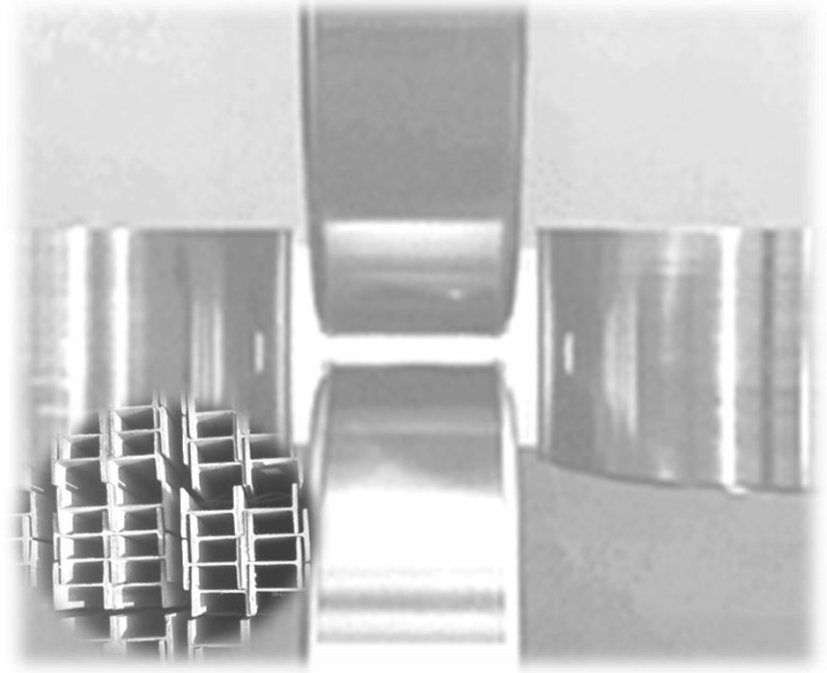
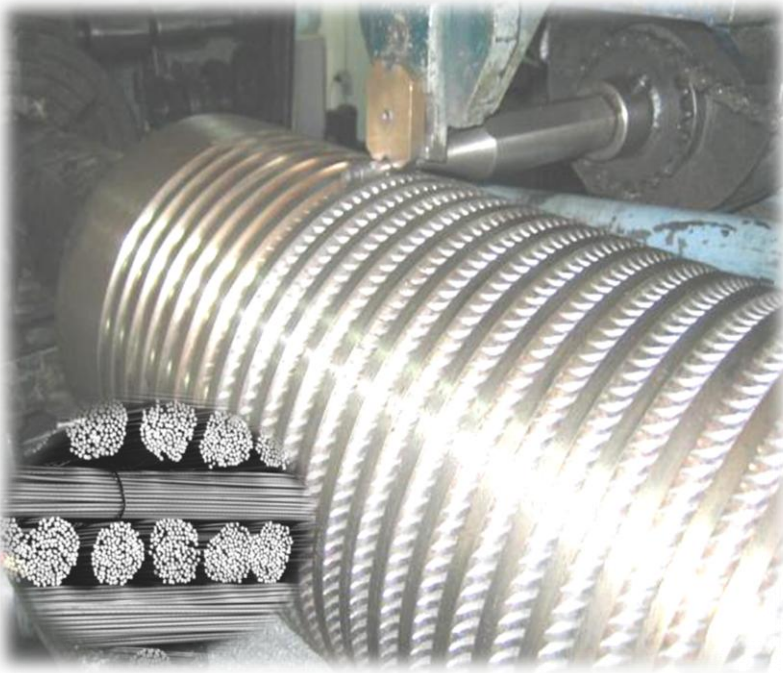


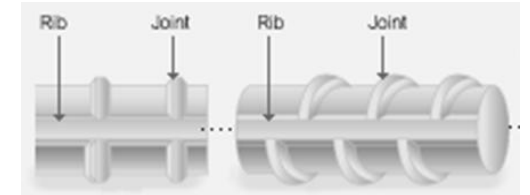
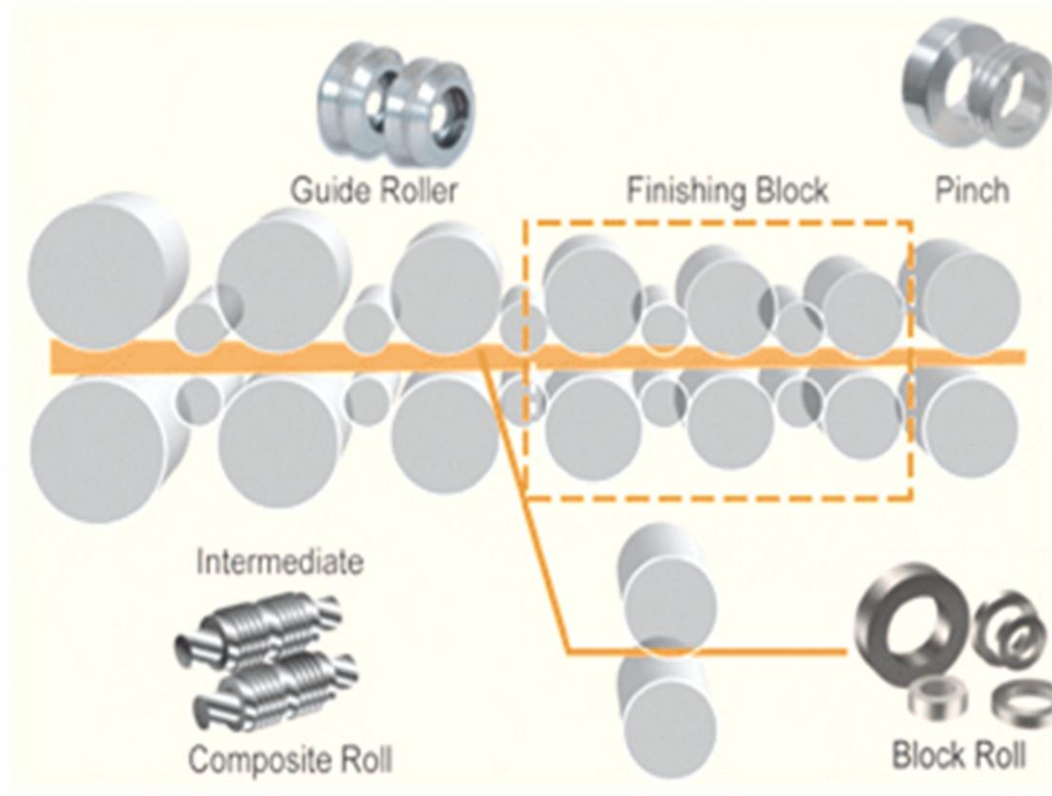
Çelik Haddelerine Yönelik Uygulamalar



