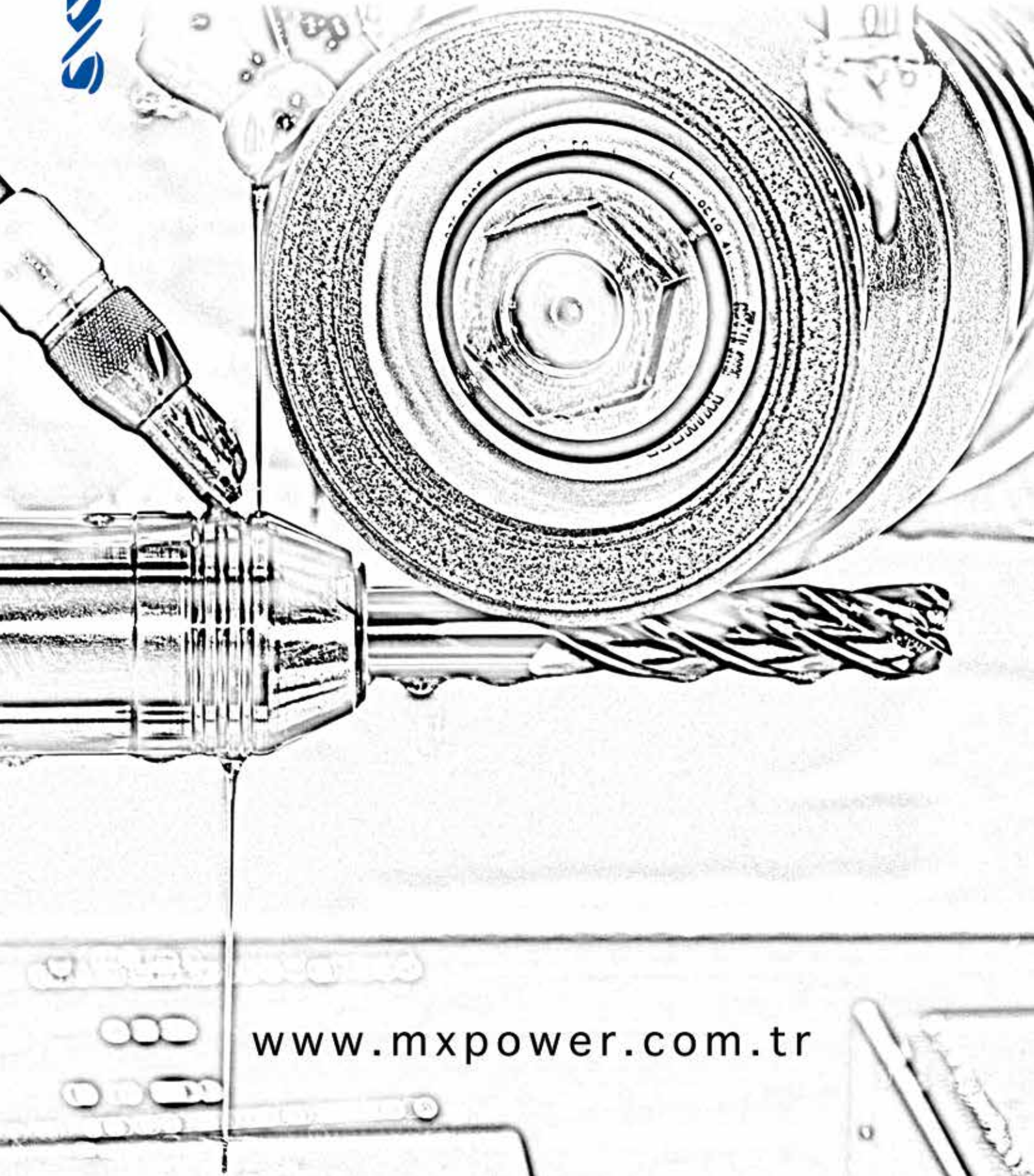


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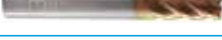
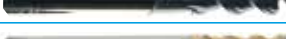
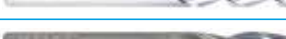
16 Seneyi Aşkın Bir Süredir Kesici Takım Sektöründe Sadece Satış Odaklı Faaliyet Gösteren Firmamız

2015 Yılından İtibaren Karbür Freze, Matkap, Rayba ve özel Takım Üretimine Başlamıştır. Kaydettiğimiz Bu Büyüme Ekseninde Daha Kaliteli Kesici Takım Üretebilmek İçin Kendi Alanında En İyi Alman makinalarıyla Üretim Hattımızı Kurduk.

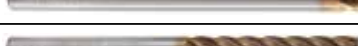
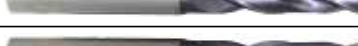
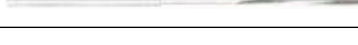
Yıllık 150.000 Adet Karbür Takım Yapabilme Kapasitesine Ulaştık. Her Geçen gün Makine Parkurumuzu Geliştirerek ve Yenileyerek Müşterilerimize Daha İyi Hizmet Vermeyi İlke Edindik.



İÇİNDEKİLER

ÜRÜN KODU	AÇIKLAMA		HRC	SAYFA
MXDS	Standart Düz Kaplamalı Freze		52	10
MXDU-L-X	Uzun Düz Kaplamalı Freze		52	11
MXDUX-L	Uzun Helis Düz Kaplamalı Freze		52	11
MXDXL	Extra Uzun Düz Kaplamalı Freze		52	11
MXKS	Standart Küre Kaplamalı Freze		52	12
MXKU-L-X	Uzun Küre Kaplamalı Freze		52	13
MXKXL	Extra Uzun Küre Kaplamalı Freze		52	13
MXKRS	Standart Köşe Radius Kaplamalı Freze		52	14
MXKRU-L-X	Uzun Köşe Radius Kaplamalı Freze		52	15
MXKRXL	Extra Uzun Köşe Radius Kaplamalı Freze		52	16
MXDXLF-L	Çok Ağızlı Uzun Düz Kaplamalı Freze		52	17
MXFD	Dalma Boylu Düz Kaplamalı Freze		52	18-19
MXFDK	Dalma Boylu Küre Kaplamalı Freze		52	20-21
MXFDR	Dalma Boylu Köşe Radius Kaplamalı Freze		52	22-23
MXUT	Chatter Free Kaplamalı Freze		52	24
MXKB	Kabataş Kaplamalı Freze		52	25
MXPS	Değişken Açılı (İNOX) Kaplamalı Freze		52	25
MXTN	Finiş Kaplamalı Freze		52	26
MXPR	High Feed (Hızlı Kesim) Köşe Radius Kaplamalı Freze		52	27
MXAL	Standart Alüminyum Kaplamasız Freze		52	28
MXALU	Uzun Alüminyum Kaplamasız Freze		52	28-29
MXLT	Yüksek Performans Alüminyum Kaplamasız Freze		52	29
MXPF	Değişken Kanallı Yüksek Performans Alüminyum Kaplamalı Freze		52	30
MX3616	Konik Düz Kaplamalı Freze 1-2-3-5°		52	32
MX3716	Konik Küre Kaplamalı Freze 1-2-3-5°		52	33
MXDSH	Standart Düz Kaplamalı Freze		70	36
MXDU-L-H	Uzun Düz Kaplamalı Freze		70	37
MXDUXH	Uzun Helis Düz Kaplamalı Freze		70	37
MXDXLH	Extra Uzun Düz Kaplamalı Freze		70	37
MXKSH	Standart Küre Kaplamalı Freze		70	38

İÇİNDEKİLER

ÜRÜN KODU	AÇIKLAMA		HRC	SAYFA
MXKUH-L	Uzun Küre Kaplamalı Freze		70	39
MXKXLH	Extra Uzun Küre Kaplamalı Freze		70	39
MXKRSH	Standart Köşe Radius Kaplamalı Freze		70	40
MXKRUH-L	Uzun Köşe Radius Kaplamalı Freze		70	41
MXKRXLH	Ekstra Uzun Köşe Radius Kaplamalı Freze		70	42
MXDXLFH-L	Çok Ağızlı Uzun Düz Kaplamalı Freze		70	43
MXFDH	Dalma Boylu Düz Kaplamalı Freze		70	44-45
MXFDKH	Dalma Boylu Küre Kaplamalı Freze		70	46-47
MXFDRH	Dalma Boylu Köşe Radius Kaplamalı Freze		70	48-49
MXPRH	High Feed (Hızlı Kesim) Köşe Radius Kaplamalı Freze		70	50
MX3016	N Tipi Karbür Kaplamasız Matkap 118° DIN 1897			52-53
MX3017	N Tipi Karbür Kaplamasız Matkap 118° DIN 338			54-55
MX3645	Yüksek Performans Karbür Matkap Kaplamalı 140° 3D			56-58
MX3646	Yüksek Performans Karbür Matkap Kaplamalı 140° 5D			59-61
MX3687	Yüksek Performans Sıvı Kanallı Karbür Matkap Kaplamalı 140° 3D			62-64
MX3688	Yüksek Performans Sıvı Kanallı Karbür Matkap Kaplamalı 140° 5D			65-67
MX1021	Karbür Punta Matkabı FORM-A			68
MX190-191	NC Karbür Punta Matkabı 90° / 120°			70
MX460-490-4120	Havşa Frezesi 60° / 90° / 120°			71
MX6507	Çift Taraflı Karbür Havşa Kaplamalı 90°			72
MX5210	NC Karbür Rayba Kaplamasız			73-75



STANDART DÜZ FREZE



STANDART KÜRE FREZE



STANDART KÖŞE RADIUS FREZE



ÇOK AĞIZLI DÜZ FREZE



DALMA BOYLU DÜZ FREZE



DALMA BOYLU KÜRE FREZE



DALMA BOYLU KÖŞE RADIUS FREZE



CHATTER FREZE



KABATALAŞ FREZE



FİNİŞ FREZE



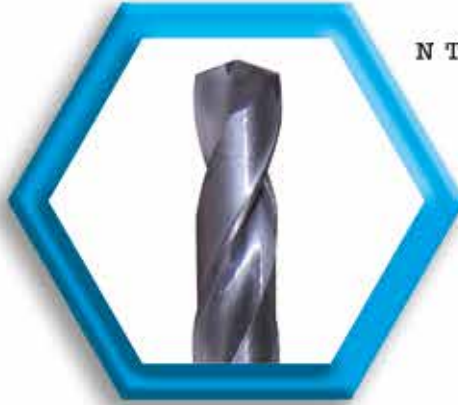
ALÜMİNYUM FREZE



KONİK FREZE



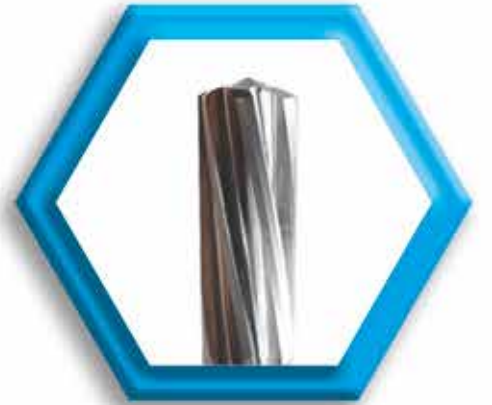
N TİPİ KARBÜR MATKAP (kaplamasız)



KARBÜR MATKAP



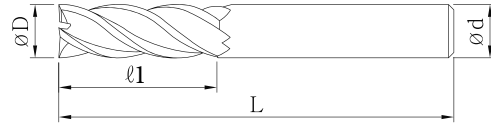
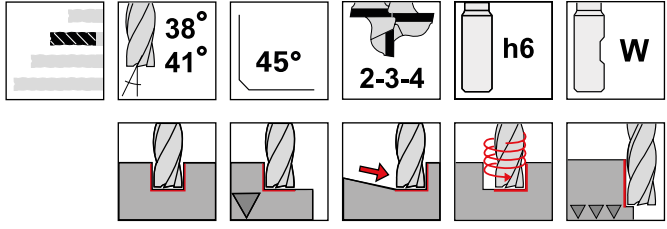
HAVŞA



MAKİNA RAYBASI

STANDART DÜZ KAPLAMALI FREZE 52 HRC Z=4

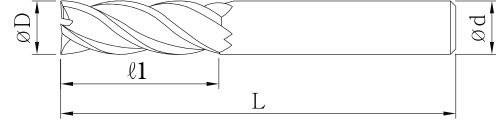
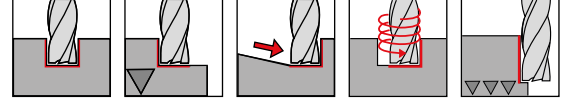
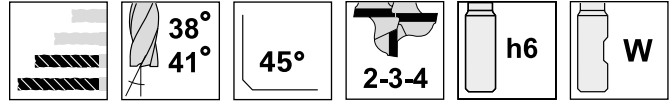
Karbür standart düz freze 52 HRC
2344-2312-2738-1040-1050
ve benzeri malzemeler için uygundur



ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXDS 2003	0.3	0.5	50	4	2	
MXDS 2004	0.4	0.5	50	4	2	
MXDS 2005	0.5	0.5	50	4	2	
MXDS 2006	0.6	0.6	50	4	2	
MXDS 2007	0.7	0.6	50	4	2	
MXDS 2008	0.8	0.7	50	4	2	
MXDS 2009	0.9	0.8	50	4	2	
MXDS 4010	1.0	3	50	4	4	
MXDS 4015	1.5	4	50	4	4	
MXDS 4020	2.0	6	50	4	4	
MXDS 40206	2.0	8	50	6	4	
MXDS 4025	2.5	6	50	4	4	
MXDS 40303	3.0	6	50	3	4	
MXDS 4030	3.0	8	50	4	4	
MXDS 40306	3.0	9	50	6	4	
MXDS 4035	3.5	9	50	4	4	
MXDS 4040	4.0	11	50	4	4	
MXDS 40406	4.0	11	50	6	4	
MXDS 40505	5.0	13	50	5	4	
MXDS 4050	5.0	13	50	6	4	
MXDS 4060	6.0	13	50	6	4	
MXDS 4070	7.0	19	63	7	4	
MXDS 4080	8.0	19	63	8	4	
MXDS 4090	9.0	22	72	9	4	
MXDS 4100	10	22	72	10	4	
MXDS 4110	11	25	75	11	4	
MXDS 4120	12	26	80	12	4	
MXDS 4130	13	26	80	13	4	
MXDS 4140	14	26	83	14	4	
MXDS 4150	15	32	92	15	4	
MXDS 4160	16	32	92	16	4	
MXDS 4180	18	32	92	18	4	
MXDS 4200	20	40	104	20	4	
MXDS 4220	22	40	104	22	4	
MXDS 4240	24	40	110	24	4	
MXDS 4250	25	40	110	25	4	

UZUN DÜZ KAPLAMALI FREZE 52 HRC Z=4

Karbür uzun düz freze 52 HRC
2344-2312-2738-1040-1050
ve benzeri malzemeler için uygundur



ÜRÜN KODU	ÇAP D	KESME BOYU L1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXDU 40303	3	10	75	3	4	
MXDU 4040	4	15	75	4	4	
MXDUL 4040	4	20	100	4	4	
MXDU 4050	5	15	75	5	4	
MXDUL 4050	5	20	100	5	4	
MXDU 4060	6	15	75	6	4	
MXDUL 4060	6	20	100	6	4	
MXDX 4060	6	20	120	6	4	
MXDU 4080	8	19	75	8	4	
MXDUL 4080	8	22	100	8	4	
MXDX 4080	8	25	120	8	4	
MXDU 4100	10	22	100	10	4	
MXDX 4100	10	30	120	10	4	
MXDU 4120	12	26	100	12	4	
MXDX 4120	12	35	120	12	4	
MXDU 4140	14	40	100	14	4	
MXDU 4160	16	40	100	16	4	

UZUN HELİS DÜZ KAPLAMALI FREZE 52 HRC Z=4

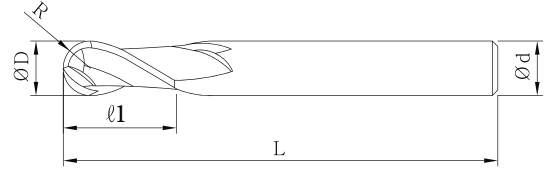
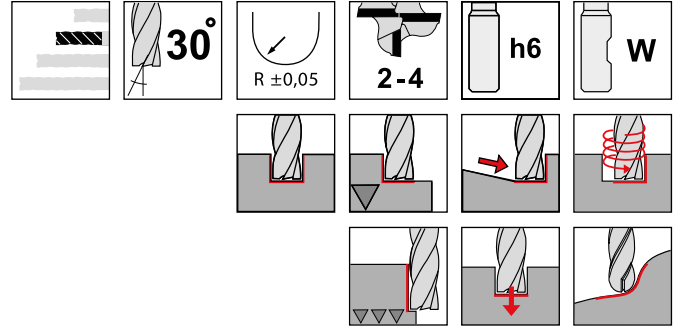
ÜRÜN KODU	ÇAP D	KESME BOYU L1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXDUX 4030	3	20	75	3	4	
MXDUX 4040	4	30	75	4	4	
MXDUXL 4040	4	30	100	4	4	
MXDUX 4060	6	40	100	6	4	
MXDUX 4080	8	45	100	8	4	
MXDUX 4100	10	45	100	10	4	
MXDUX 4120	12	45	100	12	4	

EXTRA UZUN DÜZ KAPLAMALI FREZE 52 HRC Z=4

ÜRÜN KODU	ÇAP D	KESME BOYU L1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXDXL 4060	6	40	150	6	4	
MXDXL 4080	8	45	150	8	4	
MXDXL 4100	10	45	150	10	4	
MXDXL 4120	12	50	150	12	4	
MXDXL 4140	14	50	150	14	4	
MXDXL 4160	16	50	150	16	4	
MXDXL 4180	18	50	150	18	4	
MXDXL 4200	20	60	150	20	4	
MXDXL 4250	25	60	150	25	4	

STANDART KÜRE KAPLAMALI FREZE 52 HRC Z=2

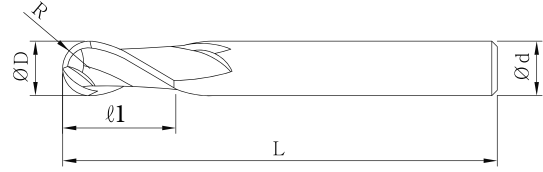
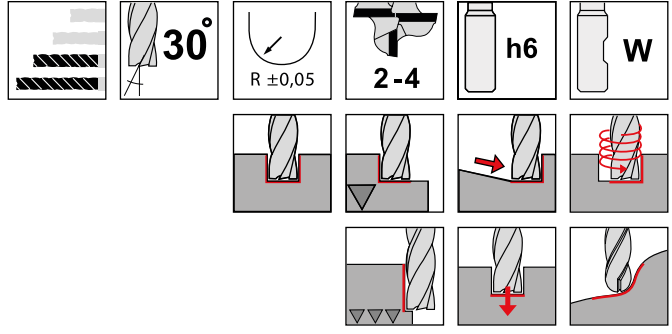
Karbür standart küre freze 52 HRC
2344-2312-2738-1040-1050
ve benzeri malzemeler için uygundur



ÜRÜN KODU	ÇAP D	KESME BOYU l1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	RADİUS R	SİPARİŞ NO
MXKS 2003	0.3	0.5	50	4	2	0.15	
MXKS 2004	0.4	0.5	50	4	2	0.20	
MXKS 2005	0.5	0.5	50	4	2	0.25	
MXKS 2006	0.6	0.6	50	4	2	0.30	
MXKS 2007	0.7	0.6	50	4	2	0.35	
MXKS 2008	0.8	0.7	50	4	2	0.40	
MXKS 2009	0.9	0.8	50	4	2	0.45	
MXKS 2010	1.0	3	50	4	2	0.50	
MXKS 2015	1.5	4	50	4	2	0.75	
MXKS 2020	2.0	4	50	4	2	1.00	
MXKS 20206	2.0	10	50	6	2	1.25	
MXKS 2025	2.5	4	50	4	2	1.25	
MXKS 20303	3.0	6	50	3	2	1.50	
MXKS 2030	3.0	6	50	4	2	1.50	
MXKS 20306	3.0	10	50	6	2	1.50	
MXKS 2040	4.0	8	50	4	2	2.00	
MXKS 20406	4.0	10	50	6	2	2.00	
MXKS 2050	5.0	10	50	6	2	2.50	
MXKS 20505	5.0	10	50	5	2	2.50	
MXKS 2060	6.0	12	50	6	2	3.00	
MXKS 4060	6.0	12	50	6	4	3.00	
MXKS 2070	7.0	15	63	7	2	3.50	
MXKS 2080	8.0	16	63	8	2	4.00	
MXKS 4080	8.0	16	63	8	4	4.00	
MXKS 2090	9.0	20	63	9	2	4.50	
MXKS 2100	10	20	72	10	2	5.00	
MXKS 4100	10	24	72	10	4	5.00	
MXKS 2110	11	24	80	11	2	5.50	
MXKS 2120	12	26	80	12	2	6.00	
MXKS 4120	12	26	80	12	4	6.00	
MXKS 2130	13	26	80	13	2	6.50	
MXKS 2140	14	26	83	14	2	7.00	
MXKS 2150	15	32	92	15	2	7.50	
MXKS 2160	16	32	92	16	2	8.00	
MXKS 2180	18	32	92	18	2	9.00	
MXKS 2200	20	40	104	20	2	10.00	
MXKS 2220	22	40	104	22	2	11.00	
MXKS 2400	24	40	110	24	2	12.00	
MXKS 2500	25	40	110	25	2	12.50	

UZUN KÜRE KAPLAMALI FREZE 52 HRC Z=2

Karbür uzun küre freze 52 HRC
2344-2312-2738-1040-1050
ve benzeri malzemeler için uygundur



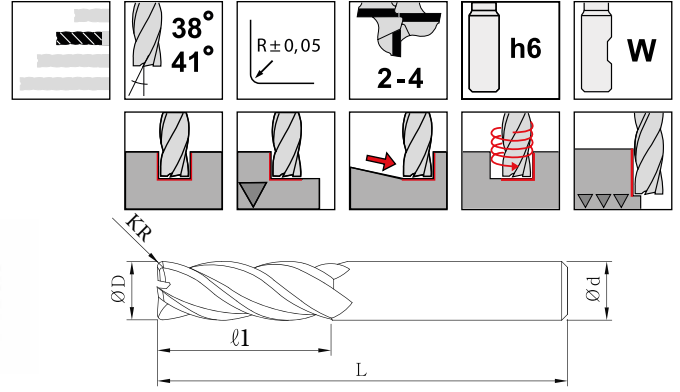
ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	RADİUS R	SİPARİŞ NO
MXKU 2030	3	6	75	3	2	1.50	
MXKU 2040	4	8	75	4	2	2.00	
MXXKUL 2040	4	10	100	4	2	2.00	
MXKU 2050	5	12	75	5	2	2.50	
MXXKUL 2050	5	12	100	5	2	2.50	
MXKU 2060	6	12	75	6	2	3.00	
MXXKUL 2060	6	15	100	6	2	3.00	
MXXKX 2060	6	15	120	6	2	3.00	
MXKU 2080	8	16	75	8	2	4.00	
MXXKUL 2080	8	16	100	8	2	4.00	
MXXKX 2080	8	20	120	8	2	4.00	
MXKU 2100	10	20	100	10	2	5.00	
MXXKX 2100	10	20	120	10	2	5.00	
MXXKUL 2120	12	25	100	12	2	6.00	
MXXKX 2120	12	25	120	12	2	6.00	

EXTRA UZUN KÜRE KAPLAMALI FREZE 52 HRC Z=2

ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	RADİUS R	SİPARİŞ NO
MXXKXL 4060	6	30	150	6	2-4	3.00	
MXXKXL 4080	8	35	150	8	2-4	4.00	
MXXKXL 4100	10	40	150	10	2-4	5.00	
MXXKXL 4120	12	40	150	12	2-4	6.00	
MXXKXL 4140	14	50	150	14	2-4	7.00	
MXXKXL 4160	16	50	150	16	2-4	8.00	
MXXKXL 4180	18	50	150	18	2-4	9.00	
MXXKXL 4200	20	50	150	20	2-4	10.00	
MXXKXL 4250	25	60	150	25	2-4	12.50	

STANDART KÖŞE RADIUS KAPLAMALI FREZE 52 HRC Z=4

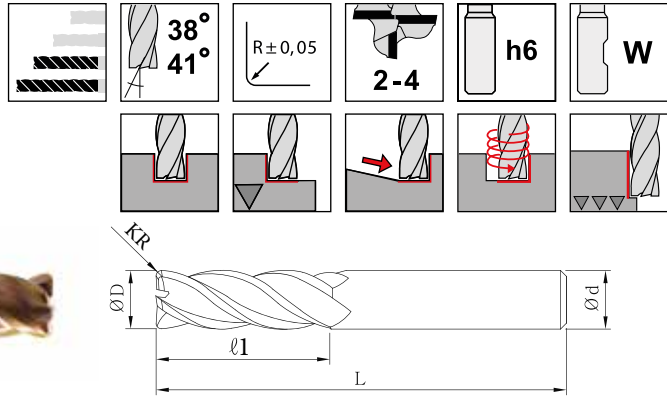
Karbür standart köşe radius 52 HRC
2344-2312-2738-1040-1050
ve benzeri malzemeler için uygundur



ÜRÜN KODU	ÇAP D	KESME BOYU ℓ_1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	KÖŞE RADIUS KR	SİPARİŞ NO
MXKRS 40202	2	6	50	4	4	R0.2	
MXKRS 402026	2	8	50	6	4	R0.2	
MXKRS 40205	2	6	50	4	4	R0.5	
MXKRS 402056	2	8	50	6	4	R0.5	
MXKRS 40252	2.5	6	50	4	4	R0.2	
MXKRS 40255	2.5	6	50	4	4	R0.5	
MXKRS 403023	3	8	50	3	4	R0.2	
MXKRS 40302	3	8	50	4	4	R0.2	
MXKRS 403026	3	9	50	6	4	R0.2	
MXKRS 403053	3	8	50	3	4	R0.5	
MXKRS 40305	3	8	50	4	4	R0.5	
MXKRS 403056	3	9	50	6	4	R0.5	
MXKRS 403103	3	8	50	3	4	R1.0	
MXKRS 40310	3	8	50	4	4	R1.0	
MXKRS 403106	3	9	50	6	4	R1.0	
MXKRS 40402	4	11	50	4	4	R0.2	
MXKRS 404026	4	11	50	6	4	R0.2	
MXKRS 40405	4	11	50	4	4	R0.5	
MXKRS 404056	4	11	50	6	4	R0.5	
MXKRS 40410	4	11	50	4	4	R1.0	
MXKRS 404106	4	11	50	6	4	R1.0	
MXKRS 40502	5	13	50	5	4	R0.2	
MXKRS 405026	5	13	50	6	4	R0.2	
MXKRS 40505	5	13	50	5	4	R0.5	
MXKRS 405056	5	13	50	6	4	R0.5	
MXKRS 40510	5	13	50	5	4	R1.0	
MXKRS 405106	5	13	50	6	4	R1.0	
MXKRS 40602	6	15	50	6	4	R0.2	
MXKRS 40605	6	15	50	6	4	R0.5	
MXKRS 40610	6	15	50	6	4	R1.0	
MXKRS 40615	6	15	50	6	4	R1.5	
MXKRS 40620	6	15	50	6	4	R2.0	
MXKRS 40802	8	19	63	8	4	R0.2	
MXKRS 40805	8	19	63	8	4	R0.5	
MXKRS 40810	8	19	63	8	4	R1.0	
MXKRS 40815	8	19	63	8	4	R1.5	
MXKRS 40820	8	19	63	8	4	R2.0	
MXKRS 41002	10	22	75	10	4	R0.2	
MXKRS 41005	10	22	75	10	4	R0.5	
MXKRS 41010	10	22	75	10	4	R1.0	
MXKRS 41015	10	22	75	10	4	R1.5	
MXKRS 41020	10	22	75	10	4	R2.0	
MXKRS 41202	12	25	82	12	4	R0.2	
MXKRS 41205	12	25	82	12	4	R0.5	
MXKRS 41210	12	25	82	12	4	R1.0	
MXKRS 41215	12	25	82	12	4	R1.5	
MXKRS 41220	12	25	82	12	4	R2.0	
MXKRS 41405	14	26	83	14	4	R0.5	
MXKRS 41410	14	26	83	14	4	R1.0	
MXKRS 41605	16	32	92	16	4	R0.5	
MXKRS 41610	16	32	92	16	4	R1.0	

UZUN KÖŞE RADIUS KAPLAMALI FREZE 52 HRC Z=4

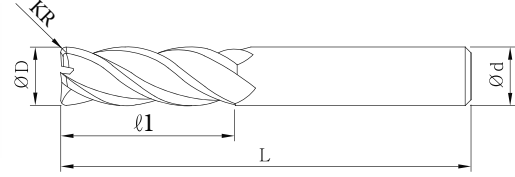
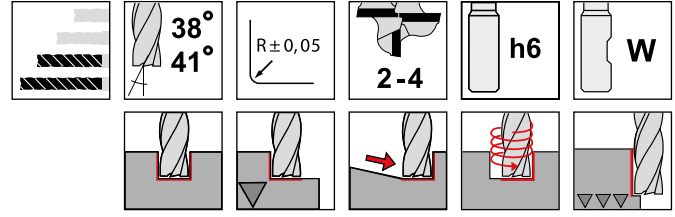
Karbür uzun köşe radius freze 52 HRC
2344-2312-2738-1040-1050
ve benzeri malzemeler için uygundur



ÜRÜN KODU	ÇAP D	KESME BOYU l1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	KÖŞE RADIUS KR	SİPARİŞ NO
MXKRU 40302	3	8	75	3	4	R0.2	
MXKRU 40305	3	8	75	3	4	R0.5	
MXKRU 40310	3	8	75	3	4	R1.0	
MXKRU 40402	4	8	75	4	4	R0.2	
MXKRU 40405	4	8	75	4	4	R0.5	
MXKRU 40410	4	8	75	4	4	R1.0	
MXKRUL 40402	4	11	100	4	4	R0.2	
MXKRUL 40405	4	11	100	4	4	R0.5	
MXKRUL 40410	4	11	100	4	4	R1.0	
MXKRU 40502	5	15	75	5	4	R0.2	
MXKRU 40505	5	15	75	5	4	R0.5	
MXKRU 40510	5	15	75	5	4	R1.0	
MXKRUL 40505	5	15	100	5	4	R0.5	
MXKRUL 40510	5	15	100	5	4	R1.0	
MXKRU 40602	6	15	75	6	4	R0.2	
MXKRU 40605	6	15	75	6	4	R0.5	
MXKRU 40610	6	15	75	6	4	R1.0	
MXKRU 40615	6	15	75	6	4	R1.5	
MXKRUL 40602	6	15	100	6	4	R0.2	
MXKRUL 40605	6	15	100	6	4	R0.5	
MXKRUL 40610	6	15	100	6	4	R1.0	
MXKRUL 40615	6	15	100	6	4	R1.5	
MXKRX 40605	6	20	120	6	4	R0.5	
MXKRX 40610	6	20	120	6	4	R1.0	
MXKRU 40802	8	20	75	8	4	R0.2	
MXKRU 40805	8	20	75	8	4	R0.5	
MXKRU 40810	8	20	75	8	4	R1.0	
MXKRU 40815	8	20	75	8	4	R1.5	
MXKRU 40820	8	20	75	8	4	R2.0	
MXKRUL 40802	8	20	100	8	4	R0.2	
MXKRUL 40805	8	20	100	8	4	R0.5	
MXKRUL 40810	8	20	100	8	4	R1.0	
MXKRUL 40815	8	20	100	8	4	R1.5	
MXKRUL 40820	8	20	100	8	4	R2.0	
MXKRX 40805	8	20	120	8	4	R0.5	
MXKRX 40810	8	20	120	8	4	R1.0	
MXKRUL 41002	10	20	100	10	4	R0.2	
MXKRUL 41005	10	20	100	10	4	R0.5	
MXKRUL 41010	10	20	100	10	4	R1.0	
MXKRUL 41015	10	20	100	10	4	R1.5	
MXKRUL 41020	10	20	100	10	4	R2.0	
MXKRX 41005	10	25	120	10	4	R0.5	
MXKRX 41010	10	25	120	10	4	R1.0	
MXKRUL 41202	12	25	100	12	4	R0.2	
MXKRUL 41205	12	25	100	12	4	R0.5	
MXKRUL 41210	12	25	100	12	4	R1.0	
MXKRUL 41215	12	25	100	12	4	R1.5	
MXKRUL 41220	12	25	100	12	4	R2.0	
MXKRX 41205	12	25	120	12	4	R0.5	
MXKRX 41210	12	25	120	12	4	R1.0	

