE*
Works' standard automat taps / *Özel norm otomat klavuzu*

Metric Fine *Metrik ince*	Code *Kod*	Dimensions *Boyutlar* **oalxthreadxØshank** *tamboyxdişboyuxØsap*	Type *Tip*	EURO
M 8x1	6000810MS	70x17xØ6mm	E	14.00
M 10x1	6001010MS	70x22xØ8mm	E	15.50
M 11x1	6001110MS	70x18xØ9mm	E	25.00
M 10x1.25	6001012MS	70x22xØ8mm	E	16.50
M 12x1	6001210MS	70x18xØ9mm	E	17.50
M 12x1.25	6001212MS	70x18xØ9mm	E	19.50
M 12x1.5	6001215MS	70x22xØ9mm	E	17.00
M 13x1	6001310MS	70x20xØ10mm	E	29.00
M 14x1	6001410MS	70x20xØ10mm	E	23.00
M 14x1.25	6001412MS	70x20xØ10mm	E	22.00
M 14x1.5	6001415MS	70x20xØ10mm	E	21.00
M 16x1.5	6001615MS	70x20xØ12mm	E	22.50
M 18x1.5	6001815MS	70x22xØ12mm	E	32.00
M 20x1.5	6002015MS	70x22xØ15mm	E	32.00
M 24x1.5	6002415MS	70x22xØ18mm	E	42.00



Tol. 6G OVERSIZE MS BRASS M. FINE / *KAPLAMA PAYLI MS PİRİNÇ M. İNCE*
Works' standard automat taps / *Özel norm otomat klavuzu*

Metric Fine *Metrik İnce*	Code *Kod*	Dimensions *Boyutlar* **oalxthreadxØshank** *tamboyxdişboyuxØsap*	+ Oversize *+ Ölçüsü*	Type *Tip*	EURO
M 8x1 6G	6010810MS6G	70x17xØ6mm	+ 0.024mm	E	14.50
M 10x1 6G	6011010MS6G	70x22xØ8mm	+ 0.024mm	E	16.00
M 11x1 6G	6011110MS6G	70x18xØ9mm	+ 0.024mm	E	26.00
M 10x1.25 6G	6011012MS6G	70x22xØ8mm	+ 0.025mm	E	17.00
M 12x1 6G	6011210MS6G	70x18xØ9mm	+ 0.025mm	E	18.00
M 12x1.25 6G	6011212MS6G	70x18xØ9mm	+ 0.028mm	E	20.00
M 12x1.5 6G	6011215MS6G	70x22xØ9mm	+ 0.030mm	E	17.50
M 13x1 6G	6011310MS6G	70x20xØ10mm	+ 0.025mm	E	30.00
M 14x1 6G	6011410MS6G	70x20xØ10mm	+ 0.025mm	E	24.00
M 14x1.25 6G	6011412MS6G	70x20xØ10mm	+ 0.028mm	E	23.00
M 14x1.5 6G	6011415MS6G	70x20xØ10mm	+ 0.030mm	E	22.00
M 16x1.5 6G	6011615MS6G	70x20xØ12mm	+ 0.030mm	E	23.50
M 18x1.5 6G	6011815MS6G	70x22xØ12mm	+ 0.030mm	E	33.00
M 20x1.5 6G	6012015MS6G	70x22xØ15mm	+ 0.030mm	E	33.00
M 24x1.5 6G	6012415MS6G	70x22xØ15mm	+ 0.032mm	E	43.00

Effective diameter (pitch diameter) of these taps are oversized according to standard taps with indicated "+ oversize". Please choose the tap "+ oversize" the most suitable to your coating thickness. Please note this "+ oversize" is "+" on diameter.

Metrik Normal diş kılavuzlara göre çapları (bölüm dairesi çapları) tabloda "+ ölçüsü" olarak belirtilen miktarda büyük olan kılavuzlardır kaplama kalınlığınıza en uygun olanı tercih ediniz.Dikkat, belirtilen "+ ölçüsü" çaptaki artı ölçüsüdür.

BSP-G WITHWORTH PIPE THREAD TAPS
BSP-G BORU DİŞİ KILAVUZLAR

BSP-G DIN5156 STRAIGHT FLUTE LONG SHANK HSS-E
BSP-G DIN5156 DÜZ KANALLI UZUN SAPLI HSS-E



BSP / *G*	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
G 1/8"	28	5156018	DIN5156-C	16.00
G 1/4"	19	5156014	DIN5156-C	21.00
G 3/8"	19	5156038	DIN5156-C	27.00
G 1/2"	14	5156012	DIN5156-C	36.00
G 5/8"	14	5156058	DIN5156-C	45.00
G 3/4"	14	5156034	DIN5156-C	58.00
G 7/8"	14	5156078	DIN5156-C	78.00
G 1"	11	5156100	DIN5156-C	82.00
G 1 1/8"	11	5156118	DIN5156-C	120.00
G 1 1/4"	11	5156114	DIN5156-C	136.00
G 1 1/2"	11	5156112	DIN5156-C	186.00
G 1 3/4"	11	5156134	DIN5156-C	250.00
G 2"	11	5156200	DIN5156-C	280.00
G 2 1/2	11	5156212	DIN5156-C	450.00

BSP-G DIN5156 SPIRAL FLUTE LONG SHANK HSS-E
BSP-G DIN5156 HELİS KANALLI UZUN SAPLI HSS-E



BSP / *G*	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
G 1/8"	28	5156018H	DIN5156-C	19.00
G 1/4"	19	5156014H	DIN5156-C	25.00
G 3/8"	19	5156038H	DIN5156-C	31.00
G 1/2"	14	5156012H	DIN5156-C	41.00
G 5/8"	14	5156058H	DIN5156-C	51.00
G 3/4"	14	5156034H	DIN5156-C	66.00
G 7/8"	14	5156078H	DIN5156-C	89.00
G 1"	11	5156100H	DIN5156-C	100.00
G 1 1/4"	11	5156114H	DIN5156-C	160.00
G 1 1/2"	11	5156112H	DIN5156-C	230.00
G 2"	11	5156200H	DIN5156-C	325.00

BSP-G DIN5156 STRAIGHT FLUTE LONG SHANK HSS-E TIN
BSP-G DIN5156 DÜZ KANALLI UZUN SAPLI HSS-E TIN



BSP / *G*	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
G 1/8"	28	5156018T	DIN5156-C	22.00
G 1/4"	19	5156014T	DIN5156-C	29.00
G 3/8"	19	5156038T	DIN5156-C	37.00
G 1/2"	14	5156012T	DIN5156-C	49.00
G 3/4"	14	5156034T	DIN5156-C	77.00

BSP-G DIN5156 SPIRAL FLUTE LONG SHANK HSS-E TIN
BSP-G DIN5156 HELİS KANALLI UZUN SAPLI HSS-E TIN



BSP / *G*	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
G 1/8"	28	5156018HT	DIN5156-C	25.00
G 1/4"	19	5156014HT	DIN5156-C	33.00
G 3/8"	19	5156038HT	DIN5156-C	41.00
G 1/2"	14	5156012HT	DIN5156-C	54.00
G 3/4"	14	5156034HT	DIN5156-C	87.00

BSP-G WITHWORTH PIPE THREAD MS BRASS CUTTING TAPS HSS-E
BSP-G BORU DİŞİ MS PİRİNÇ MALZEME KILAVUZLARI HSS-E

MS BRASS PİRİNÇ



BSP-G DIN5157 MS BRASS STRAIGHT FLUTE
BSP-G DIN5157 MS PİRİNÇ DÜZ KANALLI

BSP *G*	Pitch *Hatve*	Code *Kod*	Type *Tip*	EURO
G 1/8"	28	5157018MS	DIN5157-E	16.00
G 1/4"	19	5157014MS	DIN5157-E	20.00
G 3/8"	19	5157038MS	DIN5157-E	24.00
G 1/2"	14	5157012MS	DIN5157-E	35.00
G 5/8"	14	5157058MS	DIN5157-E	44.00
G 3/4"	14	5157034MS	DIN5157-E	53.00
G 7/8"	14	5157078MS	DIN5157-E	78.00
G 1"	11	5157100MS	DIN5157-E	85.00
G 1 1/4"	11	5157114MS	DIN5157-E	142.00
G 1 1/2"	11	5157112MS	DIN5157-E	180.00



BSP-G OVERSIZE +0.05mm TAPS MS BRASS STRAIGHT FLUTE DIN5157
BSP-G KAPLAMA PAYLI +0.05mm KILAVUZLAR MS PİRİNÇ DÜZ KANAL DIN5157

BSP *G*	Pitch *Hatve*	+ Oversize *+ Ölçüsü*	Code *Kod*	Type *Tip*	EURO
G 1/8" +0.05	28	+ 0.05mm	5157018MSK	DIN5157-E	17.00
G 1/4" +0.05	19	+ 0.05mm	5157014MSK	DIN5157-E	22.00
G 3/8" +0.05	19	+ 0.05mm	5157038MSK	DIN5157-E	26.00
G 1/2" +0.05	14	+ 0.05mm	5157012MSK	DIN5157-E	37.00
G 3/4" +0.05	14	+ 0.05mm	5157034MSK	DIN5157-E	56.00
G 1" +0.05	11	+ 0.05mm	5157100MSK	DIN5157-E	90.00
G 1 1/4" +0.05	11	+ 0.05mm	5157114MSK	DIN5157-E	148.00
G 1 1/2" +0.05	11	+ 0.05mm	5157112MSK	DIN5157-E	188.00

BSP-G DIN5157 STRAIGHT FLUTE SHORT TYPE HSS
BSP-G DIN5157 DÜZ KANALLI KISA TİP HSS



BSP / *G*	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
G 1/8"	28	5157018	DIN5157-C	12.00
G 1/4"	19	5157014	DIN5157-C	15.70
G 3/8"	19	5157038	DIN5157-C	19.00
G 1/2"	14	5157012	DIN5157-C	28.00
G 5/8"	14	5157058	DIN5157-C	34.00
G 3/4"	14	5157034	DIN5157-C	41.00
G 7/8"	14	5157078	DIN5157-C	56.00
G 1"	11	5157100	DIN5157-C	68.00
G 1 1/8"	11	5157118	DIN5157-C	105.00
G 1 1/4"	11	5157114	DIN5157-C	110.00
G 1 1/2"	11	5157112	DIN5157-C	140.00
G 1 3/4"	11	5157134	DIN5157-C	190.00
G 2"	11	5157200	DIN5157-C	208.00
G 2 1/4"	11	5157214	DIN5157-C	285.00
G 2 1/2"	11	5157212	DIN5157-C	345.00
G 3"	11	5157300	DIN5157-C	500.00
G 4"	11	5157400	DIN5157-C	730.00

BSP-G MS BRASS CUTTING EXTRA THREAD LENGHT TAPS
BSP-G MS PİRİNÇ İÇİN EKSTRA DİŞ BOYLU KILAVUZLAR

MS BRASS PİRİNÇ

BSP-G EXTRA LENGHT AND LIFE
BSP-G EXTRA UZUN BOY VE ÖMÜR



BSP *G*	Pitch *Hatve*	Code *Kod*	Dimensions *Boyutlar* **oalxthreadxØshank** *tamboyxdişboyuxØsap*	Type *Tip*	EURO
G 1/4"	19	FTG014MS	100x40xØ11mm	E	**30.00**
G 3/8"	19	FTG038MS	100x40xØ12mm	E	**35.00**
G 1/2"	14	FTG012MS	100x45xØ16mm	E	**38.00**
G 3/4"	14	FTG034MS	100x50xØ20mm	E	**56.00**
G 1"	11	FTG100MS	120x60xØ25mm	E	**110.00**

Specially designed for fittings industry with extra long teeth lenght which enables extra long tool life
Fittings sanayi için özel tasarım kılavuz ekstra uzun diş boyu ile extra uzun takım ömrü.

BSP-G OVERSIZE +0.05mm EXTRA LENGHT AND LIFE
BSP-G KAPLAMA PAYLI +0.05mm EXTRA UZUN BOY VE ÖMÜR



BSP *G*	Pitch *Hatve*	Code *Kod*	+ Oversize *+ Ölçüsü*	Dimensions *Boyutlar* **oalxthreadxØshank** *tamboyxdişboyuxØsap*	Type *Tip*	EURO
G 1/4" +0.05	19	FTG014MSK	+ 0.05mm	100x40xØ11mm	E	**32.00**
G 3/8" +0.05	19	FTG038MSK	+ 0.05mm	100x40xØ12mm	E	**37.00**
G 1/2" +0.05	14	FTG012MSK	+ 0.05mm	100x45xØ16mm	E	**40.00**
G 3/4" +0.05	14	FTG034MSK	+ 0.05mm	100x50xØ20mm	E	**58.00**
G 1" +0.05	11	FTG100MSK	+ 0.05mm	120x60xØ25mm	E	**113.00**

Specially designed for fittings industry with extra long teeth lenght which enables extra long tool life
Fittings sanayi için özel tasarım kılavuz ekstra uzun diş boyu ile extra uzun takım ömrü.

BSP-G COLD FORMING (FLUTELESS) TAPS PIPE THREAD HSS-E + TIN
BSP-G OVALAMA (KANALSIZ) KILAVUZLAR HSS-E + TIN

BSP-G DIN5156 COLD FORMING / *OVALAMA*



BSP *G*	Pitch *Hatve*	Code *Kod*	Dimensions *Boyutlar* **oalxthreadxØshank** *tamboyxdişboyuxØsap*	EURO
G 1/8"	28	KG018CF345	90x18xØ7mm	**95.00**
G 1/4"	19	KG014CF345	100x20xØ11mm	**118.00**
G 3/8"	19	KG038CF345	100x22xØ12mm	**165.00**
G 1/2"	14	KG012CF345	125x25xØ16mm	**214.00**
G 3/4"	14	KG034CF345	140x28xØ20mm	**240.00**

TAPER PIPE THREADS TAPS HSS-E
KONİK BORU DİŞİ KILAVUZLAR HSS-E



NPT AMERICAN TAPER PIPE THREAD 1:16 TAPER
NPT AMERİKAN KONİK BORU DİŞ 1:16 KONİK

NPT	Pitch *Hatve*	Code *Kod*	Dimensions *Boyutlar* oalxthreadxØshank *tamboyxdişboyuxØsap*	Type *Tip*	EURO
NPT 1/16"	27	KNPT011	63x12xØ6mm	C	22.00
NPT 1/8"	27	KNPT018	63x12xØ7mm	C	23.00
NPT 1/4"	18	KNPT014	63x18xØ11mm	C	29.00
NPT 3/8"	18	KNPT038	70x18xØ12mm	C	33.00
NPT 1/2"	14	KNPT012	80x24xØ16mm	C	46.00
NPT 3/4"	14	KNPT034	100x24xØ20mm	C	61.00
NPT 1"	11.5	KNPT100	110x30xØ25mm	C	87.00
NPT 1 1/4"	11.5	KNPT114	125x30xØ32mm	C	148.00
NPT 1 1/2"	11.5	KNPT112	140x30xØ36mm	C	174.00
NPT 2"	11.5	KNPT200	160x30xØ45mm	C	265.00



NPTF AMERICAN TAPER PIPE THREAD 1:16 TAPER
NPTF AMERİKAN KONİK BORU DİŞ 1:16 KONİK

NPTF	Pitch *Hatve*	Code *Kod*	Dimensions *Boyutlar* oalxthreadxØshank *tamboyxdişboyuxØsap*	Type *Tip*	EURO
NPTF 1/16"	27	KNPTF011	63x12xØ6mm	C	25.00
NPTF 1/8"	27	KNPTF018	63x12xØ7mm	C	26.00
NPTF 1/4"	18	KNPTF014	63x18xØ11mm	C	32.00
NPTF 3/8"	18	KNPTF038	70x18xØ12mm	C	40.00
NPTF 1/2"	14	KNPTF012	80x24xØ16mm	C	53.00
NPTF 3/4"	14	KNPTF034	100x24xØ20mm	C	70.00
NPTF 1"	11.5	KNPTF100	110x30xØ25mm	C	102.00
NPTF 1 1/4"	11.5	KNPTF114	125x30xØ32mm	C	170.00
NPTF 1 1/2"	11.5	KNPTF112	140x30xØ36mm	C	220.00
NPTF 2"	11.5	KNPTF200	160x30xØ45mm	C	320.00

Rc (BSPT) WHITHWORTH TAPER PIPE THREAD TAPS 1:16 TAPER HSS-E
Rc (BSPT) WHITHWORTH KONİK BORU DİŞİ KILAVUZLAR 1:16 KONİK HSS-E



Application: Internal cylindrical (Rp) thread - External taper thread (R - ISO7/1 DIN EN10226-1+2)
Uygulama:
İç vida (Rp) düz - Dış vida konik (R - ISO7/1 DIN EN10226-1+2)

Rc (BSPT) DIN-EN 10226-2 (ISO7)

Rc (BSPT)	Pitch *Hatve*	Code *Kod*	Dimensions *Boyutlar* oalxthreadxØshank *tamboyxdişboyuxØsap*	Type *Tip*	EURO
Rc (BSPT) 1/8"	28	KRC018	90x14xØ7mm	C	42.00
Rc (BSPT) 1/4"	19	KRC014	100x20xØ11mm	C	45.00
Rc (BSPT) 3/8"	19	KRC038	100x21xØ12mm	C	55.00
Rc (BSPT) 1/2"	14	KRC012	125x25xØ16mm	C	72.00
Rc (BSPT) 3/4"	14	KRC034	140x29xØ20mm	C	110.00
Rc (BSPT) 1"	11	KRC100	160x35xØ25mm	C	150.00

Rp (DIN2999) WHITHWORTH CYLIDRICAL PIPE THREAD TAPS DIN EN10226-1 (ISO7) HSS-E
Rp (DIN2999) WHITHWORTH DÜZ BORU DİŞİ KILAVUZLAR DIN EN10226-1 (ISO 7) HSS-E

DIN-EN 10226-1 (ISO7)

Rp (DIN2999)	Pitch *Hatve*	Code *Kod*	Dimensions *Boyutlar* oalxthreadxØshank *tamboyxdişboyuxØsap*	Type *Tip*	EURO
Rp 1/8"	28	KRP018	90x17xØ7mm	C	19.00
Rp 1/4"	19	KRP014	100x20xØ11mm	C	25.00
Rp 3/8"	19	KRP038	100x22xØ12mm	C	32.00
Rp 1/2"	14	KRP012	125x25xØ16mm	C	42.00
Rp 3/4"	14	KRP034	140x28xØ20mm	C	67.00
Rp 1"	11	KRP100	160x30xØ25mm	C	97.00
Rp 1 1/4"	11	KRP114	170x30xØ32mm	C	164.00
Rp 1 1/2"	11	KRP112	190x32xØ36mm	C	226.00
Rp 2"	11	KRP200	220x40xØ45mm	C	342.00



Application: Internal cylindrical (Rp) thread - External taper thread (R - ISO7/1 DIN EN10226-1+2)
Uygulama:
İç vida (Rp) düz - Dış vida konik (R - ISO7/1 DIN EN10226-1+2)

Rp (DIN2999) WHITHWORTH CYLIDRICAL PIPE THREAD TAPS MS BRASS CUTTING HSS-E
Rp (DIN2999) WHITHWORTH DÜZ BORU DİŞİ KILAVUZLAR MS PİRİNÇ İÇİN HSS-E MS BRASS PİRİNÇ

DIN-EN 10226-1 (ISO7)

Rp (DIN2999)	Pitch *Hatve*	Code *Kod*	Dimensions *Boyutlar* oalxthreadxØshank *tamboyxdişboyuxØsap*	Type *Tip*	EURO
Rp 1/8"	28	KRP018MS	70x20xØ8mm	E	18.00
Rp 1/4"	19	KRP014MS	70x20xØ10mm	E	24.00
Rp 3/8"	19	KRP038MS	70x20xØ12mm	E	30.00
Rp 1/2"	14	KRP012MS	70x22xØ16mm	E	40.00
Rp 3/4"	14	KRP034MS	70x24xØ18mm	E	62.00
Rp 1"	11	KRP100MS	70x25xØ18mm	E	90.00
Rp 1 1/4"	11	KRP114MS	70x25xØ18mm	E	150.00



Application: Internal cylindrical (Rp) thread - External taper thread (R - ISO7/1 DIN EN10226-1+2)
Uygulama:
İç vida (Rp) düz - Dış vida konik (R - ISO7/1 DIN EN10226-1+2)

DIN477 VALVE THREAD TAPS HSS-E
DIN477 VALF DİŞİ KILAVUZLAR HSS-E

DIN477 VALVE THREAD / *DIN477 VALF DİŞİ*

W DIN477	Pitch *Hatve*	Code *Kod*	Dimensions *Boyutlar* oalxthreadxØshank *tamboyxdişboyuxØsap*	EURO
W 19.8 * Taper/ Konik	14	KW477198T	70x22xØ15mm	200.00
W 28,8 * Taper/ Konik	14	KW477288T	70x22xØ18mm	230.00
W 21.8 ** MS BRASS PİRİNÇ	14	KW477218MS	70x22xØ15mm	170.00
W 21.8 LH/SOL** MS BRASS PİRİNÇ	14	KW477218LMS	70x22xØ15mm	185.00
W 24.32 ** MS BRASS PİRİNÇ	14	KW477243MS	70x22xØ18mm	185.00



*** W19.8x14 and W 28.8x14 threads are taper threads the rest are parallele**
**** W21.8x14 and W24.32x14 taps are for brass use**
** W19.8x14 ve W 28.8x14 dişler konik vidalardır diğerleri düzdür*
*** W21.8x14 ve W24.32x14 kılavuzlar pirinç MS malzeme içindir.*

UNC MACHINE TAPS
UNC MAKİNA KILAVUZLARI



Fig. 1



Fig. 2

Nr2 - 3/8 Reinforced shank
7/16 - 2" reduced shank
Nr2 - 3/8 takviyeli saplı
7/16 - 2" İnce saplı

STRAIGHT FLUTE DIN2184-1 HSS-E / *DÜZ KANALLI DIN2184-1 HSS-E*

UNC	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
UNC Nr. 2	56	KUNCN02	DIN2184-1-C / Fig.1	14.70
UNC Nr. 3	48	KUNCN03	DIN2184-1-C / Fig.1	14.00
UNC Nr. 4	40	KUNCN04	DIN2184-1-C / Fig.1	12.50
UNC Nr. 5	40	KUNCN05	DIN2184-1-C / Fig.1	12.00
UNC Nr. 6	32	KUNCN06	DIN2184-1-C / Fig.1	10.50
UNC Nr. 8	32	KUNCN08	DIN2184-1-C / Fig.1	10.50
UNC Nr.10	24	KUNCN10	DIN2184-1-C / Fig.1	12.00
UNC Nr.12	24	KUNCN12	DIN2184-1-C / Fig.1	13.00
UNC 1/4"	20	KUNC014	DIN2184-1-C / Fig.1	13.00
UNC 5/16"	18	KUNC051	DIN2184-1-C / Fig.1	14.00
UNC 3/8"	16	KUNC038	DIN2184-1-C / Fig.1	16.00
UNC 7/16"	14	KUNC071	DIN2184-1-C / Fig.2	20.00
UNC 1/2"	13	KUNC012	DIN2184-1-C / Fig.2	21.00
UNC 9/16"	12	KUNC091	DIN2184-1-C / Fig.2	29.00
UNC 5/8"	11	KUNC058	DIN2184-1-C / Fig.2	27.00
UNC 3/4"	10	KUNC034	DIN2184-1-C / Fig.2	36.00
UNC 7/8"	9	KUNC078	DIN2184-1-C / Fig.2	45.00
UNC 1"	8	KUNC100	DIN2184-1-C / Fig.2	60.00
UNC 1 1/8"	7	KUNC118	DIN2184-1-C / Fig.2	88.00
UNC 1 1/4"	7	KUNC114	DIN2184-1-C / Fig.2	97.00
UNC 1 3/8"	6	KUNC138	DIN2184-1-C / Fig.2	135.00
UNC 1 1/2"	6	KUNC112	DIN2184-1-C / Fig.2	140.00
UNC 1 3/4"	5	KUNC134	DIN2184-1-C / Fig.2	210.00
UNC 2"	4.5	KUNC200	DIN2184-1-C / Fig.2	270.00



Fig. 1



Fig. 2

Nr2 - 3/8 Reinforced shank
7/16 - 1" reduced shank
Nr2 - 3/8 takviyeli saplı
7/16 - 1" İnce saplı

SPIRAL FLUTE DIN2184-1 HSS-E / *HELİS KANALLI DIN2184-1 HSS-E*

UNC	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
UNC Nr. 2	56	KUNCN02H	DIN2184-1-C / Fig.1	16.00
UNC Nr. 3	48	KUNCN03H	DIN2184-1-C / Fig.1	15.00
UNC Nr. 4	40	KUNCN04H	DIN2184-1-C / Fig.1	13.50
UNC Nr. 5	40	KUNCN05H	DIN2184-1-C / Fig.1	13.50
UNC Nr. 6	32	KUNCN06H	DIN2184-1-C / Fig.1	12.00
UNC Nr. 8	32	KUNCN08H	DIN2184-1-C / Fig.1	12.00
UNC Nr.10	24	KUNCN10H	DIN2184-1-C / Fig.1	13.00
UNC Nr. 12	24	KUNCN12H	DIN2184-1-C / Fig.1	15.00
UNC 1/4"	20	KUNC014H	DIN2184-1-C / Fig.1	15.00
UNC 5/16"	18	KUNC051H	DIN2184-1-C / Fig.1	15.50
UNC 3/8"	16	KUNC038H	DIN2184-1-C / Fig.1	17.50
UNC 7/16"	14	KUNC071H	DIN2184-1-C / Fig.2	24.00
UNC 1/2"	13	KUNC012H	DIN2184-1-C / Fig.2	24.00
UNC 9/16"	12	KUNC091H	DIN2184-1-C / Fig.2	34.00
UNC 5/8"	11	KUNC058H	DIN2184-1-C / Fig.2	32.00
UNC 3/4"	10	KUNC034H	DIN2184-1-C / Fig.2	37.00
UNC 7/8"	9	KUNC078H	DIN2184-1-C / Fig.2	50.00
UNC 1"	8	KUNC100H	DIN2184-1-C / Fig.2	67.00
UNC 1 1/8"	7	KUNC118H	DIN2184-1-C / Fig.2	98.00
UNC 1 1/4"	7	KUNC114H	DIN2184-1-C / Fig.2	108.00
UNC 1 3/8"	6	KUNC138H	DIN2184-1-C / Fig.2	148.00
UNC 1 1/2"	6	KUNC112H	DIN2184-1-C / Fig.2	154.00
UNC 1 3/4"	5	KUNC134H	DIN2184-1-C / Fig.2	235.00
UNC 2"	4.5	KUNC200H	DIN2184-1-C / Fig.2	290.00

TIN Coated availlable on request / *TIN kaplı olarak ta mevcuttur.*

UNF MACHINE TAPS
UNF MAKİNA KILAVUZLARI

STRAIGHT FLUTE DIN2184-1 HSS-E / *DÜZ KANALLI DIN2184-1 HSS-E*

UNF	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
UNF Nr. 1"	72	KUNFN01	DIN2184-1-C / Fig.1	20.00
UNF Nr. 2"	64	KUNFN02	DIN2184-1-C / Fig.1	17.00
UNF Nr. 3"	56	KUNFN03	DIN2184-1-C / Fig.1	16.00
UNF Nr. 4"	48	KUNFN04	DIN2184-1-C / Fig.1	15.00
UNF Nr. 5"	44	KUNFN05	DIN2184-1-C / Fig.1	14.00
UNF Nr. 6"	40	KUNFN06	DIN2184-1-C / Fig.1	13.00
UNF Nr. 8"	36	KUNFN08	DIN2184-1-C / Fig.1	13.00
UNF Nr. 10"	32	KUNFN10	DIN2184-1-C / Fig.1	14.00
UNF Nr. 12"	28	KUNFN12	DIN2184-1-C / Fig.1	16.00
UNF 1/4"	28	KUNF014	DIN2184-1-C / Fig.1	15.00
UNF 5/16"	24	KUNF051	DIN2184-1-C / Fig.1	16.00
UNF 3/8"	24	KUNF038	DIN2184-1-C / Fig.1	17.00
UNF 7/16"	20	KUNF071	DIN2184-1-C / Fig.2	21.00
UNF 1/2"	20	KUNF012	DIN2184-1-C / Fig.2	21.00
UNF 9/16"	18	KUNF091	DIN2184-1-C / Fig.2	33.00
UNF 5/8"	18	KUNF058	DIN2184-1-C / Fig.2	28.00
UNF 3/4"	16	KUNF034	DIN2184-1-C / Fig.2	37.00
UNF 7/8"	14	KUNF078	DIN2184-1-C / Fig.2	48.00
UNF 1"	12	KUNF100	DIN2184-1-C / Fig.2	65.00
UNF 1 1/8"	12	KUNF118	DIN2184-1-C / Fig.2	78.00
UNF 1 1/4"	12	KUNF114	DIN2184-1-C / Fig.2	93.00
UNF 1 3/8"	12	KUNF138	DIN2184-1-C / Fig.2	130.00
UNF 1 1/2"	12	KUNF112	DIN2184-1-C / Fig.2	142.00



Fig. 1



Fig. 2

Nr2 - 3/8 Reinforced shank
7/16 - 2" reduced shank
Nr2 - 3/8 takviyeli saplı
7/16 - 1 1/2" İnce saplı

SPIRAL FLUTE DIN2184-1 HSS-E / *HELİS KANALLI DIN2184-1 HSS-E*

UNF	Pitch / *Hatve*	Code / *Kod*	Type / *Tip*	EURO
UNF Nr. 2	64	KUNFN02H	DIN2184-1-C / Fig.1	18.00
UNF Nr. 3	56	KUNFN03H	DIN2184-1-C / Fig.1	17.00
UNF Nr. 4	48	KUNFN04H	DIN2184-1-C / Fig.1	16.00
UNF Nr. 5	44	KUNFN05H	DIN2184-1-C / Fig.1	14.50
UNF Nr. 6	40	KUNFN06H	DIN2184-1-C / Fig.1	14.50
UNF Nr. 8	36	KUNFN08H	DIN2184-1-C / Fig.1	14.50
UNF Nr. 10	32	KUNFN10H	DIN2184-1-C / Fig.1	15.00
UNF Nr. 12	28	KUNFN12H	DIN2184-1-C / Fig.1	17.00
UNF 1/4"	28	KUNF014H	DIN2184-1-C / Fig.1	17.00
UNF 5/16"	24	KUNF051H	DIN2184-1-C / Fig.1	17.50
UNF 3/8"	24	KUNF038H	DIN2184-1-C / Fig.1	19.00
UNF 7/16"	20	KUNF071H	DIN2184-1-C / Fig.2	24.00
UNF 1/2"	20	KUNF012H	DIN2184-1-C / Fig.2	25.00
UNF 9/16"	18	KUNF091H	DIN2184-1-C / Fig.2	40.00
UNF 5/8"	18	KUNF058H	DIN2184-1-C / Fig.2	32.00
UNF 3/4"	16	KUNF034H	DIN2184-1-C / Fig.2	43.00
UNF 7/8"	14	KUNF078H	DIN2184-1-C / Fig.2	52.00
UNF 1"	12	KUNF100H	DIN2184-1-C / Fig.2	71.00
UNF 1 1/8"	12	KUNF118H	DIN2184-1-C / Fig.2	100.00
UNF 1 1/4"	12	KUNF114H	DIN2184-1-C / Fig.2	116.00
UNF 1 3/8"	12	KUNF138H	DIN2184-1-C / Fig.2	143.00
UNF 1 1/2"	12	KUNF112H	DIN2184-1-C / Fig.2	155.00

TIN Coated availlable on request. / *TIN kaplı olarak ta mevcuttur.*



Fig. 1



Fig. 2

Nr2 - 3/8 Reinforced shank
7/16 - 2" reduced shank
Nr2 - 3/8 takviyeli saplı
7/16 - 1 1/2" İnce saplı

BSW MACHINE TAPS HSS-E
BSW MAKİNA KILAVUZLARI HSS-E



Fig. 1



Fig. 2

1/8 - 3/8 Reinforced shank
7/16 - 1" reduced shank
1/8 - 3/8 takviyeli saplı
7/16 - 2" İnce saplı

STRAIGHT FLUTE DIN2184-1 / *DÜZ KANALLI DIN2184-1*

BSW	Pitch *Hatve*	Code *Kod*	Type *Tip*	EURO
BSW 1/8"	40	KBSW018	DIN2184-1-C / Fig.1	**11.50**
BSW 3/16"	24	KBSW031	DIN2184-1-C / Fig.1	**12.00**
BSW 1/4"	20	KBSW014	DIN2184-1-C / Fig.1	**12.50**
BSW 5/16"	18	KBSW051	DIN2184-1-C / Fig.1	**13.50**
BSW 3/8"	16	KBSW038	DIN2184-1-C / Fig.1	**16.00**
BSW 7/16"	14	KBSW071	DIN2184-1-C / Fig.2	**21.50**
BSW 1/2"	12	KBSW012	DIN2184-1-C / Fig.2	**21.50**
BSW 5/8"	11	KBSW058	DIN2184-1-C / Fig.2	**27.50**
BSW 3/4"	10	KBSW034	DIN2184-1-C / Fig.2	**38.00**
BSW 7/8"	9	KBSW078	DIN2184-1-C / Fig.2	**48.00**
BSW 1"	8	KBSW100	DIN2184-1-C / Fig.2	**70.00**
BSW 1 1/8"	7	KBSW118	DIN2184-1-C / Fig.2	**97.00**
BSW 1 1/4"	7	KBSW114	DIN2184-1-C / Fig.2	**113.00**
BSW 1 3/8"	6	KBSW138	DIN2184-1-C / Fig.2	**147.00**
BSW 1 1/2"	6	KBSW112	DIN2184-1-C / Fig.2	**175.00**
BSW 1 3/4"	5	KBSW134	DIN2184-1-C / Fig.2	**220.00**
BSW 2"	4.5	KBSW200	DIN2184-1-C / Fig.2	**285.00**

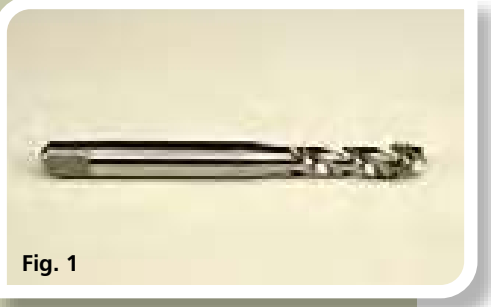


Fig. 1



Fig. 2

1/8 - 3/8 Reinforced shank
7/16 - 1" reduced shank
1/8 - 3/8 takviyeli saplı
7/16 - 1 1/2" İnce saplı

SPIRAL FLUTE DIN2184-1 / *HELİS KANALLI DIN2184-1*

BSW	Pitch *Hatve*	Code *Kod*	Type *Tip*	EURO
BSW 1/8"	40	KBSW018H	DIN2184-1-C / Fig.1	**14.00**
BSW 3/16"	24	KBSW031H	DIN2184-1-C / Fig.1	**14.00**
BSW 1/4"	20	KBSW014H	DIN2184-1-C / Fig.1	**15.00**
BSW 5/16"	18	KBSW051H	DIN2184-1-C / Fig.1	**17.00**
BSW 3/8"	16	KBSW038H	DIN2184-1-C / Fig.1	**19.00**
BSW 7/16"	14	KBSW071H	DIN2184-1-C / Fig.2	**25.00**
BSW 1/2"	12	KBSW012H	DIN2184-1-C / Fig.2	**25.00**
BSW 5/8"	11	KBSW058H	DIN2184-1-C / Fig.2	**33.00**
BSW 3/4"	10	KBSW034H	DIN2184-1-C / Fig.2	**44.00**
BSW 7/8"	9	KBSW078H	DIN2184-1-C / Fig.2	**57.00**
BSW 1"	8	KBSW100H	DIN2184-1-C / Fig.2	**79.00**
BSW 1 1/2"	6	KBSW112H	DIN2184-1-C / Fig.2	**193.00**

TIN Coated availlable on request. / *TIN kaplı olarak ta mevcuttur.*

PG THREAD TAPS DIN40430 HSS-E
PG DİŞ KILAVUZLAR DIN40430 HSS-E

PG DIN40430



PG	Pitch *Hatve*	Code *Kod*	Dimensions Boyutlar oalxthreadxØshank tamboyxdişboyuxØsap	Type *Tip*	EURO
PG 7	20	KPG07	70x20xØ9mm	C	28.00
PG 9	18	KPG09	70x20xØ12mm	C	34.00
PG 11	18	KPG11	80x22xØ14mm	C	41.00
PG 13,5	18	KPG13	80x22xØ16mm	C	42.00
PG 16	18	KPG16	80x22xØ18mm	C	52.00
PG 21	16	KPG21	90x22xØ22mm	C	73.00
PG 29	16	KPG29	100x25xØ28mm	C	120.00
PG 36	16	KPG36	140x32xØ36mm	C	173.00
PG 42	16	KPG42	140x32xØ40mm	C	230.00
PG 48	16	KPG48	160x32xØ45mm	C	285.00

TR TRAPEZOIDAL THREAD TAPS DIN103 Tol. 7H HSS-E
TR TRAPEZ DİŞ KILAVUZLAR DIN103 Tol. 7H HSS-E

MS BRASS PİRİNÇ

TR DIN103 Tol. 7H



TR	Pitch *Hatve*	Code *Kod*	Dimensions Boyutlar oalxthreadxØshank tamboyxdişboyuxØsap	Type *Tip*	EURO
TR 8	1.5	KTR081MS	70x22xØ8mm	E	72.00
TR 8	2	KTR082MS	70x22xØ8mm	E	72.00
TR 9	1.5	KTR091MS	70x22xØ8mm	E	72.00
TR 9	2	KTR092MS	70x22xØ8mm	E	72.00
TR 10	1.5	KTR101MS	70x22xØ8mm	E	72.00
TR 10	2	KTR102MS	70x22xØ8mm	E	72.00
TR 10	3	KTR103MS	70x22xØ8mm	E	76.00
TR 11	2	KTR112MS	70x22xØ9mm	E	72.00
TR 11	3	KTR113MS	70x22xØ9mm	E	78.00
TR 12	2	KTR122MS	70x22xØ9mm	E	65.00
TR 12	3	KTR123MS	70x22xØ9mm	E	72.00
TR 14	2	KTR142MS	70x25xØ10mm	E	78.00
TR 14	3	KTR143MS	70x25xØ10mm	E	81.00
TR 14	4	KTR144MS	70x25xØ10mm	E	83.00
TR 16	2	KTR162MS	70x25xØ12mm	E	83.00
TR 16	4	KTR164MS	70x25xØ12mm	E	85.00
TR 18	2	KTR182MS	70x28xØ12mm	E	105.00
TR 18	4	KTR184MS	70x28xØ12mm	E	107.00
TR 20	2	KTR202MS	70x28xØ16mm	E	110.00
TR 20	4	KTR204MS	70x28xØ16mm	E	117.00
TR 22	3	KTR223MS	70x30xØ18mm	E	120.00
TR 24	3	KTR243MS	70x30xØ18mm	E	130.00

TR LEFT HAND TRAPEZOIDAL THREAD TAPS DIN103 Tol. 7H HSS-E
TR SOL TRAPEZ DİŞ KILAVUZLAR DIN103 Tol. 7H HSS-E

MS BRASS PİRİNÇ



TR LEFT HAND DIN103 Tol. 7H / *TR SOL DİŞ DIN103 Tol. 7H*

TR LH TR SOL	Pitch *Hatve*	Code *Kod*	Dimensions Boyutlar oalxthreadxØshank tamboyxdişboyuxØsap	EURO
TR 8 LH	2	KTR082LMS	70x22xØ8mm	86.00
TR 9 LH	2	KTR092LMS	70x22xØ8mm	86.00
TR 10 LH	1.5	KTR101LMS	70x22xØ8mm	86.00
TR 10 LH	2	KTR102LMS	70x22xØ8mm	86.00
TR 10 LH	3	KTR103LMS	70x22xØ8mm	96.00
TR 12 LH	2	KTR122LMS	70x22xØ9mm	85.00
TR 12 LH	3	KTR123LMS	70x22xØ9mm	107.00
TR 16 LH	2	KTR162LMS	70x25xØ12mm	125.00
TR 16 LH	4	KTR164LMS	70x25xØ12mm	125.00

MS For Brass use / *MS Pirinç (sarı) için*

Rd ROUND THREADS TAPS DIN405 HSS-E
Rd YUVARLAK VIDA KILAVUZLAR DIN405 HSS-E

MS BRASS PİRİNÇ



Rd ROUND THREADS DIN405 / *Rd YUVARLAK VIDA DIN405*

Rd	Pitch *Hatve*	Code *Kod*	Dimensions Boyutlar oalxthreadxØshank tamboyxdişboyuxØsap	EURO
Rd 8	1/10	KRD08MS	70x22xØ8mm	44.00
Rd 9	1/10	KRD09MS	70x22xØ8mm	46.00
Rd 10	1/10	KRD10MS	70x22xØ8mm	44.00
Rd 11	1/10	KRD11MS	80x25xØ8mm	48.00
Rd 12	1/10	KRD12MS	90x25xØ9mm	46.00
Rd 14	1/8	KRD14MS	100x32xØ11mm	51.00
Rd 16	1/8	KRD16MS	100x32xØ12mm	55.00
Rd 18	1/8	KRD18MS	110x32xØ14mm	64.00
Rd 20	1/8	KRD20MS	110x32xØ16mm	69.00
Rd 22	1/8	KRD22MS	110x32xØ18mm	84.00
Rd 24	1/8	KRD24MS	125x32xØ18mm	96.00
Rd 26	1/8	KRD26MS	125x36xØ18mm	110.00
Rd 28	1/8	KRD28MS	125x36xØ20mm	120.00
Rd 30	1/8	KRD30MS	125x36xØ22mm	130.00

TAPPING DRILL SIZES
KILAVUZ MATKAP ÇAPLARI

M. COARSE *M. NORMAL*	Drill Ø *Matkap Ø*
M 2	1.60
M 2,2	1.75
M 2,3	1.90
M 2,5	2.05
M 2,6	2.10
M 3	2.50
M 3,5	2.90
M 4	3.30
M 4,5	3.70
M 5	4.20
M 6	5.00
M 7	6.00
M 8	6.80
M 9	7.80
M 10	8.50
M 11	9.50

M. COARSE *M. NORMAL*	Drill Ø *Matkap Ø*
M 12	10.20
M 14	12.00
M 16	14.00
M 18	15.50
M 20	17.50
M 22	19.50
M 24	21.00
M 27	24.00
M 30	26.50
M 33	29.50
M 36	32.00
M 39	35.00
M 42	37.50
M 45	40.50
M 48	43.00
M 52	47.00

M. FINE *M. İNCE*	Drill Ø *Matkap Ø*
M 4x0,5	3.50
M 4,5x0,5	4.00
M 5x0,5	4.50
M 6x0,5	5.50
M 6x0,75	5.20
M 7x0,75	6.20
M 8x0.5	7.50
M 8x0,75	7.20
M 8x1	7.00
M 9x1	8.00
M 10x0,75	9.20
M 10x1	9.00
M 10x1,25	8.80
M 11x1	10.00
M 12x1	11.00
M 12x1,25	10.80
M 12x1,5	10.50
M 13x1	12.00
M 14x1	13.00
M 14x1,25	12.80
M 14x1,5	12.50
M 15x1	14.00
M 15x1,5	13.50
M 16x1	15.00
M 16x1,5	14.50
M 18x1	17.00
M 18x1,5	16.50
M 18x2	16.00

M. FINE *M. İNCE*	Drill Ø *Matkap Ø*
M 20x1	19.00
M 20x1,5	18.50
M 20x2	18.00
M 22x1	21.00
M 22x1,5	20.50
M 22x2	20.00
M 24x1	23.00
M 24x1,5	22.50
M 24x2	22.00
M 25x1	24.00
M 25x1,5	23.50
M 26x1	25.00
M 26x1,5	24.50
M 27x1,5	25.50
M 27x2	25.00
M 28x1,5	26.50
M 28x2	26.00
M 30x1	29.00
M 30x1,5	28.50
M 30x2	28.00
M 32x1,5	30.50
M 33x1,5	31.50
M 33x2	31.00
M 34x1,5	32.50
M 36x1,5	34.50
M 36x2	34.00
M 38x1,5	36.50
M 40x1,5	38.50



TAPPING DRILL SIZES
KILAVUZ MATKAP ÇAPLARI



G	Drill Ø *Matkap Ø*
G 1/8x28	8.80
G 1/4x19	11.80
G 3/8x19	15.25
G 1/2x14	19.00
G 5/8x14	21.00
G 3/4x14	24.50
G 7/8x14	28.25
G 1 x11	30.75
G 1 1/8x11	35.50
G 1 1/4x11	39.50
G 1 1/2x11	15.25
G 1 3/4x11	51.10
G 2 x11	57.00
G 2 1/2x11	73.00

UNC	Drill Ø *Matkap Ø*
No. 2x56	1.85
No. 3x48	2.10
No. 4x40	2.35
No. 5x40	2.65
No. 6x32	2.85
No. 8x32	3.50
No. 10x24	3.90
No. 12x24	4.50
1/4x20	5.10
5/16x18	6.60
3/8x16	8.00
7/16x14	9.40
1/2x13	10.80
9/16x12	12.20
5/8x11	13.50
3/4x10	16.50
7/8x9	19.50
1x8	22.25
1 1/8x7	25.00
1 1/4x7	28.00
1 3/8x6	30.75
1 1/2x6	34.00
1 3/4x5	39.50
2 x4,5	45.00

NPT	Drill Ø *Matkap Ø*
1/16x27	6.20
1/8x27	8.50
1/4x18	11.10
3/8x18	14.55
1/2x14	18.00
3/4x14	23.25
1x11.5	29.20

NPTF	Drill Ø *Matkap Ø*
1/16x27	6.20
1/8x27	8.50
1/4x18	11.00
3/8x18	14.50
1/2x14	17.80
3/4x14	23.10
1x11.5	29.10

BSPT - Rc	Drill Ø *Matkap Ø*
1/8x28	8.20
1/4x19	11.00
3/8x19	14.50
1/2x14	18.00
3/4x14	23.40
1x11	29.50

BSW	Drill Ø *Matkap Ø*
1/8x40	2.00
5/32x32	3.20
3/16x24	3.60
1/4x20	5.10
5/16x18	6.50
3/8x16	7.90
7/16x14	9.30
1/2x12	10.50
9/16x12	12.00
5/8x11	13.50
3/4x10	16.50
7/8x9	19.25
1x8	22.00

TAPPING DRILL SIZES
KILAVUZ MATKAP ÇAPLARI

UNF	Drill Ø *Matkap Ø*
No. 2x64	1.85
No. 3x56	2.15
No. 4x48	2.40
No. 5x44	2.70
No. 6x40	2.95
No. 8x36	3.50
No. 10x32	4.10
No. 12x28	4.60
1/4x28	5.50
5/16x24	6.90
3/8x24	8.50
7/16x20	9.90
1/2x20	11.50
9/16x18	12.90
5/8x18	14.50
3/4x16	17.50
7/8x14	20.40
1x12	23.25
1 1/8x12	26.50
1 1/4x12	29.50
1 3/8x12	32.75
1 1/2x12	36.00

W DIN477	Drill Ø *Matkap Ø*
W 21.8x1/14	19.75
W 24.32x1.14	22.25
W 19.8x1/14 taper/konik	14.70
W 28.8x1/14 taper/konik	22.70

Rc	Drill Ø *Matkap Ø*
Rc 1/8	8.20
Rc 1/4	11.00
Rc 3/8	14.50
Rc 1/2	18.00
Rc 3/4	23.40
Rc 1	29.50
Rc 1-1/4	38.00
Rc 1-1/2	43.90
Rc 2	55.50

Rd	Drill Ø *Matkap Ø*
Rd 8	6.00
Rd 9	7.00
Rd 10	8.00
Rd 11	9.00
Rd 12	10.00
Rd 14	11.50
Rd 16	13.50
Rd 18	15.50
Rd 20	17.50

PG	Drill Ø *Matkap Ø*
PG 7	11.35
PG 9	13.95
PG 11	17.35
PG 13,5	19.15
PG 16	21.25
PG 21	26.90
PG 29	35.60
PG 36	45.60
PG 42	52.60

Rp	Drill Ø *Matkap Ø*
Rp 1/8	8.60
Rp 1/4	11.50
Rp 3/8	15.00
Rp 1/2	18.50
Rp 3/4	24.00
Rp 1	30.25
Rp 1-1/4	39.00
Rp 1-1/2	45.00
Rp 2	56.50



TAPPING DRILL SIZES
KILAVUZ MATKAP ÇAPLARI



TR	Drill Ø *Matkap Ø*
TR 8x1,5	6.60
TR 8x2	6.20
TR 9x1,5	7.60
TR 9x2	7.20
TR 10x1,5	8.60
TR 10x2	8.20
TR 10x3	7.50
TR 11x2	9.20
TR 11x3	8.25
TR 12x2	10.20
TR 12x3	9.25
TR 14x2	12.20
TR 14x3	11.25
TR 14x4	10.50
TR 16x2	14.20
TR 16x4	12.25
TR 18x2	16.20
TR 18x4	14.25
TR 20x2	18.20
TR 20x4	16.25

Cold forming taps drill diameters
Ovalama Kılavuzları için matkap çapları

M. COARSE *M. NORMAL*	Drill Ø *Matkap Ø*
M 3	2.75
M 4	3.65
M 5	4.60
M 6	5.50
M 8	7.40
M 10	9.30
M 12	11.20

CUTTING SPEEDS FOR TAPS
KILAVUZ KESME HIZLARI

WORKPIECE MATERIAL *İŞLENEN MALZEME*	HSS-E TAPS *KLAVUZLAR* m/min	HSS-E + TIN TAPS *KILAVUZLAR* m/min	MS BRASS CUTTING TAPS *MS PİRİNÇ KILAVUZLARI* m/min
STEELS UP TO 150 HB *150 HB YE KADAR ÇELİKLER*	6-7	8-12	
150-250 HB STEELS *150-250 HB ÇELİKLER*	5-6	7-9	
250-320 HB STEELS *250-320 HB ÇELİKLER*	3-4	5-6	
STAINLESS STEELS *PASLANMAZ ÇELİKLER*	2-3	3-5	
CAST IRON *DÖKÜMLER*	6-10	10-16	
BRASS *SARI PİRİNÇ*	10-15	15-20	15-25
ALUMINIUM *ALUMİNYUM*	8-12		10-20

gürhan



CIRCULAR DIES
PAFTALAR

METRIC COARSE THREAD DIES DIN 13 DIN EN 22568 HSS
METRİK NORMAL DİŞ PAFTALAR DIN 13 DIN EN 22568 HSS



Metric *Metrik*	Pitch *Hatve*	CODE *KOD*	EURO
M 1	0.25	P010	**40.00**
M 1.1	0.25	P011	**51.00**
M 1.2	0.25	P012	**37.00**
M 1.4	0.3	P014	**34.00**
M 1.6	0.35	P016	**28.50**
M 1.7	0.35	P017	**34.00**
M 1.8	0.35	P018	**31.00**
M 2	0.4	P020	**21.00**
M 2.2	0.45	P022	**35.00**
M 2.3	0.4	P023	**27.00**
M 2.5	0.45	P025	**19.50**
M 2.6	0.45	P026	**24.00**
M 3	0.5	P030	**17.50**
M 3.5	0.6	P035	**21.00**
M 4	0.7	P040	**17.50**
M 4.5	0.75	P045	**33.00**
M 5	0.8	P050	**17.50**
M 6	1	P060	**17.50**
M 7	1	P070	**22.00**
M 8	1.25	P080	**19.50**
M 9	1.25	P090	**25.00**
M 10	1.5	P100	**23.50**
M 11	1.5	P110	**33.00**
M 12	1.75	P120	**31.00**
M 14	2	P140	**32.00**
M 16	2	P160	**40.50**
M 18	2.5	P180	**43.00**
M 20	2.5	P200	**43.00**
M 22	2.5	P220	**62.00**
M 24	3	P240	**62.00**
M 27	3	P270	**93.00**
M 30	3	P300	**93.00**
M 33	3.5	P330	**104.00**
M 36	4	P360	**100.00**
M 39	4	P390	**164.00**
M 42	4.5	P420	**164.00**
M 45	4.5	P450	**259.00**
M 48	5	P480	**247.00**
M 52	5	P520	**260.00**

METRIC FINE THREAD DIES DIN 13 DIN EN 22568 HSS
METRİK İNCE DİŞ PAFTALAR DIN 13 DIN EN 22568 HSS

M.Fine *M.ince*	Pitch *Hatve*	CODE *KOD*	EURO
M 2	0.25	P02002	53.00
M 2.5	0.35	P02503	43.00
M 3	0.35	P03003	30.50
M 3.5	0.35	P03503	40.00
M 4	0.35	P04003	34.00
M 5	0.35	P05003	53.00
M 4	0.5	P04005	24.00
M 4.5	0.5	P04505	35.00
M 5	0.5	P05005	24.00
M 5	0.75	P05007	47.00
M 6	0.5	P06005	24.00
M 6	0.75	P06007	24.00
M 7	0.5	P07005	42.00
M 7	0.75	P07007	26.50
M 8	0.5	P08005	35.00
M 8	0.75	P08007	25.00
M 8	1	P08010	25.00
M 9	0.5	P09005	48.50
M 9	0.75	P09007	36.00
M 9	1	P09010	31.00
M 10	0.5	P10005	44.00
M 10	0.75	P10007	33.00
M 10	1	P10010	30.00
M 10	1.25	P10012	32.00
M 11	0.5	P11005	73.00
M 11	0.75	P11007	46.00
M 11	1	P11010	33.00
M 11	1.25	P11012	47.00
M 12	0.5	P12005	57.00
M 12	0.75	P12007	46.00
M 12	1	P12010	39.00
M 12	1.25	P12012	41.00
M 12	1.5	P12015	36.00
M 13	0.75	P13007	71.00
M 13	1	P13010	42.00
M 14	0.5	P14005	76.00
M 14	0.75	P14007	44.00
M 14	1	P14010	39.00
M 14	1.25	P14012	41.00
M 14	1.5	P14015	36.00
M 15	0.75	P15007	71.00