www.ehwadia.com

Merdanenin Uygulanması

- Kangal Hadde Ürünleri



Deforme edilmiş Çelik Çubuk



Yuvarlak Çelik Çubuk

Merdane Türleri



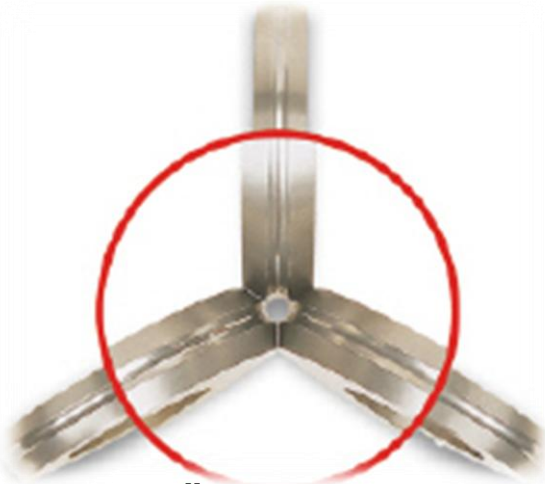
Finiş Bloğu Ringi



Orta & Finiş Hattı Ringi



Klavuz Makara



Üçlü Ring

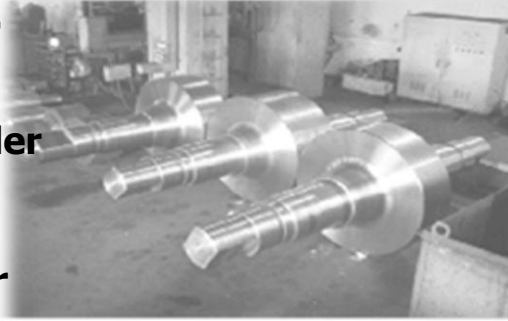


Kapma Ringi

Merdane Malzemeleri

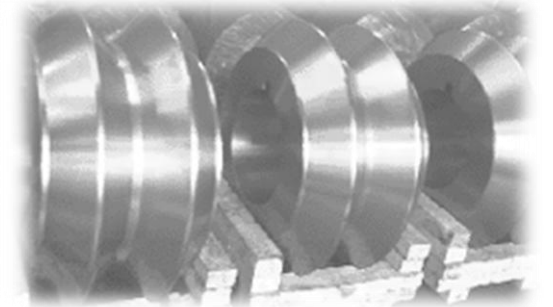
1. Çelik bazlı merdaneler

- ✓Yüksek hız çeliği merdaneler
- ✓Yüksek kromlu çelik merdaneler
- vs. ...

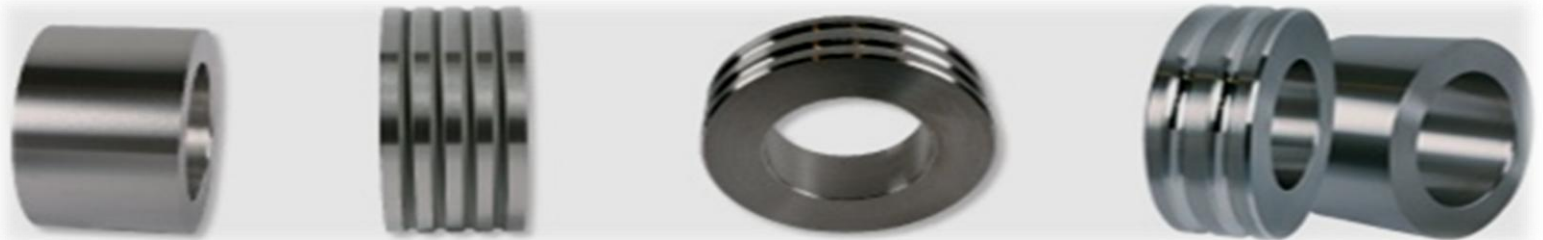


2. Dökme Demir merdaneler

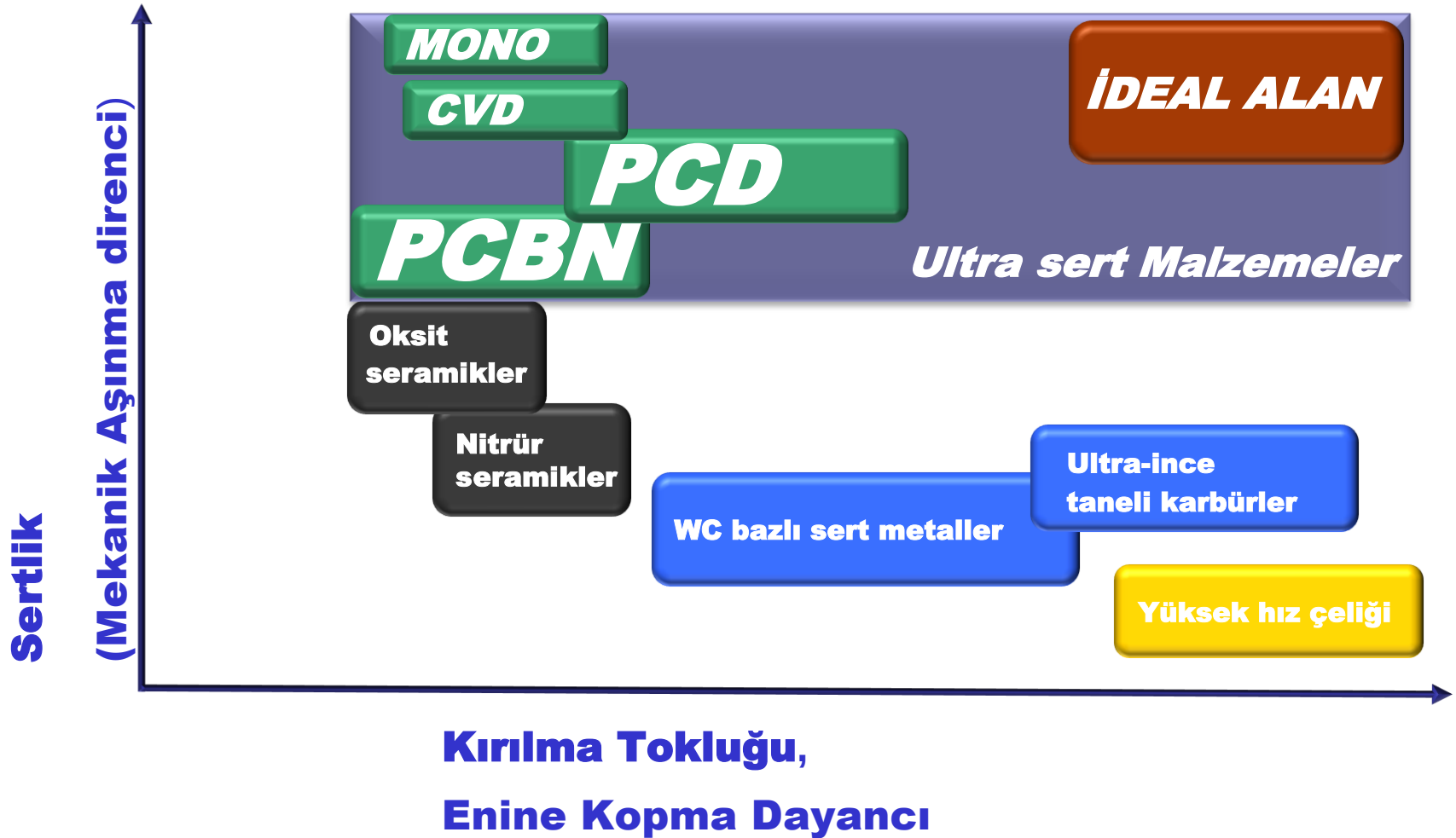
- ✓Sünek dökme demir merdaneler
- ✓Çil döküm merdaneler
- ✓Yüksek kromlu demir merdaneler
- vs...