EXTRA UZUN KÖŞE RADIUS KAPLAMALI FREZE 52 HRC Z=4

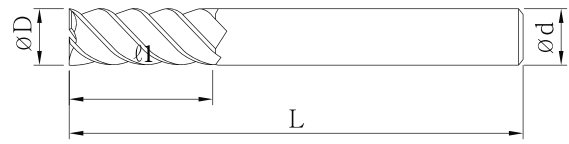
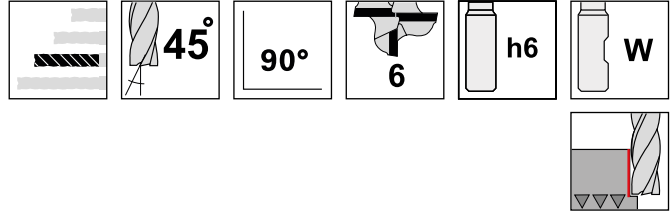
Karbür extra uzun köşe radius freze 52 HRC
2344-2312-2738-1040-1050
ve benzeri malzemeler için uygundur



ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	KÖŞE RADIUS KR	SİPARİŞ NO
MXKRXL 40602	6	30	150	6	4	R0.2	
MXKRXL 40605	6	30	150	6	4	R0.5	
MXKRXL 40610	6	30	150	6	4	R1.0	
MXKRXL 40802	8	35	150	8	4	R0.2	
MXKRXL 40805	8	35	150	8	4	R0.5	
MXKRXL 40810	8	35	150	8	4	R1.0	
MXKRXL 41002	10	40	150	10	4	R0.2	
MXKRXL 41005	10	40	150	10	4	R0.5	
MXKRXL 41010	10	40	150	10	4	R1.0	
MXKRXL 41202	12	40	150	12	4	R0.2	
MXKRXL 41205	12	40	150	12	4	R0.5	
MXKRXL 41210	12	40	150	12	4	R1.0	

ÇOK AĞIZLI UZUN DÜZ KAPLAMALI FREZE 52 HRC Z=6

Karbür çok ağızlı uzun düz freze 52 HRC
2344-2312-2738-1040-1050
ve benzeri malzemeler için uygundur



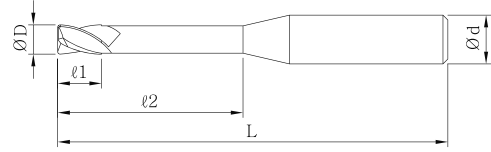
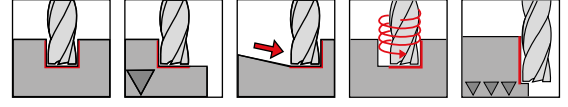
ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXDXLF 6060	6	25	75	6	6	
MXDXLF 6080	8	40	100	8	6	
MXDXLF 6100	10	45	100	10	6	
MXDXLF 6120	12	45	110	12	6	
MXDXLF 6140	14	50	110	14	6	
MXDXLF 6160	16	55	110	16	6	
MXDXLF 6180	18	55	110	18	6	
MXDXLF 6200	20	60	110	20	6	
MXDXLFL 6080	8	50	150	8	6	
MXDXLFL 6100	10	55	150	10	6	
MXDXLFL 6120	12	55	150	12	6	
MXDXLFL 6140	14	65	150	14	6	
MXDXLFL 6160	16	65	150	16	6	
MXDXLFL 6180	18	65	150	18	6	
MXDXLFL 6200	20	70	150	20	6	

DALMA BOYLU DÜZ KAPLAMALI FREZE 52 HRC Z=2

Karbür dalma boylu düz freze 52 HRC

2344-2312-2738-1040-1050

ve benzeri malzemeler için uygundur



ÜRÜN KODU	ÇAP D	KESME BOYU l1	DALMA BOYU l2	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXFD0100L4	1.0	1.5	4	50	4	2	
MXFD0100L6	1.0	1.5	6	50	4	2	
MXFD0100L8	1.0	1.5	8	50	4	2	
MXFD0100L10	1.0	1.5	10	50	4	2	
MXFD0100L12	1.0	1.5	12	50	4	2	
MXFD0100L14	1.0	1.5	14	50	4	2	
MXFD0100L16	1.0	1.5	16	50	4	2	
MXFD0100L18	1.0	1.5	18	50	4	2	
MXFD0100L20	1.0	1.5	20	50	4	2	
MXFD0150L4	1.5	2.2	4	50	4	2	
MXFD0150L6	1.5	2.2	6	50	4	2	
MXFD0150L8	1.5	2.2	8	50	4	2	
MXFD0150L10	1.5	2.2	10	50	4	2	
MXFD0150L12	1.5	2.2	12	50	4	2	
MXFD0150L14	1.5	2.2	14	50	4	2	
MXFD0150L16	1.5	2.2	16	50	4	2	
MXFD0150L18	1.5	2.2	18	50	4	2	
MXFD0150L20	1.5	2.2	20	50	4	2	
MXFD0200L6	2.0	3.0	6	50	4	2	
MXFD0200L8	2.0	3.0	8	50	4	2	
MXFD0200L10	2.0	3.0	10	50	4	2	
MXFD0200L12	2.0	3.0	12	50	4	2	
MXFD0200L14	2.0	3.0	14	50	4	2	
MXFD0200L16	2.0	3.0	16	50	4	2	
MXFD0200L18	2.0	3.0	18	50	4	2	
MXFD0200L20	2.0	3.0	20	50	4	2	
MXFD0200L25	2.0	3.0	25	60	4	2	
MXFD0250L6	2.5	3.5	6	50	4	2	
MXFD0250L8	2.5	3.5	8	50	4	2	
MXFD0250L10	2.5	3.5	10	50	4	2	
MXFD0250L12	2.5	3.5	12	50	4	2	
MXFD0250L14	2.5	3.5	14	50	4	2	
MXFD0250L16	2.5	3.5	16	50	4	2	
MXFD0250L18	2.5	3.5	18	50	4	2	
MXFD0250L20	2.5	3.5	20	50	4	2	
MXFD0250L25	2.5	3.5	25	60	4	2	
MXFD0250L30	2.5	3.5	30	60	4	2	

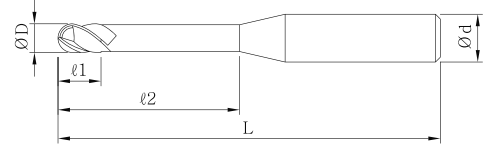
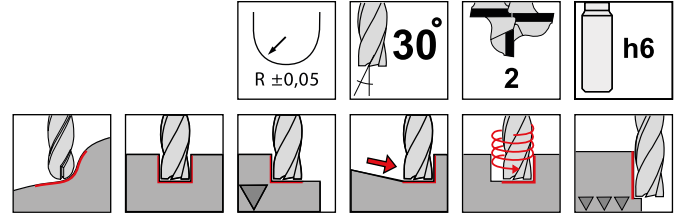
ÜRÜN KODU	ÇAP D	KESME BOYU ℓ_1	DALMA BOYU ℓ_2	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXFD0300L10	3.0	4	10	65	6	2	
MXFD0300L12	3.0	4	12	65	6	2	
MXFD0300L14	3.0	4	14	65	6	2	
MXFD0300L16	3.0	4	16	65	6	2	
MXFD0300L18	3.0	4	18	65	6	2	
MXFD0300L20	3.0	4	20	65	6	2	
MXFD0300L25	3.0	4	25	65	6	2	
MXFD0300L30	3.0	4	30	65	6	2	
MXFD0300L35	3.0	4	35	65	6	2	
MXFD0400L10	4.0	6	10	65	6	2	
MXFD0400L12	4.0	6	12	65	6	2	
MXFD0400L14	4.0	6	14	65	6	2	
MXFD0400L16	4.0	6	16	65	6	2	
MXFD0400L18	4.0	6	18	65	6	2	
MXFD0400L20	4.0	6	20	65	6	2	
MXFD0400L25	4.0	6	25	65	6	2	
MXFD0400L30	4.0	6	30	65	6	2	
MXFD0400L35	4.0	6	35	65	6	2	

DALMA BOYLU KÜRE KAPLAMALI FREZE 52 HRC Z=2

Karbür dalma boylu küre freze 52 HRC

2344-2312-2738-1040-1050

ve benzeri malzemeler için uygundur

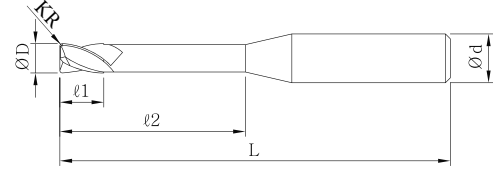
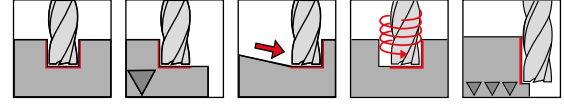
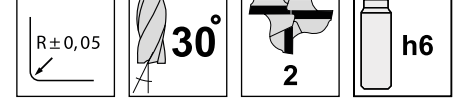


ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	DALMA BOYU ℓ2	TAM BOY L	ŞAFT ÇAP d	AĞIZ SAYISI Z	SİPARİŞ NO
MXFDK0100L4	1.0	1.5	4	50	4	2	
MXFDK0100L6	1.0	1.5	6	50	4	2	
MXFDK0100L8	1.0	1.5	8	50	4	2	
MXFDK0100L10	1.0	1.5	10	50	4	2	
MXFDK0100L12	1.0	1.5	12	50	4	2	
MXFDK0100L14	1.0	1.5	14	50	4	2	
MXFDK0100L16	1.0	1.5	16	50	4	2	
MXFDK0100L18	1.0	1.5	18	50	4	2	
MXFDK0100L20	1.0	1.5	20	50	4	2	
MXFDK0150L4	1.5	2.2	4	50	4	2	
MXFDK0150L6	1.5	2.2	6	50	4	2	
MXFDK0150L8	1.5	2.2	8	50	4	2	
MXFDK0150L10	1.5	2.2	10	50	4	2	
MXFDK0150L12	1.5	2.2	12	50	4	2	
MXFDK0150L14	1.5	2.2	14	50	4	2	
MXFDK0150L16	1.5	2.2	16	50	4	2	
MXFDK0150L18	1.5	2.2	18	50	4	2	
MXFDK0150L20	1.5	2.2	20	50	4	2	
MXFDK0200L6	2.0	3.0	6	50	4	2	
MXFDK0200L8	2.0	3.0	8	50	4	2	
MXFDK0200L10	2.0	3.0	10	50	4	2	
MXFDK0200L12	2.0	3.0	12	50	4	2	
MXFDK0200L14	2.0	3.0	14	50	4	2	
MXFDK0200L16	2.0	3.0	16	50	4	2	
MXFDK0200L18	2.0	3.0	18	50	4	2	
MXFDK0200L20	2.0	3.0	20	50	4	2	
MXFDK0200L25	2.0	3.0	25	60	4	2	
MXFDK0250L6	2.5	3.5	6	50	4	2	
MXFDK0250L8	2.5	3.5	8	50	4	2	
MXFDK0250L10	2.5	3.5	10	50	4	2	
MXFDK0250L12	2.5	3.5	12	50	4	2	
MXFDK0250L14	2.5	3.5	16	50	4	2	
MXFDK0250L16	2.5	3.5	20	50	4	2	
MXFDK0250L18	2.5	3.5	25	50	4	2	
MXFDK0250L20	2.5	3.5	20	50	4	2	
MXFDK0250L25	2.5	3.5	25	60	4	2	

ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	DALMA BOYU ℓ2	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXFDK0300L10	3.0	4	10	65	6	2	
MXFDK0300L12	3.0	4	12	65	6	2	
MXFDK0300L14	3.0	4	14	65	6	2	
MXFDK0300L16	3.0	4	16	65	6	2	
MXFDK0300L18	3.0	4	18	65	6	2	
MXFDK0300L20	3.0	4	20	65	6	2	
MXFDK0300L25	3.0	4	25	65	6	2	
MXFDK0300L30	3.0	4	30	65	6	2	
MXFDK0300L35	3.0	4	35	65	6	2	
MXFDK0400L10	4.0	6	10	65	6	2	
MXFDK0400L12	4.0	6	12	65	6	2	
MXFDK0400L14	4.0	6	14	65	6	2	
MXFDK0400L16	4.0	6	16	65	6	2	
MXFDK0400L18	4.0	6	18	65	6	2	
MXFDK0400L20	4.0	6	20	65	6	2	
MXFDK0400L25	4.0	6	25	65	6	2	
MXFDK0400L30	4.0	6	30	65	6	2	
MXFDK0400L35	4.0	6	35	65	6	2	

DALMA BOYLU KÖŞE RADIUS KAPLAMALI FREZE 52 HRC Z=2

Karbür dalma boylu köşe radius freze 52 HRC
2344-2312-2738-1040-1050
ve benzeri malzemeler için uygundur

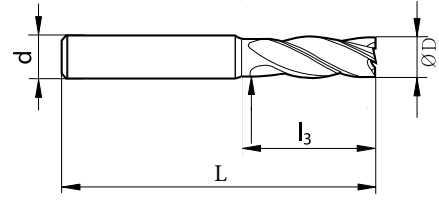
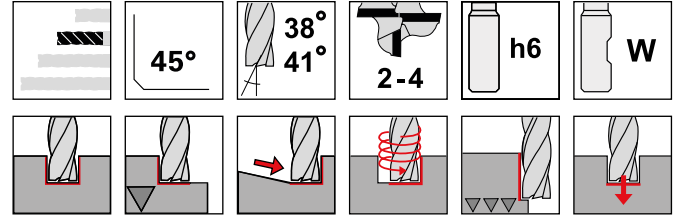


ÜRÜN KODU	KÖŞE RADIUS KR	ÇAP D	KESME BOYU ℓ ₁	DALMA BOYU ℓ ₂	TAM BOY L	ŞAFT ÇAPı d	AĞIZ SAYISI	SİPARİŞ NO
MXFD0100R02L4	R0.2	1.0	1.5	4	50	4	2	
MXFD0100R02L6	R0.2	1.0	1.5	6	50	4	2	
MXFD0100R02L8	R0.2	1.0	1.5	8	50	4	2	
MXFD0100R02L10	R0.2	1.0	1.5	10	50	4	2	
MXFD0100R02L12	R0.2	1.0	1.5	12	50	4	2	
MXFD0100R02L14	R0.2	1.0	1.5	14	50	4	2	
MXFD0100R02L16	R0.2	1.0	1.5	16	50	4	2	
MXFD0100R02L18	R0.2	1.0	1.5	18	50	4	2	
MXFD0100R02L20	R0.2	1.0	1.5	20	50	4	2	
MXFD0150R02L4	R0.2	1.5	2.2	4	50	4	2	
MXFD0150R02L6	R0.2	1.5	2.2	6	50	4	2	
MXFD0150R02L8	R0.2	1.5	2.2	8	50	4	2	
MXFD0150R02L10	R0.2	1.5	2.2	10	50	4	2	
MXFD0150R02L12	R0.2	1.5	2.2	12	50	4	2	
MXFD0150R02L14	R0.2	1.5	2.2	14	50	4	2	
MXFD0150R02L16	R0.2	1.5	2.2	16	50	4	2	
MXFD0150R02L18	R0.2	1.5	2.2	18	50	4	2	
MXFD0150R02L20	R0.2	1.5	2.2	20	50	4	2	
MXFD0200R02L6	R0.2	2.0	3.0	6	50	4	2	
MXFD0200R02L8	R0.2	2.0	3.0	8	50	4	2	
MXFD0200R02L10	R0.2	2.0	3.0	10	50	4	2	
MXFD0200R02L12	R0.2	2.0	3.0	12	50	4	2	
MXFD0200R02L14	R0.2	2.0	3.0	14	50	4	2	
MXFD0200R02L16	R0.2	2.0	3.0	16	50	4	2	
MXFD0200R02L18	R0.2	2.0	3.0	18	50	4	2	
MXFD0200R02L20	R0.2	2.0	3.0	20	50	4	2	
MXFD0200R02L25	R0.2	2.0	3.0	25	60	4	2	
MXFD0200R05L6	R0.5	2.0	3.0	6	50	4	2	
MXFD0200R05L8	R0.5	2.0	3.0	8	50	4	2	
MXFD0200R05L10	R0.5	2.0	3.0	10	50	4	2	
MXFD0200R05L12	R0.5	2.0	3.0	12	50	4	2	
MXFD0200R05L14	R0.5	2.0	3.0	14	50	4	2	
MXFD0200R05L16	R0.5	2.0	3.0	16	50	4	2	
MXFD0200R05L18	R0.5	2.0	3.0	18	50	4	2	
MXFD0200R05L20	R0.5	2.0	3.0	20	50	4	2	
MXFD0200R05L25	R0.5	2.0	3.0	25	60	4	2	

ÜRÜN KODU	RADIUS	ÇAP D	KESME BOYU ℓ ₁	DALMA BOYU ℓ ₂	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI	SİPARİŞ NO
MXFD0250R02L6	R0.2	2.5	3.5	6	50	4	2	
MXFD0250R02L8	R0.2	2.5	3.5	8	50	4	2	
MXFD0250R02L10	R0.2	2.5	3.5	10	50	4	2	
MXFD0250R02L12	R0.2	2.5	3.5	12	50	4	2	
MXFD0250R02L14	R0.2	2.5	3.5	14	50	4	2	
MXFD0250R02L16	R0.2	2.5	3.5	16	50	4	2	
MXFD0250R02L18	R0.2	2.5	3.5	18	50	4	2	
MXFD0250R02L20	R0.2	2.5	3.5	20	50	4	2	
MXFD0250R02L25	R0.2	2.5	3.5	25	60	4	2	
MXFD0250R05L6	R0.5	2.5	3.5	6	50	4	2	
MXFD0250R05L8	R0.5	2.5	3.5	8	50	4	2	
MXFD0250R05L10	R0.5	2.5	3.5	10	50	4	2	
MXFD0250R05L12	R0.5	2.5	3.5	12	50	4	2	
MXFD0250R05L14	R0.5	2.5	3.5	14	50	4	2	
MXFD0250R05L16	R0.5	2.5	3.5	16	50	4	2	
MXFD0250R05L18	R0.5	2.5	3.5	18	50	4	2	
MXFD0250R05L20	R0.5	2.5	3.5	20	50	4	2	
MXFD0250R05L25	R0.5	2.5	3.5	25	60	4	2	
MXFD0300R02L10	R0.2	3.0	4	10	65	6	2	
MXFD0300R02L12	R0.2	3.0	4	12	65	6	2	
MXFD0300R02L14	R0.2	3.0	4	14	65	6	2	
MXFD0300R02L16	R0.2	3.0	4	16	65	6	2	
MXFD0300R02L18	R0.2	3.0	4	18	65	6	2	
MXFD0300R02L20	R0.2	3.0	4	20	65	6	2	
MXFD0300R02L25	R0.2	3.0	4	25	65	6	2	
MXFD0300R02L30	R0.2	3.0	4	30	65	6	2	
MXFD0300R02L35	R0.2	3.0	4	35	65	6	2	
MXFD0300R05L10	R0.5	3.0	4	10	65	6	2	
MXFD0300R05L12	R0.5	3.0	4	12	65	6	2	
MXFD0300R05L14	R0.5	3.0	4	14	65	6	2	
MXFD0300R05L16	R0.5	3.0	4	16	65	6	2	
MXFD0300R05L18	R0.5	3.0	4	18	65	6	2	
MXFD0300R05L20	R0.5	3.0	4	20	65	6	2	
MXFD0300R05L25	R0.5	3.0	4	25	65	6	2	
MXFD0300R05L30	R0.5	3.0	4	30	65	6	2	
MXFD0300R05L35	R0.5	3.0	4	35	65	6	2	
MXFD0300R1L10	R1.0	3.0	4	10	65	6	2	
MXFD0300R1L12	R1.0	3.0	4	12	65	6	2	
MXFD0300R1L14	R1.0	3.0	4	14	65	6	2	
MXFD0300R1L16	R1.0	3.0	4	16	65	6	2	
MXFD0300R1L18	R1.0	3.0	4	18	65	6	2	
MXFD0300R1L20	R1.0	3.0	4	20	65	6	2	
MXFD0300R1L25	R1.0	3.0	4	25	65	6	2	
MXFD0300R1L30	R1.0	3.0	4	30	65	6	2	
MXFD0300R1L35	R1.0	3.0	4	35	65	6	2	
MXFD0400R02L10	R0.2	4.0	6	10	65	6	2	
MXFD0400R02L12	R0.2	4.0	6	12	65	6	2	
MXFD0400R02L14	R0.2	4.0	6	14	65	6	2	
MXFD0400R02L16	R0.2	4.0	6	16	65	6	2	
MXFD0400R02L18	R0.2	4.0	6	18	65	6	2	
MXFD0400R02L20	R0.2	4.0	6	20	65	6	2	
MXFD0400R02L25	R0.2	4.0	6	25	65	6	2	
MXFD0400R02L30	R0.2	4.0	6	30	65	6	2	
MXFD0400R02L35	R0.2	4.0	6	35	65	6	2	
MXFD0400R05L10	R0.5	4.0	6	10	65	6	2	
MXFD0400R05L12	R0.5	4.0	6	12	65	6	2	
MXFD0400R05L14	R0.5	4.0	6	14	65	6	2	
MXFD0400R05L16	R0.5	4.0	6	16	65	6	2	
MXFD0400R05L18	R0.5	4.0	6	18	65	6	2	
MXFD0400R05L20	R0.5	4.0	6	20	65	6	2	
MXFD0400R05L25	R0.5	4.0	6	25	65	6	2	
MXFD0400R05L30	R0.5	4.0	6	30	65	6	2	
MXFD0400R05L35	R0.5	4.0	6	35	65	6	2	
MXFD0400R1L10	R1.0	4.0	6	10	65	6	2	
MXFD0400R1L12	R1.0	4.0	6	12	65	6	2	
MXFD0400R1L14	R1.0	4.0	6	14	65	6	2	
MXFD0400R1L16	R1.0	4.0	6	16	65	6	2	
MXFD0400R1L18	R1.0	4.0	6	18	65	6	2	
MXFD0400R1L20	R1.0	4.0	6	20	65	6	2	
MXFD0400R1L25	R1.0	4.0	6	25	65	6	2	
MXFD0400R1L30	R1.0	4.0	6	30	65	6	2	
MXFD0400R1L35	R1.0	4.0	6	35	65	6	2	

CHATTER FREE KAPLAMALI KARBÜR FREZE 52 HRC Z=4

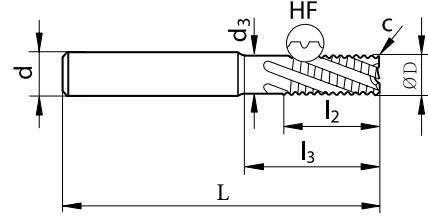
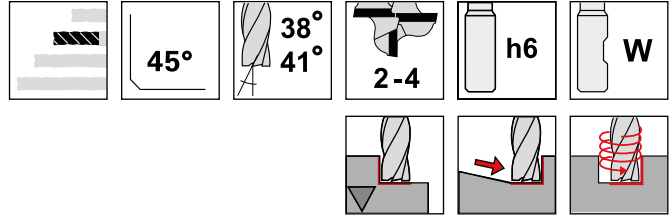
Karbür Super F-UT düz freze 52 HRC
2344-2312-2738-1040-1050
ve benzeri malzemeler için uygundur



ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d	TAM BOY L	KESME BOYU l3	AĞIZ SAYISI	SİPARİŞ NO
MXUT 40206	2.0	6.0	50	10	4	
MXUT 40306	3.0	6.0	50	11	4	
MXUT 40406	4.0	6.0	50	11	4	
MXUT 40506	5.0	6.0	50	13	4	
MXUT 4060	6.0	6.0	50	13	4	
MXUT 4080	8.0	8.0	63	19	4	
MXUT 4100	10	10	72	22	4	
MXUT 4120	12	12	80	26	4	
MXUT 4140	14	14	83	26	4	
MXUT 4160	16	16	92	32	4	
MXUT 4180	18	18	92	32	4	
MXUT 4200	20	20	104	38	4	
MXUT 4250	25	25	110	45	4	

KABATALAŞ KAPLAMALI FREZE 52 HRC Z=4

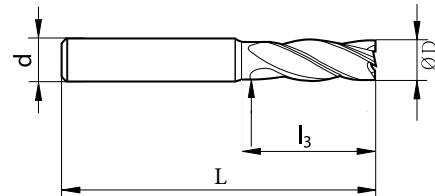
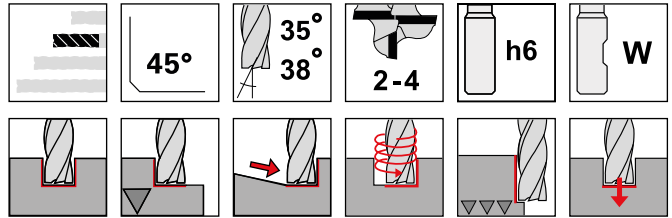
Karbür kabatalaş freze 52 HRC
2344-2312-2738-1040-1050
ve benzeri malzemeler için uygundur



ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d	BOĞAZ ÇAPI d3	TAM BOY L	KESME BOYU l1	HELİS BOYU l3	AĞIZ SAYISI	SİPARİŞ NO
MXKB 4060	6.0	6.0	5.5	57	13	21	4	
MXKB 4080	8.0	8.0	7.5	63	19	27	4	
MXKB 4100	10	10	9.2	72	22	32	4	
MXKB 4120	12	12	11.2	83	26	38	4	
MXKB 4140	14	14	13.0	92	32	44	4	
MXKB 4160	16	16	15.0	92	32	44	4	
MXKB 4180	18	18	17.0	104	38	54	4	
MXKB 4200	20	20	19.0	104	38	54	4	
MXKB 4250	25	25	23.5	110	45	65	4	

DEĞİŞKEN AÇILI KAPLAMALI KARBÜR FREZE Z=4

Kaba ve Hassas işlemlerde,
çeliklerde ve yüksek alaşımlı çeliklerde
48 HRC (1600 N/mm²) en zor koşullarda bile
performans gösterir.
Paslanmaz malzemeler için de uygundur.



ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d	TAM BOY L	KESME BOYU l3	AĞIZ SAYISI	SİPARİŞ NO
MXPS 40206	2.0	6.0	50	10	4	
MXPS 40306	3.0	6.0	50	11	4	
MXPS 40406	4.0	6.0	50	11	4	
MXPS 40506	5.0	6.0	50	13	4	
MXPS 4060	6.0	6.0	50	13	4	
MXPS 4080	8.0	8.0	63	19	4	
MXPS 4100	10	10	72	22	4	
MXPS 4120	12	12	80	26	4	
MXPS 4140	14	14	83	26	4	
MXPS 4160	16	16	92	32	4	
MXPS 4180	18	18	92	32	4	
MXPS 4200	20	20	104	38	4	
MXPS 4250	25	25	110	45	4	

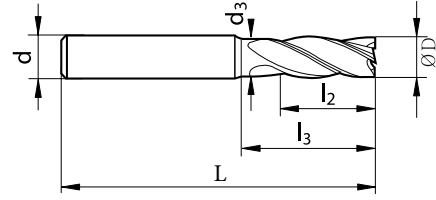
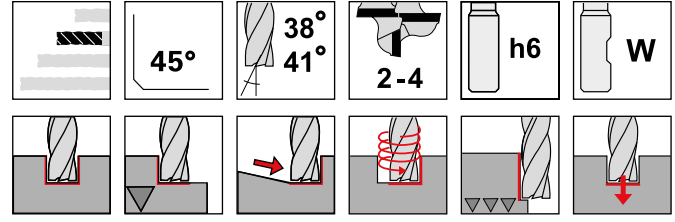
FİNİŞ FREZESİ KAPLAMALI 52 HRC Z=4

Finiş düz freze, değişken kanal derinliğine sahiptir.

52 HRC

2344-2312-2738-1040-1050

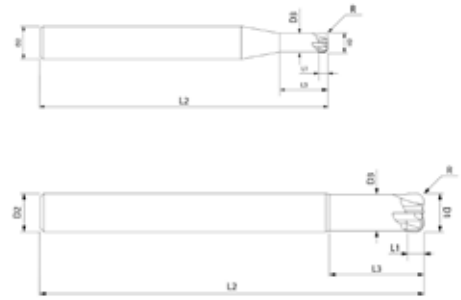
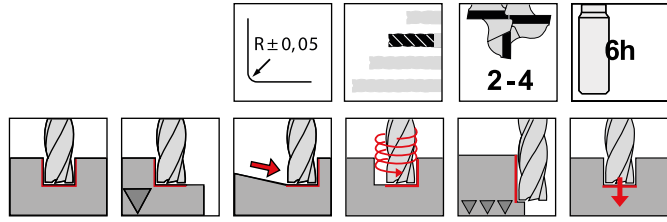
ve benzeri malzemeler için uygundur



ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d	TAM BOY L	KESME BOYU ℓ_1	AĞIZ SAYISI	SİPARİŞ NO
MXTN 4030	3.0	6.0	50	8	4	
MXTN 4040	4.0	6.0	50	11	4	
MXTN 4050	5.0	6.0	50	13	4	
MXTN 4060	6.0	6.0	50	13	4	
MXTN 4080	8.0	8.0	63	19	4	
MXTN 4100	10	10	72	22	4	
MXTN 4120	12	12	80	25	4	
MXTN 4140	14	14	92	32	4	
MXTN 4160	16	16	92	32	4	
MXTN 4200	20	20	105	38	4	

HIGH FEED (HIZLI KESİM) KÖŞE RADIUS FREZE KAPLAMALI 52 HRC Z=4

Kalıpçı çeliklerinde yüksek performans için uygundur.
Yüksek hız ve yüksek devir ilerleme ile çalışır.

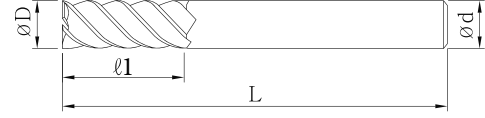
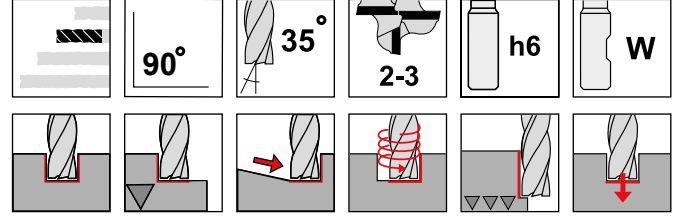


ÜRÜN KODU	ÇAP D1	ŞAFT ÇAPI D2	TAM BOY L2	DALMA BOYU L3	KESME BOYU L1	BOĞAZ ÇAPI D3	R	Z	SİPARİŞ NO
MXPR 4040	4.0	6.0	65	10	1,6	3,5	0.5	4	
MXPR 4040	4.0	6.0	65	10	1,6	3,5	1	4	
MXPR 4050	5.0	6.0	75	12	2	4,5	0.5	4	
MXPR 4050	5.0	6.0	75	12	2	4,5	1	4	
MXPR 4060	6.0	6.0	75	13	2,5	5,5	0.5	4	
MXPR 4060	6.0	6.0	75	13	2,5	5,5	1	4	
MXPR 4080	8.0	8.0	100	18	3,5	7,5	0.5	4	
MXPR 4080	8.0	8.0	100	18	3,5	7,5	1	4	
MXPR 4100	10	10	100	20	4	9,5	0.5	4	
MXPR 4100	10	10	100	20	4	9,5	1	4	
MXPR 4120	12	12	100	25	5	11,5	0.5	4	
MXPR 4120	12	12	100	25	5	11,5	1	4	

STANDART ALÜMİNYUM FREZE

Z=2-3

Karbür standart Alüminyum freze



ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXAL 2030	3.0	10	50	3	2	
MXAL 2040	4.0	11	50	4	2	
MXAL 2050	5.0	13	50	5	2	
MXAL 2060	6.0	13	50	6	2	
MXAL 2080	8.0	19	63	8	2	
MXAL 2100	10.0	22	72	10	2	
MXAL 2120	12.0	26	80	12	2	
MXAL 2140	14.0	26	83	14	2	
MXAL 2160	16.0	32	92	16	2	
MXAL 2180	18.0	32	92	18	2	
MXAL 2200	20.0	38	104	20	2	

ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXAL 3030	3.0	10	50	3	3	
MXAL 3040	4.0	11	50	4	3	
MXAL 3050	5.0	13	50	5	3	
MXAL 3060	6.0	13	50	6	3	
MXAL 3080	8.0	19	63	8	3	
MXAL 3100	10.0	22	72	10	3	
MXAL 3120	12.0	26	80	12	3	
MXAL 3140	14.0	26	83	14	3	
MXAL 3160	16.0	32	92	16	3	
MXAL 3180	18.0	32	92	18	3	
MXAL 3200	20.0	38	104	20	3	

UZUN ALÜMİNYUM FREZE

Z=2

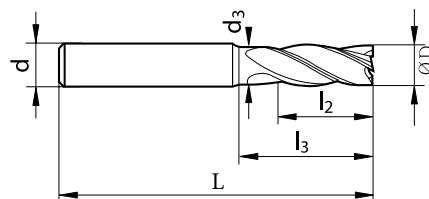
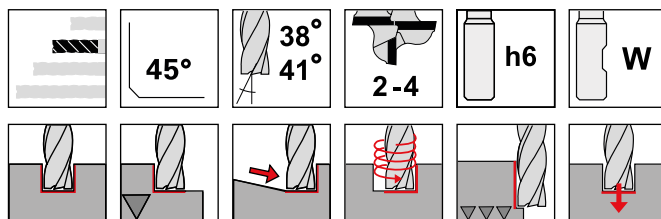
ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXALU 2030	3.0	16	65	3	2	
MXALU 2040	4.0	18	65	4	2	
MXALU 2050	5.0	25	75	5	2	
MXALU 2060	6.0	25	75	6	2	
MXALU 2080	8.0	38	100	8	2	
MXALU 2100	10.0	45	100	10	2	
MXALU 2120	12.0	45	100	12	2	
MXALU 2140	14.0	45	100	14	2	
MXALU 2160	16.0	45	100	16	2	
MXALU 2180	18.0	50	110	18	2	
MXALU 2200	20.0	75	150	20	2	

UZUN ALÜMİNYUM FREZE Z=3

ÜRÜN KODU	ÇAP D	KESME BOYU ℓ_1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXALU 3030	3.0	16	65	3	3	
MXALU 3040	4.0	18	65	4	3	
MXALU 3050	5.0	25	75	5	3	
MXALU 3060	6.0	25	75	6	3	
MXALU 3080	8.0	40	100	8	3	
MXALU 3100	10.0	45	100	10	3	
MXALU 3120	12.0	45	100	12	3	
MXALU 3140	14.0	45	100	14	3	
MXALU 3160	16.0	45	100	16	3	
MXALU 3180	18.0	50	110	18	3	
MXALU 3200	20.0	75	150	20	3	

YÜKSEK PERFORMANSLI ALÜMİNYUM FREZE

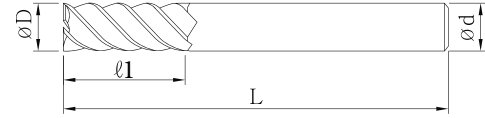
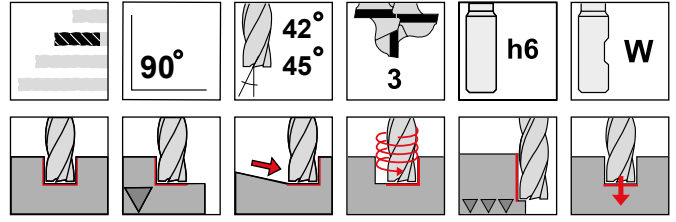
Yüksek hacimli titreşimsiz talaş kaldırma özelliğine sahiptir.
Alüminyum ve benzeri malzemelerde kullanılabılır.