M.Fine *M.ince*	Pitch *Hatve*	CODE *KOD*	EURO
M 15	1	P15010	41.00
M 15	1.5	P15015	47.00
M 15	2	P15020	125.00
M 16	0.5	P16005	95.00
M 16	0.75	P16007	83.00
M 16	1	P16010	54.00
M 16	1.25	P16012	64.00
M 16	1.5	P16015	49.00
M 17	1	P17010	62.00
M 18	0.75	P18007	93.00
M 18	1	P18010	54.00
M 18	1.25	P18012	74.00
M 18	1.5	P18015	49.00
M 18	2	P18020	61.00
M 19	0.75	P19007	130.00
M 19	1	P19010	69.00
M 20	0.5	P20005	137.00
M 20	0.75	P20007	122.00
M 20	1	P20010	54.00
M 20	1.25	P20012	140.00
M 20	1.5	P20015	49.00
M 20	2	P20020	56.00
M 21	0.75	P21007	173.00
M 21	1	P21010	75.00
M 21	1.25	P21012	215.00
M 21	1.5	P21015	92.00
M 22	1	P22010	72.00
M 22	1.25	P22012	185.00
M 22	1.5	P22015	64.00
M 22	2	P22020	77.00
M 23	1	P23010	120.00
M 23	1.5	P23010	235.00
M 24	1	P24010	72.00
M 24	1.5	P24015	64.00
M 24	2	P24020	70.00
M 25	1	P25010	90.00
M 25	1.5	P25015	75.00
M 25	2	P25020	111.00
M 26	1	P26010	90.00
M 26	1.5	P26015	75.00
M 26	2	P26020	122.00



METRIC FINE THREAD DIES DIN 13 DIN EN 22568 HSS
METRİK İNCE DİŞ PAFTALAR DIN 13 DIN EN 22568 HSS



M.Fine *M.ince*	Pitch *Hatve*	CODE *KOD*	EURO
M 27	1	P27010	115.00
M 27	1.5	P27015	94.00
M 27	2	P27020	104.00
M 28	1	P28010	111.00
M 28	1.5	P28015	94.00
M 28	2	P28020	136.00
M 30	1	P30010	108.00
M 30	1.5	P30015	94.00
M 30	2	P30020	104.00
M 30	3	P30030	176.00
M 32	1	P32010	131.00
M 32	1.5	P32015	96.00
M 32	2	P32020	136.00
M 33	1.5	P33015	99.00
M 33	2	P33020	104.00
M 33	3	P33030	208.00
M 34	1	P34010	160.00
M 34	1.5	P34015	125.00
M 35	1.5	P35015	98.00
M 35	2	P35020	151.00
M 36	1	P36010	156.00
M 36	1.5	P36015	98.00
M 36	2	P36020	104.00
M 36	3	P36030	131.00
M 37	1.5	P37015	330.00
M 38	1.5	P38015	149.00
M 38	2	P38020	181.00
M 39	1.5	P39015	174.00
M 39	2	P39020	166.00
M 39	3	P39030	179.00
M 40	1.5	P40015	149.00
M 40	2	P40020	166.00
M 42	1.5	P42015	149.00

M.Fine *M.ince*	Pitch *Hatve*	CODE *KOD*	EURO
M 42	2	P42020	166.00
M 42	3	P42030	179.00
M 45	1.5	P45015	200.00
M 45	2	P45020	220.00
M 45	3	P45030	240.00
M 48	1.5	P48015	200.00
M 48	2	P48020	215.00
M 48	3	P48030	240.00
M 50	1.5	P50015	200.00
M 50	2	P50020	227.00
M 52	1.5	P52015	200.00
M 52	2	P52020	218.00
M 52	3	P52030	288.00
M 55	1.5	P55015	271.00
M 55	2	P55020	271.00
M 56	1.5	P56015	309.00
M 56	2	P56020	271.00
M 58	1.5	P58015	288.00
M 60	1.5	P60015	269.00
M 60	2	P60020	262.00
M 62	1.5	P62015	341.00
M 64	1.5	P64015	370.00
M 64	2	P64020	301.00
M 65	1.5	P65015	288.00
M 65	2	P65020	283.00
M 70	1.5	P70015	356.00
M 70	2	P70020	346.00
M 72	2	P72020	359.00
M 75	1.5	P75015	384.00
M 75	2	P75020	359.00
M 80	1.5	P80015	479.00
M 80	2	P80020	418.00
M 85	2	P85020	485.00

HSS-E COBALT METRIC COARSE THREAD DIES DIN 13 DIN EN 22568
HSS-E COBALT METRİK NORMAL DİŞ PAFTALAR DIN 13 DIN EN 22568

HSS-E COBALT METRIC COARSE THREAD / *METRİK NORMAL DİŞ*

Metric *Metrik*	Pitch *Hatve*	CODE *KOD*	EURO
M 2	0.4	P020C	45.00
M 2.3	0.4	P023C	54.00
M 2.5	0.45	P025C	48.00
M 2.6	0.45	P026C	42.00
M 3	0.5	P030C	27.00
M 3.5	0.6	P035C	33.00
M 4	0.7	P040C	26.00
M 5	0.8	P050C	23.00
M 6	1.0	P060C	23.00
M 8	1.25	P080C	29.00

Metric *Metrik*	Pitch *Hatve*	CODE *KOD*	EURO
M 10	1.5	P100C	34.00
M 12	1.75	P120C	44.00
M 14	2.0	P140C	49.00
M 16	2.0	P160C	58.00
M 18	2.5	P180C	64.00
M 20	2.5	P200C	59.00
M 22	2.5	P220C	98.00
M 24	3.0	P240C	89.00
M 27	3.0	P270C	177.00
M 30	3,5	P300C	177.00



HSS-E COBALT METRIC FINE THREAD DIES DIN 13 DIN EN 22568
HSS-E COBALT METRİK İNCE DİŞ PAFTALAR DIN 13 DIN EN 22568

HSS-E COBALT METRIC FINE THREAD / *METRİK İNCE DİŞ*

M.Fine *M.ince*	Pitch *Hatve*	CODE *KOD*	EURO
M 4	0.5	P04005C	44.00
M 5	0.5	P05005C	35.00
M 6	0.5	P06005C	34.00
M 6	0.75	P06007C	31.00
M 8	0.5	P08005C	64.00
M 8	0.75	P08007C	37.00
M 8	1.0	P08010C	32.00
M 10	0.75	P10007C	45.00
M 10	1.0	P10010C	38.00
M 10	1.25	P10012C	65.00
M 12	1.0	P12010C	49.00
M 12	1.25	P12012C	74.00
M 12	1.5	P12015C	47.00
M 14	1.0	P14010C	50.00

M.Fine *M.ince*	Pitch *Hatve*	CODE *KOD*	EURO
M 14	1.5	P14015C	47.00
M 16	1.0	P16010C	68.00
M 16	1.5	P16015C	65.00
M 18	1.0	P18010C	88.00
M 18	1.5	P18015C	65.00
M 20	1.0	P20010C	80.00
M 20	1.5	P20015C	65.00
M 22	1.5	P22015C	91.00
M 24	1.5	P24015C	91.00
M 24	2.0	P24020C	130.00
M 26	1.5	P26015C	130.00
M 30	1.5	P30015C	139.00
M 30	2.0	P30020C	173.00



MS BRASS CUTTING DIES METRIC COARSE DIN 13 DIN EN 22568 HSS
MS PİRİNÇ PAFTALARI METRİK NORMAL DIN 13 DIN EN 22568 HSS

MS BRASS PİRİNÇ



MS BRASS CUTTING METRIC COARSE / *MS PİRİNÇ METRİK NORMAL*

Metric *Metrik*	Pitch *Hatve*	CODE *KOD*	EURO
M 1.6	0.35	P016MS	53.00
M 2	0.4	P020MS	48.00
M 2.5	0.45	P025MS	51.00
M 3	0.5	P030MS	32.00
M 3.5	0.6	P035MS	46.00
M 4	0.7	P040MS	29.00
M 5	0.8	P050MS	29.00
M 6	1	P060MS	26.00
M 7	1	P070MS	50.00
M 8	1.25	P080MS	29.00
M 10	1.5	P100MS	36.00
M 12	1.75	P120MS	55.00

MS BRASS CUTTING DIES METRIC FINE DIN 13 DIN EN 22568 HSS
MS PİRİNÇ PAFTALARI METRİK İNCE DIN 13 DIN EN 22568 HSS

MS BRASS PİRİNÇ



MS BRASS CUTTING METRIC FINE / *MS PİRİNÇ METRİK İNCE*

M.Fine *M.ince*	Pitch *Hatve*	CODE *KOD*	EURO
M 4	0.5	P04005MS	42.00
M 4.5	0.5	P04505MS	150.00
M 5	0.5	P05005MS	47.00
M 6	0.5	P06005MS	40.00
M 6	0.75	P06007MS	37.00
M 7	0.75	P07007MS	55.00
M 8	0.75	P08007MS	46.00
M 8	1	P08010MS	32.00
M 10	0.75	P10007MS	65.00
M 10	1	P10010MS	38.00
M 10	1.25	P10012MS	80.00
M 11	1	P11010MS	150.00
M 12	1	P12010MS	49.00
M 12	1.25	P12012MS	150.00
M 12	1.5	P12015MS	52.00
M 13	1	P13010MS	58.00
M 14	1	P14010MS	54.00
M 14	1.25	P14012MS	180.00
M 14	1.5	P14015MS	58.00

M.Fine *M.ince*	Pitch *Hatve*	CODE *KOD*	EURO
M 15	1	P15010MS	58.00
M 16	1	P16010MS	73.00
M 16	1.5	P16015MS	70.00
M 18	1	P18010MS	81.00
M 18	1.5	P18015MS	69.00
M 20	1	P20010MS	74.00
M 20	1.5	P20015MS	78.00
M 21	1	P21010MS	130.00
M 22	1	P22010MS	117.00
M 22	1.5	P22015MS	85.00
M 24	1	P24010MS	170.00
M 24	1.5	P24015MS	99.00
M 25	1	P25010MS	151.00
M 26	1	P26010MS	134.00
M 26	1.5	P26015MS	200.00
M 28	1	P28010MS	270.00
M 28	1.5	P28015MS	230.00
M 30	1.5	P30015MS	230.00

UNDERSIZED Tol. 6e METRIC COARSE THREAD DIES HSS
KAPLAMA PAYLI Tol. 6e METRİK NORMAL DİŞ PAFTALAR HSS

Tol. 6e UNDERSIZE M. COARSE / *KAPLAMA PAYLI M. NORMAL*



Metric *Metrik*	Pitch *Hatve*	Tol.	CODE *KOD*	EURO
M 2	0.4	6e	P020K	42.00
M 2.5	0.45	6e	P025K	38.00
M 3	0.5	6e	P030K	27.00
M 3.5	0.6	6e	P035K	42.00
M 4	0.7	6e	P040K	26.00
M 5	0.8	6e	P050K	23.00
M 6	1	6e	P060K	23.00
M 7	1	6e	P070K	40.00
M 8	1.25	6e	P080K	26.00
M 10	1.5	6e	P100K	31.00
M 12	1.75	6e	P120K	41.00
M 16	2	6e	P160K	67.00

UNDERSIZED Tol. 6e METRIC FINE THREAD DIES HSS
KAPLAMA PAYLI Tol. 6e METRİK İNCE DİŞ PAFTALAR HSS

Tol. 6e UNDERSIZE M. FINE / *KAPLAMA PAYLI M. İNCE*



M.Fine *M.İnce*	Pitch *Hatve*	Tol.	CODE *KOD*	EURO
M 4	0.5	6e	P04005K	42.00
M 5	0.5	6e	P05005K	47.00
M 6	0.5	6e	P06005K	48.00
M 6	0.75	6e	P06007K	39.00
M 7	0.75	6e	P07007K	50.00
M 8	0.75	6e	P08007K	43.00
M 8	1	6e	P08010K	32.00
M 10	0.75	6e	P10007K	88.00
M 10	1	6e	P10010K	36.00
M 10	1.25	6e	P10012K	105.00
M 12	1	6e	P12010K	48.00
M 12	1.25	6e	P12012K	120.00
M 12	1.5	6e	P12015K	45.00
M 13	1	6e	P13010K	80.00
M 14	1	6e	P14010K	52.00
M 14	1.25	6e	P14012K	130.00
M 14	1.5	6e	P14015K	45.00
M 15	1	6e	P15010K	60.00
M 16	1	6e	P16010K	74.00
M 16	1.5	6e	P16015K	60.00
M 18	1	6e	P18010K	104.00
M 18	1.5	6e	P18015K	67.00
M 20	1	6e	P20010K	104.00
M 20	1.5	6e	P20015K	78.00
M 22	1	6e	P22010K	150.00
M 22	1.5	6e	P22015K	89.00
M 24	1.5	6e	P24015K	112.00
M 26	1.5	6e	P26015K	127.00

BELL FORM DIES METRIC COARSE THREAD HSS
UZUN AĞIZLI PAFTALAR METRİK NORMAL DİŞ HSS



BELL FORM DIES M.COARSE / *UZUN AĞIZLI PAFTALAR M. NORMAL*

Metric *Metrik*	Pitch *Hatve*	CODE *KOD*	EURO
M 2	0.4	P020GL	45.00
M 2.5	0.45	P025GL	45.00
M 3	0.5	P030GL	40.00
M 4	0.7	P040GL	39.00
M 5	0.8	P050GL	41.00
M 6	1	P060GL	41.00
M 8	1.25	P080GL	53.00
M 10	1.5	P100GL	128.00
M 12	1.75	P120GL	128.00

THREAD ROLLING DIES METRIC COARSE THREAD
OVALAMA PAFTALARI METRİK NORMAL DİŞ

Metric *Metrik*	**Pitch** *Hatve*	**CODE** *KOD*	**TURNING DIA** *OVALAMA ÇAPI* **Ømm**	**EURO**
M 1	0.25	PR010	0.80	**68.00**
M 1.2	0.25	PR012	1.00	**68.00**
M 1.4	0.3	PR014	1.16	**85.00**
M 1.6	0.35	PR016	1.32	**86.00**
M 1.7	0.35	PR017	1.42	**86.00**
M 1.8	0.35	PR018	1.52	**86.00**
M 2	0.4	PR020	1.67	**86.00**
M 2.2	0.45	PR022	1.84	**101.00**
M 2.3	0.4	PR023	1.98	**101.00**
M 2.5	0.45	PR025	2.13	**101.00**
M 2.6	0.45	PR026	2.25	**101.00**
M 3	0.5	PR030	2.60	**121.00**
M 3.5	0.6	PR035	3.03	**121.00**
M 4	0.7	PR040	3.46	**121.00**
M 4.5	0.75	PR045	3.93	**154.00**
M 5	0.8	PR050	4.39	**154.00**
M 6	1	PR060	5.25	**171.00**



THREAD ROLLING DIES METRIC FINE THREAD
OVALAMA PAFTALARI METRİK İNCE DİŞ

M.Fine *M.İnce*	**Pitch** *Hatve*	**CODE** *KOD*	**TURNING DIA** *OVALAMA ÇAPI* **Ømm**	**EURO**
M 3	0.35	PR03003	2.72	**142.00**
M 3.5	0.35	PR03503	3.22	**142.00**
M 4	0.35	PR04003	3.72	**142.00**
M 4	0.5	PR04005	3.60	**197.00**
M 5	0.5	PR05005	4.60	**218.00**
M 6	0.5	PR06006	5.60	**240.00**
M 6	0.75	PR06007	5.43	**255.00**
M 8	0.75	PR08007	7.43	**255.00**
M 8	1	PR08010	7.25	**255.00**



The turning diameters indicated are aproximate sizes and if the right thread profile could not be achieved by given sizes then bigger diemeters need to be tried by increasing 0,1mm in each try. It is recommended to have a 15-20° chamfer in the front end of the bar prior to thread rolling.
Please use lubrification. It is recommended for steel with minimum 8% elongation and up to 900N/mm2.
The cutting speed is 20-40m/min. 20-25m/min for steel. 30-40m/min for brass (MS63 or higher) gold, bronze.

Yukarıdaki ovalama çapları yaklaşık olarak belirtilmiştir.
Tam vida profili elde edilemezse profil yakalanana kadar 0.1mm lik artışlarla deneyerek ovalama çapınızı tespit ediniz. Bu değer malzemeden malzemeye farklılık gösterebilir. Ovalanacak milin ucuna 15°-20° havşa yapılması önerilir. Kesme yağı kullanınız. Ovalamaya uygun en az %8 uzama oranı olan ve mukavemeti 900N/mm2 ye kadar çeliklerde kullanılabilir.
Kesme hızı 20-40m/dakika arasındadır. 30-40 kesme hızı altın, pirinç (MS63 ve üstü) ve bronz içindir. Çelikler için 20-25 m/dakika kullanılmalıdır.

THREAD ROLLING DIES UNC
OVALAMA PAFTALARI UNC



UNC	Pitch *Hatve*	CODE *KOD*	TURNING DIA *OVALAMA ÇAPI* Ømm	EURO
UNC NR. 1	64	PRUNCN01	1.55	**108.00**
UNC NR. 2	56	PRUNCN02	1.84	**121.00**
UNC NR. 3	48	PRUNCN03	2.10	**170.00**
UNC NR. 4	40	PRUNCN04	2.36	**170.00**
UNC NR. 6	32	PRUNCN06	2.91	**218.00**
UNC NR. 8	32	PRUNCN08	3.57	**218.00**

THREAD ROLLING DIES UNF
OVALAMA PAFTALARI UNF



UNF	Pitch *Hatve*	CODE *KOD*	TURNING DIA *OVALAMA ÇAPI* Ømm	EURO
UNF NR. 0	80	PRUNFN00	1.27	**86.00**
UNF NR. 1	72	PRUNFN01	1.58	**108.00**
UNF NR. 2	64	PRUNFN02	1.87	**108.00**
UNF NR. 3	56	PRUNFN03	2.15	**121.00**
UNF NR. 4	48	PRUNFN04	2.43	**170.00**
UNF NR. 5	44	PRUNFN04	2.73	**170.00**
UNF NR. 6	40	PRUNFN06	3.02	**170.00**
UNF NR. 10	32	PRUNFN10	4.23	**218.00**

The turning diameters indicated are aproximate sizes and if the right thread profile could not be achieved by given sizes then bigger diemeters need to be tried by increasing 0,1mm in each try. It is recommended to have a 15-20° chamfer in the front end of the bar prior to thread rolling.
Please use lubrification. It is recommended for steel with minimum 8% elongation and up to 900N/mm2.
The cutting speed is 20-40m/min. 20-25m/min for steel. 30-40m/min for brass (MS63 or higher) gold, bronze.

Yukarıdaki ovalama çapları yaklaşık olarak belirtilmiştir.
Tam vida profili elde edilemezse profil yakalanana kadar 0.1mm lik artışlarla deneyerek ovalama çapınızı tespit ediniz. Bu değer malzemeden malzemeye farklılık gösterebilir. Ovalanacak milin ucuna 15°-20° havşa yapılması önerilir. Kesme yağı kullanınız. Ovalamaya uygun en az %8 uzama oranı olan ve mukavemeti 900N/mm2 ye kadar çeliklerde kullanılabilir.
Kesme hızı 20-40m/dakika arasındadır. 30-40 kesme hızı altın, pirinç (MS63 ve üstü) ve bronz içindir. Çelikler için 20-25 m/dakika kullanılmalıdır.

LEFT HAND THREAD DIES HSS
SOL DİŞ PAFTALAR HSS

LEFT HAND METRIC COARSE THREAD DIES
SOL DİŞ METRİK NORMAL PAFTALAR



Metric *Metrik*	Pitch *Hatve*	CODE *KOD*	EURO
M 2	0.4	P020L	**41.00**
M 2.5	0.45	P025L	**41.00**
M 3	0.5	P030L	**29.00**
M 3.5	0.6	P035L	**58.00**
M 4	0.7	P040L	**28.00**
M 5	0.8	P050L	**25.00**
M 6	1	P060L	**25.00**
M 7	1	P070L	**44.00**
M 8	1.25	P080L	**27.00**
M 10	1.5	P100L	**33.00**
M 12	1.75	P120L	**43.00**
M 14	2	P140L	**46.00**
M 16	2	P160L	**56.00**
M 18	2.5	P180L	**77.00**
M 20	2.5	P200L	**60.00**
M 22	2.5	P220L	**109.00**
M 24	3	P240L	**85.00**
M 27	3	P270L	**154.00**
M 30	3	P300L	**132.00**

LEFT HAND THREAD DIES HSS
SOL DİŞ PAFTALAR HSS



LEFT HAND METRIC FINE THREAD DIES
SOL DİŞ METRİK İNCE PAFTALAR

M.Fine *M.İnce*	Pitch *Hatve*	CODE *KOD*	EURO
M 4	0.5	P0405L	57.00
M 6	0.5	P0605L	45.00
M 6	0.75	P0607L	40.00
M 8	0.5	P0805L	69.00
M 8	0.75	P0807L	52.00
M 8	1.0	P0810L	34.00
M 10	1.0	P1010L	39.00
M 10	1.25	P1012L	46.00
M 12	1.0	P1210L	52.00
M 12	1.25	P1212L	56.00
M 12	1.5	P1215L	50.00
M 14	1.0	P1410L	53.00
M 14	1.25	P1412L	69.00
M 14	1.5	P1415L	48.00
M 16	1.0	P1610L	72.00
M 16	1.5	P1615L	65.00
M 18	1.0	P1810L	109.00
M 18	1.5	P1815L	65.00
M 20	1.0	P2010L	76.00
M 20	1.5	P2015L	65.00
M 22	1.0	P2210L	175.00
M 22	1.5	P2215L	99.00
M 24	1.0	P2410L	143.00
M 24	1.5	P2415L	86.00
M 25	1.5	P2515L	115.00
M 26	1.5	P2615L	169.00
M 30	1.5	P3015L	127.00
M 32	1.5	P3215L	198.00
M 36	1.5	P3615L	185.00
M 38	1.5	P3815L	255.00
M 40	1.5	P4015L	255.00

BSP-G WITHWORTH PIPE THREAD DIES HSS
BSP-G BORU DİŞİ PAFTALAR HSS

BSP-G



BSP-G	Pitch *Hatve*	CODE *KOD*	EURO
G 1/16"	28	PG011	85.00
G 1/8"	28	PG018	31.00
G 1/4"	19	PG014	31.00
G 3/8"	19	PG038	41.00
G 1/2"	14	PG012	41.00
G 5/8"	14	PG058	64.00
G 3/4"	14	PG034	63.00
G 7/8"	14	PG078	100.00
G 1"	11	PG100	88.00
G 1 1/8"	11	PG118	158.00
G 1 1/4"	11	PG114	131.00
G 1 3/8"	11	PG138	244.00
G 1 1/2"	11	PG112	180.00
G 1 3/4"	11	PG134	193.00
G 2"	11	PG200	234.00
G 2 1/4"	11	PG214	295.00
G 2 1/2"	11	PG212	316.00
G 2 3/4"	11	PG234	387.00
G 3"	11	PG300	411.00
G 3 1/2	11	PG312	800.00
G 4"	11	PG400	850.00

MS BRASS CUTTING DIES BSP-G WITHWORTH PIPE THREAD HSS
MS PİRİNÇ PAFTALARI BSP-G BORU DİŞİ HSS

MS BRASS PİRİNÇ

BSP-G MS BRASS CUTTING / *BSP-G MS PİRİNÇ İÇİN*



BSP-G	pitch *Hatve*	CODE *KOD*	EURO
G 1/8"	28	PG018MS	42.00
G 1/4"	19	PG014MS	42.00
G 3/8"	19	PG038MS	54.00
G 1/2"	14	PG012MS	54.00
G 3/4"	14	PG034MS	81.00
G 1"	11	PG100MS	112.00
G 1-1/4"	11	PG114MS	166.00
G 1-1/2"	11	PG112MS	228.00
G 1-3/4"	11	PG134MS	315.00
G 2"	11	PG200MS	450.00
G 2-1/2"	11	PG212MS	500.00

UNDERSIZED -0.10mm BSP-G MS BRASS CUTTING DIES HSS
KAPLAMA PAYLI -0.10mm BSP-G MS PİRİNÇ PAFTALARI HSS

MS BRASS PİRİNÇ



BSP-G MS BRASS CUTTING UNDERSIZE -0.10mm
BSP-G MS PİRİNÇ İÇİN KAPLAMA PAYLI -0.10mm

BSP-G - 0.1mm	Pitch *Hatve*	CODE *KOD*	EURO
G 1/8" -0.10	28	PG018MSK1	73.00
G 1/4" -0.10	19	PG014MSK1	60.00
G 3/8" -0.10	19	PG038MSK1	63.00
G 1/2" -0.10	14	PG012MSK1	61.00
G 3/4" -0.10	14	PG034MSK1	98.00
G 1" -0.10	11	PG100MSK1	127.00
G 1-1/4" -0.10	11	PG114MSK1	178.00

HSS-E COBALT BSP-G DIES
HSS-E COBALT BSP-G PAFTALAR



BSP-G HSS-E COBALT

BSP-G - HSSE	Pitch *Hatve*	CODE *KOD*	EURO
G 1/8"	28	PG018C	44.00
G 1/4"	19	PG014C	45.00
G 3/8"	19	PG038C	63.00
G 1/2"	14	PG012C	59.00
G 3/4"	14	PG034C	89.00
G 1"	11	PG100C	124.00
G 1-1/4"	11	PG114C	194.00
G 1-1/2"	11	PG112C	268.00

LEFT HAND BSP-G DIES HSS
SOL DİŞ BSP-G PAFTALAR HSS



BSP-G LEFT HAND LH / *BSP-G SOL DİŞ*

BSP-G - LH / *SOL*	Pitch *Hatve*	CODE *KOD*	EURO
G 1/4" LH	19	PG014L	63.00
G 3/8" LH	19	PG038L	69.00
G 1/2" LH	14	PG012L	69.00
G 3/4" LH	14	PG034L	110.00
G 1" LH	11	PG100L	174.00

BELL FORM BSP-G WITHWORTH PIPE THREAD DIES HSS
UZUN AĞIZLI BSP-G BORU DİŞ PAFTALAR HSS

BELL FORM BSP-G MS BRASS CUTTING
UZUN AĞIZLI BSP-G MS PİRİNÇ İÇİN

MS BRASS PİRİNÇ



BSP-G GL Bell form die *Uzun ağızlı*	Pitch *Hatve*	CODE *KOD*	EURO
G 1/8"	28	PG018GLMS	132.00
G 1/4"	19	PG014GLMS	87.00
G 3/8"	19	PG038GLMS	106.00
G 1/2"	14	PG012GLMS	112.00
G 3/4"	14	PG034GLMS	148.00
G 1"	11	PG100GLMS	208.00

BELL FORM BSP-G MS BRASS CUTTING UNDERSIZE -0.10mm
UZUN AĞIZLI BSP-G MS PİRİNÇ İÇİN KAPLAMA PAYLI -0.10mm

MS BRASS PİRİNÇ

BSP-G GL Bell form die *Uzun ağızlı*	Pitch *Hatve*	CODE *KOD*	EURO
G 1/4" -0.10mm	19	PG014GLMSK1	197.00
G 3/8" -0.10mm	19	PG038GLMSK1	228.00
G 1/2" -0.10mm	14	PG012GLMSK1	163.00
G 3/4" -0.10mm	14	PG034GLMSK1	231.00
G 1" -0.10mm	11	PG100GLMSK1	362.00

BELL FORM BSP-G FOR STEEL CUTTING
UZUN AĞIZLI BSP-G ÇELİK İÇİN

BSP-G GL Bell form die *Uzun ağızlı*	Pitch *Hatve*	CODE *KOD*	EURO
G 1/8"	28	PG018GL	138.00
G 1/4"	19	PG014GL	125.00
G 3/8"	19	PG038GL	169.00
G 1/2"	14	PG012GL	194.00
G 3/4"	14	PG034GL	194.00
G 1"	11	PG100GL	290.00

BELL FORM BSP-G CARBIDE BRAZED TIPPED THREADS
UZUN AĞIZLI BSP-G KARBÜR KAYNAKLI DİŞ

MS BRASS PİRİNÇ

BSP-G GL Bell form die *Uzun ağızlı*	Pitch *Hatve*	CODE *KOD*	EURO
G 3/8"	19	PG038GLHM	880.00
G 1/2"	14	PG012GLHM	930.00
G 3/4"	14	PG034GLHM	1.050.00
G 1"	11	PG100GLHM	1.080.00

NPT - NPTF TAPER PIPE THREAD DIES HSS
NPT - NPTF KONİK BORU DİŞİ PAFTALAR HSS



NPT

NPT	pitch *Hatve*	CODE *KOD*	EURO
NPT 1/16"	27	PNPT011	55.00
NPT 1/8"	27	PNPT018	49.00
NPT 1/4"	18	PNPT014	54.00
NPT 3/8"	18	PNPT038	66.00
NPT 1/2"	14	PNPT012	66.00
NPT 3/4"	14	PNPT034	109.00
NPT 1"	11.5	PNPT100	139.00
NPT 1-1/4"	11.5	PNPT114	195.00
NPT 1-1/2"	11.5	PNPT112	270.00
NPT 2"	11.5	PNPT200	350.00

NPT MS BRASS CUTTING / *NPT MS PİRİNÇ İÇİN* MS BRASS PİRİNÇ

NPT	pitch *Hatve*	CODE *KOD*	EURO
NPT 1/8"	27	PNPT018MS	138.00
NPT 1/4"	18	PNPT014MS	138.00
NPT 3/8"	18	PNPT038MS	157.00
NPT 1/2"	14	PNPT012MS	107.00
NPT 3/4"	14	PNPT034MS	157.00



NPTF

NPTF	pitch *Hatve*	CODE *KOD*	EURO
NPTF 1/16"	27	PNPTF011	98.00
NPTF 1/8"	27	PNPTF018	58.00
NPTF 1/4"	18	PNPTF014	67.00
NPTF 3/8"	18	PNPTF038	87.00
NPTF 1/2"	14	PNPTF012	102.00
NPTF 3/4"	14	PNPTF034	141.00
NPTF 1"	11.5	PNPTF100	209.00

BSPT-R TAPER WHITWORTH PIPE THREAD DIES HSS
BSPT-R KONİK WHITWORTH BORU DİŞİ PAFTALAR HSS

DIN EN 10226/ISO7-1
DIN2999/DIN3858/BS21
TAPER/*KONİK* **1:16**

BSPT-R



BSPT - R	pitch *Hatve*	CODE *KOD*	EURO
R 1/8"	28	PBSPT018	50.00
R 1/4"	19	PBSPT014	51.00
R 3/8"	19	PBSPT038	67.00
R 1/2"	14	PBSPT012	67.00
R 3/4"	14	PBSPT034	110.00
R 1"	11	PBSPT100	140.00
R 1-1/4"	11	PBSPT114	242.00
R 1-1/2"	11	PBSPT112	289.00
R 2"	11	PBSPT200	375.00

BSPT-R MS BRASS CUTTING / *BSPT-R MS PİRİNÇ İÇİN* MS BRASS PİRİNÇ

BSPT - R	pitch *Hatve*	CODE *KOD*	EURO
R 1/8"	28	PBSPT018MS	115.00
R 1/4"	19	PBSPT014MS	105.00
R 3/8"	19	PBSPT038MS	125.00
R 1/2"	14	PBSPT012MS	150.00
R 3/4"	14	PBSPT034MS	188.00
R 1"	11	PBSPT100MS	330.00

DIN 477 VALVE THREAD DIES HSS
DIN 477 VALF DİŞİ PAFTALAR HSS



DIN 477 VALVE MS BRASS CUTTING / *VALF MS PİRİNÇ İÇİN* MS BRASS PİRİNÇ

W - DIN 477	TAPER - PARALLEL *KONİK - DÜZ*	CODE *KOD*	EURO
W 19.8 x 14	3:25 TAPER / *KONİK*	PW198MS	204.00
W 28.8 x 14	3:25 TAPER / *KONİK*	PW288MS	292.00
W 21.8 x 14	PARALLEL / *DÜZ*	PW218MS	139.00
W 21.8 x 14 LH / *SOL*	PARALLEL / *DÜZ*	PW218LMS	154.00
W 24.32 x 14	PARALLEL / *DÜZ*	PW243MS	232.00

DIN 477 VALVE STEEL CUTTING / *DIN 477 VALF ÇELİK İÇİN*

W - DIN 477	TAPER - PARALLEL *KONİK - DÜZ*	CODE *KOD*	EURO
W 19.8 x 14	3:25 TAPER / *KONİK*	PW198	203.00
W 28.8 x 14	3:25 TAPER / *KONİK*	PW288	290.00
W 21.8 x 14	PARALLEL / *DÜZ*	PW218	122.00
W 21.8 x 14 LH / *SOL*	PARALLEL / *DÜZ*	PW218L	138.00
W 24.32 x 14	PARALLEL / *DÜZ*	PW243	189.00

PG THREAD DIN 40434 DIES HSS
PG DİŞ DIN 40434 PAFTALAR HSS



PG DIN 40434

DIN 40434 PG	pitch *Hatve*	CODE *KOD*	EURO
PG 7	20	PPG07	53.00
PG 9	18	PPG09	53.00
PG 11	18	PPG11	68.00
PG 13.5	18	PPG13	68.00
PG 16	18	PPG16	91.00
PG 21	16	PPG21	120.00
PG 29	16	PPG29	130.00
PG 36	16	PPG36	246.00
PG 42	16	PPG42	500.00
PG 48	16	PPG48	550.00

TR TRAPEZOIDAL THREAD DIES DIN 103 HSS
TR TRAPEZ DİŞ PAFTALAR DIN 103 HSS

TR DIN 103 Tol. 7e	CODE *KOD*	EURO
TR 8x1.5	PTR081	175.00
TR 8x2	PTR082	138.00
TR 8x2 MS MS BRASS PİRİNÇ	PTR082MS	138.00
TR 8x2 LH-*SOL*	PTR082L	138.00
TR 8x2 LH-*SOL* MS MS BRASS PİRİNÇ	PTR082LMS	138.00
TR 10x2	PTR102	90.00
TR 10x2 MS MS BRASS PİRİNÇ	PTR102MS	150.00
TR 10x2 LH-*SOL*	PTR102L	113.00
TR 10x2 LH-*SOL* MS MS BRASS PİRİNÇ	PTR102LMS	150.00
TR 10x3	PTR103	120.00
TR 12x2	PTR122	117.00
TR 12x3	PTR123	115.00
TR 12x3 LH-*SOL*	PTR123L	179.00
TR 14x2	PTR142	128.00
TR 14x3	PTR143	129.00
TR 14x4	PTR144	140.00
TR 14x4 LH-*SOL*	PTR144L	260.00
TR 16x2	PTR162	154.00
TR 16x4	PTR164	118.00
TR 16x4 LH-*SOL*	PTR164L	182.00
TR 18x2	PTR182	167.00
TR 18x4	PTR184	138.00
TR 18x4 LH-*SOL*	PTR184L	227.00
TR 20x2	PTR202	167.00
TR 20x4	PTR204	154.00
TR 20x4 LH-*SOL*	PTR204L	213.00
TR 22x5	PTR225	223.00
TR 24x5	PTR245	204.00
TR 24x5 LH-*SOL*	PTR245L	290.00
TR 26x5	PTR265	234.00
TR 28x5	PTR285	260.00
TR 30x6	PTR306	245.00



MS Dies are for Brass. LH Dies are Left Hand
MS Paftalar pirinç malzeme içindir.
LH Paftalar sol diştir.

Rd DIES DIN 405 / *Rd PAFTALAR*

Rd Tol. 7h	pitch *Hatve*	CODE *KOD*	EURO
Rd 10	10	PRD10	270.00
Rd 12	10	PRD12	183.00
Rd 14	8	PRD14	218.00
Rd 16	8	PRD16	203.00
Rd 18	8	PRD18	299.00
Rd 20	8	PRD20	288.00
Rd 24	8	PRD24	288.00
Rd 30	8	PRD30	359.00



UNC DIES HSS
UNC PAFTALAR HSS



UNC DIES / *UNC PAFTALAR*

UNC	Pitch *Hatve*	CODE *KOD*	EURO
UNC Nr. 1	64	PUNCN01	**48.00**
UNC Nr. 2	56	PUNCN02	**41.00**
UNC Nr. 3	48	PUNCN03	**48.00**
UNC Nr. 4	40	PUNCN04	**35.00**
UNC Nr. 5	40	PUNCN05	**30.00**
UNC Nr. 6	32	PUNCN06	**28.00**
UNC Nr. 8	32	PUNCN08	**25.00**
UNC Nr. 10	24	PUNCN10	**28.00**
UNC Nr. 12	24	PUNCN12	**30.00**
UNC 1/4”	20	PUNC014	**23.00**
UNC 5/16”	18	PUNC051	**26.00**
UNC 3/8”	16	PUNC038	**30.00**
UNC 7/16”	14	PUNC071	**31.00**
UNC 1/2”	13	PUNC012	**38.00**
UNC 9/16”	12	PUNC091	**43.00**
UNC 5/8”	11	PUNC058	**50.00**
UNC 3/4”	10	PUNC034	**56.00**
UNC 7/8”	9	PUNC078	**75.00**
UNC 1”	8	PUNC100	**75.00**
UNC 1-1/8”	7	PUNC118	**139.00**
UNC 1-1/4”	7	PUNC114	**139.00**
UNC 1-3/8”	6	PUNC138	**153.00**
UNC 1-1/2”	6	PUNC112	**193.00**
UNC 1-3/4”	5	PUNC134	**335.00**
UNC 2”	4.5	PUNC200	**335.00**

UNF DIES HSS
UNF PAFTALAR HSS

UNF DIES / *UNF PAFTALAR*



UNF	Pitch *Hatve*	CODE *KOD*	EURO
UNF Nr.0	80	PUNFN00	**39.00**
UNF Nr.1	72	PUNFN01	**35.00**
UNF Nr.2	64	PUNFN02	**48.00**
UNF Nr.3	56	PUNFN03	**46.00**
UNF Nr.4	48	PUNFN04	**45.00**
UNF Nr.5	44	PUNFN05	**38.00**
UNF Nr.6	40	PUNFN06	**35.00**
UNF Nr.8	36	PUNFN08	**30.00**
UNF Nr.10	32	PUNFN10	**23.00**
UNF Nr.12	28	PUNFN12	**29.00**
UNF 1/4”	28	PUNF014	**23.00**
UNF 5/16”	24	PUNF051	**26.00**
UNF 3/8”	24	PUNF038	**30.00**
UNF 7/16”	20	PUNF071	**31.00**
UNF 1/2”	20	PUNF012	**38.00**
UNF 9/16”	18	PUNF091	**43.00**
UNF 5/8”	18	PUNF058	**50.00**
UNF 3/4”	16	PUNF034	**50.00**
UNF 7/8”	14	PUNF078	**68.00**
UNF 1”	12	PUNF100	**71.00**
UNF 1-1/8”	12	PUNF118	**114.00**
UNF 1-1/4”	12	PUNF114	**114.00**
UNF 1-3/8”	12	PUNF138	**130.00**
UNF 1-1/2”	12	PUNF112	**160.00**

UNEF - UN - UNS DIES HSS
UNEF - UN - UNS PAFTALAR HSS



UNEF DIES / *UNEF PAFTALAR*

UNEF	pitch *Hatve*	CODE *KOD*	EURO
UNEF Nr.12	32	PUNEFN12	64.00
UNEF 1/4"	32	PUNEF014	43.00
UNEF 5/16"	32	PUNEF051	37.00
UNEF 3/8"	32	PUNEF038	39.00
UNEF 7/16"	28	PUNEF071	49.00
UNEF 1/2"	28	PUNEF012	53.00
UNEF 9/16"	24	PUNEF091	53.00
UNEF 5/8"	24	PUNEF058	66.00
UNEF 11/16"	24	PUNEF011	105.00
UNEF 3/4"	20	PUNEF034	64.00
UNEF 13/16"	20	PUNEF013	107.00
UNEF 7/8"	20	PUNEF078	100.00
UNEF 15/16"	20	PUNEF015	167.00
UNEF 1"	20	PUNEF100	113.00
UNEF 1 1/8"	18	PUNEF118	160.00
UNEF 1 1/4"	18	PUNEF114	190.00



UN - UNS DIES / *UN - UNS PAFTALAR*

UN - UNS	pitch *Hatve*	CODE *KOD*	EURO
UNS 1/4"	40	PUNS014040	64.00
UNS 1/4"	36	PUNS014036	40.00
UNS 1/4"	24	PUNS014024	67.00
UNS 7/16"	24	PUNS071624	51.00
UNS 1/2"	24	PUNS012024	73.00
UNS 9/16"	20	PUN091620	120.00
UN 11/16"	20	PUN111620	91.00
UN 11/16"	16	PUN111620	77.00
UNS 1"	14	PUNS100014	92.00
UN 1-1/16"	12	PUN111612	123.00
UN 1-3/16"	12	PUN131612	197.00
UN 1-5/16"	12	PUN151612	155.00
UN 1-5/8"	12	PUN158012	179.00
UN 1-3/4"	12	PUN134012	223.00
UN 2"	12	PUN200012	299.00
UN 1-1/8"	8	PUN118008	154.00
UN 1-1/4"	8	PUN114008	154.00
UN 1-3/8"	8	PUN138008	177.00
UN 1-1/2"	8	PUN112008	170.00
UN 1-3/4"	8	PUN134008	230.00
UN 2"	8	PUN200008	230.00

BSW - BSF DIES HSS
BSW - BSF PAFTALAR HSS

BSW DIES / *BSW PAFTALAR*



BSW	pitch *Hatve*	CODE *KOD*	EURO
BSW 1/16"	60	PBSW116	58.00
BSW 3/32"	48	PBSW332	47.00
BSW 1/8"	40	PBSW018	30.00
BSW 5/32"	32	PBSW053	31.00
BSW 3/16"	24	PBSW031	30.00
BSW 7/32"	24	PBSW073	30.00
BSW 1/4"	20	PBSW014	26.00
BSW 5/16"	18	PBSW051	32.00
BSW 3/8"	16	PBSW038	33.00
BSW 7/16"	14	PBSW071	35.00
BSW 1/2"	12	PBSW012	42.00
BSW 9/16"	12	PBSW091	55.00
BSW 5/8"	11	PBSW058	55.00
BSW 3/4"	10	PBSW034	57.00
BSW 7/8"	9	PBSW078	79.00
BSW 1"	8	PBSW100	79.00
BSW 1-1/8"	7	PBSW118	167.00
BSW 1-1/4"	7	PBSW114	135.00
BSW 1-3/8"	6	PBSW138	179.00
BSW 1-1/2"	6	PBSW112	223.00
BSW 1-3/4"	5	PBSW134	435.00
BSW 2"	4.5	PBSW200	369.00

BSF DIES / *BSF PAFTALAR*



BSF	pitch *Hatve*	CODE *KOD*	EURO
BSF 3/16"	32	PBSF031	39.00
BSF 1/4"	26	PBSF014	35.00
BSF 5/16"	22	PBSF051	37.00
BSF 3/8"	20	PBSF038	36.00
BSF 7/16"	18	PBSF071	44.00
BSF 1/2"	16	PBSF012	54.00
BSF 9/16"	16	PBSF091	71.00
BSF 5/8"	14	PBSF058	73.00
BSF 3/4"	12	PBSF034	73.00
BSF 7/8"	11	PBSF078	107.00
BSF 1"	10	PBSF100	107.00

CUTTING DATAS FOR DIES
PAFTALAR İÇİN KESME DEĞERLERİ



CUTTING SPEED AND RECOMMENDATION / *KESME HIZI VE ÖNERİLER*

WORKPIECE MATERIAL *İŞLENEN MALZEME*	**CUTTING SPEED** *KESME HIZI* **m/minute** *m/dakika*	**RECOMMENDATIONS** *ÖNERİLER*
ST37- ST50 SOFT STEEL *ST37- ST50 YUMUŞAK ÇELİKLER*	**8-12**	**Use cutting oil** *Kesme yağı kullanınız.*
CASE HARDENING STEEL *SEMENTE ÇELİKLERİ* **CK15, 16MnCr5, 8620**	**6-10**	**Use cutting oil** *Kesme yağı kullanınız.*
HEAT TREATABLE STEEL *ISIL İŞLEM GÖREBİLEN ÇELİKLER* **C45, C35**	**5-8**	**Use cutting oil, prefer HSSE dies** *Kesme yağı kullanınız. HSS E pafta tercih ediniz*
STAINLESS STEEL *PASLANMAZ ÇELİKLER*	**4-6**	**Use cutting oil, prefer HSSE dies** *Kesme yağı kullanınız. HSS E pafta tercih ediniz*
CAST IRON GG15, GG25 *DÖKÜMLER GG15, GG25*	**5-8**	**Use cutting oil with paraphine** *Kesme yağı, parafin kullanınız*
BRASS (SHORT CHIPPING) *PİRİNÇ (KISA TALAŞ VEREN)*	**20-30**	**Use cutting oil and prefer MS (brass type) dies** *Kesme yağı kullanınız. MS pafta tercih ediniz*
BRASS (LONG CHIPPING) *PİRİNÇ (UZUN TALAŞ VEREN)*	**12-18**	**Use cutting oil and prefer MS (brass type) dies** *Kesme yağı kullanınız. MS pafta tercih ediniz*
ALUMINIUM ALLOYS (LONG CHIPPING) *ALUMINYUM ALAŞIMLARI (UZUN TALAŞ VEREN)*	**15-20**	**Use cutting oil** *Kesme yağı kullanınız.*
ALUMINIUM ALLOYS (SHORT CHIPPING) *ALUMINYUM ALAŞIMLARI (KISA TALAŞ VEREN)*	**8-12**	**Use cutting oil with paraphine** *Kesme yağı, parafin kullanınız*
BRONZE *BRONZ*	**5-8**	**Use cutting oil with paraphine** *Kesme yağı, parafin kullanınız*

TURNING DIAMETERS FOR DIES
PAFTALAR İÇİN TORNALAMA ÇAPLARI

TURNING DIAMETERS / *TORNALAMA ÇAPLARI*



Nominal diameter *Nominal çap* Ø mm	Pitch *Hatve*	maximum/minimum and target turning diameters for 6g tolerance *6g toleransı için önerilen minimum / maximum / hedef tornalama çapı*		
		Minimum turning diameter *Minimum tornalama çapı*	Maximum Turning Diameter *Maximum Tornalama Çapı*	target turning diameter *hedef tornalama çapı*
2	0.4	1.89	1.98	1.94
2.5	0.45	2.38	2.48	2.43
3	0.5	2.87	2.98	2.92
3.5	0.6	3.35	3.48	3.41
4	0.7	3.84	3.99	3.91
4.5	0.75	4.34	4.48	4.41
5	0.8	4.83	4.98	4.9
6	1	5.79	5.97	5.88
7	1	6.79	6.97	6.88
8	1.25	7.76	7.97	7.87
10	1.5	9.73	9.96	9.85
12	1.75	11.7	11.97	11.83
14	2	13.68	13.96	13.82
16	2	15.68	15.96	15.82
18	2.5	17.62	17.96	17.79
20	2.5	19.62	19.96	19.79
22	2.5	21.62	21.96	21.79
24	3	23.58	23.95	23.77
27	3	26.58	26.95	26.77
30	3.5	29.52	29.95	29.73

For finding the turning diameters of the Metric Fine threads:
Look at the given table turning diameter difference of the same pitch dies on metric coarse thread. Apply the same difference on the Metric fine theread. Eg. For M20x1, look at M6x1 and the datas given on the table 5.79-5.97-5.88 are considred as 19,79 - 19,97 - 19,88.

Metrik ince diş paftaların tornalama ölçülerini tespit için:
Aynı hatvedeki metrik normal vidanın yukarıda belirtilen tornalama farkı kadar fark metrik incedeki çapa uygulanır. Örneğin. M 20x1 için hatvesi 1mm olan M 6 ye bakılır, 5,79 - 5,97 - 5,88 olan değerler 19,79 - 19,97 - 19,88 olarak tespit edilir.

gürkan



gürkan



CARBIDE THREAD MILLING CUTTERS

KARBÜR VİDA FREZELERİ

Advantages of thread milling
Vida frezelemenin avantajları



*** Threads to different tolerance classes can be produced with the same cutter**
*** Tool breakage does not necessarily entail scrapping of the workpiece**
*** Less power needed for cutting internal thread**
*** Short machining time due to high cutting speed**
*** Excellent thread surface finish**
*** Short chips hence no chip problems**
*** Right and left hand threads can be produced in blind or through holes by the same cutter**
*** Low cutting forces enable threads to be cut in thin wall workpieces**
*** Cutting speed and feed can be matched individually to workpiece material so no need different tool for different raw material workpiece**
*** No change of cutter spindle direction of rotation required**
*** No special tapping chucks required, standard chucks suffice**
*** Threads can be cut to exact depth.**
*** Threads can be cut to near bottom of blind holes**
*** Start of the thread accurately determined by NC programme**

Specific advantages of different typs of thread milling cutters
GFS type :
High productivity due to chamfering and thread milling with just one tool without tool changing.

GFM type :
Cutter can cut thread of identical pitch on a wide range of diameters
Low tooling costs of large threads, neck between cutter teeth and chank allows deeper threads to be cut by a second thread milling cycle

BGF type :
High productivity due to drilling chamfering and thread milling with just one tool without tool changing

GFE / GFT type :
Small diameter threads starting from M 1 can be produced
Deep threads 3xD can be produced

BGFS-W / BGFS-H type.
Allows the usage of drill thread milling cutters in soft and hardened steel materials.

** Vida ölçü toleransları kontrol altındadır ve ayarlanabilir, aynı takımla farklı toleransta vidalar üretilebilir.*
** Takım kırılmaları tamamen iş parçasının zayi olmasına sebep olmaz.*
** Kılavuza kıyasla daha az güç tüketimi.*
** Yüksek kesme değerleri sayesinde çok daha kısa işlem süresi.*
** Mükemmel vida profili ve yüzey kalitesi.*
** Talaşların küçük parçacıklara bölünmesi sayesinde talaş sıkışma sorunu aşılır.*
** Sağ ve sol vida, ayrıca kör ve açık delik aynı takımla işlenebilir.*
** Çok az güç gerektirdiği için ince çeperli malzemelerde dahi diş çekebilir.*
** Kesme hızları her malzemeye göre ayrı ayrı ayarlanabilir. Ayrı evsafta takım gerekmez.*
** Tezgah fener milinin dönüş yönü değiştirmeden vida çekme işlemi gerçekleşir.*
** Vida çekmek üzere özel bir başlık veya bir aparat gerektirmez. Standart pensli başlıklar vs. kullanılabilir.*
** Kör deliklerde deliğin dibine çok yakın mesafeye kadar diş çekebilir.*
** Zor malzemelere kolayca diş çeker.*
** Vidanın başlama noktası hassas bir şekilde belirlenebilir.*

Tiplerine göre bazı vida freze avantajları
GFS tipi:
Havşalama ve viade frezeleme aynı takımla takım değiştirmeden yapıldığı için yüksek verimlilik.

GFM tipi :
Aynı takım, aynı hatvedeki diğer büyük çaplara da diş açabilir.
Büyük çaplı vidalarda takım maliyeti çok düşer. Takımın diş kısmı ile sapı arasındaki boğaz boyu kadar derinlikte ikinci operasyonla oldukça uzun boyda vida çekilebilir.

BGF tipi :
Delme, vida frezeleme ve havşa aynı takıma takım değiştirmeden yapılabilir verimlilik artar.

GFE / GFT tipi :
M 1 den başlayan küçük dişlere vida çekilebilir . 3xD kadar uzun boyda vida çekilebilir

BGFS-W / BGFS-H tipi:
Vida frezesini yumuşak ve de sertleşmiş çeliklerde de kullanımına olanak tanır. Aynı takımla takım değiştirmeden delme vida çekme havşalama işlemini yapar verimlilik artar.