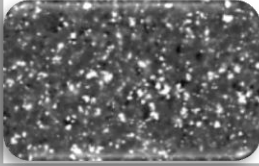
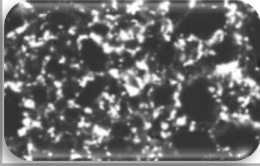
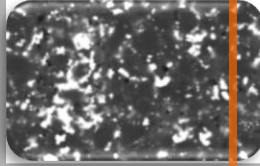
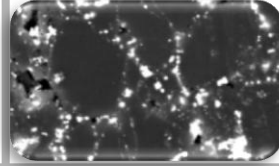
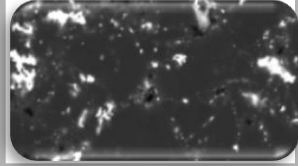
3. Tungsten Karbür merdaneler



Kesici Takım Malzemeleri



Ehwa PCD Kalite Standartları

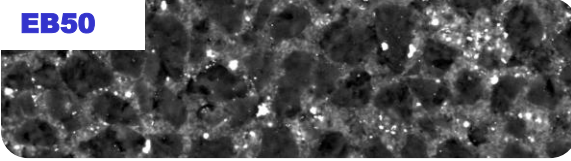
Tane boyu	Süper İnce	İnce	Orta	Kaba	Çoklu yapı
Mikro Yapı (X1000)					
Tip	Karbür altlı	Karbür altlı	Karbür altlı	Karbür altlı	Karbür altlı
Tane boyu (μm)	1	4	10	25	30+2
Elmas (vol, %)	90	90	90	92	94
Tanımlama	EP50	EP11	EP55	EP58	EP59

❖ Kaba taneli PCD, Tungsten karbür (hacmen Co %30 aşağısı) için iyidir.

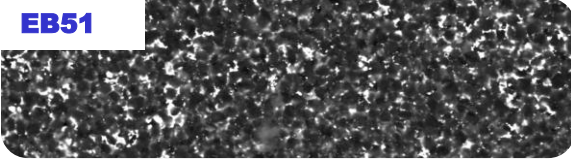
Ehwa PcBN Kalite Standartları

Mikroyapı

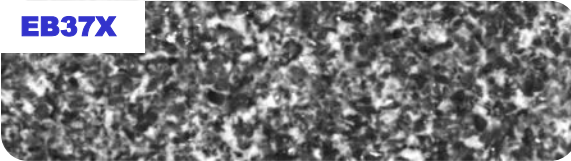
EB50



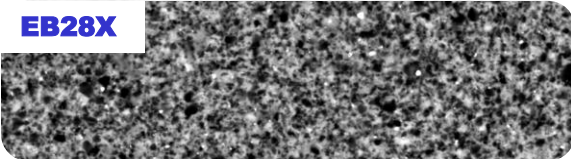
EB51



EB37X



EB28X



Özellikler

- ✓ **Solid PCBN**
- ✓ **İyi aşınma ve kimyasal direnci**
- ✓ **Sertleştirilmiş çelik ve dökme demirin kaba işlenmesi**
- ✓ **Dökme demirin finiş işlenmesi**

- ✓ **Yüksek tokluk ve iyi aşınma direnci**
- ✓ **Dökme demir ve süper alaşımların kaba/finiş işlenmesi**
- ✓ **Sertleştirilmiş çeliğin yoğun darbeleri işlenmesi**

❖ Yüksek PCBN oranı (hacmen %30 Co üzeri)
Tungsten karbür için iyidir.

- ✓ **İyi kimyasal ve darbe direnci**
- ✓ **Sertleştirilmiş çeliğin, sinter metalin sert tornalanması**
- ✓ **Hafif ~ Orta darbe**

- ✓ **İyi ısı ve kimyasal direnç**
- ✓ **Sertleştirilmiş çeliğin kaba/finiş işlenmesi**
- ✓ **Sürekli ~ hafif darbe**
- ✓ **Sinter metal**

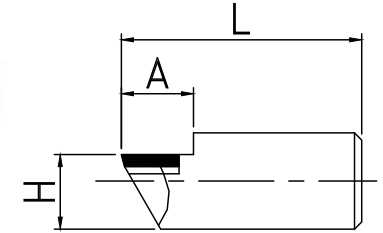
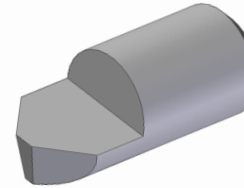
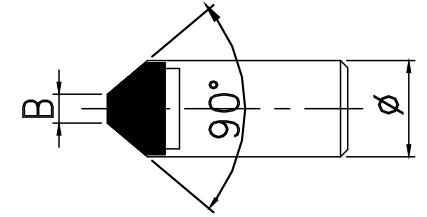
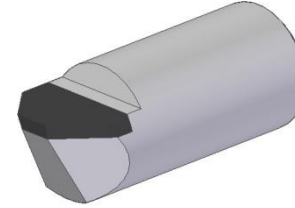
1. Nervür Ucu



- Boyut Tanımları -

Nervür	Φ (mm)	L (mm)	B (mm)	H (mm)	A (mm)
N6	2.50	4.10	0.55	1.50	1.3
N8	3.00	5.30	0.81	1.70	1.50
N10	4.00	7.05	1.01	2.70	2.10
N14	5.00	10.00	1.42	3.00	2.50
N16	6.00	11.00	1.62	3.50	3.10
N18	8.00	13.00	1.82	5.00	3.70
N20	8.00	13.50	2.03	5.00	4.20
N22	8.00	15.00	2.23	5.00	4.20
N25	10.00	17.00	2.55	6.00	5.20
N28	10.00	19.00	2.95	6.00	5.20
N30	12.00	19.00	3.05	7.50	6.20
N32	12.00	21.00	3.25	7.50	6.20
N36	14.00	24.00	3.65	8.50	7.20
N40	14.00	25.00	4.05	8.50	7.20

- Çizim -



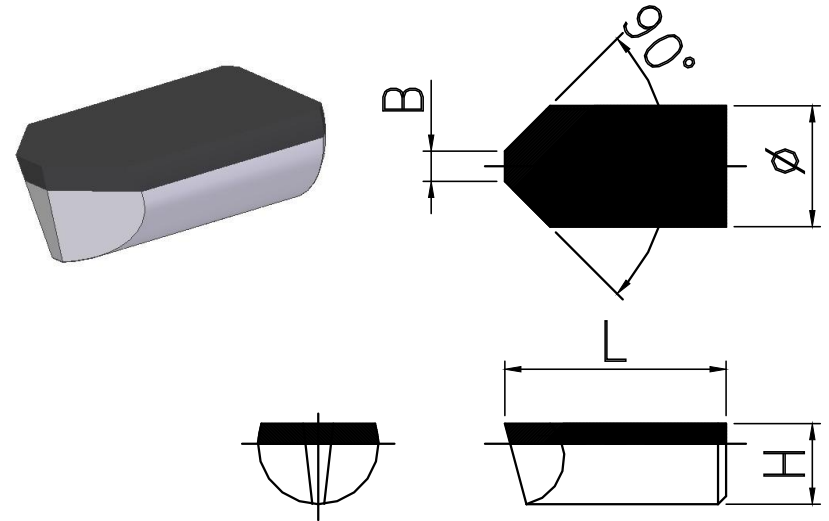
◆ Uygulanabilir Takım Malzemesi : PCD, PCBN, TC

2. Tam Yüz Nervür ucu

- Boyut Tanımları -

Nervür	Φ (mm)	L (mm)	B (mm)	H (mm)
N6	2.50	4.00	0.50	1.50
N8	3.00	5.30	0.70	1.80
N12	4.00	9.00	0.80	2.00
N14	5.00	10.00	1.00	2.50
N16	5.00	10.85	1.20	2.50
N18~N22	6.00	12.00	1.40	3.00
N22~N25	8.00	15.00	2.20	4.00