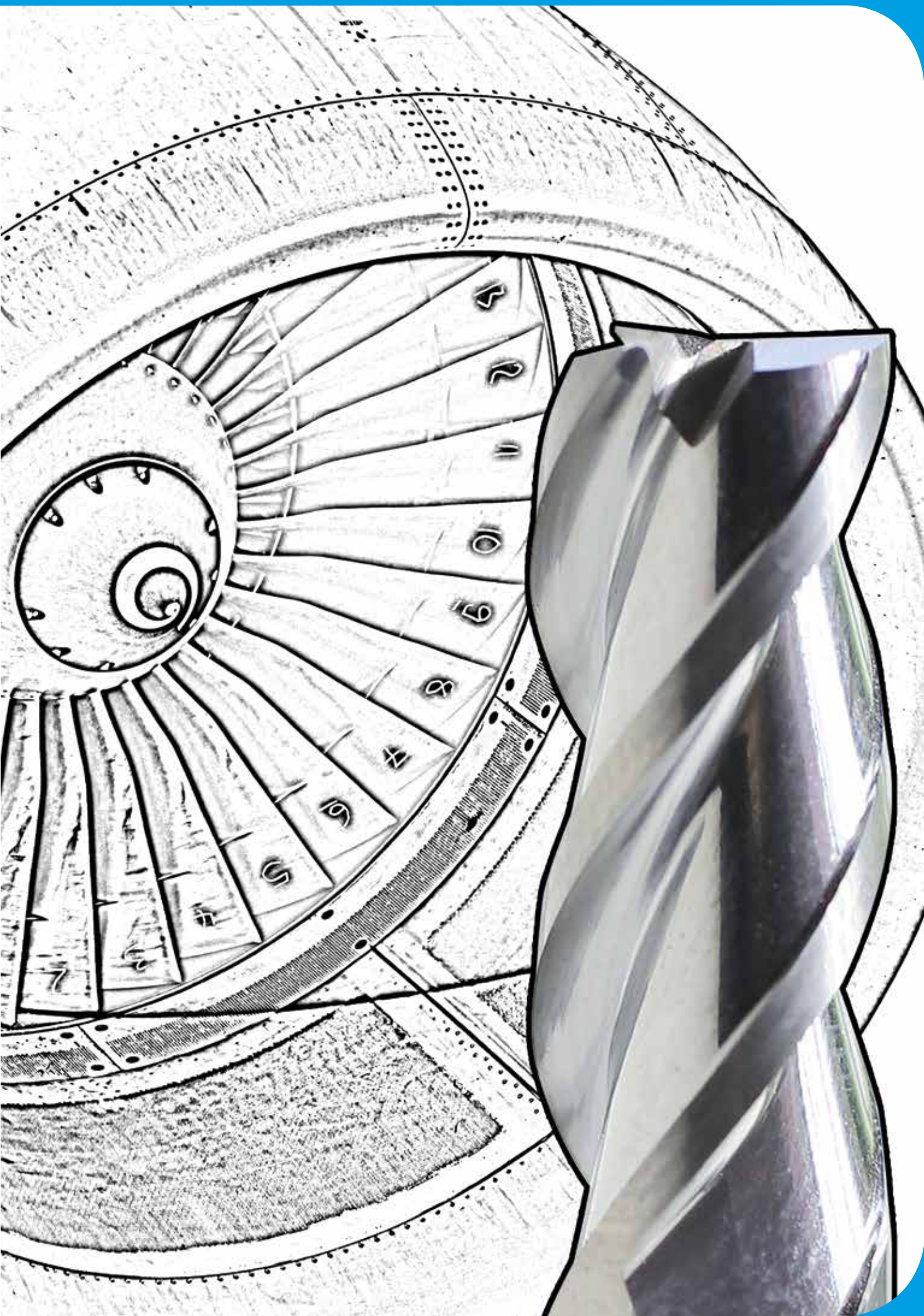
ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d	BOĞAZ ÇAPI d3	TAM BOY L	KESME BOYU ℓ_1	HELİS BOYU L3	AĞIZ SAYISI	SİPARİŞ NO
MXLT 4030	3.0	6.0	2.8	57	8	12	3	
MXLT 4040	4.0	6.0	3.8	57	11	15	3	
MXLT 4050	5.0	6.0	4.8	57	13	18	3	
MXLT 4060	6.0	6.0	5.8	57	13	18	3	
MXLT 4080	8.0	8.0	7.8	63	19	22	3	
MXLT 4100	10	10	9.8	72	22	25	3	
MXLT 4120	12	12	11.8	83	25	27	3	
MXLT 4140	14	14	13.8	92	32	38	3	
MXLT 4160	16	16	15.8	92	35	38	3	
MXLT 4200	20	20	19.8	105	38	44	3	

DEĞİŞKEN KANALLI YÜKSEK PERFORMANSLI ALÜMİNYUM FREZE KAPLAMALI Z=3

Yüksek hacimli titreşimsiz talaş kaldırma özelliğine sahiptir.
Alüminyum ve benzeri malzemelerde kullanılabilir.



ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXPf 3030	3.0	8	50	3	3	
MXPf 3040	4.0	11	50	4	3	
MXPf 3050	5.0	13	50	5	3	
MXPf 3060	6.0	13	50	6	3	
MXPf 3080	8.0	19	63	8	3	
MXPf 3100	10.0	22	72	10	3	
MXPf 3120	12.0	26	80	12	3	
MXPf 3160	16.0	32	92	16	3	
MXPf 3200	20.0	38	100	20	3	

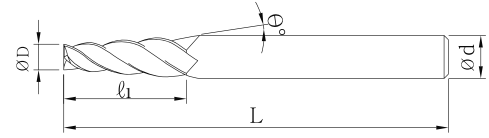
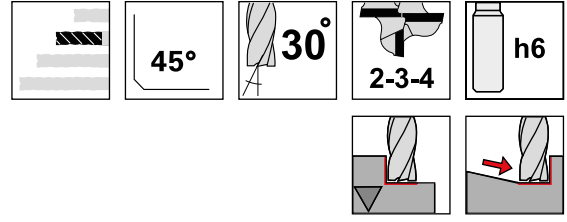


KONİK DÜZ KAPLAMALI FREZE 52 HRC Z=3 / Z=2 1-2-3-5°

Karbür konik freze 52 HRC

2344-2312-2738-1040-1050

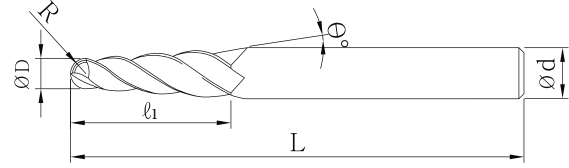
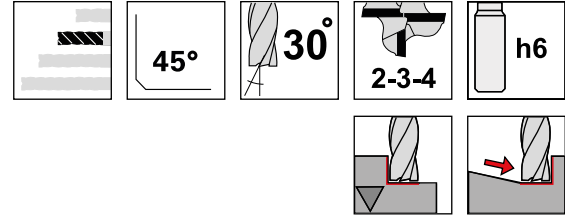
ve benzeri malzemeler için uygundur



ÜRÜN KODU	ÇAP D	DERECE θ°	KESME BOYU ℓ ₁	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI	SİPARİŞ NO
MX3616 0201	2	1	20	65	4	Z= 2-3	
MX3616 0301	3	1	28	65	4	Z= 2-3	
MX3616 0401	4	1	28	65	6	Z= 2-3	
MX3616 0501	5	1	28	68	6	Z= 2-3	
MX3616 0601	6	1	40	88	8	Z= 2-3	
MX3616 0801	8	1	45	100	10	Z= 2-3	
MX3616 1001	10	1	45	100	12	Z= 2-3	
MX3616 1201	12	1	45	100	14	Z= 2-3	
MX3616 0202	2	2	20	65	4	Z= 2-3	
MX3616 0302	3	2	28	65	6	Z= 2-3	
MX3616 0402	4	2	28	68	6	Z= 2-3	
MX3616 0502	5	2	42	88	8	Z= 2-3	
MX3616 0602	6	2	45	100	10	Z= 2-3	
MX3616 0802	8	2	45	100	12	Z= 2-3	
MX3616 1002	10	2	45	100	14	Z= 2-3	
MX3616 1202	12	2	45	100	16	Z= 2-3	
MX3616 0203	2	3	19	65	4	Z= 2-3	
MX3616 0303	3	3	28	68	6	Z= 2-3	
MX3616 0403	4	3	38	88	8	Z= 2-3	
MX3616 0503	5	3	48	100	10	Z= 2-3	
MX3616 0603	6	3	48	100	12	Z= 2-3	
MX3616 0803	8	3	48	100	14	Z= 2-3	
MX3616 1003	10	3	48	100	16	Z= 2-3	
MX3616 1203	12	3	48	100	18	Z= 2-3	
MX3616 0205	2	5	20	68	6	Z= 2-3	
MX3616 0305	3	5	28	88	8	Z= 2-3	
MX3616 0405	4	5	34	100	10	Z= 2-3	
MX3616 0505	5	5	40	100	12	Z= 2-3	
MX3616 0605	6	5	45	100	14	Z= 2-3	
MX3616 0805	8	5	45	100	16	Z= 2-3	
MX3616 1005	10	5	45	100	18	Z= 2-3	
MX3616 1205	12	5	45	100	20	Z= 2-3	

KONİK KÜRE KAPLAMALI FREZE 52 HRC Z=2 1-2-3-5°

Karbür konik küre freze 52 HRC
2344-2312-2738-1040-1050
ve benzeri malzemeler için uygundur



ÜRÜN KODU	ÇAP D	DERECE θ°	KESME BOYU ℓ_1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI	SİPARİŞ NO
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MX3716 0201	2	1	20	65	4	Z= 2	
MX3716 0301	3	1	28	65	4	Z= 2	
MX3716 0401	4	1	28	65	6	Z= 2	
MX3716 0501	5	1	28	68	6	Z= 2	
MX3716 0601	6	1	40	88	8	Z= 2	
MX3716 0801	8	1	45	100	10	Z= 2	
MX3716 1001	10	1	45	100	12	Z= 2	
MX3716 1201	12	1	45	100	14	Z= 2	
MX3716 0202	2	2	20	65	4	Z= 2	
MX3716 0302	3	2	28	65	6	Z= 2	
MX3716 0402	4	2	28	68	6	Z= 2	
MX3716 0502	5	2	42	88	8	Z= 2	
MX3716 0602	6	2	45	100	10	Z= 2	
MX3716 0802	8	2	45	100	12	Z= 2	
MX3716 1002	10	2	45	100	14	Z= 2	
MX3716 1202	12	2	45	100	16	Z= 2	
MX3716 0203	2	3	19	65	4	Z= 2	
MX3716 0303	3	3	28	68	6	Z= 2	
MX3716 0403	4	3	38	88	8	Z= 2	
MX3716 0503	5	3	48	100	10	Z= 2	
MX3716 0603	6	3	48	100	12	Z= 2	
MX3716 0803	8	3	48	100	14	Z= 2	
MX3716 1003	10	3	48	100	16	Z= 2	
MX3716 1203	12	3	48	100	18	Z= 2	
MX3716 0205	2	5	20	68	6	Z= 2	
MX3716 0305	3	5	28	88	8	Z= 2	
MX3716 0405	4	5	34	100	10	Z= 2	
MX3716 0505	5	5	40	100	12	Z= 2	
MX3716 0605	6	5	45	100	14	Z= 2	
MX3716 0805	8	5	45	100	16	Z= 2	
MX3716 1005	10	5	45	100	18	Z= 2	
MX3716 1205	12	5	45	100	20	Z= 2	

70

HRC



STANDART DÜZ FREZE



STANDART KÜRE FREZE



STANDART KÖŞE RADIUS FREZE



ÇOK AĞIZLI DÜZ FREZE



DALMA BOYLU DÜZ FREZE



DALMA BOYLU KÜRE FREZE



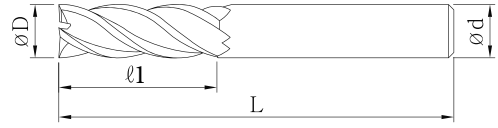
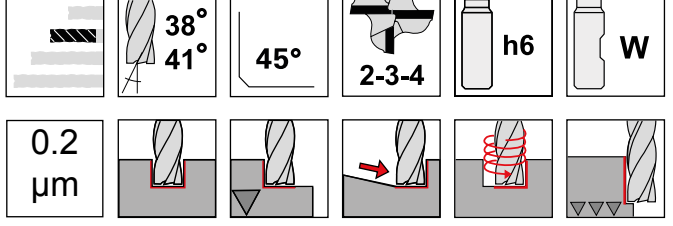
DALMA BOYLU KÖŞE RADIUS FREZE



HIGH FEED FREZE

STANDART DÜZ KAPLAMALI FREZE 70 HRC Z=4

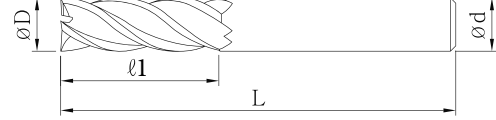
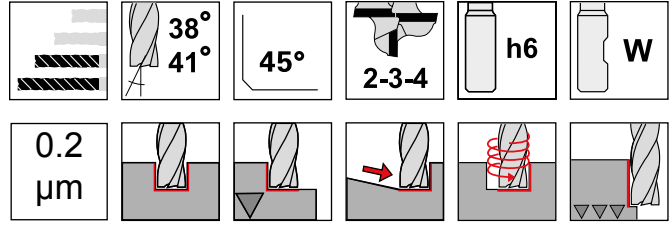
52 HRC üzeri malzemeler için uygundur
Yüksek mukavemetlidir.



ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXDSH 4010	1.0	3	50	4	4	
MXDSH 4015	1.5	4	50	4	4	
MXDSH 4020	2.0	6	50	4	4	
MXDSH 40206	2.0	8	50	6	4	
MXDSH 4025	2.5	6	50	4	4	
MXDSH 40303	3.0	6	50	3	4	
MXDSH 4030	3.0	8	50	4	4	
MXDSH 40306	3.0	8	50	6	4	
MXDSH 4035	3.5	8	50	4	4	
MXDSH 4040	4.0	11	50	4	4	
MXDSH 40406	4.0	11	50	6	4	
MXDSH 40505	5.0	13	50	5	4	
MXDSH 40506	5.0	13	50	6	4	
MXDSH 4060	6.0	15	50	6	4	
MXDSH 4070	7.0	16	63	7	4	
MXDSH 4080	8.0	19	63	8	4	
MXDSH 4090	9.0	20	72	9	4	
MXDSH 4100	10	22	72	10	4	
MXDSH 4110	11	25	80	11	4	
MXDSH 4120	12	26	80	12	4	
MXDSH 4130	13	26	80	13	4	
MXDSH 4140	14	26	83	14	4	
MXDSH 4150	15	32	92	15	4	
MXDSH 4160	16	32	92	16	4	
MXDSH 4180	18	32	92	18	4	
MXDSH 4200	20	40	104	20	4	
MXDSH 4220	22	40	104	22	4	
MXDSH 4240	24	40	110	24	4	
MXDSH 4250	25	40	110	25	4	

UZUN DÜZ KAPLAMALI FREZE 70 HRC Z=4

52 HRC üzeri malzemeler için uygundur
Yüksek mukavemetlidir.



ÜRÜN KODU	ÇAP D	KESME BOYU l1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXDUH 4030	3	10	75	3	4	
MXDUH 4040	4	10	75	4	4	
MXDULH 4040	4	15	100	4	4	
MXDUH 4050	5	15	75	5	4	
MXDULH 4050	5	15	100	5	4	
MXDUH 4060	6	15	75	6	4	
MXDULH 4060	6	20	100	6	4	
MXDXH 4060	6	20	120	8	4	
MXDUH 4080	8	19	75	8	4	
MXDULH 4080	8	22	100	8	4	
MXDXH 4080	8	25	120	8	4	
MXDUH 4100	10	22	100	10	4	
MXDXH 4100	10	30	120	10	4	
MXDUH 4120	12	26	100	12	4	
MXDXH 4120	12	35	120	12	4	

UZUN HELİS DÜZ KAPLAMALI FREZE 70 HRC Z=4

ÜRÜN KODU	ÇAP D	KESME BOYU l1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXDUXH 4030	3	20	75	3	4	
MXDUXH 4040	4	30	75	4	4	
MXDUXLH 4040	4	30	100	4	4	
MXDUXH 4060	6	40	100	6	4	
MXDUXH 4080	8	45	100	8	4	
MXDUXH 4100	10	45	100	10	4	
MXDUXH 4120	12	45	100	12	4	

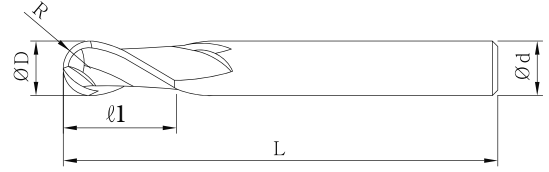
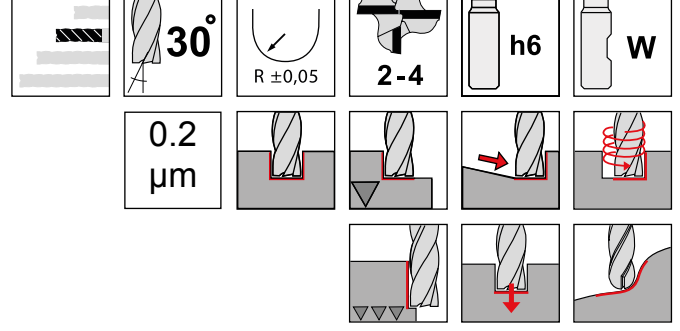
EXTRA UZUN DÜZ KAPLAMALI FREZE 70 HRC Z=4

ÜRÜN KODU	ÇAP D	KESME BOYU l1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXDXLH 4060	6	30	150	6	4	
MXDXLH 4080	8	35	150	8	4	
MXDXLH 4100	10	40	150	10	4	
MXDXLH 4120	12	40	150	12	4	
MXDXLH 4140	14	50	150	14	4	
MXDXLH 4160	16	50	150	16	4	
MXDXLH 4180	18	50	150	18	4	
MXDXLH 4200	20	50	150	20	4	
MXDXLH 4250	25	60	150	25	4	

300 mm özel boy üretim yapılabilir

STANDART KÜRE KAPLAMALI FREZE 70 HRC Z=2

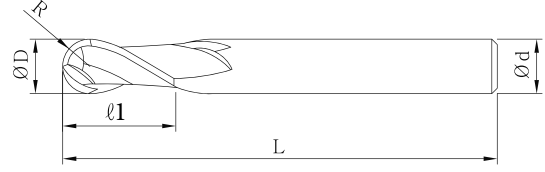
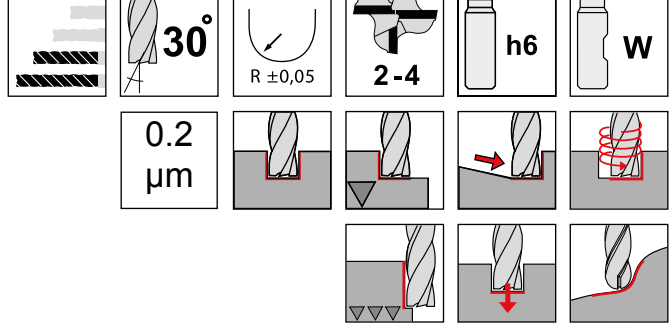
52 HRC üzeri malzemeler için uygundur
Yüksek mukavemetlidir.



ÜRÜN KODU	ÇAP D	KESME BOYU l1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	RADİUS R	SİPARİŞ NO
MXKSH 2010	1.0	3	50	4	2	0.50	
MXKSH 2015	1.5	4	50	4	2	0.75	
MXKSH 2020	2.0	4	50	4	2	1.00	
MXKSH 20206	2.0	10	50	6	2	1.25	
MXKSH 2025	2.5	4	50	4	2	1.25	
MXKSH 20303	3.0	6	50	3	2	1.50	
MXKSH 2030	3.0	6	50	4	2	1.50	
MXKSH 20306	3.0	10	50	6	2	1.50	
MXKSH 2040	4.0	8	50	4	2	2.00	
MXKSH 20406	4.0	10	50	6	2	2.00	
MXKSH 2050	5.0	10	50	6	2	2.50	
MXKSH 20505	5.0	10	50	5	2	2.50	
MXKSH 2060	6.0	12	50	6	2	3.00	
MXKSH 4060	6.0	12	50	6	4	3.00	
MXKSH 2070	7.0	15	63	7	2	3.50	
MXKSH 2080	8.0	16	63	8	2	4.00	
MXKSH 4080	8.0	16	63	8	4	4.00	
MXKSH 2090	9.0	20	72	9	2	4.50	
MXKSH 2100	10	20	72	10	2	5.00	
MXKSH 4100	10	24	72	10	4	5.00	
MXKSH 2110	11	24	80	11	2	5.50	
MXKSH 2120	12	26	80	12	2	6.00	
MXKSH 4120	12	26	80	12	4	6.00	
MXKSH 2130	13	26	80	13	2	6.50	
MXKSH 2140	14	26	83	14	2	7.00	
MXKSH 2150	15	32	92	15	2	7.50	
MXKSH 2160	16	32	92	16	2	8.00	
MXKSH 2180	18	32	92	18	2	9.00	
MXKSH 2200	20	40	104	20	2	10.00	
MXKSH 2220	22	40	104	22	2	11.00	
MXKSH 2400	24	40	110	24	2	12.00	
MXKSH 2500	25	40	110	25	2	12.50	

UZUN KÜRE KAPLAMALI FREZE 70 HRC Z=2

52 HRC üzeri malzemeler için uygundur
Yüksek mukavemetlidir.



ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	RADİUS R	SİPARİŞ NO
MXKUH 2030	3	6	75	3	2	1.50	
MXKUH 2040	4	8	75	4	2	2.00	
MXXKULH 2040	4	10	100	4	2	2.00	
MXKUH 2050	5	12	75	5	2	2.50	
MXXKULH 2050	5	12	100	5	2	2.50	
MXKUH 2060	6	12	75	6	2	3.00	
MXXKULH 2060	6	12	100	6	2	3.00	
MXXKH 2080	6	15	120	6	2	3.00	
MXKUH 2080	8	16	75	8	2	4.00	
MXXKULH 2080	8	16	100	8	2	4.00	
MXXKH 2080	8	20	120	8	2	4.00	
MXKUH 2100	10	20	100	10	2	5.00	
MXXKH 2100	10	20	120	10	2	5.00	
MXXKULH 2120	12	25	100	12	2	6.00	
MXXKH 2120	12	25	120	12	2	6.00	

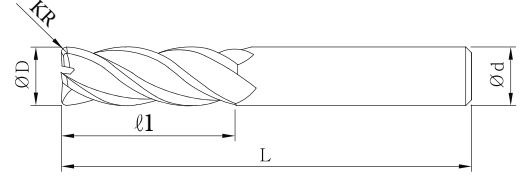
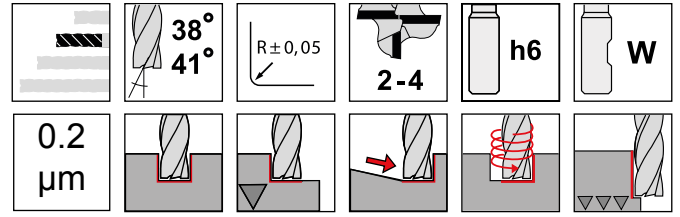
EXTRA UZUN KÜRE KAPLAMALI FREZE 70 HRC Z=2

ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	RADİUS R	SİPARİŞ NO
MXXKXLH 4060	6	30	150	6	2-4	3.00	
MXXKXLH 4080	8	35	150	8	2-4	4.00	
MXXKXLH 4100	10	40	150	10	2-4	5.00	
MXXKXLH 4120	12	40	150	12	2-4	6.00	
MXXKXLH 4140	14	50	150	14	2-4	7.00	
MXXKXLH 4160	16	50	150	16	2-4	8.00	
MXXKXLH 4180	18	50	150	18	2-4	9.00	
MXXKXLH 4200	20	50	150	20	2-4	10.00	
MXXKXLH 4250	25	60	150	25	2-4	12.50	

300 mm özel boy üretim yapılabilir

STANDART KÖŞE RADIUS KAPLAMALI FREZE 70 HRC Z=4

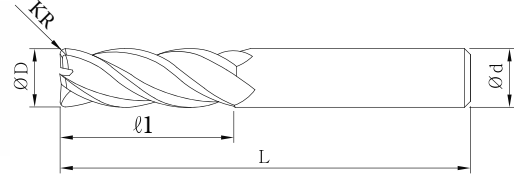
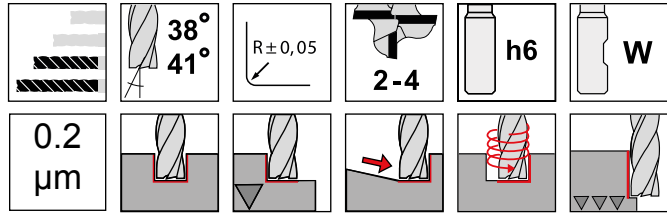
52 HRC üzeri malzemeler için uygundur
Yüksek mukavemetlidir.



ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	KÖŞE RADIUS KR	SİPARİŞ NO
MXKRSH 40202	2	6	50	4	4	R0.2	
MXKRSH 40205	2	6	50	4	4	R0.5	
MXKRSH 40252	2	6	50	4	4	R0.2	
MXKRSH 40255	2	6	50	4	4	R0.5	
MXKRSH 40302	3	8	50	3	4	R0.2	
MXKRSH 40305	3	8	50	3	4	R0.5	
MXKRSH 40310	3	8	50	3	4	R1.0	
MXKRSH 40402	4	8	50	4	4	R0.2	
MXKRSH 40405	4	8	50	4	4	R0.5	
MXKRSH 40410	4	8	50	4	4	R1.0	
MXKRSH 40502	5	11	50	5	4	R0.2	
MXKRSH 40505	5	11	50	5	4	R0.5	
MXKRSH 40510	5	11	50	5	4	R1.0	
MXKRSH 40602	6	15	50	6	4	R0.2	
MXKRSH 40605	6	15	50	6	4	R0.5	
MXKRSH 40610	6	15	50	6	4	R1.0	
MXKRSH 40615	6	15	50	6	4	R1.5	
MXKRSH 40802	8	19	63	8	4	R0.2	
MXKRSH 40805	8	19	63	8	4	R0.5	
MXKRSH 40810	8	19	63	8	4	R1.0	
MXKRSH 40815	8	19	63	8	4	R1.5	
MXKRSH 40820	8	19	63	8	4	R2.0	
MXKRSH 41002	10	22	75	10	4	R0.2	
MXKRSH 41005	10	22	75	10	4	R0.5	
MXKRSH 41010	10	22	75	10	4	R1.0	
MXKRSH 41015	10	22	75	10	4	R1.5	
MXKRSH 41020	10	22	75	10	4	R2.0	
MXKRSH 41202	12	25	80	12	4	R0.2	
MXKRSH 41205	12	25	80	12	4	R0.5	
MXKRSH 41210	12	25	80	12	4	R1.0	
MXKRSH 41215	12	25	80	12	4	R1.5	
MXKRSH 41220	12	25	80	12	4	R2.0	

UZUN KÖŞE RADIUS KAPLAMALI FREZE 70 HRC Z=4

52 HRC üzeri malzemeler için uygundur
Yüksek mukavemetlidir.

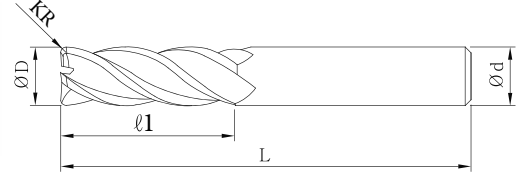
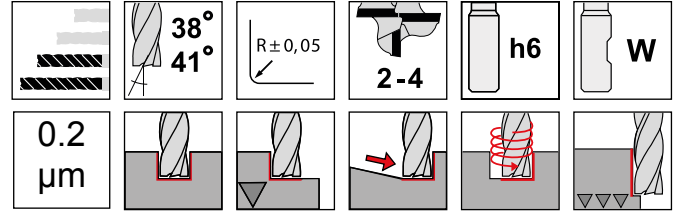


ÜRÜN KODU	ÇAP D	KESME BOYU l1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	KÖŞE RADIUS KR	SİPARİŞ NO
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MXKRUH 40302	3	8	75	3	4	R0.2	
MXKRUH 40305	3	8	75	3	4	R0.5	
MXKRUH 40310	3	8	75	3	4	R1.0	
MXKRUH 40402	4	8	75	4	4	R0.2	
MXKRUH 40405	4	8	75	4	4	R0.5	
MXKRUH 40410	4	8	75	4	4	R1.0	
MXKRULH 40402	4	11	100	4	4	R0.2	
MXKRULH 40405	4	11	100	4	4	R0.5	
MXKRULH 40410	4	11	100	4	4	R1.0	
MXKRUH 40502	5	15	75	5	4	R0.2	
MXKRUH 40505	5	15	75	5	4	R0.5	
MXKRUH 40510	5	15	75	5	4	R1.0	
MXKRUH 40602	6	15	75	6	4	R0.2	
MXKRUH 40605	6	15	75	6	4	R0.5	
MXKRUH 40610	6	15	75	6	4	R1.0	
MXKRUH 40615	6	15	75	6	4	R1.5	
MXKRULH 40602	6	15	100	6	4	R0.2	
MXKRULH 40605	6	15	100	6	4	R0.5	
MXKRULH 40610	6	15	100	6	4	R1.0	
MXKRULH 40615	6	15	100	6	4	R1.5	
MXKRXH 40605	6	20	120	6	4	R0.5	
MXKRXH 40610	6	20	120	6	4	R1.0	
MXKRUH 40802	8	20	75	8	4	R0.2	
MXKRUH 40805	8	20	75	8	4	R0.5	
MXKRUH 40810	8	20	75	8	4	R1.0	
MXKRUH 40815	8	20	75	8	4	R1.5	
MXKRUH 40820	8	20	75	8	4	R2.0	
MXKRULH 40802	8	20	100	8	4	R0.2	
MXKRULH 40805	8	20	100	8	4	R0.5	
MXKRULH 40810	8	20	100	8	4	R1.0	
MXKRULH 40815	8	20	100	8	4	R1.5	
MXKRULH 40820	8	20	100	8	4	R2.0	
MXKRXH 40805	8	20	120	8	4	R0.5	
MXKRXH 40810	8	20	120	8	4	R1.0	
MXKRULH 41002	10	20	100	10	4	R0.2	
MXKRULH 41005	10	20	100	10	4	R0.5	
MXKRULH 41010	10	20	100	10	4	R1.0	
MXKRULH 41015	10	20	100	10	4	R1.5	
MXKRULH 41020	10	20	100	10	4	R2.0	
MXKRXH 41005	10	20	120	10	4	R0.5	
MXKRXH 41010	10	20	120	10	4	R1.0	
MXKRULH 41202	12	25	100	12	4	R0.2	
MXKRULH 41205	12	25	100	12	4	R0.5	
MXKRULH 41210	12	25	100	12	4	R1.0	
MXKRULH 41215	12	25	100	12	4	R1.5	
MXKRULH 41220	12	25	100	12	4	R2.0	
MXKRXH 41205	12	25	120	12	4	R0.5	
MXKRXH 41210	12	25	120	12	4	R1.0	

EXTRA UZUN KÖŞE RADIUS KAPLAMALI FREZE 70 HRC Z=4

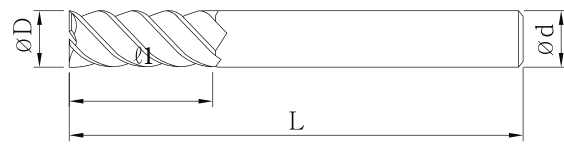
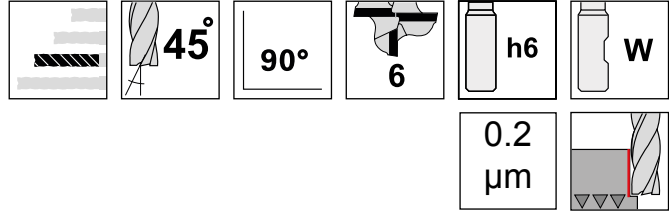
52 HRC üzeri malzemeler için uygundur
Yüksek mukavemetlidir.



ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	KÖŞE RADIUS KR	SİPARİŞ NO
MXKRXLH 40602	6	30	150	6	4	R0.2	
MXKRXLH 40605	6	30	150	6	4	R0.5	
MXKRXLH 40610	6	30	150	6	4	R1.0	
MXKRXLH 40802	8	35	150	8	4	R0.2	
MXKRXLH 40805	8	35	150	8	4	R0.5	
MXKRXLH 40810	8	35	150	8	4	R1.0	
MXKRXLH 41002	10	40	150	10	4	R0.2	
MXKRXLH 41005	10	40	150	10	4	R0.5	
MXKRXLH 41010	10	40	150	10	4	R1.0	
MXKRXLH 41202	12	40	150	12	4	R0.2	
MXKRXLH 41205	12	40	150	12	4	R0.5	
MXKRXLH 41210	12	40	150	12	4	R1.0	

ÇOK AĞIZLI UZUN DÜZ KAPLAMALI FREZE 70 HRC Z=6

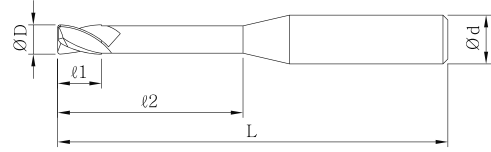
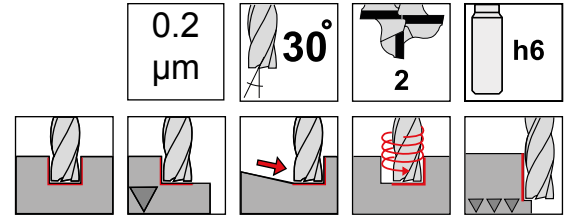
52 HRC üzeri malzemeler için uygundur
Yüksek mukavemetlidir.



ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXDXLFH 6060	6	25	75	6	6	
MXDXLFH 6080	8	40	100	8	6	
MXDXLFH 6100	10	45	100	10	6	
MXDXLFH 6120	12	45	110	12	6	
MXDXLFH 6140	14	50	110	14	6	
MXDXLFH 6160	16	55	110	16	6	
MXDXLFH 6180	18	55	110	18	6	
MXDXLFH 6200	20	60	110	20	6	
MXDXLFLH 6080	8	50	150	8	6	
MXDXLFLH 6100	10	55	150	10	6	
MXDXLFLH 6120	12	55	150	12	6	
MXDXLFLH 6140	14	65	150	14	6	
MXDXLFLH 6160	16	65	150	16	6	
MXDXLFLH 6180	18	65	150	18	6	
MXDXLFLH 6200	20	70	150	20	6	

DALMA BOYLU KAPLAMALI DÜZ FREZE 70 HRC Z=2

52 HRC üzeri malzemeler için uygundur
Yüksek mukavemetlidir.



ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	DALMA BOYU ℓ2	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXFDH0100L4	1.0	1.5	4	50	4	2	
MXFDH0100L6	1.0	1.5	6	50	4	2	
MXFDH0100L8	1.0	1.5	8	50	4	2	
MXFDH0100L10	1.0	1.5	10	50	4	2	
MXFDH0100L12	1.0	1.5	12	50	4	2	
MXFDH0100L14	1.0	1.5	14	50	4	2	
MXFDH0100L16	1.0	1.5	16	50	4	2	
MXFDH0100L18	1.0	1.5	18	50	4	2	
MXFDH0100L20	1.0	1.5	20	50	4	2	
MXFDH0150L4	1.5	2.2	4	50	4	2	
MXFDH0150L6	1.5	2.2	6	50	4	2	
MXFDH0150L8	1.5	2.2	8	50	4	2	
MXFDH0150L10	1.5	2.2	10	50	4	2	
MXFDH0150L12	1.5	2.2	12	50	4	2	
MXFDH0150L14	1.5	2.2	14	50	4	2	
MXFDH0150L16	1.5	2.2	16	50	4	2	
MXFDH0150L18	1.5	2.2	18	50	4	2	
MXFDH0150L20	1.5	2.2	20	50	4	2	
MXFDH0200L6	2.0	3.0	6	50	4	2	
MXFDH0200L8	2.0	3.0	8	50	4	2	
MXFDH0200L10	2.0	3.0	10	50	4	2	
MXFDH0200L12	2.0	3.0	12	50	4	2	
MXFDH0200L14	2.0	3.0	14	50	4	2	
MXFDH0200L16	2.0	3.0	16	50	4	2	
MXFDH0200L18	2.0	3.0	18	50	4	2	
MXFDH0200L20	2.0	3.0	20	50	4	2	
MXFDH0200L25	2.0	3.0	25	60	4	2	
MXFDH0250L6	2.5	3.5	6	50	4	2	
MXFDH0250L8	2.5	3.5	8	50	4	2	
MXFDH0250L10	2.5	3.5	10	50	4	2	
MXFDH0250L12	2.5	3.5	12	50	4	2	
MXFDH0250L14	2.5	3.5	14	50	4	2	
MXFDH0250L16	2.5	3.5	16	50	4	2	
MXFDH0250L18	2.5	3.5	18	50	4	2	
MXFDH0250L20	2.5	3.5	20	50	4	2	
MXFDH0250L25	2.5	3.5	25	60	4	2	

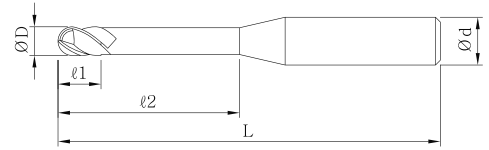
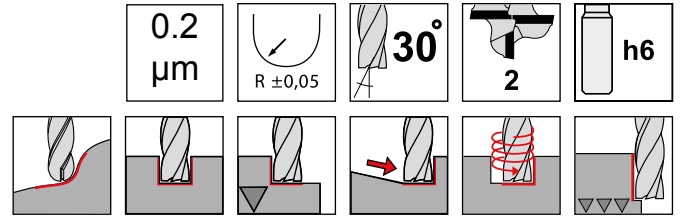
ÜRÜN KODU	ÇAP D	KESME BOYU ℓ ₁	DALMA BOYU ℓ ₂	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXFDH0300L10	3.0	4	10	65	6	2	
MXFDH0300L12	3.0	4	12	65	6	2	
MXFDH0300L14	3.0	4	14	65	6	2	
MXFDH0300L16	3.0	4	16	65	6	2	
MXFDH0300L18	3.0	4	18	65	6	2	
MXFDH0300L20	3.0	4	20	65	6	2	
MXFDH0300L25	3.0	4	25	65	6	2	
MXFDH0300L30	3.0	4	30	65	6	2	
MXFDH0300L35	3.0	4	35	65	6	2	
MXFDH0400L10	4.0	6	10	65	6	2	
MXFDH0400L12	4.0	6	12	65	6	2	
MXFDH0400L14	4.0	6	14	65	6	2	
MXFDH0400L16	4.0	6	16	65	6	2	
MXFDH0400L18	4.0	6	18	65	6	2	
MXFDH0400L20	4.0	6	20	65	6	2	
MXFDH0400L25	4.0	6	25	65	6	2	
MXFDH0400L30	4.0	6	30	65	6	2	
MXFDH0400L35	4.0	6	35	65	6	2	

FREZELER

END MILL

DALMA BOYLU KAPLAMALI KÜRE FREZE 70 HRC Z=2

52 HRC üzeri malzemeler için uygundur
Yüksek mukavemetlidir.



ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	DALMA BOYU ℓ2	TAM BOY L	ŞAFT ÇAP d	AĞIZ SAYISI Z	SİPARİŞ NO
MXFDKH0100L4	1.0	1.5	4	50	4	2	
MXFDKH0100L6	1.0	1.5	6	50	4	2	
MXFDKH0100L8	1.0	1.5	8	50	4	2	
MXFDKH0100L10	1.0	1.5	10	50	4	2	
MXFDKH0100L12	1.0	1.5	12	50	4	2	
MXFDKH0100L14	1.0	1.5	14	50	4	2	
MXFDKH0100L16	1.0	1.5	16	50	4	2	
MXFDKH0100L18	1.0	1.5	18	50	4	2	
MXFDKH0100L20	1.0	1.5	20	50	4	2	
MXFDKH0150L4	1.5	2.2	4	50	4	2	
MXFDKH0150L6	1.5	2.2	6	50	4	2	
MXFDKH0150L8	1.5	2.2	8	50	4	2	
MXFDKH0150L10	1.5	2.2	10	50	4	2	
MXFDKH0150L12	1.5	2.2	12	50	4	2	
MXFDKH0150L14	1.5	2.2	14	50	4	2	
MXFDKH0150L16	1.5	2.2	16	50	4	2	
MXFDKH0150L18	1.5	2.2	18	50	4	2	
MXFDKH0150L20	1.5	2.2	20	50	4	2	
MXFDKH0200L6	2.0	3.0	6	50	4	2	
MXFDKH0200L8	2.0	3.0	8	50	4	2	
MXFDKH0200L10	2.0	3.0	10	50	4	2	
MXFDKH0200L12	2.0	3.0	12	50	4	2	
MXFDKH0200L14	2.0	3.0	14	50	4	2	
MXFDKH0200L16	2.0	3.0	16	50	4	2	
MXFDKH0200L18	2.0	3.0	18	50	4	2	
MXFDKH0200L20	2.0	3.0	20	50	4	2	
MXFDKH0200L25	2.0	3.0	25	60	4	2	
MXFDKH0250L6	2.5	3.5	6	50	4	2	
MXFDKH0250L8	2.5	3.5	8	50	4	2	
MXFDKH0250L10	2.5	3.5	10	50	4	2	
MXFDKH0250L12	2.5	3.5	12	50	4	2	
MXFDKH0250L14	2.5	3.5	16	50	4	2	
MXFDKH0250L16	2.5	3.5	20	50	4	2	
MXFDKH0250L18	2.5	3.5	25	50	4	2	
MXFDKH0250L20	2.5	3.5	20	50	4	2	
MXFDKH0250L25	2.5	3.5	25	60	4	2	

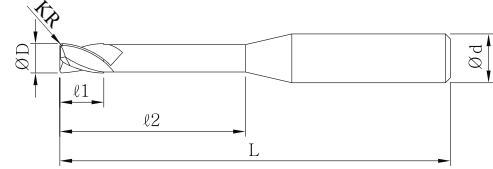
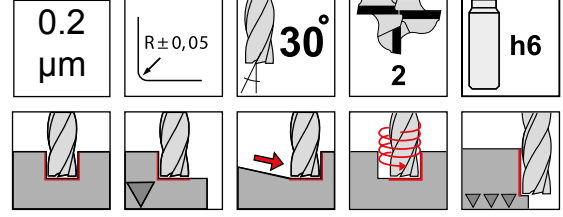
ÜRÜN KODU	ÇAP D	KESME BOYU ℓ1	DALMA BOYU ℓ2	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI Z	SİPARİŞ NO
MXFDKH0300L10	3.0	4	10	65	6	2	
MXFDKH0300L12	3.0	4	12	65	6	2	
MXFDKH0300L14	3.0	4	14	65	6	2	
MXFDKH0300L16	3.0	4	16	65	6	2	
MXFDKH0300L18	3.0	4	18	65	6	2	
MXFDKH0300L20	3.0	4	20	65	6	2	
MXFDKH0300L25	3.0	4	25	65	6	2	
MXFDKH0300L30	3.0	4	30	65	6	2	
MXFDKH0300L35	3.0	4	35	65	6	2	
MXFDKH0400L10	4.0	6	10	65	6	2	
MXFDKH0400L12	4.0	6	12	65	6	2	
MXFDKH0400L14	4.0	6	14	65	6	2	
MXFDKH0400L16	4.0	6	16	65	6	2	
MXFDKH0400L18	4.0	6	18	65	6	2	
MXFDKH0400L20	4.0	6	20	65	6	2	
MXFDKH0400L25	4.0	6	25	65	6	2	
MXFDKH0400L30	4.0	6	30	65	6	2	
MXFDKH0400L35	4.0	6	35	65	6	2	

FREZELER

END MILL

DALMA BOYLU KAPLAMALI KÖŞE RADIUS FREZE 70 HRC Z=2

52 HRC üzeri malzemeler için uygundur
Yüksek mukavemetlidir.



ÜRÜN KODU	KÖŞE RADIUS KR	ÇAP D	KESME BOYU ℓ ₁	DALMA BOYU L ₂	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI	SİPARİŞ NO
MXFDH0100R02L4	R0.2	1.0	1.5	4	50	4	2	
MXFDH0100R02L6	R0.2	1.0	1.5	6	50	4	2	
MXFDH0100R02L8	R0.2	1.0	1.5	8	50	4	2	
MXFDH0100R02L10	R0.2	1.0	1.5	10	50	4	2	
MXFDH0100R02L12	R0.2	1.0	1.5	12	50	4	2	
MXFDH0100R02L14	R0.2	1.0	1.5	14	50	4	2	
MXFDH0100R02L16	R0.2	1.0	1.5	16	50	4	2	
MXFDH0100R02L18	R0.2	1.0	1.5	18	50	4	2	
MXFDH0100R02L20	R0.2	1.0	1.5	20	50	4	2	
MXFDH0150R02L4	R0.2	1.5	2.2	4	50	4	2	
MXFDH0150R02L6	R0.2	1.5	2.2	6	50	4	2	
MXFDH0150R02L8	R0.2	1.5	2.2	8	50	4	2	
MXFDH0150R02L10	R0.2	1.5	2.2	10	50	4	2	
MXFDH0150R02L12	R0.2	1.5	2.2	12	50	4	2	
MXFDH0150R02L14	R0.2	1.5	2.2	14	50	4	2	
MXFDH0150R02L16	R0.2	1.5	2.2	16	50	4	2	
MXFDH0150R02L18	R0.2	1.5	2.2	18	50	4	2	
MXFDH0150R02L20	R0.2	1.5	2.2	20	50	4	2	
MXFDH0200R02L6	R0.2	2.0	3.0	6	50	4	2	
MXFDH0200R02L8	R0.2	2.0	3.0	8	50	4	2	
MXFDH0200R02L10	R0.2	2.0	3.0	10	50	4	2	
MXFDH0200R02L12	R0.2	2.0	3.0	12	50	4	2	
MXFDH0200R02L14	R0.2	2.0	3.0	14	50	4	2	
MXFDH0200R02L16	R0.2	2.0	3.0	16	50	4	2	
MXFDH0200R02L18	R0.2	2.0	3.0	18	50	4	2	
MXFDH0200R02L20	R0.2	2.0	3.0	20	50	4	2	
MXFDH0200R02L25	R0.2	2.0	3.0	25	60	4	2	
MXFDH0200R05L6	R0.5	2.0	3.0	6	50	4	2	
MXFDH0200R05L8	R0.5	2.0	3.0	8	50	4	2	
MXFDH0200R05L10	R0.5	2.0	3.0	10	50	4	2	
MXFDH0200R05L12	R0.5	2.0	3.0	12	50	4	2	
MXFDH0200R05L14	R0.5	2.0	3.0	14	50	4	2	
MXFDH0200R05L16	R0.5	2.0	3.0	16	50	4	2	
MXFDH0200R05L18	R0.5	2.0	3.0	18	50	4	2	
MXFDH0200R05L20	R0.5	2.0	3.0	20	50	4	2	
MXFDH0200R05L25	R0.5	2.0	3.0	25	60	4	2	

ÜRÜN KODU	RADIUS	ÇAP D	KESME BOYU ℓ ₁	DALMA BOYU ℓ ₂	TAM BOY L	ŞAFT ÇAPI d	AĞIZ SAYISI	SİPARİŞ NO
MXFDH0250R02L6	R0.2	2.5	3.5	6	50	4	2	
MXFDH0250R02L8	R0.2	2.5	3.5	8	50	4	2	
MXFDH0250R02L10	R0.2	2.5	3.5	10	50	4	2	
MXFDH0250R02L12	R0.2	2.5	3.5	12	50	4	2	
MXFDH0250R02L14	R0.2	2.5	3.5	14	50	4	2	
MXFDH0250R02L16	R0.2	2.5	3.5	16	50	4	2	
MXFDH0250R02L18	R0.2	2.5	3.5	18	50	4	2	
MXFDH0250R02L20	R0.2	2.5	3.5	20	50	4	2	
MXFDH0250R02L25	R0.2	2.5	3.5	25	60	4	2	
MXFDH0250R05L6	R0.5	2.5	3.5	6	50	4	2	
MXFDH0250R05L8	R0.5	2.5	3.5	8	50	4	2	
MXFDH0250R05L10	R0.5	2.5	3.5	10	50	4	2	
MXFDH0250R05L12	R0.5	2.5	3.5	12	50	4	2	
MXFDH0250R05L14	R0.5	2.5	3.5	14	50	4	2	
MXFDH0250R05L16	R0.5	2.5	3.5	16	50	4	2	
MXFDH0250R05L18	R0.5	2.5	3.5	18	50	4	2	
MXFDH0250R05L20	R0.5	2.5	3.5	20	50	4	2	
MXFDH0250R05L25	R0.5	2.5	3.5	25	60	4	2	
MXFDH0300R02L10	R0.2	3.0	4	10	65	6	2	
MXFDH0300R02L12	R0.2	3.0	4	12	65	6	2	
MXFDH0300R02L14	R0.2	3.0	4	14	65	6	2	
MXFDH0300R02L16	R0.2	3.0	4	16	65	6	2	
MXFDH0300R02L18	R0.2	3.0	4	18	65	6	2	
MXFDH0300R02L20	R0.2	3.0	4	20	65	6	2	
MXFDH0300R02L25	R0.2	3.0	4	25	65	6	2	
MXFDH0300R02L30	R0.2	3.0	4	30	65	6	2	
MXFDH0300R02L35	R0.2	3.0	4	35	65	6	2	
MXFDH0300R05L10	R0.5	3.0	4	10	65	6	2	
MXFDH0300R05L12	R0.5	3.0	4	12	65	6	2	
MXFDH0300R05L14	R0.5	3.0	4	14	65	6	2	
MXFDH0300R05L16	R0.5	3.0	4	16	65	6	2	
MXFDH0300R05L18	R0.5	3.0	4	18	65	6	2	
MXFDH0300R05L20	R0.5	3.0	4	20	65	6	2	
MXFDH0300R05L25	R0.5	3.0	4	25	65	6	2	
MXFDH0300R05L30	R0.5	3.0	4	30	65	6	2	
MXFDH0300R05L35	R0.5	3.0	4	35	65	6	2	
MXFDH0300R1L10	R1.0	3.0	4	10	65	6	2	
MXFDH0300R1L12	R1.0	3.0	4	12	65	6	2	
MXFDH0300R1L14	R1.0	3.0	4	14	65	6	2	
MXFDH0300R1L16	R1.0	3.0	4	16	65	6	2	
MXFDH0300R1L18	R1.0	3.0	4	18	65	6	2	
MXFDH0300R1L20	R1.0	3.0	4	20	65	6	2	
MXFDH0300R1L25	R1.0	3.0	4	25	65	6	2	
MXFDH0300R1L30	R1.0	3.0	4	30	65	6	2	
MXFDH0300R1L35	R1.0	3.0	4	35	65	6	2	
MXFDH0400R02L10	R0.2	4.0	6	10	65	6	2	
MXFDH0400R02L12	R0.2	4.0	6	12	65	6	2	
MXFDH0400R02L14	R0.2	4.0	6	14	65	6	2	
MXFDH0400R02L16	R0.2	4.0	6	16	65	6	2	
MXFDH0400R02L18	R0.2	4.0	6	18	65	6	2	
MXFDH0400R02L20	R0.2	4.0	6	20	65	6	2	
MXFDH0400R02L25	R0.2	4.0	6	25	65	6	2	
MXFDH0400R02L30	R0.2	4.0	6	30	65	6	2	
MXFDH0400R02L35	R0.2	4.0	6	35	65	6	2	
MXFDH0400R05L10	R0.5	4.0	6	10	65	6	2	
MXFDH0400R05L12	R0.5	4.0	6	12	65	6	2	
MXFDH0400R05L14	R0.5	4.0	6	14	65	6	2	
MXFDH0400R05L16	R0.5	4.0	6	16	65	6	2	
MXFDH0400R05L18	R0.5	4.0	6	18	65	6	2	
MXFDH0400R05L20	R0.5	4.0	6	20	65	6	2	
MXFDH0400R05L25	R0.5	4.0	6	25	65	6	2	
MXFDH0400R05L30	R0.5	4.0	6	30	65	6	2	
MXFDH0400R05L35	R0.5	4.0	6	35	65	6	2	
MXFDH0400R1L10	R1.0	4.0	6	10	65	6	2	
MXFDH0400R1L12	R1.0	4.0	6	12	65	6	2	
MXFDH0400R1L14	R1.0	4.0	6	14	65	6	2	
MXFDH0400R1L16	R1.0	4.0	6	16	65	6	2	
MXFDH0400R1L18	R1.0	4.0	6	18	65	6	2	
MXFDH0400R1L20	R1.0	4.0	6	20	65	6	2	
MXFDH0400R1L25	R1.0	4.0	6	25	65	6	2	
MXFDH0400R1L30	R1.0	4.0	6	30	65	6	2	
MXFDH0400R1L35	R1.0	4.0	6	35	65	6	2	

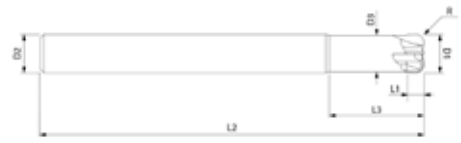
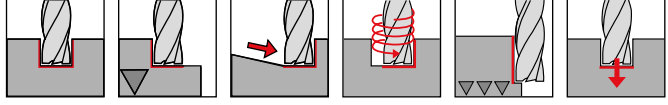
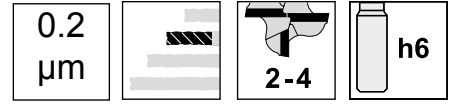
HIGH FEED (HIZLI KESİM) KÖŞE RADIUS FREZE KAPLAMALI 52 HRC Z=4

Finış düz freze, değişken kanal derinliğine sahiptir.

52 HRC

2344-2312-2738-1040-1050

ve benzeri malzemeler için uygundur



ÜRÜN KODU	ÇAP D1	ŞAFT ÇAPI D2	TAM BOY L2	DALMA BOYU L3	KESME BOYU L1	BOĞAZ ÇAPI D3	R	Z	SİPARİŞ NO
MXPRH 4040	4.0	6.0	65	10	1,6	3,5	0.5	4	
MXPRH 4040	4.0	6.0	65	10	1,6	3,5	1	4	
MXPRH 4050	5.0	6.0	75	12	2	4,5	0.5	4	
MXPRH 4050	5.0	6.0	75	12	2	4,5	1	4	
MXPRH 4060	6.0	6.0	75	13	2,5	5,5	0.5	4	
MXPRH 4060	6.0	6.0	75	13	2,5	5,5	1	4	
MXPRH 4080	8.0	8.0	100	18	3,5	7,5	0.5	4	
MXPRH 4080	8.0	8.0	100	18	3,5	7,5	1	4	
MXPRH 4100	10	10	100	20	4	9,5	0.5	4	
MXPRH 4100	10	10	100	20	4	9,5	1	4	
MXPRH 4120	12	12	100	25	5	11,5	0.5	4	
MXPRH 4120	12	12	100	25	5	11,5	1	4	



N TİPİ KARBÜR MATKAP (kaplamasız)



KARBÜR MATKAP



KARBÜR PUNTA MATKAP UCU



NC KARBÜR MATKAP



KARBÜR HAVŞA



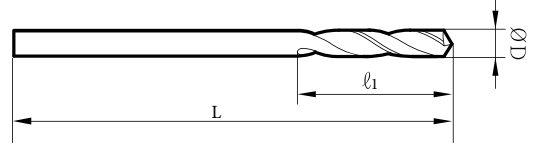
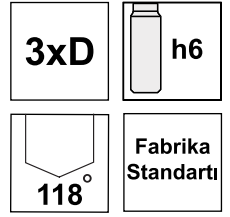
ÇİFT TARAFLI HAVŞA



KARBÜR MAKİNA RAYBASI

N TİPİ KARBÜR KISA MATKAP UCU DIN 1897

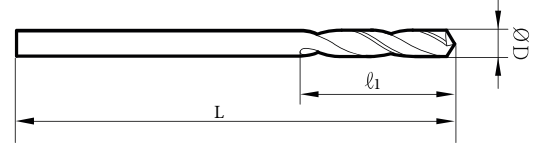
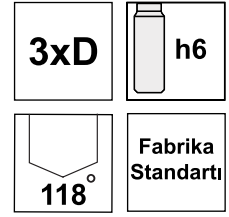
N tipi karbür kaplamasız kısa matkap ucu çelik, döküm, mangan, sertleştirilmiş çelikler, bronz ve hafif metaller için uygundur. Lif takviyeli plastikler ve duro plastik gibi ürünler için kısıtlı kullanılır.



ÜRÜN KODU	ÇAP D	KESME BOYU l ₁	TAM BOY L	SİPARİŞ NO
MX3016 0050	0.50	4	22	
MX3016 0055	0.55	4	22	
MX3016 0060	0.60	5	22	
MX3016 0065	0.65	5	22	
MX3016 0070	0.70	5	24	
MX3016 0075	0.75	5	24	
MX3016 0080	0.80	5	24	
MX3016 0085	0.85	5	24	
MX3016 0090	0.90	6	26	
MX3016 0095	0.95	6	26	
MX3016 0100	1.00	6	26	
MX3016 0105	1.05	6	26	
MX3016 0110	1.10	7	28	
MX3016 0115	1.15	7	28	
MX3016 0120	1.20	8	30	
MX3016 0125	1.25	8	32	
MX3016 0130	1.30	8	32	
MX3016 0135	1.35	9	32	
MX3016 0140	1.40	9	32	
MX3016 0145	1.45	9	32	
MX3016 0150	1.50	9	32	
MX3016 0155	1.55	10	34	
MX3016 0160	1.60	10	34	
MX3016 0165	1.65	11	34	
MX3016 0170	1.70	11	34	
MX3016 0175	1.75	11	36	
MX3016 0180	1.80	12	36	
MX3016 0185	1.85	12	36	
MX3016 0190	1.90	12	36	
MX3016 0195	1.95	12	38	
MX3016 0200	2.00	13	38	
MX3016 0205	2.05	13	38	
MX3016 0210	2.10	13	38	
MX3016 0215	2.15	14	40	
MX3016 0220	2.20	14	40	
MX3016 0225	2.25	14	40	
MX3016 0230	2.30	14	40	
MX3016 0235	2.35	14	40	
MX3016 0240	2.40	15	43	
MX3016 0245	2.45	15	43	
MX3016 0250	2.50	15	43	
MX3016 0255	2.55	15	43	
MX3016 0260	2.60	15	43	
MX3016 0265	2.65	16	46	
MX3016 0270	2.70	17	46	
MX3016 0275	2.75	17	46	
MX3016 0280	2.80	17	46	
MX3016 0285	2.85	17	46	

N TİPİ KARBÜR KISA MATKAP UCU DIN 1897

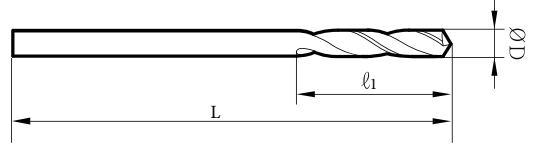
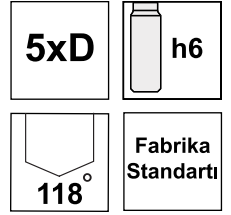
N tipi karbür kaplamasız kısa matkap ucu çelik, döküm, mangan, sertleştirilmiş çelikler, bronz ve hafif metaller için uygundur. Lif takviyeli plastikler ve duro plastik gibi ürünler için kısıtlı kullanılır.



ÜRÜN KODU	ÇAP D	KESME BOYU l ₁	TAM BOY L	SİPARİŞ NO
MX3016 0290	2.90	17	46	
MX3016 0295	2.95	17	46	
MX3016 0300	3.00	17	46	
MX3016 0310	3.10	19	49	
MX3016 0320	3.20	19	49	
MX3016 0330	3.30	19	49	
MX3016 0340	3.40	21	52	
MX3016 0350	3.50	21	52	
MX3016 0360	3.60	21	52	
MX3016 0370	3.70	21	52	
MX3016 0380	3.80	23	55	
MX3016 0390	3.90	23	55	
MX3016 0400	4.00	23	55	
MX3016 0410	4.1	23	55	
MX3016 0420	4.2	24	55	
MX3016 0430	4.3	25	58	
MX3016 0440	4.4	25	58	
MX3016 0450	4.5	25	58	
MX3016 0460	4.6	25	58	
MX3016 0470	4.7	25	58	
MX3016 0480	4.8	27	62	
MX3016 0490	4.9	27	62	
MX3016 0500	5.0	27	62	
MX3016 0520	5.2	27	62	
MX3016 0550	5.5	29	66	
MX3016 0580	5.8	29	66	
MX3016 0600	6.0	29	66	
MX3016 0650	6.5	32	70	
MX3016 0680	6.8	35	74	
MX3016 0700	7.0	35	74	
MX3016 0750	7.5	35	74	
MX3016 0780	7.8	38	79	
MX3016 0800	8.0	38	79	
MX3016 0850	8.5	38	79	
MX3016 0880	8.8	41	84	
MX3016 0900	9.0	41	84	
MX3016 0950	9.5	41	84	
MX3016 0980	9.8	44	89	
MX3016 1000	10.0	44	89	
MX3016 1020	10.2	44	89	
MX3016 1050	10.5	44	89	
MX3016 1080	10.8	48	95	
MX3016 1100	11.0	48	95	
MX3016 1150	11.5	48	95	
MX3016 1180	11.8	48	95	
MX3016 1200	12.0	52	102	

N TİPİ KARBÜR STANDART MATKAP UCU DIN 338

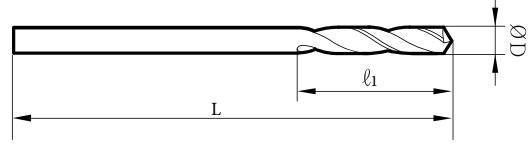
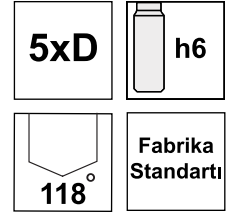
N tipi karbür kaplamasız kısa matkap ucu çelik, döküm, mangan, sertleştirilmiş çelikler, bronz ve hafif metaller için uygundur. Lif takviyeli plastikler ve duro plastik gibi ürünler için kısıtlı kullanılır.