DRILL THREAD MILLING CUTTER SOLID CARBIDE COATED TYPE: BGF
MATKAPLI VİDA FREZESİ SERT METAL KAPLAMALI TİP: BGF

M. COARSE 1.5xD Thread lenght / *M. NORMAL 1.5xD Diş boyu*

Metric coarse *Metrik Normal*	CODE *KOD*	overall lenght *tamboy*	Thread lenght *Diş boyu* 1.5 x D	Shank *sap* Ø	Drill lenght *matkap boyu*	EURO
M 3	BGFM03D15T	48	5.4	6	0.5	293.00
M 4	BGFM04D15T	48	6.6	6	0.7	260.00
M 5	BGFM05D15T	54	8.6	6	0.8	255.00
M 6	BGFM06D15T	62	10.7	8	1	250.00
M 8	BGFM08D15T	74	13.4	10	1.25	312.00
M 10	BGFM10D15T	80	17.7	12	1.5	370.00
M 12	BGFM12D15T	90	20.3	14	1.5	510.00

M. COARSE 2xD Thread lenght / *M. NORMAL 2xD Diş boyu*

Metric coarse *Metrik Normal*	CODE *KOD*	overall lenght *tamboy*	Thread lenght *Diş boyu* 2 x D	Shank *sap* Ø	Drill lenght *matkap boyu*	EURO
M 3	BGFM03D20T	48	6.9	6	0.5	293.00
M 4	BGFM04D20T	48	8.7	6	0.5	260.00
M 5	BGFM05D20T	54	11.0	6	0.8	255.00
M 6	BGFM06D20T	62	13.7	8	1	250.00
M 8	BGFM08D20T	74	18.4	10	1.3	312.00
M 10	BGFM10D20T	80	22.2	12	1.5	370.00
M 12	BGFM12D20T	90	25.5	14	1.5	510.00
M 16	BGFM16D20T	102	35.1	18	1.5	750.00

METRIC FINE 1.5xD Thread lenght / *METRİK İNCE 1.5xD Diş boyu*

Metric fine *Metrik ince*	CODE *KOD*	overall lenght *tamboy*	Thread lenght *Diş boyu* 1.5 x D	Shank *sap* Ø	Drill lenght *matkap boyu*	EURO
M 6x0.75	BGFM0607D15T	62	9.6	8	0.8	288.00
M 8x1	BGFM0810D15T	74	13.8	10	1	342.00
M 10x1	BGFM1010D15T	80	16.0	12	1	408.00
M 10x1.25	BGFM1012D15T	80	16.0	12	1.3	423.00
M 12x1	BGFM1210D15T	90	19.0	14	1	550.00
M 12x1.5	BGFM1215D15T	90	20.7	14	1.5	550.00

METRIC FINE 2xD Thread lenght / *METRİK İNCE 2xD Diş boyu*

Metric fine *Metrik ince*	CODE *KOD*	overall lenght *tamboy*	Thread lenght *Diş boyu* 2 x D	Shank *sap* Ø	Drill lenght *matkap boyu*	EURO
M 6x0.75	BGFM0607D20T	62	12.6	8	0.8	288.00
M 8x1	BGFM0810D20T	74	16.8	10	1	342.00
M 10x1	BGFM1010D20T	80	21.0	12	1	408.00
M 10x1.25	BGFM1012D20T	80	21.0	12	1.3	423.00
M 12x1	BGFM1210D20T	90	25.0	14	1	550.00
M 12x1.5	BGFM1215D20T	90	26.7	14	1.5	550.00
M 14x1.5	BGFM1415D20T	102	29.7	16	1.5	810.00
M 16x1.5	BGFM1615D20T	102	32.9	18	1.5	905.00

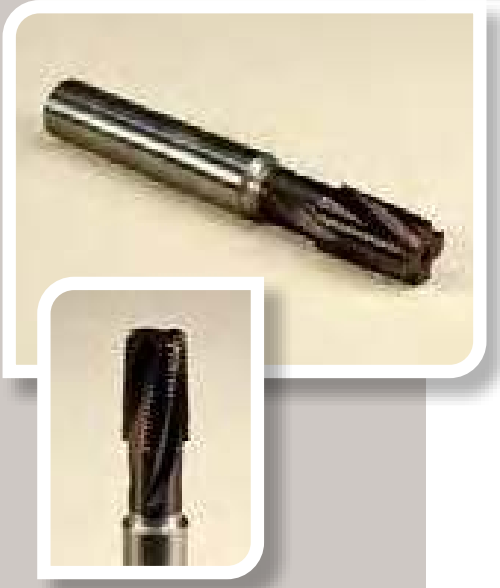


TYPE - *TİP* : BGF
DRILLING - COUNTERSINKING 45° - THREADING : 3 OPERATIONS WITH SAME TOOL IN SECONDS
DELME - HAVŞALAMA 45° - VİDA ÇEKME : 3 İŞLEM TEK TAKIMLA SANİYELER İÇİNDE

Internal coolant type, 2.5xD thread lenght and other sizes are also available, please ask for quotation.

İçten soğutmalı tip, 2.5xD diş boyu ve diğer dişler mevcuttur, lütfen fiyat isteyiniz.

THREAD MILLING CUTTERS SOLID CARBIDE COATED TYPE: GFM
VİDA FREZESİ SERT METAL KAPLAMALI TİP: GFM



TYPE - *TİP :* GFM
SAME TOOL CAN MAKE DIFFERENT DIAMETER THREAD HAVING THE SAME PITCH
AYNI TAKIM AYNI HATVEDE OLAN FARKLI ÇAPLARA DİŞ AÇABİLİR

METRIC COARSE / METRIC FINE
METRİK NORMAL / METRIK İNCE

Tool diameter *Takım çapı*	Pitch *Hatve*	CODE *KOD*	Overall lenght *tamboy*	D > For thread diamters Ø > *Diş çekebileceği çaplar Ø >*	Max thread lenght *Max Diş Boyu*	Shank *sap* Ø	Z	EURO
6	0.5	GFMM0605T	54	8	12.0	6	4	**211.00**
6	1	GFMM0610T	54	8	12.0	6	4	**198.00**
8	0.5	GFMM0805T	64	10	16.0	8	4	**257.00**
8	0.75	GFMM0807T	64	10	16.0	8	4	**252.00**
8	1	GFMM0810T	64	10	16.0	8	4	**225.00**
10	0.75	GFMM1007T	70	12	25.0	10	4	**317.00**
10	1	GFMM1010T	70	12	25.0	10	4	**271.00**
10	1.25	GFMM1012T	70	12	25.0	10	4	**291.00**
10	1.5	GFMM1015T	70	12	25.0	10	4	**257.00**
12	1	GFMM1210T	80	16	31.0	12	4	**330.00**
12	1.25	GFMM1212T	80	16	31.0	12	4	**362.00**
12	1.5	GFMM1215T	80	16	31.0	12	4	**331.00**
16	1	GFMM1610T	90	22	40.0	16	5	**460.00**
16	1.5	GFMM1615T	90	22	40.0	16	5	**413.00**
16	2	GFMM1620T	90	22	40.0	16	5	**426.00**
16	2.5	GFMM1625T	90	22	40.0	16	5	**460.00**

BSP - G WITHWORTH PARALLELE PIPE THREADS
BSP - G WITHWORTH DÜZ BORU DİŞLERİ

Tool diameter *Takım çapı*	Pitch *Hatve*	CODE *KOD*	Overall lenght *tamboy*	D > For thread diamters Ø > *Diş çekebileceği çaplar Ø >*	Max thread lenght *Max Diş Boyu*	Shank *sap* Ø	Z	EURO
10	19	GFMG1019T	70	G1/4 ve üstü	25.0	10	4	**290.00**
16	14	GFMG1614T	90	G1/2 ve üstü	40.0	16	5	**466.00**
20	11	GFMG2011T	105	G1" ve üstü	50.0	20	5	**670.00**
25	11	GFMG2511T	115	G1-1/2" ve üstü	57.0	25	6	**930.00**

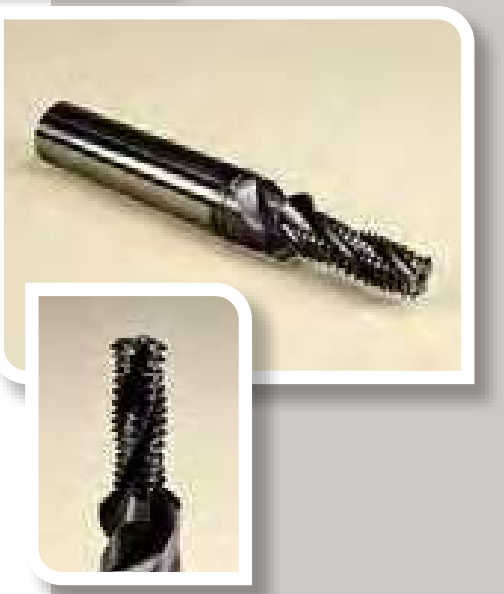
GFM G thread milling cutters are suitable for internal and external threads
GFM G vida frezeleri hem iç hem dış vida frezeleyebilmektedir.
All are coated and internal coolant type cutters / *Tamamı kaplamalı ve içten soğutmalı takımlardır*

THREAD MILLING CUTTERS SOLID CARBIDE COATED TYPE: GFS
VİDA FREZESİ SERT METAL KAPLAMALI TİP: GFS

METRIC COARSE / *METRİK NORMAL*

METRIC COARSE *METRİK NORMAL*	Pitch *Hatve*	CODE *KOD*	overlall lenght *tamboy*	Thread lenght *Diş Boyu* 2 x D	Shank *sap* Ø	Z	EURO
M 3*	0.5	GFSM0305D20T	48	6.75	6	3	**193.00**
M 4	0.7	GFSM0407D20T	48	8.75	6	3	**173.00**
M 5	0.8	GFSM0508D20T	54	10.75	6	3	**177.00**
M 6	1	GFSM0610D20T	62	13.50	8	3	**207.00**
M 8	1.25	GFSM0812D20T	74	18.10	10	3	**248.00**
M 10	1.5	GFSM1015D20T	80	21.70	12	4	**288.00**
M 12	1.75	GFSM1217D20T	90	25.30	14	4	**360.00**
M 14	2	GFSM1420D20T	102	30.95	16	4	**438.00**
M 16	2	GFSM1620D20T	102	34.95	18	4	**527.00**

* coated but not internal collant, all others are coated and internal coolant
** kaplamalı fakat içten soğutmalı değildir, tüm diğerleri kaplamalı ve içten soğutmalıdır*



TYPE - *TİP :* GFS
COUNTERSINKING AND THREAD MILLING WITH THE SAME TOOL IN SAME OPERATION
HAVŞALAMA VE VİDA FREZELEME AYNI KATIMLA AYNI OPERASYONLA

METRIC FINE / *METRİK İNCE*

METRIC FINE *METRİK İNCE*	Pitch *Hatve*	CODE *KOD*	overlall lenght *tamboy*	Thread lenght *Diş Boyu* 2 x D	Shank *sap* Ø	Z	EURO
M 6	0.75	GFSM0607D20T	62	13.10	8	3	**238.00**
M 8	0.75	GFSM0807D20T	74	16.85	10	3	**271.00**
M 8	1	GFSM0810D20T	74	17.45	10	3	**263.00**
M 10	1	GFSM1010D20T	80	21.45	12	4	**315.00**
M 10	1.25	GFSM1012D20T	80	21.85	12	4	**305.00**
M 12	1	GFSM1210D20T	90	25.45	14	4	**403.00**
M 12	1.5	GFSM1215D20T	90	26.20	14	4	**388.00**
M 14	1.5	GFSM1415D20T	102	30.70	16	4	**465.00**
M 16	1.5	GFSM1615D20T	102	33.70	18	4	**553.00**

All is coated and internal coolant / *Tamamı kaplamalı ve içten soğutmalıdır*

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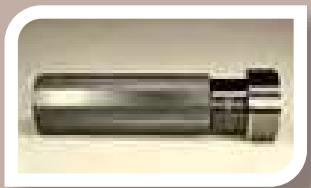
THREAD GAUGES
VİDA MASTARLARI

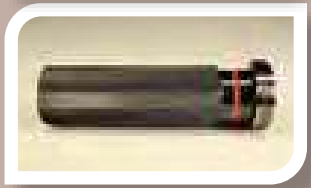
METRIC COARSE THREAD PLUG GAUGES Tol. 6H
METRİK NORMAL DİŞ TAMPON MASTARLAR Tol. 6H



METRIC COARSE PLUG GAUGE / *METRİK NORMAL TAMPON MASTAR*

METRIC *METRİK*	PITCH *HATVE*	CODE *KOD*	EURO
M 1	0.25	M010E	165.00
M 1.2	0.25	M012E	138.00
M 1.4	0.3	M014E	111.00
M 1.6	0.35	M016E	102.00
M 1.7	0.35	M017E	117.00
M 1.8	0.35	M018E	95.00
M 2	0.4	M020E	84.00
M 2.2	0.45	M022E	90.00
M 2.3	0.4	M023E	94.00
M 2.5	0.45	M025E	72.00
M 2.6	0.45	M026E	91.00
M 3	0.5	M030E	60.00
M 3.5	0.6	M035E	64.00
M 4	0.7	M040E	56.00
M 4.5	0.75	M045E	79.00
M 5	0.8	M050E	55.00
M 6	1.0	M060E	55.00
M 7	1.0	M070E	60.00
M 8	1.25	M080E	55.00
M 9	1.25	M090E	74.00
M 10	1.5	M100E	59.00
M 11	1.5	M110E	79.00
M 12	1.75	M120E	64.00
M 14	2.0	M140E	69.00
M 16	2.0	M160E	74.00
M 18	2.5	M180E	81.00
M 20	2.5	M200E	87.00
M 22	2.5	M220E	92.00
M 24	3.0	M240E	103.00
M 27	3.0	M270E	116.00
M 30	3.5	M300E	129.00
M 33	3.5	M330E	143.00
M 36	4.0	M360E	154.00
M 39	4.0	M390E	170.00
M 42*	4.5	M420E	224.00
M 45*	4.5	M450E	241.00
M 48*	5.0	M480E	258.00
M 52*	5.0	M520E	275.00
M 56*	5.5	M560E	307.00
M 60*	5.5	M600E	344.00
M 64*	6.0	M640E	378.00
M 68*	6.0	M680E	403.00





* indicated plug gauges have go and nogo seperate 2 pcs and the price is for set of total 2 pcs.

* *işaretli tampon mastarlar geçer ve geçmez olarak 2 parçalıdır, fiyat toplam 2 parçalı takım fiyatıdır.*

METRIC COARSE THREAD RING GAUGES Tol. 6g
METRİK NORMAL DİŞ HALKA MASTARLAR Tol. 6g

METRIC COARSE RING GAUGE / *METRİK NORMAL HALKA MASTAR*



METRIC *METRİK*	PITCH *HATVE*	CODE *KOD*	EURO
M 1	0.25	M010D	275.00
M 1.2	0.25	M012D	257.00
M 1.4	0.3	M014D	230.00
M 1.6	0.35	M016D	200.00
M 1.7	0.35	M017D	242.00
M 1.8	0.35	M018D	180.00
M 2	0.4	M020D	168.00
M 2.2	0.45	M022D	190.00
M 2.3	0.4	M023D	310.00
M 2.5	0.45	M025D	136.00
M 2.6	0.45	M026D	170.00
M 3	0.5	M030D	104.00
M 3.5	0.6	M035D	110.00
M 4	0.7	M040D	95.00
M 4.5	0.75	M045D	150.00
M 5	0.8	M050D	95.00
M 6	1.0	M060D	95.00
M 7	1.0	M070D	110.00
M 8	1.25	M080D	97.00
M 9	1.25	M090D	131.00
M 10	1.5	M100D	108.00
M 11	1.5	M110D	155.00
M 12	1.75	M120D	120.00
M 14	2.0	M140D	129.00
M 16	2.0	M160D	148.00
M 18	2.5	M180D	175.00
M 20	2.5	M200D	189.00
M 22	2.5	M220D	213.00
M 24	3.0	M240D	223.00
M 27	3.0	M270D	211.00
M 30	3.5	M300D	275.00
M 33	3.5	M330D	310.00
M 36	4.0	M360D	325.00
M 39	4.0	M390D	365.00
M 42	4.5	M420D	375.00
M 45	4.5	M450D	400.00
M 48	5.0	M480D	420.00
M 52	5.0	M520D	510.00
M 56	5.5	M560D	480.00
M 60	5.5	M600D	650.00
M 64	6.0	M640D	685.00
M 68	6.0	M680D	730.00

Ring gauges have go and nogo seperate 2 pcs and the price is for set of total 2 pcs.
Halka mastarlar geçer ve geçmez olarak 2 parçalıdır, fiyat toplam 2 parçalı takım fiyatıdır.

METRIC FINE THREAD PLUG GAUGES Tol. 6H
METRİK İNCE DİŞ TAMPON MASTARLAR Tol. 6H



METRIC FINE PLUG GAUGE / *METRİK İNCE TAMPON MASTAR*

M. FINE *M. İNCE*	CODE *KOD*	EURO
M 1 x 0.2 *	M01002E	333.00
M 1.2 x 0.2 *	M01202E	330.00
M 1.4 x 0.2 *	M01402E	322.00
M 1.6 x 0.2 *	M01602E	306.00
M 1.8 x 0.2 *	M01802E	301.00
M 2 x 0.2	M02002E	293.00
M 2 x 0.25	M020025E	216.00
M 2.5 x 0.25	M02502E	210.00
M 3 x 0.25	M03002E	210.00
M 3 x 0.35	M03003E	138.00
M 3.5 x 0.35	M03503E	138.00
M 4 x 0.35	M04003E	131.00
M 4 x 0.5	M04005E	104.00
M 4.5 x 0.5	M04505E	126.00
M 5 x 0.5	M05005E	100.00
M 6 x 0.5	M06005E	100.00
M 6 x 0.75	M06007E	70.00
M 7 x 0.5	M07005E	102.00
M 7 x 0.75	M07007E	72.00
M 8 x 0.5	M08005E	103.00
M 8 x 0.75	M08007E	71.00
M 8 x 1.0	M08010E	62.00
M 9 x 0.5	M09005E	118.00
M 9 x 0.75	M09007E	80.00
M 9 x 1.0	M09010E	68.00
M 10 x 0.5	M10005E	115.00
M 10 x 0.75	M10007E	76.00
M 10 x 1.0	M10010E	65.00
M 10 x 1.25	M10012E	76.00
M 11 x 0.5	M11005E	131.00
M 11 x 0.75	M11007E	86.00
M 11 x 1.0	M11010E	73.00
M 12 x 0.5	M12005E	123.00
M 12 x 0.75	M12007E	81.00
M 12 x 1.0	M12010E	71.00
M 12 x 1.25	M12012E	81.00
M 12 x 1.5	M12015E	65.00
M 13 x 0.75	M13007E	89.00
M 13 x 1.0	M13010E	83.00

M. FINE *M. İNCE*	CODE *KOD*	EURO
M 13 x 1.5	M13015E	135.00
M 14 x 0.5	M14005E	135.00
M 14 x 0.75	M14007E	89.00
M 14 x 1.0	M14010E	76.00
M 14 x 1.25	M14012E	94.00
M 14 x 1.5	M14015E	69.00
M 15 x 0.75	M15007E	95.00
M 15 x 1.0	M15010E	85.00
M 15 x 1.5	M15015E	85.00
M 16 x 0.5	M16005E	151.00
M 16 x 0.75	M16007E	95.00
M 16 x 1.0	M16010E	81.00
M 16 x 1.25	M16012E	224.00
M 16 x 1.5	M16015E	73.00
M 17 x 1.0	M17010E	92.00
M 17 x 1.5	M17015E	119.00
M 18 x 0.5	M18005E	170.00
M 18 x 0.75	M18007E	100.00
M 18 x 1.0	M18010E	84.00
M 18 x 1.25	M18012E	264.00
M 18 x 1.5	M18015E	77.00
M 18 x 2.0	M18020E	86.00
M 19 x 0.75	M19007E	118.00
M 19 x 1.0	M19010E	101.00
M 19 x 1.5	M19015E	179.00
M 20 x 0.5	M20005E	190.00
M 20 x 0.75	M20007E	111.00
M 20 x 1.0	M20010E	91.00
M 20 x 1.25	M20012E	281.00
M 20 x 1.5	M20015E	83.00
M 20 x 2.0	M20020E	89.00
M 21 x 1.0	M21010E	115.00
M 21 x 1.5	M21015E	195.00
M 22 x 0.75	M22007E	131.00
M 22 x 1.0	M22010E	103.00
M 22 x 1.25	M22012E	291.00
M 22 x 1.5	M22015E	91.00
M 22 x 2.0	M22020E	95.00
M 23 x 1.0	M23010E	125.00

* Indicated gauges are with Tol. 4H / * *işaretli mastarlar Tol. 4H dır.*

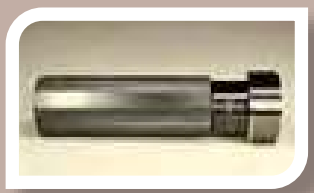
METRIC FINE THREAD PLUG GAUGES Tol. 6H
METRİK İNCE DİŞ TAMPON MASTARLAR Tol. 6H

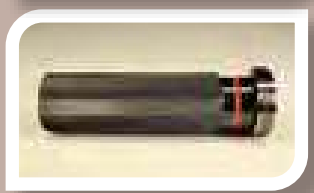
METRIC FINE PLUG GAUGE / *METRİK İNCE TAMPON MASTAR*



M. FINE *M. İNCE*	CODE *KOD*	EURO
M 24 x 1.0	M24010E	110.00
M 24 x 1.25	M24012E	296.00
M 24 x 1.5	M24015E	98.00
M 24 x 2.0	M24020E	101.00
M 25 x 1.0	M25010E	122.00
M 25 x 1.5	M25015E	102.00
M 25 x 2.0	M25020E	107.00
M 26 x 1.0	M26010E	123.00
M 26 x 1.5	M26015E	105.00
M 26 x 2.0	M26020E	111.00
M 27 x 1.0	M27010E	131.00
M 27 x 1.5	M27015E	108.00
M 27 x 2.0	M27020E	110.00
M 28 x 1.0	M28010E	133.00
M 28 x 1.5	M28015E	111.00
M 28 x 2.0	M28020E	117.00
M 30 x 1.0	M30010E	136.00
M 30 x 1.5	M30015E	120.00
M 30 x 2.0	M30020E	121.00
M 30 x 3.0	M30030E	146.00
M 32 x 1.0	M32010E	140.00
M 32 x 1.5	M32015E	123.00
M 32 x 2.0	M32020E	126.00
M 33 x 1.0	M33010E	146.00
M 33 x 1.5	M33015E	126.00
M 33 x 2.0	M33020E	130.00
M 33 x 3.0	M33030E	158.00
M 34 x 1.0	M34010E	150.00
M 34 x 1.5	M34015E	133.00
M 34 x 2.0	M34020E	173.00
M 35 x 1.0	M35010E	158.00
M 35 x 1.5	M35015E	132.00
M 35 x 2.0	M35020E	177.00
M 36 x 1.0	M36010E	162.00
M 36 x 1.5	M36015E	135.00
M 36 x 2.0	M36020E	140.00
M 36 x 3.0	M36030E	155.00
M 38 x 1.0	M38010E	174.00
M 38 x 1.5	M38015E	147.00
M 38 x 2.0	M38020E	153.00

M. FINE *M. İNCE*	CODE *KOD*	EURO
M 39 x 1.0	M39010E	229.00
M 39 x 1.5	M39015E	157.00
M 39 x 2.0	M39020E	157.00
M 39 x 3.0	M39030E	189.00
M 40 x 1.0	M40010E	187.00
M 40 x 1.5	M40015E	155.00
M 40 x 2.0	M40020E	163.00
M 42 x 1.0 *	M42010E	217.00
M 42 x 1.5 *	M42015E	188.00
M 42 x 2.0*	M42020E	194.00
M 45 x 1.0*	M45010E	231.00
M 45 x 1.5*	M45015E	200.00
M 45 x 2.0*	M45020E	206.00
M 48 x 1.5*	M48015E	212.00
M 48 x 2.0*	M48020E	218.00
M 50 x 1.5*	M50015E	218.00
M 50 x 2.0*	M50020E	224.00
M 52 x 1.5*	M52015E	227.00
M 52 x 2.0*	M52020E	233.00
M 55 x 1.5*	M55015E	241.00
M 55 x 2.0*	M55020E	248.00
M 56 x 1.5*	M56015E	246.00
M 56 x 2.0*	M56020E	252.00
M 58 x 1.5*	M58015E	255.00
M 58 x 2.0*	M58020E	262.00
M 60 x 1.5*	M60015E	265.00
M 60 x 2.0*	M60020E	272.00
M 62 x 1.5 *	M62015E	272.00
M 64 x 1.5 *	M64015E	282.00
M 65 x 1.5 *	M65015E	295.00
M 68 x 1.5 *	M68015E	302.00
M 70 x 1.5 *	M70015E	310.00
M 72 x 1.5 *	M72015E	329.00
M 75 x 1.5 *	M75015E	344.00
M 76 x 1.5 *	M76015E	429.00
M 78 x 1.5 *	M78015E	380.00
M 80 x 1.5 *	M80015E	380.00
M 82 x 1.5 *	M82015E	392.00
M 85 x 1.5 *	M85015E	404.00





* indicated plug gauges have
go and nogo seperate 2 pcs
and the price is for set of total 2 pcs.

** işaretli tampon mastarlar*
geçer ve geçmez olarak 2 parçalıdır,
fiyat toplam 2 parçalı takım fiyatıdır.

METRIC FINE THREAD RING GAUGES Tol. 6g
METRİK İNCE DİŞ HALKA MASTARLAR Tol. 6g



METRIC FINE RING GAUGE / *METRİK İNCE HALKA MASTAR*

M. FINE *M. İNCE*	CODE *KOD*	EURO
M 1 x 0.2 *	M01002D	972.00
M 1.2 x 0.2 *	M01202D	949.00
M 1.4 x 0.2 *	M01402D	925.00
M 1.6 x 0.2	M01602D	890.00
M 1.8 x 0.2	M01802D	850.00
M 2 x 0.2	M02002D	838.00
M 2 x 0.25	M020025D	634.00
M 2.5 x 0.25	M02502D	615.00
M 3 x 0.25	M03002D	602.00
M 3 x 0.35	M03003D	175.00
M 3.5 x 0.35	M03503D	172.00
M 4 x 0.35	M04003D	159.00
M 4 x 0.5	M04005D	144.00
M 4.5 x 0.5	M04505D	190.00
M 5 x 0.5	M05005D	144.00
M 6 x 0.5	M06005D	146.00
M 6 x 0.75	M06007D	136.00
M 7 x 0.5	M07005D	152.00
M 7 x 0.75	M07007D	145.00
M 8 x 0.5	M08005D	156.00
M 8 x 0.75	M08007D	145.00
M 8 x 1.0	M08010D	105.00
M 9 x 0.5	M09005D	170.00
M 9 x 0.75	M09007D	161.00
M 9 x 1.0	M09010D	134.00
M 10 x 0.5	M10005D	175.00
M 10 x 0.75	M10007D	152.00
M 10 x 1.0	M10010D	117.00
M 10 x 1.25	M10012D	138.00
M 11 x 0.5	M11005D	213.00
M 11 x 0.75	M11007D	173.00
M 11 x 1.0	M11010D	152.00
M 12 x 0.5	M12005D	201.00
M 12 x 0.75	M12007D	164.00
M 12 x 1.0	M12010D	133.00
M 12 x 1.25	M12012D	175.00
M 12 x 1.5	M12015D	126.00
M 13 x 0.75	M13007D	180.00
M 13 x 1.0	M13010D	179.00

M. FINE *M. İNCE*	CODE *KOD*	EURO
M 13 x 1.5	M13015D	290.00
M 14 x 0.5	M14005D	244.00
M 14 x 0.75	M14007D	180.00
M 14 x 1.0	M14010D	144.00
M 14 x 1.25	M14012D	195.00
M 14 x 1.5	M14015D	134.00
M 15 x 0.75	M15007D	192.00
M 15 x 1.0	M15010D	188.00
M 15 x 1.5	M15015D	180.00
M 16 x 0.5	M16005D	270.00
M 16 x 0.75	M16007D	192.00
M 16 x 1.0	M16010D	157.00
M 16 x 1.25	M16012D	518.00
M 16 x 1.5	M16015D	147.00
M 17 x 1.0	M17010D	182.00
M 17 x 1.5	M17015D	221.00
M 18 x 0.5	M18005D	305.00
M 18 x 0.75	M18007D	203.00
M 18 x 1.0	M18010D	173.00
M 18 x 1.25	M18012D	555.00
M 18 x 1.5	M18015D	158.00
M 18 x 2.0	M18020D	198.00
M 19 x 0.75	M19007D	213.00
M 19 x 1.0	M19010D	211.00
M 19 x 1.5	M19015D	317.00
M 20 x 0.5	M20005D	327.00
M 20 x 0.75	M20007D	224.00
M 20 x 1.0	M20010D	186.00
M 20 x 1.25	M20012D	577.00
M 20 x 1.5	M20015D	175.00
M 20 x 2.0	M20020D	187.00
M 21 x 1.0	M21010D	227.00
M 21 x 1.5	M21015D	431.00
M 22 x 0.75	M22007D	265.00
M 22 x 1.0	M22010D	206.00
M 22 x 1.25	M22012D	615.00
M 22 x 1.5	M22015D	187.00
M 22 x 2.0	M22020D	199.00
M 23 x 1.0	M23010D	237.00

* Indicated gauges are with Tol. 6h / * *işaretli mastarlar Tol. 6h dir.*

Ring gauges have go and nogo seperate 2 pcs and the price is for set of total 2 pcs.
Halka mastarlar geçer ve geçmez olarak 2 parçalıdır, fiyat toplam 2 parçalı takım fiyatıdır.

METRIC FINE THREAD RING GAUGES Tol. 6g
METRİK İNCE DİŞ HALKA MASTARLAR Tol. 6g

METRIC FINE RING GAUGE / *METRİK İNCE HALKA MASTAR*



M. FINE *M. İNCE*	CODE *KOD*	EURO
M 24 x 1.0	M24010D	220.00
M 24 x 1.25	M24012D	674.00
M 24 x 1.5	M24015D	199.00
M 24 x 2.0	M24020D	208.00
M 25 x 1.0	M25010D	233.00
M 25 x 1.5	M25015D	208.00
M 25 x 2.0	M25020D	220.00
M 26 x 1.0	M26010D	241.00
M 26 x 1.5	M26015D	215.00
M 26 x 2.0	M26020D	231.00
M 27 x 1.0	M27010D	247.00
M 27 x 1.5	M27015D	223.00
M 27 x 2.0	M27020D	230.00
M 28 x 1.0	M28010D	257.00
M 28 x 1.5	M28015D	227.00
M 28 x 2.0	M28020D	244.00
M 30 x 1.0	M30010D	260.00
M 30 x 1.5	M30015D	239.00
M 30 x 2.0	M30020D	248.00
M 30 x 3.0	M30030D	280.00
M 32 x 1.0	M32010D	292.00
M 32 x 1.5	M32015D	252.00
M 32 x 2.0	M32020D	262.00
M 33 x 1.0	M33010D	297.00
M 33 x 1.5	M33015D	260.00
M 33 x 2.0	M33020D	265.00
M 33 x 3.0	M33030D	312.00
M 34 x 1.0	M34010D	302.00
M 34 x 1.5	M34015D	287.00
M 34 x 2.0	M34020D	347.00
M 35 x 1.0	M35010D	310.00
M 35 x 1.5	M35015D	270.00
M 35 x 2.0	M35020D	352.00
M 36 x 1.0	M36010D	319.00
M 36 x 1.5	M36015D	277.00
M 36 x 2.0	M36020D	282.00
M 36 x 3.0	M36030D	312.00
M 38 x 1.0	M38010D	332.00
M 38 x 1.5	M38015D	292.00
M 38 x 2.0	M38020D	305.00

M. FINE *M. İNCE*	CODE *KOD*	EURO
M 39 x 1.0	M39010D	411.00
M 39 x 1.5	M39015D	319.00
M 39 x 2.0	M39020D	310.00
M 39 x 3.0	M39030D	327.00
M 40 x 1.0	M40010D	362.00
M 40 x 1.5	M40015D	307.00
M 40 x 2.0	M40020D	324.00
M 42 x 1.0	M42010D	372.00
M 42 x 1.5	M42015D	324.00
M 42 x 2.0	M42020D	329.00
M 45 x 1.0	M45010D	396.00
M 45 x 1.5	M45015D	342.00
M 45 x 2.0	M45020D	349.00
M 48 x 1.5	M48015D	359.00
M 48 x 2.0	M48020D	367.00
M 50 x 1.5	M50015D	374.00
M 50 x 2.0	M50020D	381.00
M 52 x 1.5	M52015D	391.00
M 52 x 2.0	M52020D	399.00
M 55 x 1.5	M55015D	406.00
M 55 x 2.0	M55020D	424.00
M 56 x 1.5	M56015D	414.00
M 56 x 2.0	M56020D	431.00
M 58 x 1.5	M58015D	424.00
M 58 x 2.0	M58020D	443.00
M 60 x 1.5	M60015D	438.00
M 60 x 2.0	M60020D	461.00
M 62 x 1.5	M62015D	456.00
M 64 x 1.5	M64015D	471.00
M 65 x 1.5	M65015D	478.00
M 68 x 1.5	M68015D	498.00
M 70 x 1.5	M70015D	520.00
M 72 x 1.5	M72015D	535.00
M 75 x 1.5	M75015D	567.00
M 76 x 1.5	M76015D	617.00
M 78 x 1.5	M78015D	610.00
M 80 x 1.5	M80015D	617.00
M 82 x 1.5	M82015D	644.00
M 85 x 1.5	M85015D	667.00

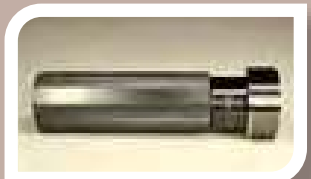
Ring gauges have go and nogo seperate 2 pcs and the price is for set of total 2 pcs.
Halka mastarlar geçer ve geçmez olarak 2 parçalıdır, fiyat toplam 2 parçalı takım fiyatıdır.

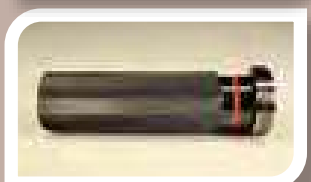
UNC PLUG GAUGES Tol.2B
UNC TAMPON MASTARLAR Tol.2B



UNC PLUG GAUGE / *UNC TAMPON MASTAR*

UNC	PITCH *HATVE*	CODE *KOD*	EURO
UNC Nr. 1	64	MUNCN01E	130.00
UNC Nr. 2	56	MUNCN02E	98.00
UNC Nr. 3	48	MUNCN03E	98.00
UNC Nr. 4	40	MUNCN04E	83.00
UNC Nr. 5	40	MUNCN05E	83.00
UNC Nr. 6	32	MUNCN06E	70.00
UNC Nr. 8	32	MUNCN08E	66.00
UNC Nr. 10	24	MUNCN10E	66.00
UNC Nr. 12	24	MUNCN12E	70.00
UNC 1/4"	20	MUNC014E	63.00
UNC 5/16"	18	MUNC051E	63.00
UNC 3/8"	16	MUNC038E	65.00
UNC 7/16"	14	MUNC071E	71.00
UNC 1/2"	13	MUNC012E	73.00
UNC 9/16"	12	MUNC091E	79.00
UNC 5/8"	11	MUNC058E	81.00
UNC 3/4"	10	MUNC034E	93.00
UNC 7/8"	9	MUNC078E	108.00
UNC 1"	8	MUNC100E	122.00
UNC 1-1/8"	7	MUNC118E	140.00
UNC 1-1/4"	7	MUNC114E	150.00
UNC 1-3/8"	6	MUNC138E	180.00
UNC 1-1/2"	6	MUNC112E	195.00
UNC 1-3/4" *	5	MUNC134E	287.00
UNC 2" *	4.5	MUNC200E	327.00
UNC 2-1/4" *	4.5	MUNC214E	354.00
UNC 2-1/2" *	4	MUNC212E	400.00
UNC 2-3/4" *	4	MUNC234E	440.00





* indicated plug gauges have go and nogo seperate 2 pcs and the price is for set of total 2 pcs.

** işaretli tampon mastarlar geçer ve geçmez olarak 2 parçalıdır, fiyat toplam 2 parçalı takım fiyatıdır.*

UNC RING GAUGES Tol. 2A
UNC HALKA MASTARLAR Tol. 2A

UNC RING GAUGE / *UNC HALKA MASTAR*



UNC	PITCH *HATVE*	CODE *KOD*	EURO
UNC Nr. 1	64	MUNCN01D	232.00
UNC Nr. 2	56	MUNCN02D	175.00
UNC Nr. 3	48	MUNCN03D	210.00
UNC Nr. 4	40	MUNCN04D	153.00
UNC Nr. 5	40	MUNCN05D	140.00
UNC Nr. 6	32	MUNCN06D	120.00
UNC Nr. 8	32	MUNCN08D	113.00
UNC Nr. 10	24	MUNCN10D	111.00
UNC Nr. 12	24	MUNCN12D	129.00
UNC 1/4"	20	MUNC014D	106.00
UNC 5/16"	18	MUNC051D	113.00
UNC 3/8"	16	MUNC038D	122.00
UNC 7/16"	14	MUNC071D	133.00
UNC 1/2"	13	MUNC012D	146.00
UNC 9/16"	12	MUNC091D	201.00
UNC 5/8"	11	MUNC058D	171.00
UNC 3/4"	10	MUNC034D	212.00
UNC 7/8"	9	MUNC078D	258.00
UNC 1"	8	MUNC100D	280.00
UNC 1-1/8"	7	MUNC118D	375.00
UNC 1-1/4"	7	MUNC114D	402.00
UNC 1-3/8"	6	MUNC138D	435.00
UNC 1-1/2"	6	MUNC112D	475.00
UNC 1-3/4"	5	MUNC134D	600.00
UNC 2"	4.5	MUNC200D	680.00
UNC 2-1/4"	4.5	MUNC214D	780.00
UNC 2-1/2"	4	MUNC212D	870.00
UNC 2-3/4"	4	MUNC234D	970.00

Ring gauges have go and nogo seperate 2 pcs and the price is for set of total 2 pcs.
Halka mastarlar geçer ve geçmez olarak 2 parçalıdır, fiyat toplam 2 parçalı takım fiyatıdır.

UNF PLUG GAUGES Tol.2B
UNF TAMPON MASTARLAR Tol.2B



UNF PLUG GAUGE / *UNF TAMPON MASTAR*

UNF	PITCH *HATVE*	CODE *KOD*	EURO
UNF Nr.0	80	MUNFN00E	128.00
UNF Nr.1	72	MUNFN01E	115.00
UNF Nr.2	64	MUNFN02E	122.00
UNF Nr.3	56	MUNFN03E	114.00
UNF Nr.4	48	MUNFN04E	99.00
UNF Nr.5	44	MUNFN05E	89.00
UNF Nr.6	40	MUNFN06E	75.00
UNF Nr.8	36	MUNFN08E	71.00
UNF Nr.10	32	MUNFN10E	65.00
UNF Nr.12	28	MUNFN12E	71.00
UNF 1/4"	28	MUNF014E	64.00
UNF 5/16"	24	MUNF051E	64.00
UNF 3/8"	24	MUNF038E	66.00
UNF 7/16"	20	MUNF071E	69.00
UNF 1/2"	20	MUNF012E	74.00
UNF 9/16"	18	MUNF091E	77.00
UNF 5/8"	18	MUNF058E	82.00
UNF 3/4"	16	MUNF034E	92.00
UNF 7/8"	14	MUNF078E	103.00
UNF 1"	12	MUNF100E	113.00
UNF 1-1/8"	12	MUNF118E	129.00
UNF 1-1/4"	12	MUNF114E	137.00
UNF 1-3/8"	12	MUNF138E	154.00
UNF 1-1/2"	12	MUNF112E	170.00

UNF RING GAUGES Tol. 2A
UNF HALKA MASTARLAR Tol. 2A

UNF RING GAUGE / *UNF HALKA MASTAR*



UNF	PITCH *HATVE*	CODE *KOD*	EURO
UNF Nr.0	80	MUNFN00D	255.00
UNF Nr.1	72	MUNFN01D	214.00
UNF Nr.2	64	MUNFN02D	214.00
UNF Nr.3	56	MUNFN03D	214.00
UNF Nr.4	48	MUNFN04D	189.00
UNF Nr.5	44	MUNFN05D	152.00
UNF Nr.6	40	MUNFN06D	146.00
UNF Nr.8	36	MUNFN08D	135.00
UNF Nr.10	32	MUNFN10D	107.00
UNF Nr.12	28	MUNFN12D	129.00
UNF 1/4"	28	MUNF014D	106.00
UNF 5/16"	24	MUNF051D	113.00
UNF 3/8"	24	MUNF038D	123.00
UNF 7/16"	20	MUNF071D	132.00
UNF 1/2"	20	MUNF012D	147.00
UNF 9/16"	18	MUNF091D	158.00
UNF 5/8"	18	MUNF058D	174.00
UNF 3/4"	16	MUNF034D	203.00
UNF 7/8"	14	MUNF078D	238.00
UNF 1"	12	MUNF100D	268.00
UNF 1-1/8"	12	MUNF118D	301.00
UNF 1-1/4"	12	MUNF114D	330.00
UNF 1-3/8"	12	MUNF138D	360.00
UNF 1-1/2"	12	MUNF112D	380.00

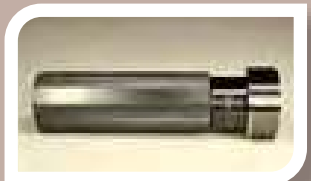
Ring gauges have go and nogo seperate 2 pcs and the price is for set of total 2 pcs.
Halka mastarlar geçer ve geçmez olarak 2 parçalıdır, fiyat toplam 2 parçalı takım fiyatıdır.

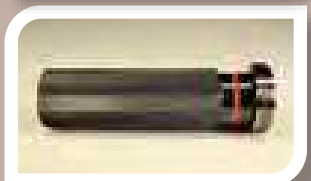
BSP - G DIN EN ISO 228 PLUG GAUGES
BSP - G DIN EN ISO 228 TAMPON MASTARLAR



BSP - G PLUG GAUGE / *BSP - G TAMPON MASTAR*

BSP - G	PITCH *HATVE*	CODE *KOD*	EURO
G 1/16"	28	MG011E	92.00
G 1/8"	28	MG018E	63.00
G 1/4"	19	MG014E	69.00
G 3/8"	19	MG038E	79.00
G 1/2"	14	MG012E	91.00
G 5/8"	14	MG058E	100.00
G 3/4"	14	MG034E	106.00
G 7/8"	14	MG078E	130.00
G 1"	11	MG100E	130.00
G 1-1/8"	11	MG118E	158.00
G 1-1/4" *	11	MG114E	185.00
G 1-1/2" *	11	MG112E	215.00
G 1-3/4" *	11	MG134E	255.00
G 2" *	11	MG200E	266.00
G 2-1/4" *	11	MG214E	322.00
G 2-1/2" *	11	MG212E	333.00
G 2-3/4" *	11	MG234E	393.00
G 3" *	11	MG300E	391.00
G 3-1/2 *	11	MG312E	473.00
G 4" *	11	MG400E	565.00
G 4-1/2" *	11	MG412E	715.00
G 5" *	11	MG500E	785.00
G 5-1/2" *	11	MG512E	850.00
G 6" *	11	MG600E	935.00





* indicated plug gauges have go and nogo seperate 2 pcs and the price is for set of total 2 pcs.

* *işaretli tampon mastarlar geçer ve geçmez olarak 2 parçalıdır, fiyat toplam 2 parçalı takım fiyatıdır.*

BSP - G DIN EN ISO 228 RING GAUGES Tol.A
BSP - G DIN EN ISO 228 HALKA MASTARLAR Tol. A

BSP - G RING GAUGE / *BSP - G HALKA MASTAR*



BSP - G	PITCH *HATVE*	CODE *KOD*	EURO
G 1/16"	28	MG011D	210.00
G 1/8"	28	MG018D	110.00
G 1/4"	19	MG014D	131.00
G 3/8"	19	MG038D	156.00
G 1/2"	14	MG012D	179.00
G 5/8"	14	MG058D	217.00
G 3/4"	14	MG034D	218.00
G 7/8"	14	MG078D	282.00
G 1"	11	MG100D	266.00
G 1-1/8"	11	MG118D	319.00
G 1-1/4"	11	MG114D	328.00
G 1-1/2"	11	MG112D	368.00
G 1-3/4"	11	MG134D	432.00
G 2"	11	MG200D	450.00
G 2-1/4"	11	MG214D	545.00
G 2-1/2"	11	MG212D	614.00
G 2-3/4"	11	MG234D	662.00
G 3"	11	MG300D	715.00
G 3-1/2	11	MG312D	862.00
G 4"	11	MG400D	1.000.00
G 4-1/2"	11	MG412D	1.322.00
G 5"	11	MG500D	1.515.00
G 5-1/2"	11	MG512D	1.700.00
G 6"	11	MG600D	1.900.00

Ring gauges have go and nogo seperate 2 pcs and the price is for set of total 2 pcs.
Halka mastarlar geçer ve geçmez olarak 2 parçalıdır, fiyat toplam 2 parçalı takım fiyatıdır.

NPT GAUGES ASME B1.20.1 Taper 1:16
NPT MASTARLAR



NPT PLUG GAUGE / *NPT TAMPON MASTAR*

NPT (Taper) *NPT (Konik)*	PITCH *HATVE*	CODE *KOD*	EURO
NPT 1/16"	27	MNPT011E	173.00
NPT 1/8"	27	MNPT018E	161.00
NPT 1/4"	18	MNPT014E	172.00
NPT 3/8"	18	MNPT038E	185.00
NPT 1/2"	14	MNPT012E	203.00
NPT 3/4"	14	MNPT034E	229.00
NPT 1"	11.5	MNPT100E	263.00
NPT 1-1/4"	11.5	MNPT114E	344.00
NPT 1-1/2"	11.5	MNPT112E	390.00
NPT 2"	11.5	MNPT200E	480.00
NPT 2-1/2"	8	MNPT212E	570.00
NPT 3"	8	MNPT300E	690.00
NPT 3-1/2"	8	MNPT312E	900.00
NPT 4"	8	MNPT400E	1.020.00

NPT taper plug gauges have go and no go on one single side.
NPT konik tampon mastarlarda geçer ve geçmez tek taraftadır.



NPT RING GAUGE / *NPT HALKA MASTAR*

NPT (Taper) *NPT (Konik)*	PITCH *HATVE*	CODE *KOD*	EURO
NPT 1/16"	27	MNPT011D	295.00
NPT 1/8"	27	MNPT018D	272.00
NPT 1/4"	18	MNPT014D	280.00
NPT 3/8"	18	MNPT038D	295.00
NPT 1/2"	14	MNPT012D	320.00
NPT 3/4"	14	MNPT034D	350.00
NPT 1"	11.5	MNPT100D	400.00
NPT 1-1/4"	11.5	MNPT114D	465.00
NPT 1-1/2"	11.5	MNPT112D	510.00
NPT 2"	11.5	MNPT200D	625.00
NPT 2-1/2"	8	MNPT212D	710.00
NPT 3"	8	MNPT300D	910.00
NPT 3-1/2"	8	MNPT312D	1.250.00
NPT 4"	8	MNPT400D	1.500.00

NPT taper ring gauges have go and no go on one single piece.
NPT konik halka mastarlarda geçer ve geçmez tek parça üzerindedir.

NPTF GAUGES ANSI B1.20.3 Taper 1:16
NPTF MASTARLAR

NPTF PLUG GAUGE / *NPTF TAMPON MASTAR*

NPTF (Taper) *NPTF (Konik)*	PITCH *HATVE*	CODE *KOD*	EURO
NPTF 1/16"	27	MNPTF011E	188.00
NPTF 1/8"	27	MNPTF018E	195.00
NPTF 1/4"	18	MNPTF014E	207.00
NPTF 3/8"	18	MNPTF038E	223.00
NPTF 1/2"	14	MNPTF012E	242.00
NPTF 3/4"	14	MNPTF034E	270.00
NPTF 1"	11.5	MNPTF100E	312.00
NPTF 1-1/4"	11.5	MNPTF114E	377.00
NPTF 1-1/2"	11.5	MNPTF112E	427.00
NPTF 2"	11.5	MNPTF200E	525.00
NPTF 2-1/2"	8	MNPTF212E	625.00
NPTF 3"	8	MNPTF300E	760.00



NPTF taper plug gauges have go and no go on one single side.
NPTF konik tampon mastarlarda geçer ve geçmez tek taraftadır.

NPTF RING GAUGE / *NPTF HALKA MASTAR*

NPTF (Taper) *NPTF (Konik)*	PITCH *HATVE*	CODE *KOD*	EURO
NPTF 1/16"	27	MNPTF011D	325.00
NPTF 1/8"	27	MNPTF018D	300.00
NPTF 1/4"	18	MNPTF014D	310.00
NPTF 3/8"	18	MNPTF038D	325.00
NPTF 1/2"	14	MNPTF012D	350.00
NPTF 3/4"	14	MNPTF034D	385.00
NPTF 1"	11.5	MNPTF100D	435.00
NPTF 1-1/4"	11.5	MNPTF114D	510.00
NPTF 1-1/2"	11.5	MNPTF112D	560.00
NPTF 2"	11.5	MNPTF200D	682.00
NPTF 2-1/2"	8	MNPTF212D	785.00
NPTF 3"	8	MNPTF300D	1.000.00



NPTF taper ring gauges have go and no go on one single piece.
NPTF konik halka mastarlarda geçer ve geçmez tek parça üzerindedir.

DIN2999 - R GAUGES
DIN2999 - R MASTARLAR



Withworth pipe thread DIN 2999
Internal parallele and external taper thread
Withworth boru dişi DIN 2999
İç vida düz ve dış vida konik

DIN2999 Plug gauges are taper.
They are used for gauging
DIN 2999 internal parallel thread
They are marked as: "Rp DIN2999"
DIN2999 Tampon mastarlar koniktir. DIN2999 düz iç vida kontrolü için kullanılır.
"Rp DIN2999" olarak markalanmıştır

DIN2999 - R PLUG GAUGE / *DIN2999 - R TAMPON MASTAR*

R DIN2999 Taper / *Konik*	PITCH *HATVE*	CODE *KOD*	EURO
DIN2999 R 1/8"	28	M2999R018E	192.00
DIN2999 R 1/4"	19	M2999R014E	204.00
DIN2999 R 3/8"	19	M2999R038E	219.00
DIN2999 R 1/2"	14	M2999R012E	239.00
DIN2999 R 3/4"	14	M2999R034E	267.00
DIN2999 R 1"	11	M2999R100E	314.00
DIN2999 R 1-1/4"	11	M2999R114E	373.00
DIN2999 R 1-1/2"	11	M2999R112E	420.00
DIN2999 R 2"	11	M2999R200E	517.00
DIN2999 R 2-1/2"	11	M2999R212E	607.00
DIN2999 R 3"	11	M2999R300E	718.00
DIN2999 R 4"	11	M2999R400E	1.015.00

DIN2999 taper plug gauges have go and no go on one single side.
DIN2999 konik tampon mastarlarda geçer ve geçmez tek taraftadır.



Withworth pipe thread DIN 2999
Internal parallele and external taper thread
Withworth boru dişi DIN 2999
İç vida düz ve dış vida konik

DIN2999 Ring gauges are parallele.
They are used for gauging
DIN 2999 external taper thread
They are marked as: "Rr DIN2999"
DIN2999 Halka mastarlar düzdür. DIN2999 konik dış vida kontrolü için kullanılır.
"Rr DIN2999" olarak markalanmıştır

DIN2999 - R RING GAUGE / *DIN2999 - R HALKA MASTAR*

R DIN2999	PITCH *HATVE*	CODE *KOD*	EURO
DIN2999 R 1/8"	28	M2999R018D	141.00
DIN2999 R 1/4"	19	M2999R014D	152.00
DIN2999 R 3/8"	19	M2999R038D	183.00
DIN2999 R 1/2"	14	M2999R012D	219.00
DIN2999 R 3/4"	14	M2999R034D	250.00
DIN2999 R 1"	11	M2999R100D	270.00
DIN2999 R 1-1/4"	11	M2999R114D	321.00
DIN2999 R 1-1/2"	11	M2999R112D	391.00
DIN2999 R 2"	11	M2999R200D	436.00
DIN2999 R 2-1/2"	11	M2999R212D	479.00
DIN2999 R 3"	11	M2999R300D	555.00
DIN2999 R 4"	11	M2999R400D	681.00

DIN2999 parallele ring gauges have go and no go on one single piece.
DIN2999 düz halka mastarlarda geçer ve geçmez tek parça üzerindedir.

ISO7-2:2000 and DIN EN 10226 GAUGES
ISO7-2:2000 ve DIN EN 10226 MASTARLAR

ISO7-2:2000 and DIN EN 10226 PLUG GAUGE
ISO7-2:2000 ve DIN EN 10226 TAMPON MASTAR

R ISO 7-2:2000 Taper / *Konik*	PITCH *HATVE*	CODE *KOD*	EURO
ISO7-2:2000 R 1/8"	28	MISO7R018E	212.00
ISO7-2:2000 R 1/4"	19	MISO7R014E	226.00
ISO7-2:2000 R 3/8"	19	MISO7R038E	243.00
ISO7-2:2000 R 1/2"	14	MISO7R012E	263.00
ISO7-2:2000 R 3/4"	14	MISO7R034E	295.00
ISO7-2:2000 R 1"	11	MISO7R100E	346.00
ISO7-2:2000 R 1-1/4"	11	MISO7R114E	413.00
ISO7-2:2000 R 1-1/2"	11	MISO7R112E	466.00
ISO7-2:2000 R 2"	11	MISO7R200E	571.00
ISO7-2:2000 R 2-1/2"	11	MISO7R212E	672.00
ISO7-2:2000 R 3"	11	MISO7R300E	800.00
ISO7-2:2000 R 4"	11	MISO7R400E	1.130.00

ISO7-2:2000 taper plug gauges have go and no go on one single side.
ISO7-2:2000 konik tampon mastarlarda geçer ve geçmez tek taraftadır.