- Çizim -



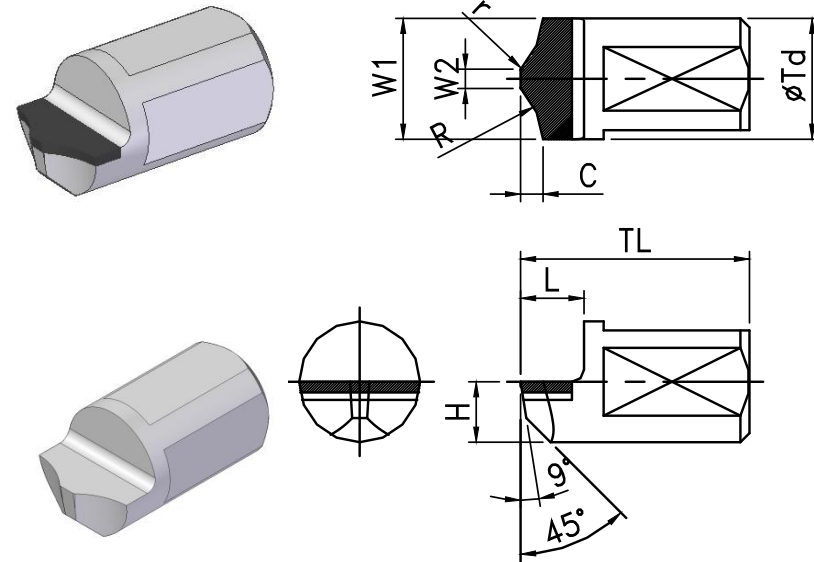
◆ Uygulanabilir Takım Malzemesi : PCD, PCBN, TC

3. Profilli Nervür Ucu

- Boyut Tanımları -

Kod	R	W1	W2	r	ΦTd	TL	L	H
PN20	5.80	9.00	1.28	0.20	9.00	15.00	3.50	4.50
PN22	7.10	10.60	1.48	0.30	11.00	18.50	4.00	5.50
PN25	8.30	11.00	1.78	0.50	11.00	20.00	4.00	5.50
PN28	6.20	11.00	1.70	0.50	11.00	23.00	5.00	5.50
PN30	6.60	11.40	1.74	0.50	12.00	24.00	5.00	6.00
PN32	9.50	13.00	2.20	0.50	13.00	26.00	5.00	6.50
PN40	10.70	15.00	2.60	0.50	15.00	31.00	5.00	7.50

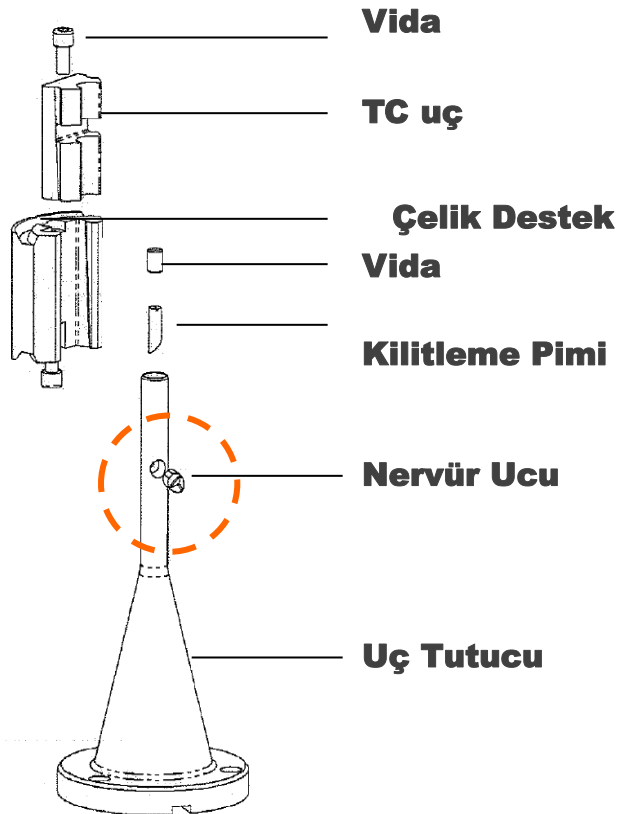
- Drawing -



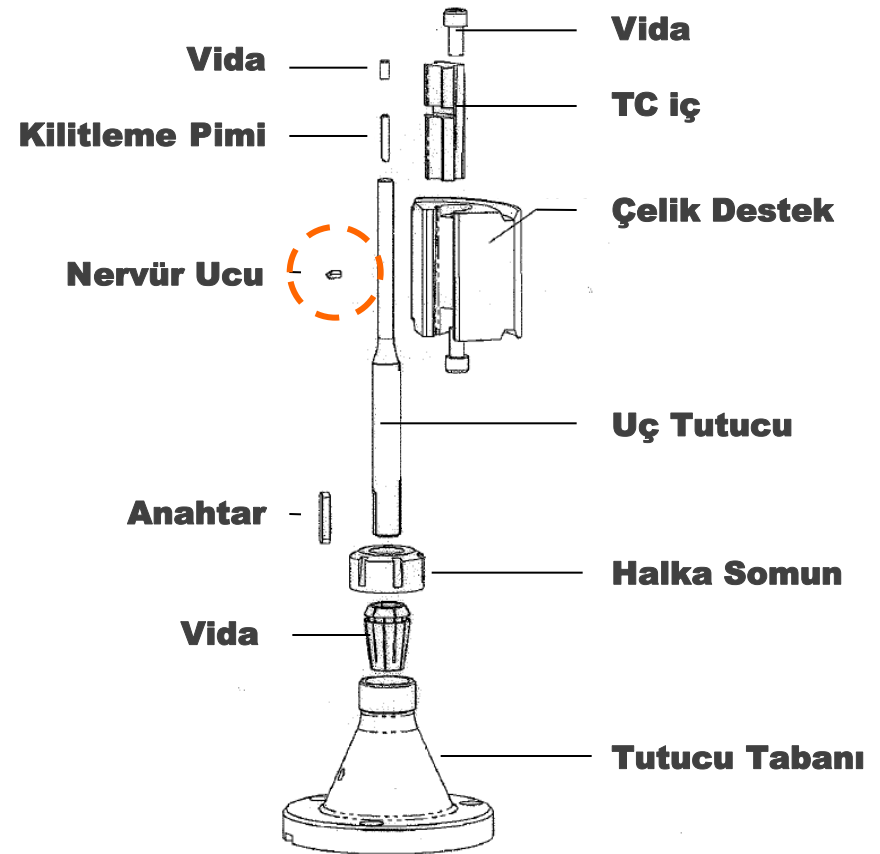
◆ Uygulanabilir Takım Malzemesi : PCD, PCBN, TC

4. Nervür Ucu Tutucuları

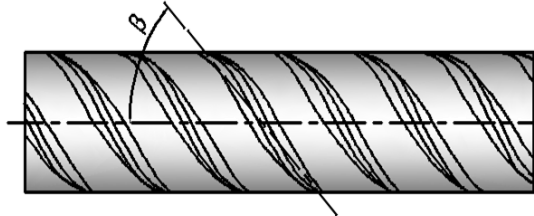
1. Yekpare Tip Tutucu : Φ20mm üzeri re-bar



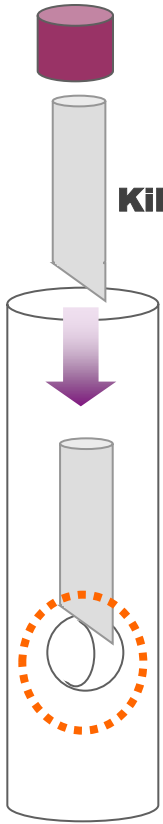
2. Kompozit Tip Tutucu : Φ20mm veya altı re-bar