ÜRÜN KODU	ÇAP D	KESME BOYU l ₁	TAM BOY L	SİPARİŞ NO
MX3017 0050	0.50	7	22	
MX3017 0055	0.55	7	22	
MX3017 0060	0.60	8	24	
MX3017 0065	0.65	8	24	
MX3017 0070	0.70	10	28	
MX3017 0075	0.75	10	28	
MX3017 0080	0.80	11	30	
MX3017 0085	0.85	11	30	
MX3017 0090	0.90	12	32	
MX3017 0095	0.95	12	32	
MX3017 0100	1.00	13	34	
MX3017 0105	1.05	13	34	
MX3017 0110	1.10	15	36	
MX3017 0115	1.15	15	36	
MX3017 0120	1.20	17	38	
MX3017 0125	1.25	17	38	
MX3017 0130	1.30	17	38	
MX3017 0135	1.35	17	38	
MX3017 0140	1.40	19	40	
MX3017 0145	1.45	19	40	
MX3017 0150	1.50	19	40	
MX3017 0155	1.55	21	43	
MX3017 0160	1.60	21	43	
MX3017 0165	1.65	21	43	
MX3017 0170	1.70	21	43	
MX3017 0175	1.75	23	46	
MX3017 0180	1.80	23	46	
MX3017 0185	1.85	23	46	
MX3017 0190	1.90	23	46	
MX3017 0195	1.95	25	49	
MX3017 0200	2.00	25	49	
MX3017 0205	2.05	25	49	
MX3017 0210	2.10	25	49	
MX3017 0215	2.15	28	53	
MX3017 0220	2.20	28	53	
MX3017 0225	2.25	28	53	
MX3017 0230	2.30	28	53	
MX3017 0235	2.35	31	57	
MX3017 0240	2.40	31	57	
MX3017 0245	2.45	31	57	
MX3017 0250	2.50	31	57	
MX3017 0255	2.55	31	57	
MX3017 0260	2.60	31	57	
MX3017 0265	2.65	34	61	
MX3017 0270	2.70	34	61	
MX3017 0275	2.75	34	61	
MX3017 0280	2.80	34	61	
MX3017 0285	2.85	34	61	

N TİPİ KARBÜR STANDART MATKAP UCU DIN 338

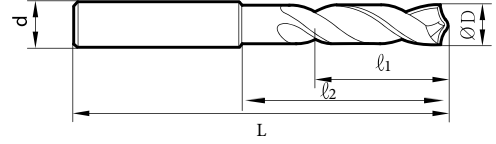
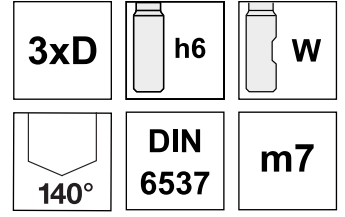
N tipi karbür standart matkap ucu
çelik, döküm, mangan, sertleştirilmiş çelikler,
bronz ve hafif metaller için uygundur.
Lif takviyeli plastikler ve duro plastik gibi
ürünler için kısıtlı kullanılır.



ÜRÜN KODU	ÇAP D	KESME BOYU l_1	TAM BOY L	SİPARİŞ NO
MX3017 0290	2.90	34	61	
MX3017 0295	2.95	34	61	
MX3017 0300	3.00	34	61	
MX3017 0310	3.10	37	65	
MX3017 0320	3.20	37	65	
MX3017 0330	3.30	37	65	
MX3017 0340	3.40	40	70	
MX3017 0350	3.50	40	70	
MX3017 0360	3.60	40	70	
MX3017 0370	3.70	40	70	
MX3017 0380	3.80	44	75	
MX3017 0390	3.90	44	75	
MX3017 0400	4.00	44	75	
MX3017 0410	4.1	44	75	
MX3017 0420	4.2	44	75	
MX3017 0430	4.3	48	80	
MX3017 0440	4.4	48	80	
MX3017 0450	4.5	48	80	
MX3017 0460	4.6	48	80	
MX3017 0470	4.7	48	80	
MX3017 0480	4.8	53	86	
MX3017 0490	4.9	53	86	
MX3017 0500	5.0	53	86	
MX3017 0520	5.2	53	86	
MX3017 0550	5.5	57	93	
MX3017 0580	5.8	57	93	
MX3017 0600	6.0	57	93	
MX3017 0650	6.5	63	101	
MX3017 0680	6.8	69	109	
MX3017 0700	7.0	69	109	
MX3017 0750	7.5	69	109	
MX3017 0780	7.8	75	117	
MX3017 0800	8.0	75	117	
MX3017 0850	8.5	75	117	
MX3017 0880	8.8	82	125	
MX3017 0900	9.0	82	125	
MX3017 0950	9.5	82	125	
MX3017 0980	9.8	87	133	
MX3017 1000	10.0	87	133	
MX3017 1020	10.2	87	133	
MX3017 1050	10.5	87	133	
MX3017 1080	10.8	94	142	
MX3017 1100	11.0	94	142	
MX3017 1150	11.5	94	142	
MX3017 1180	11.8	94	142	
MX3017 1200	12.0	101	151	

KARBÜR MATKAP UCU KAPLAMALI SIVI KANALSIZ

Yüksek performanslı olan matkap ucu kısa ve uzun talaş veren yapı ve ıslah çeliği, çelik döküm, sementasyon çelikleri, çekme mukavemeti yaklaşık 1200 N/mm² kadar olan alaşımlı malzemelerde kullanılır. Kendinden puntalama özelliği mevcuttur.

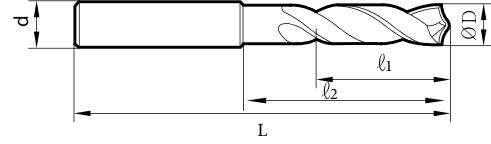
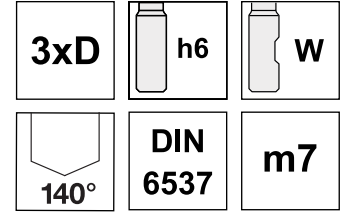


ÜRÜN KODU	ÇAP D	ŞAFT ÇAP d	TAM BOY L	Tmax BOYU l ₁	HELİS BOYU l ₂	SİPARİŞ NO
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MX3645	1.00	1.0	3.0	38	3	8	
MX3645	1.10	1.1	3.0	38	3	8	
MX3645	1.20	1.2	3.0	38	3	8	
MX3645	1.30	1.3	3.0	38	3	8	
MX3645	1.40	1.4	3.0	38	3	8	
MX3645	1.50	1.5	3.0	50	5	8	
MX3645	1.600	1.6	3.0	50	5	8	
MX3645	1.700	1.7	3.0	50	7	9	
MX3645	1.800	1.8	3.0	50	7	9	
MX3645	1.900	1.9	3.0	50	7	9	
MX3645	2.000	2.0	3.0	50	10	16	
MX3645	2.100	2.1	3.0	50	10	16	
MX3645	2.200	2.2	3.0	50	10	16	
MX3645	2.300	2.3	3.0	50	10	16	
MX3645	2.400	2.4	3.0	50	10	16	
MX3645	2.500	2.5	3.0	50	14	20	
MX3645	2.600	2.6	3.0	50	14	20	
MX3645	2.700	2.7	3.0	50	14	20	
MX3645	2.800	2.8	3.0	50	14	20	
MX3645	2.900	2.9	3.0	50	14	20	
MX3645	3.000	3.0	6.0	62	14	20	
MX3645	3.100	3.1	6.0	62	14	20	
MX3645	3.200	3.2	6.0	62	14	20	
MX3645	3.300	3.3	6.0	62	14	20	
MX3645	3.400	3.4	6.0	62	14	20	
MX3645	3.500	3.5	6.0	62	14	20	
MX3645	3.600	3.6	6.0	62	14	20	
MX3645	3.700	3.7	6.0	62	14	20	
MX3645	3.800	3.8	6.0	66	17	24	
MX3645	3.900	3.9	6.0	66	17	24	
MX3645	4.000	4.0	6.0	66	17	24	
MX3645	4.100	4.1	6.0	66	17	24	
MX3645	4.200	4.2	6.0	66	17	24	
MX3645	4.300	4.3	6.0	66	17	24	
MX3645	4.400	4.4	6.0	66	17	24	
MX3645	4.500	4.5	6.0	66	17	24	
MX3645	4.600	4.6	6.0	66	17	24	
MX3645	4.650	4.65	6.0	66	17	24	
MX3645	4.700	4.7	6.0	66	17	24	
MX3645	4.800	4.8	6.0	66	20	28	
MX3645	4.900	4.9	6.0	66	20	28	
MX3645	5.000	5.0	6.0	66	20	28	
MX3645	5.100	5.1	6.0	66	20	28	
MX3645	5.200	5.2	6.0	66	20	28	
MX3645	5.300	5.3	6.0	66	20	28	
MX3645	5.400	5.4	6.0	66	20	28	

KARBÜR MATKAP UCU KAPLAMALI SIVI KANALSIZ

Yüksek performanslı olan matkap ucu kısa ve uzun talaş veren yapı ve ıslah çeliği, çelik döküm, sementasyon çelikleri, çekme mukavemeti yaklaşık 1200 N/mm² kadar olan alaşımlı malzemelerde kullanılır. Kendinden puntalama özelliği mevcuttur.

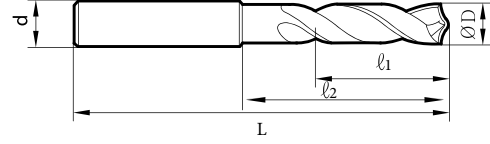
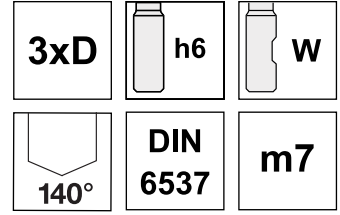


ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d	TAM BOY L	Tmax BOYU l ₁	HELİS BOYU l ₂	SİPARİŞ NO
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MX3645	5.500	5.5	6.0	66	20	28	
MX3645	5.550	5.55	6.0	66	20	28	
MX3645	5.600	5.6	6.0	66	20	28	
MX3645	5.700	5.7	6.0	66	20	28	
MX3645	5.800	5.8	6.0	66	20	28	
MX3645	5.900	5.9	6.0	66	20	28	
MX3645	6.000	6.0	6.0	66	20	28	
MX3645	6.100	6.1	8.0	79	24	34	
MX3645	6.200	6.2	8.0	79	24	34	
MX3645	6.300	6.3	8.0	79	24	34	
MX3645	6.400	6.4	8.0	79	24	34	
MX3645	6.500	6.5	8.0	79	24	34	
MX3645	6.600	6.6	8.0	79	24	34	
MX3645	6.700	6.7	8.0	79	24	34	
MX3645	6.800	6.8	8.0	79	24	34	
MX3645	6.900	6.9	8.0	79	24	34	
MX3645	7.000	7.0	8.0	79	24	34	
MX3645	7.100	7.1	8.0	79	29	41	
MX3645	7.200	7.2	8.0	79	29	41	
MX3645	7.300	7.3	8.0	79	29	41	
MX3645	7.400	7.4	8.0	79	29	41	
MX3645	7.500	7.5	8.0	79	29	41	
MX3645	7.600	7.6	8.0	79	29	41	
MX3645	7.700	7.7	8.0	79	29	41	
MX3645	7.800	7.8	8.0	79	29	41	
MX3645	7.900	7.9	8.0	79	29	41	
MX3645	8.000	8.0	8.0	79	29	41	
MX3645	8.100	8.1	10.0	89	35	47	
MX3645	8.200	8.2	10.0	89	35	47	
MX3645	8.300	8.3	10.0	89	35	47	
MX3645	8.400	8.4	10.0	89	35	47	
MX3645	8.500	8.5	10.0	89	35	47	
MX3645	8.600	8.6	10.0	89	35	47	
MX3645	8.700	8.7	10.0	89	35	47	
MX3645	8.800	8.8	10.0	89	35	47	
MX3645	8.900	8.9	10.0	89	35	47	
MX3645	9.000	9.0	10.0	89	35	47	
MX3645	9.100	9.1	10.0	89	35	47	
MX3645	9.200	9.2	10.0	89	35	47	
MX3645	9.250	9.25	10.0	89	35	47	
MX3645	9.300	9.3	10.0	89	35	47	
MX3645	9.400	9.4	10.0	89	35	47	
MX3645	9.500	9.5	10.0	89	35	47	
MX3645	9.600	9.6	10.0	89	35	47	
MX3645	9.700	9.7	10.0	89	35	47	
MX3645	9.800	9.8	10.0	89	35	47	

KARBÜR MATKAP UCU KAPLAMALI SIVI KANALSIZ

Yüksek performanslı olan matkap ucu kısa ve uzun talaş veren yapı ve ıslah çeliği, çelik döküm, sementasyon çelikleri, çekme mukavemeti yaklaşık 1200 N/mm² kadar olan alaşımlı malzemelerde kullanılır. Kendinden puntalama özelliği mevcuttur.

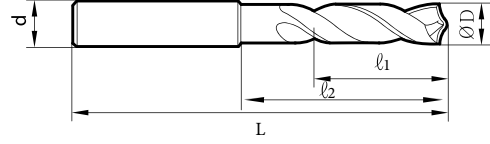
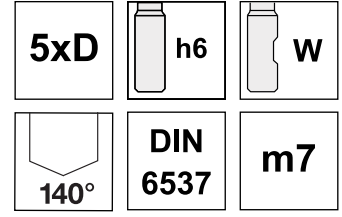


ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d	TAM BOY L	Tmax BOYU ℓ ₁	HELİS BOYU ℓ ₂	SİPARİŞ NO
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MX3645	9.900	9.9	10.0	89	35	47	
MX3645	10.000	10.0	10.0	89	35	47	
MX3645	10.100	10.1	12.0	102	40	55	
MX3645	10.200	10.2	12.0	102	40	55	
MX3645	10.300	10.3	12.0	102	40	55	
MX3645	10.400	10.4	12.0	102	40	55	
MX3645	10.500	10.5	12.0	102	40	55	
MX3645	10.600	10.6	12.0	102	40	55	
MX3645	10.700	10.7	12.0	102	40	55	
MX3645	10.800	10.8	12.0	102	40	55	
MX3645	10.900	10.9	12.0	102	40	55	
MX3645	11.000	11.0	12.0	102	40	55	
MX3645	11.100	11.1	12.0	102	40	55	
MX3645	11.200	11.2	12.0	102	40	55	
MX3645	11.300	11.3	12.0	102	40	55	
MX3645	11.400	11.4	12.0	102	40	55	
MX3645	11.500	11.5	12.0	102	40	55	
MX3645	11.600	11.6	12.0	102	40	55	
MX3645	11.700	11.7	12.0	102	40	55	
MX3645	11.800	11.8	12.0	102	40	55	
MX3645	11.900	11.9	12.0	102	40	55	
MX3645	12.000	12.0	12.0	102	40	55	
MX3645	12.100	12.1	14.0	107	43	60	
MX3645	12.200	12.2	14.0	107	43	60	
MX3645	12.500	12.5	14.0	107	43	60	
MX3645	12.700	12.7	14.0	107	43	60	
MX3645	12.800	12.8	14.0	107	43	60	
MX3645	13.000	13.0	14.0	107	43	60	
MX3645	13.500	13.5	14.0	107	43	60	
MX3645	13.700	13.7	14.0	107	43	60	
MX3645	13.800	13.8	14.0	107	43	60	
MX3645	14.000	14.0	14.0	107	43	60	
MX3645	14.200	14.2	16.0	115	45	65	
MX3645	14.500	14.5	16.0	115	45	65	
MX3645	14.700	14.7	16.0	115	45	65	
MX3645	15.000	15.0	16.0	115	45	65	
MX3645	15.500	15.5	16.0	115	45	65	
MX3645	15.700	15.7	16.0	115	45	65	
MX3645	15.800	15.8	16.0	115	45	65	
MX3645	16.000	16.0	16.0	115	45	65	
MX3645	16.500	16.5	18.0	123	51	73	
MX3645	17.000	17.0	18.0	123	51	73	
MX3645	17.500	17.5	18.0	123	51	73	
MX3645	18.000	18.0	18.0	123	51	73	
MX3645	18.500	18.5	20.0	131	55	79	
MX3645	19.000	19.0	20.0	131	55	79	
MX3645	19.500	19.5	20.0	131	55	79	
MX3645	20.000	20.0	20.0	131	55	79	

KARBÜR MATKAP UCU KAPLAMALI SIVI KANALSIZ

Yüksek performanslı olan matkap ucu kısa ve uzun talaş veren yapı ve ıslah çeliği, çelik döküm, sementasyon çelikleri, çekme mukavemeti yaklaşık 1200 N/mm² kadar olan alaşımlı malzemelerde kullanılır. Kendinden puntalama özelliği mevcuttur.

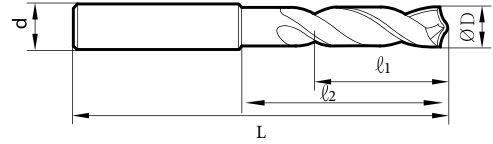
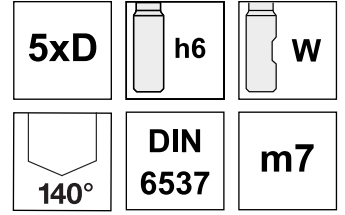


ÜRÜN KODU	ÇAP D	ŞAFT ÇAP d	TAM BOY L	Tmax BOYU l ₁	HELİS BOYU l ₂	SİPARİŞ NO
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MX3646	1.000	1.0	3.0	55	7	10	
MX3646	1.100	1.1	3.0	55	10	12	
MX3646	1.200	1.2	3.0	55	10	12	
MX3646	1.300	1.3	3.0	55	10	12	
MX3646	1.400	1.4	3.0	55	10	12	
MX3646	1.500	1.5	3.0	55	10	12	
MX3646	1.600	1.6	3.0	55	13	16	
MX3646	1.700	1.7	3.0	55	13	16	
MX3646	1.800	1.8	3.0	55	13	16	
MX3646	1.900	1.9	3.0	55	13	16	
MX3646	2.000	2.0	3.0	55	16	21	
MX3646	2.100	2.1	3.0	55	16	21	
MX3646	2.200	2.2	3.0	55	16	21	
MX3646	2.300	2.3	3.0	55	16	21	
MX3646	2.400	2.4	3.0	55	16	21	
MX3646	2.500	2.5	3.0	55	16	21	
MX3646	2.600	2.6	3.0	55	19	21	
MX3646	2.700	2.7	3.0	55	19	21	
MX3646	2.800	2.8	3.0	55	19	21	
MX3646	2.900	2.9	3.0	55	19	21	
MX3646	3.000	3.0	6.0	66	23	28	
MX3646	3.100	3.1	6.0	66	23	28	
MX3646	3.200	3.2	6.0	66	23	28	
MX3646	3.300	3.3	6.0	66	23	28	
MX3646	3.400	3.4	6.0	66	23	28	
MX3646	3.500	3.5	6.0	66	23	28	
MX3646	3.600	3.6	6.0	66	23	28	
MX3646	3.700	3.7	6.0	66	23	28	
MX3646	3.800	3.8	6.0	74	29	36	
MX3646	3.900	3.9	6.0	74	29	36	
MX3646	4.000	4.0	6.0	74	29	36	
MX3646	4.100	4.1	6.0	74	29	36	
MX3646	4.200	4.2	6.0	74	29	36	
MX3646	4.300	4.3	6.0	74	29	36	
MX3646	4.400	4.4	6.0	74	29	36	
MX3646	4.500	4.5	6.0	74	29	36	
MX3646	4.600	4.6	6.0	74	29	36	
MX3646	4.650	4.65	6.0	74	29	36	
MX3646	4.700	4.7	6.0	74	29	36	
MX3646	4.800	4.8	6.0	82	35	44	
MX3646	4.900	4.9	6.0	82	35	44	
MX3646	5.000	5.0	6.0	82	35	44	
MX3646	5.100	5.1	6.0	82	35	44	
MX3646	5.200	5.2	6.0	82	35	44	
MX3646	5.300	5.3	6.0	82	35	44	
MX3646	5.400	5.4	6.0	82	35	44	
MX3646	5.500	5.5	6.0	82	35	44	
MX3646	5.550	5.55	6.0	82	35	44	

KARBÜR MATKAP UCU KAPLAMALI SIVI KANALSIZ

Yüksek performanslı olan matkap ucu kısa ve uzun talaş veren yapı ve ıslah çeliği, çelik döküm, sementasyon çelikleri, çekme mukavemeti yaklaşık 1200 N/mm² kadar olan alaşımlı malzemelerde kullanılır. Kendinden puntalama özelliği mevcuttur.

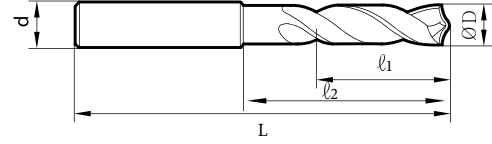
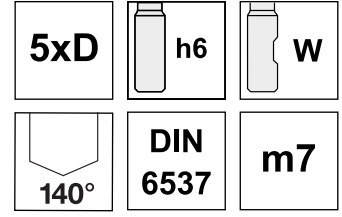


ÜRÜN KODU	ÇAP D	ŞAFT ÇAPı d	TAM BOY L	Tmax BOYU l ₁	HELİS BOYU l ₂	SİPARİŞ NO
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MX3646	5.600	5.6	6.0	82	35	44	
MX3646	5.700	5.7	6.0	82	35	44	
MX3646	5.800	5.8	6.0	82	35	44	
MX3646	5.900	5.9	6.0	82	35	44	
MX3646	6.000	6.0	6.0	82	35	44	
MX3646	6.100	6.1	8.0	91	43	53	
MX3646	6.200	6.2	8.0	91	43	53	
MX3646	6.300	6.3	8.0	91	43	53	
MX3646	6.400	6.4	8.0	91	43	53	
MX3646	6.500	6.5	8.0	91	43	53	
MX3646	6.600	6.6	8.0	91	43	53	
MX3646	6.700	6.7	8.0	91	43	53	
MX3646	6.800	6.8	8.0	91	43	53	
MX3646	6.900	6.9	8.0	91	43	53	
MX3646	7.000	7.0	8.0	91	43	53	
MX3646	7.100	7.1	8.0	91	43	53	
MX3646	7.200	7.2	8.0	91	43	53	
MX3646	7.300	7.3	8.0	91	43	53	
MX3646	7.400	7.4	8.0	91	43	53	
MX3646	7.500	7.5	8.0	91	43	53	
MX3646	7.600	7.6	8.0	91	43	53	
MX3646	7.700	7.7	8.0	91	43	53	
MX3646	7.800	7.8	8.0	91	43	53	
MX3646	7.900	7.9	8.0	91	43	53	
MX3646	8.000	8.0	8.0	91	43	53	
MX3646	8.100	8.1	10.0	103	49	61	
MX3646	8.200	8.2	10.0	103	49	61	
MX3646	8.300	8.3	10.0	103	49	61	
MX3646	8.400	8.4	10.0	103	49	61	
MX3646	8.500	8.5	10.0	103	49	61	
MX3646	8.600	8.6	10.0	103	49	61	
MX3646	8.700	8.7	10.0	103	49	61	
MX3646	8.800	8.8	10.0	103	49	61	
MX3646	8.900	8.9	10.0	103	49	61	
MX3646	9.000	9.0	10.0	103	49	61	
MX3646	9.100	9.1	10.0	103	49	61	
MX3646	9.200	9.2	10.0	103	49	61	
MX3646	9.250	9.25	10.0	103	49	61	
MX3646	9.300	9.3	10.0	103	49	61	
MX3646	9.400	9.4	10.0	103	49	61	
MX3646	9.500	9.5	10.0	103	49	61	
MX3646	9.600	9.6	10.0	103	49	61	
MX3646	9.700	9.7	10.0	103	49	61	
MX3646	9.800	9.8	10.0	103	49	61	
MX3646	9.900	9.9	10.0	103	49	61	
MX3646	10.000	10.0	10.0	103	49	61	
MX3646	10.100	10.1	12.0	118	56	71	

KARBÜR MATKAP UCU KAPLAMALI SIVI KANALSIZ

Yüksek performanslı olan matkap ucu kısa ve uzun talaş veren yapı ve ıslah çeliği, çelik döküm, sementasyon çelikleri, çekme mukavemeti yaklaşık 1200 N/mm² kadar olan alaşımlı malzemelerde kullanılır. Kendinden puntalama özelliği mevcuttur.



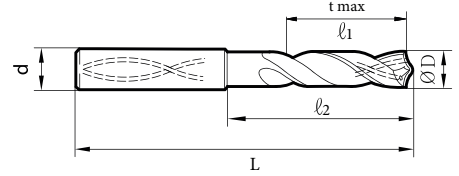
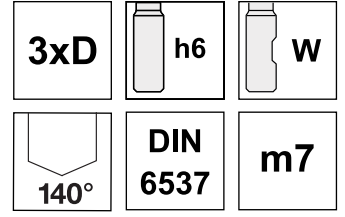
ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d	TAM BOY L	Tmax BOYU l ₁	HELİS BOYU l ₂	SİPARİŞ NO
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MX3646	10.200	10.2	12.0	118	56	71	
MX3646	10.300	10.3	12.0	118	56	71	
MX3646	10.400	10.4	12.0	118	56	71	
MX3646	10.500	10.5	12.0	118	56	71	
MX3646	10.600	10.6	12.0	118	56	71	
MX3646	10.700	10.7	12.0	118	56	71	
MX3646	10.800	10.8	12.0	118	56	71	
MX3646	10.900	10.9	12.0	118	56	71	
MX3646	11.000	11.0	12.0	118	56	71	
MX3646	11.100	11.1	12.0	118	56	71	
MX3646	11.200	11.2	12.0	118	56	71	
MX3646	11.300	11.3	12.0	118	56	71	
MX3646	11.400	11.4	12.0	118	56	71	
MX3646	11.500	11.5	12.0	118	56	71	
MX3646	11.600	11.6	12.0	118	56	71	
MX3646	11.700	11.7	12.0	118	56	71	
MX3646	11.800	11.8	12.0	118	56	71	
MX3646	11.900	11.9	12.0	118	56	71	
MX3646	12.000	12.0	12.0	118	56	71	
MX3646	12.100	12.1	14.0	124	60	77	
MX3646	12.200	12.2	14.0	124	60	77	
MX3646	12.500	12.5	14.0	124	60	77	
MX3646	12.700	12.7	14.0	124	60	77	
MX3646	12.800	12.8	14.0	124	60	77	
MX3646	13.000	13.0	14.0	124	60	77	
MX3646	13.500	13.5	14.0	124	60	77	
MX3646	13.700	13.7	14.0	124	60	77	
MX3646	13.800	13.8	14.0	124	60	77	
MX3646	14.000	14.0	14.0	124	60	77	
MX3646	14.200	14.2	16.0	133	63	83	
MX3646	14.500	14.5	16.0	133	63	83	
MX3646	14.700	14.7	16.0	133	63	83	
MX3646	15.000	15.0	16.0	133	63	83	
MX3646	15.500	15.5	16.0	133	63	83	
MX3646	15.700	15.7	16.0	133	63	83	
MX3646	15.800	15.8	16.0	133	63	83	
MX3646	16.000	16.0	16.0	133	63	83	
MX3646	16.500	16.5	18.0	143	71	93	
MX3646	17.000	17.0	18.0	143	71	93	
MX3646	17.500	17.5	18.0	143	71	93	
MX3646	18.000	18.0	18.0	143	71	93	
MX3646	18.500	18.5	20.0	153	77	101	
MX3646	19.000	19.0	20.0	153	77	101	
MX3646	19.500	19.5	20.0	153	77	101	
MX3646	20.000	20.0	20.0	153	77	101	

KARBÜR MATKAP UCU KAPLAMALI SIVI KANALLI

Yüksek performanslı olan matkap ucu kısa ve uzun talaş veren yapı ve ıslah çeliği, çelik döküm, sementasyon çelikleri, çekme mukavemeti yaklaşık 1200 N/mm² kadar olan alaşımlı malzemelerde kullanılır. Kendinden puntalama özelliği mevcuttur.

Contalı Pens ile Kullanılması tavsiye edilmektedir



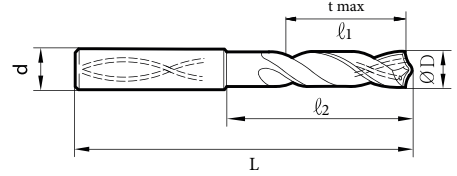
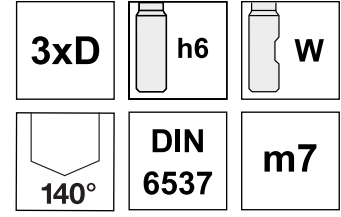
ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d	TAM BOY L	Tmax BOYU l ₁	HELİS BOYU l ₂	SİPARİŞ NO
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MX3687	1.00	1.0	3.0	38	3	8	
MX3687	1.10	1.1	3.0	38	3	8	
MX3687	1.20	1.2	3.0	38	3	8	
MX3687	1.30	1.3	3.0	38	3	8	
MX3687	1.40	1.4	3.0	38	3	8	
MX3687	1.50	1.5	3.0	50	5	8	
MX3687	1.600	1.6	3.0	50	5	8	
MX3687	1.700	1.7	3.0	50	7	9	
MX3687	1.800	1.8	3.0	50	7	9	
MX3687	1.900	1.9	3.0	50	7	9	
MX3687	2.000	2.0	3.0	50	10	16	
MX3687	2.100	2.1	3.0	50	10	16	
MX3687	2.200	2.2	3.0	50	10	16	
MX3687	2.300	2.3	3.0	50	10	16	
MX3687	2.400	2.4	3.0	50	10	16	
MX3687	2.500	2.5	3.0	50	14	20	
MX3687	2.600	2.6	3.0	50	14	20	
MX3687	2.700	2.7	3.0	50	14	20	
MX3687	2.800	2.8	3.0	50	14	20	
MX3687	2.900	2.9	3.0	50	14	20	
MX3687	3.000	3.0	6.0	62	14	20	
MX3687	3.100	3.1	6.0	62	14	20	
MX3687	3.200	3.2	6.0	62	14	20	
MX3687	3.300	3.3	6.0	62	14	20	
MX3687	3.400	3.4	6.0	62	14	20	
MX3687	3.500	3.5	6.0	62	14	20	
MX3687	3.600	3.6	6.0	62	14	20	
MX3687	3.700	3.7	6.0	62	14	20	
MX3687	3.800	3.8	6.0	66	17	24	
MX3687	3.900	3.9	6.0	66	17	24	
MX3687	4.000	4.0	6.0	66	17	24	
MX3687	4.100	4.1	6.0	66	17	24	
MX3687	4.200	4.2	6.0	66	17	24	
MX3687	4.300	4.3	6.0	66	17	24	
MX3687	4.400	4.4	6.0	66	17	24	
MX3687	4.500	4.5	6.0	66	17	24	
MX3687	4.600	4.6	6.0	66	17	24	
MX3687	4.650	4.65	6.0	66	17	24	
MX3687	4.700	4.7	6.0	66	17	24	
MX3687	4.800	4.8	6.0	66	20	28	
MX3687	4.900	4.9	6.0	66	20	28	
MX3687	5.000	5.0	6.0	66	20	28	
MX3687	5.100	5.1	6.0	66	20	28	
MX3687	5.200	5.2	6.0	66	20	28	
MX3687	5.300	5.3	6.0	66	20	28	
MX3687	5.400	5.4	6.0	66	20	28	

KARBÜR MATKAP UCU KAPLAMALI SIVI KANALLI

Yüksek performanslı olan matkap ucu kısa ve uzun talaş veren yapı ve ıslah çeliği, çelik dö-küm, sementasyon çelikleri, çekme mukavemeti yaklaşık 1200 N/mm² kadar olan alaşımlı malzemelerde kullanılır. Kendinden puntalama özelliği mevcuttur.