Withworth taper pipe thread ISO7 and DIN EN10226 plug gauges are used for gauging ISO 7-1 or DIN EN 10226 Rp internal parallel and Rc internal taper thread.
Plug gauges are taper and they are marked as "ISO7 Rc/Rp No1"

Withworth konik boru dişi ISO7 ve DIN EN10226 tampon mastarlar ISO 7-1 veya DIN EN 10226 Rp düz iç vida ve Rc konik iç vida kontrolü için kullanılır. Tampon mastarlar koniktir "ISO7 Rc/Rp No1" olarak markalanmıştır

ISO7-2:2000 and DIN EN 10226 RING GAUGE
ISO7-2:2000 ve DIN EN 10226 HALKA MASTAR

R ISO 7-2:2000	PITCH *HATVE*	CODE *KOD*	EURO
ISO7-2:2000 R 1/8"	28	MISO7R018D	160.00
ISO7-2:2000 R 1/4"	19	MISO7R014D	170.00
ISO7-2:2000 R 3/8"	19	MISO7R038D	205.00
ISO7-2:2000 R 1/2"	14	MISO7R012D	245.00
ISO7-2:2000 R 3/4"	14	MISO7R034D	280.00
ISO7-2:2000 R 1"	11	MISO7R100D	303.00
ISO7-2:2000 R 1-1/4"	11	MISO7R114D	360.00
ISO7-2:2000 R 1-1/2"	11	MISO7R112D	440.00
ISO7-2:2000 R 2"	11	MISO7R200D	500.00
ISO7-2:2000 R 2-1/2"	11	MISO7R212D	540.00
ISO7-2:2000 R 3"	11	MISO7R300D	620.00
ISO7-2:2000 R 4"	11	MISO7R400D	760.00

ISO7-2:2000 parallele ring gauges have go and no go on one single piece.
ISO7-2:2000 düz halka mastarlarda geçer ve geçmez tek parça üzerindedir.

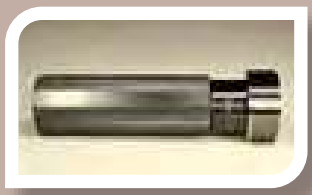


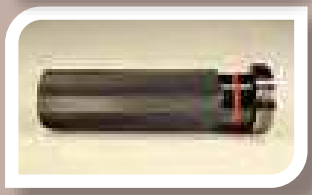
Withworth taper pipe thread ISO7 and DIN EN10226 ring gauges are used for gauging R ISO 7-1 or DIN EN 10226 external taper thread.
ISO 7-2:2000 Ring gauges are parallel and they are marked as "ISO7 R No3"

Withworth konik boru dişi ISO7 ve DIN EN10226 halka mastarlar R ISO 7-1 ve DIN EN 10226 konik dış vida kontrolü için kullanılır.
ISO 7-2:2000 Halka mastarlar düzdür "ISO7 R No3" olarak markalanmıştır

BSW GAUGES
BSW MASTARLAR







* indicated plug gauges have
go and nogo seperate 2 pcs
and the price is for set of total 2 pcs.
** işaretli tampon mastarlar*
geçer ve geçmez olarak 2 parçalıdır,
fiyat toplam 2 parçalı takım fiyatıdır.

BSW PLUG GAUGE / *BSW TAMPON MASTAR*

BSW	PITCH *HATVE*	CODE *KOD*	EURO
BSW 1/8"	40	MBSW018E	135.00
BSW 3/16"	24	MBSW031E	95.00
BSW 1/4"	20	MBSW014E	91.00
BSW 5/16"	18	MBSW051E	94.00
BSW 3/8"	16	MBSW038E	95.00
BSW 7/16"	14	MBSW071E	100.00
BSW 1/2"	12	MBSW012E	106.00
BSW 9/16"	12	MBSW091E	115.00
BSW 5/8"	11	MBSW058E	120.00
BSW 3/4"	10	MBSW034E	137.00
BSW 7/8"	9	MBSW078E	155.00
BSW 1"	8	MBSW100E	179.00
BSW 1-1/8"	7	MBSW118E	200.00
BSW 1-1/4"	7	MBSW114E	214.00
BSW 1-3/8"	6	MBSW138E	238.00
BSW 1-1/2"	6	MBSW112E	263.00
BSW 1-3/4"*	5	MBSW134E	345.00
BSW 2"*	4.5	MBSW200E	405.00



BSW RING GAUGE / *BSW HALKA MASTAR*

BSW	PITCH *HATVE*	CODE *KOD*	EURO
BSW 1/8"	40	MBSW018D	235.00
BSW 3/16"	24	MBSW031D	174.00
BSW 1/4"	20	MBSW014D	167.00
BSW 5/16"	18	MBSW051D	180.00
BSW 3/8"	16	MBSW038D	189.00
BSW 7/16"	14	MBSW071D	199.00
BSW 1/2"	12	MBSW012D	211.00
BSW 9/16"	12	MBSW091D	237.00
BSW 5/8"	11	MBSW058D	253.00
BSW 3/4"	10	MBSW034D	279.00
BSW 7/8"	9	MBSW078D	308.00
BSW 1"	8	MBSW100D	360.00
BSW 1-1/8"	7	MBSW118D	400.00
BSW 1-1/4"	7	MBSW114D	438.00
BSW 1-3/8"	6	MBSW138D	483.00
BSW 1-1/2"	6	MBSW112D	525.00
BSW 1-3/4"	5	MBSW134D	613.00
BSW 2"	4.5	MBSW200D	703.00

Ring gauges have go and nogo seperate
2 pcs and the price is for set of total 2 pcs.
Halka mastarlar geçer ve geçmez olarak
2 parçalıdır, fiyat toplam 2 parçalı takım
fiyatıdır.

BSF GAUGES
BSF MASTARLAR

BSF PLUG GAUGE / *BSF TAMPON MASTAR*



BSF	PITCH *HATVE*	CODE *KOD*	EURO
BSF 3/16"	32	MBSF031E	111.00
BSF 7/32"	28	MBSF073E	119.00
BSF 1/4"	26	MBSF014E	103.00
BSF 9/32"	26	MBSF093E	119.00
BSF 5/16"	22	MBSF051E	103.00
BSF 3/8"	20	MBSF038E	106.00
BSF 7/16"	18	MBSF071E	117.00
BSF 1/2"	16	MBSF012E	117.00
BSF 9/16"	16	MBSF091E	128.00
BSF 5/8"	14	MBSF058E	130.00
BSF 11/16"	14	MBSF111E	164.00
BSF 3/4"	12	MBSF034E	147.00
BSF 7/8"	11	MBSF078E	164.00
BSF 1"	10	MBSF100E	200.00

BSF RING GAUGE / *BSF HALKA MASTAR*



BSF	PITCH *HATVE*	CODE *KOD*	EURO
BSF 3/16"	32	MBSF031D	208.00
BSF 7/32"	28	MBSF073D	223.00
BSF 1/4"	26	MBSF014D	190.00
BSF 9/32"	26	MBSF093D	223.00
BSF 5/16"	22	MBSF051D	200.00
BSF 3/8"	20	MBSF038D	218.00
BSF 7/16"	18	MBSF071D	236.00
BSF 1/2"	16	MBSF012D	240.00
BSF 9/16"	16	MBSF091D	265.00
BSF 5/8"	14	MBSF058D	273.00
BSF 11/16"	14	MBSF111D	328.00
BSF 3/4"	12	MBSF034D	308.00
BSF 7/8"	11	MBSF078D	345.00
BSF 1"	10	MBSF100D	395.00

Ring gauges have go and nogo seperate 2 pcs and the price is for set of total 2 pcs.
Halka mastarlar geçer ve geçmez olarak 2 parçalıdır, fiyat toplam 2 parçalı takım fiyatıdır.

UNEF GAUGES ASME B1.1
UNEF MASTARLAR



UNEF PLUG GAUGES / *UNEF TAMPON MASTARLAR* Tol. 2B

UNEF	PITCH *HATVE*	CODE *KOD*	EURO
UNEF 1/4"	32	MUNEF0140E	85.00
UNEF 5/16	32	MUNEF0516E	86.00
UNEF 3/8"	32	MUNEF0380E	88.00
UNEF 7/16"	28	MUNEF0716E	92.00
UNEF 1/2"	28	MUNEF0120E	93.00
UNEF 9/16"	24	MUNEF0916E	97.00
UNEF 5/8"	24	MUNEF0580E	101.00
UNEF 11/16"	24	MUNEF01116E	105.00
UNEF 3/4"	20	MUNEF0340E	109.00
UNEF 13/16"	20	MUNEF01316E	113.00
UNEF 7/8"	20	MUNEF0780E	120.00
UNEF 15/16"	20	MUNEF01516E	124.00
UNEF 1"	20	MUNEF1000E	129.00
UNEF 1-1/16"	18	MUNEF1116E	136.00
UNEF 1-1/8"	18	MUNEF1180E	142.00
UNEF 1-3/16"	18	MUNEF1316E	151.00
UNEF 1-1/4"	18	MUNEF1140E	157.00
UNEF 1-5/16"	18	MUNEF1516E	166.00
UNEF 1-3/8"	18	MUNEF1380E	175.00
UNEF 1-7/16"	18	MUNEF1716E	184.00
UNEF 1-1/2"	18	MUNEF1120E	194.00
UNEF 1-9/16"	18	MUNEF1916E	210.00

UNEF GAUGES ASME B1.1
UNEF MASTARLAR

UNEF RING GAUGES / *UNEF HALKA MASTARLAR* Tol. 2A



UNEF	PITCH *HATVE*	CODE *KOD*	EURO
UNEF 1/4"	32	MUNEF0140D	161.00
UNEF 5/16	32	MUNEF0516D	171.00
UNEF 3/8"	32	MUNEF0380D	182.00
UNEF 7/16"	28	MUNEF0716D	195.00
UNEF 1/2"	28	MUNEF0120D	202.00
UNEF 9/16"	24	MUNEF0916D	223.00
UNEF 5/8"	24	MUNEF0580D	239.00
UNEF 11/16"	24	MUNEF01116D	257.00
UNEF 3/4"	20	MUNEF0340D	270.00
UNEF 13/16"	20	MUNEF01316D	286.00
UNEF 7/8"	20	MUNEF0780D	309.00
UNEF 15/16"	20	MUNEF01516D	330.00
UNEF 1"	20	MUNEF1000D	345.00
UNEF 1-1/16"	18	MUNEF1116D	369.00
UNEF 1-1/8"	18	MUNEF1180D	384.00
UNEF 1-3/16"	18	MUNEF1316D	405.00
UNEF 1-1/4"	18	MUNEF1140D	431.00
UNEF 1-5/16"	18	MUNEF1516D	455.00
UNEF 1-3/8"	18	MUNEF1380D	481.00
UNEF 1-7/16"	18	MUNEF1716D	504.00
UNEF 1-1/2"	18	MUNEF1120D	530.00
UNEF 1-9/16"	18	MUNEF1916D	565.00

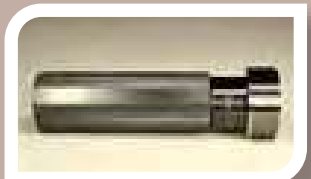
Ring gauges have go and nogo seperate 2 pcs and the price is for set of total 2 pcs.
Halka mastarlar geçer ve geçmez olarak 2 parçalıdır, fiyat toplam 2 parçalı takım fiyatıdır.

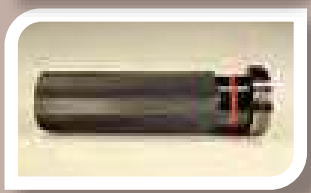
UNS - UN GAUGES ASME B1.1
UNS - UN MASTARLAR



UNS - UN PLUG GAUGE / *UNS - UN TAMPON MASTAR* Tol. 2B

UNS - UN	PITCH / *HATVE*	CODE / *KOD*	EURO
UNS 1/4"	36	MUNS01436E	219.00
UN 1"	32	MUN100032E	283.00
UN 11/16"	16	MUN0111616E	315.00
UN 13/16"	16	MUN0131616E	325.00
UN 7/8"	16	MUN007816E	352.00
UN 1"	16	MUN100016E	358.00
UN 1-1/16"	16	MUN111616E	362.00
UN 1-3/16"	16	MUN131616E	371.00
UNS 1"	14	MUNS100014E	338.00
UN 1-1/16"	12	MUN111612E	312.00
UN 1-3/16"	12	MUN131612E	330.00
UN 1-5/16"	12	MUN151612E	375.00
UN 1-5/8" *	12	MUN105812E	605.00
UN 1-3/4" *	12	MUN103412E	605.00
UN 1-7/8" *	12	MUN107812E	668.00
UN 2" *	12	MUN200012E	754.00
UN 1-1/8"	8	MUN101808E	399.00
UN 1-1/4"	8	MUN101408E	455.00
UN 1-3/8"	8	MUN103808E	490.00
UN 1-1/2"	8	MUN101208E	492.00
UN 1-5/8" *	8	MUN105808E	720.00
UN 1-3/4" *	8	MUN103408E	707.00
UN 2" *	8	MUN200008E	798.00





* indicated plug gauges have
go and nogo seperate 2 pcs
and the price is for set of total 2 pcs.

* *işaretli tampon mastarlar*
geçer ve geçmez olarak 2 parçalıdır,
fiyat toplam 2 parçalı takım fiyatıdır.

UNS - UN GAUGES ASME B1.1
UNS - UN MASTARLAR

UNS - UN RING GAUGE / *UNS - UN HALKA MASTAR* Tol. 2A



UNS - UN	PITCH / *HATVE*	CODE / *KOD*	EURO
UNS 1/4"	36	MUNS01436D	439.00
UN 1"	32	MUN100032D	897.00
UN 11/16"	16	MUN0111616D	748.00
UN 13/16"	16	MUN0131616D	652.00
UN 7/8"	16	MUN007816D	668.00
UN 1"	16	MUN100016D	748.00
UN 1-1/16"	16	MUN111616D	787.00
UN 1-3/16"	16	MUN131616D	868.00
UNS 1"	14	MUNS100014D	613.00
UN 1-1/16"	12	MUN111612D	683.00
UN 1-3/16"	12	MUN131612D	774.00
UN 1-5/16"	12	MUN151612D	764.00
UN 1-5/8"	12	MUN105812D	977.00
UN 1-3/4"	12	MUN103412D	938.00
UN 1-7/8"	12	MUN107812D	1027.00
UN 2"	12	MUN200012D	1042.00
UN 1-1/8"	8	MUN101808D	761.00
UN 1-1/4"	8	MUN101408D	764.00
UN 1-3/8"	8	MUN103808D	824.00
UN 1-1/2"	8	MUN101208D	988.00
UN 1-5/8"	8	MUN105808D	1035.00
UN 1-3/4"	8	MUN103408D	1175.00
UN 2"	8	MUN200008D	1270.00

Ring gauges have go and nogo seperate 2 pcs and the price is for set of total 2 pcs.
Halka mastarlar geçer ve geçmez olarak 2 parçalıdır, fiyat toplam 2 parçalı takım fiyatıdır.

TR TRAPEZOIDAL THREAD PLUG GAUGES DIN103
TR TRAPEZ VİDA TAMPON MASTARLAR DIN103



TR PLUG GAUGE / *TR TAMPON MASTAR* — Tol. 7H

TR	PITCH *HATVE*	CODE *KOD*	EURO
TR 8	1.5	MTR0815E	200.00
TR 10	2	MTR1020E	208.00
TR 11	2	MTR1120E	208.00
TR 12	3	MTR1230E	210.00
TR 14	3	MTR1430E	213.00
TR 16	4	MTR1640E	220.00
TR 18	4	MTR1840E	230.00
TR 20	4	MTR2040E	235.00
TR 22	5	MTR2250E	250.00
TR 24	5	MTR2450E	260.00
TR 26	5	MTR2650E	270.00
TR 28	5	MTR2850E	285.00
TR 30	6	MTR3060E	300.00
TR 32	6	MTR3260E	305.00



TR RING GAUGE / *TR HALKA MASTAR* — Tol. 7e

TR	PITCH *HATVE*	CODE *KOD*	EURO
TR 8	1.5	MTR0815D	570.00
TR 10	2	MTR1020D	585.00
TR 11	2	MTR1120D	595.00
TR 12	3	MTR1230D	600.00
TR 14	3	MTR1430D	610.00
TR 16	4	MTR1640D	630.00
TR 18	4	MTR1840D	640.00
TR 20	4	MTR2040D	665.00
TR 22	5	MTR2250D	695.00
TR 24	5	MTR2450D	735.00
TR 26	5	MTR2650D	760.00
TR 28	5	MTR2850D	795.00
TR 30	6	MTR3060D	825.00
TR 32	6	MTR3260D	850.00

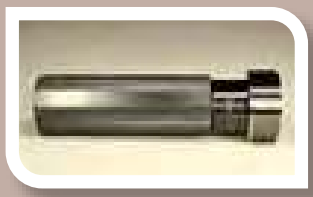
Ring gauges have go and nogo seperate 2 pcs and the price is for set of total 2 pcs.
Halka mastarlar geçer ve geçmez olarak 2 parçalıdır, fiyat toplam 2 parçalı takım fiyatıdır.

PG - DIN 40430 GAUGES
PG - DIN 40430 *MASTARLAR*

PG PLUG GAUGE DIN40430 / *PG TAMPON MASTAR DIN40430*



PG	PITCH *HATVE*	CODE *KOD*	EURO
PG 7	20	MPG07E	82.00
PG 9	18	MPG09E	91.00
PG 11	18	MPG11E	102.00
PG 13.5	18	MPG13E	110.00
PG 16	18	MPG16E	118.00
PG 21	16	MPG21E	139.00
PG 29	16	MPG29E	185.00





PG	PITCH *HATVE*	GO PLUG GAUGE *GEÇER TAMPON MASTAR*	EURO	NO GO PLUG GAUGE *GEÇMEZ TAMPON MASTAR*	EURO
PG 36 *	16	MPG36GE	166.00	MPG36NGE	92.00
PG 42 *	16	MPG42GE	188.00	MPG42NGE	105.00
PG 48 *	16	MPG48GE	205.00	MPG48NGE	114.00

* indicated plug gauges have go and nogo seperate 2 pcs and each of them are seperately priced.
* *işaretli tampon mastarlar geçer ve geçmez olarak 2 parçalıdır, geçer ve geçmez olarak ayrı ayrı fiyatları vardır*

No go plug gauge side has no thread and checks only the minor diameter.
Geçmez tampton mastar kısmı vidasız silindirik olup sadece diş dibi çapını kontrol eder.

PG RING GAUGE DIN40430 / *PG HALKA MASTAR DIN40430*



PG	PITCH *HATVE*	GO RING GAUGE *GEÇER HALKA MASTAR*	EURO	NO GO RING GAUGE *GEÇMEZ HALKA MASTAR*	EURO
PG 7	20	MPG07GD	121.00	MPG07NGD	54.00
PG 9	18	MPG09GD	132.00	MPG09NGD	59.00
PG 11	18	MPG11GD	143.00	MPG11NGD	63.00
PG 13.5	18	MPG13GD	155.00	MPG13NGD	65.00
PG 16	18	MPG16GD	163.00	MPG16NGD	68.00
PG 21	16	MPG21GD	198.00	MPG21NGD	72.00
PG 29	16	MPG29GD	253.00	MPG29NGD	75.00
PG 36	16	MPG36GD	310.00	MPG36NGD	86.00
PG 42	16	MPG42GD	351.00	MPG42NGD	106.00
PG 48	16	MPG48GD	384.00	MPG48NGD	112.00

No go ring gauge side has no thread and checks only the major diameter.
Geçmez halka mastar kısmı vidasız silindirik olup sadece diş üstü çapını kontrol eder.

CALIBRATION CERTIFICATE
KALİBRASYON SERTİFİKASI



PLUG GAUGES CALIBRATION CERTIFICATE
TAMPON MASTAR KALİBRASYON SERTİFİKASI

THREAD DIA *VİDA ÇAPI*	**Ø mm 1 - <3**	**Ø mm 3 - 6**	**Ø mm >6 - 40**	**Ø mm >40 - 100**
PLUG GAUGE / *TAMPON MASTAR*	**EURO**	**EURO**	**EURO**	**EURO**
PLUG GO - NO GO *TAMPON GEÇER - GEÇMEZ*	**45.00**	**37.00**	**35.00**	
PLUG GO *TAMPON GEÇER*				**30.00**
PLUG NO GO *TAMPON GEÇMEZ*				**30.00**
PLUG TAPER GO - NO GO *TAMPON KONİK GEÇER - GEÇMEZ*			**58.00**	**68.00**



RING GAUGES CALIBRATION CERTIFICATE
HALKA MASTAR KALİBRASYON SERTİFİKASI

THREAD DIA *VİDA ÇAPI*	**Ø mm 1 - <3**	**Ø mm 3 - 6**	**Ø mm >6 - 40**	**Ø mm >40 - 100**
RING GAUGE / *HALKA MASTAR*	**EURO**	**EURO**	**EURO**	**EURO**
RING GO *HALKA GEÇER*	**45.00**	**37.00**	**34.00**	**42.00**
RING NO GO *HALKA GEÇMEZ*	**45.00**	**37.00**	**34.00**	**42.00**
RING TAPER GO - NO GO *HALKA KONİK GEÇER - GEÇMEZ*			**58.00**	**68.00**

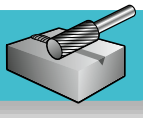
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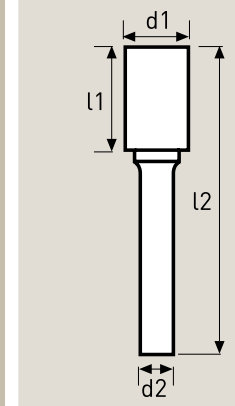
CARBIDE BURS & ABRASIVES

SERT METAL ÇAPAK ALMA FREZELERİ
VE AŞINDIRICILAR

CARBIDE BURS
SERT METAL ÇAPAK ALMA FREZELERİ







Cylinder without end cut / *Silindir Düz Uçlu*

d1 Dia/*Çap*	1.5	2.4	2.4	3	3	4
l1	6	13	13	13	13	13
d2	3	2.4	2.4	3	3	4
l2	38	38	63	38	63	50
Standard Cut *Düz Kanallı*	**T1050**	**T1100**		**T1200**		**T1300**
EURO	**4.65**	**4.95**		**5.50**		**8.10**
Double Cut *Talaş Kırıcılı*	**T1050D**	**T1100D**	**T1100DL**	**T1200D**	**T1200DL**	**T1300D**
EURO	**4.65**	**4.95**	**7.80**	**5.50**	**6.60**	**8.10**

d1 Dia/*Çap*	4	4	6	6	6
l1	13	16	13	19	19
d2	4	6	3	6	6
l2	63	50	45	50	75
Standard Cut *Düz Kanallı*		**T1300-6**	**T1240**	**T1400**	**T1400L**
EURO		**8.30**	**7.70**	**11.20**	**14.20**
Double Cut *Talaş Kırıcılı*	**T1300DL**	**T1300D-6**	**T1240D**	**T1400D**	**T1400DL**
EURO	**12.10**	**8.30**	**7.70**	**11.20**	**14.20**

d1 Dia/*Çap*	6	8	10	10	11
l1	25	19	19	25	25
d2	6	6	6	6	6
l2	50	65	65	70	70
Standard Cut *Düz Kanallı*		**T 1500**	**T 1600**		
EURO		**12.80**	**14.50**		
Double Cut *Talaş Kırıcılı*	**T1400D-1**	**T1500D**	**TDX160**	**T1600D-1**	**T1650D**
EURO	**12.00**	**12.80**	**14.50**	**15.30**	**15.80**

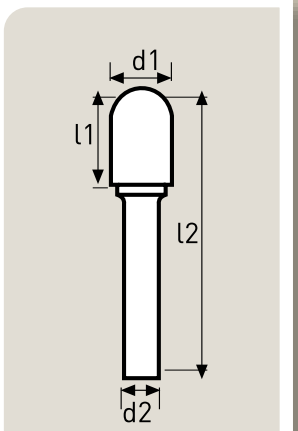
d1 Dia/*Çap*	12	12	12	16	16
l1	19	25	25	25	25
d2	6	6	8	6	8
l2	65	70	70	70	70
Standard Cut *Düz Kanallı*	**T1700**	**T1700-1**	**T1700-1-8**	**T1800-6**	**T1800**
EURO	**17.30**	**20.50**	**20.50**	**26.50**	**26.50**
Double Cut *Talaş Kırıcılı*	**T1700D**	**TDX170-1**	**T1700D-1-8**	**T1800D-6**	**T1800D**
EURO	**17.30**	**20.50**	**20.50**	**26.50**	**26.50**

CARBIDE BURS
SERT METAL ÇAPAK ALMA FREZELERİ

Ball Nosed Cylinder / *Küre Uçlu Silindir*



d1 Dia/*Çap*	2.5	3	3	3	4
l1	11	13	13	13	16
d2	3	3	3	3	6
l2	38	38	50	75	50
Standard Cut *Düz Kanallı*	T3100	T3200			T3300-6
EURO	6.30	6.30			11.80
Double Cut *Talaş Kırıcılı*	T3100D	T3200D	T3200DL	T3200DXL	T3300D-6
EURO	6.30	6.30	8.00	9.00	11.80

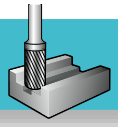


d1 Dia/*Çap*	5	6	6	6
l1	16	13	19	25
d2	6	3	6	6
l2	50	45	50	50
Standard Cut *Düz Kanallı*		T3240	T3400	
EURO		11.80	11.80	
Double Cut *Talaş Kırıcılı*	T3350D-6	T3240D	T3400D	T3400D-1
EURO	12.00	11.80	11.80	12.20

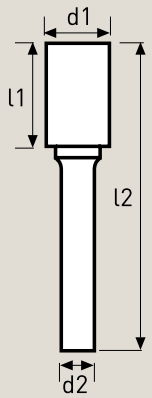
d1 Dia/*Çap*	8	10	10	11	12
l1	19	19	25	25	19
d2	6	6	6	6	6
l2	65	65	70	70	65
Standard Cut *Düz Kanallı*	T3500	T3600			T3700
EURO	12.70	13.90			15.00
Double Cut *Talaş Kırıcılı*	TDX350	TDX360	T3600D-1	T3650D	TDX370
EURO	12.70	13.90	14.40	15.00	15.00

d1 Dia/*Çap*	12	12	16	16
l1	25	25	25	25
d2	6	8	6	8
l2	70	70	70	70
Standard Cut *Düz Kanallı*	T3700-1	T3700-1-8	T3800-6	T3800
EURO	18.80	19.00	25.70	25.70
Double Cut *Talaş Kırıcılı*	TDX370-1	TDX370-1-8	TDX380-6	TDX380
EURO	18.80	19.00	25.70	25.70

CARBIDE BURS
SERT METAL ÇAPAK ALMA FREZELERİ







Cylinder with end cut / *Silindir Alın Kesicili*

d1 Dia/*Çap*	1.5	2	2	2	2.4
l1	6	13	14	30	13
d2	3	3	3	3	2.4
l2	38	38	65	75	38
Standard Cut *Düz Kanallı*	**T1052**				**T1102**
EURO	**5.40**				**5.50**
Double Cut *Talaş Kırıcılı*	**T1052D**	**GTS5680**	**GTS6609**	**GTS6040**	**T1102D**
EURO	**5.40**	**7.00**	**11.00**	**13.50**	**5.50**

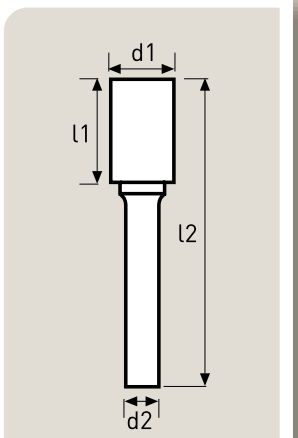
d1 Dia/*Çap*	2.4	2.5	2.5	3	3
l1	13	14	30	13	13
d2	2.4	3	3	3	3
l2	63	65	75	38	63
Standard Cut *Düz Kanallı*				**T1202**	**T1202L**
EURO				**5.70**	**10.00**
Double Cut *Talaş Kırıcılı*	**T1102DL**	**GTS6610**	**GTS6039**	**T1202D**	**T1202DL**
EURO	**10.50**	**11.00**	**13.50**	**5.70**	**10.00**

d1 Dia/*Çap*	3	4	4	4	6
l1	30	13	13	16	13
d2	3	4	4	6	3
l2	75	50	63	50	45
Standard Cut *Düz Kanallı*		**T1302**		**T1302-6**	**T1242**
EURO		**9.50**		**9.70**	**10.20**
Double Cut *Talaş Kırıcılı*	**GTS6270**	**T1302D**	**T1302DL**	**T1302D-6**	**T1242D**
EURO	**13.50**	**9.50**	**11.20**	**9.70**	**10.20**

CARBIDE BURS
SERT METAL ÇAPAK ALMA FREZELERİ

Cylinder with end cut / *Silindir Alın Kesicili*





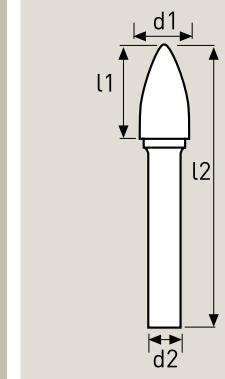
d1 Dia/*Çap*	6	6	6	8
l1	19	19	25	19
d2	6	6	6	6
l2	50	75	50	65
Standard Cut *Düz Kanallı*	**T1402**	**T1402L**		**T1502**
EURO	**12.30**	**15.10**		**14.50**
Double Cut *Talaş Kırıcılı*	**T1402D**	**T1402DL**	**T1402D-1**	**T1502D**
EURO	**12.30**	**15.10**	**13.10**	**14.50**

d1 Dia/*Çap*	10	10	11	12
l1	19	25	25	19
d2	6	6	6	6
l2	65	70	70	65
Standard Cut *Düz Kanallı*	**T1602**			**T1702**
EURO	**15.80**			**21.90**
Double Cut *Talaş Kırıcılı*	**TDX162**	**T1602D-1**	**T1652D**	**T1702D**
EURO	**15.80**	**16.50**	**17.00**	**21.90**

d1 Dia/*Çap*	12	12	16	16
l1	25	25	25	25
d2	6	8	6	8
l2	70	70	70	70
Standard Cut *Düz Kanallı*	**T1702-1**	**T1702-1-8**	**T1802-6**	**T1802**
EURO	**22.40**	**22.40**	**30.30**	**30.30**
Double Cut *Talaş Kırıcılı*	**TDX172-1**	**T1702D-1-8**	**T1802D-6**	**T1802D**
EURO	**22.40**	**22.40**	**30.30**	**30.30**

CARBIDE BURS
SERT METAL ÇAPAK ALMA FREZELERİ





Tree / *Çam*

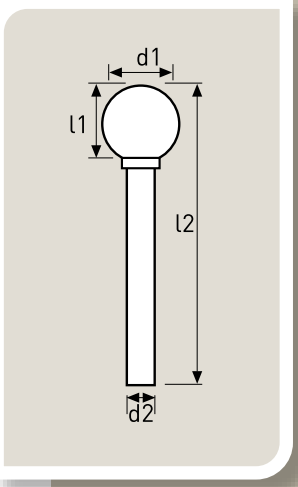
d1 Dia/*Çap*	3	3	3	6	6	8
l1	6	10	13	13	16	19
d2	3	3	3	3	6	6
l2	38	38	38	45	50	65
Standard Cut *Düz Kanallı*	**T6220**	**T6230**	**T6200**	**T6240**	**T6400**	
EURO	**6.00**	**6.10**	**6.50**	**11.90**	**13.50**	
Double Cut *Talaş Kırıcılı*	**T6220D**	**T6230D**	**T6200D**	**T6240D**	**T6400D**	**T6450D**
EURO	**6.00**	**6.10**	**6.50**	**11.90**	**13.50**	**13.70**

d1 Dia/*Çap*	10	12	12	12	16	16
l1	19	19	25	25	25	25
d2	6	6	6	8	6	8
l2	65	65	70	70	70	70
Standard Cut *Düz Kanallı*	**T6500**	**T6700**	**T6800**	**T6800-8**	**T6900-6**	**T6900**
EURO	**14.10**	**21.00**	**21.40**	**21.40**	**30.50**	**30.50**
Double Cut *Talaş Kırıcılı*	**TDX650**	**T6700D**	**TDX680**	**T6800D-8**	**T6900D-6**	**T6900D**
EURO	**14.10**	**21.00**	**21.40**	**21.40**	**30.50**	**30.50**

CARBIDE BURS
SERT METAL ÇAPAK ALMA FREZELERİ

Ball / *Küre*



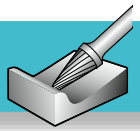


d1 Dia/*Çap*	2.5	3	3	4	5
l1	2.3	2.7	2.5	3.6	4.7
d2	3	3	6	3	3
l2	38	38	50	45	38
Standard Cut *Düz Kanallı*	**T7100**	**T7200**	**T7200-6**	**T7300**	**T7350**
EURO	**7.70**	**7.80**	**12.70**	**13.90**	**13.50**
Double Cut *Talaş Kırıcılı*	**T7100D**	**T7200D**	**T7200D-6**	**T7300D**	**T7350D**
EURO	**7.70**	**7.80**	**12.70**	**13.90**	**13.50**

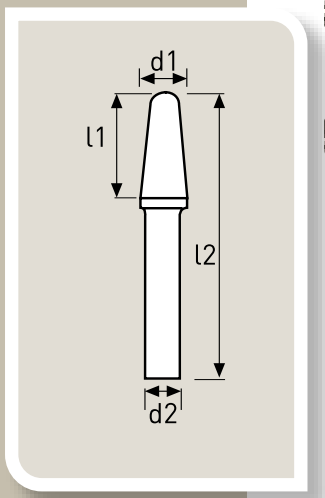
d1 Dia/*Çap*	5	6	6	8	10
l1	4.7	5.4	5.4	7.2	9
d2	6	3	6	6	6
l2	50	38	50	52	53
Standard Cut *Düz Kanallı*	**T7350-6**	**T7240**	**T7400**	**T7500**	**T7600**
EURO	**13.50**	**11.60**	**12.70**	**10.30**	**10.70**
Double Cut *Talaş Kırıcılı*	**T7350D-6**	**T7240D**	**T7400D**	**T7500D**	**TDX760**
EURO	**13.50**	**11.60**	**12.70**	**10.30**	**10.70**

d1 Dia/*Çap*	11	12	16	19	19
l1	9.9	10.8	14.4	17.1	17.1
d2	6	6	6	6	8
l2	54	55	60	63	63
Standard Cut *Düz Kanallı*		**T7700**	**T7800**	**T7900-6**	**T7900**
EURO		**14.80**	**20.50**	**32.10**	**32.10**
Double Cut *Talaş Kırıcılı*	**T7650D**	**TDX770**	**T7800D**	**T7900D-6**	**T7900D**
EURO	**12.70**	**14.80**	**20.50**	**32.10**	**32.10**

CARBIDE BURS
SERT METAL ÇAPAK ALMA FREZELERİ







Ball Nosed Cone / *Küre Uçlu Konik*

	14°	8°	8°	14°	14°	14°
d1 Dia/*Çap*	3	3	3	6	6	8
l1	8	9.5	13	13	16	22
d2	3	3	3	3	6	6
l2	38	38	38	45	50	69
Standard Cut *Düz Kanallı*	**T4200**	**T4210**	**T4220**	**T4240**	**T4400**	
EURO	**7.00**	**7.10**	**7.60**	**12.10**	**15.20**	
Double Cut *Talaş Kırıcılı*	**T4200D**	**T4210D**	**T4220D**	**T4240D**	**T4400D**	**T4500D**
EURO	**7.00**	**7.10**	**7.60**	**12.10**	**15.20**	**16.00**

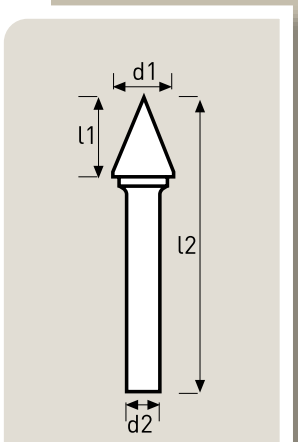
	14°	14°	14°	14°	14°	14°
d1 Dia/*Çap*	10	10	12	12	16	16
l1	19	27	30	30	33	33
d2	6	6	6	8	6	8
l2	65	75	75	75	78	78
Standard Cut *Düz Kanallı*	**T4600**	**T4600-1**	**T4700**	**T4700-8**	**T4800-6**	**T4800**
EURO	**17.20**	**19.00**	**21.00**	**21.00**	**31.00**	**31.00**
Double Cut *Talaş Kırıcılı*	**T4600D**	**TDX460-1**	**TDX470**	**T4700D-8**	**T4800D-6**	**T4800D**
EURO	**17.20**	**19.00**	**21.00**	**21.00**	**31.00**	**31.00**

CARBIDE BURS
SERT METAL ÇAPAK ALMA FREZELERİ

Cone / *Konik*



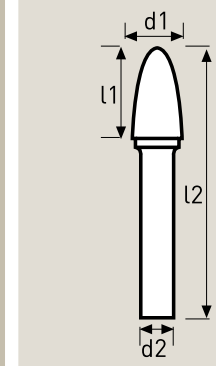
	12°	7°	22°	22°	14°	11°
d1 Dia/*Çap*	3	3	6	6	6	6
l1	11	16	13	13	19	25
d2	3	3	3	6	6	6
l2	38	38	45	50	50	50
Standard Cut *Düz Kanallı*	**T2200**	**T2220**	**T2240**		**T2400**	
EURO	**4.80**	**5.20**	**10.00**		**11.50**	
Double Cut *Talaş Kırıcılı*	**T2200D**	**T2220D**	**T2240D**	**T2300D**	**T2400D**	**T2400D-1**
EURO	**4.80**	**5.20**	**10.00**	**11.00**	**11.50**	**12.00**



	28°	35°	28°	28°	31°	31°
d1 Dia/*Çap*	10	12	12	12	16	16
l1	16	19	25	25	25	25
d2	6	6	6	8	6	8
l2	65	65	70	70	73	73
Standard Cut *Düz Kanallı*	**T2600**	**T2700**	**T2700-1**	**T2700-1-8**		
EURO	**14.70**	**17.30**	**17.70**	**17.70**		
Double Cut *Talaş Kırıcılı*	**T2600D**	**T2700D**	**T2700D-1**	**T2700D-1-8**	**T2750D-1-6**	**T2750D-1**
EURO	**14.70**	**17.30**	**17.70**	**17.70**	**19.00**	**19.00**

CARBIDE BURS
SERT METAL ÇAPAK ALMA FREZELERİ





Ball Nosed Tree / *Küre Uçlu Çam*

d1 Dia/*Çap*	3	3	6	6	10
l1	6	13	13	16	19
d2	3	3	3	6	6
l2	38	38	45	50	65
Standard Cut *Düz Kanallı*	**T9220**	**T9200**	**T9240**	**T9400**	**T9600**
EURO	**6.50**	**6.50**	**9.20**	**14.10**	**15.20**
Double Cut *Talaş Kırıcılı*	**T9220D**	**T9200D**	**T9240D**	**T9400D**	**TDX960**
EURO	**6.50**	**6.50**	**9.20**	**14.10**	**15.20**

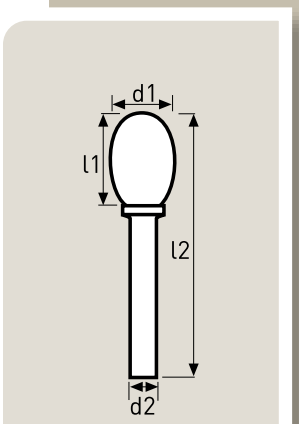
d1 Dia/*Çap*	11	12	12	16	16
l1	25	19	25	25	25
d2	6	6	6	6	8
l2	70	65	70	70	70
Standard Cut *Düz Kanallı*			**T9700**	**T9800-6**	**T9800**
EURO			**20.30**	**25.00**	**25.00**
Double Cut *Talaş Kırıcılı*	**T9650D**	**T9730D**	**TDX970**	**TDX980-6**	**TDX980**
EURO	**16.30**	**20.00**	**20.30**	**25.00**	**25.00**

CARBIDE BURS
SERT METAL ÇAPAK ALMA FREZELERİ

Oval / *Oval*

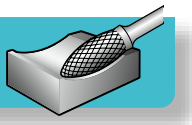


d1 Dia/*Çap*	3	6	6	8	10
l1	6	10	10	13	16
d2	3	3	6	6	6
l2	38	42	50	58	60
Standard Cut *Düz Kanallı*	**T5220**	**T5240**		**T5300**	**T5500**
EURO	**7.40**	**11.20**		**12.80**	**13.10**
Double Cut *Talaş Kırıcılı*	**T5220D**	**T5240D**	**T5260D**	**T5300D**	**TDX550**
EURO	**7.40**	**11.20**	**11.50**	**12.80**	**13.10**

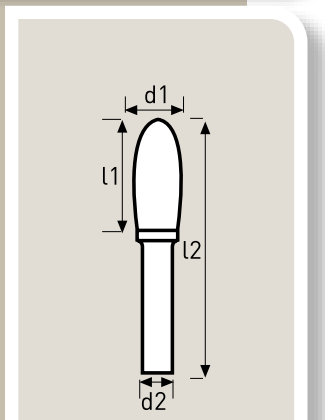


d1 Dia/*Çap*	12	12	16	16
l1	22	22	25	25
d2	6	8	6	8
l2	67	67	70	70
Standard Cut *Düz Kanallı*	**T5700**	**T5700-8**	**T5800**	**T5800-8**
EURO	**19.70**	**19.70**	**26.00**	**26.00**
Double Cut *Talaş Kırıcılı*	**TDX570**	**T5700D-8**	**T5800D**	**T5800D-8**
EURO	**19.70**	**19.70**	**26.00**	**26.00**

CARBIDE BURS
SERT METAL ÇAPAK ALMA FREZELERİ



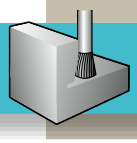




Flame / *Alev*

d1 Dia/*Çap*	3	6	8	12	16	16
l1	8	14	19	32	36	36
d2	3	6	6	6	6	8
l2	38	50	65	77	80	80
Standard Cut *Düz Kanallı*	**T5200**	**T5400**	**T5550**	**T5600**		
EURO	**6.90**	**12.00**	**14.20**	**24.00**		
Double Cut *Talaş Kırıcılı*	**T5200D**	**T5400D**	**T5550D**	**TDX560**	**T5850D-6**	**T5850D**
EURO	**6.90**	**12.00**	**14.20**	**24.00**	**26.00**	**26.00**

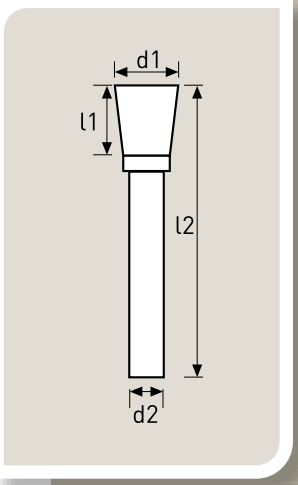
CARBIDE BURS
SERT METAL ÇAPAK ALMA FREZELERİ



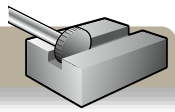
Inverted Cone / *Ters Konik*

	10°	10°	13°	20°	18°
d1 Dia/*Çap*	3	6	9.5	12	16
l1	7	7	9.5	13	19
d2	3	6	6	6	6
l2	38	50	53	58	63
Standard Cut *Düz Kanallı*	**T8200**	**T8400**		**T8500**	
EURO	**7.50**	**12.50**		**20.00**	
Double Cut *Talaş Kırıcılı*	**T8200D**	**T8400D**	**T8450D**	**T8500D**	**T8800D-6**
EURO	**7.50**	**12.50**	**16.50**	**20.00**	**26.00**



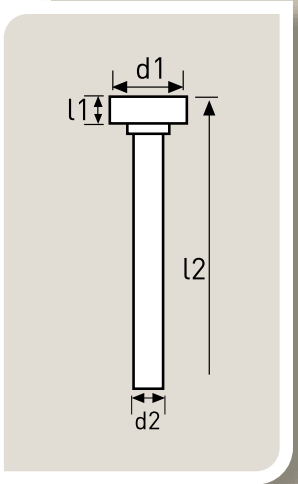


Rim "T" Slot / *"T" Yarık*

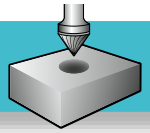


d1 Dia/*Çap*	10	12	25	25
l1	1.6	2.6	5.2	6.3
d2	3	6	8	8
l2	34	48	50	51
Standard Cut *Düz Kanallı*	**T8240**	**T8700**	**T8100**	**T9100**
EURO	**13.00**	**14.50**	**42.00**	**36.00**

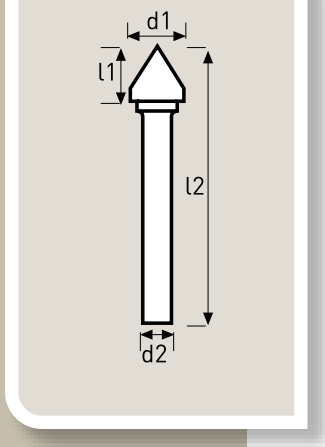




CARBIDE BURS
SERT METAL ÇAPAK ALMA FREZELERİ







Countersink 90° / *Havşa 90°*

d1 Dia/*Çap*	3	6	10	12	16
l1	1.5	3	5	6	8
d2	3	6	6	6	6
l2	38	50	55	54	60
Standard Cut *Düz Kanallı*	**T2810**	**T2820**	**T2000**	**T2840**	**T2800**
EURO	**5.60**	**10.60**	**12.00**	**14.20**	**18.90**
Double Cut *Talaş Kırıcılı*	**T2810D**	**T2820D**	**T2000D**	**T2840D**	**T2800D**
EURO	**5.60**	**10.60**	**12.00**	**14.20**	**18.90**

Countersink 60° / *Havşa 60°*

d1 Dia/*Çap*	6	10	12	16
l1	4	8	11	14.5
d2	6	6	6	6
l2	50	55	60	60
Standard Cut *Düz Kanallı*	**T2920**	**T2940**	**T2900**	**T2960**
EURO	**10.70**	**12.00**	**19.50**	**21.00**
Double Cut *Talaş Kırıcılı*	**T2920D**	**T2940D**	**T2900D**	**T2960D**
EURO	**10.70**	**12.00**	**19.50**	**21.00**

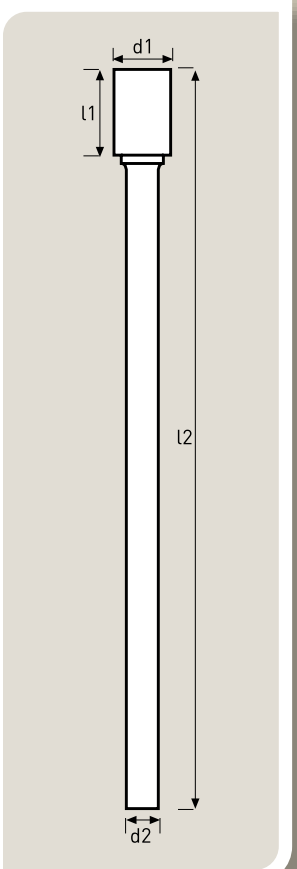
CARBIDE BURS EXTRA LONG
SERT METAL ÇAPAK ALMA FREZELERİ EKSTRA UZUN

Extra Long Lenght / *Extra Uzun Boylar*

d1 Dia/*Çap*	10	10	12	10
l1	19	19	25	19
d2	6	6	6	6
l2	169	169	175	169
Standard Cut *Düz Kanallı*	**T1600XL**	**T1602XL**	**T1700-1XL**	**T3600XL**
EURO	**31.00**	**32.00**	**34.00**	**25.00**
Double Cut *Talaş Kırıcılı*	**T1600DXL**	**T1602DXL**	**T1700D-1XL**	**T3600DXL**
EURO	**31.00**	**32.00**	**34.00**	**25.00**



d1 Dia/*Çap*	12	8	10	12
l1	25	7.2	9	10,8
d2	6	6	6	6
l2	175	157	159	161
Standard Cut *Düz Kanallı*	**T3700-1XL**	**T7500XL**	**T7600XL**	**T7700XL**
EURO	**35.00**	**31.00**	**33.00**	**35.00**
Double Cut *Talaş Kırıcılı*	**T3700D-1XL**		**T7600DXL**	**T7700DXL**
EURO	**35.00**		**33.00**	**35.00**

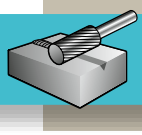


d1 Dia/*Çap*	10	12	10	12	10	12
l1	19	25	19	25	27	30
d2	6	6	6	6	6	6
l2	169	175	169	175	177	180
Standard Cut *Düz Kanallı*	**T9600XL**	**T9700XL**	**T6500XL**	**T6800XL**	**T4600-1XL**	**T4700XL**
EURO	**30.00**	**39.00**	**30.00**	**35.00**	**35.00**	**41.00**
Double Cut *Talaş Kırıcılı*	**T9600DXL**	**T9700DXL**	**T6500DXL**	**T6800DXL**	**T4600D-1XL**	**T4700DXL**
EURO	**30.00**	**39.00**	**30.00**	**35.00**	**35.00**	**41.00**

gürkan

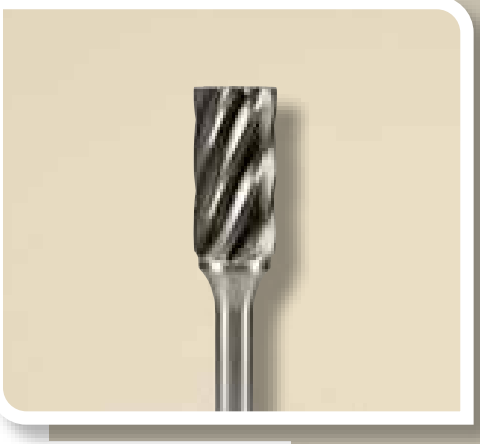


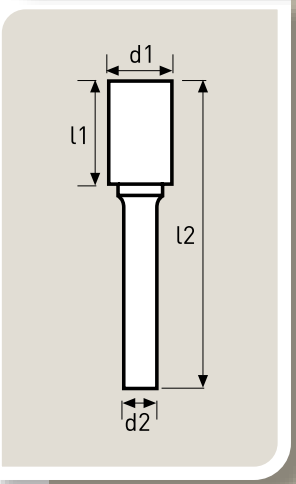
CARBIDE BURS ALUMINIUM CUT
SERT METAL ÇAPAK ALMA FREZELERİ ALUMİNYUM İÇİN



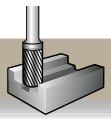
Cylinder without end cut / *Silindir Düz Uçlu*

				
d1 Dia/*Çap*	6	10	12	16
l1	19	19	25	25
d2	6	6	6	8
l2	50	65	70	70
Aluminium Cut *Alüminyum Kanal*	**TTA240**	**TTA260**	**TTA270**	**TTA280**
EURO	**17.20**	**22.30**	**23.00**	**38.00**



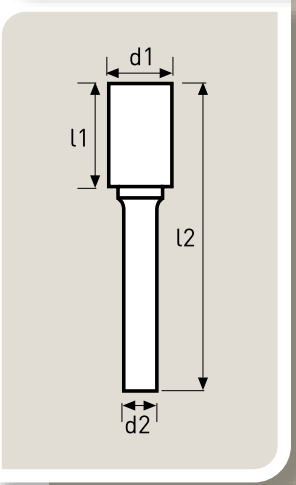


Cylinder with end cut / *Silindir Alın Kesicili*

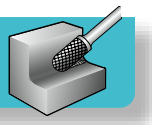


				
d1 Dia/*Çap*	**6**	**10**	**12**	**16**
l1	**19**	**19**	**25**	**25**
d2	**6**	**6**	**6**	**8**
l2	**50**	**65**	**70**	**70**
Aluminium Cut *Alüminyum Kanal*	**TTA140**	**TTA160**	**TTA170**	**TTA180**
EURO	**17.60**	**23.30**	**32.70**	**40.70**

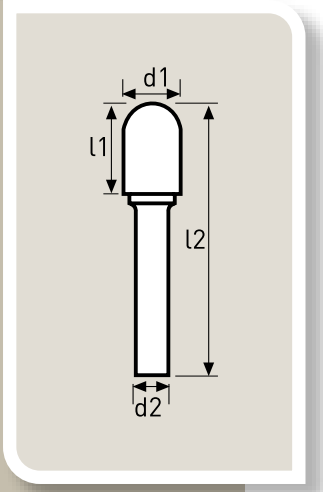




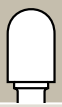
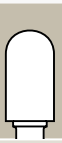
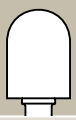
CARBIDE BURS ALUMINIUM CUT
SERT METAL ÇAPAK ALMA FREZELERİ ALUMİNYUM İÇİN