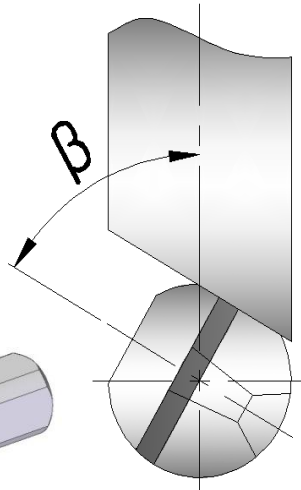
5. Nervür Ucunun Ayarlanması



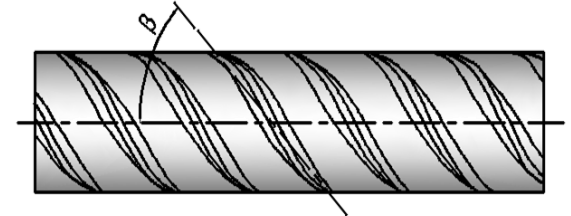
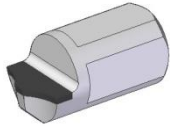
Kilitleme Pimi



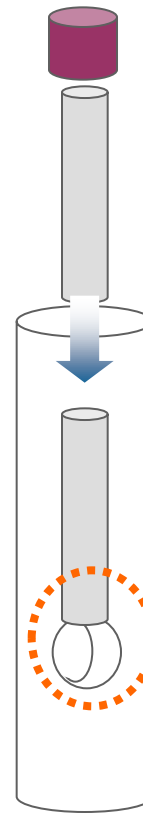
Kilitleme Pimi



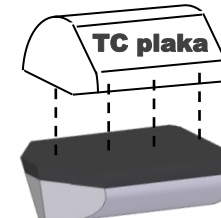
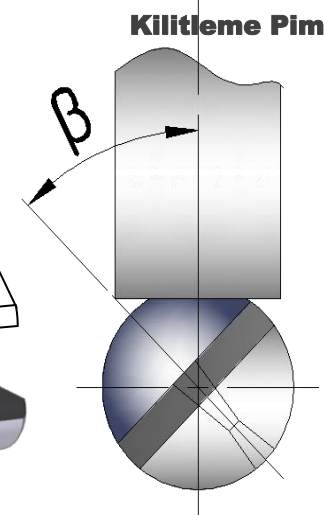
Kaynaklı tip
nervür ucu



Kilitleme Pimi

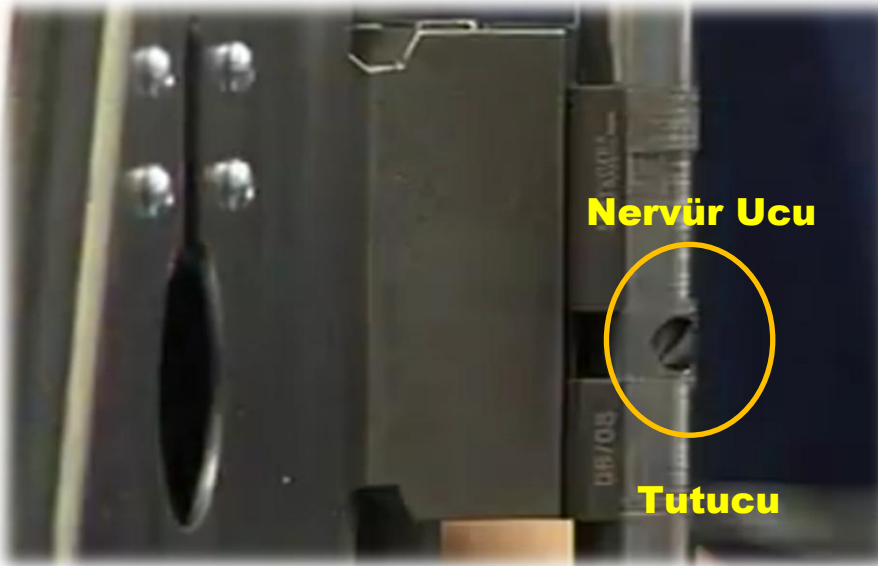
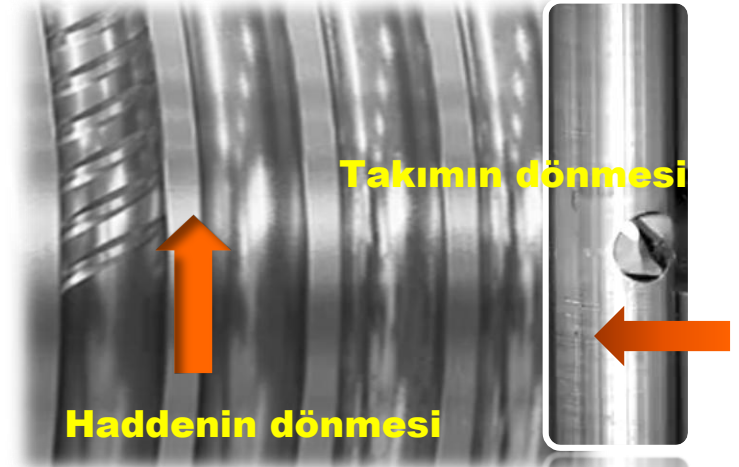
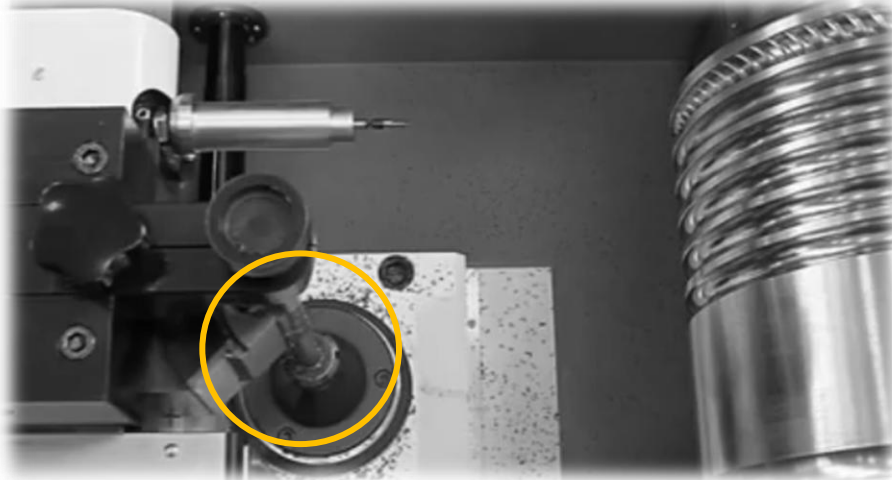


Kilitleme Pimi



Yarım tip
nervür ucu

6. Nervür Açma

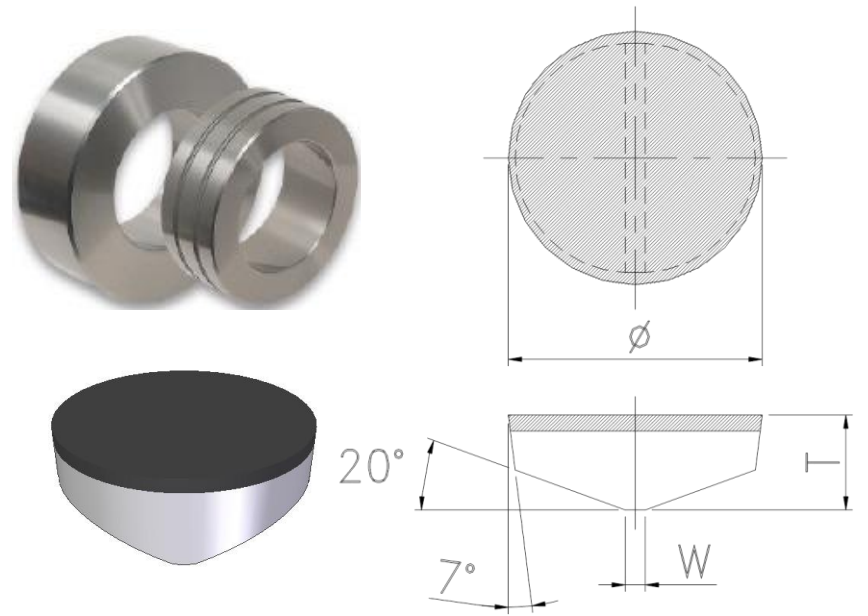


7. Tam Yüz Kanal Ucu - RCGX Tip

- Boyut Tanımları -

Kod	Φ (mm) ± 0.05	T (mm) ± 0.05	W (mm) ± 0.1
RCGX060300	6.35	3.18	0.73
RCGX07.500300	7.50	3.18	0.75
RCGX090300	9.525	3.18	0.75
RCGX11.400400	11.40	4.76	1.00
RCGX120400	12.70	4.76	1.00
RCGX190600	19.05	6.35	4.00