Contalı Pens ile Kullanılması tavsiye edilmektedir



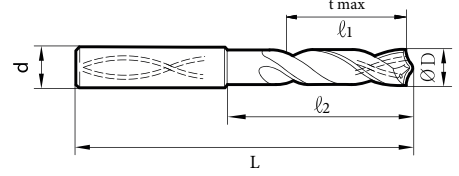
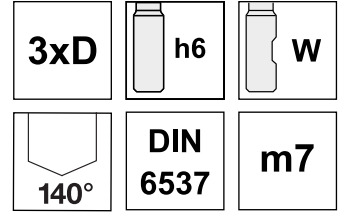
ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d	TAM BOY L	Tmax BOYU l1	HELİS BOYU l2	SİPARİŞ NO
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MX3687	5.500	5.5	6.0	66	20	28	
MX3687	5.550	5.55	6.0	66	20	28	
MX3687	5.600	5.6	6.0	66	20	28	
MX3687	5.700	5.7	6.0	66	20	28	
MX3687	5.800	5.8	6.0	66	20	28	
MX3687	5.900	5.9	6.0	66	20	28	
MX3687	6.000	6.0	6.0	66	20	28	
MX3687	6.100	6.1	8.0	79	24	34	
MX3687	6.200	6.2	8.0	79	24	34	
MX3687	6.300	6.3	8.0	79	24	34	
MX3687	6.400	6.4	8.0	79	24	34	
MX3687	6.500	6.5	8.0	79	24	34	
MX3687	6.600	6.6	8.0	79	24	34	
MX3687	6.700	6.7	8.0	79	24	34	
MX3687	6.800	6.8	8.0	79	24	34	
MX3687	6.900	6.9	8.0	79	24	34	
MX3687	7.000	7.0	8.0	79	24	34	
MX3687	7.100	7.1	8.0	79	29	41	
MX3687	7.200	7.2	8.0	79	29	41	
MX3687	7.300	7.3	8.0	79	29	41	
MX3687	7.400	7.4	8.0	79	29	41	
MX3687	7.500	7.5	8.0	79	29	41	
MX3687	7.600	7.6	8.0	79	29	41	
MX3687	7.700	7.7	8.0	79	29	41	
MX3687	7.800	7.8	8.0	79	29	41	
MX3687	7.900	7.9	8.0	79	29	41	
MX3687	8.000	8.0	8.0	79	29	41	
MX3687	8.100	8.1	10.0	89	35	47	
MX3687	8.200	8.2	10.0	89	35	47	
MX3687	8.300	8.3	10.0	89	35	47	
MX3687	8.400	8.4	10.0	89	35	47	
MX3687	8.500	8.5	10.0	89	35	47	
MX3687	8.600	8.6	10.0	89	35	47	
MX3687	8.700	8.7	10.0	89	35	47	
MX3687	8.800	8.8	10.0	89	35	47	
MX3687	8.900	8.9	10.0	89	35	47	
MX3687	9.000	9.0	10.0	89	35	47	
MX3687	9.100	9.1	10.0	89	35	47	
MX3687	9.200	9.2	10.0	89	35	47	
MX3687	9.250	9.25	10.0	89	35	47	
MX3687	9.300	9.3	10.0	89	35	47	
MX3687	9.400	9.4	10.0	89	35	47	
MX3687	9.500	9.5	10.0	89	35	47	
MX3687	9.600	9.6	10.0	89	35	47	
MX3687	9.700	9.7	10.0	89	35	47	
MX3687	9.800	9.8	10.0	89	35	47	

KARBÜR MATKAP UCU KAPLAMALI SIVI KANALLI

Yüksek performanslı olan matkap ucu kısa ve uzun talaş veren yapı ve ıslah çeliği, çelik dö-küm, sementasyon çelikleri, çekme mukavemeti yaklaşık 1200 N/mm² kadar olan alaşımlı malzeme-lerde kullanılır. Kendinden puntalama özelli-ği mevcuttur.

Contalı Pens ile Kullanılması tavsiye edilmektedir



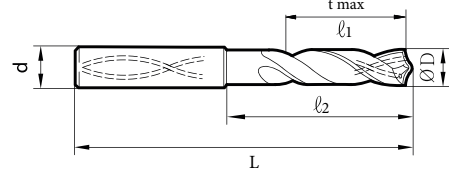
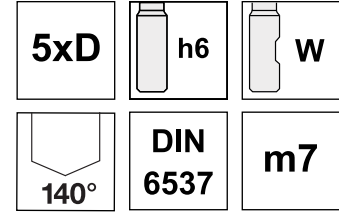
ÜRÜN KODU	ÇAP D	ŞAFT ÇAP d	TAM BOY L	Tmax BOYU l1	HELİS BOYU l2	SİPARİŞ NO
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MX3687	9.900	9.9	10.0	89	35	47	
MX3687	10.000	10.0	10.0	89	35	47	
MX3687	10.100	10.1	12.0	102	40	55	
MX3687	10.200	10.2	12.0	102	40	55	
MX3687	10.300	10.3	12.0	102	40	55	
MX3687	10.400	10.4	12.0	102	40	55	
MX3687	10.500	10.5	12.0	102	40	55	
MX3687	10.600	10.6	12.0	102	40	55	
MX3687	10.700	10.7	12.0	102	40	55	
MX3687	10.800	10.8	12.0	102	40	55	
MX3687	10.900	10.9	12.0	102	40	55	
MX3687	11.000	11.0	12.0	102	40	55	
MX3687	11.100	11.1	12.0	102	40	55	
MX3687	11.200	11.2	12.0	102	40	55	
MX3687	11.300	11.3	12.0	102	40	55	
MX3687	11.400	11.4	12.0	102	40	55	
MX3687	11.500	11.5	12.0	102	40	55	
MX3687	11.600	11.6	12.0	102	40	55	
MX3687	11.700	11.7	12.0	102	40	55	
MX3687	11.800	11.8	12.0	102	40	55	
MX3687	11.900	11.9	12.0	102	40	55	
MX3687	12.000	12.0	12.0	102	40	55	
MX3687	12.100	12.1	14.0	107	43	60	
MX3687	12.200	12.2	14.0	107	43	60	
MX3687	12.500	12.5	14.0	107	43	60	
MX3687	12.700	12.7	14.0	107	43	60	
MX3687	12.800	12.8	14.0	107	43	60	
MX3687	13.000	13.0	14.0	107	43	60	
MX3687	13.500	13.5	14.0	107	43	60	
MX3687	13.700	13.7	14.0	107	43	60	
MX3687	13.800	13.8	14.0	107	43	60	
MX3687	14.000	14.0	14.0	107	43	60	
MX3687	14.200	14.2	16.0	115	45	65	
MX3687	14.500	14.5	16.0	115	45	65	
MX3687	14.700	14.7	16.0	115	45	65	
MX3687	15.000	15.0	16.0	115	45	65	
MX3687	15.500	15.5	16.0	115	45	65	
MX3687	15.700	15.7	16.0	115	45	65	
MX3687	15.800	15.8	16.0	115	45	65	
MX3687	16.000	16.0	16.0	115	45	65	
MX3687	16.500	16.5	18.0	123	51	73	
MX3687	17.000	17.0	18.0	123	51	73	
MX3687	17.500	17.5	18.0	123	51	73	
MX3687	18.000	18.0	18.0	123	51	73	
MX3687	18.500	18.5	20.0	131	55	79	
MX3687	19.000	19.0	20.0	131	55	79	
MX3687	19.500	19.5	20.0	131	55	79	
MX3687	20.000	20.0	20.0	131	55	79	

KARBÜR MATKAP UCU KAPLAMALI SIVI KANALLI

Yüksek performanslı olan matkap ucu kısa ve uzun talaş veren yapı ve ıslah çeliği, çelik döküm, sementasyon çelikleri, çekme mukavemeti yaklaşık 1200 N/mm² kadar olan alaşımlı malzemelerde kullanılır. Kendinden puntalama özelliği mevcuttur.

Contalı Pens ile Kullanılması tavsiye edilmektedir



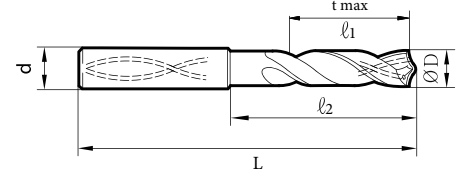
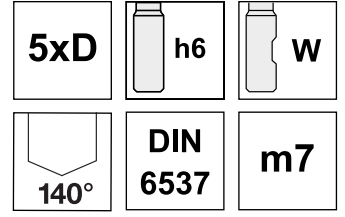
ÜRÜN KODU	ÇAP D	ŞAFT ÇAPı d	TAM BOY L	Tmax BOYU l ₁	HELİS BOYU l ₂	SİPARİŞ NO
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MX3688	1.000	1.0	3.0	55	7	10	
MX3688	1.100	1.1	3.0	55	10	12	
MX3688	1.200	1.2	3.0	55	10	12	
MX3688	1.300	1.3	3.0	55	10	12	
MX3688	1.400	1.4	3.0	55	10	12	
MX3688	1.500	1.5	3.0	55	10	12	
MX3688	1.600	1.6	3.0	55	13	16	
MX3688	1.700	1.7	3.0	55	13	16	
MX3688	1.800	1.8	3.0	55	13	16	
MX3688	1.900	1.9	3.0	55	13	16	
MX3688	2.000	2.0	3.0	55	16	21	
MX3688	2.100	2.1	3.0	55	16	21	
MX3688	2.200	2.2	3.0	55	16	21	
MX3688	2.300	2.3	3.0	55	16	21	
MX3688	2.400	2.4	3.0	55	16	21	
MX3688	2.500	2.5	3.0	55	16	21	
MX3688	2.600	2.6	3.0	55	19	21	
MX3688	2.700	2.7	3.0	55	19	21	
MX3688	2.800	2.8	3.0	55	19	21	
MX3688	2.900	2.9	3.0	55	19	21	
MX3688	3.000	3.0	6.0	66	23	28	
MX3688	3.100	3.1	6.0	66	23	28	
MX3688	3.200	3.2	6.0	66	23	28	
MX3688	3.300	3.3	6.0	66	23	28	
MX3688	3.400	3.4	6.0	66	23	28	
MX3688	3.500	3.5	6.0	66	23	28	
MX3688	3.600	3.6	6.0	66	23	28	
MX3688	3.700	3.7	6.0	66	23	28	
MX3688	3.800	3.8	6.0	74	29	36	
MX3688	3.900	3.9	6.0	74	29	36	
MX3688	4.000	4.0	6.0	74	29	36	
MX3688	4.100	4.1	6.0	74	29	36	
MX3688	4.200	4.2	6.0	74	29	36	
MX3688	4.300	4.3	6.0	74	29	36	
MX3688	4.400	4.4	6.0	74	29	36	
MX3688	4.500	4.5	6.0	74	29	36	
MX3688	4.600	4.6	6.0	74	29	36	
MX3688	4.650	4.65	6.0	74	29	36	
MX3688	4.700	4.7	6.0	74	29	36	
MX3688	4.800	4.8	6.0	82	35	44	
MX3688	4.900	4.9	6.0	82	35	44	
MX3688	5.000	5.0	6.0	82	35	44	
MX3688	5.100	5.1	6.0	82	35	44	
MX3688	5.200	5.2	6.0	82	35	44	
MX3688	5.300	5.3	6.0	82	35	44	
MX3688	5.400	5.4	6.0	82	35	44	
MX3688	5.500	5.5	6.0	82	35	44	
MX3688	5.550	5.55	6.0	82	35	44	

KARBÜR MATKAP UCU KAPLAMALI SIVI KANALLI

Yüksek performanslı olan matkap ucu kısa ve uzun talaş veren yapı ve ıslah çeliği, çelik dö-küm, sementasyon çelikleri, çekme mukavemeti yaklaşık 1200 N/mm² kadar olan alaşımlı malzeme-lerde kullanılır. Kendinden puntalama özelli-ği mevcuttur.

Contalı Pens ile Kullanılması tavsiye edilmektedir



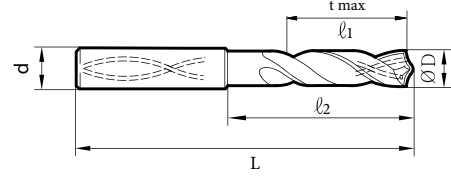
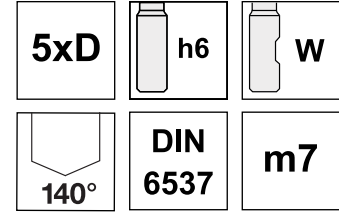
ÜRÜN KODU	ÇAP D	ŞAFT ÇAPİ d	TAM BOY L	Tmax BOYU l ₁	HELİS BOYU l ₂	SİPARİŞ NO
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MX3688	5.600	5.6	6.0	82	35	44	
MX3688	5.700	5.7	6.0	82	35	44	
MX3688	5.800	5.8	6.0	82	35	44	
MX3688	5.900	5.9	6.0	82	35	44	
MX3688	6.000	6.0	6.0	82	35	44	
MX3688	6.100	6.1	8.0	91	43	53	
MX3688	6.200	6.2	8.0	91	43	53	
MX3688	6.300	6.3	8.0	91	43	53	
MX3688	6.400	6.4	8.0	91	43	53	
MX3688	6.500	6.5	8.0	91	43	53	
MX3688	6.600	6.6	8.0	91	43	53	
MX3688	6.700	6.7	8.0	91	43	53	
MX3688	6.800	6.8	8.0	91	43	53	
MX3688	6.900	6.9	8.0	91	43	53	
MX3688	7.000	7.0	8.0	91	43	53	
MX3688	7.100	7.1	8.0	91	43	53	
MX3688	7.200	7.2	8.0	91	43	53	
MX3688	7.300	7.3	8.0	91	43	53	
MX3688	7.400	7.4	8.0	91	43	53	
MX3688	7.500	7.5	8.0	91	43	53	
MX3688	7.600	7.6	8.0	91	43	53	
MX3688	7.700	7.7	8.0	91	43	53	
MX3688	7.800	7.8	8.0	91	43	53	
MX3688	7.900	7.9	8.0	91	43	53	
MX3688	8.000	8.0	8.0	91	43	53	
MX3688	8.100	8.1	10.0	103	49	61	
MX3688	8.200	8.2	10.0	103	49	61	
MX3688	8.300	8.3	10.0	103	49	61	
MX3688	8.400	8.4	10.0	103	49	61	
MX3688	8.500	8.5	10.0	103	49	61	
MX3688	8.600	8.6	10.0	103	49	61	
MX3688	8.700	8.7	10.0	103	49	61	
MX3688	8.800	8.8	10.0	103	49	61	
MX3688	8.900	8.9	10.0	103	49	61	
MX3688	9.000	9.0	10.0	103	49	61	
MX3688	9.100	9.1	10.0	103	49	61	
MX3688	9.200	9.2	10.0	103	49	61	
MX3688	9.250	9.25	10.0	103	49	61	
MX3688	9.300	9.3	10.0	103	49	61	
MX3688	9.400	9.4	10.0	103	49	61	
MX3688	9.500	9.5	10.0	103	49	61	
MX3688	9.600	9.6	10.0	103	49	61	
MX3688	9.700	9.7	10.0	103	49	61	
MX3688	9.800	9.8	10.0	103	49	61	
MX3688	9.900	9.9	10.0	103	49	61	
MX3688	10.000	10.0	10.0	103	49	61	
MX3688	10.100	10.1	12.0	118	56	71	

KARBÜR MATKAP UCU KAPLAMALI SIVI KANALLI

Yüksek performanslı olan matkap ucu kısa ve uzun talaş veren yapı ve ıslah çeliği, çelik dö-küm, sementasyon çelikleri, çekme mukavemeti yaklaşık 1200 N/mm² kadar olan alaşımlı malzemelerde kullanılır. Kendinden puntalama özelliği mevcuttur.

Contalı Pens ile Kullanılması tavsiye edilmektedir

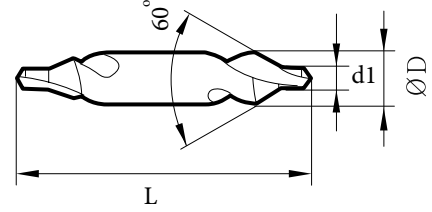
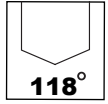


ÜRÜN KODU	ÇAP D	ŞAFT ÇAP d	TAM BOY L	Tmax BOYU l ₁	HELİS BOYU l ₂	SİPARİŞ NO
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MX3688	10.200	10.2	12.0	118	56	71	
MX3688	10.300	10.3	12.0	118	56	71	
MX3688	10.400	10.4	12.0	118	56	71	
MX3688	10.500	10.5	12.0	118	56	71	
MX3688	10.600	10.6	12.0	118	56	71	
MX3688	10.700	10.7	12.0	118	56	71	
MX3688	10.800	10.8	12.0	118	56	71	
MX3688	10.900	10.9	12.0	118	56	71	
MX3688	11.000	11.0	12.0	118	56	71	
MX3688	11.100	11.1	12.0	118	56	71	
MX3688	11.200	11.2	12.0	118	56	71	
MX3688	11.300	11.3	12.0	118	56	71	
MX3688	11.400	11.4	12.0	118	56	71	
MX3688	11.500	11.5	12.0	118	56	71	
MX3688	11.600	11.6	12.0	118	56	71	
MX3688	11.700	11.7	12.0	118	56	71	
MX3688	11.800	11.8	12.0	118	56	71	
MX3688	11.900	11.9	12.0	118	56	71	
MX3688	12.000	12.0	12.0	118	56	71	
MX3688	12.100	12.1	14.0	124	60	77	
MX3688	12.200	12.2	14.0	124	60	77	
MX3688	12.500	12.5	14.0	124	60	77	
MX3688	12.700	12.7	14.0	124	60	77	
MX3688	12.800	12.8	14.0	124	60	77	
MX3688	13.000	13.0	14.0	124	60	77	
MX3688	13.500	13.5	14.0	124	60	77	
MX3688	13.700	13.7	14.0	124	60	77	
MX3688	13.800	13.8	14.0	124	60	77	
MX3688	14.000	14.0	14.0	124	60	77	
MX3688	14.200	14.2	16.0	133	63	83	
MX3688	14.500	14.5	16.0	133	63	83	
MX3688	14.700	14.7	16.0	133	63	83	
MX3688	15.000	15.0	16.0	133	63	83	
MX3688	15.500	15.5	16.0	133	63	83	
MX3688	15.700	15.7	16.0	133	63	83	
MX3688	15.800	15.8	16.0	133	63	83	
MX3688	16.000	16.0	16.0	133	63	83	
MX3688	16.500	16.5	18.0	143	71	93	
MX3688	17.000	17.0	18.0	143	71	93	
MX3688	17.500	17.5	18.0	143	71	93	
MX3688	18.000	18.0	18.0	143	71	93	
MX3688	18.500	18.5	20.0	153	77	101	
MX3688	19.000	19.0	20.0	153	77	101	
MX3688	19.500	19.5	20.0	153	77	101	
MX3688	20.000	20.0	20.0	153	77	101	

KARBÜR PUNTA MATKABI FORM A DIN 333

Çelik, Döküm, Paslanmaz vb. malzemeler için uygundur.

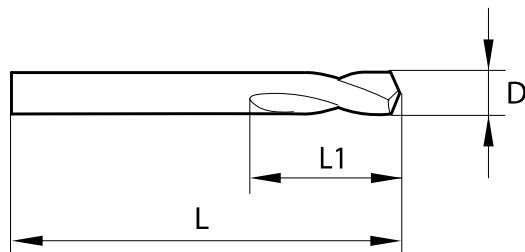
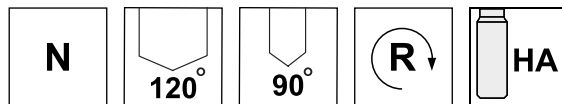


ÜRÜN KODU	ÇAP d1	ŞAFT ÇAPI D	TAM BOY L	SİPARİŞ NO
MX1021 0500	0.50	3.15	25.00	
MX1021 0800	0.80	3.15	25.00	
MX1021 1000	1.00	3.15	31.50	
MX1021 1250	1.25	3.15	31.50	
MX1021 1600	1.60	4.00	35.50	
MX1021 2000	2.00	5.00	40.00	
MX1021 2500	2.50	6.30	45.00	
MX1021 3150	3.15	8.00	50.00	
MX1021 4000	4.00	10.00	56.00	
MX1021 5000	5.00	12.50	63.00	
MX1021 6300	6.30	16.00	71.00	
MX1021 8000	8.00	20.00	80.00	
MX1021 10000	10.00	25.00	100.00	
MX1021 12500	12.50	31.50	125.00	

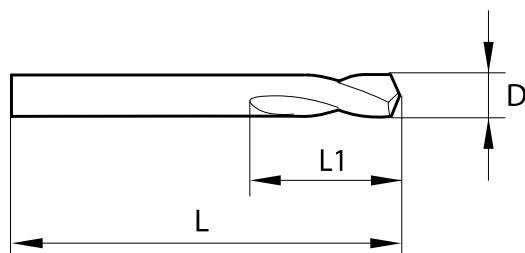


NC KARBÜR PUNTA MATKAP UCU 90°

Hızlı şekilde puntalama ve havşalama işlerinde kullanılır.



ÜRÜN KODU	ÇAP D	KESME BOYU L1	TAM BOY L	SİPARİŞ NO
MX190 4.000	4.00	10.00	50	
MX190 5.000	5.00	10.00	50	
MX190 6.000	6.00	10.00	50	
MX190 8.000	8.00	15.00	63	
MX190 10.000	10.00	20.00	72	
MX190 12.000	12.00	22.00	83	
MX190 16.000	16.00	30.00	100	
MX190 20.000	20.00	36.00	100	

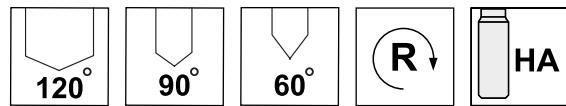


NC KARBÜR PUNTA MATKAP UCU 120°

ÜRÜN KODU	ÇAP D	KESME BOYU L1	TAM BOY L	SİPARİŞ NO
MX191 4.000	4.00	10.00	50	
MX191 5.000	5.00	10.00	50	
MX191 6.000	6.00	10.00	50	
MX191 8.000	8.00	15.00	63	
MX191 10.000	10.00	20.00	72	
MX191 12.000	12.00	22.00	83	
MX191 16.000	16.00	30.00	100	
MX191 20.000	20.00	36.00	100	

HAVŞA FREZESİ KAPLAMALI 60°

Özel pah kırma ve havşalama işlerinde kullanılır.



ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d1	TAM BOY L	AĞIZ SAYISI Z	SİPARİŞ NO
MX460 4.000	4.00	4.00	50	4	
MX460 6.000	6.00	6.00	50	4	
MX460 8.000	8.00	8.00	63	4	
MX460 10.000	10.00	10.00	72	4	
MX460 12.000	12.00	12.00	83	4	

HAVŞA FREZESİ KAPLAMALI 90°

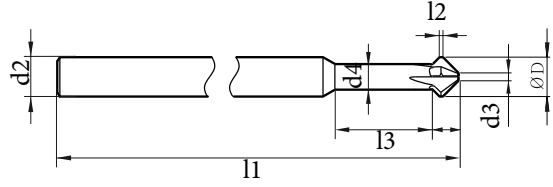
ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d1	TAM BOY L	AĞIZ SAYISI Z	SİPARİŞ NO
MX490 4.000	4.00	4.00	50	4	
MX490 6.000	6.00	6.00	50	4	
MX490 8.000	8.00	8.00	63	4	
MX490 10.000	10.00	10.00	72	4	
MX490 12.000	12.00	12.00	83	4	

HAVŞA FREZESİ KAPLAMALI 120°

ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d1	TAM BOY L	AĞIZ SAYISI Z	SİPARİŞ NO
MX4120 4.000	4.00	4.00	50	4	
MX4120 6.000	6.00	6.00	50	4	
MX4120 8.000	8.00	8.00	63	4	
MX4120 10.000	10.00	10.00	72	4	
MX4120 12.000	12.00	12.00	83	4	

ÇİFT TARAFLI KARBÜR HAVŞA KAPLAMALI 90°

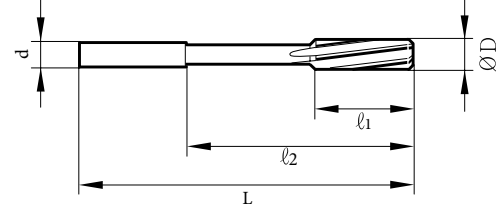
Özel pah kırma ve havşalama frezesi



ÜRÜN KODU	D mm	d2 h6 mm	d3 mm	d4 mm	l1 mm	l2 mm	l3 mm	SİPARİŞ NO
MX6507	3.000	4.000	0.600	2.200	75	0.50	9.40	
MX6507	4.000	4.000	0.800	2.900	75	0.50	12.40	
MX6507	5.000	5.000	1.000	3.900	75	0.50	15.00	
MX6507	6.000	6.000	1.200	3.900	100	0.50	14.30	
MX6507	8.000	6.000	1.600		100	0.50	59.00	
MX6507	10.000	6.000	2.000		100	0.50	53.00	
MX6507	12.000	6.000	2.400		100	0.50	46.00	

NC KARBÜR RAYBA KAPLAMASIZ

Tüm çelikler ve hafif metaller için uygundur.
Seri imalatlarda kullanılabilir.
Sol Helis 8°



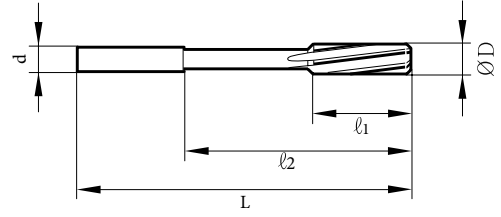
ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d	TAM BOY L	DALMA BOYU l2	KESME BOYU l1	SİPARİŞ NO
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MX5210	1.00	1.00	3.0	49	20	10	
MX5210	1.10	1.10	3.0	49	20	10	
MX5210	1.20	1.20	3.0	49	20	10	
MX5210	1.30	1.30	3.0	49	20	10	
MX5210	1.40	1.40	3.0	49	20	10	
MX5210	1.50	1.50	3.0	49	20	10	
MX5210	1.60	1.60	3.0	49	20	10	
MX5210	1.70	1.70	3.0	49	20	10	
MX5210	1.80	1.80	3.0	49	22	10	
MX5210	1.90	1.90	3.0	49	22	10	
MX5210	2.00	2.00	3.0	49	24	10	
MX5210	2.10	2.10	3.0	49	24	11	
MX5210	2.20	2.20	3.0	53	25	12	
MX5210	2.30	2.30	3.0	53	25	12	
MX5210	2.40	2.40	3.0	57	29	14	
MX5210	2.50	2.50	3.0	57	29	14	
MX5210	2.60	2.60	3.0	57	29	14	
MX5210	2.70	2.70	3.0	61	33	15	
MX5210	2.80	2.80	3.0	61	33	15	
MX5210	2.90	2.90	3.0	61	33	15	
MX5210	3.00	3.00	3.0	61	33	15	
MX5210	3.10	3.10	4.0	65	37	16	
MX5210	3.20	3.20	4.0	65	37	16	
MX5210	3.30	3.30	4.0	65	37	16	
MX5210	3.40	3.40	4.0	70	42	18	
MX5210	3.50	3.50	4.0	70	42	18	
MX5210	3.60	3.60	4.0	70	42	18	
MX5210	3.70	3.70	4.0	70	42	18	
MX5210	3.80	3.80	4.0	75	47	19	
MX5210	3.90	3.90	4.0	75	47	19	
MX5210	4.00	4.00	4.0	75	47	19	
MX5210	4.10	4.10	6.0	75	47	19	
MX5210	4.20	4.20	6.0	75	47	19	
MX5210	4.30	4.30	6.0	80	52	21	
MX5210	4.40	4.40	6.0	80	52	21	
MX5210	4.50	4.50	6.0	80	52	21	
MX5210	4.60	4.60	6.0	80	52	21	
MX5210	4.70	4.70	6.0	80	52	21	
MX5210	4.80	4.80	6.0	86	58	23	
MX5210	4.90	4.90	6.0	86	58	23	
MX5210	5.00	5.00	5.0	86	58	23	
MX5210	5.10	5.10	6.0	86	58	23	
MX5210	5.20	5.20	6.0	86	58	23	
MX5210	5.30	5.30	6.0	86	58	23	

NC KARBÜR RAYBA KAPLAMASIZ

Tüm çelikler ve hafif metaller için uygundur.
Seri imalatlarda kullanılabilir.
Sol Helis 8°

H7



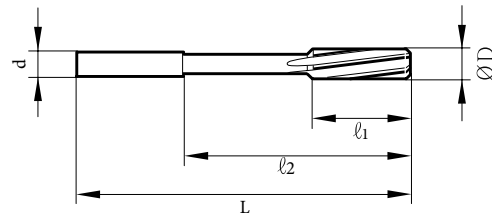
ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d	TAM BOY L	DALMA BOYU l ₂	KESME BOYU l ₁	SİPARİŞ NO
MX5210	5.40	5.40	93	57	26	
MX5210	5.50	5.50	93	57	26	
MX5210	5.60	5.60	93	57	26	
MX5210	5.70	5.70	93	57	26	
MX5210	5.80	5.80	93	57	26	
MX5210	5.90	5.90	93	57	26	
MX5210	6.00	6.00	93	57	26	
MX5210	6.10	6.10	101	65	28	
MX5210	6.20	6.20	101	65	28	
MX5210	6.30	6.30	101	65	28	
MX5210	6.40	6.40	101	65	28	
MX5210	6.50	6.50	101	65	28	
MX5210	6.60	6.60	101	65	28	
MX5210	6.70	6.70	101	65	28	
MX5210	6.80	6.80	109	73	31	
MX5210	6.90	6.90	109	73	31	
MX5210	7.00	7.00	109	73	31	
MX5210	7.10	7.10	109	73	31	
MX5210	7.20	7.20	109	73	31	
MX5210	7.30	7.30	109	73	31	
MX5210	7.40	7.40	109	73	31	
MX5210	7.50	7.50	109	73	31	
MX5210	7.60	7.60	117	81	33	
MX5210	7.70	7.70	117	81	33	
MX5210	7.80	7.80	117	81	33	
MX5210	7.90	7.90	117	81	33	
MX5210	8.00	8.00	117	81	33	
MX5210	8.10	8.10	117	81	33	
MX5210	8.20	8.20	117	81	33	
MX5210	8.30	8.30	117	81	33	
MX5210	8.40	8.40	117	81	33	
MX5210	8.50	8.50	117	81	33	
MX5210	8.60	8.60	125	85	36	
MX5210	8.70	8.70	125	85	36	
MX5210	8.80	8.80	125	85	36	
MX5210	8.90	8.90	125	85	36	
MX5210	9.00	9.00	125	85	36	
MX5210	9.10	9.10	125	85	36	
MX5210	9.20	9.20	125	85	36	

NC KARBÜR RAYBA KAPLAMASIZ

Tüm çelikler ve hafif metaller için uygundur.
Seri imalatlarda kullanılabilir.
Sol Helis 8°

H7

HA



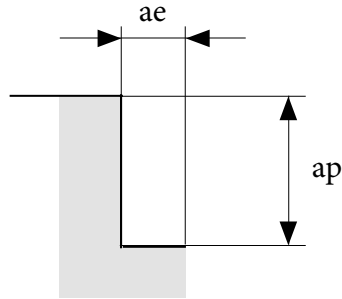
ÜRÜN KODU	ÇAP D	ŞAFT ÇAPI d	TAM BOY L	DALMA BOYU l ₂	KESME BOYU l ₁	SİPARİŞ NO
MX5210 9.30	9.30	10.0	125	85	36	
MX5210 9.40	9.40	10.0	125	85	36	
MX5210 9.50	9.50	10.0	125	85	36	
MX5210 9.60	9.60	10.0	133	93	38	
MX5210 9.70	9.70	10.0	133	93	38	
MX5210 9.80	9.80	10.0	133	93	38	
MX5210 9.90	9.90	10.0	133	93	38	
MX5210 10.00	10.00	10.0	133	93	38	
MX5210 11.00	11.00	12.0	142	102	41	
MX5210 12.00	12.00	12.0	151	111	44	
MX5210 13.00	13.00	14.0	151	111	44	
MX5210 14.00	14.00	14.0	160	115	47	
MX5210 15.00	15.00	16.0	162	117	50	
MX5210 16.00	16.00	16.0	170	125	52	
MX5210 17.00	17.00	18.0	175	130	54	
MX5210 18.00	18.00	18.0	182	137	56	
MX5210 19.00	19.00	20.0	189	141	58	
MX5210 20.00	20.00	20.0	195	147	60	



DS / DSH SERİSİ DEVİR İLERLEME TABLOSU

KISA ve UZUN DÜZ FREZELER İÇİN GEÇERLİDİR

Malzeme Material	HRC 30 - 45		HRC 45 - 55		HRC 55 - 70	
Çap Diameter	Hız Speed	İlerleme Feed	Hız Speed	İlerleme Feed	Hız Speed	İlerleme Feed
	min	mm/min	min	mm/min	min	mm/min
0.30	24.000	300	24.000	200	24.000	100
0.40	24.000	300	24.000	200	24.000	100
0.50	24.000	350	24.000	220	24.000	110
0.60	24.000	450	24.000	250	24.000	125
0.70	20.000	500	20.000	275	20.000	140
0.80	20.000	550	20.000	300	20.000	150
0.90	20.000	650	20.000	400	20.000	200
1.00	10.000	1150	10.000	800	6.000	600
1.50	10.000	1200	10.000	800	6.000	600
2.00	8.000	1300	8.000	1000	5.000	500
2.50	8.000	1500	8.000	1200	5.000	500
3.00	7.500	1400	7.500	1200	5.500	500
4.00	7.500	1650	7.500	1250	5.500	450
5.00	6.000	1700	6.000	1400	5.000	450
6.00	6.000	2000	6.000	1600	4.500	450
8.00	5.000	2500	5.000	2000	3.500	400
10.00	4.500	2500	4.500	2000	3.000	400
12.00	4.200	2200	4.200	2000	2.800	360
14.00	3.000	1800	3.000	1500		
16.00	2.500	1500	2.500	1400		
18.00	2.000	1200	2.000	1000		
20.00	1.800	1000	1.800	900		

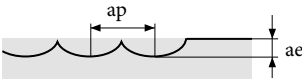
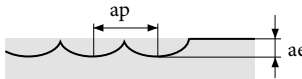


100 mm ve üzeri boylarda kesme parametreleri %10 daha düşük kullanılmalıdır.