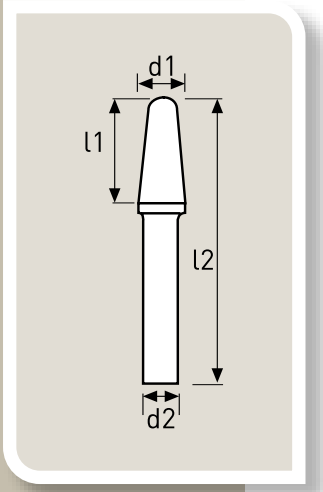




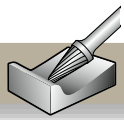
Ball Nosed Cylinder / *Küre Uçlu Silindir*

				
d1 Dia/*Çap*	6	10	12	16
l1	19	19	25	25
d2	6	6	6	8
l2	50	65	70	70
Aluminium Cut *Alüminyum Kanal*	**TTA340**	**TTA360**	**TTA370**	**TTA380**
EURO	**17.60**	**22.50**	**30.20**	**42.50**



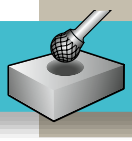


Ball Nosed Cone / *Küre Uçlu Konik*



				
d1 Dia/*Çap*	6	10	12	16
l1	16	27	30	33
d2	6	6	6	8
l2	50	75	75	78
Aluminium Cut *Alüminyum Kanal*	**TTA440**	**TTA460**	**TTA470**	**TTA480**
EURO	**18.00**	**28.00**	**34.00**	**46.00**

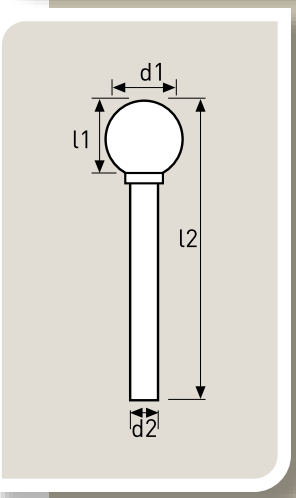
CARBIDE BURS ALUMINIUM CUT
SERT METAL ÇAPAK ALMA FREZELERİ ALUMİNYUM İÇİN



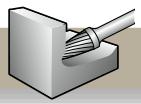
Ball / *Küre*

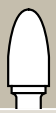
				
d1 Dia/*Çap*	6	10	12	16
l1	5.4	9	10.8	14.4
d2	6	6	6	8
l2	50	53	55	60
Aluminium Cut *Alüminyum Kanal*	**TTA740**	**TTA760**	**TTA770**	**TTA780**
EURO	**17.60**	**23.20**	**24.20**	**39.50**



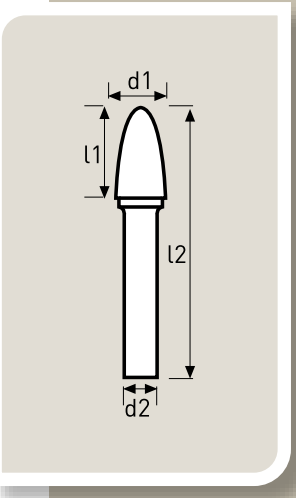


Ball Nosed Tree / *Küre Uçlu Çam*

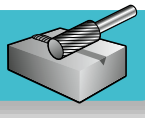


				
d1 Dia/*Çap*	6	10	12	16
l1	16	19	25	25
d2	6	6	6	8
l2	50	65	70	70
Aluminium Cut *Alüminyum Kanal*	**TTA940**	**TTA960**	**TTA970**	**TTA980**
EURO	**17.60**	**22.00**	**29.00**	**38.50**

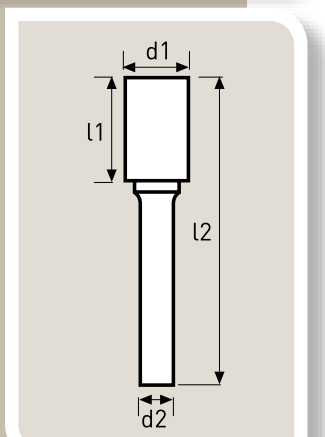




NG6 HIGH PERFORMACE BURS
NG6 YÜKSEK PERFORMANS ÇAPAK ALMA FREZELERİ



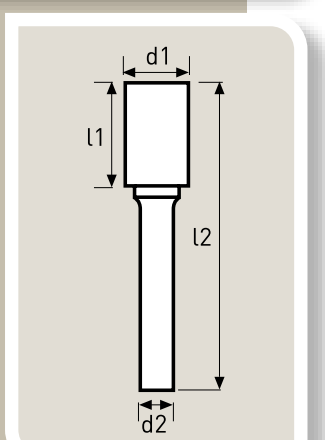




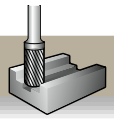
Cylinder without end cut / *Silindir Düz Uçlu*

d1 Dia/*Çap*	6	8	10	12	16
l1	19	19	19	25	25
d2	6	6	6	6	6
l2	75	65	65	70	70
NG6 CODE /*KOD*	**T1400 NG6**	**T1500 NG6**	**T1600 NG6**	**T1700-1 NG6**	**T1800-6 NG6**
EURO	**12.10**	**13.80**	**15.70**	**22.10**	**28.60**
NG6 ACC COATED *KAPLAMALI* CODE /*KOD*	**T1400 NG6 ACC**	**T1500 NG6 ACC**	**T1600 NG6 ACC**	**T1700-1 NG6 ACC**	**T1800-6 NG6 ACC**
EURO	**15.50**	**17.60**	**19.90**	**28.10**	**36.20**





Cylinder with end cut / *Silindir alın kesicili*



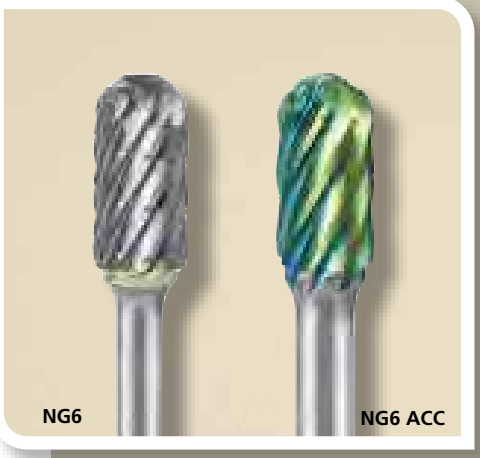
d1 Dia/*Çap*	6	8	10	12	16
l1	19	19	19	25	25
d2	6	6	6	6	6
l2	75	65	65	70	70
NG6 CODE /*KOD*	**T1402 NG6**	**T1502 NG6**	**T1602 NG6**	**T1702-1 NG6**	**T1802-6 NG6**
EURO	**13.50**	**15.70**	**17.10**	**23.90**	**32.80**
NG6 ACC COATED *KAPLAMALI* CODE /*KOD*	**T1402 NG6 ACC**	**T1502 NG6 ACC**	**T1602 NG6 ACC**	**T1702-1 NG6 ACC**	**T1802-6 NG6 ACC**
EURO	**16.90**	**19.50**	**21.30**	**29.90**	**40.40**

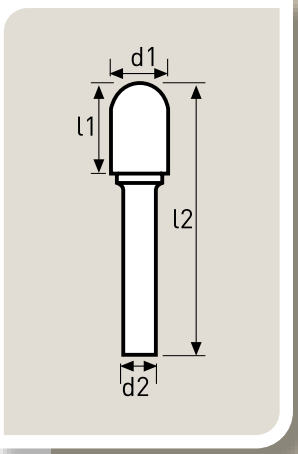
All steels, stainless steels, cast iron / *Tüm çelikler, paslanmaz çelikler, dökümler.*
NG6 : Up to 50% better performance / *% 50 ye varan daha yüksek performans*
NG6 ACC (Coated) : Up to 100% better performace / *% 100 ye varan daha yüksek performans*

NG6 HIGH PERFORMACE BURS
NG6 YÜKSEK PERFORMANS ÇAPAK ALMA FREZELERİ

Ball Nosed Cylinder / *Küre Uçlu Silindir*

d1 Dia/*Çap*	6	8	10	12	16
l1	19	19	19	25	25
d2	6	6	6	6	6
l2	50	65	65	70	70
NG6 CODE /*KOD*	**T3400 NG6**	**T3500 NG6**	**T3600 NG6**	**T3700-1 NG6**	**T3800-6 NG6**
EURO	**12.80**	**13.70**	**15.10**	**20.70**	**27.80**
NG6 ACC COATED *KAPLAMALI* **CODE /***KOD*	**T3400 NG6 ACC**	**T3500 NG6 ACC**	**T3600 NG6 ACC**	**T3700-1 NG6 ACC**	**T3800-6 NG6 ACC**
EURO	**16.20**	**17.50**	**19.30**	**26.70**	**35.40**

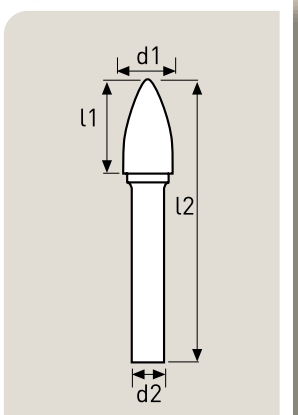




Tree / *Çam*

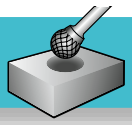
d1 Dia/*Çap*	6	8	10	12	16
l1	16	19	19	25	25
d2	6	6	6	6	6
l2	50	65	65	70	70
NG6 CODE /*KOD*	**T6400 NG6**	**T6450 NG6**	**T6500 NG6**	**T6800 NG6**	**T6900-6 NG6**
EURO	**14.70**	**14.90**	**15.30**	**23.20**	**33.40**
NG6 ACC COATED *KAPLAMALI* **CODE /***KOD*	**T6400 NG6 ACC**	**T6450 NG6 ACC**	**T6500 NG6 ACC**	**T6800 NG6 ACC**	**T6900-6 NG6 ACC**
EURO	**18.10**	**18.70**	**19.50**	**29.20**	**41.00**

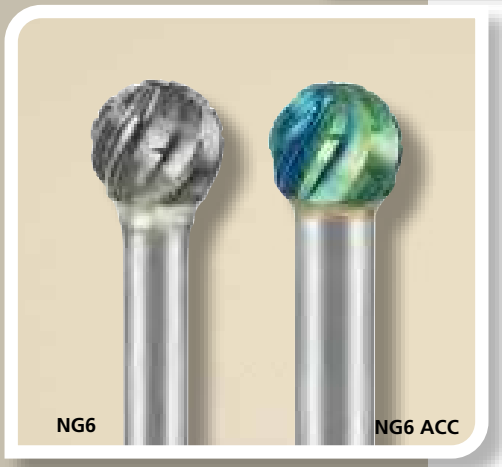


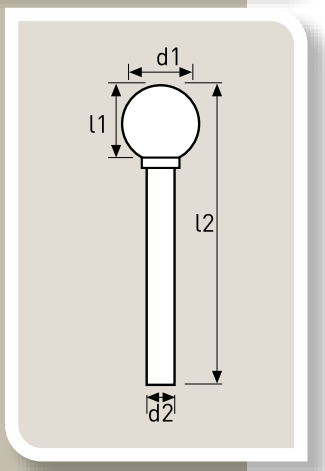


All steels, stainless steels, cast iron / *Tüm çelikler, paslanmaz çelikler, dökümler.*
NG6 : Up to 50% better performance / *% 50 ye varan daha yüksek performans*
NG6 ACC (Coated) : Up to 100% better performace / *% 100 ye varan daha yüksek performans*

NG6 HIGH PERFORMACE BURS
NG6 YÜKSEK PERFORMANS ÇAPAK ALMA FREZELERİ



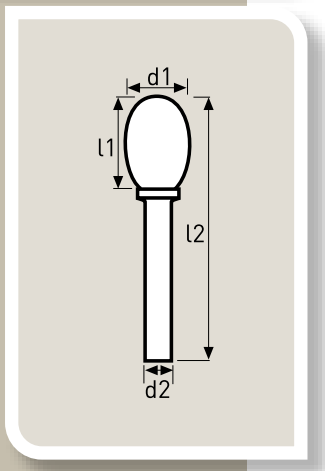




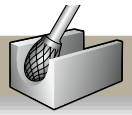
Ball / *Küre*

d1 Dia/*Çap*	6	8	10	12	16
l1	5,4	7,2	9	11	14
d2	6	6	6	6	6
l2	50	52	53	56	59
NG6 CODE /*KOD*	**T7400 NG6**	**T7500 NG6**	**T7600 NG6**	**T7700 NG6**	**T7800 NG6**
EURO	**13.70**	**11.30**	**11.60**	**16.00**	**22.30**
NG6 ACC COATED *KAPLAMALI* CODE /*KOD*	**T7400 NG6 ACC**	**T7500 NG6 ACC**	**T7600 NG6 ACC**	**T7700 NG6 ACC**	**T7800 NG6 ACC**
EURO	**17.10**	**15.10**	**15.80**	**22.00**	**29.90**





Oval / *Oval*



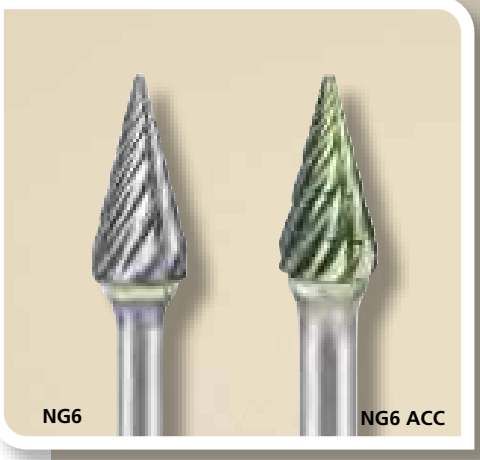
d1 Dia/*Çap*	6	8	10	12	16
l1	10	13	16	22	25
d2	6	6	6	6	6
l2	50	58	60	67	70
NG6 CODE /*KOD*	**T5260 NG6**	**T5300 NG6**	**T5500 NG6**	**T5700 NG6**	**T5800 NG6**
EURO	**12.20**	**13.90**	**14.20**	**21.30**	**26.50**
NG6 ACC COATED *KAPLAMALI* CODE /*KOD*	**T5260 NG6 ACC**	**T5300 NG6 ACC**	**T5500 NG6 ACC**	**T5700 NG6 ACC**	**T5800 NG6 ACC**
EURO	**15.60**	**17.70**	**18.40**	**27.30**	**34.10**

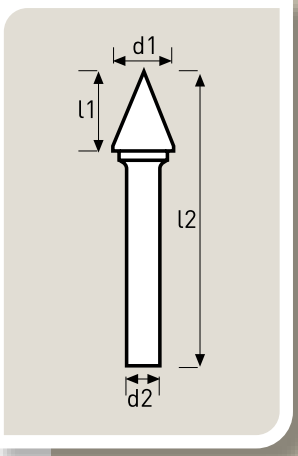
All steels, stainless steels, cast iron / *Tüm çelikler, paslanmaz çelikler, dökümler.*
NG6 : Up to 50% better performance / *% 50 ye varan daha yüksek performans*
NG6 ACC (Coated) : Up to 100% better performace / *% 100 ye varan daha yüksek performans*

NG6 HIGH PERFORMACE BURS
NG6 YÜKSEK PERFORMANS ÇAPAK ALMA FREZELERİ

Cone / *Konik*

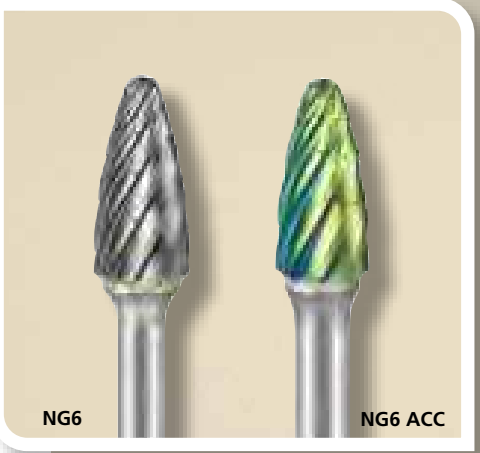
	14°	11°	28°	35°	31°
d1 Dia/*Çap*	6	8	10	12	16
l1	19	18.5	16	25	25
d2	6	6	6	6	6
l2	50	64	65	70	73
NG6 CODE /*KOD*	**T2400 NG6**	**T2500 NG6**	**T 2600 NG6**	**T 2700-1 NG6**	**T2750-1-6 NG6**
EURO	**12.50**	**18.50**	**16.50**	**19.00**	**21.00**
NG6 ACC COATED *KAPLAMALI* CODE /*KOD*	**T2400 NG6 ACC**	**T2500 NG6 ACC**	**T 2600 NG6 ACC**	**T 2700-1 NG6 ACC**	**T 2750-1-6 NG6 ACC**
EURO	**15.90**	**21.90**	**20.70**	**25.00**	**28.60**

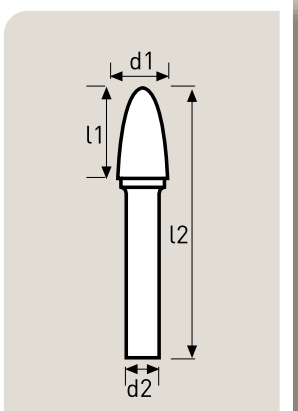




Ball Nosed Tree / *Küre Uçlu Çam*

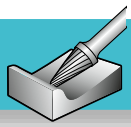
d1 Dia/*Çap*	6	8	10	12	16
l1	18	20	19	25	25
d2	6	6	6	6	6
l2	50	65	65	70	70
NG6 CODE /*KOD*	**T9400 NG6**	**T9500 NG6**	**T9600 NG6**	**T9700 NG6**	**T9800-6 NG6**
EURO	**15.30**	**19.70**	**16.50**	**21.70**	**27.10**
NG6 ACC COATED *KAPLAMALI* CODE /*KOD*	**T9400 NG6 ACC**	**T9500 NG6 ACC**	**T9600 NG6 ACC**	**T9700 NG6 ACC**	**T9800-6 NG6 ACC**
EURO	**18.70**	**23.50**	**20.70**	**27.70**	**34.70**

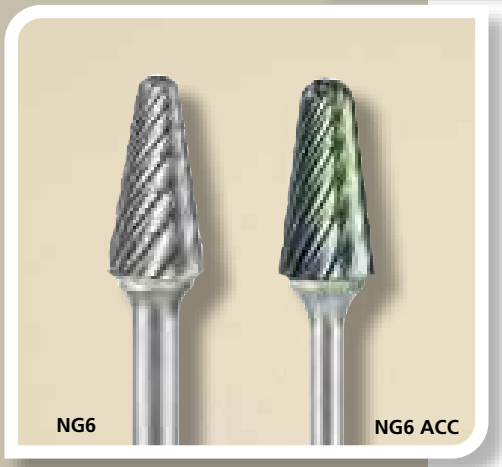


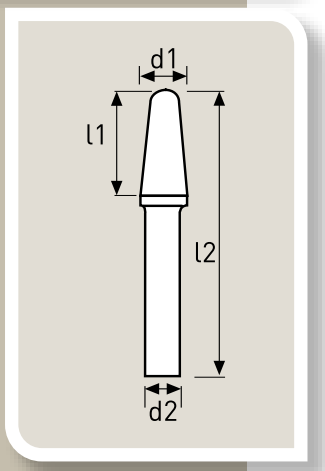


All steels, stainless steels, cast iron / *Tüm çelikler, paslanmaz çelikler, dökümler.*
NG6 : Up to 50% better performance / *% 50 ye varan daha yüksek performans*
NG6 ACC (Coated) : Up to 100% better performace / *% 100 ye varan daha yüksek performans*

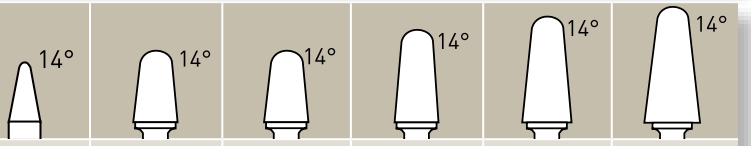
NG6 HIGH PERFORMACE BURS
NG6 YÜKSEK PERFORMANS ÇAPAK ALMA FREZELERİ



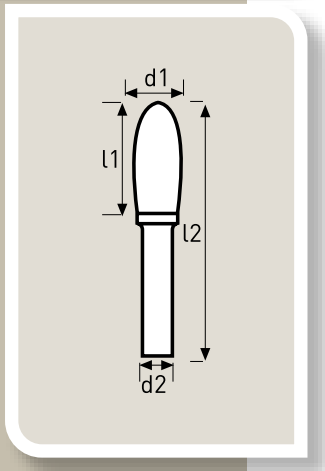




Ball Nosed Cone / *Küre Uçlu Konik*

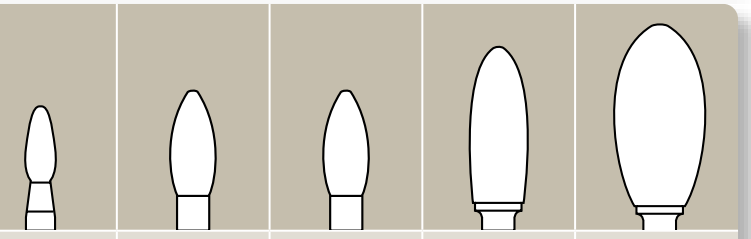
						
d1 Dia/*Çap*	6	8	10	10	12	16
l1	18	19	19	27	30	33
d2	60	6	6	6	6	6
l2	50	69	65	75	75	78
NG6 CODE /*KOD*	**T4400 NG6**	**T4500 NG6**	**T4600 NG6**	**T4600-1 NG6**	**T4700 NG6**	**T4800-6 NG6**
EURO	**16.50**	**17.50**	**18.50**	**21.50**	**22.40**	**33.20**
NG6 ACC COATED *KAPLAMALI* CODE /*KOD*	**T4400 NG6 ACC**	**T4500 NG6 ACC**	**T4600 NG6 ACC**	**T4600-1 NG6 ACC**	**T4700 NG6 ACC**	**T4800-6 NG6 ACC**
EURO	**19.90**	**21.30**	**22.70**	**26.50**	**28.40**	**41.00**





Flame / *Alev*



					
d1 Dia/*Çap*	6	8	10	12	16
l1	14	19	19	32	36
d2	6	6	6	6	6
l2	50	65	65	77	81
NG6 CODE /*KOD*	**T5400 NG6**	**T5550 NG6**	**T5555 NG6**	**T5600 NG6**	**T5800-6 NG6**
EURO	**12.90**	**15.40**	**23.70**	**25.10**	**26.50**
NG6 ACC COATED *KAPLAMALI* CODE /*KOD*	**T5400 NG6 ACC**	**T5550 NG6 ACC**	**T5555 NG6 ACC**	**T5600 NG6 ACC**	**T5800-6 NG6 ACC**
EURO	**16.30**	**19.20**	**27.90**	**32.10**	**34.50**

All steels, stainless steels, cast iron / *Tüm çelikler, paslanmaz çelikler, dökümler.*
NG6 : Up to 50% better performance / *% 50 ye varan daha yüksek performans*
NG6 ACC (Coated) : Up to 100% better performace / *% 100 ye varan daha yüksek performans*

gürkan

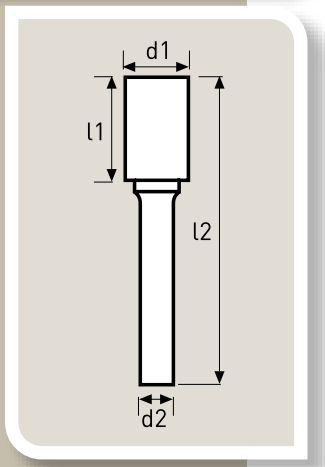






CARBIDE BURS INOX SERIES
SERT METAL ÇAPAK ALMA FREZELERİ PASLANMAZ SERİSİ



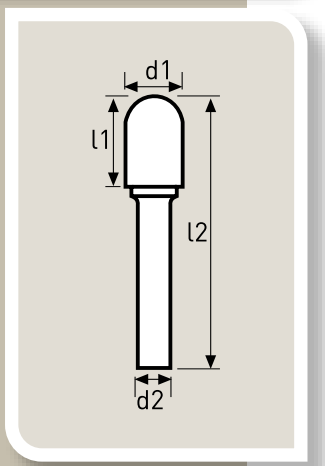


Cylinder (without end cut) / *Silindir (Düz Uçlu)*



d1 Dia/*Çap*	**3**	**6**	**6**	**8**	**10**	**12**
l1	**13**	**13**	**19**	**19**	**19**	**25**
d2	**3**	**3**	**6**	**6**	**6**	**6**
l2	**38**	**45**	**75**	**65**	**65**	**70**
Inox *Paslanmaz*	**T1200 IN**	**T1240 IN**	**T1400 IN**	**T1500 IN**	**T1600 IN**	**T1700-1 IN**
EURO	**10.00**	**16.30**	**15.40**	**19.80**	**19.90**	**28.00**





Ball Nosed Cylinder / *Küre Uçlu Silindir*



d1 Dia/*Çap*	3	6	6	8	10	12
l1	13	13	19	19	19	25
d2	3	3	6	6	6	6
l2	38	45	50	65	65	70
Inox *Paslanmaz*	**T3200 IN**	**T3240 IN**	**T3400 IN**	**T3500 IN**	**T3600 IN**	**T3700-1 IN**
EURO	**10.00**	**16.40**	**17.60**	**18.90**	**20.70**	**28.40**

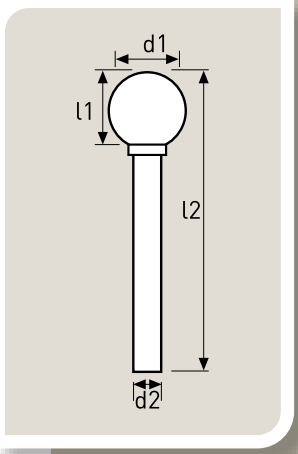
Specially designed for stainless steel materials and its derivatives
Özellikle paslanmaz çelik ve türevleri için tasarlanmış

CARBIDE BURS INOX SERIES
SERT METAL ÇAPAK ALMA FREZELERİ PASLANMAZ SERİSİ

Ball / *Küre*

d1 Dia/*Çap*	3	6	6	8	10	12
l1	2.7	5.4	5.4	7.2	9	10.8
d2	3	3	6	6	6	6
l2	38	38	50	52	53	55
Inox *Paslanmaz*	**T7200 IN**	**T7240 IN**	**T7400 IN**	**T7500 IN**	**T7600 IN**	**T7700 IN**
EURO	**18.00**	**19.50**	**18.90**	**17.50**	**16.20**	**26.20**

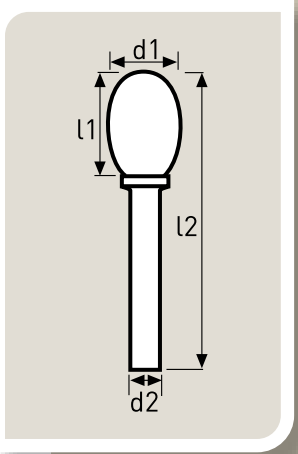




Oval / *Oval*

d1 Dia/*Çap*	8	10	12
l1	13	16	22
d2	6	6	6
l2	58	60	67
Inox *Paslanmaz*	**T5300 IN**	**T5500 IN**	**T5700 IN**
EURO	**21.20**	**23.70**	**29.50**

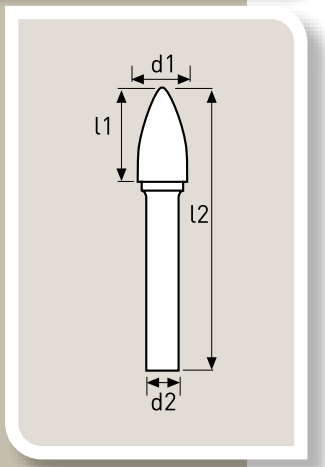




Specially designed for stainless steel materials and its derivatives
Özellikle paslanmaz çelik ve türevleri için tasarlanmış

CARBIDE BURS INOX SERIES
SERT METAL ÇAPAK ALMA FREZELERİ PASLANMAZ SERİSİ

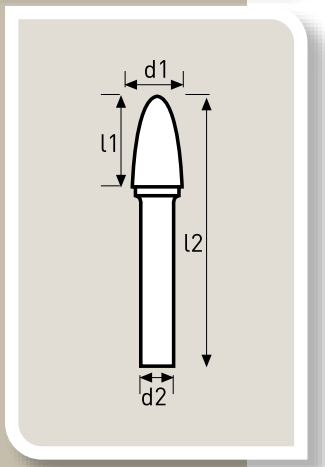




Tree / *Çam*

d1 Dia/*Çap*	6	8	10	12
l1	16	19	19	25
d2	6	6	6	6
l2	50	65	65	70
Inox *Paslanmaz*	**T6400 IN**	**T6450 IN**	**T6500 IN**	**T6800 IN**
EURO	**20.10**	**22.40**	**21.00**	**28.00**





Ball Nosed Tree / *Küre Uçlu Çam*

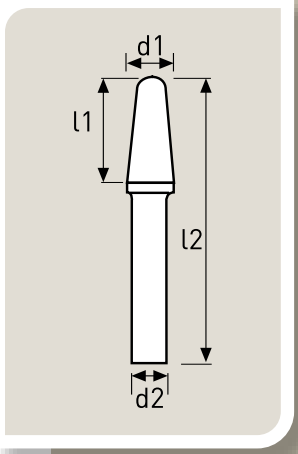
d1 Dia/*Çap*	3	6	6	8	10	12
l1	13	13	16	19	19	25
d2	3	3	6	6	6	6
l2	38	45	50	65	65	70
Inox *Paslanmaz*	**T9200 IN**	**T9240 IN**	**T9400 IN**	**T9500 IN**	**T9600 IN**	**T9700 IN**
EURO	**16.80**	**20.70**	**21.10**	**21.10**	**22.80**	**29.80**

Specially designed for stainless steel materials and its derivatives
Özellikle paslanmaz çelik ve türevleri için tasarlanmış

Ball Nosed Cone / *Küre Uçlu Konik*

	14°	14°	14°	14°
d1 Dia/*Çap*	8	10	10	12
l1	19	19	27	30
d2	6	6	6	6
l2	69	65	75	75
Inox *Paslanmaz*	**T4500 IN**	**T4600 IN**	**T4600-1 IN**	**T4700 IN**
EURO	**24.60**	**25.60**	**28.00**	**29.00**

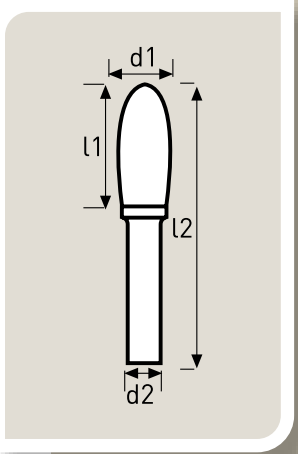




Flame / *Alev*

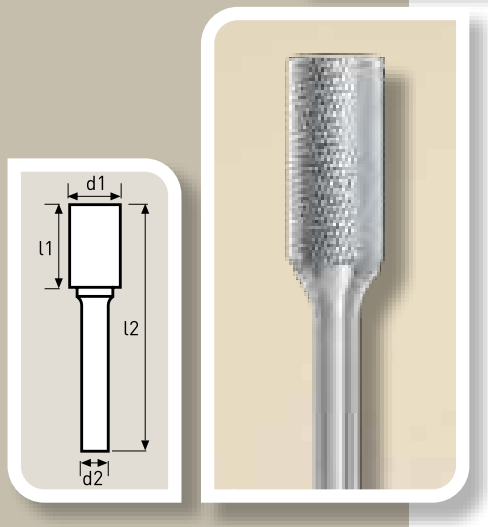
d1 Dia/*Çap*	8	10	12
l1	19	19	32
d2	6	6	6
l2	65	65	77
Inox *Paslanmaz*	**T5550 IN**	**T5555 IN**	**T5600 IN**
EURO	**24.40**	**24.50**	**37.20**





Specially designed for stainless steel materials and its derivatives
Özellikle paslanmaz çelik ve türevleri için tasarlanmış

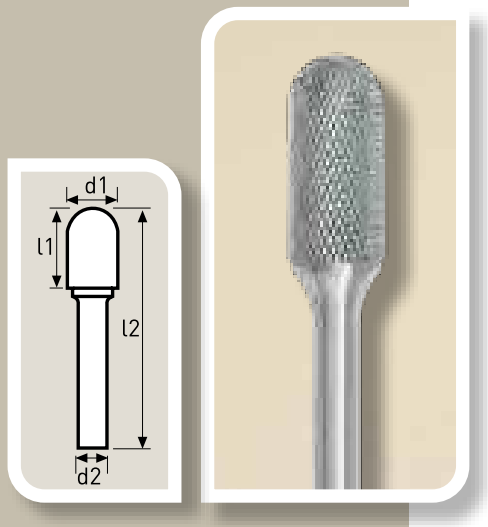
VERY FINE CUT BURS
EKSTRA İNCE DİŞ ÇAPAK FREZE



Cylinder (without end cut) / *Silindir (Düz Uçlu)*



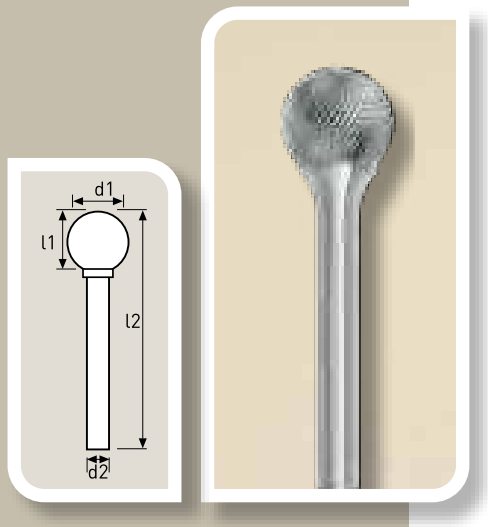
d1 Dia/*Çap*	**2**	**3**	**6.3**	**6**	**12**
l1	**11**	**14**	**13**	**18**	**25**
d2	**3**	**3**	**3**	**6**	**6**
l2	**38**	**38**	**45**	**50**	**65**
VF Very Fine Code/*Kod*	**T1100 VF**	**T1200 VF**	**T1240 VF**	**T1400 VF**	**T1700-1 VF**
EURO	**6.70**	**7.40**	**12.00**	**12.90**	**23.50**



Ball Nosed Cylinder / *Küre Uçlu Silindir*



d1 Dia/*Çap*	**2**	**3**	**6.3**	**6**	**12**
l1	**11**	**14**	**13**	**18**	**25**
d2	**3**	**3**	**3**	**6**	**6**
l2	**38**	**38**	**45**	**50**	**65**
VF Very Fine Code/*Kod*	**T3100 VF**	**T3200 VF**	**T3240 VF**	**T3400 VF**	**T3700-1 VF**
EURO	**7.50**	**7.50**	**12.20**	**14.80**	**23.90**



Ball / *Küre*



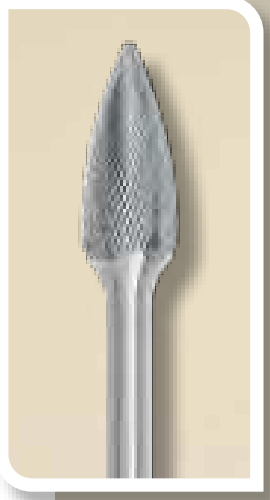
d1 Dia/*Çap*	2	3	6.3	6	9.6	12
l1	1.8	2.5	5.4	5.4	8	10.8
d2	3	3	3	6	6	6
l2	38	38	38	50	52	51
VF Very Fine Code/*Kod*	**T7100 VF**	**T7200 VF**	**T7240 VF**	**T7400 VF**	**T7600 VF**	**T7700 VF**
EURO	**7.50**	**7.50**	**17.90**	**14.70**	**13.60**	**22.10**

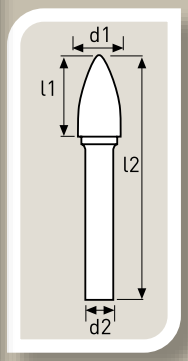
VERY FINE CUT BURS
EKSTRA İNCE DİŞ ÇAPAK FREZE

Tree / *Çam*



d1 Dia/*Çap*	3	6.3	6	12
l1	14	13	16	25
d2	3	3	6	6
l2	38	45	50	65
VF Very Fine Code/*Kod*	**T6200 VF**	**T6240 VF**	**T6400 VF**	**T6800 VF**
EURO	**7.50**	**12.50**	**16.80**	**24.00**

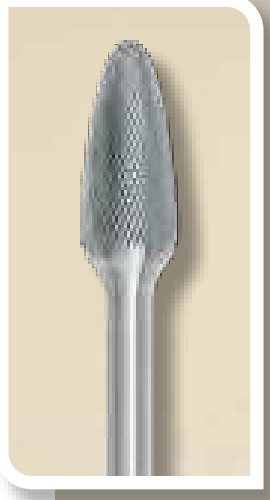


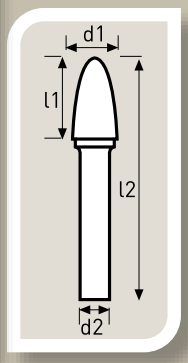


Ball Nosed Tree / *Küre Uçlu Çam*



d1 Dia/*Çap*	3	3	6.3	12
l1	8	13	13	25
d2	3	3	3	6
l2	38	38	45	65
VF Very Fine Code/*Kod*	**T9220 VF**	**T9200 VF**	**T9240 VF**	**T9700 VF**
EURO	**8.90**	**7.50**	**15.50**	**25.00**





The Very Fine Diamond Cut carbide bur is designed to effectively remove workpiece imperfections from ferrous applications. optimal light stock removal on, excellent grinding control, consistent workpiece finish.

Ekstra ince diş karbür çapak freze, metallerde yüzeysel kusurları etkili bir şekilde gidermek için tasarlanmıştır. Optimum hafif talaş kaldırma, mükemmel taşlama kontrolü, homojen yüzel kalitesi temin eder.



ROUTERS WITH FRONT END CUT
KENAR FREZESİ ALIN KESİCİLİ



Code *Kod*	Cutting Dia *Kesici çap Ømm*	Cutting Lenght *Kesici Boy*	Shank Dia *Sap çapı*	Overall lenght *Tam Boy*	EURO
262030	3	12	2	38	**20.00**
262040	4	16	4	50	**24.00**
262060	6	19	6	63	**27.00**
262080	8	25	8	63	**35.00**
262100	10	25	10	75	**58.00**
262120	12	25	12	75	**76.00**

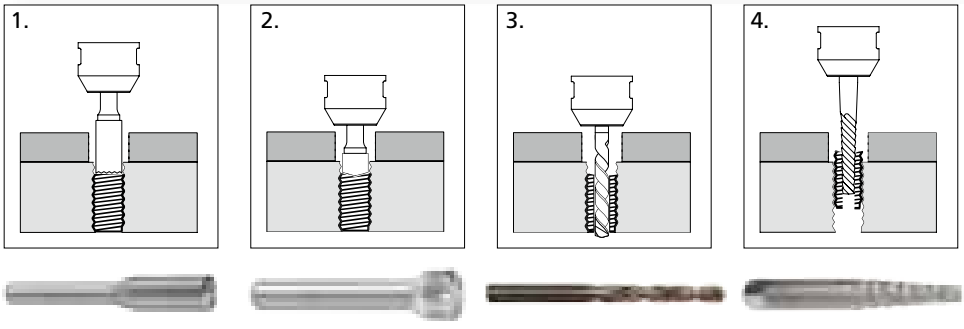
For fiberglas countouring and roughing / *Fiber malzeme kontur kesme ve işleme*

BOLT REMOVER KIT
VİDA SÖKME TAKIMI

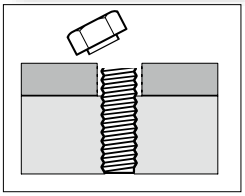


Code *Kod*	Bolt *Vida Ømm*	Content / *İçeriği*	EURO
BRGBKIT48-06	6	1 pce. carbide bur cylinder 1 pce. carbide countersink 1 pce. HSS drill 1 pce. screw extractor tool	**39.00**
BRGBKIT49-08	8		**40.00**
BRGBKIT50-10	10		**45.00**
BRGBKIT51-12	12		**52.00**
BRGBKIT52-14	14		**64.00**

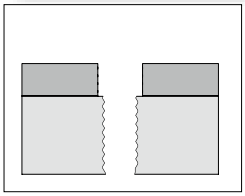
THE APPLICATION / *UYGULAMA*



BEFORE / *ÖNCE*

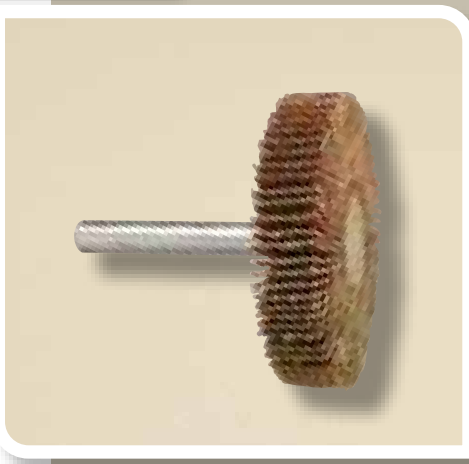


AFTER / *SONRA*



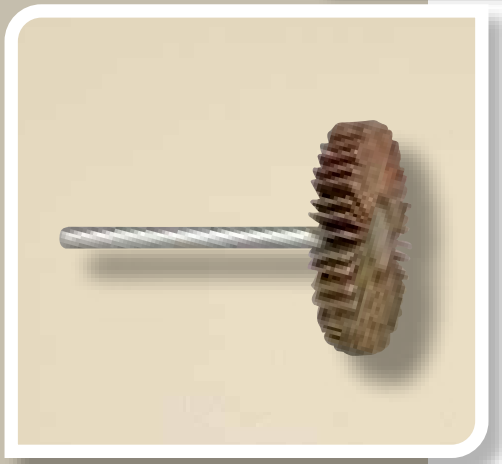
PREMIUM FLAP WHEELS
AŞINDIRICI SAPLI FIRFIR ZIMPARALAR

CODE *KOD*	Dia/*Çap* mm	Width *Kalınlık*	Shank *Sap* Ø mm	EURO
S3010	30	10	3	3.90
S3015	30	15	3	4.20
S3010L	30	10	6	4.20
S3015L	30	15	6	4.20
S4010	40	10	6	4.30
S4015	40	15	6	4.30
S4020	40	20	6	4.50
S4025	40	25	6	5.30
S4030	40	30	6	5.80
S5010	50	10	6	4.50
S5015	50	15	6	5.00
S5020	50	20	6	5.50
S5025	50	25	6	5.80
S5030	50	30	6	6.30
S5040	50	40	6	7.00
S6010	60	10	6	5.50
S6015	60	15	6	5.80
S6020	60	20	6	5.80
S6025	60	25	6	6.20
S6030	60	30	6	6.60
S6040	60	40	6	7.50
S6050	60	50	6	8.50
S8015	80	15	6	6.50
S8020	80	20	6	7.00
S8025	80	25	6	7.50
S8030	80	30	6	8.80
S8040	80	40	6	9.00
S8050	80	50	6	12.00



Grit selections - *Kum seçenekleri* **: 40-60-80-100-120-150-180-240-320 Grit/kum**
Packed in (Minimum order) 10 pcs / *Ambalaj miktarı (Minimum sipariş) 10 Ad.*
Prices are for 1 pce / *Fiyatlar 1 adet içindir.*
Ordering example: S6010-080 (for Ø60x10mm with 80grit)
Sipariş örneği : S6010-080 (Ø60x10mm 80kum için)

MINI FLAP WHEELS
MİNİ FIRFIR ZIMPARA



CODE *KOD*	Dia/*Çap* mm	Width *Kalınlık*	Shank *Sap* Ø mm	EURO
SM1010	10	10	3	6.60
SM1515	15	15	3	7.70
SM2010	20	10	6	6.60
SM2015	20	15	6	7.00
SM2020	20	20	6	7.30
SM2505	25	5	6	5.00
SM2510	25	10	6	5.50
SM2515	25	15	6	5.50
SM2520	25	20	6	7.50
SM2525	25	25	6	8.00
SM3005	30	5	3	5.00
SM3005L	30	5	6	5.00

Grit selections / *Kum seçenekleri* **: 80-120-180 Grit/kum**
Packed in (Minimum order) 10 pcs / *Ambalaj miktarı (Minimum sipariş) 10 Ad.*
Prices are for 1 pce / *Fiyatlar 1 adet içindir.*
Ordering example: GSM3005-080 (for Ø30x5mm with 80grit)
Sipariş örneği : GSM3005-080 (Ø30x5mm 80kum için)

ABRASIVE RUBBER BLOCK
AŞINDIRICI LASTİK SİLGİ



Grit / *Kum* - Colour / *Renk*	Abrasive *Aşındırıcı*	CODE *KOD*	EURO
60 Grit - Pink *60 Kum - Pembe*	**Extra Coarse** *Ekstra Kaba*	GB036GFLEX	9.00
60 Grit - Blue *60 Kum - Mavi*	**Coarse** *Kaba*	GB060GFLEX	9.00
120 Grit - Gray *120 Kum - Gri*	**Medium** *Orta*	GB120GFLEX	9.00
240 Grit - Brown *240 Kum - Kahverengi*	**Fine** *İnce*	GB240GFLEX	9.00

Sizes / *Boyutlar* **80x50x20mm.**
Prices are for 1 pce / *Fiyatlar 1 adet içindir.*
Packed in Box of 18 pcs / *Ambalaj Miktarı 18 Adet*

ABRASIVE CUTTING DISCS FOR METAL
METAL KESEN AŞINDIRICI KESME DİSKİ

CODE *KOD*	Dia/*Çap* Ø mm	Thickness *Kalınlık* mm	Bore Dia *Delik Çapı* Ø mm	EURO
ACD1500532	150	0.50	32	9.60
ACD1500632	150	0.60	32	9.60
ACD1500732	150	0.70	32	9.60
ACD1500832	150	0.80	32	9.60
ACD1500932	150	0.90	32	9.60
ACD1501032	150	1.00	32	9.00
ACD1501232	150	1.20	32	9.00
ACD1501632	150	1.60	32	8.50
ACD1502032	150	2.00	32	8.50
ACD1502432	150	2.40	32	8.50







CARBIDE BURRS OPERATION SPEED
SERT METAL ÇAPAK FREZE KULLANIM DEVİRLERİ



Workpiece *İşlenilen malzeme*	**Rpm range according to tool diameter** *Takım çapına göre devir aralığı*				
	Ø 3mm	Ø 6mm	Ø 10mm	Ø 12mm	Ø 16mm
Steel *Çelik*	60.000-80.000	35.000-45.000	22.000-35.000	20.000-30.000	15.000-20.000
Hard Steel **Sert Çelik**	60.000-80.000	30.000-45.000	19.000-30.000	15.000-22.000	12.000-18.000
Stainless steel *Paslanmaz Çelik*	60.000-80.000	30.000-45.000	19.000-30.000	15.000-22.000	12.000-18.000
Cast ıron *Döküm*	45.000-80.000	22.000-45.000	15.000-35.000	11.000-30.000	9.000-20.000
Titanium *Titanyum*	60.000-80.000	30.000-45.000	19.000-30.000	15.000-22.000	12.000-18.000
Nickel *Nikel*	60.000-80.000	30.000-45.000	19.000-30.000	15.000-22.000	12.000-18.000
Copper and **Copper alloys** *Bakır ve alaşımları*	45.000-80.000	22.000-45.000	15.000-35.000	11.000-30.000	9.000-20.000
Aluminium *Aluminyum*	30.000-80.000	15.000-45.000	10.000-35.000	7.000-30.000	6.000-20.000
Plastics *Plastik*	30.000-80.000	15.000-45.000	10.000-35.000	7.000-30.000	6.000-20.000

gürkan



DRILLS

MATKAP UÇLARI



DIN 338 DRILL HSSE / *DIN 338 MATKAP UCU HSSE*

Dia / Çap Ø mm	CODE *KOD*	Flute lenght *Helis boyu*	Overall lenght *tamboy*	EURO
0.5	338005	6	22	2.40
0.8	338008	10	30	2.40
1	338010	12	34	0.60
1.5	338015	18	40	0.50
2	338020	24	49	1.00
2.5	338025	30	57	1.00
3	338030	33	61	1.00
3.3	338033	36	65	1.30
3.5	338035	39	70	1.30
4	338040	43	75	1.30
4.2	338042	43	75	1.60
4.5	338045	52	80	1.60
5	338050	52	86	1.70
5.5	338055	57	93	2.20
6	333060	57	93	2.20
6.5	338065	63	101	2.90
6.8	338068	69	109	3.80
7	338070	69	109	3.50
7.5	338075	69	109	3.90
8	338080	75	117	4.00
8.5	338085	75	117	4.90
9	338090	81	125	5.50
9.5	338095	81	125	6.30
10	338100	87	133	6.60
10.2	338102	87	133	9.00
10.5	338105	87	133	8.10
11	338110	94	142	9.30
11.5	338115	94	142	9.80
12	338120	101	151	10.70
12.5	338125	101	151	11.50
13	338130	101	151	12.30
13.5	338135	108	160	21.30
14	338140	108	160	22.00
14.5	338145	114	169	25.00
15	338150	114	169	26.00
15.5	338155	120	178	27.00
16	338160	120	178	29.00

HP HIGH PERFORMANCE CARBIDE DRILLS Coated
YÜKSEK PERFORMANS SERT METAL MATKAPLAR Kaplamalı

CARBIDE DRILL / *SERT METAL MATKAP UCU*



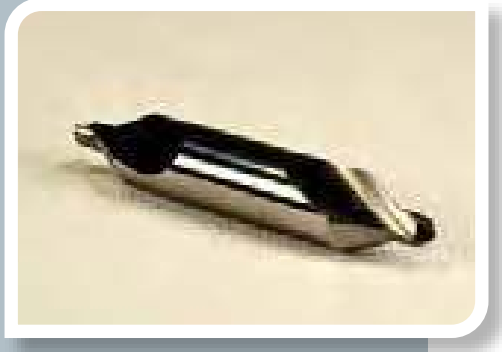
Dia / *Çap* Ø mm	CODE *KOD*	Flute lenght *Helis boyu*	Overall lenght *tamboy*	Shank Dia *Sap Çapı*	EURO
3	215030	21	50	3	**14.00**
3.3	215033	25	60	4	**18.00**
3.5	215035	25	60	4	**18.00**
4	215040	28	60	4	**18.00**
4.2	215042	31	75	5	**22.00**
4.5	215045	33	75	5	**22.00**
5	215050	35	75	5	**22.00**
5.5	215055	38	80	6	**25.00**
6	215060	40	80	6	**25.00**
6.5	215065	45	90	8	**34.00**
6.8	215068	45	90	8	**34.00**
7	215070	45	90	8	**34.00**
7.5	215075	50	90	8	**34.00**
8	215080	50	90	8	**34.00**
8.5	215085	52	100	10	**49.00**
9	215090	55	100	10	**49.00**
9.5	215095	56	100	10	**49.00**
10	215100	60	100	10	**49.00**
10.2	215102	60	110	12	**68.00**
10.5	215105	60	110	12	**68.00**
11	215110	65	110	12	**68.00**
11.5	215115	65	110	12	**68.00**
12	215120	70	110	12	**68.00**
12.5	215125	73	120	14	**97.00**

CENTRE DRILLS DIN 333
PUNTA MATKAPLARI **DIN 333**



DIN 333 CENTRE DRILL HSS / *DIN 333 PUNTA MATKABI HSS*

Point dia *Punta çapı* Ømm	CODE *KOD*	body dia *gövde çapı*	point lenght *punta boyu*	overall lenght *tamboy*	EURO
1.6	**33316**	4	2	35	**3.00**
2	**33320**	5	2.5	40	**3.50**
2.5	**33325**	6.3	3.1	45	**4.50**
3.15	**33331**	8	3.9	50	**5.50**
4	**33340**	10	5	56	**7.00**
5	**33350**	12.5	6.3	63	**10.00**



DIN 333 CENTRE DRILL CARBIDE / *DIN 333 PUNTA MATKABI SERT METAL*

Point dia *Punta çapı* Ømm	CODE *KOD*	body dia *gövde çapı*	point lenght *punta boyu*	overall lenght *tamboy*	EURO
1.6	33316HM	4	2	35	**18.00**
2	33320HM	5	2.5	40	**19.00**
2.5	33325HM	6.3	3.1	45	**22.00**
3.15	SSS31HM	8	3.9	50	**28.00**
4	33340HM	10	5	56	**36.00**
5	33350HM	12.5	6.3	63	**45.00**

SPEED AND FEED DATAS FOR DRILLS
MATKAPLAR İÇİN DEVİR ve İLERLEME DEĞERLERİ

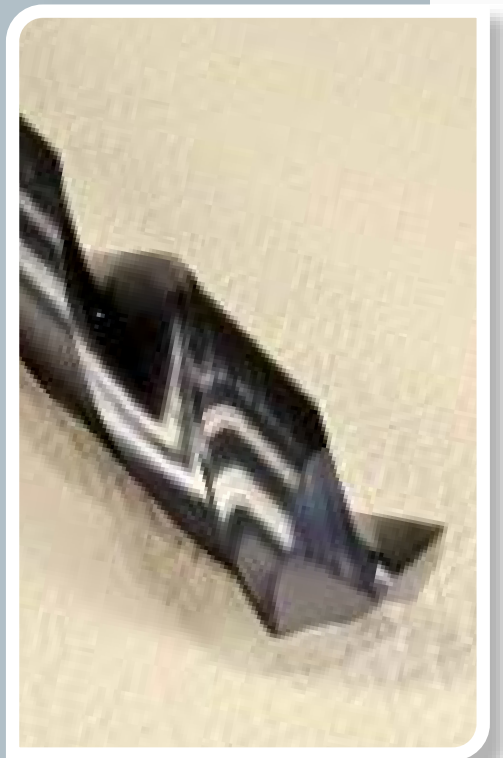
Workpiece material İşlenen malzeme türü	Cutting speed Kesme hızı Metre/ minute metre/ dakika	FEED RATE ACCORDING TO DRILL DIAMETER (FEED PER REVOLUTION) m/rev. *MATKAP ÇAPLARINA GÖRE İLERLEME (devir başına ilerleme) mm/ devir*											
		Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø8	Ø10	Ø12	Ø15	Ø16	Ø20
STEEL < 200 HB ÇELİK < 200 HB	20-25	0.020	0.060	0.090	0.100	0.110	0.130	0.160	0.190	0.200	0.230	0.250	0.280
STEEL 200-300 HB ÇELİK 200-300 HB	12-20	0.018	0.050	0.070	0.080	0.095	0.110	0.140	0.170	0.180	0.200	0.210	0.230
ÇELİK 300-350 HB	10-12	0.016	0.035	0.050	0.060	0.065	0.075	0.095	0.110	0.125	0.140	0.150	0.180
STAINLESS STEEL PASLANMAZ ÇELİK	12-18	0.016	0.035	0.050	0.060	0.065	0.075	0.095	0.110	0.125	0.140	0.150	0.180
CAST IRON DÖKÜM	20-30	0.018	0.050	0.070	0.080	0.095	0.110	0.140	0.170	0.180	0.200	0.210	0.230
CUPPER, BRONZE, BRASS BAKIR BRONZ PİRİNÇ	20-35	0.018	0.050	0.070	0.080	0.095	0.110	0.140	0.170	0.180	0.200	0.210	0.230
ALUNIMIUM ALUMINYUM	25-35	0.020	0.060	0.090	0.100	0.110	0.130	0.160	0.190	0.200	0.230	0.250	0.280

Indicated datas are for HSS Cobalt drills, for HSS drills please reduce these datas by 30%
Yukarıdaki değerleri HSS Cobalt matkaplarda kullanınız, HSS matkaplarda bu değerleri %30 düşürünüz.