- Çizim -



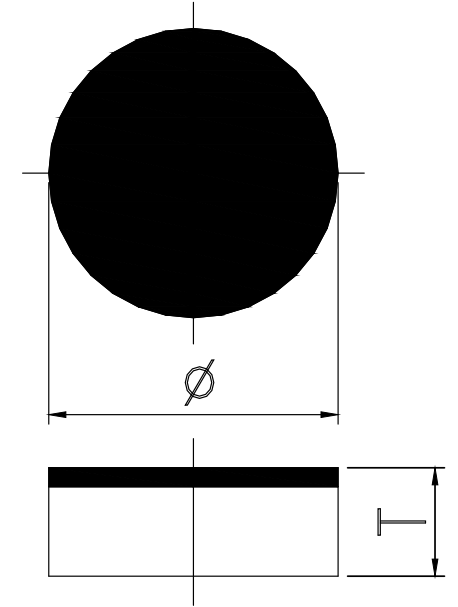
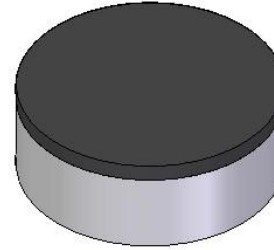
◆ Uygulanabilir Takım Malzemesi : PCD, PCBN, Seramik

8. Tam Yüz Kanal Ucu

- Boyut Tanımları -

Kod	Φ (mm) ± 0.05	T (mm) ± 0.13
RNMN060300	6.35	3.18
RNMN090300	9.525	3.18
RNMN090400	9.525	4.76
RNMN120300	12.70	3.18
RNMN120400	12.70	4.76
RNMN150400	15.875	4.76

- Çizim -



❖ **Sandviç tip önermek mümkün : daha ekonomik yol**

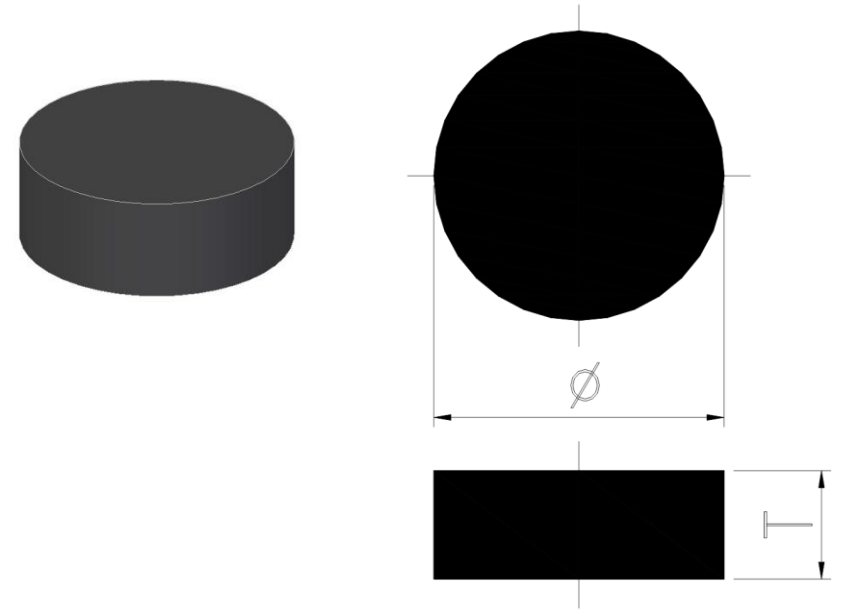
◆ **Uygulanabilir Takım Malzemesi : PCD, PCBN, Seramik**

9. Solid Kanal Ucu

- Boyut Tanımları -

SPEC	Φ (mm) ± 0.05	T (mm) ± 0.13
RNMN060300	6.35	3.18
RNMN090300	9.525	3.18
RNMN090400	9.525	4.76
RNMN120300	12.70	3.18
RNMN120400	12.70	4.76
RNMN150400	15.875	4.76