KS / KSH SERİSİ DEVİR İLERLEME TABLOSU

KISA ve UZUN KÜRE FREZELER İÇİN GEÇERLİDİR



Malzeme Material	HRC 30 - 45		HRC 45 - 55		HRC 55 - 70	
Çap Diameter	Hız Speed	İlerleme Feed	Hız Speed	İlerleme Feed	Hız Speed	İlerleme Feed
	min	mm/min	min	mm/min	min	mm/min
0.30	24.000	2000	24.000	1800	24.000	1300
0.40	24.000	2000	24.000	1800	24.000	1300
0.50	24.000	2300	24.000	2000	24.000	1100
0.60	24.000	2500	24.000	2300	24.000	1300
0.70	20.000	2800	20.000	2500	20.000	1300
0.80	20.000	2800	20.000	2500	20.000	1800
0.90	20.000	3000	20.000	2000	20.000	1800
1.00	11.000	3100	10.000	2500	6.000	1500
1.50	11.000	3800	10.000	2750	6.000	1500
2.00	9.000	4000	8.000	3000	5.000	1100
2.50	9.000	4200	8.000	3300	5.000	1100
3.00	8.500	4200	7.500	3000	5.500	1200
4.00	8.500	4200	7.500	2850	5.500	1200
5.00	7.000	4500	6.000	3200	5.000	1200
6.00	7.000	4500	6.000	3200	4.500	1200
8.00	6.000	4000	5.000	2900	3.500	1400
10.00	5.500	3500	4.500	2500	3.000	1400
12.00	5.200	3400	4.200	2300	2.800	1200
	 ae = 0.02D ap = 0.05D				 ae = 0.01D ap = 0.05D	

100 mm ve üzeri boylarda kesme parametreleri %10 daha düşük kullanılmalıdır.

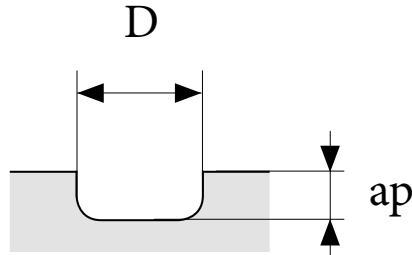


KR / KRH SERİSİ DEVİR İLERLEME TABLOSU

KISA ve UZUN KÖŞE RADIUS FREZELER İÇİN GEÇERLİDİR

Malzeme Material	HRC 30 - 45			HRC 45 - 55			HRC 55 - 70		
Çap Diameter	Hız Speed	İlerleme Feed	ap	Hız Speed	İlerleme Feed	ap	Hız Speed	İlerleme Feed	ap
	min	mm/min	mm	min	mm/min	mm	min	mm/min	mm

1.00	8.000 - 15.000	1000	0.10	8.000 - 15.000	850	0.05	8.000 - 15.000	700	0.05
1.50	8.000 - 15.000	1300	0.10	8.000 - 15.000	1100	0.05	8.000 - 15.000	800	0.05
2.00	8.000 - 15.000	1400	0.10	8.000 - 15.000	1300	0.05	8.000 - 15.000	800	0.05
2.50	8.000 - 15.000	1500	0.10	8.000 - 15.000	1400	0.10	8.000 - 15.000	1000	0.05
3.00	7.000 - 12.000	1500	0.10	6.000 - 15.000	1400	0.10	7.000 - 12.000	1000	0.05
4.00	5.000 - 12.000	1500	0.15	4.000 - 13.000	1300	0.15	5.000 - 12.000	900	0.10
5.00	5.000 - 12.000	1800	0.15	4.000 - 13.000	2300	0.15	5.000 - 12.000	1500	0.10
6.00	5.000 - 12.000	2000	0.15	4.000 - 13.000	2300	0.15	5.000 - 12.000	1500	0.10
8.00	4.000 - 9.000	2200	0.15	4.000 - 9.000	2000	0.15	4.000 - 9.000	1200	0.15
10.00	3.000 - 6.000	2000	0.20	3.000 - 6.000	1500	0.20	3.000 - 6.000	1000	0.15
12.00	2.000 - 5.000	2000	0.20	3.000 - 5.000	1500	0.20	2.000 - 5.000	1000	0.15



100 mm ve üzeri boylarda kesme parametreleri %10 daha düşük kullanılmalıdır.

DXLF / DXLFH SERİSİ DEVİR İLERLEME TABLOSU

ÇOK AĞIZLI FREZELER İÇİN GEÇERLİDİR



Malzeme Material	HRC 30 - 45		HRC 45 - 55		HRC 55 - 70	
Çap Diameter	Hız Speed	İlerleme Feed	Hız Speed	İlerleme Feed	Hız Speed	İlerleme Feed
	min	mm/min	min	mm/min	min	mm/min
6.00	5.500	1000	4.500	850	3.800	650
8.00	4.000	1000	3.500	850	3.000	650
10.00	3.300	1000	3.100	850	2.400	650
12.00	3.000	900	2.500	700	2.000	600
14.00	3.000	900	2.500	700	2.000	600
16.00	2.500	700	2.000	550	1.500	450
18.00	2.200	600	1.800	500	1.300	400
20.00	1.800	550	1.500	420	1.200	380

DXLFL / DXLFLH SERİSİ DEVİR İLERLEME TABLOSU

ÇOK AĞIZLI UZUN BOY FREZELER İÇİN GEÇERLİDİR



Malzeme Material	HRC 30 - 45		HRC 45 - 55		HRC 55 - 70	
Çap Diameter	Hız / Devir Speed	İlerleme Feed	Hız / Devir Speed	İlerleme Feed	Hız / Devir Speed	İlerleme Feed
	min	mm/min	min	mm/min	min	mm/min
6.00	1.900	400	1.500	300	1.200	220
8.00	1.500	380	1.100	280	900	200
10.00	1.200	360	850	260	750	190
12.00	1.000	340	700	230	650	180
14.00	1.000	340	700	230	650	180
16.00	750	280	550	200	450	150
18.00	700	250	500	180	400	140
20.00	600	240	450	170	350	120



FD / FDH SERİSİ DEVİR İLERLEME TABLOSU

DALMA BOYLU DÜZ FREZELER İÇİN GEÇERLİDİR

Malzeme Material	HRC 30 - 45			HRC 45 - 55			HRC 55 - 70		
Çap Diameter	Hız Speed	İlerleme Feed	ap	Hız Speed	İlerleme Feed	ap	Hız Speed	İlerleme Feed	ap
	min	mm/min	mm	min	mm/min	mm	min	mm/min	mm
1.00	10.000 - 18.000	400 - 1000	0.05	10.000 - 18.000	400 - 1000	0.05	10.000 - 18.000	400 - 1000	0.05
1.50	9.000 - 16.000	400 - 1000	0.05	9.000 - 16.000	400 - 1000	0.05	9.000 - 16.000	400 - 1000	0.05
2.00	7.000 - 15.000	400 - 1000	0.05	7.000 - 15.000	400 - 1000	0.05	7.000 - 15.000	400 - 1000	0.05
2.50	7.000 - 15.000	400 - 1000	0.07	7.000 - 15.000	400 - 1000	0.07	7.000 - 15.000	400 - 1000	0.07
3.00	5.000 - 10.000	700 - 1500	0.08	5.000 - 10.000	700 - 1500	0.08	5.000 - 10.000	700 - 1500	0.08
4.00	3.500 - 9.000	700 - 1500	0.10	3.500 - 9.000	700 - 1500	0.10	3.500 - 9.000	700 - 1500	0.10



FDK / FDKH SERİSİ DEVİR İLERLEME TABLOSU

DALMA BOYLU KÜRE FREZELER İÇİN GEÇERLİDİR

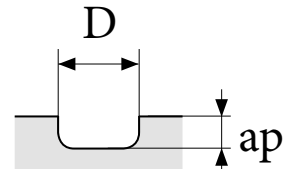
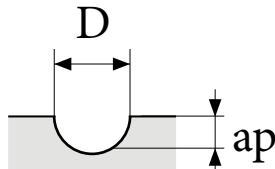
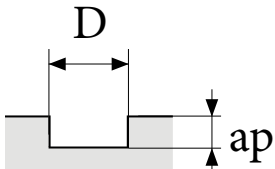
Malzeme Material	HRC 30 - 45			HRC 45 - 55			HRC 55 - 70		
Çap Diameter	Hız Speed	İlerleme Feed	ap	Hız Speed	İlerleme Feed	ap	Hız Speed	İlerleme Feed	ap
	min	mm/min	mm	min	mm/min	mm	min	mm/min	mm
1.00	10.000 - 18.000	400 - 1000	0.05 - 0.10	10.000 - 18.000	400 - 1000	0.05 - 0.10	10.000 - 18.000	400 - 1000	0.05 - 0.10
1.50	9.000 - 16.000	400 - 1000	0.05 - 0.10	9.000 - 16.000	400 - 1000	0.05 - 0.10	9.000 - 16.000	400 - 1000	0.05 - 0.10
2.00	7.000 - 15.000	400 - 1000	0.05 - 0.10	7.000 - 15.000	400 - 1000	0.05 - 0.10	7.000 - 15.000	400 - 1000	0.05 - 0.10
2.50	7.000 - 15.000	400 - 1000	0.05 - 0.10	7.000 - 15.000	400 - 1000	0.05 - 0.10	7.000 - 15.000	400 - 1000	0.05 - 0.10
3.00	5.000 - 10.000	700 - 1500	0.05 - 0.20	5.000 - 10.000	700 - 1500	0.05 - 0.20	5.000 - 10.000	700 - 1500	0.05 - 0.20
4.00	3.500 - 9.000	700 - 1500	0.05 - 0.20	3.500 - 9.000	700 - 1500	0.05 - 0.20	3.500 - 9.000	700 - 1500	0.05 - 0.20



FDKR / FDKRH SERİSİ DEVİR İLERLEME TABLOSU

DALMA BOYLU KÖŞE RADIUS FREZELER İÇİN GEÇERLİDİR

Malzeme Material	HRC 30 - 45			HRC 45 - 55			HRC 55 - 70		
Çap Diameter	Hız Speed	İlerleme Feed	ap	Hız Speed	İlerleme Feed	ap	Hız Speed	İlerleme Feed	ap
	min	mm/min	mm	min	mm/min	mm	min	mm/min	mm
1.00	10.000 - 18.000	800 - 1500	0.05 - 0.10	10.000 - 18.000	800 - 1500	0.05 - 0.10	10.000 - 18.000	800 - 1500	0.05 - 0.10
1.50	10.000 - 18.000	800 - 1500	0.05 - 0.10	10.000 - 18.000	800 - 1500	0.05 - 0.10	10.000 - 18.000	800 - 1500	0.05 - 0.10
2.00	10.000 - 18.000	800 - 1500	0.05 - 0.10	10.000 - 18.000	800 - 1500	0.05 - 0.10	10.000 - 18.000	800 - 1500	0.05 - 0.10
2.50	7.000 - 15.000	800 - 1500	0.05 - 0.10	7.000 - 15.000	800 - 1500	0.05 - 0.10	7.000 - 15.000	800 - 1500	0.05 - 0.10
3.00	5.000 - 12.000	800 - 1500	0.05 - 0.20	5.000 - 12.000	800 - 1500	0.05 - 0.20	5.000 - 12.000	800 - 1500	0.05 - 0.20
4.00	5.000 - 12.000	800 - 1500	0.05 - 0.20	5.000 - 12.000	800 - 1500	0.05 - 0.20	5.000 - 12.000	800 - 1500	0.05 - 0.20



UT SERİSİ DEVİR İLERLEME TABLOSU

CHATTER FREE FREZELER İÇİN GEÇERLİDİR

UT

Malzeme Material	ÇELİK			PASLANMAZ		
Çap Diameter	Hız / Devir Speed	İlerleme Feed	ap	Hız / Devir Speed	İlerleme Feed	ap
	Vc	Fz	mm	Vc	Fz	mm
2.00	80 - 120	0.010	2 - 4	60 - 100	0.010	2 - 4
3.00	80 - 120	0.010	2 - 4	60 - 100	0.010	2 - 4
4.00	80 - 120	0.015	4 - 6	60 - 100	0.015	4 - 6
5.00	80 - 130	0.015	5 - 7	60 - 100	0.015	5 - 7
6.00	80 - 130	0.020	6 - 8	60 - 100	0.020	6 - 8
8.00	80 - 130	0.025	8 - 10	60 - 100	0.025	8 - 10
10.00	80 - 130	0.030	10 - 12	60 - 100	0.030	10 - 12
12.00	80 - 130	0.035	12 - 14	60 - 100	0.035	12 - 14
14.00	80 - 130	0.040	14 - 16	60 - 100	0.040	14 - 16
16.00	80 - 130	0.050	16 - 18	60 - 100	0.050	16 - 18
18.00	80 - 130	0.050	18 - 20	60 - 100	0.050	18 - 20
20.00	80 - 130	0.055	20 - 22	60 - 100	0.055	20 - 22

AL SERİSİ DEVİR İLERLEME TABLOSU

ALÜMİNYUM FREZELER İÇİN GEÇERLİDİR

AL

MALZEME Material	ALAŞIM Alloy	Kesme Değeri Cutting Speed Vc=m/dk	DİŞ BAŞI İLERLEME / Fz mm/devir Feed Per Tooth							
			Ø4	Ø6	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20
Alüminyum	<:%10 Si	500	0.04	0.05	0.07	0.09	0.11	0.14	0.14	0.16
Alüminyum	>:%10 Si	400	0.03	0.05	0.06	0.07	0.08	0.10	0.10	0.12
Plastik		400	0.03	0.05	0.06	0.07	0.08	0.10	0.10	0.12
Bakır		350	0.03	0.05	0.06	0.07	0.08	0.10	0.10	0.12

LT SERİSİ DEVİR İLERLEME TABLOSU

ALÜMİNYUM YÜKSEK PERFORMANS FREZELER İÇİN GEÇERLİDİR

LT

MALZEME Material	ALAŞIM Alloy	Kesme Değeri Cutting Speed Vc=m/dk	DİŞ BAŞI İLERLEME / Fz mm/devir Feed Per Tooth							
			Ø4	Ø6	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20
Alüminyum	<:%10 Si	500	0.04	0.06	0.08	0.10	0.12	0.15	0.16	0.18
Alüminyum	>:%10 Si	400	0.03	0.05	0.07	0.08	0.09	0.11	0.11	0.13
Bakır		350	0.03	0.05	0.07	0.08	0.09	0.11	0.11	0.13

3616

3617

3616 - 3617 DEVİR İLERLEME TABLOSU

DÜZ ve KÜRE KONİK FREZELER İÇİN GEÇERLİDİR

MALZEME Material		Gerilme Dayanımı	DIN	Malzeme No Material No	Kesme Değeri Cutting Speed Vc=m/dk	DIŞ BAŞI İLERLEME / Fz mm/devir Feed Per Tooth							
		Tensile Strength Hardness N/mm²				Ø2	Ø3	Ø4	Ø5	Ø6	Ø8	Ø10	Ø12
Çelik	Alaşımsız Çelik	<450	St 37	1010	80-100	0.005	0.008	0.015	0.020	0.026	0.035	0.043	0.052
	İmalat Çeliği	450-550	CK40	1040	80-100	0.005	0.008	0.015	0.020	0.026	0.035	0.043	0.052
	İslah Çeliği	550-900	42CrMo4	4140	60-80	0.005	0.008	0.013	0.017	0.021	0.029	0.036	0.053
	Soğuk İş Takım Çeliği	900-1200	2379 - 2080	D2-D3	60-80	0.004	0.006	0.009	0.011	0.015	0.020	0.025	0.030
	Sıcak İş Takım Çeliği	900-1200	2344	H13	60-80	0.004	0.006	0.009	0.011	0.015	0.020	0.025	0.030
Paslanmaz Çelik	Paslanmaz Çelik	500-950	X5CrNi1810	X5CrNi1810	40-60	0.006	0.010	0.020	0.025	0.030	0.040	0.045	0.055
Döküm	Gri Dökme Demir	≤550	GG25	GG25	80-100	0.005	0.008	0.015	0.020	0.026	0.035	0.043	0.052
	Alaşımlı Dökme Demir	300-700	GGL-NiCr35 2	GGL-NiCr35 2	70-90	0.005	0.008	0.015	0.020	0.026	0.035	0.043	0.052
	Hassas Döküm	400-750	GTS55	GTS55	20-40	0.004	0.006	0.009	0.011	0.015	0.020	0.025	0.030
Titanyum	Titanyum	140-900		TiAl6Sn2	20-40	0.004	0.006	0.009	0.011	0.015	0.020	0.025	0.030

TN

TN DEVİR İLERLEME TABLOSU

FİNİŞ FREZELER İÇİN GEÇERLİDİR

MALZEME Material	Gerilme Dayanımı Tensile Strength Hardness N/mm²	DIN	Malzeme No Material No	Kesme Değeri Cutting Speed Vc=m/dk	DIŞ BAŞI İLERLEME / Fz mm/devir Feed Per Tooth								
					Ø3	Ø4	Ø5	Ø6	Ø8	Ø10	Ø12	≥Ø14	
Çelik	Alaşımsız Çelik	<450	St 37	1010	120-140	0.017	0.017	0.030	0.030	0.045	0.060	0.070	0.100
	İmalat Çeliği	450-550	CK40	1040	100-130	0.017	0.017	0.030	0.030	0.045	0.060	0.070	0.100
	İslah Çeliği	550-900	42CrMo4	4140	100-120	0.017	0.017	0.030	0.030	0.045	0.060	0.070	0.100
	Soğuk İş Takım Çeliği	900-1200	2379 - 2080	D2-D3	99-110	0.017	0.017	0.030	0.030	0.045	0.060	0.070	0.100
	Sıcak İş Takım Çeliği	900-1200	2344	H13	80-100	0.015	0.015	0.020	0.020	0.025	0.030	0.040	0.080
Paslanmaz Çelik	Paslanmaz Çelik	500-950	X5CrNi1810	X5CrNi1810	30-50	0.020	0.020	0.025	0.025	0.040	0.050	0.060	0.100
Döküm	Gri Dökme Demir	≤550	GG25	GG25	100-120	0.020	0.020	0.035	0.035	0.050	0.060	0.070	0.100
	Alaşımlı Dökme Demir	300-700	GGL-NiCr35 2	GGL-NiCr35 2	80-100	0.020	0.020	0.035	0.035	0.050	0.060	0.070	0.100
	Hassas Döküm	400-750	GTS55	GTS55	70-90	0.020	0.020	0.035	0.035	0.050	0.060	0.070	0.100
Titanyum	Titanyum	140-900		TiAl6Sn2	30-50	0.015	0.015	0.025	0.025	0.030	0.040	0.060	0.080

PR ve PRH SERİSİ DEVİR İLERLEME TABLOSU

HIGH FEED FREZELER İÇİN GEÇERLİDİR



Malzeme Material	HRC 30 - 45		HRC 45 - 55		HRC 55 - 70	
Çap Diameter	Hız Speed	İlerleme Feed	Hız Speed	İlerleme Feed	Hız Speed	İlerleme Feed
	min	mm/min	min	mm/min	min	mm/min
4.00 R0.5	16.000	10.000	12.000	9.000	9.000	6.000
4.00 R1	16.000	10.000	12.000	9.000	9.000	6.000
5.00 R0.5	12.000	10.000	10.000	9.000	7.500	7.000
5.00 R1	12.000	10.000	10.000	9.000	7.500	7.000
6.00 R0.5	9.000	10.000	8.500	9.000	6.400	7.000
6.00 R1	9.000	10.000	8.500	9.000	6.400	7.000
8.00 R0.5	7.000	10.000	6.500	9.000	4.800	7.000
8.00 R1	7.000	10.000	6.500	9.000	4.800	7.000
10.00 R0.5	6.000	10.000	5.100	9.000	3.800	7.000
10.00 R1	6.000	10.000	5.100	9.000	3.800	7.000
12.00 R0.5	5.000	10.000	4.200	9.000	3.200	7.000
12.00 R1	5.000	10.000	4.200	9.000	3.200	7.000

3016

3017

3016 - 3017 SERİSİ DEVİR İLERLEME TABLOSU

N TİPİ KARBÜR MATKAPLAR İÇİN GEÇERLİDİR

MALZEME Material		İLERLEME / F mm/devir Feed						
		Vc m/min	Ø 0,5-2	Ø 2-4	Ø 4-6	Ø 6-8	Ø 8-10	Ø 10-12
Çelik	Genel Çelik <500 N/mm	60 - 80	0.015 - 0.05	0.6 - 0.10	0.12 - 0.14	0.14 - 0.16	0.16 - 0.18	0.18 - 0.20
	Genel Çelik <700 N/mm	60 - 80	0.015 - 0.05	0.6 - 0.10	0.12 - 0.14	0.14 - 0.16	0.16 - 0.18	0.18 - 0.20
	Genel Çelik <850 N/mm	60 - 80	0.015 - 0.05	0.6 - 0.10	0.12 - 0.14	0.14 - 0.16	0.16 - 0.18	0.18 - 0.20
	Genel Çelik <1000 N/mm	50 - 70	0.015 - 0.05	0.6 - 0.10	0.12 - 0.14	0.14 - 0.16	0.16 - 0.18	0.18 - 0.20
	Genel Çelik <1400 N/mm	30 - 50	0.01 - 0.05	0.06 - 0.10	0.10 - 0.12	0.12 - 0.14	0.14 - 0.16	0.16 - 0.20
	Sertleştirilmiş çelikler <1000 N/mm	50 - 70	0.01 - 0.05	0.06 - 0.10	0.10 - 0.12	0.12 - 0.14	0.14 - 0.16	0.16 - 0.20
	Nitrasyonlu çelikler <1000 N/mm	30 - 50	0.01 - 0.05	0.06 - 0.10	0.10 - 0.12	0.12 - 0.14	0.14 - 0.16	0.16 - 0.20
	Isıl işlemlı Çelikler <850 N/mm	30 - 50	0.01 - 0.05	0.06 - 0.10	0.10 - 0.12	0.12 - 0.14	0.14 - 0.16	0.16 - 0.20
Paslanmaz Çelik	Takım Çeliği	25 - 60	0.01 - 0.05	0.06 - 0.10	0.10 - 0.12	0.12 - 0.14	0.14 - 0.16	0.16 - 0.20
	Paslanmaz Çelikler <700 N/mm	20 - 40	0.01 - 0.05	0.6 - 0.10	0.10 - 0.12	0.12 - 0.14	0.14 - 0.16	0.16 - 0.20
	Paslanmaz Çelikler >700 N/mm	15 - 30	0.01 - 0.05	0.6 - 0.10	0.10 - 0.12	0.12 - 0.14	0.14 - 0.16	0.16 - 0.20
Döküm	Döküm <180HB	70 - 100	0.01 - 0.05	0.6 - 0.10	0.12 - 0.14	0.14 - 0.16	0.16 - 0.18	0.18 - 0.20
	Temper Döküm	70 - 100	0.015 - 0.05	0.6 - 0.10	0.12 - 0.14	0.14 - 0.16	0.16 - 0.18	0.18 - 0.20
	Pik Döküm	60 - 80	0.01 - 0.05	0.6 - 0.01	0.10 - 0.12	0.12 - 0.14	0.14 - 0.16	0.16 - 0.20
Alüminyum	Alüminyum ve Alüminyum Alaşımları <6%Si	100 - 220	0.015 - 0.05	0.6 - 0.10	0.12 - 0.14	0.14 - 0.16	0.16 - 0.18	0.18 - 0.20
	Alüminyum ve Alüminyum Alaşımları <12%Si	120 - 170	0.015 - 0.05	0.6 - 0.10	0.12 - 0.14	0.14 - 0.16	0.16 - 0.18	0.18 - 0.20
	Alüminyum ve Alüminyum Alaşımları >12%Si	100 - 160	0.015 - 0.05	0.6 - 0.10	0.12 - 0.14	0.14 - 0.16	0.16 - 0.18	0.18 - 0.20
	Pirinç - Bakır - Bronz	100 - 180	0.01 - 0.05	0.06 - 0.10	0.10 - 0.12	0.12 - 0.14	0.14 - 0.16	0.16 - 0.20
	Termo Plastikler							
Titanyum	Titanyum ve Titanyum Alaşımları	20 - 35	0.01 - 0.04	0.04 - 0.08	0.08 - 0.12	0.12 - 0.13	0.14 - 0.16	0.16 - 0.18
	Nikel	15 - 30	0.01 - 0.04	0.04 - 0.08	0.08 - 0.12	0.12 - 0.13	0.14 - 0.16	0.16 - 0.18

3645 SERİSİ DEVİR İLERLEME TABLOSU

YÜKSEK PERFORMANS MATKAPLAR İÇİN GEÇERLİDİR

3645
3D

MALZEME Material		İLERLEME / F mm/devir Feed				
		Vc m/min	Ø 1-6	Ø 6-10	Ø 10-16	Ø 16-20
Çelik	Genel Çelik <500 N/mm	80 - 100	0.08 - 0.15	0.15 - 0.20	0.20 - 0.25	0.25 - 0.35
	Genel Çelik <700 N/mm	80 - 100	0.08 - 0.15	0.15 - 0.20	0.20 - 0.25	0.25 - 0.35
	Genel Çelik <850 N/mm	80 - 100	0.08 - 0.15	0.15 - 0.20	0.20 - 0.25	0.25 - 0.35
	Genel Çelik <1000 N/mm	70 - 90	0.08 - 0.15	0.15 - 0.20	0.20 - 0.25	0.25 - 0.35
	Genel Çelik <1400 N/mm	30 - 50	0.06 - 0.12	0.12 - 0.15	0.15 - 0.20	0.20 - 0.30
	Sertleştirilmiş çelikler <1000 N/mm	60 - 80	0.07 - 0.13	0.13 - 0.16	0.16 - 0.22	0.22 - 0.30
	Nitrasyonlu çelikler <1000 N/mm	60 - 80	0.07 - 0.13	0.13 - 0.16	0.16 - 0.22	0.22 - 0.30
	Isıl işlemlili Çelikler <850 N/mm	50 - 70	0.07 - 0.13	0.13 - 0.16	0.16 - 0.22	0.22 - 0.30
Paslanmaz Çelik	Takım Çeliği	30 - 50	0.06 - 0.12	0.12 - 0.15	0.15 - 0.20	0.20 - 0.30
	Paslanmaz Çelikler <700 N/mm	30 - 50	0.06 - 0.10	0.10 - 0.15	0.15 - 0.18	0.18 - 0.25
Paslanmaz Çelikler >700 N/mm	Paslanmaz Çelikler >700 N/mm	25 - 40	0.06 - 0.10	0.10 - 0.15	0.15 - 0.18	0.18 - 0.25
	Döküm	Döküm <180HB	100 - 120	0.05 - 0.13	0.13 - 0.17	0.17 - 0.22
Temper Döküm		100 - 120	0.05 - 0.13	0.13 - 0.17	0.17 - 0.22	0.22 - 0.35
Pik Döküm		80 - 110	0.05 - 0.13	0.13 - 0.17	0.17 - 0.22	0.22 - 0.35
Alüminyum	Alüminyum ve Alüminyum Alaşımları <6%Si	200 - 250	0.08 - 0.15	0.15 - 0.20	0.20 - 0.25	0.25 - 0.35
	Alüminyum ve Alüminyum Alaşımları <12%Si	160 - 200	0.08 - 0.15	0.15 - 0.20	0.20 - 0.25	0.25 - 0.35
	Alüminyum ve Alüminyum Alaşımları >12%Si	120 - 180	0.08 - 0.15	0.15 - 0.20	0.20 - 0.25	0.25 - 0.35
	Pirinç - Bakır - Bronz	100 - 200	0.08 - 0.15	0.15 - 0.20	0.20 - 0.25	0.25 - 0.35
Titanyum	Titanyum ve Titanyum Alaşımları	25 - 40	0.06 - 0.10	0.10 - 0.15	0.15 - 0.18	0.18 - 0.25

3646 SERİSİ DEVİR İLERLEME TABLOSU

YÜKSEK PERFORMANS MATKAPLAR İÇİN GEÇERLİDİR

3646
5D

MALZEME Material		İLERLEME / F mm/devir Feed				
		Vc m/min	Ø 1-6	Ø 6-10	Ø 10-16	Ø 16-20
Çelik	Genel Çelik <500 N/mm	100 - 130	0.12 - 0.18	0.18 - 0.23	0.23 - 0.27	0.27 - 0.30
	Genel Çelik <700 N/mm	100 - 130	0.12 - 0.18	0.18 - 0.23	0.23 - 0.27	0.27 - 0.30
	Genel Çelik <850 N/mm	100 - 130	0.12 - 0.18	0.18 - 0.23	0.23 - 0.27	0.27 - 0.30
	Genel Çelik <1000 N/mm	90 - 120	0.12 - 0.18	0.18 - 0.23	0.23 - 0.27	0.27 - 0.30
	Genel Çelik <1400 N/mm	35 - 55	0.06 - 0.09	0.09 - 0.15	0.15 - 0.20	0.20 - 0.23
	Sertleştirilmiş çelikler <1000 N/mm	80 - 100	0.10 - 0.16	0.16 - 0.20	0.20 - 0.22	0.22 - 0.25
	Nitrasyonlu çelikler <1000 N/mm	80 - 100	0.10 - 0.16	0.16 - 0.20	0.20 - 0.22	0.22 - 0.25
	Isıl işlemlı Çelikler <850 N/mm	80 - 100	0.10 - 0.16	0.16 - 0.20	0.20 - 0.22	0.22 - 0.25
	Takım Çeliği	50 - 80	0.10 - 0.16	0.16 - 0.20	0.20 - 0.22	0.22 - 0.25
Alüminyum	Alüminyum ve Alüminyum Alaşımları <6%Si	220 - 260	0.15 - 0.25	0.25 - 0.38	0.38 - 0.42	0.42 - 0.55
	Alüminyum ve Alüminyum Alaşımları <12%Si	220 - 260	0.15 - 0.25	0.25 - 0.38	0.38 - 0.42	0.42 - 0.55
	Pirinç - Bakır - Bronz	90 - 110	0.15 - 0.22	0.22 - 0.30	0.30 - 0.40	0.40 - 0.50

021

021 SERİSİ DEVİR İLERLEME TABLOSU

KARBÜR PUNTA MATKAPLAR İÇİN GEÇERLİDİR

MALZEME Material		İLERLEME / F mm/devir Feed				
		Vc m/min	Ø 0,5-1,25	Ø 1,6-2,5	Ø 3,15-4	Ø 5-6,3
Çelik	Genel Çelik <500 N/mm	80	0.02 - 0.03	0.08 - 0.10	0.10 - 0.13	0.13 - 0.20
	Genel Çelik <700 N/mm	80	0.02 - 0.03	0.08 - 0.10	0.10 - 0.13	0.13 - 0.20
	Genel Çelik <850 N/mm	75	0.02 - 0.03	0.08	0.08 - 0.10	0.10 - 0.15
	Genel Çelik <1000 N/mm	70	0.02 - 0.03	0.08	0.08 - 0.10	0.10 - 0.15
	Genel Çelik <1400 N/mm	35	0.01 - 0.02	0.06 - 0.08	0.08 - 0.10	0.10 - 0.15
	Sertleştirilmiş çelikler <1000 N/mm	65	0.01 - 0.02	0.06 - 0.08	0.08 - 0.10	0.10 - 0.15
	Nitrasyonlu çelikler <1000 N/mm	65	0.01 - 0.02	0.06 - 0.08	0.08 - 0.10	0.10 - 0.15
	Isıl işlemlili Çelikler <850 N/mm	65	0.01 - 0.02	0.06 - 0.08	0.08 - 0.10	0.10 - 0.15
	Takım Çeliği	40	0.01 - 0.02	0.06 - 0.08	0.08 - 0.10	0.10 - 0.15
Paslanmaz Çelik	Paslanmaz Çelikler <700 N/mm	30	0.01	0.02	0.02 - 0.03	0.03 - 0.07
	Paslanmaz Çelikler >700 N/mm	25	0.01	0.02	0.02 - 0.03	0.03 - 0.07
Döküm	Döküm <180HB	70	0.04	0.07 - 0.08	0.08 - 0.13	0.13 - 0.18
	Temper Döküm	70	0.02	0.06 - 0.08	0.08 - 0.10	0.10 - 0.15
	Pik Döküm	70	0.02	0.06 - 0.08	0.08 - 0.10	0.10 - 0.15
Alüminyum	Alüminyum ve Alüminyum Alaşımları <6%Si	200	0.01	0.02	0.02 - 0.03	0.03 - 0.07
	Alüminyum ve Alüminyum Alaşımları <12%Si	180	0.01	0.02	0.02 - 0.03	0.03 - 0.07
	Alüminyum ve Alüminyum Alaşımları >12%Si	160	0.01	0.02	0.02 - 0.03	0.03 - 0.07
	Pirinç - Bakır - Bronz	100	0.01	0.01	0.01 - 0.02	0.02 - 0.06
	Termo Plastikler	45	0.05	0.05	0.05	0.10 - 0.14
Titanyum	Titanyum ve Titanyum Alaşımları	25	0.01 - 0.02	0.02	0.02 - 0.03	0.03 - 0.07