SPEED AND FEED DATAS FOR CARBIDE DRILLS
SERT METAL MATKAPLAR İÇİN DEVİR VE İLERLEME DEĞERLERİ

Workpiece material İşlenen malzeme türü	Cutting speed Kesme hızı Metre/ minute metre/ dakika	FEED RATE ACCORDING TO DRILL DIAMETER (FEED PER REVOLUTION) m/rev. MATKAP ÇAPLARINA GÖRE İLERLEME (devir başına ilerleme) mm/ devir											
		Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø8	Ø10	Ø12	Ø15	Ø16	Ø20
STEEL < 200 HB ÇELİK < 200 HB	70-80	0.007	0.012	0.020	0.025	0.030	0.035	0.050	0.075	0.095	0.120	0.130	0.140
STEEL 200-300 HB ÇELİK 200-300 HB	55-70	0.007	0.012	0.020	0.025	0.030	0.035	0.050	0.075	0.095	0.120	0.130	0.140
STEEL 300-350 HB ÇELİK 300-350 HB	35-55	0.007	0.012	0.020	0.025	0.030	0.035	0.050	0.075	0.095	0.120	0.130	0.140
STEEL 40-50 HRC ÇELİK 40-50 HRC	20-30	0.007	0.012	0.018	0.022	0.028	0.033	0.045	0.065	0.085	0.110	0.120	0.130
STEEL 50-55 HRC ÇELİK 50-55 HRC	16-20	0.006	0.012	0.016	0.020	0.025	0.030	0.040	0.060	0.080	0.100	0.110	0.120
STAINLESS STEEL PASLANMAZ ÇELİK	20-30	0.007	0.012	0.018	0.022	0.028	0.033	0.045	0.065	0.085	0.110	0.120	0.130
CAST IRON DÖKÜM	50-70	0.012	0.022	0.032	0.040	0.050	0.060	0.085	0.095	0.110	0.130	0.140	0.160
CUPPER, BRONZE, BRASS BAKIR BRONZ PİRİNÇ	100-200	0.025	0.050	0.070	0.080	0.100	0.125	0.160	0.200	0.240	0.270	0.300	0.300
ALUNIMIUM ALUMINYUM	60-150	0.025	0.050	0.070	0.080	0.100	0.125	0.160	0.200	0.240	0.270	0.300	0.300



Finding the revolution using cutting speed rate
Kesme hızından deviri bulmak için

$$\frac{\textbf{Cutting speed (m/minute)}\ \textit{Kesme hızı (m/dakika)}\ \textbf{x 1000}}{\textbf{3,14 x tool (drill) diameter}\ \textit{takım (matkap) çapı}} = \textbf{DEVİR}/\textit{DAKİKA}\ \textbf{(RPM)}$$

All given datas are to make user to have reference point to make a start.
The machine, coolant, workpiece fixing, toolholding accuracy, workpiece characteristics and many other inputs may lead you to change these datas
Having made a start with these given datas, by adjusting them you can reach the optimun datas of your particular application.
Do NOT start with the upper level of the given datas. Start from the lower level then gradually inrease it.

Tüm verilen değerler işlemeye başlangıç yapabilmeniz için referans alabileceğiniz değerlerdir.
Tezgah, soğutucu, parça bağlama, takım tutucu hassasiyeti, malzeme özelliği ve diğer tüm etkenler bu değerleri değiştirmenizi gerektirebilir.
Başlangıcı yukarıdaki değerlerle yaptıktan sonra kesme değerlerini değiştirerek işleminize uygun optimum kesme değerine ulaşabilirsiniz.
Tabloda belirtilen değer aralıklarının üst sınırlarıyla başlangıç yapmayınız. Alt sınırdan başlayarak değerlerinizi kademeli olarak artırınız.

gürhan



CARBIDE END MILLS

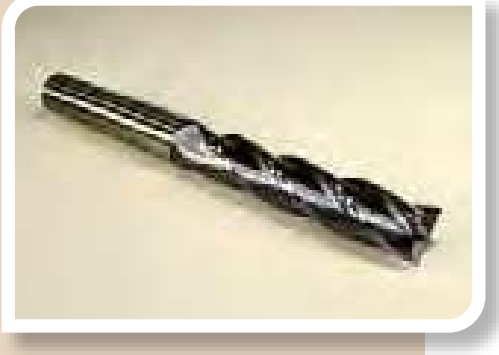
SERT METAL PARMAK FREZELER

SOLID CARBIDE END MILLS UNEQUAL HELIX/PITCH
SERT METAL PARMAK FREZELER EŞİTSİZ HELİS / HATVE



CARBIDE END MILL 4 FLUTED STANDARD LENGHT
SERT METAL PARMAK FREZE 4 AĞIZLI STANDART BOY

Ø mm	CODE *KOD*	Cutting lenght *Kesici boy*	Overall lenght *tamboy*	Shank Dia *Sap Çapı*	Nr of flute *Kanal adeti*	EURO
2	114020A	7	50	6	4	**17.00**
3	114030A	8	50	6	4	**17.00**
4	114050A	11	50	6	4	**17.00**
5	114050A	13	57	6	4	**19.00**
6	114060A	13	57	6	4	**19.00**
8	114080A	19	63	8	4	**25.00**
10	114100A	22	72	10	4	**34.00**
12	114120A	26	83	12	4	**49.00**
14	114140A	28	83	14	4	**70.00**
16	114160A	32	92	16	4	**95.00**
18	114180A	32	92	18	4	**110.00**
20	114200A	40	100	20	4	**135.00**
25	114250A	40	100	25	4	**175.00**



CARBIDE END MILL 4 FLUTED LONG LENGHT
SERT METAL PARMAK FREZE 4 AĞIZLI UZUN BOY

Ø mm	CODE *KOD*	Cutting lenght *Kesici boy*	Overall lenght *tamboy*	Shank Dia *Sap Çapı*	Nr of flute *Kanal adeti*	EURO
3	148030A	20	75	6	4	**24.00**
4	148040A	25	75	6	4	**24.00**
5	148050A	25	75	6	4	**24.00**
6	148060A	40	100	6	4	**27.00**
8	148080A	40	100	8	4	**34.00**
10	148100A	40	100	10	4	**43.00**
12	148120A	45	100	12	4	**60.00**
12	148120AX	75	160	12	4	**100.00**
16	148160A	75	160	16	4	**170.00**
20	148200A	75	160	20	4	**250.00**
25	148250A	75	160	25	4	**330.00**

Micrograin carbide + TIALN coated / *Micrograin sert metal + TIALN kaplama*
Straight shank H6 Tol. / *Düz saplı H6 Tolerance*

BALL NOSED SOLID CARBIDE END MILLS UNEQUAL HELIX/PITCH
KÜRE UÇLU SERT METAL PARMAK FREZELER EŞİTSİZ HELİS / HATVE

BALL NOSED CARBIDE END MILL 4 FLUTED
KÜRE UÇLU SERT METAL PARMAK FREZE 4 AĞIZLI



Ø mm	CODE *KOD*	Cutting lenght *Kesici boy*	Overall lenght *tamboy*	Shank Dia *Sap Çapı*	Nr of flute *Kanal adeti*	EURO
3	128030	25	75	6	4	**30.00**
4	128040	25	75	6	4	**30.00**
5	128050	25	75	6	4	**30.00**
6	128060	40	100	6	4	**35.00**
8	128080	40	100	8	4	**36.00**
10	128100	40	100	10	4	**50.00**
12	128120	45	100	12	4	**70.00**

CUTTING DATAS FOR CARBIDE MILLING CUTTERS
SERT METAL FREZELER KESME DEĞERLERİ



Cutting speed / *Kesme Hızı*

Steels below 20 HRC - *20 HRC altında çelikler: 75 - 150* m/minute *m/dakika*

Steels 20 - 40 HRC - *20 - 40 HRC çelikler için: 30 - 100* m/minute *m/dakika*

Steels 40 - 55 HRC - *40 - 55 HRCçelikler için: 25 - 50* m/minute *m/dakika*

RPM revolution
Devir / Dakika

$$= \frac{\text{Cutting speed (m/minute)} \quad \textit{Kesme hızı (m/dakika)} \times 1000}{\text{3.14 x tool diameter} \quad \textit{3.14 x takım çapı}}$$

Feed / *İlerleme*

tool diamter *takım çapı*	**Feed per teeth (mm per teeth)** *İlerleme (kesici ağız başına)*
Ø1 - 2 mm	0.010 - 0.012 mm
Ø3 - 4 mm	0.013 - 0.018 mm
Ø5 - 6 mm	0.018 - 0.025 mm
Ø8 - 10 mm	0.025 - 0.050 mm
Ø12 - 16 mm	0.050 - 0.080 mm
Ø18 - 20 mm	0.060 - 0.090 mm

gürkan



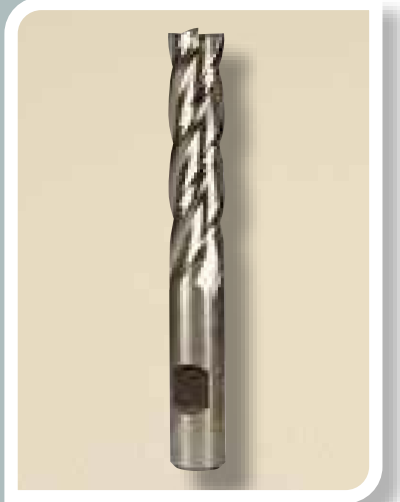
STRAIGHT SHANK HSS MILLING CUTTERS
SİLİNDİRİK SAPLI HSS FREZE BIÇAKLARI

END MILLS HSS Cobalt DIN 844
PARMAK FREZELER HSS Cobalt DIN 844



END MILL DIN 844 SHORT / *PARMAK FREZE DIN 844 KISA*

Dia *Çap* Ø mm	CODE *KOD*	Flute lenght *Helis boyu*	Overall lenght *tamboy*	Shank *Sap* Ø	z	EURO
2	611020	7	51	6	3	8.00
2.5	611025	8	52	6	3	8.00
3	611030	8	52	6	4	6.50
4	611040	11	55	6	4	6.50
5	611050	13	57	6	4	6.50
6	611060	13	57	6	4	6.50
7	611070	16	66	10	4	8.00
8	611080	19	69	10	4	7.50
10	611100	22	72	10	4	9.00
11	611110	22	79	12	4	12.00
12	611120	26	83	12	4	11.00
14	611140	26	83	12	4	15.00
16	611160	32	92	16	4	16.00
18	611180	32	92	16	4	20.00
20	611200	38	104	20	4	23.00
22	611220	38	104	20	6	32.00
25	611250	45	121	25	6	43.00
28	611280	45	121	25	6	52.00
30	611300	45	121	25	6	59.00
32	611320	53	133	32	6	65.00
36	611360	53	133	32	6	80.00
40	611400	63	155	40	6	90.00



END MILL DIN 844 LONG / *PARMAK FREZE DIN 844 UZUN*

Dia *Çap* Ø mm	CODE *KOD*	Flute lenght *Helis boyu*	Overall lenght *tamboy*	Shank *Sap* Ø	z	EURO
6	612060	24	68	6	4	8.00
8	612080	38	88	10	4	10.00
10	612100	45	95	10	4	12.00
12	612120	53	110	12	4	14.00
14	612140	53	110	12	4	19.00
16	612160	63	123	16	4	22.00
18	612180	63	123	16	4	28.00
20	612200	75	141	20	4	32.00
22	612220	75	141	20	4	40.00
25	612250	90	166	25	6	52.00
28	612280	90	166	25	6	65.00
30	612300	90	166	25	6	72.00
32	612320	106	186	32	6	80.00
36	612360	106	186	32	6	90.00
40	612400	125	217	40	8	105.00

ROUGHING END MILL HSS Cobalt DIN 844
KABATALAŞ PARMAK FREZELER HSS Cobalt DIN 844

ROUGHING END MILL SHORT / *KABATALAŞ PARMAK FREZE KISA*



Dia Çap Ø mm	CODE *KOD*	Flute lenght *Helis boyu*	Overall lenght *tamboy*	Shank *Sap* Ø	z	EURO
6	521060	13	57	6	4	**13.00**
8	521080	19	69	10	4	**13.00**
10	521100	22	72	10	4	**16.00**
12	521120	26	83	12	4	**20.00**
14	521140	26	83	12	4	**26.00**
16	521160	32	92	16	4	**30.00**
18	521180	32	92	20	4	**36.00**
20	521200	38	104	20	4	**43.00**
22	521220	38	104	25	5	**52.00**
25	521250	45	121	25	5	**65.00**
28	521280	45	121	25	6	**91.00**
30	521300	45	121	25	6	**98.00**
32	521320	53	133	32	6	**103.00**
36	521360	53	133	32	6	**117.00**
40	521401	63	143	32	6	**130.00**
40	521400	63	155	40	6	**136.00**

ROUGHING END MILL LONG / *KABATALAŞ PARMAK FREZE UZUN*



Dia Çap Ø mm	CODE *KOD*	Flute lenght *Helis boyu*	Overall lenght *tamboy*	Shank *Sap* Ø	z	EURO
6	522060	24	68	6	4	**18.00**
8	522080	38	88	10	4	**18.00**
10	522100	45	95	12	4	**20.00**
12	522120	53	110	12	4	**25.00**
14	522140	53	110	12	4	**33.00**
16	522160	63	123	16	4	**39.00**
18	522180	63	123	20	4	**46.00**
20	522200	75	141	20	4	**52.00**
22	522220	75	141	25	5	**65.00**
25	522250	90	166	25	5	**78.00**
28	522280	90	166	25	6	**104.00**
30	522300	90	166	25	6	**110.00**
32	522320	106	186	32	6	**117.00**
36	522360	106	186	32	6	**130.00**
40	522401	106	205	32	6	**155.00**
40	522400	125	217	40	6	**165.00**

2 FLUTED SLOT DRILL HSS Cobalt DIN 327
2 AĞIZLI PARMAK FREZE HSS Cobalt DIN 327



SLOT DRILL DIN 327 / *2 AĞIZLI PARMAK FREZE DIN 327*

Dia Çap Ø mm	CODE *KOD*	Flute lenght *Helis boyu*	Overall lenght *tamboy*	Shank *Sap* *Ø*	z	EURO
2	621020	4	48	6	2	**6.00**
3	621030	5	49	6	2	**6.00**
4	621040	7	51	6	2	**6.00**
5	621050	8	52	6	2	**6.00**
6	621060	8	52	6	2	**6.00**
7	621070	10	60	10	2	**7.00**
8	621080	11	61	10	2	**7.00**
10	621100	13	63	10	2	**9.00**
12	621120	16	73	12	2	**11.00**
14	621140	16	73	12	2	**15.00**
16	621160	19	79	16	2	**16.00**
18	621180	19	79	16	2	**18.00**
20	621200	22	88	20	2	**20.00**
22	621220	22	88	20	2	**26.00**
24	621240	26	102	25	2	**30.00**
25	621250	26	102	25	2	**36.00**
28	621280	26	102	25	2	**42.00**
30	621300	26	102	25	2	**48.00**
32	621320	32	112	32	2	**55.00**

WOODRUFF CUTTER DIN850/B HSS Cobalt
T YARIK FREZE DIN850/B HSS Cobalt

DIN 850/B WOODRUFF CUTTER / *DIN 850/B T YARIK FREZE*



ØDia x Thickness *Øçapxkalınlık* mm	CODE *KOD*	Shank Dia *sap çapı* Ø mm	Overall lenght *tamboy*	EURO
7,5 x 1,5	8500701	6	50	21.00
7,5 x 2	8500802	6	50	21.00
10,5 x 2	8501002	6	50	21.00
10,5 x 2,5	85010025	6	50	21.00
10,5 x 3	8501003	6	50	21.00
13,5 x 2	8501302	10	56	23.00
13,5 x 3	8501303	10	56	23.00
13,5 x 4	8501304	10	56	23.00
16,5 x 3	8501603	10	56	25.00
16,5 x 4	8501604	10	56	25.00
16,5 x 5	8501605	10	56	25.00
19,5 x 3	8501903	10	56	27.00
19,5 x 4	8501904	10	56	27.00
19,5 x 5	8501905	10	56	27.00
19,5 x 6	8501906	10	56	27.00
22,5 x 4	8502204	10	56	32.00
22,5 x 5	8502205	10	56	32.00
22,5 x 6	8502206	10	56	32.00
22,5 x 8	8502208	10	56	32.00
25,5 x 5	8502505	10	56	35.00
25,5 x 6	8502506	10	56	35.00
25,5 x 8	8502508	10	56	35.00
28,5 x 6	8502806	10	56	41.00
28,5 x 8	8502808	10	56	41.00
28,5 x 10	8502510	12	63	41.00
32,5 x 6	8503206	10	56	52.00
32,5 x 8	8503208	10	56	52.00
32,5 x 10	8503210	12	63	52.00
45,5 x 10	8504510	12	63	69.00

T SLOT CUTTER DIN 851 HSS Cobalt
T KANAL FREZE DIN 851 HSS Cobalt



DIN 851 T SLOT CUTTER / *DIN 851 T KANAL FREZE*

ØDia x Thickness *Øçapxkalınlık* mm	CODE *KOD*	Shank Dia *sap çapı* Ø mm	Overall lenght *tamboy*	EURO
12,5 x 6	8511206	10	57	**27.00**
16 x 8	8511608	10	62	**33.00**
18 x 8	8511808	10	70	**37.00**
19 x 9	8511909	10	70	**38.00**
21x9	8512109	12	74	**42.00**
22x10	8512210	12	74	**45.00**
25x11	8512511	12	82	**51.00**
28 x 12	8512812	12	85	**58.00**
32 x 14	8513214	16	90	**68.00**
36 x 16	8513616	25	103	**85.00**
40 x 18	8514018	25	108	**93.00**
45 x 20	8514520	25	113	**100.00**
50 x 22	8515022	32	123	**112.00**
60 x 28	8516028	32	140	**118.00**

CORNER ROUNDING CUTTER HSS Cobalt
KÖŞE YUVARLAMA FREZE HSS Cobalt

CORNER ROUNDING CUTTER / *KÖŞE YUVARLAMA FREZE*



Radius *Radüs*	CODE *KOD*	Head Dia *Kafa çapı* Ømm	Shank Dia *sap çapı* Ømm	Overall lenght *Tam boy*	EURO
R 1	6518010	8	10	60	**16.00**
R 1.5	6518015	9	10	60	**16.00**
R 2	6518020	10	10	60	**16.00**
R 2.5	6518025	11	10	60	**18.00**
R 3	6518030	12	12	60	**23.00**
R 3.5	6518035	13	12	60	**27.00**
R 4	6518040	14	12	60	**25.00**
R 5	6518050	16	12	60	**27.00**
R 6	6518060	20	16	67	**31.00**
R 7	6518070	22	16	71	**37.00**
R 8	6518080	24	16	71	**35.00**
R 9	6518090	26	25	85	**42.00**
R 10	6518100	28	25	85	**38.00**
R 11	6518110	32	25	90	**51.00**
R 12	6518120	34	25	90	**51.00**
R 12,5	6518125	41	25	100	**58.00**
R 13	6518130	42	25	100	**81.00**
R 14	6518140	44	25	100	**81.00**
R 15	6518150	46	25	100	**105.00**
R 16	6518160	48	25	100	**105.00**
R 18	6518170	52	32	112	**135.00**
R 20	6518180	56	32	112	**150.00**

DOVETAIL CUTTER DIN 1833-A HSS Cobalt
KIRLANGIÇ FREZE DIN 1833 A HSS Cobalt


Form A

DOVETAIL CUTTER FORM A / *KIRLANGIÇ FREZE FORM A*

ØDia x Thickness *Øçapxkalınlık* mm	CODE *KOD*	Shank Dia *sap çapı* Ø mm	Overall lenght *tamboy*	EURO
16 x 45°	1833A1645	12	60	22.00
16 x 60°	1833A1660	12	60	22.00
20 x 45°	1833A2045	12	63	27.00
20 x 60°	1833A2060	12	63	27.00
25 x 45°	1833A2545	16	67	37.00
25 x 60°	1833A2560	16	67	37.00
32 x 45°	1833A3245	16	71	47.00
32 x 60°	1833A3260	16	71	47.00

INVERTED DOVETAIL CUTTER DIN 1833-B HSS Cobalt
KIRLANGIÇ FREZE DIN 1833 B HSS Cobalt


Form B

INVERTED DOVETAIL CUTTER FORM B / *KIRLANGIÇ FREZE FORM B*

ØDia x Thickness *Øçapxkalınlık* mm	CODE *KOD*	Shank Dia *sap çapı* Ø mm	Overall lenght *tamboy*	EURO
16 x 45°	1833B1645	12	60	22.00
16 x 60°	1833B1645	12	60	22.00
20 x 45°	1833B2045	12	63	27.00
20 x 60°	1833B2060	12	63	27.00
25 x 45°	1833B2545	16	67	37.00
25 x 60°	1833B2560	16	67	37.00
32 x 45°	1833B3245	16	71	47.00
32 x 60°	1833B3260	16	71	47.00

CUTTING DATAS FOR HSS MILLING CUTTERS
HSS FREZELER İÇİN KESME DEĞERLERİ

CUTTING SPEED - *RPM / KESME HIZI - DEVİR*



RPM - *Devir/dakika*

1- Select the cutting speed m/minute from the table on the right according to workpiece
1- Sağdaki tablodan malzemenize göre m/dakika cinsinden kesme hızınızı bulunuz.

2- Place the cutting speed on the formula below to find the RPM
2- Alttaki formülde yerine koyarak devir / dakika cinsinden devirinizi bulunuz

RPM revolution
Devir / Dakika

$$= \frac{\text{Cutting speed (m/minute)} \text{ } \textit{Kesme hızı (m/dakika)} \text{ x 1000}}{\text{3.14 x tool diameter} \text{ } \textit{3.14 x takım çapı}}$$

Feed / *İlerleme*

3- On the feed table below select your "letter" acording to your operation and stock removal
3- Aşağıdaki ilerleme tablosundaki işlem şekli ve talaş miktarınıza göre belirtilen harfi bulunuz

4- On the bottom table across your "letter" you will find the feed rate acording to your speed that you already found
4- En alttaki tabloda bu harfin bulunduğu satırda kesme hızınıza göre ilerleme hızınızı bulacaksınız.

Materila To Cut *Malzeme*	**Cutting speed m/min.** *Kesme Hızı m/dakika*
Below 180HB soft steels *180 HB altı yumuşak çelikler*	32-40
180-250 HB carbon and low alloyed steel *180-250 HB karbonlu çelikler ve az alaşımlı çelikler*	20-25
25-33 HRC alloyed steels *25-33 HRC alaşımlı çelikler*	12-20
33-42 HRC alloyed steels, hardened steels *33-42 HRC alaşımlı çelikler, sertleşmiş çelikler*	10-12
Stainless steels *Paslanmaz çelikler*	12-20
Cast iron GG10-GG40 *Dökümler GG10 - GG40*	25-32
Cas iron GGG40-GGG70 200-300 HB *Dökümler GGG40-GGG70 200-300 HB*	20-25
Titanium - Nickel alloys *Titanyum ve nikel alaşımları*	8-25
Cupper *Bakır*	70-80
Bronze *Bronz*	35-45
Brass *Pirinç*	40-50
Alloyed Bronze *Alaşımı Bronz*	12-16
non- alloyed Aluminium *Aluminyum alaşımsız*	80-100
Aluminium Si < 0.5 % *Aluminyum Si < 0.5 %*	70-80
Aluminium Si 0.5 % - 10 % *Aluminyum Si 0.5 % - 10 %*	50-60
Aluminium Si > 10 % *Aluminyum Si > 10 %*	40-50
Plastic *Plastik*	50-80

FEED / *İLERLEME*

STOCK REMOVAL *TALAŞ MİKTARI*	**PROFILING** *PROFİL İŞLEME*												**SLOTTING** *KANAL AÇMA*				**"T" SIDE MILLING** *"T" KANAL YARIK*		**SURFACE MILLING** *ALIN TARAMA*	
Radial cutting depth *Dairesel kesme derinliği*	**0,125xD**			**0,25xD**			**0,375xD**			**0,75XD**			**1.0XD**				**1.0 XD**	**0,25 XD**	**0,75XD**	
Axial cutting depth *Eksenel kesme derinliği*	1,25 xD	1,5 xD	2.0 xD	1,25 xD	1,5 xD	2.0 xD	1,25 xD	1,5 xD	2.0 xD	1,25 xD	1,5 xD	2 xD	0,5 XD	1.0 XD	1,5 XD	2.0 XD	0,5 XD	0,5 XD	3-5 mm	6-10 mm
2 FLUTED END MILL *2 AĞIZLI FREZE DIN327*																				
MULTI FLUTE END MILL *ÇOK AĞIZLI FREZE DIN 844*	İ	İ	D	Ş	T	A	L	A	R											
ROUGHING END MILL *KABATALAŞ FREZE DIN 844*							N	N	N	N	K	Ü	N	N	Ü	N				
T SLOT CUTTER *T KANAL FREZE DIN 851*																	N			
WOODRUF CUTTER *T YARIK FREZE DIN 850*																		G		
DOVETAIL CUTTER *KIRLANGIÇ FREZE DIN 1833*																		R		
SHELL MILL CUTTER *VALS ALIN FREZE DIN 1880*																			N	K
SIDE & FACE CUTTER *DAIRESEL KANAL FREZE DIN 885*																	N			

CUTTING SPEED m/minute *KESME HIZI m/Dakika*	**6**	**8**	**10**	**12**	**16**	**20**	**25**	**32**	**40**	**50**	**60**	**80**	**100**	**125**
FEED mm/minute *İLERLEME mm/dakika*														
G	10	12	16	20	25	32	40	50	60	80	100	120	160	200
Ü	11	14	18	22	28	35	45	55	70	90	110	140	180	220
R	12	16	20	25	32	40	50	60	80	100	120	160	200	250
K	14	18	22	28	35	45	55	70	90	110	140	180	220	280
A	16	20	25	32	40	50	60	80	100	120	160	200	250	320
N	18	22	28	35	45	55	70	90	110	140	180	220	280	350
L	20	25	32	40	50	60	80	100	120	160	200	250	320	400
T	22	28	35	45	55	70	90	110	140	180	220	280	350	450
D	25	32	40	50	60	80	100	120	160	200	250	320	400	500
Ş	28	35	45	55	70	90	110	140	180	220	280	350	450	560
İ	35	45	55	70	90	110	140	180	220	280	350	450	560	700

gürhan







REAMERS & COUNTERSINKS

RAYBALAR & HAVŞA FREZELER

CARBIDE REAMER
SERT METAL RAYBA



CARBIDE REAMER / *SERT METAL RAYBA*

Dia/*Çap* Ø mm H7	CODE *KOD*	Flute lenght *Helis boyu*	Overall lenght *tamboy*	Shank Dia *sap çapı* Ø mm	EURO
2	220020	12	58	2	20.00
3	220030	12	58	3	20.00
4	220040	18	63	4	26.00
5	220050	22	75	5	33.00
6	220060	25	75	6	38.00
7	220070	25	75	7	44.00
8	220080	28	82	8	45.00
9	220090	35	100	9	60.00
10	220100	35	100	10	70.00
11	220110	35	100	11	80.00
12	220120	35	100	12	80.00

TECHNIC / *TEKNİK*

SPEED & FEED RECOMMANDATIONS FOR CARBIDE REAMERS
SERT METAL RAYBALARDA ÖNERİLEN DEVİR & İLERLEME DEĞERLERİ

Workpiece material	FEED - KESME HIZI	FEED RATE ACCORDING TO REAMER DIAMETER mm / revolution RAYBA ÇAPLARINA GÖRE İLERLEME (devir başına ilerleme) mm/ devir							
İşlenen Malzeme Türü	m/min - m/dak.	Ø2	Ø3	Ø4	Ø5	Ø6	Ø8	Ø10	Ø12
STEEL - ÇELİK < 200 HB	14-24 m/min - m/dak.	0.035	0.060	0.070	0.080	0.100	0.120	0.150	0.180
STEEL - ÇELİK 200-300 HB	9-14 m/min - m/dak.	0.030	0.050	0.060	0.075	0.090	0.140	0.012	0.150
STEEL - ÇELİK 300-350 HB	6-9 m/min - m/dak.	0.020	0.030	0.040	0.060	0.080	0.090	0.100	0.130
STEEL - ÇELİK 38-45 HRC	5-7 m/min - m/dak.	0.015	0.020	0.030	0.050	0.060	0.070	0.080	0.100
STAINLESS STEEL PASLANMAZ ÇELİK	5-10 m/min - m/dak.	0.025	0.030	0.035	0.040	0.050	0.060	0.060	0.080
CAST IRON - DÖKÜM	8-25 m/min - m/dak.	0.035	0.060	0.080	0.095	0.110	0.140	0.150	0.180
CUPPER BRONZE BRASS BAKIR BRONZ PİRİNÇ	20-30 m/min - m/dak.	0.035	0.060	0.080	0.095	0.110	0.140	0.160	0.180
ALUMINIUM ALUMINYUM	20-50 m/min - m/dak.	0.035	0.060	0.100	0.110	0.130	0.160	0.180	0.200

STOCK REMOVAL RECOMMENDED IN THE HOLE TO BE REAMED
RAYBALANACAK DELİKTE BIRAKILMASI GEREKEN TALAŞ MİKTARI

Reamer Diameter Rayba çapı	Ø Stock removal recommended on diameter Çaptaki raybalama payı mm
1.0-3.0	0.07-0.15
3.1-6.0	0.15-0.20
6.1-10.0	0.20-0.30
10.1-13.0	0.25-0.35

COUNTERSINK 3 FLUTED HSS
HAVŞA FREZE 3 AĞIZLI HSS

COUNTERSINK 3 FLUTED 90° / *HAVŞA FREZE 3 AĞIZLI 90°*

ØDia mm x Angle ° *Øçap mm x Açı °*	CODE *KOD*	EURO
8.3 x 90°	335C08	8.00
10.4 x 90°	335C10	9.00
12.4 x 90°	335C12	9.50
16.5 x 90°	335C16	12.00
20.5 x 90°	335C20	17.00
25 x 90°	335C25	22.00
31.5 x 90°	335C31	39.00



COUNTERSINK 3 FLUTED 60° / *HAVŞA FREZE 3 AĞIZLI 60°*

ØDia mm x Angle ° *Øçap mm x Açı °*	CODE *KOD*	EURO
8 x 60°	334C08	9.00
10 x 60°	334C10	10.00
12.5 x 60°	334C12	11.00
16.5 x 60°	334C16	13.00
20 x 60°	334C20	18.00
25 x 60°	334C25	24.00
31 x 60°	334C31	40.00



COUNTERSINK MULTI FLUTED HSS
HAVŞA FREZE ÇOK AĞIZLI HSS



COUNTERSINK MULTI FLUTED 90° / *HAVŞA FREZE ÇOK AĞIZLI 90°*

ØDia mm x Angle ° *Øçap mm x Açı °*	CODE *KOD*	EURO
8 x 90°	335A08	8.00
10 x 90°	335A10	8.00
12,5 x 90°	335A12	9.00
16 x 90°	335A16	10.00
20 x 90°	335A20	14.00
25 x 90°	335A25	18.00
31,5 x 90°	335A31	32.00
40x 90°	335A40	50.00
45x 90°	335A45	62.00



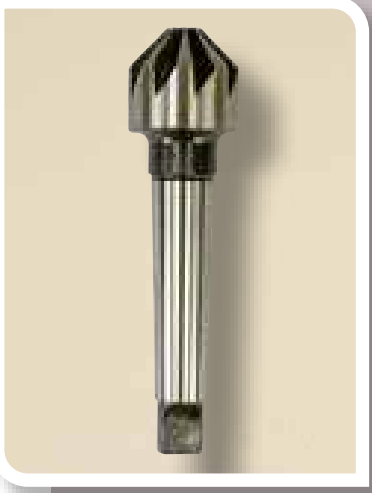
COUNTERSINK MULTI FLUTED 60° / *HAVŞA FREZE ÇOK AĞIZLI 60°*

ØDia mm x Angle ° *Øçap mm x Açı °*	CODE *KOD*	EURO
8 x 60°	334A08	8.00
10 x 60°	334A10	8.00
12,5 x 60°	334A12	9.00
16 x 60°	334A16	10.00
20 x 60°	334A20	14.00
25 x 60°	334A25	18.00
31,5 x 60°	334A31	32.00

COUNTERSINK MULTI FLUTE MORSE TAPER SHANK
HAVŞA FREZE ÇOK AĞIZLI MORS KONİK SAPLI

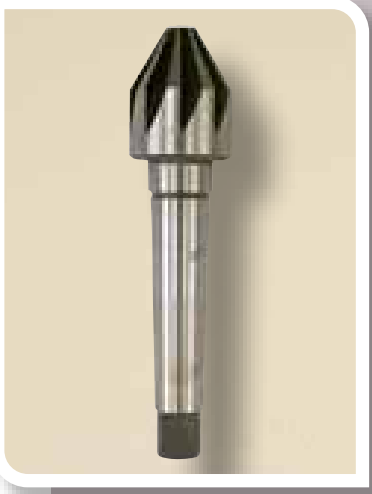
COUNTERSINK MULTI FLUTE MORSE TAPER SHANK 90°
HAVŞA FREZE ÇOK AĞIZLI MORS KONİK SAPLI 90°

ØDia mm x Angle ° *Øçap mm x Açı °*	CODE *KOD*	EURO
25 x 90°	335B25	25.00
31,5 x 90°	335B31	30.00
40 x 90°	335B40	47.00
45 x 90°	335B45	60.00
50 x 90°	335B50	68.00
63 x 90°	335B63	112.00
80 x 90°	335B80	180.00



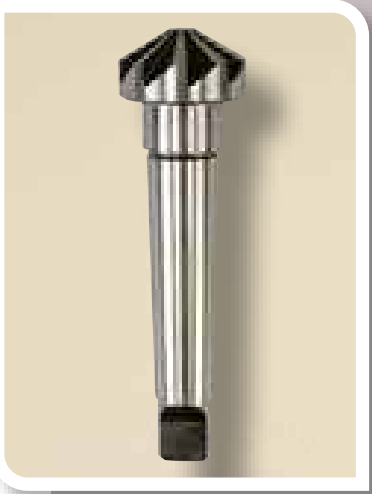
COUNTERSINK MULTI FLUTE MORSE TAPER SHANK 60°
HAVŞA FREZE ÇOK AĞIZLI MORS KONİK SAPLI 60°

ØDia mm x Angle ° *Øçap mm x Açı °*	CODE *KOD*	EURO
25 x 60°	334B25	25.00
31,5 x 60°	334B31	30.00
40 x 60°	334B40	47.00
45 x 60°	334B45	60.00
50 x 60°	334B50	68.00
63 x 60°	334B63	112.00
80 x 60°	334B80	180.00



COUNTERSINK MULTI FLUTE MORSE TAPER SHANK 120°
HAVŞA FREZE ÇOK AĞIZLI MORS KONİK SAPLI 120°

ØDia mm x Angle ° *Øçap mm x Açı °*	CODE *KOD*	EURO
25 x 120°	347B25	25.00
31,5 x 120°	347B31	30.00
40 x 120°	347B40	47.00
45 x 120°	347B45	60.00
50 x 120°	347B50	68.00
63 x 120°	347B63	112.00
80 x 120°	347B80	180.00



COUNTERBORES STRAIGHT SHANK DIN 373 HSS
İMBUS VİDA YERİ FREZESİ DÜZ SAPLI DIN 373 HSS



DIN 373 COUNTERBORE / *DIN 373 İMBUS VİDA YERİ FREZESİ*

Screw size Metric *İmbus Vida Ölçüsü Metrik*	CODE *KOD*	EURO
M 3	37303	10.00
M 4	37304	10.00
M 5	37305	12.00
M 6	37306	14.00
M 8	37308	16.00
M 10	37310	18.00
M 12	37312	21.00
M 14	37314	31.00
M 16	37316	37.00
M 20	37320	55.00

MACHINE REAMER STRAIGHT SHANK DIN 212/B HSS Cobalt
MAKİNA RAYBASI DÜZ SAPLI DIN 212/B HSS Cobalt

DIN 212/B MACHINE REAMER / *DIN 212/B MAKİNA RAYBASI*



Dia/*Çap* Ø mm H7	CODE *KOD*	Flute lenght *Helis boyu*	Overall lenght *tamboy*	Shank Dia *sap çapı* Ø mm	EURO
2	212020	11	49	2	**12.00**
3	212030	15	61	3	**12.00**
4	212040	19	75	4	**12.00**
5	212050	23	86	5	**12.00**
6	212060	26	93	5.6	**13.00**
7	212070	31	109	7.1	**15.00**
8	212080	33	117	8.0	**16.00**
9	212090	36	125	9	**17.00**
10	212100	38	133	10	**18.00**
11	212110	41	142	10	**22.00**
12	212120	44	151	10	**25.00**
13	212130	44	151	10	**27.00**
14	212140	47	160	12.5	**31.00**
15	212150	50	162	12.5	**32.00**
16	212160	52	170	12.5	**33.00**
17	212170	54	175	14	**37.00**
18	212180	56	182	14	**43.00**
19	212190	58	189	16	**47.00**
20	212200	60	195	16	**47.00**

MACHINE REAMER MORSE TAPER SHANK DIN 208/B HSS
MAKİNA RAYBASI MORS KONİK SAPLI DIN 208/B HSS



DIN 208/B MACHINE REAMER / *DIN 208/B MAKİNA RAYBASI*

Dia/*Çap* Ø mm H7	CODE *KOD*	Flute lenght *Helis boyu*	Overall lenght *tamboy*	Morse taper No *Mors Konik No.*	EURO
10	208100	38	168	1	**25.00**
11	208110	41	175	1	**25.00**
12	208120	44	182	1	**27.00**
13	208130	44	182	1	**31.00**
14	208140	47	189	1	**32.00**
15	208150	50	204	2	**37.00**
16	208160	52	210	2	**37.00**
17	208170	54	214	2	**41.00**
18	208180	56	219	2	**43.00**
19	208190	58	223	2	**46.00**
20	208200	60	228	2	**46.00**
21	208210	62	232	2	**50.00**
22	208220	64	237	2	**50.00**
23	208230	66	241	2	**55.00**
24	208240	68	268	3	**56.00**
25	208250	68	268	3	**57.00**
26	208260	70	273	3	**62.00**
27	208270	71	277	3	**72.00**
28	208280	71	277	3	**75.00**
29	208290	73	281	3	**77.00**
30	208300	73	281	3	**81.00**
31	208310	75	285	3	**82.00**
32	208320	77	317	4	**87.00**
33	208330	77	317	4	**91.00**
34	208340	78	321	4	**100.00**
35	208350	79	325	4	**102.00**
36	208360	79	325	4	**103.00**
37	208370	79	325	4	**106.00**
38	208380	81	329	4	**112.00**
39	208390	81	329	4	**115.00**
40	208400	82	333	4	**118.00**
42	208420	82	333	4	**120.00**
45	208450	84	340	4	**125.00**

HAND REAMERS DIN206/B HSS
EL RAYBASI DIN206/B HSS

DIN 206/B HAND REAMER / *DIN 206/B EL RAYBASI*



Dia/*Çap* Ø mm H7	CODE *KOD*	Flute lenght *Helis boyu*	Overall lenght *tamboy*	Shank Dia *sap çapı* Ø mm	EURO
2	206020	25	50	2	12.00
3	206030	31	62	3	12.00
4	206040	38	76	4	12.00
5	206050	44	87	5	13.00
6	206060	47	93	6	13.00
7	206070	54	107	7	15.00
8	206080	58	115	8	16.00
9	206090	62	124	9	17.00
10	206100	66	133	10	17.00
11	206110	71	142	11	18.00
12	206120	76	152	12	20.00
13	206130	76	152	13	23.00
14	206140	81	163	14	26.00
15	206150	81	163	15	27.00
16	206160	87	175	16	30.00
17	206170	87	175	17	33.00
18	206180	93	188	18	37.00
19	206190	93	188	19	40.00
20	206200	100	201	20	43.00
21	206210	100	201	21	46.00
22	206220	107	215	22	50.00
23	206230	107	215	23	52.00
24	206240	115	231	24	56.00
25	206250	115	231	25	60.00
26	206260	115	231	26	62.00
27	206270	124	247	27	68.00
28	206280	124	247	28	72.00
29	206290	124	247	29	77.00
30	206300	124	247	30	80.00
31	206310	133	265	31	93.00
32	206320	133	265	32	97.00
33	206330	133	265	33	103.00
34	206340	142	284	34	110.00
35	206350	142	284	35	112.00
36	206360	142	284	36	116.00
37	206370	142	284	37	120.00
38	206380	152	305	38	140.00
39	206390	152	305	39	142.00
40	206400	152	305	40	145.00

TAPER REAMERS HSS
KONİK RAYBALAR HSS



DIN 9 TAPER PIN REAMER 1:50 TAPER
DIN 9 KONİK PİM RAYBASI 1:50 KONİK

Front Dia *Uç çapı* Ø mm	CODE *KOD*	EURO
2	915002	15.00
2.5	9150025	15.00
3	915003	15.00
4	915004	17.00
5	915005	19.00
6	915006	20.00
7	915007	25.00
8	915008	30.00
10	915009	40.00
12	915012	50.00
13	915013	65.00
14	915014	69.00
16	915016	75.00
20	915020	88.00



TAPER REAMER 1:10 TAPER
KONİK RAYBA 1:10 KONİK

Front- Back Dia *Uç -Arka çapı* Ø mm	CODE *KOD*	EURO
3-10	1100310	32.00
5-15	1100515	42.00
10-25	1101025	72.00

gürhan



CIRCULAR MILLING CUTTERS
DAİRESEL FREZELER

CIRCULAR SAWS HSS DIN 1837
DAİRE TESTERELER HSS DIN 1837



ØDiaxthicknessxØbore mm *Øçap x kalınlık x Ødelik mm*	CODE *KOD*	EURO
25x0.8x8	183702508	8.00
25x1.0x8	183702510	8.00
25x1.2x8	183702512	8.50
25x1.6x8	183702516	9.00
25x2.0x8	183702520	10.00
32x0.8x8	183703208	8.50
32x1.0x8	183703210	8.50
32x1.2x8	183703212	9.00
32x1.6x8	183703216	10.00
32x2.0x8	183703220	10.50
40x0.8x10	183704008	9.00
40x1.0x10	183704010	9.00
40x1.2x10	183704012	10.00
40X1.6x10	183704016	10.50
40X2.0x10	183704020	11.00
50X0.8x13	183705008	10.00
50X1.0x13	183705010	10.00
50X1.2x13	183705012	11.00
50X1.6x13	183705016	12.00
50X2.0x13	183705020	13.00
50X2.5x13	183705025	14.50
50X3.0x13	183705030	16.00
63X0.8x16	183706308	12.00
63X1.0x16	183706310	12.00
63X1.2x16	183706312	12.00
63X1.6x16	183706316	14.00
63X2.0x16	183706320	15.00
63X2.5x16	183706325	16.00
63X3.0x16	183706330	17.00
80X0.8x22	183708008	16.00
80X1.0x22	183708010	16.00
80X1.2x22	183708012	16.00
80X1.6x22	183708016	17.00
80X2.0x22	183708020	18.00
80X2.5x22	183708025	21.00
80X3.0x22	183708030	24.00
80X4.0x22	183708040	30.00
100X1.0x22	183710010	19.00
100X1.2x22	183710012	20.00
100X1.6x22	183710016	23.00
100X2.0x22	183710020	26.00
100X2.5x22	183710025	29.00
100X3.0x22	183710030	33.00
100X4.0x22	183710040	41.00
125X1.6x22	183712516	32.00
125X2.0x22	183712520	34.00
125X2.5x22	183712525	39.00
125X3.0x22	183712530	43.00
125X4.0x22	183712540	54.00
160X1.6x32	183716016	43.00
160X2.0x32	183716020	46.00
160X2.5x32	183716025	56.00
160X3.0x32	183716030	68.00
160X4.0x32	183716040	91.00

CARBIDE CIRCULAR SAWS
SERT METAL DAIRE TESTERELER

ØDiaxthicknessxØbore mm *Øçap x kalınlık x Ødelik mm*	CODE *KOD*	T - Nr. of Teeth *T - Diş sayısı*	EURO
20x0.2x5	183802002HM	32	18.00
20x0.3x5	183802003HM	32	17.00
20x0.4x5	183802004HM	32	17.00
20x0.5x5	183802005HM	24	17.00
20x0.8x5	183802008HM	24	19.00
20x1.0x5	183802010HM	20	19.00
20x1.2x5	183802012HM	20	19.00
25x0.3x8	183802003HM	32	20.00
25x0.4x8	183802504HM	32	20.00
25x0.5x8	183802505HM	24	20.00
25x0.8x8	183802508HM	24	21.00
25x1.0x8	183802510HM	24	21.00
25x1.2x8	183802512HM	24	22.00
25x1.6x8	183802516HM	24	24.00
25x2.0x8	183802520HM	20	26.00
30x0.5x8	183803005HM	40	24.00
30x0.8x8	183803008HM	32	25.00
30x1.0x8	183803010HM	32	26.00
30x1.2x8	183803012HM	32	27.00
30x1.6x8	183803016HM	32	29.00
30x2.0x8	183803020HM	24	31.00
40x0.5x10	183804005HM	40	34.00
40x0.8x10	183804008HM	40	36.00
40x1.0x10	183804010HM	40	37.00
40x1.2x10	183804012HM	32	39.00
40X1.6x10	183804016HM	32	41.00
40X2.0x10	183804020HM	32	44.00
50X0.8x13	183805008HM	40	42.00
50X1.0x13	183805010HM	40	44.00
50X1.2x13	183805012HM	40	46.00
50X1.6x13	183805016HM	40	50.00
50X2.0x13	183805020HM	40	53.00
50X2.5x13	183805025HM	32	60.00
50X3.0x13	183805030HM	32	67.00
63X0.8x16	183806308HM	50	52.00
63X1.0x16	183806310HM	50	55.00
63X1.2x16	183806312HM	50	58.00
63X1.6x16	183806316HM	50	63.00
63X2.0x16	183806320HM	50	68.00
63X2.5x16	183806325HM	50	75.00
63X3.0x16	183806330HM	50	85.00
63X4.0x16	183806340HM	40	110.00
80X0.8x22	183808008HM	64	74.00
80X1.0x22	183808010HM	64	77.00
80X1.2x22	183808012HM	64	80.00
80X1.6x22	183808016HM	64	84.00
80X2.0x22	183808020HM	64	88.00
80X2.5x22	183808025HM	64	105.00
80X3.0x22	183808030HM	64	126.00
80X3.5x22	183808035HM	64	160.00
80X4.0x22	183708040HM	64	175.00
80X5.0x22	183808050HM	48	200.00
80X6.0x22	183808060HM	48	225.00



Please ask for other sizes
Diğer çap ve kalınlıklar için bilgi isteyiniz.

SIDE AND FACE CUTTER STAGGERED TEETH DIN 885A HSS Cobalt
KANAL FREZE DAİRESEL ÇAPRAZ DİŞLİ DIN 885A HSS Cobalt



ØDiaxthicknessxØbore mm *Øçap x kalınlık x Ødelik mm*	CODE *KOD*	EURO
50x4x16	885A05004	30.00
50x5x16	885A05005	31.00
50x6x16	885A05006	32.00
50x8x16	885A05008	36.00
50x10x16	885A05010	39.00
63x4x22	885A06304	32.00
63x5x22	885A06305	33.00
63x6x22	885A06306	34.00
63x8x22	885A06308	38.00
63x10x22	885A06310	42.00
63x12x22	885A06312	45.00
80x4x27	885A08001	36.00
80x5x27	885A08005	38.00
80x6x27	885A08006	40.00
80x8x27	885A08008	44.00
80x10x27	885A08010	48.00
80x12x27	885A08012	52.00
80x14x27	885A08014	57.00
80x16x27	885A08016	62.00
100x6x32	885A10006	50.00
100x8x32	885A10008	55.00
100x10x32	885A10010	60.00
100x12x32	885A10012	64.00
100x14x32	885A10014	69.00
100x16x32	885A10016	74.00
100x18x32	885A10018	80.00
100x20x32	885A10020	86.00
125x8x32	885A12508	67.00
125x10x32	885A12510	76.00
125x12x32	885A12512	81.00
125x14x32	885A12514	86.00
125x16x32	885A12516	91.00
125x18x32	885A12518	96.00
125x20x32	885A12520	100.00
160x6x40	885A16006	84.00
160x8x40	885A16008	88.00
160x10x40	885A16010	93.00
160x12x40	885A16012	98.00
160x14x40	885A16014	103.00
160x16x40	885A16016	108.00
160x18x40	885A16018	114.00
160x20x40	885A16020	120.00
200x10x40	885A20010	120.00
200x12x40	885A20012	132.00
200x14x40	885A20014	144.00
200x16x40	885A20016	156.00
200x18x40	885A20018	168.00
200x20x40	885A20020	180.00
200x25x40	885A20025	198.00

SINGLE ANGLE CUTTER DIN 842 HSS Cobalt
TEK AÇI FREZE DIN 842 HSS Cobalt



DIN 842 SINGLE ANGLE CUTTER HSS Cobalt 45°
DIN 842 TEK AÇI FREZE HSS Cobalt 45°

Ø dia x thickness x Ø bore mm x angle° *Ø çap x kalınlık x Ø delik mm x açı°*	CODE *KOD*	EURO
40x10x10-45°	84204045	39.00
50x13x13-45°	84205045	43.00
63x18x16-45°	84206345	52.00
80x22x22-45°	84208045	72.00
100x28x27-45°	84210045	114.00
125x36x32-45°	84212545	168.00

DIN 842 SINGLE ANGLE CUTTER HSS Cobalt 60°
DIN 842 TEK AÇI FREZE HSS Cobalt 60°

Ø dia x thickness x Ø bore mm x angle° *Ø çap x kalınlık x Ø delik mm x açı°*	CODE *KOD*	EURO
40x13x10-60°	84204060	39.00
50x16x13-60°	84205060	43.00
63x20x16-60°	84206360	52.00
80x25x22-60°	84208060	72.00
100x32x27-60°	84210060	114.00
125x40x32-60°	84212560	168.00

50° ve 55° of those sizes are also avaliable at same price as 60°
Yukarıdaki ölçülerde 50° ve 55° de mevcuttur fiyatı 60° ile aynıdır.