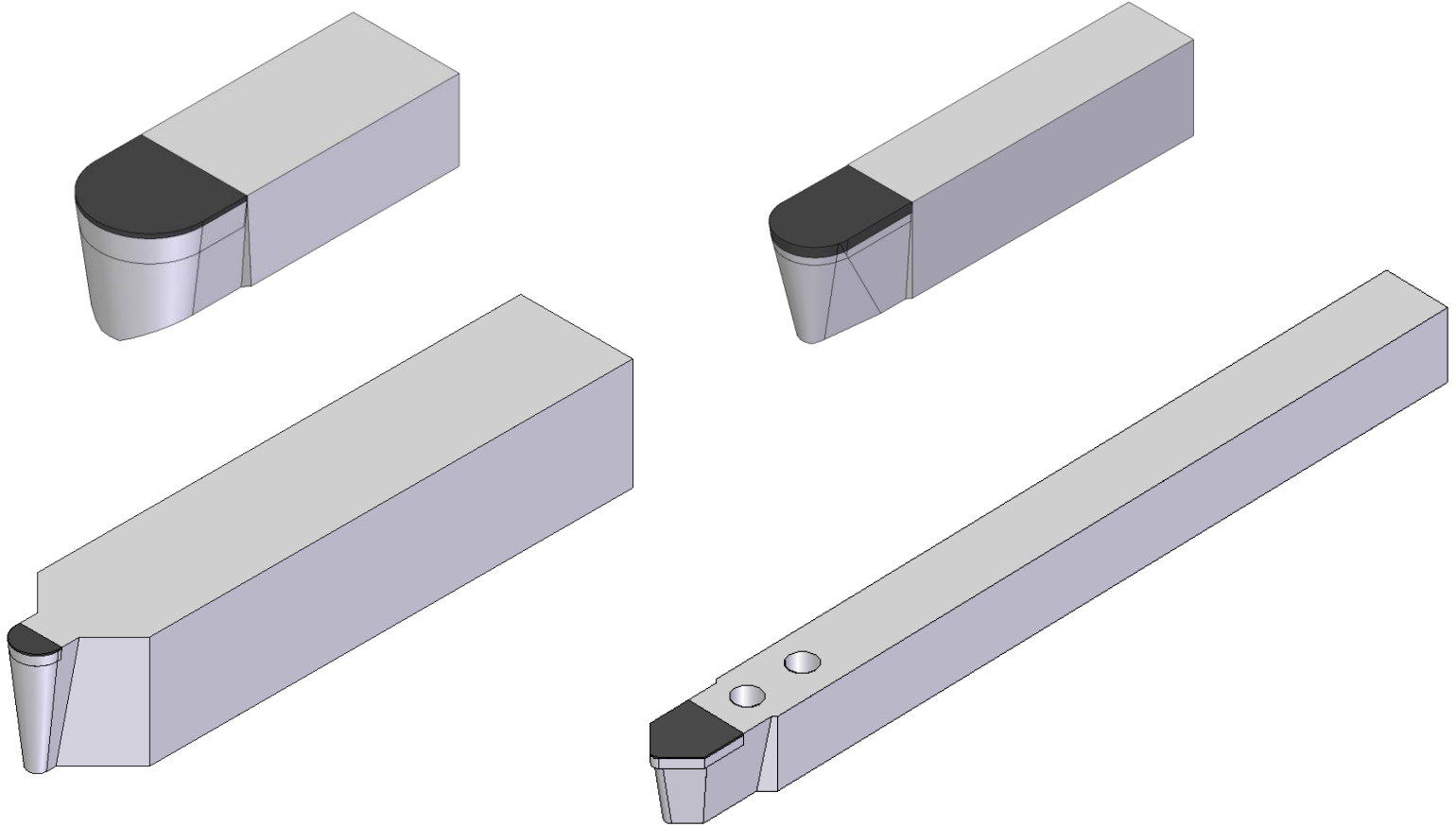
- Çizim -



❖ **Azami Kalınlık : 8 mm**

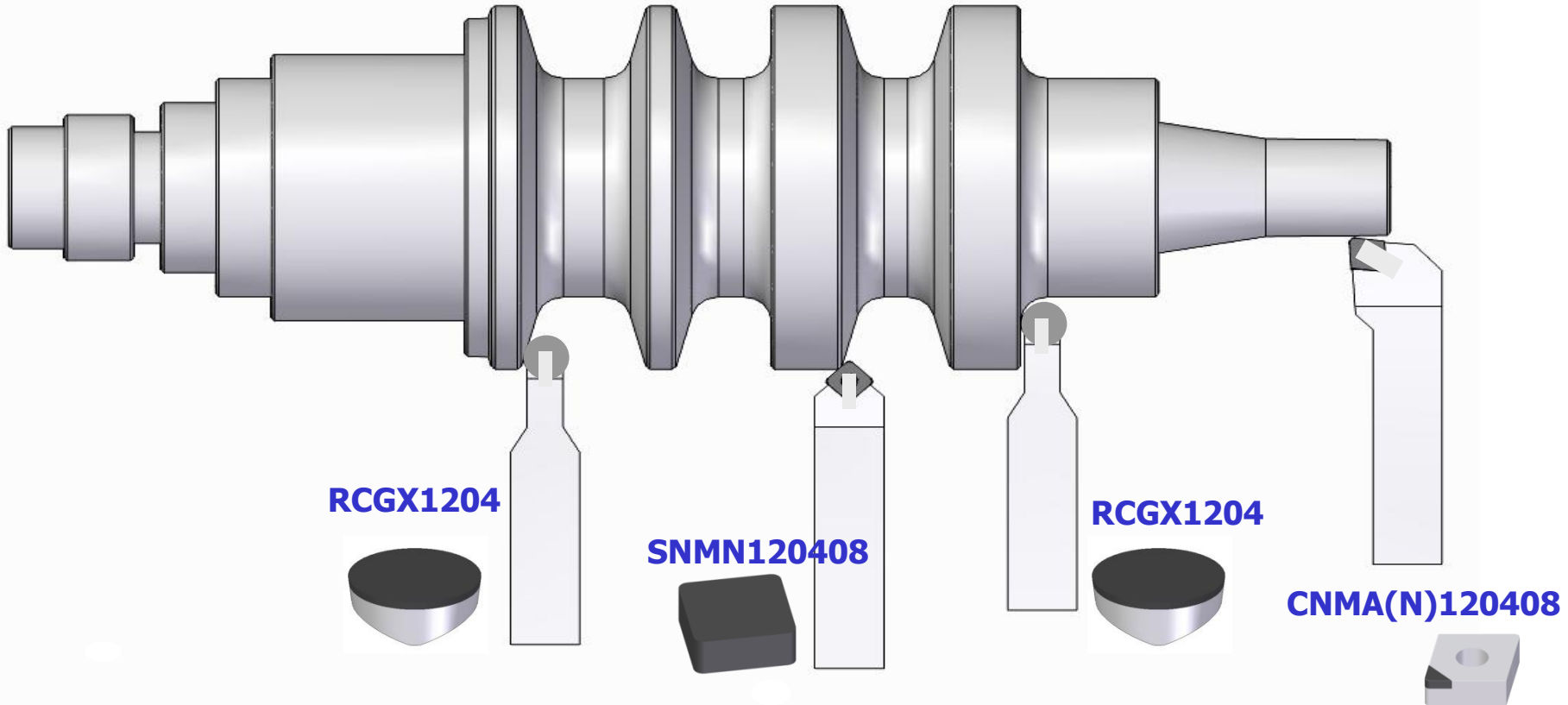
◆ **Uygulanabilir Takım Malzemesi : PCD, PCBN, Seramik**

10. Diğer Kanal Takımları



◆ Kullanıcıya göre Özel Ürün

11. Kanal Açma ve Tornalama



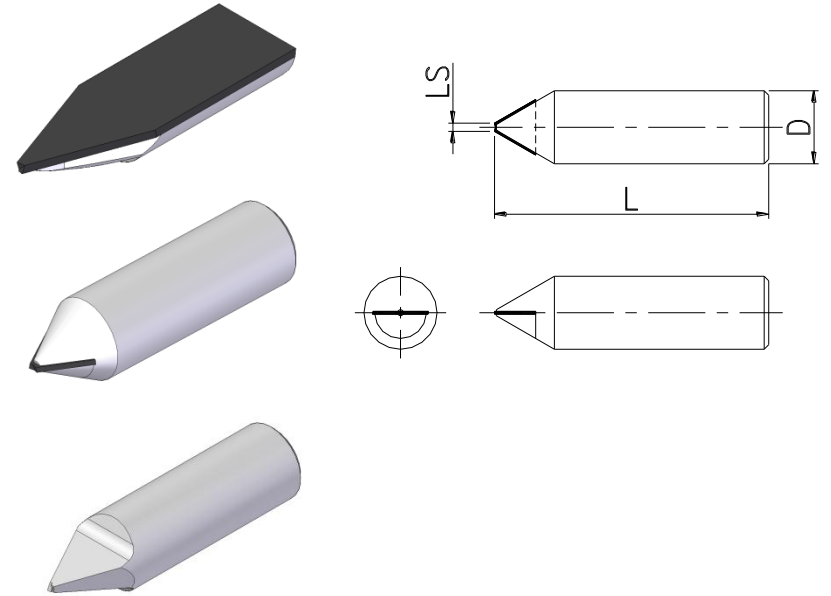
◆ Uygulanabilir Takım Malzemesi : PCD, PCBN, Seramik

12. Markalama Kalemi

- Boyut Tanımları -

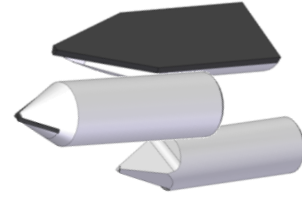
Kod	Φ (mm)	L (mm)	LS
N8	8.00	30.00	0.6
N10	8.00	30.00	0.8
N14~N16	8.00	30.00	1
N20~N25	8.00	30.00	1.2
N32	8.00	30.00	1.5