190

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190 - 191 SERİSİ DEVİR İLERLEME TABLOSU 90° - 120°

NC KARBÜR PUNTA MATKAPLAR İÇİN GEÇERLİDİR

MALZEME Material		İLERLEME / F mm/devir Feed				
		Vc m/min	Ø 3-5	Ø 5-6	Ø 6-12	Ø 12-20
Çelik	Genel Çelik <500 N/mm	70 - 80	0.06 - 0.11	0.11 - 0.14	0.14 - 0.16	0.16
	Genel Çelik <700 N/mm	65 - 75	0.06 - 0.11	0.11 - 0.14	0.14 - 0.16	0.16
	Genel Çelik <850 N/mm	55 - 65	0.06 - 0.11	0.11 - 0.14	0.14 - 0.16	0.16
	Genel Çelik <1000 N/mm	40 - 60	0.05 - 0.09	0.09 - 0.12	0.12 - 0.14	0.14
	Genel Çelik <1400 N/mm	25 - 35	0.05 - 0.09	0.09 - 0.12	0.12 - 0.14	0.14
	Sertleştirilmiş çelikler <1000 N/mm	30 - 40	0.05 - 0.09	0.09 - 0.12	0.12 - 0.14	0.14
	Nitrasyonlu çelikler <1000 N/mm	30 - 40	0.05 - 0.09	0.09 - 0.12	0.12 - 0.14	0.14
	Isıl işlemlı Çelikler <850 N/mm	40 - 50	0.05 - 0.09	0.09 - 0.12	0.12 - 0.14	0.14
Paslanmaz Çelik	Takım Çeliği	25 - 35	0.05 - 0.09	0.09 - 0.12	0.12 - 0.14	0.14
	Paslanmaz Çelikler <700 N/mm	20 - 30	0.01 - 0.03	0.03 - 0.07	0.07	0.07
Döküm	Paslanmaz Çelikler >700 N/mm	20 - 25	0.01 - 0.03	0.03 - 0.07	0.07	0.07
	Döküm <180HB	60 - 70	0.04 - 0.09	0.09 - 0.11	0.11 - 0.13	0.13
	Temper Döküm	60 - 70	0.04 - 0.09	0.09 - 0.11	0.11 - 0.13	0.13
	Pik Döküm	60 - 70	0.04 - 0.09	0.09 - 0.11	0.11 - 0.13	0.13
Alüminyum	Alüminyum ve Alüminyum Alaşımları <6%Si	180 - 200	0.02 - 0.03	0.03 - 0.07	0.07	0.07
	Alüminyum ve Alüminyum Alaşımları <12%Si	160 - 180	0.02 - 0.03	0.03 - 0.07	0.07	0.07
	Alüminyum ve Alüminyum Alaşımları >12%Si	140 - 160	0.02 - 0.03	0.03 - 0.07	0.07	0.07
	Pirinç - Bakır - Bronz	60 - 80	0.01 - 0.02	0.02 - 0.06	0.07	0.07
	Termo Plastikler	40 - 50	0.01 - 0.02	0.02 - 0.04	0.04 - 0.06	0.07
Titanyum	Titanyum ve Titanyum Alaşımları	25 - 35	0.01 - 0.03	0.03 - 0.07	0.07	0.07
	Nikel	25 - 35	0.01 - 0.03	0.03 - 0.07	0.07	0.07

460 - 490 - 4120 SERİSİ DEVİR İLERLEME TABLOSU

HAVŞA FREZELERİ İÇİN GEÇERLİDİR
60° - 90° - 120°

460
490
4120

MALZEME Material		İLERLEME / F mm/devir Feed		
		Vc m/min	Ø 4-6-8	Ø 10-12
Çelik	Genel Çelik <500 N/mm	190	0.04 - 0.07	0.07 - 0.12
	Genel Çelik <700 N/mm	170	0.04 - 0.07	0.02 - 0.04
	Genel Çelik <850 N/mm	170	0.04 - 0.07	0.02 - 0.04
	Genel Çelik <1000 N/mm	140	0.04 - 0.07	0.02 - 0.04
	Genel Çelik <1400 N/mm	85	0.02 - 0.05	0.04 - 0.06
	Sertleştirilmiş çelikler <1000 N/mm	120	0.02 - 0.05	0.05 - 0.07
	Nitrasyonlu çelikler <1000 N/mm	120	0.02 - 0.05	0.05 - 0.07
	Isıl işlemlı Çelikler <850 N/mm	160	0.02 - 0.05	0.05 - 0.07
	Takım Çeliği	95	0.02 - 0.05	0.04 - 0.06
Paslanmaz Çelik	Paslanmaz Çelikler <700 N/mm	110	0.02 - 0.04	0.04 - 0.05
	Paslanmaz Çelikler >700 N/mm	75	0.02 - 0.04	0.04 - 0.05
Döküm	Döküm <180HB	150	0.03 - 0.04	0.07 - 0.08
	Temper Döküm	70	0.04 - 0.06	0.08 - 0.09
	Pik Döküm	100	0.04 - 0.06	0.08 - 0.09
Alüminyum	Alüminyum ve Alüminyum Alaşımları <6%Si	700	0.04 - 0.07	0.12
	Alüminyum ve Alüminyum Alaşımları <12%Si	700	0.04 - 0.07	0.12
	Alüminyum ve Alüminyum Alaşımları >12%Si	40	0.04 - 0.07	0.12
	Pirinç - Bakır - Bronz	300	0.04 - 0.07	0.12
Titanyum	Titanyum ve Titanyum Alaşımları	60	0.02 - 0.04	0.07
	Nikel	60	0.02 - 0.04	0.07

6507 SERİSİ DEVİR İLERLEME TABLOSU

ÇİFT TARAFLI HAVŞA FREZESİ İÇİN GEÇERLİDİR

6507

MALZEME Material		İLERLEME / F mm/devir Feed					
		Vc m/min	Ø 1-3	Ø 4-6	Ø 6-8	Ø 8-10	Ø 10-12
Çelik	Genel Çelik <500 N/mm	60 - 80	0.004 - 0.007	0.007 - 0.014	0.014 - 0.018	0.018 - 0.022	0.022 - 0.030
	Genel Çelik <700 N/mm	60 - 80	0.002 - 0.006	0.006 - 0.014	0.014 - 0.018	0.018 - 0.022	0.022 - 0.030
	Genel Çelik <850 N/mm	60 - 80	0.002 - 0.006	0.006 - 0.014	0.014 - 0.018	0.018 - 0.022	0.022 - 0.030
	Genel Çelik <1000 N/mm	50 - 70	0.002 - 0.006	0.006 - 0.014	0.014 - 0.018	0.018 - 0.022	0.022 - 0.030
	Genel Çelik <1400 N/mm	30 - 50	0.004 - 0.006	0.006 - 0.010	0.010 - 0.012	0.014	0.014 - 0.021
	Sertleştirilmiş çelikler <1000 N/mm	40 - 60	0.004 - 0.006	0.006 - 0.010	0.010 - 0.012	0.014	0.014 - 0.021
	Nitrasyonlu çelikler <1000 N/mm	35 - 55	0.004 - 0.006	0.006 - 0.010	0.010 - 0.012	0.014	0.014 - 0.021
	Isıl işlemlili Çelikler <850 N/mm	35 - 55	0.004 - 0.006	0.006 - 0.010	0.010 - 0.012	0.014	0.014 - 0.021
	Takım Çeliği	25 - 40	0.004 - 0.006	0.006 - 0.010	0.010 - 0.012	0.014	0.014 - 0.021
Paslanmaz Çelik	Paslanmaz Çelikler <700 N/mm	35 - 55	0.004 - 0.006	0.006 - 0.010	0.010 - 0.012	0.014	0.014 - 0.021
	Paslanmaz Çelikler >700 N/mm	30 - 50	0.002 - 0.006	0.006 - 0.010	0.010 - 0.012	0.014	0.014 - 0.021
Döküm	Döküm <180HB	30 - 50	0.004 - 0.007	0.007 - 0.014	0.014 - 0.018	0.022	0.022 - 0.030
	Temper Döküm	30 - 50	0.004 - 0.007	0.007 - 0.014	0.014 - 0.018	0.022	0.022 - 0.030
	Pik Döküm	30 - 50	0.004 - 0.007	0.007 - 0.014	0.014 - 0.018	0.022	0.022 - 0.030
Alüminyum	Alüminyum ve Alüminyum Alaşımları <6%Si	220 - 250	0.006 - 0.009	0.009 - 0.015	0.015 - 0.020	0.023	0.025 - 0.035
	Alüminyum ve Alüminyum Alaşımları <12%Si	110 - 130	0.006 - 0.009	0.009 - 0.015	0.015 - 0.020	0.023	0.025 - 0.035
	Alüminyum ve Alüminyum Alaşımları >12%Si	70 - 100	0.006 - 0.009	0.009 - 0.015	0.015 - 0.020	0.023	0.025 - 0.035
	Pirinç - Bakır - Bronz	60 - 80	0.004 - 0.007	0.007 - 0.014	0.014 - 0.018	0.023	0.025 - 0.035
	Termo Plastikler	110 - 130	0.004 - 0.007	0.007 - 0.014	0.014 - 0.018	0.023	0.025 - 0.035
	Grafit	30 - 50	0.004 - 0.007	0.007 - 0.014	0.014 - 0.018	0.023	0.025 - 0.035

5210

5210 SERİSİ DEVİR İLERLEME TABLOSU

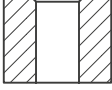
KARBÜR RAYBALAR İÇİN GEÇERLİDİR

MALZEME Material		İLERLEME / F mm/devir Feed					
		Vc m/min	Ø 1-2,99	Ø 3-5,99	Ø 6-9,99	Ø 10-15,99	Ø 16-20
Çelik	Genel Çelik <500 N/mm	30 -40	0.08 - 0.10	0.10 - 0.15	0.15 - 0.20	0.20 - 0.25	0.25 - 0.30
	Genel Çelik <700 N/mm	25 - 35	0.08 - 0.10	0.10 - 0.15	0.15 - 0.20	0.20 - 0.25	0.25 - 0.30
	Genel Çelik <850 N/mm	25 - 35	0.08 - 0.10	0.10 - 0.15	0.15 - 0.20	0.20 - 0.25	0.25 - 0.30
	Genel Çelik <1000 N/mm	25 - 35	0.06 - 0.08	0.08 - 0.10	0.10 - 0.14	0.14 - 0.20	0.20 - 0.30
	Genel Çelik <1400 N/mm	10 - 15	0.06 - 0.08	0.08 - 0.10	0.10 - 0.14	0.14 - 0.20	0.20 - 0.30
	Sertleştirilmiş çelikler <1000 N/mm	10 - 20	0.08 - 0.10	0.10	0.12 - 0.16	0.16 - 0.25	0.25 - 0.30
	Nitrasyonlu çelikler <1000 N/mm	10 - 20	0.06 - 0.08	0.08	0.10 - 0.14	0.14 - 0.20	0.20 - 0.30
	Isıl işlemlili Çelikler <850 N/mm	15 - 20	0.06 - 0.08	0.08	0.10 - 0.14	0.14 - 0.20	0.20 - 0.30
Paslanmaz Çelik	Takım Çeliği	10 - 15	0.06 - 0.08	0.08	0.10 - 0.14	0.14 - 0.20	0.20 - 0.30
	Paslanmaz Çelikler <700 N/mm	10 - 15	0.06 - 0.08	0.08	0.10 - 0.14	0.14 - 0.20	0.20 - 0.30
Döküm	Paslanmaz Çelikler >700 N/mm	8 - 15	0.06 - 0.08	0.08	0.10 - 0.14	0.14 - 0.20	0.20 - 0.30
	Döküm <180HB	12 - 20	0.12 - 0.18	0.18	0.20 - 0.23	0.23 - 0.30	0.30 - 0.35
Alüminyum	Temper Döküm	10 - 15	0.10 - 0.12	0.12	0.16 - 0.18	0.18 - 0.25	0.25 - 0.30
	Alüminyum ve Alüminyum Alaşımları <6%Si	30 - 60	0.12 - 0.18	0.18	0.20 - 0.23	0.23 - 0.30	0.30 - 0.35
	Alüminyum ve Alüminyum Alaşımları <12%Si	20 - 40	0.12 - 0.18	0.18	0.20 - 0.23	0.23 - 0.30	0.30 - 0.35
	Alüminyum ve Alüminyum Alaşımları >12%Si	15 - 30	0.12 - 0.18	0.18	0.20 - 0.23	0.23 - 0.30	0.30 - 0.35
	Pirinç - Bakır - Bronz	20 - 30	0.15 - 0.20	0.20	0.25 - 0.32	0.32 - 0.40	0.40 - 0.45
	Termo Plastikler	15 - 30	0.08 - 0.10	0.10	0.15 - 0.20	0.20 - 0.25	0.25 - 0.30
Titanyum	Titanyum ve Titanyum Alaşımları	5 - 10	0.06 - 0.08	0.08	0.10 - 0.14	0.14 - 0.20	0.20 - 0.30

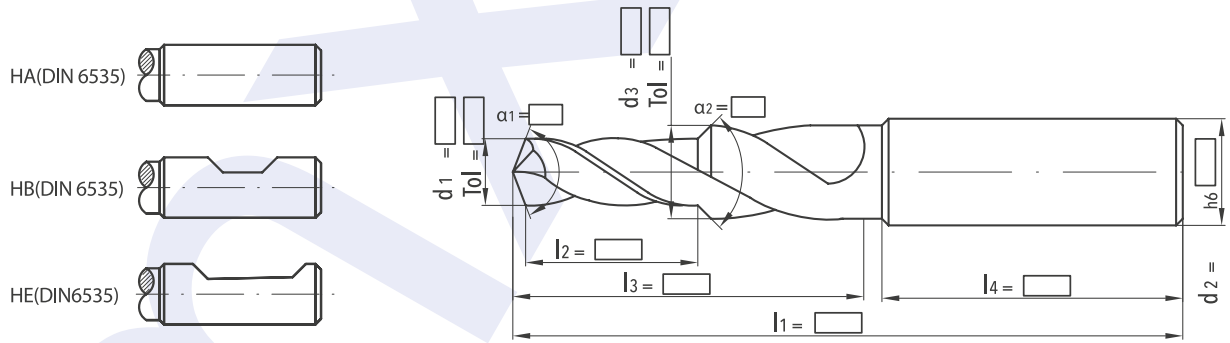
KARBÜR KADEMELİ MATKAP SİPARİŞ FORMU

Karbür Kademeli Matkap

Lütfen işleme şeklinizi ve ihtiyacınız olan özel takımı tanımlayınız

İşleme şekli	☐		☐		İşlenecek malzeme	
					☐ Alaşımsız çelik	☐ Alüminyum Si>%10
Delik tipi	☐ Açık delik	☐ Kör delik			☐ Dökme çelik	☐ Alüminyum Si<%10
					☐ Alaşımlı çelik	☐ Bakır
İşleme metodu	☐ Sulu	☐ Kuru			☐ Inox	☐ Prinç
	☐ min. Yağlama				☐ Paslanmaz / Aside dayanıklı	☐ Bronz
					☐ Gri dökme demir	☐ Titanyum alaşımları
Soğutma şekli	☐ Dıştan	☐ İçten			☐ Alaşımlı dökme demir	☐ Nikel alaşımları
					☐ Sfrero döküm	☐ Soğuk dökme demir
					☐ Dövme çelik	☐ Sertleştirilmiş çelik
Sertlik(HRC,HB,etc)	Çekme mukavemeti(N/mm ²)					Standart No
Kesme yönü						☐ Sağ
Belirtilmediği takdirde Sağ olarak kabul edilir /						☐ Sol
Kaplama İsteği						

Şaft formu



Not

Firma İsmi

Yetkili kişi

Adres

Tel/Faks

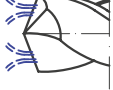
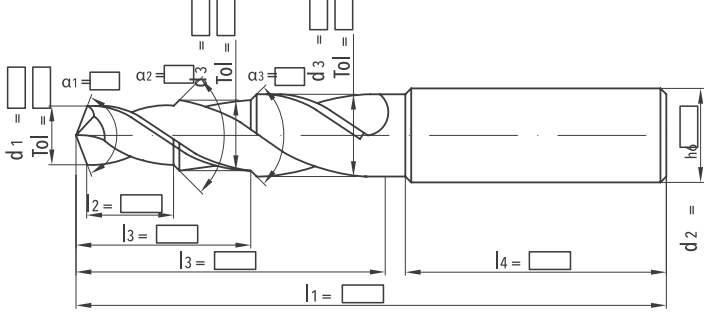
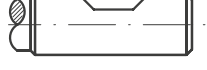
e-posta

Tarih/İmza

KARBÜR ÇOK KADEMELİ MATKAP SİPARİŞ FORMU

Karbür Çok Kademeli Matkap

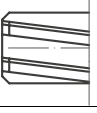
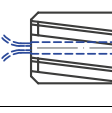
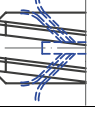
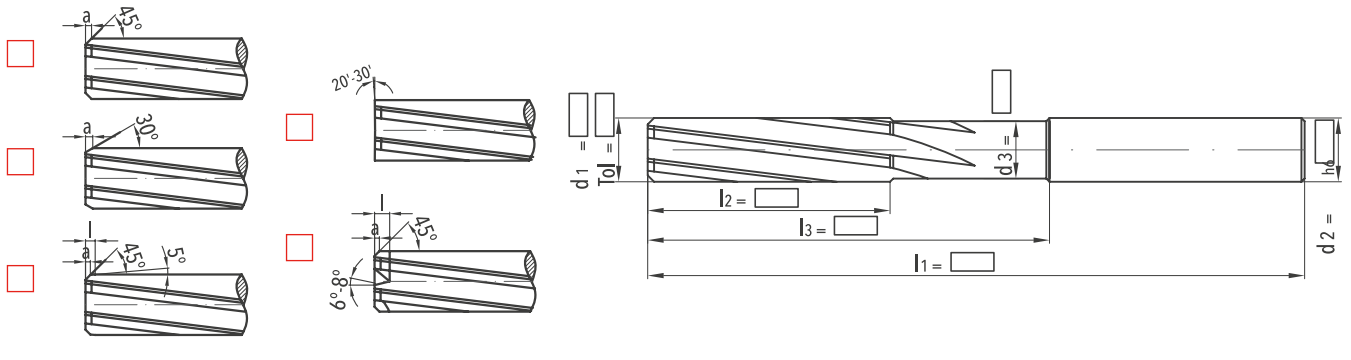
Lütfen işleme şeklinizi ve ihtiyacınız olan özel takımı tanımlayınız

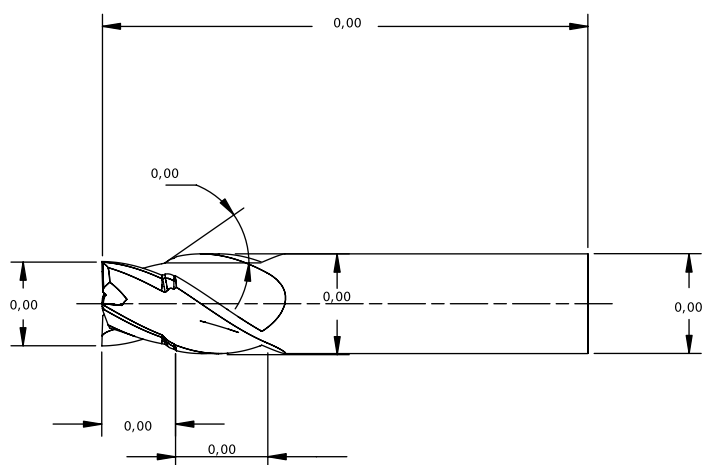
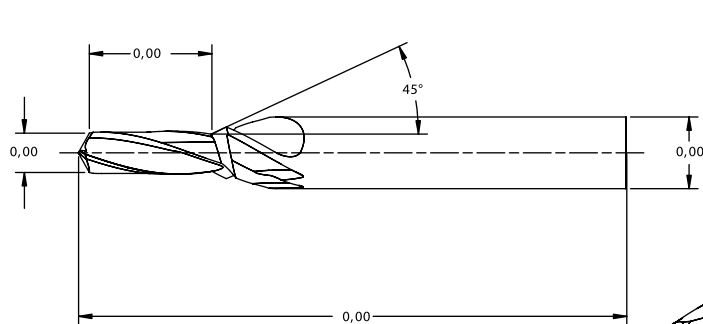
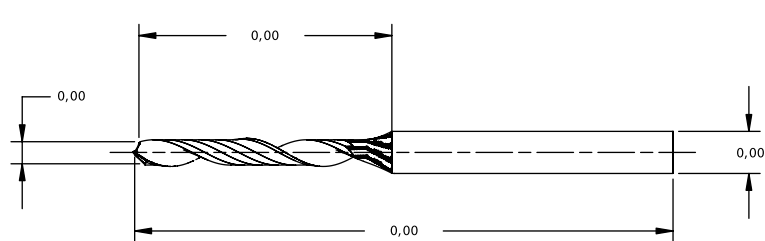
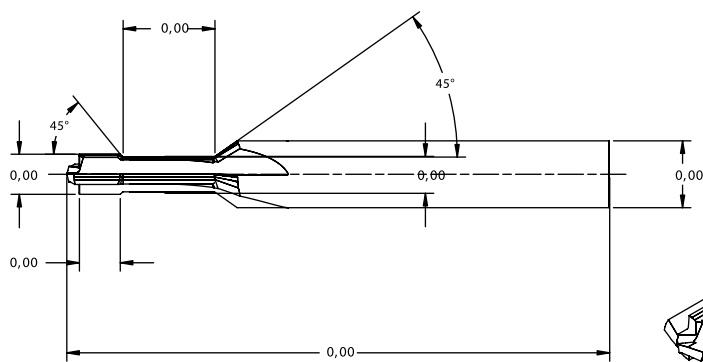
İşleme şekli	☐ 	☐ 	İşlenecek malzeme	
			☐ Alaşımsız çelik	☐ Alüminyum Si>%10
Delik tipi	☐ Açık delik	☐ Kör delik	☐ Dökme çelik	☐ Alüminyum Si<%10
			☐ Alaşımlı çelik	☐ Bakır
İşleme metodu	☐ Sulu	☐ Kuru	☐ Inox	☐ Prinç
	☐ min. Yağlama		☐ Paslanmaz / Aside dayanıklı	☐ Bronz
			☐ Gri dökme demir	☐ Titanyum alaşımları
Soğutma şekli	☐ Dıştan	☐ İçten	☐ Alaşımlı dökme demir	☐ Nikel alaşımları
			☐ Sfrero döküm	☐ Soğuk dökme demir
			☐ Dövme çelik	☐ Sertleştirilmiş çelik
Sertlik(HRc,HB,etc)	Çekme mukavemeti(N/mm ²)			Standart No
Kesme yönü	☐ Sağ			☐ Sol
Belirtilmediği takdirde Sağ olarak kabul edilir / if stated we will assume RH.				
Kaplama İsteği				
Şaft formu				
HA(DIN 6535)				
HB(DIN 6535)				
HE(DIN6535)				
Not				
Firma İsmi				
Yetkili kişi				
Adres				
Tel/Faks				
e-posta				
Tarih/İmza				

ÖZEL KARBÜR RAYBA SİPARİŞ FORMU

Özel Karbür Rayba

Lütfen işleme şeklinizi ve ihtiyacınız olan özel takımı tanımlayınız

Delik tipi	☐ Açık delik	☐ Kör delik	☐ Alaşimsız çelik	☐ Alüminyum Si>%10
			☐ Dökme çelik	☐ Alüminyum Si<%10
İşleme metodu	☐ Sulu	☐ Kuru	☐ Alaşımli çelik	☐ Bakır
	☐ min. Yağlama		☐ Inox	☐ Prinç
Soğutma şekli			☐ Paslanmaz / Aside dayanıklı	☐ Bronz
☐ Dıştan	☐ İçten	☐ İçten	☐ Gri dökme demir	☐ Titanyum alaşımları
			☐ Alaşımli dökme demir	☐ Nikel alaşımları
			☐ Sfrero döküm	☐ Soğuk dökme demir
Kaplama İsteği			☐ Dövme çelik	☐ Sertleştirilmiş çelik
Sertlik(HRC,HB,etc) :	Çekme mukavemeti(N/mm ²):			Standart No
Kesme yönü			☐ Sağ	☐ Sol
Belirtilmediği takdirde Sağ olarak kabul edilir				
Rayba formu				
				
Not				
Firma İsmi				
Yetkili kişi				
Adres				
Tel/Faks				
e-posta				
Tarih/İmza				



mx

Made in TURKEY



POWER

mx POWER

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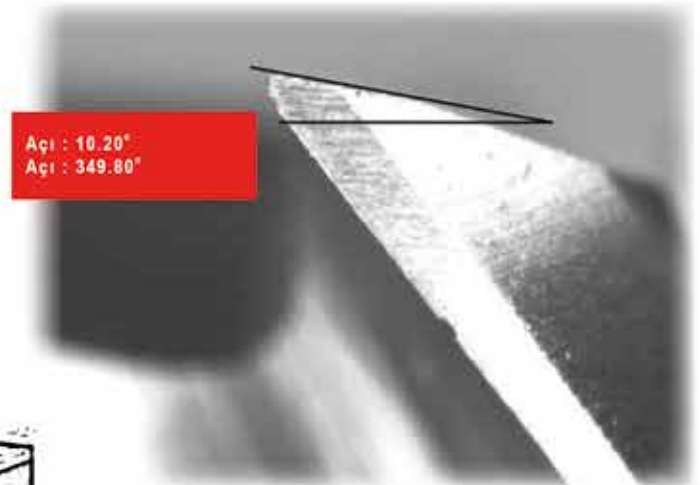
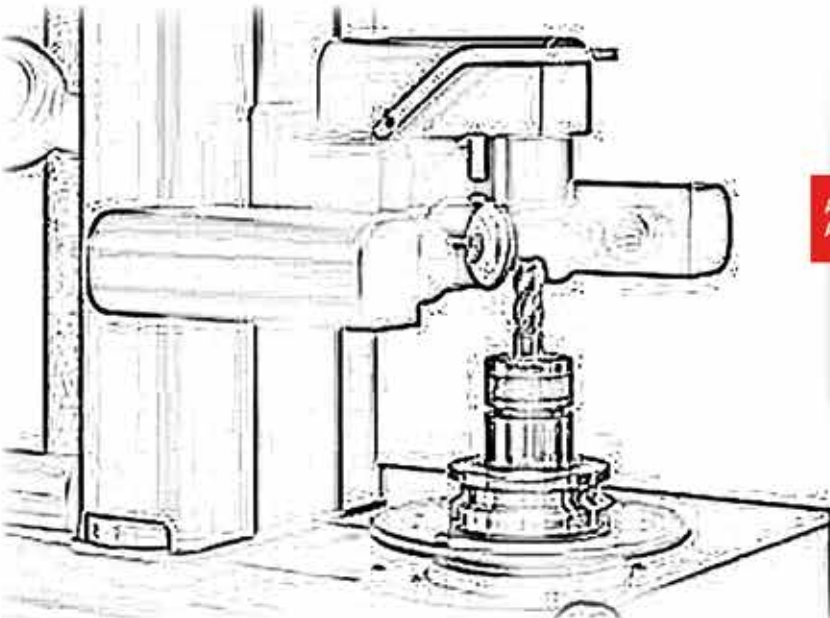
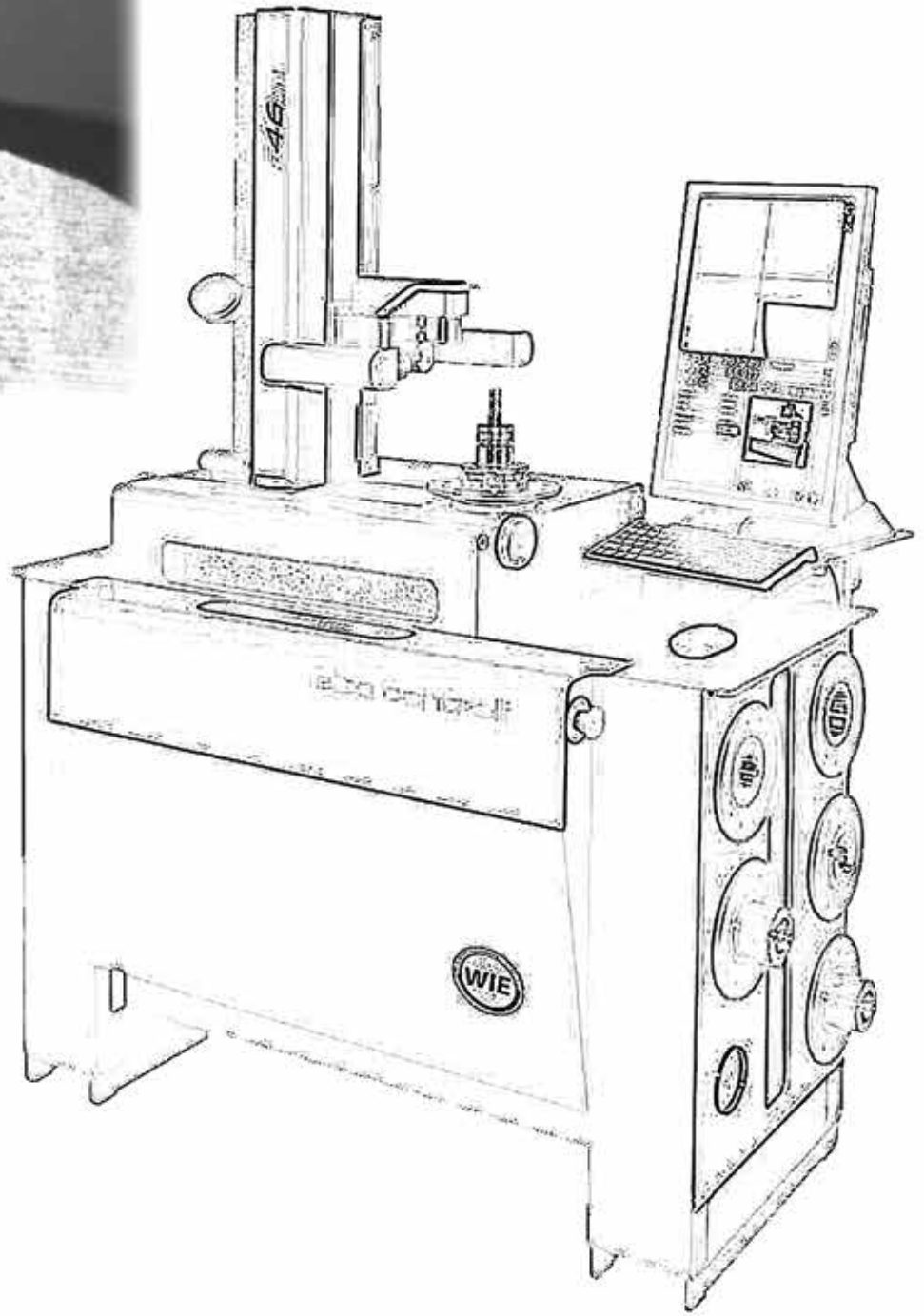
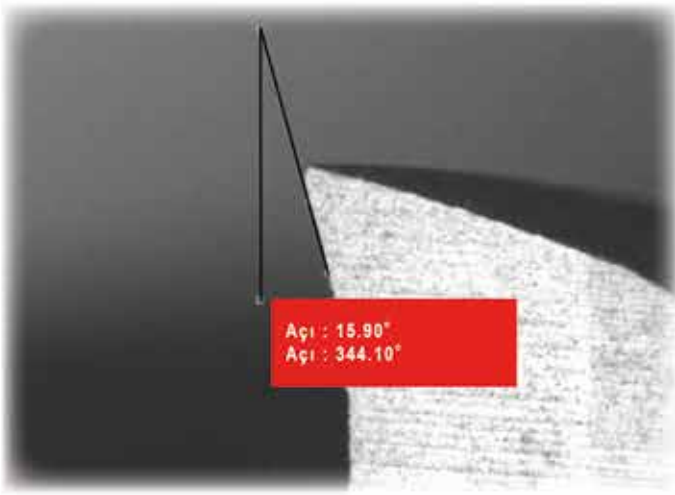
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