DOUBLE ANGLE CUTER DIN 847 HSS
ÇİFT AÇI FREZE DIN 847 HSS



DIN 847 DOUBLE ANGLE CUTER HSS 45° - 60° - 90°
DIN 847 ÇİFT AÇI FREZE HSS 45° - 60° - 90°

ØDiaxthicknessxØbore mm *Øçap x kalınlık x Ødelik mm*	CODE *KOD*	EURO
56x10x16-45°	84705645	42.00
63x12x22-45°	84706345	48.00
80x12x22-45°	84708045	66.00
100x18x27-45°	84710045	102.00
56x12x16-60°	84705660	45.00
63x16x22-60°	84706360	51.00
80x18x22-60°	84708060	69.00
100x25x27-60°	84710060	105.00
56x14x16-90°	84705690	48.00
63x18x22-90°	84706390	54.00
80x22x22-90°	84708090	72.00
100x28x27-90°	84710090	108.00

SHELL END MILL DIN 1880 HSS
VALS ALIN FREZE DIN 1880 HSS



DIN 1880 SHELL END MILL / *DIN 1880 VALS ALIN FREZE*

ØDiaxthicknessxØbore mm *Øçap x kalınlık x Ødelik mm*	CODE *KOD*	EURO
40x32x16	1880040	42.00
50x36x22	1880050	48.00
63x40x27	1880063	60.00
80x45x27	1880080	78.00
100x50x27	1880100	114.00
125x56x40	1880125	168.00

CONCAVE MILLING CUTTER DIN 855 HSS
KONKAV FREZE DIN 855 HSS

DIN 855 CONCAVE CUTTER / *DIN 855 KONKAV FREZE*



RADIUS *RADÜS*	CODE *KOD*	Ø dia x thickness x Ø bore mm *Ø çap x kalınlık x Ø delik mm*	EURO
R 2	855020	50x9x16	42.00
R 2.5	855025	63x10x22	45.00
R 3	855030	63x12x22	48.00
R 3.5	855035	63x14x22	54.00
R 4	855040	63x16x22	54.00
R 5	855050	63x20x22	66.00
R 6	855060	80x24x27	72.00
R 7	855070	80x28x27	84.00
R 8	855080	80x32x27	96.00
R 9	855090	100x36x32	108.00
R 10	855100	100x40x32	132.00
R 20	855200	125x70x32	240.00

CONVEX MILLING CUTTER DIN 856 HSS
KONVEKS FREZE DIN 856 HSS

DIN 856 CONVEX CUTTER / *DIN 856 KONVEKS FREZE*



RADIUS *RADÜS*	CODE *KOD*	Ø dia x thickness x Ø bore mm *Ø çap x kalınlık x Ø delik mm*	EURO
R 1	856010	50x4x16	36.00
R 1.5	856015	50x4x16	36.00
R 2	856020	50x4x16	36.00
R 2.5	856025	63x5x22	42.00
R 3	856030	63x6x22	42.00
R 3.5	856035	63x7x22	48.00
R 4	856040	63x8x22	48.00
R 4,5	856045	63x9x22	54.00
R 5	856050	63x10x22	54.00
R 6	856060	80x12x27	66.00
R 7	856070	80x14x27	78.00
R 8	856080	80x16x27	84.00
R 9	856090	100x18x32	102.00
R 10	856100	100x20x32	114.00
R 11	856110	100x22x32	126.00
R 12	856120	100x24x32	132.00
R 12.5	856125	100x25x32	144.00

CUTTING DATAS FOR HSS MILLING CUTTERS
HSS FREZELER İÇİN KESME DEĞERLERİ

CUTTING SPEED - *RPM / KESME HIZI - DEVİR*



Materila To Cut *Malzeme*	Cutting speed m/min. *Kesme Hızı m/dakika*
Below 180HB soft steels *180 HB altı yumuşak çelikler*	32-40
180-250 HB carbon and low alloyed steel *180-250 HB karbonlu çelikler ve az alaşımlı çelikler*	20-25
25-33 HRC alloyed steels *25-33 HRC alaşımlı çelikler*	12-20
33-42 HRC alloyed steels, hardened steels *33-42 HRC alaşımlı çelikler, sertleşmiş çelikler*	10-12
Stainless steels *Paslanmaz çelikler*	12-20
Cast iron GG10-GG40 *Dökümler GG10 - GG40*	25-32
Cas iron GGG40-GGG70 200-300 HB *Dökümler GGG40-GGG70 200-300 HB*	20-25
Titanium - Nickel alloys *Titanyum ve nikel alaşımları*	8-25
Cupper *Bakır*	70-80
Bronze *Bronz*	35-45
Brass *Pirinç*	40-50
Alloyed Bronze *Alaşımı Bronz*	12-16
non- alloyed Aluminium *Aluminyum alaşımsız*	80-100
Aluminium Si < 0.5 % *Aluminyum Si < 0.5 %*	70-80
Aluminium Si 0.5 % - 10 % *Aluminyum Si 0.5 % - 10 %*	50-60
Aluminium Si > 10 % *Aluminyum Si > 10 %*	40-50
Plastic *Plastik*	50-80

RPM - *Devir/dakika*

1- Select the cutting speed m/minute from the table on the left according to workpiece
1- Soldaki tablodan malzemenize göre m/dakika cinsinden kesme hızınızı bulunuz.

2- Place the cutting speed on the formula below to find the RPM
2- Alttaki formülde yerine koyarak devir / dakika cinsinden devirinizi bulunuz

$$\text{RPM revolution (Devir / Dakika)} = \frac{\text{Cutting speed (m/minute) (Kesme hızı (m/dakika)) x 1000}}{\text{3.14 x tool diameter (3.14 x takım çapı)}}$$

Feed / *İlerleme*

3- On the feed table below select your "letter" acording to your operation and stock removal
3- Aşağıdaki ilerleme tablosundaki işlem şekli ve talaş miktarınıza göre belirtilen harfi bulunuz

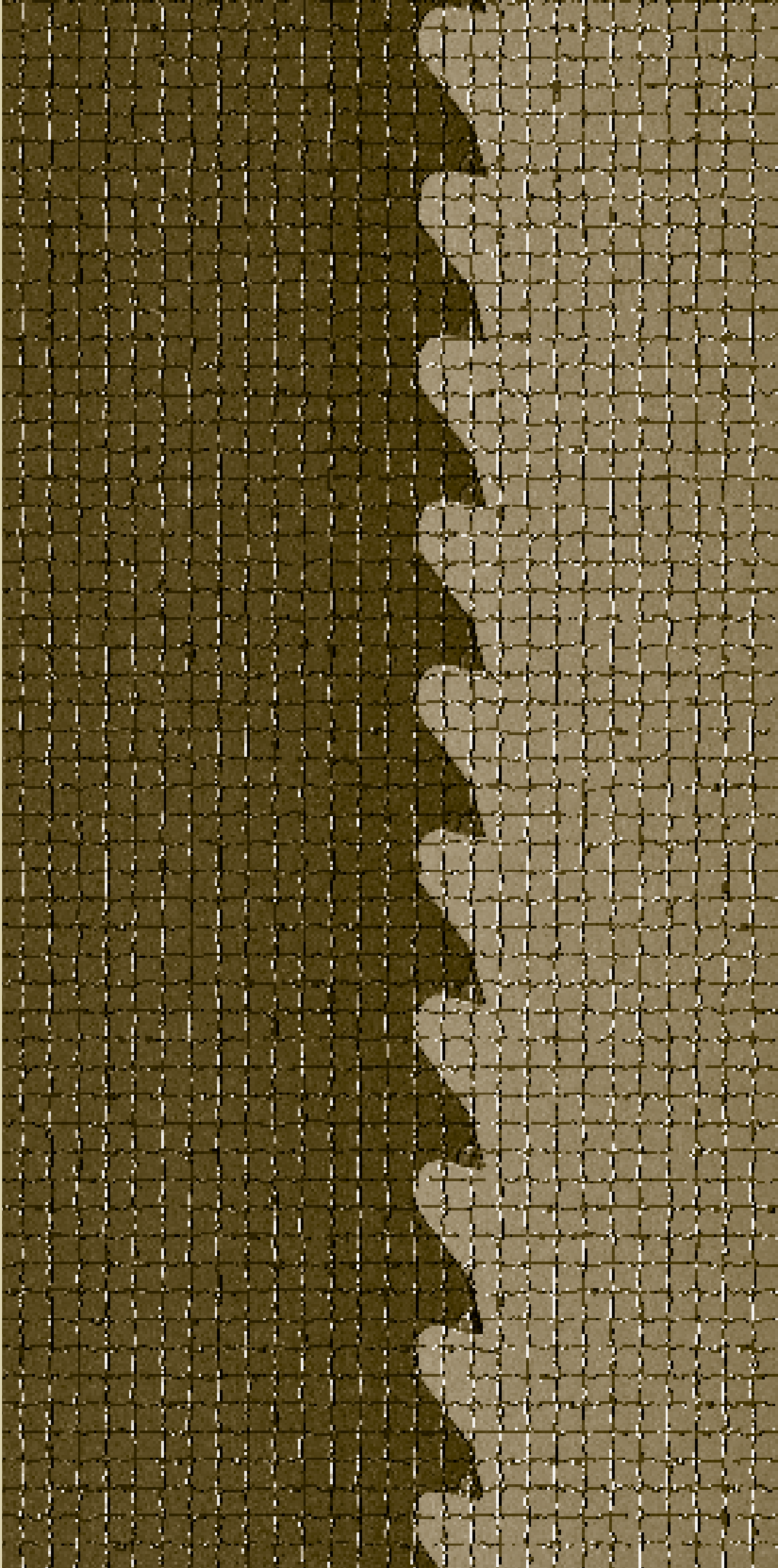
4- On the bottom table across your "letter" you will find the feed rate acording to your speed that you already found
4- En alttaki tabloda bu harfin bulunduğu satırda kesme hızınıza göre ilerleme hızınızı bulacaksınız.

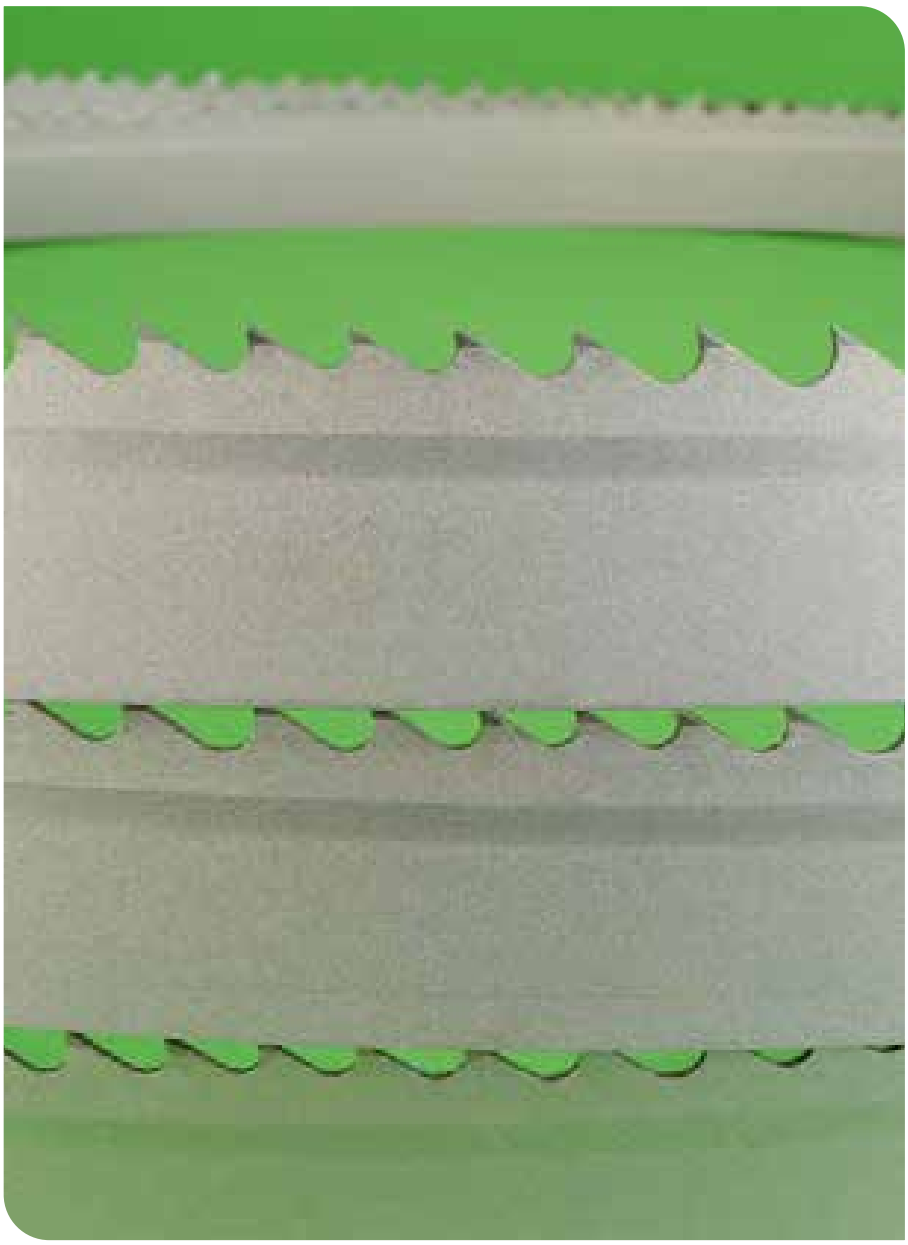
FEED / *İLERLEME*

STOCK REMOVAL *TALAŞ MİKTARI*	**PROFILING** *PROFİL İŞLEME*												**SLOTTING** *KANAL AÇMA*				**"T" SIDE MILLING** *"T" KANAL YARIK*		**SURFACE MILLING** *ALIN TARAMA*	
Radial cutting depth *Dairesel kesme derinliği*	**0,125xD**			**0,25xD**			**0,375xD**			**0,75XD**			**1.0XD**				**1.0 XD**	**0,25 XD**	**0,75XD**	
Axial cutting depth *Eksenel kesme derinliği*	1,25 xD	1,5 xD	2.0 xD	1,25 xD	1,5 xD	2.0 xD	1,25 xD	1,5 xD	2.0 xD	1,25 xD	1,5 xD	2 xD	0,5 XD	1.0 XD	1,5 XD	2.0 XD	0,5 XD	0,5 XD	3-5 mm	6-10 mm
2 FLUTED END MILL *2 AĞIZLI FREZE DIN327*																				
MULTI FLUTE END MILL *ÇOK AĞIZLI FREZE DIN 844*	İ	İ	D	Ş	T	A	L	A	R											
ROUGHING END MILL *KABATALAŞ FREZE DIN 844*							N	N	N	N	K	Ü	N	N	Ü	N				
T SLOT CUTTER *T KANAL FREZE DIN 851*																	N			
WOODRUF CUTTER *T YARIK FREZE DIN 850*																		G		
DOVETAIL CUTTER *KIRLANGIÇ FREZE DIN 1833*																		R		
SHELL MILL CUTTER *VALS ALIN FREZE DIN 1880*																			N	K
SIDE & FACE CUTTER *DAIRESEL KANAL FREZE DIN 885*																	N			

CUTTING SPEED m/minute *KESME HIZI m/Dakika*	**6**	**8**	**10**	**12**	**16**	**20**	**25**	**32**	**40**	**50**	**60**	**80**	**100**	**125**
FEED mm/minute *İLERLEME mm/dakika*														
G	10	12	16	20	25	32	40	50	60	80	100	120	160	200
Ü	11	14	18	22	28	35	45	55	70	90	110	140	180	220
R	12	16	20	25	32	40	50	60	80	100	120	160	200	250
K	14	18	22	28	35	45	55	70	90	110	140	180	220	280
A	16	20	25	32	40	50	60	80	100	120	160	200	250	320
N	18	22	28	35	45	55	70	90	110	140	180	220	280	350
L	20	25	32	40	50	60	80	100	120	160	200	250	320	400
T	22	28	35	45	55	70	90	110	140	180	220	280	350	450
D	25	32	40	50	60	80	100	120	160	200	250	320	400	500
Ş	28	35	45	55	70	90	110	140	180	220	280	350	450	560
İ	35	45	55	70	90	110	140	180	220	280	350	450	560	700

gürkan





BAND SAWS
ŞERİT TESTERELER

BANDSAW BLADES NARROW BANDS BI-METAL M42 - MATRIX
ŞERİT TESTERELER DEKUPAJ BI-METAL M42 - MATRIX



Bi-metal blades suitable to cut steel, non ferrous, casted and sheet metals.
"H" teeths are Hook form for non ferrous cast iron plexi and wood cutting.

Bi-Metal testereler çelikler hafif metaller, döküm ve sac için.
"H" işaretli dişler kanca formlu olup hafif metal döküm pleksi ve ahşap içindir.

CODE *KOD*	**Blade width x thickness** *Testere Genişlik x Kalınlık*	**Nr. Of teeth /inch** *Diş sayısı (1 inç'te)*	**Packing details: in coils** *Ambalaj Şekli: Top Halinde*	**Price/Metre** *Metre Fiyatı* **EURO**
TB06061014	**6.4 x 0.64mm**	10/14	30,5 M	**8.30**
TB06091000	**6.4 x 0.9mm**	10	30,5 M	**8.30**
TB06091014	**6.4 x 0.9mm**	10/14	30,5 M	**8.30**
TB10090400H	**9.5 x 0.9mm**	4H	30,5 M	**8.30**
TB12050100	**12,7 x 0.50mm**	8/11**	30,5 M	**8.40**
TB12050100	**12,7 x 0.50mm**	10/14**	30,5 M	**8.40**
TB12050100	**12,7 x 0.50mm**	10**	30,5 M	**8.40**
TB12060300H	**12,7 x 0.64mm**	3H**	30,5 M	**8.40**
TB12060400H	**12,7 x 0.64mm**	4H**	30,5 M	**8.40**
TB12060600	**12,7 x 0.64mm**	6**	30,5 M	**8.40**
TB12061400	**12,7 x 0.64mm**	14**	30,5 M	**8.40**
TB12060610	**12,7 x 0.64mm**	6/10**	30,5 M	**8.40**
TB12060610	**12,7 x 0.64mm**	8/12	30,5 M	**8.40**
TB12061014	**12,7 x 0.64mm**	10/14**	30,5 M	**8.40**
TB12090400H	**12,7 x 0.9mm**	4H	30,5 M	**8.40**
TB12091014	**12,7 x 0.9mm**	10/14	30,5 M	**8.40**

** Are Matrix Bi-Metal, others are M42 / ***İşaretliler Matrix Bi Metal dir, diğerleri M42 dir.*

BANDSAW BLADES BI-METAL M42
ŞERİT TESTERELER BI-METAL M42

CODE *KOD*	Blade width x thickness *Testere Genişlik x Kalınlık*	Nr. Of teeth /inch *Diş sayısı (1 inç'te)*	Cutting Angle *Kesme Açısı*	Price/Metre *Metre Fiyatı* EURO
TB19090300H	**19 x 0.9mm**	3H	**posi**	6.50
TB19090400H	**19 x 0.9mm**	4H	**posi**	6.50
TB19090406	**19 x 0.9mm**	4/6	**posi**	6.50
TB19090507	**19 x 0.9mm**	5/8	**0°**	6.50
TB19090610	**19 x 0.9mm**	6/10	**0°**	6.50
TB19090812	**19 x 0.9mm**	8/11	**posi**	6.50
TB19091014	**19 x 0.9mm**	10/14	**0°**	6.50
TB27090200H	**27 x 0.9mm**	2H	**posi**	6.90
TB27090300H	**27 x 0.9mm**	3H	**posi**	6.90
TB27090400	**27 x 0.9mm**	4H	**0°**	6.90
TB27090203	**27 x 0.9mm**	2/3	**posi**	6.90
TB27090304	**27 x 0.9mm**	3/4	**posi**	6.90
TB27090406	**27 x 0.9mm**	4/6	**posi**	6.90
TB27090507	**27 x 0.9mm**	5/7	**posi**	6.90
TB27090610	**27 x 0.9mm**	6/10	**0°**	6.90
TB27090812	**27 x 0.9mm**	8/11	**posi**	6.90
TB27091014	**27 x 0.9mm**	10/14	**0°**	6.90
TB27091400	**27 x 0.9mm**	14	**0°**	6.90
TB34110200H	**34 x 1.1mm**	2H	**posi**	9.50
TB34110203	**34 x 1.1mm**	2/3	**posi**	9.50
TB34110304	**34 x 1.1mm**	3/4	**posi**	9.50
TB34110406	**34 x 1.1mm**	4/6	**posi**	9.50
TB34110507	**34 x 1.1mm**	5/7	**posi**	9.50
TB34110610	**34 x 1.1mm**	6/10	**0°**	9.50
TB34110812	**34 x 1.1mm**	8/11	**posi**	9.50
TB41130142	**41 x 1.3mm**	1.4/2.0	**posi**	12.40
TB41130203	**41 x 1.3mm**	2/3	**posi**	12.40
TB41130304	**41 x 1.3mm**	3/4	**posi**	12.40
TB41130406	**41 x 1.3mm**	4/6	**posi**	12.40
TB41130508	**41 x 1.3mm**	5/8	**0°**	12.40
TB54160701	**54 x 1.6mm**	0.75/1.25	**posi**	18.80
TB54160102	**54 x 1.6mm**	1.4/2.0	**posi**	18.80
TB54160203	**54 x 1.6mm**	2/3	**posi**	18.80
TB54160304	**54 x 1.6mm**	3/4	**posi**	18.80
TB54160406	**54 x 1.6mm**	4/6	**posi**	18.80
TB67160001	**67 x 1.6mm**	0.75/1.25	**posi**	24.00
TB67160102	**67 x 1.6mm**	1.4/2.0	**posi**	24.00
TB67160203	**67 x 1.6mm**	2/3	**posi**	24.00



Suitable to cut all sorts of steels, casts and non-ferrous in all shapes and bundles.
Her türlü çelik ve türlerinin, hafif metallerin, yuvarlak, profil, lama ve paket kesimlerine uygundur.

H (Hook) form teeth are only suitable for aluminium, cupper and similar non-ferrorus materials and their casts. They are not suitable to cut steel.
"H" işaretli dişler (kanca formlu) sadece aluminyum, bakır bronz gibi hafif metaller ve döküm malzemeler içindir. Demir ve çelik için uygun değildir.

Welded to lenght blades are supplied without additional welding cost.
İstenilen uzunlukta şerit testereler hazır kaynatılmış olarak teslim edilir ayrıca kaynak ücreti alınmaz.

XP 51 BI-METAL EXTRA HIGH PERFORMANCE
XP 51 EXTRA YÜKSEK PERFORMANS



High production cutting of large solids, tool steel, stainless steels, nickel alloys and exotics,

Büyük çaplı dolu malzeme takım çelikleri, paslanmaz çelikler nikel alaşımlı çelikler, inconel, waspalloy, monel ve titanyum alaşımları.

CODE *KOD*	**Blade width x thickness** *Testere Genişlik x Kalınlık*	**Nr. Of teeth /inch** *Diş sayısı (1 inç'te)*	**Price/Metre** *Metre Fiyatı* **EURO**
TB27090203XP	**27 x 0.9mm**	2/3	**8.00**
TB27090304XP	**27 x 0.9mm**	3/4	**8.00**
TB27090406XP	**27 x 0.9mm**	4/6	**8.00**
TB34110203XP	**34 x 1.1mm**	2/3	**11.00**
TB34110304XP	**34 x 1.1mm**	3/4	**11.00**
TB34110406XP	**34 x 1.1mm**	4/6	**11.00**
TB41130102XP	**41 x 1.3mm**	1.4/2	**14.00**
TB41130203XP	**41 x 1.3mm**	2/3	**14.00**
TB41130304XP	**41 x 1.3mm**	3/4	**14.00**
TB54160102XP	**54 x 1.6mm**	1.4/2	**22.00**
TB54160203XP	**54 x 1.6mm**	2/3	**22.00**
TB54160304XP	**54 x 1.6mm**	3/4	**22.00**
TB67160102XP	**67 x 1.6mm**	1.4/2	**28.00**

Welded to lenght blades are supplied without additional welding cost.
İstenilen uzunlukta şerit testereler hazır kaynatılmış olarak teslim edilir ayrıca kaynak ücreti alınmaz.

INDEPENDENCE II: EXTRA HIGH PERFORMANCE PRODUCTION CUTTING
INDEPENDENCE II: EKSTRA YÜKSEK PERFORMANS SÜREKLİ KESİM

CODE *KOD*	Blade width x thickness *Testere* *Genişlik x Kalınlık*	Nr. Of teeth /inch *Diş sayısı* *(1 inç'te)*	Price/Metre *Metre Fiyatı* EURO
TB27090203IN2	**27 x 0.9mm**	2/3	**11.50**
TB27090304IN2	**27 x 0.9mm**	3/4	**11.50**
TB27090406IN2	**27 x 0.9mm**	4/6	**11.50**
TB27090507IN2	**27 x 0.9mm**	5/7	**11.50**
TB34110203IN2	**34 x 1.1mm**	2/3	**14.50**
TB34110304IN2	**34 x 1.1mm**	3/4	**14.50**
TB34110406IN2	**34 x 1.1mm**	4/6	**14.50**
TB34110507IN2	**34 x 1.1mm**	5/7	**14.50**
TB41130203IN2	**41 x 1.3mm**	2/3	**19.00**
TB41130304IN2	**41 x 1.3mm**	3/4	**19.00**
TB41130406IN2	**41 x 1.3mm**	4/6	**19.00**
TB54160203IN2	**54 x 1.6mm**	2/3	**30.00**
TB54160304IN2	**54 x 1.6mm**	3/4	**30.00**
TB54160406IN2	**54 x 1.6mm**	4/6	**30.00**



Solid of tool steel , small to medium solids of stainless, nickel based alloys, Inconel Monel , all machinable metals in single pieces or bundles

Dolu malzeme takım çelikleri , paslanmaz çelikler, nikel alaşımlı çelikler ve tüm işlenebilir çelikler.

INDEPENDENCE EXS : EXTRA HIGH PERFORMANCE PRODUCTION CUTTING
INDEPENDENCE EXS : EKSTRA YÜKSEK PERFORMANS SÜREKLİ KESİM

CODE *KOD*	Blade width x thickness *Testere* *Genişlik x Kalınlık*	Nr. Of teeth /inch *Diş sayısı* *(1 inç'te)*	Price/Metre *Metre Fiyatı* EURO
TB27090203INE	**27 x 0.9mm**	2/3	**12.20**
TB27090304INE	**27 x 0.9mm**	3/4	**12.20**
TB27090406INE	**27 x 0.9mm**	4/6	**12.20**
TB27090507INE	**27 x 0.9mm**	5/7	**12.20**
TB34110203INE	**34 x 1.1mm**	2/3	**15.40**
TB34110304INE	**34 x 1.1mm**	3/4	**15.40**
TB34110406INE	**34 x 1.1mm**	4/6	**15.40**
TB41130102INE	**41 x 1.3mm**	1.5/2.0	**20.00**
TB41130203INE	**41 x 1.3mm**	2/3	**20.00**
TB41130304INE	**41 x 1.3mm**	3/4	**20.00**
TB54161502INE	**54 x 1.6mm**	1.5/2.0	**32.00**
TB54160203INE	**54 x 1.6mm**	2/3	**32.00**
TB54160304INE	**54 x 1.6mm**	3/4	**32.00**



High production cutting of large solids , stainless steels, nickel alloys and exotics.

Büyük çaplı dolu malzeme takım çelikleri , paslanmaz çelikler nikel alaşımlı çelikler, inconel, waspalloy, monel, ve titanyum alaşımları.

Welded to lenght blades are supplied without additional welding cost.
İstenilen uzunlukta şerit testereler hazır kaynatılmış olarak teslim edilir ayrıca kaynak ücreti alınmaz.

MAVERICK
MAVERICK



Suitable for all kinds and shapes of steels wide application in one single blade.

Tüm çelik türlerine ve şekillerine uygun en geniş kapsamlı kullanım tek bir testerede.

CODE *KOD*	**Blade width x thickness** *Testere Genişlik x Kalınlık*	**Nr. Of teeth /inch** *Diş sayısı (1 inç'te)*	**Price/Metre** *Metre Fiyatı* **EURO**
TB27090203MV	**27 x 0.9mm**	2/3	**11.10**
TB27090304MV	**27 x 0.9mm**	3/4	**11.10**
TB27090406MV	**27 x 0.9mm**	4/6	**11.10**
TB27090507MV	**27 x 0.9mm**	5/7	**11.10**
TB34110203MV	**34 x 1.1mm**	2/3	**14.80**
TB34110304MV	**34 x 1.1mm**	3/4	**14.80**
TB34110406MV	**34 x 1.1mm**	4/6	**14.80**
TB34110507MV	**34 x 1.1mm**	5/7	**14.80**
TB41130102MV	**41 x 1.3mm**	1.4/2.5	**19.00**
TB41130203MV	**41 x 1.3mm**	2/3	**19.00**
TB41130304MV	**41 x 1.3mm**	3/4	**19.00**
TB41130406MV	**41 x 1.3mm**	4/6	**19.00**
TB54160102MV	**54 x 1.6mm**	1.4/2.5	**31.00**
TB54160203MV	**54 x 1.6mm**	2/3	**31.00**
TB54160304MV	**54 x 1.6mm**	3/4	**31.00**
TB67160001MV	**67 x 1.6mm**	0.75/1.0	**48.00**
TB67160101MV	**67 x 1.6mm**	1.1/1.5	**48.00**
TB67160102MV	**67 x 1.6mm**	1.5/2.0	**48.00**
TB80160001MV	**80 x 1.6mm**	0.75/1.1	**64.00**
TB80160101MV	**80 x 1.6mm**	1.1/1.5	**64.00**

Welded to lenght blades are supplied without additional welding cost.
İstenilen uzunlukta şerit testereler hazır kaynatılmış olarak teslim edilir ayrıca kaynak ücreti alınmaz.

"M FACTOR" CARBIDE TIPPED BANDSAW BLADES
"M FACTOR" SERT METAL UÇLU ŞERİT TESTERELER

JAWBREAKER

CODE *KOD*	Blade (width x thickness) *Testere (Genişlik x Kalınlık)*	Nr. Of teeth/inch *Diş sayısı (1 inç'te)*	Price/Metre *Metre Fiyatı* EURO
TBCT54160710JB	**54 x 1.6mm**	0.75/1.0	**90.00**
TBCT54161520JB	**54 x 1.6mm**	1.5/2.0	**100.00**
TBCT67160710JB	**67 x 1.6mm**	0.75/1.0	**132.00**
TBCT67161520JB	**67 x 1.6mm**	1.5/2.0	**159.00**
TBCT80160710JB	**80 x 1.6mm**	0.75/1.0	**149.00**
TBCT80161520JB	**80 x 1.6mm**	1.5/2.0	**175.00**



Alloy steels, Hardened Steel alloys up to 65 HRC, Nickel chrome moly steel, Stainless steels, Super alloys, Titanium alloys, Tool & die steels
Alaşımlı çelikler, Sert çelikler, 65 HRC ye kadar, Nikel, krom ve molübdenli çelikler, Paslanmaz çelikler, Süper alaşımlar, titanyum, takım ve kalıp çelikleri

M FACTOR GP General Purpose - *Genel maksatlı*

CODE *KOD*	Blade (width x thickness) *Testere (Genişlik x Kalınlık)*	Nr. Of teeth/inch *Diş sayısı (1 inç'te)*	Price/Metre *Metre Fiyatı* EURO
TCT27090203MFGP	**27 x 0.9mm**	2/3	**64.00**
TCT27090203MFGP	**27 x 0.9mm**	3/4	**80.00**
TCT34110710MFGP	**34 x 1.1mm**	0.75/1.0	**53.00**
TCT34111520MFGP	**34 x 1.1mm**	1.5/2.0	**59.00**
TCT34112030MFGP	**34 x 1.1mm**	2/3	**69.00**
TCT34113040MFGP	**34 x 1.1mm**	3/4	**85.00**
TCT41131520MFGP	**41 x 1.3mm**	1.5/2.0	**69.00**
TCT41132030MFGP	**41 x 1.3mm**	2/3	**80.00**
TCT41133040MFGP	**41 x 1.3mm**	3/4	**95.00**
TCT54160710MFGP	**54 x 1.6mm**	0.75/1.0	**74.00**
TCT54161520MFGP	**54 x 1.6mm**	1.5/2.0	**80.00**
TCT54162030MFGP	**54 x 1.6mm**	2/3	**85.00**
TCT67160710MFGP	**67 x 1.6mm**	0.75/1.0	**106.00**
TCT67161520MFGP	**67 x 1.6mm**	1.5/2.0	**122.00**
TCT80160710MFGP	**80 x 1.6mm**	0.75/1.0	**167.00**
TCT80161520MFGP	**80 x 1.6mm**	1.5/2.0	**132.00**

Solid materials alloy steels , stainless steels, tool steels, mould steels, carbon steels. Extra long life blades.

Dolu malzeme alaşımlı çelikler, paslanmaz çelikler, takım çelikleri, kalıp çelikleri ve karbonlu çelikler. Ekstra uzun ömürlü testere.

M FACTOR FB Forging - *Dökümhane*

CODE *KOD*	Blade (width x thickness) *Testere (Genişlik x Kalınlık)*	Nr. Of teeth/inch *Diş sayısı (1 inç'te)*	Price/Metre *Metre Fiyatı* EURO
TCT12060300MFFB	**12,7 x 0,64mm**	3	**58.00**
TCT19090300MFFB	**19 x 0.9mm**	3	**64.00**
TCT27090300MFFB	**27 x 0.9mm**	3	**64.00**
TCT34110300MFFB	**34 x 1.1mm**	3	**75.00**

Aluminium casting , abrasive wood, plywood and similar komposite materials graphite, composite wood. Extra long life blade

Aluminyum döküm, Aşındırıcı ahşap , plywood ve türevi kompozit malzemeler, grafit, sıkıştırılmış ahşap. Extra uzun ömürlü testere

Welded to lenght blades are supplied without additional welding cost.
İstenilen uzunlukta şerit testereler hazır kaynatılmış olarak teslim edilir ayrıca kaynak ücreti alınmaz.

CARBON BANDSAW BLADES
KARBON ŞERİT TESTERELER



Suitable for easy to machine metals, brass copper bronze, aluminium, wood, plastic, plywood composite, composition board.

*** Marked teeths (type H) only suitable for aluminium copper bronze, and their castings and wood. Not suitable for metals**
**** Marked teeths (type S) only suitable for plastic, brass, bronze, aluminium. Not suitable for metals**

Kolay işlenen Metaller, aluminyum pirinç bakır bronz ağaç, plastik, polywood, composite, paneller ve benzeri malzemeler için

** İşaretli dişler ("H" tipi) sadece aluminyum, bakır bronz gibi hafif metaller, döküm malzemeler ve ahşap içindir. Demir ve çelik için uygun değildir.*
*** İşaretli dişler ("S" tipi) ağaç plastik , pirinç bakır bronze ve aluminyum içindir. Demir ve çelik için uygun değildir.*

CODE *KOD*	**Blade width x thickness** *Testere Genişlik x Kalınlık*	**Nr. Of teeth /inch** *Diş sayısı (1 inç'te)*	**Packing details: in coils** *Ambalaj Şekli: Top Halinde*	**Price per coil of 30.5m** *30.5m Top Fiyatı*
TC060604H	**6 x 0.64mm**	4H*	30,5 M	**115.00**
TC060604H	**6 x 0.64mm**	6H*	30,5 M	**115.00**
TC060604S	**6 x 0.64mm**	4S**	30,5 M	**115.00**
TC060610	**6 x 0.64mm**	10	30,5 M	**115.00**
TC060614	**6 x 0.64mm**	14	30,5 M	**115.00**
TC060618	**6 x 0.64mm**	18	30,5 M	**115.00**
TC100603H	**10x0.64mm**	3H*	30,5 M	**115.00**
TC100604H	**10x0.64mm**	4H*	30,5 M	**115.00**
TC100606H	**10x0.64mm**	6H*	30,5 M	**115.00**
TC100608	**10x0.64mm**	8	30,5 M	**115.00**
TC100610	**10x0.64mm**	10	30,5 M	**115.00**
TC100614	**10x0.64mm**	14	30,5 M	**115.00**
TC100618	**10x0.64mm**	18	30,5 M	**115.00**
TC120514	**12,5x0,5mm**	10	30,5 M	**120.00**
TC120603H	**12,5x0,64mm**	3H*	30,5 M	**120.00**
TC120604H	**12,5x0,64mm**	4H*	30,5 M	**120.00**
TC120606H	**12,5x0,64mm**	6H*	30,5 M	**120.00**
TC120606	**12,5x0,64mm**	6	30,5 M	**120.00**
TC120610	**12,5x0,64mm**	10	30,5 M	**120.00**
TC120614	**12,5x0,64mm**	14	30,5 M	**120.00**
TC120618	**12,5x0,64mm**	18	30,5 M	**120.00**

Karbon bandsaws are sold in coils of 30,5 metres
Karbon Şerit testereler 30,5 metre top halinde satılır

TECHNICAL INFO - BANDSAWS
TEKNİK BİLGİLER - ŞERİT TESTERELER

Bi- metal bandsaw tooth selection guide (according to workpiece dia or thickness)
Bi-Metal Şerit testere diş seçim tablosu (Malzeme çap ve et kalınlığına göre)

Solid Ø Dolu Ø	**Tooth** Diş
2-5 mm	14 - 10/14
6-12 mm	10 - 8/12
13-20 mm	8 - 6/10
20-30 mm	6 - 5/8
30-50 mm	4/6
50-90 mm	4 - 3/4
90-120 mm	3/4
120-200 mm	2/3
200-400 mm	1.3 - 1,4 /2.5

Pipe / profile etc.. Wall thickness *Boru profil vs. et kalınlığı*	**Tooth** *Diş*
1,5-3mm	14 - 10/14
3-5mm	10 - 8/12
5-7 mm	6/10
7-10 mm	5/8
10-20 mm	4/6
20-40 mm	3/4
40 - + mm	2/3

Note: Tooth selection guide is only general guide and could well vary according to materials' characteristics and also cutting conditions. Please consult our company for further recommndations

Not: *Diş seçimi genel olarak belirtilmiş olup kesilen malzeme evsafı ve kesim şartları bu seçimi değiştirebilir. Ayrıntılı bilgi için lütfen firmamızla irtibata geçiniz.*

Performance: When you start with your new blade, while keeping the speed constant, reduce your feed by half. Having cut for 15 minutes with half the feed, gradually increase your feed up to your standard level. Therefore the very sharp cutting edges of your new blades will not be damaged in the very first cuts, thus, this will improve the life of your blade.

Performans: *Yeni testerenizi ilk taktığınızda devir sabit kalmak koşulu ile normal testere iniş hızınızı (ilerlemeyi) yarıya düşürünüz. 15 dk. kesim yaptıktan sonra yavaş yavaş eski ilerlemenize getiriniz.*
Böylece yeni testerenizin ilk etapta çok keskin olan diş uçlarındaki küçük kırılmalar engellenecek ve testerenizin ömrü artacaktır.



SOLVING THE PROBLEM BY WATCHING THE CHIPS
Problems can be identified by watching the chips created during cutting operation,

Chips : Thin and curled silver color
Speed : GOOD
Feed : GOOD
Other : Speed / feed and tooth selection is OK.

Chips : Thick, hard and short , blue or brown color
Speed : Decrease
Feed : Decrease
Other : Check the cutting oil

Chips : Powder in silver color
Speed : Decrease
Feed : Increase

Chips : Thin and tightly curled in silver color
Speed : OK.
Feed : Decrease
Other : May be wrong toolth selection

TALAŞLARI İZLEYEREK PROBLEM ÇÖZME
Kesim esnasında çıkan talaşları inceleyerek problemleri bulabilir ve çözebilirsiniz.

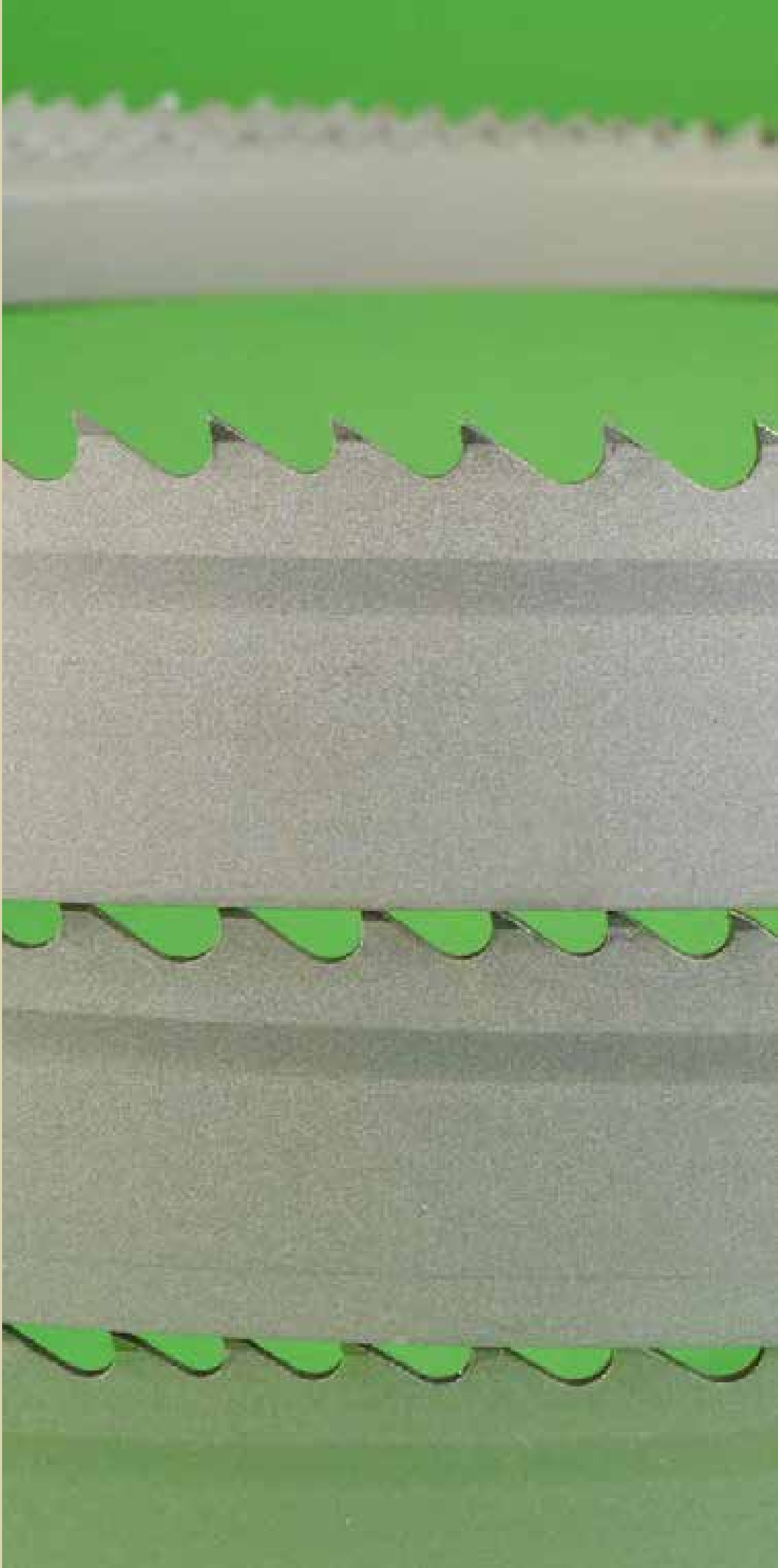
Talaş : ince kıvrılmı ve gri metal renkte
Devir : Uygun
İlerleme : Uygun
Diğer : Devir ilerleme ve diş seçiminiz uygundur

Talaş : Kısa, kalın, sert ve mavi veya kahve renkte
Devir : Düşürün
İlerleme : Düşürün
Diğer : Kesme yağını kontrol edin.

Talaş : Toz halinde ve gri
Devir : Düşürün
İlerleme : Arttırın

Talaş : İnce ve çok sıkı kıvrımlı ve gri renkte
Devir : Kesme hızı uygun
İlerleme : Düşürün
Diğer : Yanlış diş seçimi olabilir.

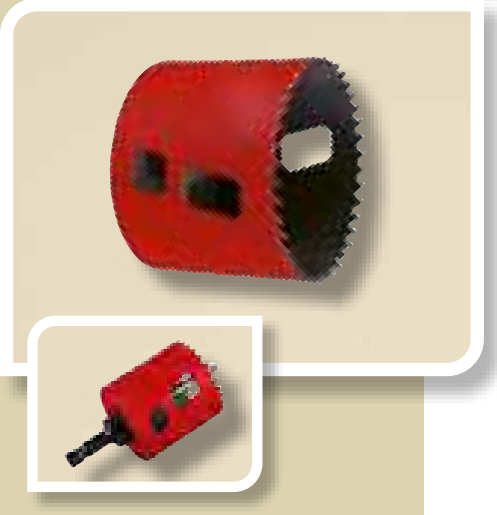
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HOLE SAWS & HAND SAWS
TCT CIRCULLAR SAW
DELİK TESTERELERİ & EL TESTERELERİ
SERT METAL PLAKETLİ DAİRE TESTERELER

BI-METAL HOLE SAWS
BI-METAL DELİK TESTERELERİ





Suitable for all machinable metals, stainless steels , wood, plastics. Requires a separate arbor for operation the suitable arbor is indicated for each diameter.

Her türlü ağaç, metal ve plastik için uygundur. Adaptör ile kullanılır. Her delik testere çapının yanında takıldığı adaptörün kodu belirtilmiştir.

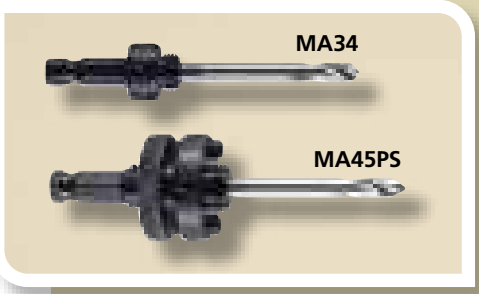
CODE *KOD*	Diameter *Çap* Ø mm	EURO	Arbor *Adaptör*
MHS09C-14	14	10.60	MA34
MHS105C-16	16	10.60	MA34
MHS11C-17	17	10.60	MA34
MHS12C-19	19	10.60	MA34
MHS125C-20	20	10.60	MA34
MHS13C-21	21	10.60	MA34
MHS14C-22	22	10.60	MA34
MHS15C-24	24	10.60	MA34
MHS155C-25	25	10.90	MA34
MHS17C-27	27	10.90	MA34
MHS18C-29	29	10.90	MA34
MHS185C-30	30	10.90	MA34
MHS205C-32	32	11.10	MA45PS
MHS21C-33	33	11.10	MA45PS
MHS225C-35	35	11.70	MA45PS
MHS23C-37	37	11.70	MA45PS
MHS24C-38	38	11.70	MA45PS
MHS255C-40	40	11.70	MA45PS
MHS26C-41	41	11.70	MA45PS
MHS27C-43	43	11.70	MA45PS
MHS28C-44	44	14.10	MA45PS
MHS285C-45	45	14.10	MA45PS
MHS29C-46	46	14.10	MA45PS
MHS30C-48	48	14.10	MA45PS
MHS315C-50	50	14.10	MA45PS
MHS32C-51	51	14.10	MA45PS
MHS33C-52	52	17.20	MA45PS
MHS34C-54	54	17.20	MA45PS
MHS345C-55	55	17.20	MA45PS
MHS36C-57	57	17.40	MA45PS
MHS37C-59	59	17.40	MA45PS

CODE *KOD*	Diameter *Çap* Ø mm	EURO	Arbor *Adaptör*
MHS38C-60	60	17.40	MA45PS
MHS385C-62	62	17.40	MA45PS
MHS40C-64	64	18.70	MA45PS
MHS41C-65	65	18.70	MA45PS
MHS42C-67	67	18.70	MA45PS
MHS425C-68	68	18.70	MA45PS
MHS44C-70	70	18.70	MA45PS
MHS46C-73	73	18.70	MA45PS
MHS475C-75	75	18.70	MA45PS
MHS48C-76	76	19.20	MA45PS
MHS50C-79	79	19.20	MA45PS
MHS52C-83	83	19.20	MA45PS
MHS54C-86	86	19.20	MA45PS
MHS56C-89	89	19.20	MA45PS
MHS58C-92	92	22.30	MA45PS
MHS60C-95	95	26.00	MA45PS
MHS62C-98	98	27.00	MA45PS
MHS63C-100	100	27.60	MA45PS
MHS64C-102	102	27.60	MA45PS
MHS66-105	105	27.60	MA45PS
MHS68-108	108	31.00	MA45PS
MHS70-111	111	36.00	MA45PS
MHS72-114	114	42.00	MA45PS
MHS76-121	121	46.00	MA45PS
MHS80-127	127	51.00	MA45PS
MHS84-133	133	59.00	MA45PS
MHS88-140	140	60.00	MA45PS
MHS92-146	146	65.00	MA45PS
MHS96-152	152	69.00	MA45PS
MHS104-162	162	96.00	MA45PS
MHS106-168	168	96.00	MA45PS

HOLE SAWS ACCESSORIES AND SETS
DELİK TESTERE AKSESUAR VE TAKIMLARI

HOLE SAWS ARBOR / *DELİK TESTERE ADAPTÖRÜ*

CODE *KOD*	Holds the holessaws *Taktığı Delik testereleri* Ø	EURO
MA34	Ø14-30mm	9.00
MA45PS	Ø32-168mm	17.00



PILOT DRILL / *PİLOT MATKABI*

CODE *KOD*	SUITS THE ARBOR *TAKILDIĞI ADAPTÖR*	EURO
MAPD301	MA34 - MA45PS	3.60



EXTENSION ADAPTOR / *UZATMA ADAPTÖRÜ*

CODE *KOD*	SUITS THE ARBOR *TAKILDIĞI ADAPTÖR*	EURO
ME121	MA45PS	15.00



BI-METAL HOLESAW KIT / *BI-METAL DELİK TESTERESİ TAKIMI*

CODE *KOD*	Description *Tanımı*	Contents *içindekiler*	EURO
MHS100	Maintenance Kit with 11 pcs *Tamir bakım seti 11 parçalı*	9 pcs holesaws Ø19-22-29-35-38-44-51-57-64mm 2pcs arbors *9Ad. delik testeresi* *2Ad. adaptör*	149.00
MHS08E	Electrician Kit with 13 pcs *Electrikçi Seti 13 parçalı*	10pcs holesaws Ø22-29-35-44-51-64-76-92-105-114mm 3pcs arbors *10Ad. delik testeresi* *3Ad. adaptör*	222.00





CARBIDE TIPPED HOLE SAWS
SERT METAL UÇLU DELİK TESTERELERİ



Suitable for abrasive materials, asbestos board, formica and metals that bi-metal saws will not cut.
Requires a separate arbor for operation. Each suitable arbor is indicated beside each hole saw diameter.

Aşındırıcı malzemeler, asbest plaka, formika bi-metal ile kesilemeyen çelikler. Her delik testere çapının yanında takıldığı adaptörün kodu belirtilmiştir.