- Çizim -



◆ Uygulanabilir Takım Malzemesi : PCD, PCBN, TC

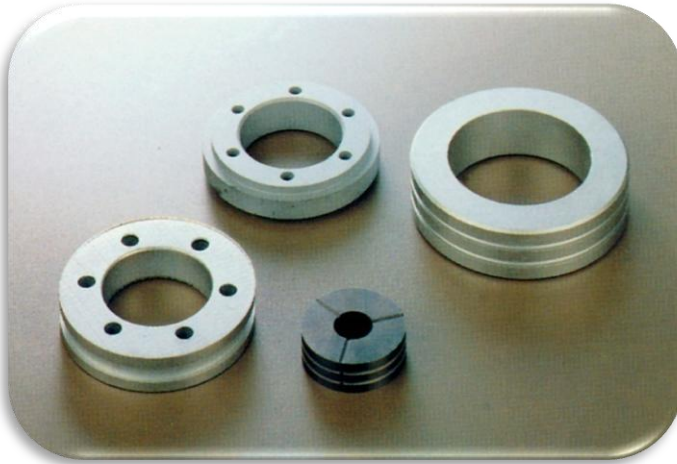
13 . Markalama



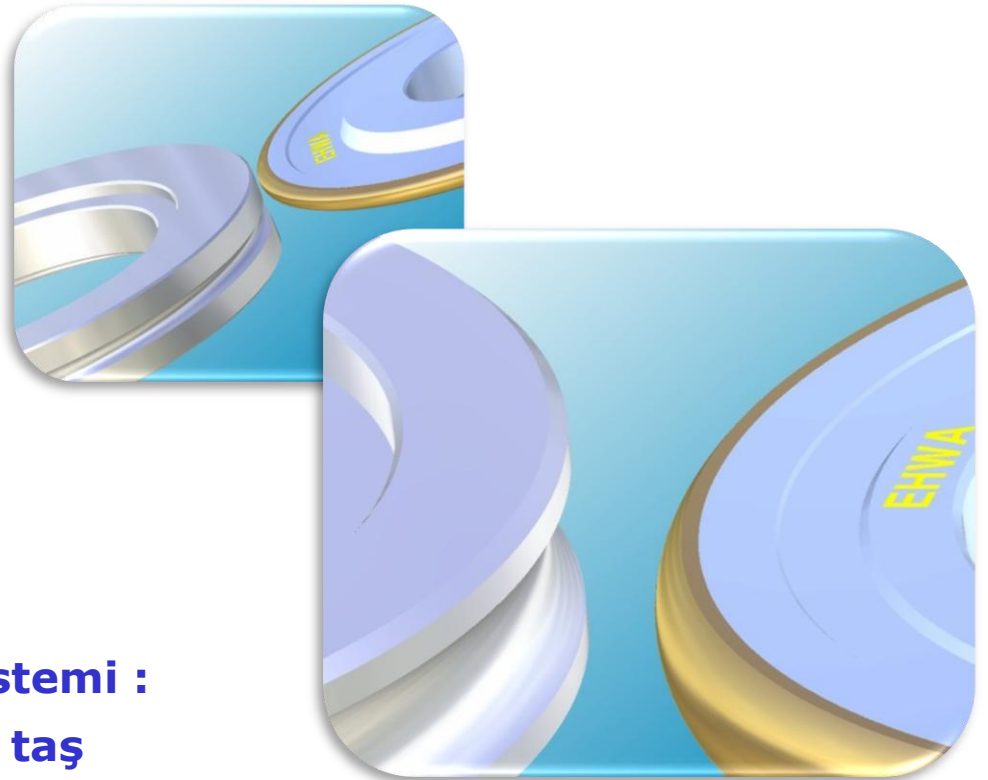
◆ Uygulanabilir Takım Malzemesi : PCD, PCBN, TC

14. Mordane Taşlama Diskleri

- ◆ **Form Verme Mordanesi**
: Çelik, Demir-dışı Metal Haddelene ve Ekipman Parçaları
- ◆ **Ekipman** : Soğuk Haddelene Mordaneleri

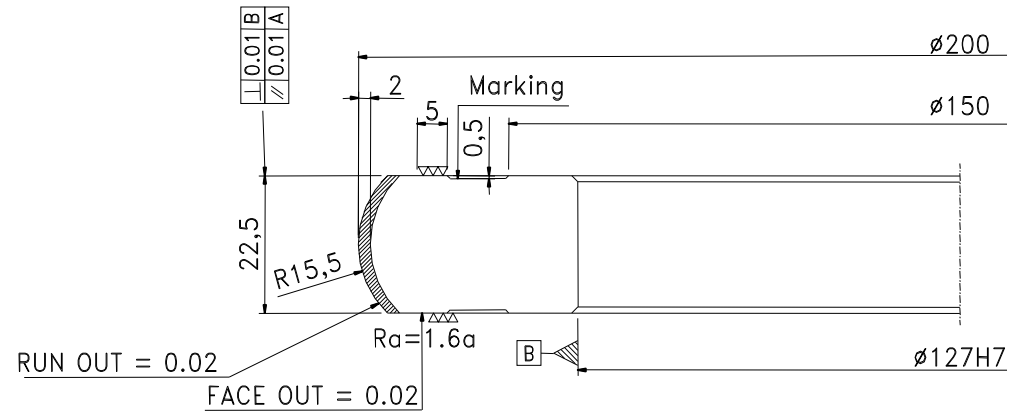
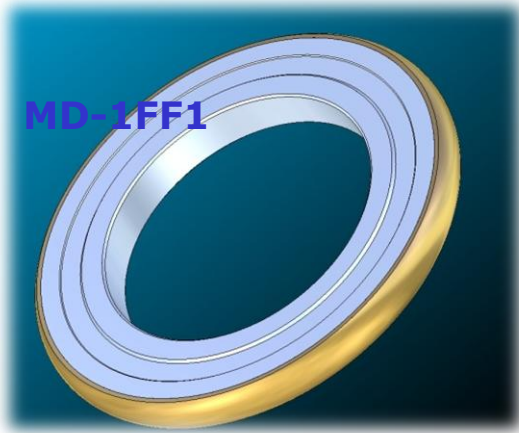


İş parçası

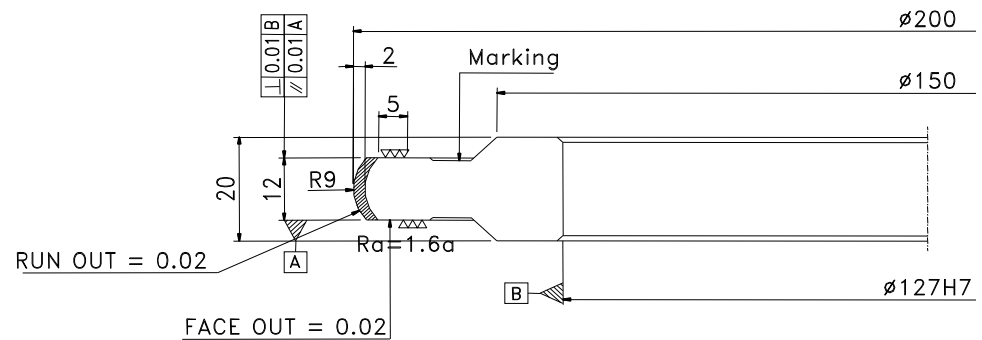
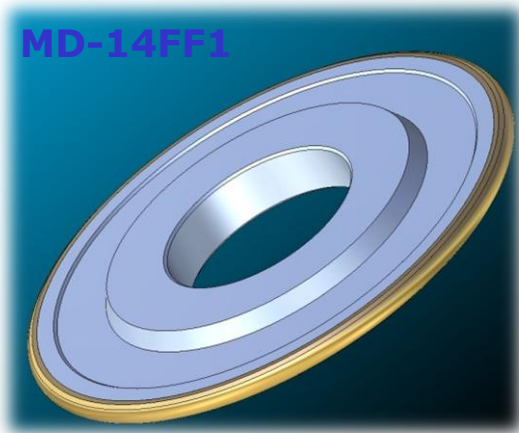


- ◆ **Uygulanabilen bağlayıcı sistemi :**
Metal, Reçine, Elektrokaplı taş

MD-1FF1



MD-14FF1



Takım Çizimi