CODE KOD	Diameter *Çap* Ø mm	EURO	Arbor Adaptör
MHSTK09-14	14	13.30	MA34CT
MHSTK105-16	16	13.30	MA34CT
MHSTK11-17	17	13.60	MA34CT
MHSTK12-19	19	13.60	MA34CT
MHSTK125-20	20	13.60	MA34CT
MHSTK13-21	21	13.60	MA34CT
MHSTK14-22	22	13.80	MA34CT
MHSTK15-24	24	14.20	MA34CT
MHSTK16-25	25	14.50	MA34CT
MHSTK17-27	27	15.00	MA34CT
MHSTK18-29	29	15.40	MA34CT
MHSTK19-30	30	15.90	MA34CT
MHSTK20-32	32	16.10	MA45PSCT
MHSTK21-33	33	16.10	MA45PSCT
MHSTK22-35	35	16.40	MA45PSCT
MHSTK23-37	37	16.40	MA45PSCT
MHSTK24-38	38	16.75	MA45PSCT
MHSTK25-40	40	17.40	MA45PSCT
MHSTK26-41	41	18.10	MA45PSCT
MHSTK27-43	43	18.10	MA45PSCT
MHSTK28-44	44	19.00	MA45PSCT
MHSTK29-46	46	19.00	MA45PSCT
MHSTK30-48	48	19.50	MA45PSCT
MHSTK32-51	51	20.00	MA45PSCT
MHSTK33-52	52	23.00	MA45PSCT
MHSTK34-54	54	23.00	MA45PSCT
MHSTK36-57	57	25.00	MA45PSCT

CODE KOD	Diameter *Çap* Ø mm	EURO	Arbor Adaptör
MHSTK37-59	59	26.00	MA45PSCT
MHSTK38-60	60	26.00	MA45PSCT
MHSTK40-64	64	27.00	MA45PSCT
MHSTK41-65	65	27.00	MA45PSCT
MHSTK42-67	67	28.00	MA45PSCT
MHSTK44-70	70	28.00	MA45PSCT
MHSTK46-73	73	29.00	MA45PSCT
MHSTK48-76	76	30.00	MA45PSCT
MHSTK50-79	79	36.00	MA45PSCT
MHSTK52-83	83	37.00	MA45PSCT
MHSTK54-86	86	39.00	MA45PSCT
MHSTK56-89	89	40.00	MA45PSCT
MHSTK58-92	92	41.00	MA45PSCT
MHSTK60-95	95	42.00	MA45PSCT
MHSTK62-98	98	43.00	MA45PSCT
MHSTK64-102	102	45.00	MA45PSCT
MHSTK66-105	105	62.00	MA45PSCT
MHSTK68-108	108	64.00	MA45PSCT
MHSTK70-111	111	65.00	MA45PSCT
MHSTK72-114	114	65.00	MA45PSCT
MHSTK76-121	121	70.00	MA45PSCT
MHSTK80-127	127	72.00	MA45PSCT
MHSTK84-133	133	75.00	MA45PSCT
MHSTK88-140	140	77.00	MA45PSCT
MHSTK92-146	146	79.00	MA45PSCT
MHSTK96-152	152	80.00	MA45PSCT



HOLE SAW ARBOR / *DELİK TESTERE ADAPTÖRÜ*

CODE *KOD*	Sitable for hole saws *Taktığı Delik testere*	EURO
MA34CT	Ø14-30 (MHSG09-14 - MHSG19-30)	11.00
MA45PSCT	Ø32-152 (MHSG20-32 - MHSG96-152)	19.00

PILOT DRILL CARBIDE TIPPED / *PİLOT MATKABI SERT METAL UÇLU*

CODE *KOD*	SUITS THE ARBOR *TAKILDIĞI ADAPTÖR*	EURO
MAPD3CT	MA34CT - MA45PSCT	7.00

EXTENSION ADAPTOR / *UZATMA ADAPTÖRÜ*

CODE *KOD*	SUITS THE ARBOR *TAKILDIĞI ADAPTÖR*	EURO
ME121	MA45PS	15.00



CARBIDE TIPPED HOLE SAW KIT / *SERT METAL UÇLU DELİK TESTERE TAKIMI*

CODE *KOD*	Description *Tanımı*	Contents *içindekiler*	EURO
MHSTK100	Maintenance Kit with 11 pcs *Tamir bakım seti 11 parçalı*	9pcs holesaws Ø19-22-29-35-38-44-51-57-64mm 2pcs arbors *9Ad. delik testeresi* *2Ad. adaptör*	222.00

TUNGSTEN CARBIDE GRIT HOLE SAWS
SERT METAL AŞINDIRICI TANELİ DELİK TESTERELERİ

CODE KOD	Diameter *Çap* Ø mm	EURO	Arbor Adaptör
MHSG12-19	19	11.00	MA34CT
MHSG13-21	21	11.00	MA34CT
MHSG14-22	22	11.00	MA34CT
MHSG15-24	24	11.00	MA34CT
MHSG16-25	25	12.00	MA34CT
MHSG17-27	27	12.00	MA34CT
MHSG18-29	29	12.00	MA34CT
MHSG19-30	30	12.00	MA34CT
MHSG20-32	32	12.40	MA45PSCT
MHSG21-33	33	12.40	MA45PSCT
MHSG22-35	35	12.60	MA45PSCT
MHSG23-37	37	12.60	MA45PSCT
MHSG24-38	38	12.60	MA45PSCT
MHSG25-40	40	12.60	MA45PSCT
MHSG26-41	41	12.60	MA45PSCT
MHSG27-43	43	12.60	MA45PSCT
MHSG28-44	44	15.30	MA45PSCT
MHSG29-46	46	15.30	MA45PSCT
MHSG30-48	48	15.30	MA45PSCT
MHSG32-51	51	15.30	MA45PSCT
MHSG33-52	52	15.30	MA45PSCT
MHSG34-54	54	18.00	MA45PSCT
MHSG36-57	57	18.00	MA45PSCT
MHSG37-59	59	18.00	MA45PSCT
MHSG38-60	60	18.00	MA45PSCT
MHSG40-64	64	20.40	MA45PSCT

CODE KOD	Diameter *Çap* Ø mm	EURO	Arbor Adaptör
MHSG41-65	65	20.40	MA45PSCT
MHSG42-67	67	20.40	MA45PSCT
MHSG44-70	70	20.40	MA45PSCT
MHSG46-73	73	20.40	MA45PSCT
MHSG48-76	76	25.00	MA45PSCT
MHSG50-79	79	25.00	MA45PSCT
MHSG52-83	83	25.00	MA45PSCT
MHSG54-86	86	25.00	MA45PSCT
MHSG56-89	89	27.00	MA45PSCT
MHSG58-92	92	27.00	MA45PSCT
MHSG60-95	95	31.00	MA45PSCT
MHSG62-98	98	32.00	MA45PSCT
MHSG64-102	102	33.00	MA45PSCT
MHSG66-105	105	35.00	MA45PSCT
MHSG68-108	108	37.00	MA45PSCT
MHSG70-111	111	39.00	MA45PSCT
MHSG72-114	114	41.00	MA45PSCT
MHSG76-121	121	44.00	MA45PSCT
MHSG80-127	127	47.00	MA45PSCT
MHSG88-140	140	50.00	MA45PSCT
MHSG92-146	146	50.00	MA45PSCT
MHSG96-152	152	50.00	MA45PSCT
MHSG104-162	162	96.00	MA45PSCT
MHSG106-168	168	100.00	MA45PSCT
MHSG110-174	174	106.00	MA45PSCT



Suitable for abrasive materials, ceramic, fiberglass, panels, cast iron, composite, cement. Requires a separate arbor for operation. Each suitable arbor is indicated beside each hole saw diameter.

Aşındırıcı malzemeler, seramik, fiberglas, alçıpan, döküm, compozit, beton.
Her delik testere çapının yanında takıldığı adaptörün kodu belirtilmiştir.

HOLE SAW ARBOR / *DELİK TESTERE ADAPTÖRÜ*

CODE / *KOD*	Sitable for hole saws / *Taktığı Delik testere*	EURO
MA34CT	Ø14-30 (MHSG09-14 - MHSG19-30)	11.00
MA45PSCT	Ø32-152 (MHSG20-32 - MHSG96-152)	19.00

PILOT DRILL CARBIDE TIPPED / *PİLOT MATKABI SERT METAL UÇLU*

CODE / *KOD*	SUITS THE ARBOR / *TAKILDIĞI ADAPTÖR*	EURO
MAPD3CT	MA34CT - MA45PSCT	7.00

EXTENSION ADAPTOR / *UZATMA ADAPTÖRÜ*

CODE / *KOD*	SUITS THE ARBOR / *TAKILDIĞI ADAPTÖR*	EURO
ME121	MA45PS	15.00



CARBIDE GRIT HOLESAW KIT
SERT METAL AŞINDIRICI TANELİ DELİK TESTERESİ TAKIMI

CODE *KOD*	Description *Tanımı*	Contents *içindekiler*	EURO
MHSG100	Maintenance Kit with 11 pcs *Tamir bakım seti 11 parçalı*	9pcs holesaws Ø19-22-29-35-38-44-51-57-64mm 2 pcs adaptor *9Ad. delik testeresi 2ad adaptör*	170.00



HACK SAW BLADES & FRAMES
EL TESTERELERİ & TESTERE KOLLARI



BI METAL HAND HACKSAW BLADES / *BI-METAL EL TESTERE LAMASI*

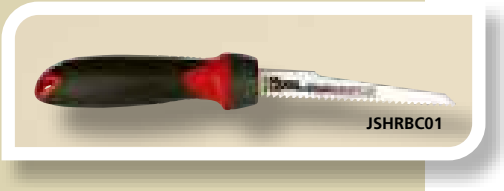
CODE *KOD*	lenghtxwidthxthickness -- teeth (per inch) *BoyxGenişlikxKalınlık -- Diş*	EURO
HHB1218	300 x 13 x 0,6mm -- 18	1.40
HHB1224	300 x 13 x 0,6mm -- 24	1.40
HHB1232	300 x 13 x 0,6mm -- 32	1.40

Prices are for one pce. Sold in packs of 10pcs
Fiyatlar bir adet içindir. 10 adetli ambalajlarda satılır.



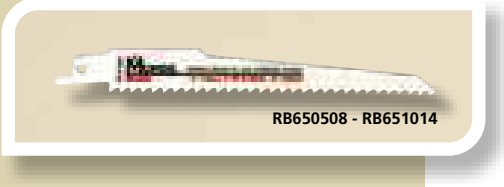
HACKSAW BLADES FRAMES / *EL TESTERE KOLLARI*

CODE *KOD*	HACK SAW FRAME *EL TESTERE KOLU*	EURO
HHBF04	Hacksaw frame with 300mm Bi-Metal blade *Testere kolu 300mm Bi-Metal Testere ağzı ile birlikte*	26.50



CODE *KOD*	GENERAL PURPOSE HAND SAWS *GENEL AMAÇLI EL TESTERESİ*	EURO
JSHRBC01	JAB saw handle with 150mm blade *"JAB" Testere sapı, ağzında testeresi ile birlikte*	17.00

JAB SAW General purpose hand tool with ergonomic handle and takes standard reciprocating blades, Suitable in narrow spaces cutting wood, metal , plastic, panels etc..
Çok maksatlı JAB SAW 'a birçok testere ağzı takılabilir. Ergonomik saplıdır ve dar alanlarda kesme imkanı sağlar. Ağaç, metal, plastik alçıpan ve benzerlerini keser.



CODE *KOD*	JAB SAW spare blade *"JAB SAW" ağzı (yedeği)*	EURO
RB650508	JAB saw blade 5/8tpi (coarse teeth) *JAB Testere ağzı 5/8 Diş (Kaba diş)*	2.70
RB651014	JAB saw blade 10/14tpi (fine teeth) *JAB Testere ağzı 10/14 Diş (ince diş)*	2.70

Prices are for one pce. Sold in packs of 5pcs / *Fiyatlar bir adet içindir. 5 adetli ambalajlarda satılır.*

METAL DEVIL NXT CARBIDE TIPPED METAL CUTTING CIRCULAR SAW BLADES
METAL KESEN SERT METAL PLAKETLİ DAİRE TESTERELER

CODE *KOD*	Blade Diameter *Testere çapı* Ø MM	Bore dia. *Delik çapı* Ømm or inch	Number of teeth *Diş adeti* Z	Material to cut *Keseceği malzeme*	Max rpm Max *devir dev/dak.*	EURO
CSM53832FSC	**137**	20 - 10mm or 5/8"	32	STEEL / *ÇELİK*	4200	**55.00**
CSM53840FNFC	**137**	20 – 10mm or 5/8"	40	ALUMINIUM / *ALUMİNYUM*	4200	**55.00**
CSM53840FSSC	**137**	20 – 10mm or 5/8"	40	STINLESS STEEL / *PASLANMAZ ÇELİK*	4200	**63.00**
CSM5883420FSC	**150**	20mm	34	STEEL / *ÇELİK*	4200	**63.00**
CSM5884020FNFC	**150**	20mm	40	ALUMINIUM / *ALUMİNYUM*	4200	**59.00**
CSM58840FSSC	**150**	20mm	40	STINLESS STEEL / *PASLANMAZ ÇELİK*	4200	**69.00**
CSM6504020FSC	**165**	20mm	40	STEEL / *ÇELİK*	4200	**79.00**
CSM6504820FNFC	**165**	20mm	48	ALUMINIUM / *ALUMİNYUM*	4200	**69.00**
CSM6504820FSSC	**165**	20mm	48	STINLESS STEEL / *PASLANMAZ ÇELİK*	4200	**111.00**
CSM7254820FSC	**184**	20mm	48	ÇELİK - *STEEL*	5800	**74.00**
CSM7255620FNFC	**184**	20mm	56	ALUMİNYUM / *ALUMINIUM*	5800	**74.00**
CSM7255620FSSC	**184**	20mm	56	STINLESS STEEL / *PASLANMAZ ÇELİK*	5800	**90.00**
CSM848FSC	**203**	5/8"	48	ÇELİK - *STEEL*	5800	**84.00**
CSM856FNFC	**203**	5/8"	56	ALUMİNYUM / *ALUMINIUM*	5800	**84.00**
CSM856FSSC	**203**	5/8"	56	STINLESS STEEL / *PASLANMAZ ÇELİK*	5800	**121.00**
CSM1052FTSC	**254**	5/8"	52	İNCE SAC / *THIN STEEL*	5200	**127.00**
CSM1072FNFC	**254**	5/8"	72	ALUMİNYUM / *ALUMINIUM*	5200	**127.00**
CSM1260FSC	**305**	1"(25.4mm)	60	ÇELİK - *STEEL*	1800	**174.00**
CSM1280FNFC	**305**	1"(25.4mm)	80	ALUMİNYUM / *ALUMINIUM*	3800	**185.00**
CSM1290FSSC	**305**	1"(25.4mm)	90	STINLESS STEEL - THIN STEEL *PASLANMAZ ÇELİK - İNCE ÇELİK*	2000	**212.00**



METAL DEVIL
Iron, steel, stainless steel, aluminium and all sorts of metals. Can be used in circular saw machines and higher tork is advantageous for better performance.

Advantages :
Faster cut time saving, longer tool life and cheaper costs per cut. No heat generated while cutting thus easier faster handling and painted surfaces are not damaged. Smooter cuts.

METAL DEVIL
Demir, çelik, paslanmaz, aluminyum ve her türlü metali keser. Dairesel testerenin kullanılabildiği elektrikli kesim cihazlarında kullanılır.
Güçlü tork kullanım performansını artıracağından tercih olmalıdır.

Avantajları:
Çok süratli keser va zamandan tasarruf sağlar uzun ömürlüdür, terstere başına kesilen parça adeti yüksektir. Kesilen parçayı ısıtmaz. kullanım kolaylığı ve zamandan tasarruf sağlar. Ayrıca ısıtmama özelliği ile parçaya örneğin boyalı yüzeylere zarar vermez. Çapaksız yüzey bırakır.

SHEET METAL STEP DRILL
KADEMELİ SAC MATKABI



SHEET METAL STEP DRILL / *KADEMELİ SAC MATKABI*

CODE *KOD*	Size range *Ölçü aralığı* Ø(inch) / mm	EURO
SDSS01	(1/8-1/2) / 3,2 - 12,7	35.00
SDSS05	(3/16-7/8) / 4,7 - 22,2	60.00
SDSS06	(1/4-3/4) / 6,3 - 19,0	55.00

Electricians, sheet metal workers and auto mechanicians.
Elektrik tesisatçıları, saç işleme ve oto makanik ustaları için



STEP DRILL KIT / *KADEMELİ SAC MATKAP TAKIMI*

CODE *KOD*	Contents *İçindekiler*	EURO
SDKIT01	3 Pcs. step drills SDSS01 (1/8-1/2) 3,2-12,7 SDSS05 (3/16-7/8) 4,7-22,2 SDSS06 (1/4-3/4) 6,3-19,0 *3 Ad. kademeli matkap*	170.00



TECHNICAL INFORMATION
TEKNİK BİLGİLER



SOLVING THE PROBLEM BY WATCHING THE CHIPS
Problems can be identified by watching the chips created during cutting operation,

Chips : Thin and curled silver color
Speed : GOOD
Feed : GOOD
Other : Speed / feed and tooth selection is OK.

Chips : Thick, hard and short , blue or brown color
Speed : Decrease
Feed : Decrease
Other : Check the cutting oil

Chips : Powder in silver color
Speed : Decrease
Feed : Increase

Chips : Thin and tightly curled in silver color
Speed : OK.
Feed : Decrease
Other : May be wrong toolth selection

TALAŞLARI İZLEYEREK PROBLEM ÇÖZME
Kesim esnasında çıkan talaşları inceleyerek problemleri bulabilir ve çözebilirsiniz.

Talaş : ince kıvrılmı ve gri metal renkte
Devir : Uygun
İlerleme : Uygun
Diğer : Devir ilerleme ve diş seçiminiz uygundur

Talaş : Kısa, kalın, sert ve mavi veya kahve renkte
Devir : Düşürün
İlerleme : Düşürün
Diğer : Kesme yağını kontrol edin.

Talaş : Toz halinde ve gri
Devir : Düşürün
İlerleme : Arttırın

Talaş : İnce ve çok sıkı kıvrımlı ve gri renkte
Devir : Kesme hızı uygun
İlerleme : Düşürün
Diğer : Yanlış diş seçimi olabilir.

Bi- metal bandsaw tooth selection guide (according to workpiece dia or thickness)
Bi-Metal Şerit testere diş seçim tablosu (Malzeme çap ve et kalınlığına göre)

Solid Ø Dolu Ø	**Tooth** Diş
2-5 mm	14 - 10/14
6-12 mm	10 - 8/12
13-20 mm	8 - 6/10
20-30 mm	6 - 5/8
30-50 mm	4/6
50-90 mm	4 - 3/4
90-120 mm	3/4
120-200 mm	2/3
200-400 mm	1.3 - 1,4 /2.5

Pipe / profile etc.. Wall thickness *Boru profil vs. et kalınlığı*	**Tooth** *Diş*
1,5-3mm	14 - 10/14
3-5mm	10 - 8/12
5-7 mm	6/10
7-10 mm	5/8
10-20 mm	4/6
20-40 mm	3/4
40 - + mm	2/3

Note: Tooth selection guide is only general guide and could well vary according to materials' characteristics and also cutting conditions. Please consult our company for further recommndations

Not: *Diş seçimi genel olarak belirtilmiş olup kesilen malzeme evsafı ve kesim şartları bu seçimi değiştirebilir. Ayrıntılı bilgi için lütfen firmamızla irtibata geçiniz.*

Performance: When you start with your new blade, while keeping the speed constant, reduce your feed by half. Having cut for 15 minutes with half the feed, gradually increase your feed up to your standard level. Therefore the very sharp cutting edges of your new blades will not be damaged in the very first cuts, thus, this will improve the life of your blade.

Performans: *Yeni testerenizi ilk taktığınızda devir sabit kalmak koşulu ile normal testere iniş hızınızı (ilerlemeyi) yarıya düşürünüz. 15 dk. kesim yaptıktan sonra yavaş yavaş eski ilerlemenize getiriniz.*
Böylece yeni testerenizin ilk etapta çok keskin olan diş uçlarındaki küçük kırılmalar engellenecek ve testerenizin ömrü artacaktır.

CARBIDE BURRS OPERATION SPEED
SERT METAL ÇAPAK FREZE KULLANIM DEVİRLERİ

Workpiece *İşlenilen malzeme*	**Rpm range according to tool diameter** *Takım çapına göre devir aralığı*				
	Ø 3mm	Ø 6mm	Ø 10mm	Ø 12mm	Ø 16mm
Steel *Çelik*	60.000-80.000	35.000-45.000	22.000-35.000	20.000-30.000	15.000-20.000
Hard Steel **Sert Çelik**	60.000-80.000	30.000-45.000	19.000-30.000	15.000-22.000	12.000-18.000
Stainless steel *Paslanmaz Çelik*	60.000-80.000	30.000-45.000	19.000-30.000	15.000-22.000	12.000-18.000
Cast ıron *Döküm*	45.000-80.000	22.000-45.000	15.000-35.000	11.000-30.000	9.000-20.000
Titanium *Titanyum*	60.000-80.000	30.000-45.000	19.000-30.000	15.000-22.000	12.000-18.000
Nickel *Nikel*	60.000-80.000	30.000-45.000	19.000-30.000	15.000-22.000	12.000-18.000
Copper and Copper alloys *Bakır ve alaşımları*	45.000-80.000	22.000-45.000	15.000-35.000	11.000-30.000	9.000-20.000
Aluminium *Aluminyum*	30.000-80.000	15.000-45.000	10.000-35.000	7.000-30.000	6.000-20.000
Plastics *Plastik*	30.000-80.000	15.000-45.000	10.000-35.000	7.000-30.000	6.000-20.000



SPEED AND FEED DATAS FOR HSS DRILLS
HSS MATKAPLAR İÇİN DEVİR VE İLERLEME DEĞERLERİ

Workpiece material İşlenen malzeme türü	Cutting speed Kesme hızı Metre/ minute metre/ dakika	FEED RATE ACCORDING TO DRILL DIAMETER (FEED PER REVOLUTION) m/rev. *MATKAP ÇAPLARINA GÖRE İLERLEME (devir başına ilerleme) mm/ devir*											
		Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø8	Ø10	Ø12	Ø15	Ø16	Ø20
STEEL < 200 HB ÇELİK < 200 HB	20-25	0.020	0.060	0.090	0.100	0.110	0.130	0.160	0.190	0.200	0.230	0.250	0.280
STEEL 200-300 HB ÇELİK 200-300 HB	12-20	0.018	0.050	0.070	0.080	0.095	0.110	0.140	0.170	0.180	0.200	0.210	0.230
ÇELİK 300-350 HB	10-12	0.016	0.035	0.050	0.060	0.065	0.075	0.095	0.110	0.125	0.140	0.150	0.180
STAINLESS STEEL PASLANMAZ ÇELİK	12-18	0.016	0.035	0.050	0.060	0.065	0.075	0.095	0.110	0.125	0.140	0.150	0.180
CAST IRON DÖKÜM	20-30	0.018	0.050	0.070	0.080	0.095	0.110	0.140	0.170	0.180	0.200	0.210	0.230
CUPPER, BRONZE, BRASS BAKIR BRONZ PİRİNÇ	20-35	0.018	0.050	0.070	0.080	0.095	0.110	0.140	0.170	0.180	0.200	0.210	0.230
ALUNIMIUM ALUMINYUM	25-35	0.020	0.060	0.090	0.100	0.110	0.130	0.160	0.190	0.200	0.230	0.250	0.280

Indicated datas are for HSS Cobalt drills, for HSS drills please reduce these datas by 30%
Yukarıdaki değerleri HSS Cobalt matkaplarda kullanınız, HSS matkaplarda bu değerleri %30 düşürünüz.



SPEED AND FEED DATAS FOR CARBIDE DRILLS
SERT METAL MATKAPLAR İÇİN DEVİR VE İLERLEME DEĞERLERİ

Workpiece material İşlenen malzeme türü	Cutting speed Kesme hızı Metre/ minute metre/ dakika	FEED RATE ACCORDING TO DRILL DIAMETER (FEED PER REVOLUTION) m/rev. MATKAP ÇAPLARINA GÖRE İLERLEME (devir başına ilerleme) mm/ devir											
		Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø8	Ø10	Ø12	Ø15	Ø16	Ø20
STEEL < 200 HB ÇELİK < 200 HB	70-80	0.007	0.012	0.020	0.025	0.030	0.035	0.050	0.075	0.095	0.120	0.130	0.140
STEEL 200-300 HB ÇELİK 200-300 HB	55-70	0.007	0.012	0.020	0.025	0.030	0.035	0.050	0.075	0.095	0.120	0.130	0.140
STEEL 300-350 HB ÇELİK 300-350 HB	35-55	0.007	0.012	0.020	0.025	0.030	0.035	0.050	0.075	0.095	0.120	0.130	0.140
STEEL 40-50 HRC ÇELİK 40-50 HRC	20-30	0.007	0.012	0.018	0.022	0.028	0.033	0.045	0.065	0.085	0.110	0.120	0.130
STEEL 50-55 HRC ÇELİK 50-55 HRC	16-20	0.006	0.012	0.016	0.020	0.025	0.030	0.040	0.060	0.080	0.100	0.110	0.120
STAINLESS STEEL PASLANMAZ ÇELİK	20-30	0.007	0.012	0.018	0.022	0.028	0.033	0.045	0.065	0.085	0.110	0.120	0.130
CAST IRON DÖKÜM	50-70	0.012	0.022	0.032	0.040	0.050	0.060	0.085	0.095	0.110	0.130	0.140	0.160
CUPPER, BRONZE, BRASS BAKIR BRONZ PİRİNÇ	100-200	0.025	0.050	0.070	0.080	0.100	0.125	0.160	0.200	0.240	0.270	0.300	0.300
ALUNIMIUM ALUMINYUM	60-150	0.025	0.050	0.070	0.080	0.100	0.125	0.160	0.200	0.240	0.270	0.300	0.300

Finding the revolution using cutting speed rate
Kesme hızından deviri bulmak için

$$\frac{\textbf{Cutting speed (m/minute)}\ \textit{Kesme hızı (m/dakika)}\ \textbf{x 1000}}{\textbf{3,14 x tool (drill) diameter}\ \textit{takım (matkap) çapı}} = \textbf{DEVİR}/\textit{DAKİKA}\ \textbf{(RPM)}$$

All given datas are to make user to have reference point to make a start.
The machine, coolant, workpiece fixing, toolholding accuracy, workpiece characteristics and many other inputs may lead you to change these datas
Having made a start with these given datas, by adjusting them you can reach the optimun datas of your particular application.
Do NOT start with the upper level of the given datas. Start from the lower level then gradually inrease it.

Tüm verilen değerler işlemeye başlangıç yapabilmeniz için referans alabileceğiniz değerlerdir.
Tezgah, soğutucu, parça bağlama, takım tutucu hassasiyeti, malzeme özelliği ve diğer tüm etkenler bu değerleri değiştirmenizi gerektirebilir.
Başlangıcı yukarıdaki değerlerle yaptıktan sonra kesme değerlerini değiştirerek işleminize uygun optimum kesme değerine ulaşabilirsiniz.
Tabloda belirtilen değer aralıklarının üst sınırlarıyla başlangıç yapmayınız. Alt sınırdan başlayarak değerlerinizi kademeli olarak artırınız.



TAPPING DRILL SIZES
KILAVUZ MATKAP ÇAPLARI



M. COARSE *M. NORMAL*	Drill Ø *Matkap Ø*
M 2	1.60
M 2,2	1.75
M 2,3	1.90
M 2,5	2.05
M 2,6	2.10
M 3	2.50
M 3,5	2.90
M 4	3.30
M 4,5	3.70
M 5	4.20
M 6	5.00
M 7	6.00
M 8	6.80
M 9	7.80
M 10	8.50
M 11	9.50

M. COARSE *M. NORMAL*	Drill Ø *Matkap Ø*
M 12	10.20
M 14	12.00
M 16	14.00
M 18	15.50
M 20	17.50
M 22	19.50
M 24	21.00
M 27	24.00
M 30	26.50
M 33	29.50
M 36	32.00
M 39	35.00
M 42	37.50
M 45	40.50
M 48	43.00
M 52	47.00

M. FINE *M. İNCE*	Drill Ø *Matkap Ø*
M 4x0,5	3.50
M 4,5x0,5	4.00
M 5x0,5	4.50
M 6x0,5	5.50
M 6x0,75	5.20
M 7x0,75	6.20
M 8x0.5	7.50
M 8x0,75	7.20
M 8x1	7.00
M 9x1	8.00
M 10x0,75	9.20
M 10x1	9.00
M 10x1,25	8.80
M 11x1	10.00
M 12x1	11.00
M 12x1,25	10.80
M 12x1,5	10.50
M 13x1	12.00
M 14x1	13.00
M 14x1,25	12.80
M 14x1,5	12.50
M 15x1	14.00
M 15x1,5	13.50
M 16x1	15.00
M 16x1,5	14.50
M 18x1	17.00
M 18x1,5	16.50
M 18x2	16.00

M. FINE *M. İNCE*	Drill Ø *Matkap Ø*
M 20x1	19.00
M 20x1,5	18.50
M 20x2	18.00
M 22x1	21.00
M 22x1,5	20.50
M 22x2	20.00
M 24x1	23.00
M 24x1,5	22.50
M 24x2	22.00
M 25x1	24.00
M 25x1,5	23.50
M 26x1	25.00
M 26x1,5	24.50
M 27x1,5	25.50
M 27x2	25.00
M 28x1,5	26.50
M 28x2	26.00
M 30x1	29.00
M 30x1,5	28.50
M 30x2	28.00
M 32x1,5	30.50
M 33x1,5	31.50
M 33x2	31.00
M 34x1,5	32.50
M 36x1,5	34.50
M 36x2	34.00
M 38x1,5	36.50
M 40x1,5	38.50

TAPPING DRILL SIZES
KILAVUZ MATKAP ÇAPLARI

G	Drill Ø *Matkap Ø*
G 1/8x28	8.80
G 1/4x19	11.80
G 3/8x19	15.25
G 1/2x14	19.00
G 5/8x14	21.00
G 3/4x14	24.50
G 7/8x14	28.25
G 1 x11	30.75
G 1 1/8x11	35.50
G 1 1/4x11	39.50
G 1 1/2x11	15.25
G 1 3/4x11	51.10
G 2 x11	57.00
G 2 1/2x11	73.00

UNC	Drill Ø *Matkap Ø*
No. 2x56	1.85
No. 3x48	2.10
No. 4x40	2.35
No. 5x40	2.65
No. 6x32	2.85
No. 8x32	3.50
No. 10x24	3.90
No. 12x24	4.50
1/4x20	5.10
5/16x18	6.60
3/8x16	8.00
7/16x14	9.40
1/2x13	10.80
9/16x12	12.20
5/8x11	13.50
3/4x10	16.50
7/8x9	19.50
1x8	22.25
1 1/8x7	25.00
1 1/4x7	28.00
1 3/8x6	30.75
1 1/2x6	34.00
1 3/4x5	39.50
2 x4,5	45.00

NPT	Drill Ø *Matkap Ø*
1/16x27	6.20
1/8x27	8.50
1/4x18	11.10
3/8x18	14.55
1/2x14	18.00
3/4x14	23.25
1x11.5	29.20

NPTF	Drill Ø *Matkap Ø*
1/16x27	6.20
1/8x27	8.50
1/4x18	11.00
3/8x18	14.50
1/2x14	17.80
3/4x14	23.10
1x11.5	29.10

BSPT - Rc	Drill Ø *Matkap Ø*
1/8x28	8.20
1/4x19	11.00
3/8x19	14.50
1/2x14	18.00
3/4x14	23.40
1x11	29.50

BSW	Drill Ø *Matkap Ø*
1/8x40	2.00
5/32x32	3.20
3/16x24	3.60
1/4x20	5.10
5/16x18	6.50
3/8x16	7.90
7/16x14	9.30
1/2x12	10.50
9/16x12	12.00
5/8x11	13.50
3/4x10	16.50
7/8x9	19.25
1x8	22.00



TAPPING DRILL SIZES
KILAVUZ MATKAP ÇAPLARI



UNF	Drill Ø *Matkap Ø*
No. 2x64	1.85
No. 3x56	2.15
No. 4x48	2.40
No. 5x44	2.70
No. 6x40	2.95
No. 8x36	3.50
No. 10x32	4.10
No. 12x28	4.60
1/4x28	5.50
5/16x24	6.90
3/8x24	8.50
7/16x20	9.90
1/2x20	11.50
9/16x18	12.90
5/8x18	14.50
3/4x16	17.50
7/8x14	20.40
1x12	23.25
1 1/8x12	26.50
1 1/4x12	29.50
1 3/8x12	32.75
1 1/2x12	36.00

W DIN477	Drill Ø *Matkap Ø*
W 21.8x1/14	19.75
W 24.32x1.14	22.25
W 19.8x1/14 taper/konik	14.70
W 28.8x1/14 taper/konik	22.70

Rc	Drill Ø *Matkap Ø*
Rc 1/8	8.20
Rc 1/4	11.00
Rc 3/8	14.50
Rc 1/2	18.00
Rc 3/4	23.40
Rc 1	29.50
Rc 1-1/4	38.00
Rc 1-1/2	43.90
Rc 2	55.50

Rd	Drill Ø *Matkap Ø*
Rd 8	6.00
Rd 9	7.00
Rd 10	8.00
Rd 11	9.00
Rd 12	10.00
Rd 14	11.50
Rd 16	13.50
Rd 18	15.50
Rd 20	17.50

PG	Drill Ø *Matkap Ø*
PG 7	11.35
PG 9	13.95
PG 11	17.35
PG 13,5	19.15
PG 16	21.25
PG 21	26.90
PG 29	35.60
PG 36	45.60
PG 42	52.60

Rp	Drill Ø *Matkap Ø*
Rp 1/8	8.60
Rp 1/4	11.50
Rp 3/8	15.00
Rp 1/2	18.50
Rp 3/4	24.00
Rp 1	30.25
Rp 1-1/4	39.00
Rp 1-1/2	45.00
Rp 2	56.50

TAPPING DRILL SIZES
KILAVUZ MATKAP ÇAPLARI

TR	Drill Ø *Matkap Ø*
TR 8x1,5	6.60
TR 8x2	6.20
TR 9x1,5	7.60
TR 9x2	7.20
TR 10x1,5	8.60
TR 10x2	8.20
TR 10x3	7.50
TR 11x2	9.20
TR 11x3	8.25
TR 12x2	10.20
TR 12x3	9.25
TR 14x2	12.20
TR 14x3	11.25
TR 14x4	10.50
TR 16x2	14.20
TR 16x4	12.25
TR 18x2	16.20
TR 18x4	14.25
TR 20x2	18.20
TR 20x4	16.25

Cold forming taps drill diameters
Ovalama Kılavuzları için matkap çapları

M. COARSE *M. NORMAL*	Drill Ø *Matkap Ø*
M 3	2.75
M 4	3.65
M 5	4.60
M 6	5.50
M 8	7.40
M 10	9.30
M 12	11.20



CUTTING SPEEDS
KILAVUZ KESME HIZLARI

WORKPIECE MATERIAL *İŞLENEN MALZEME*	HSS-E TAPS *KLAVUZLAR* m/min	HSS-E + TIN TAPS *KILAVUZLAR* m/min	BRASS CUTTING TAPS *MS SARI İÇİN ÖZEL KILAVUZLAR* m/min
STEELS UP TO 150 HB *150 HB YE KADAR ÇELİKLER*	6-7	8-12	
150-250 HB STEELS *150-250 HB ÇELİKLER*	5-6	7-9	
250-320 HB STEELS *250-320 HB ÇELİKLER*	3-4	5-6	
STAINLESS STEELS *PASLANMAZ ÇELİKLER*	2-3	3-5	
CAST IRON *DÖKÜMLER*	6-10	10-16	
BRASS *SARI PİRİNÇ*	10-15	15-20	15-25
ALUMINIUM *ALUMİNYUM*	8-12		10-20

CUTTING DATAS FOR DIES
PAFTALAR İÇİN KESME DEĞERLERİ



CUTTING SPEED AND RECOMMENDATION / *KESME HIZI VE ÖNERİLER*

WORKPIECE MATERIAL *İŞLENEN MALZEME*	**CUTTING SPEED** *KESME HIZI* **m/minute** *m/dakika*	**RECOMMENDATIONS** *ÖNERİLER*
ST37- ST50 SOFT STEEL *ST37- ST50 YUMUŞAK ÇELİKLER*	**8-12**	**Use cutting oil** *Kesme yağı kullanınız.*
CASE HARDENING STEEL *SEMENTE ÇELİKLERİ* **CK15, 16MnCr5, 8620**	**6-10**	**Use cutting oil** *Kesme yağı kullanınız.*
HEAT TREATABLE STEEL *ISIL İŞLEM GÖREBİLEN ÇELİKLER* **C45, C35**	**5-8**	**Use cutting oil, prefer HSSE dies** *Kesme yağı kullanınız. HSS E pafta tercih ediniz*
STAINLESS STEEL *PASLANMAZ ÇELİKLER*	**4-6**	**Use cutting oil, prefer HSSE dies** *Kesme yağı kullanınız. HSS E pafta tercih ediniz*
CAST IRON GG15, GG25 *DÖKÜMLER GG15, GG25*	**5-8**	**Use cutting oil with paraphine** *Kesme yağı, parafin kullanınız*
BRASS (SHORT CHIPPING) *PİRİNÇ (KISA TALAŞ VEREN)*	**20-30**	**Use cutting oil and prefer MS (brass type) dies** *Kesme yağı kullanınız. MS pafta tercih ediniz*
BRASS (LONG CHIPPING) *PİRİNÇ (UZUN TALAŞ VEREN)*	**12-18**	**Use cutting oil and prefer MS (brass type) dies** *Kesme yağı kullanınız. MS pafta tercih ediniz*
ALUMINIUM ALLOYS (LONG CHIPPING) *ALUMINYUM ALAŞIMLARI (UZUN TALAŞ VEREN)*	**15-20**	**Use cutting oil** *Kesme yağı kullanınız.*
ALUMINIUM ALLOYS (SHORT CHIPPING) *ALUMINYUM ALAŞIMLARI (KISA TALAŞ VEREN)*	**8-12**	**Use cutting oil with paraphine** *Kesme yağı, parafin kullanınız*
BRONZE *BRONZ*	**5-8**	**Use cutting oil with paraphine** *Kesme yağı, parafin kullanınız*

TURNING DIAMETERS FOR DIES
PAFTALAR İÇİN TORNALAMA ÇAPLARI

TURNING DIAMETERS / *TORNALAMA ÇAPLARI*



Nominal diameter *Nominal çap* Ø mm	Pitch *Hatve*	maximum/minimum and target turning diameters for 6g tolerance *6g toleransı için önerilen minimum / maximum / hedef tornalama çapı*		
		Minimum turning diameter *Minimum tornalama çapı*	Maximum Turning Diameter *Maximum Tornalama Çapı*	target turning diameter *hedef tornalama çapı*
2	0.4	1.89	1.98	1.94
2.5	0.45	2.38	2.48	2.43
3	0.5	2.87	2.98	2.92
3.5	0.6	3.35	3.48	3.41
4	0.7	3.84	3.99	3.91
4.5	0.75	4.34	4.48	4.41
5	0.8	4.83	4.98	4.9
6	1	5.79	5.97	5.88
7	1	6.79	6.97	6.88
8	1.25	7.76	7.97	7.87
10	1.5	9.73	9.96	9.85
12	1.75	11.7	11.97	11.83
14	2	13.68	13.96	13.82
16	2	15.68	15.96	15.82
18	2.5	17.62	17.96	17.79
20	2.5	19.62	19.96	19.79
22	2.5	21.62	21.96	21.79
24	3	23.58	23.95	23.77
27	3	26.58	26.95	26.77
30	3.5	29.52	29.95	29.73

For finding the turning diameters of the Metric Fine threads:
Look at the given table turning diameter difference of the same pitch dies on metric coarse thread. Apply the same difference on the Metric fine theread. Eg. For M20x1, look at M6x1 and the datas given on the table 5.79-5.97-5.88 are considred as 19,79 - 19,97 - 19,88.

Metrik ince diş paftaların tornalama ölçülerini tespit için:
Aynı hatvedeki metrik normal vidanın yukarıda belirtilen tornalama farkı kadar fark metrik incedeki çapa uygulanır. Örneğin. M 20x1 için hatvesi 1mm olan M 6 ye bakılır, 5,79 - 5,97 - 5,88 olan değerler 19,79 - 19,97 - 19,88 olarak tespit edilir.

CUTTING DATAS FOR CARBIDE MILLING CUTTERS
SERT METAL FREZELER KESME DEĞERLERİ



Cutting speed / *Kesme Hızı*

Steels below 20 HRC - *20 HRC altında çelikler: 75 - 150* m/minute *m/dakika*

Steels 20 - 40 HRC - *20 - 40 HRC çelikler için: 30 - 100* m/minute *m/dakika*

Steels 40 - 55 HRC - *40 - 55 HRCçelikler için: 25 - 50* m/minute *m/dakika*

RPM revolution
Devir / Dakika

$$= \frac{\text{Cutting speed (m/minute)} \quad \textit{Kesme hızı (m/dakika)} \times 1000}{\text{3.14 x tool diameter} \quad \textit{3.14 x takım çapı}}$$

Feed / *İlerleme*

tool diamter *takım çapı*	**Feed per teeth (mm per teeth)** *İlerleme (kesici ağız başına)*
Ø1 - 2 mm	0.010 - 0.012 mm
Ø3 - 4 mm	0.013 - 0.018 mm
Ø5 - 6 mm	0.018 - 0.025 mm
Ø8 - 10 mm	0.025 - 0.050 mm
Ø12 - 16 mm	0.050 - 0.080 mm
Ø18 - 20 mm	0.060 - 0.090 mm

SPEED & FEED RECOMMANDATIONS FOR CARBIDE REAMERS
SERT METAL RAYBALARDA ÖNERİLEN DEVİR & İLERLEME DEĞERLERİ

Workpiece material	FEED - KESME HIZI	FEED RATE ACCORDING TO REAMER DIAMETER mm / revolution RAYBA ÇAPLARINA GÖRE İLERLEME (devir başına ilerleme) mm/ devir							
İşlenen Malzeme Türü	m/min - m/dak.	Ø2	Ø3	Ø4	Ø5	Ø6	Ø8	Ø10	Ø12
STEEL - ÇELİK < 200 HB	14-24 m/min - m/dak.	0.035	0.060	0.070	0.080	0.100	0.120	0.150	0.180
STEEL - ÇELİK 200-300 HB	9-14 m/min - m/dak.	0.030	0.050	0.060	0.075	0.090	0.140	0.012	0.150
STEEL - ÇELİK 300-350 HB	6-9 m/min - m/dak.	0.020	0.030	0.040	0.060	0.080	0.090	0.100	0.130
STEEL - ÇELİK 38-45 HRC	5-7 m/min - m/dak.	0.015	0.020	0.030	0.050	0.060	0.070	0.080	0.100
STAINLESS STEEL PASLANMAZ ÇELİK	5-10 m/min - m/dak.	0.025	0.030	0.035	0.040	0.050	0.060	0.060	0.080
CAST IRON - DÖKÜM	8-25 m/min - m/dak.	0.035	0.060	0.080	0.095	0.110	0.140	0.150	0.180
CUPPER BRONZE BRASS BAKIR BRONZ PİRİNÇ	20-30 m/min - m/dak.	0.035	0.060	0.080	0.095	0.110	0.140	0.160	0.180
ALUMINIUM ALUMINYUM	20-50 m/min - m/dak.	0.035	0.060	0.100	0.110	0.130	0.160	0.180	0.200

STOCK REMOVAL RECOMMENDED IN THE HOLE TO BE REAMED
RAYBALANACAK DELİKTE BIRAKILMASI GEREKEN TALAŞ MİKTARI

Reamer Diameter Rayba çapı	Ø Stock removal recommended on diameter Çaptaki raybalama payı mm
1.0-3.0	0.07-0.15
3.1-6.0	0.15-0.20
6.1-10.0	0.20-0.30
10.1-13.0	0.25-0.35



CUTTING DATAS FOR HSS MILLING CUTTERS
HSS FREZELER İÇİN KESME DEĞERLERİ

CUTTING SPEED - *RPM / KESME HIZI - DEVİR*

Materila To Cut *Malzeme*	**Cutting speed m/min.** *Kesme Hızı m/dakika*
Below 180HB soft steels *180 HB altı yumuşak çelikler*	32-40
180-250 HB carbon and low alloyed steel *180-250 HB karbonlu çelikler ve az alaşımlı çelikler*	20-25
25-33 HRC alloyed steels *25-33 HRC alaşımlı çelikler*	12-20
33-42 HRC alloyed steels, hardened steels *33-42 HRC alaşımlı çelikler, setleşmiş çelikler*	10-12
Stainless steels *Paslanmaz çelikler*	12-20
Cast iron GG10-GG40 *Dökümler GG10 - GG40*	25-32
Cas iron GGG40-GGG70 200-300 HB *Dökümler GGG40-GGG70 200-300 HB*	20-25
Titanium - Nickel alloys *Titanyum ve nikel alaşımları*	8-25
Cupper *Bakır*	70-80
Bronze *Bronz*	35-45
Brass *Pirinç*	40-50
Alloyed Bronze *Alaşımı Bronz*	12-16
non- alloyed Aluminium *Aluminyum alaşımsız*	80-100
Aluminium Si < 0.5 % *Aluminyum Si < 0.5 %*	70-80
Aluminium Si 0.5 % - 10 % *Aluminyum Si 0.5 % - 10 %*	50-60
Aluminium Si > 10 % *Aluminyum Si > 10 %*	40-50
Plastic *Plastik*	50-80



RPM - *Devir/dakika*

1- Select the cutting speed m/minute from the table on the left according to workpiece
1- Soldaki tablodan malzemenize göre m/dakika cinsinden kesme hızınızı bulunuz.

2- Place the cutting speed on the formula below to find the RPM
2- Alttaki formülde yerine koyarak devir / dakika cinsinden devirinizi bulunuz

$$\text{RPM revolution / Devir / Dakika} = \frac{\text{Cutting speed (m/minute) / Kesme hızı (m/dakika) x 1000}}{\text{3.14 x tool diameter / 3.14 x takım çapı}}$$

Feed / *İlerleme*

3- On the feed table below select your "letter" acording to your operation and stock removal
3- Aşağıdaki ilerleme tablosundaki işlem şekli ve talaş miktarınıza göre belirtilen harfi bulunuz

4- On the bottom table across your "letter" you will find the feed rate acording to your speed that you already found
4- En alttaki tabloda bu harfin bulunduğu satırda kesme hızınıza göre ilerleme hızınızı bulacaksınız.

FEED / *İLERLEME*

STOCK REMOVAL *TALAŞ MİKTARI*	**PROFILING** *PROFİL İŞLEME*												**SLOTTING** *KANAL AÇMA*				**"T" SIDE MILLING** *"T" KANAL YARIK*		**SURFACE MILLING** *ALIN TARAMA*	
Radial cutting depth *Dairesel kesme derinliği*	**0,125xD**			**0,25xD**			**0,375xD**			**0,75XD**			**1.0XD**				**1.0 XD**	**0,25 XD**	**0,75XD**	
Axial cutting depth *Eksenel kesme derinliği*	1,25 xD	1,5 xD	2.0 xD	1,25 xD	1,5 xD	2.0 xD	1,25 xD	1,5 xD	2.0 xD	1,25 xD	1,5 xD	2 xD	0,5 XD	1.0 XD	1,5 XD	2.0 XD	0,5 XD	0,5 XD	3-5 mm	6-10 mm
2 FLUTED END MILL *2 AĞIZLI FREZE DIN327*																				
MULTI FLUTE END MILL *ÇOK AĞIZLI FREZE DIN 844*	İ	İ	D	Ş	T	A	L	A	R											
ROUGHING END MILL *KABATALAŞ FREZE DIN 844*							N	N	N	N	K	Ü	N	N	Ü	N				
T SLOT CUTTER *T KANAL FREZE DIN 851*																	N			
WOODRUF CUTTER *T YARIK FREZE DIN 850*																		G		
DOVETAIL CUTTER *KIRLANGIÇ FREZE DIN 1833*																		R		
SHELL MILL CUTTER *VALS ALIN FREZE DIN 1880*																			N	K
SIDE & FACE CUTTER *DAIRESEL KANAL FREZE DIN 885*																	N			

CUTTING SPEED m/minute *KESME HIZI m/Dakika*	**6**	**8**	**10**	**12**	**16**	**20**	**25**	**32**	**40**	**50**	**60**	**80**	**100**	**125**
FEED mm/minute *İLERLEME mm/dakika*														
G	10	12	16	20	25	32	40	50	60	80	100	120	160	200
Ü	11	14	18	22	28	35	45	55	70	90	110	140	180	220
R	12	16	20	25	32	40	50	60	80	100	120	160	200	250
K	14	18	22	28	35	45	55	70	90	110	140	180	220	280
A	16	20	25	32	40	50	60	80	100	120	160	200	250	320
N	18	22	28	35	45	55	70	90	110	140	180	220	280	350
L	20	25	32	40	50	60	80	100	120	160	200	250	320	400
T	22	28	35	45	55	70	90	110	140	180	220	280	350	450
D	25	32	40	50	60	80	100	120	160	200	250	320	400	500
Ş	28	35	45	55	70	90	110	140	180	220	280	350	450	560
İ	35	45	55	70	90	110	140	180	220	280	350	450	560	700

HOLE DIAMETER TOLERANCES
DELİK ÖLÇÜLERİ TOLERANS CETVELİ DIN 7161

	TOLERANCES - *TOLERANSLAR*											
From Ømm to Ømm *Ømm den Ømm ye kadar*	**E5**	**E6**	**E7**	**E8**	**E9**	**F5**	**F6**	**F7**	**F8**	**F9**	**G6**	**G7**
Ø 1 - Ø 3	+18 +14	+20 +14	+24 +14	+28 +14	+39 +14	+10 +6	+12 +6	+16 +6	+20 +6	+31 +6	+8 +2	+12 +2
Ø 3 - Ø 6	+25 +20	+28 +20	+32 +20	+38 +20	+50 +20	+15 +10	+18 +10	+22 +10	+28 +10	+40 +10	+12 +4	16 +4
Ø 6 - Ø 10	+31 +25	+34 +25	+40 +25	+47 +25	+61 +25	+19 +13	+22 +13	+28 +13	+35 +13	+49 +13	+14 +5	+20 +5
Ø 10 - Ø 18	+40 +32	+43 +32	+50 +32	+59 +32	+75 +32	+24 +16	+27 +16	+34 +16	+43 +16	+59 +16	+17 +6	+24 +6
Ø 18 - Ø 30	+49 +40	+53 +40	+61 +40	+73 +40	+92 +40	+29 +20	+33 +20	+41 +20	+53 +20	+72 +20	+20 +7	+28 +7
Ø 30 - Ø 50	+61 +50	+66 +50	+75 +50	+89 +50	+112 +50	+36 +25	+41 +25	+50 +25	+64 +25	+87 +25	+25 +9	+34 +9
Ø 50 - Ø 80	+73 +60	+79 +60	+90 +60	+106 +60	+134 +60	+43 +30	+49 +30	+60 +30	+76 +30	+104 +30	+29 +10	+40 +10

	TOLERANCES - TOLERANSLAR											
From Ømm to Ømm **Ømm den Ømm ye kadar**	**H5**	**H6**	**H7**	**H8**	**H9**	**H10**	**H11**	**H12**	**J7**	**J8**	**JS9**	**K6**
Ø 1 - Ø 3	+4 0	+6 0	+10 0	+14 0	+25 0	+40 0	+60 0	+100 0	+4 -2	+6 -8	+12 -12	0 -6
Ø 3 - Ø 6	+5 0	+8 0	+12 0	+18 0	+30 0	+48 0	+75 0	+120 0	+6 -6	+10 -8	+15 -15	+2 -6
Ø 6 - Ø 10	+6 0	+9 0	+15 0	+22 0	+36 0	+58 0	+90 0	+150 0	+8 -7	+12 -10	+18 -18	+2 -7
Ø 10 - Ø 18	+8 0	+11 0	+18 0	+27 0	+43 0	+70 0	+110 0	+180 0	+10 -8	+15 -12	+21 -21	+2 -9
Ø 18 - Ø 30	+9 0	+13 0	+21 0	+33 0	+52 0	+84 0	+130 0	+210 0	+12 -9	+20 -13	+26 -26	+2 -11
Ø 30 - Ø 50	+11 0	+16 0	+25 0	+39 0	+62 0	+100 0	+160 0	+250 0	+14 -11	+24 -15	+31 -31	+3 -13
Ø 50 - Ø 80	+13 0	+19 0	+30 0	+46 0	+74 0	+120 0	+190 0	+300 0	+18 -12	+28 -18	+37 -37	+4 -15

	TOLERANCES - TOLERANSLAR											
From Ømm to Ømm **Ømm den Ømm ye kadar**	**K7**	**K8**	**M6**	**M7**	**M8**	**N7**	**N8**	**N9**	**R5**	**R6**	**R7**	**R8**
Ø 1 - Ø 3	**0 -10**	**0 -14**	**-2 -8**	**-2 -12**		**-4 -14**	**-4 -18**	**-4 -29**	**-10 -14**	**-10 -16**	**-10 -20**	**-10 -24**
Ø 3 - Ø 6	**+3 -9**	**+5 -13**	**-1 -9**	**0 -12**	**+2 -16**	**-4 -16**	**-2 -20**	**0 -30**	**-14 -19**	**-12 -20**	**-11 -23**	**-15 -33**
Ø 6 - Ø 10	**+5 -10**	**+6 -16**	**-3 -12**	**0 -15**	**+1 -21**	**-4 -19**	**-3 -25**	**0 -36**	**-17 -23**	**-16 -25**	**-13 -28**	**-19 -41**
Ø 10 - Ø 18	**+6 -12**	**+8 -19**	**-4 -15**	**0 -18**	**+2 -25**	**-5 -23**	**-3 -30**	**0 -43**	**-20 -28**	**-20 -31**	**-16 -34**	**-23 -50**
Ø 18 - Ø 30	**+6 -15**	**+10 -23**	**-4 -17**	**0 -21**	**+4 -29**	**-7 -28**	**-3 -36**	**0 -52**	**-25 -34**	**-24 -37**	**-20 -41**	**-28 -61**
Ø 30 - Ø 50	**+7 -18**	**+12 -27**	**-4 -20**	**0 -25**	**+5 -34**	**-8 -33**	**-3 -42**	**0 -62**	**-30 -41**	**-29 -45**	**-25 -50**	**-34 -73**
Ø 50 - Ø 80	**+9 -21**	**+14 -32**	**-5 -24**	**0 -30**	**+5 -41**	**-9 -39**	**-4 -50**	**0 -74**	**-39 -49**	**-35 -54**	**-30 -60**	**-41 -87**

HARDNESS CONVERTION CHART
MALZEME SERTLİĞİ DÖNÜŞÜM CETVELİ

HRC	HB30	Rm (N/mm2)	HV10
	71	240	75
	76	255	80
	81	270	85
	86	285	90
	90	305	95
	95	320	100
	100	335	105
	105	350	110
	109	370	115
	114	385	120
	119	400	125
	124	415	130
	128	430	135
	133	450	140
	138	465	145
	143	480	150
	147	495	155
	152	510	160
	157	530	165
	162	545	170
	166	560	175
	171	575	180
	176	595	185
	181	610	190
	185	625	195
	190	640	200
	195	660	205
	199	675	210
	204	690	215
	209	705	220
	214	720	225
	219	740	230
	223	755	235
	228	770	240
	233	785	245
22	238	800	250
23	242	820	255
24	247	835	260
25	255	860	268
26	258	870	272
27	266	900	280

HRC	HB30	Rm (N/mm2)	HV10
28	273	920	287
29	278	940	293
30	287	970	302
31	295	995	310
32	301	1020	317
33	311	1050	327
34	319	1080	336
35	328	1110	345
36	337	1140	355
37	346	1170	364
38	354	1200	373
39	363	1230	382
40	372	1260	392
41	383	1300	403
42	393	1330	413
43	402	1360	423
44	413	1400	434
45	424	1440	446
46	435	1480	458
47	449	1530	473
48	460	1570	484
49	472	1620	497
50	488	1680	514
51	501	1730	527
52	517	1790	544
53	532	1845	560
54	549	1910	578
55	567	1980	596
56	584	2050	615
57	607	2140	639
58	622	2180	655
59			675
60			698
61			720
62			745
63			773
64			800
65			829
66			864
67			900
68			940



NOTES

gürkan

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