



PİSTON UYGULAMALARI



PİSTON RİNGİNE KANAL AÇMA

✓ *İşlenecek Parça*

Parça : Piston

Malzeme : Yüksek Bakırlı Alüminyum Alaşımı

Sertlik :

Yüzey : Finit

✓ *Şartlar*

İşlem : Piston ringine kanal açma

Kalite : PCD EP13

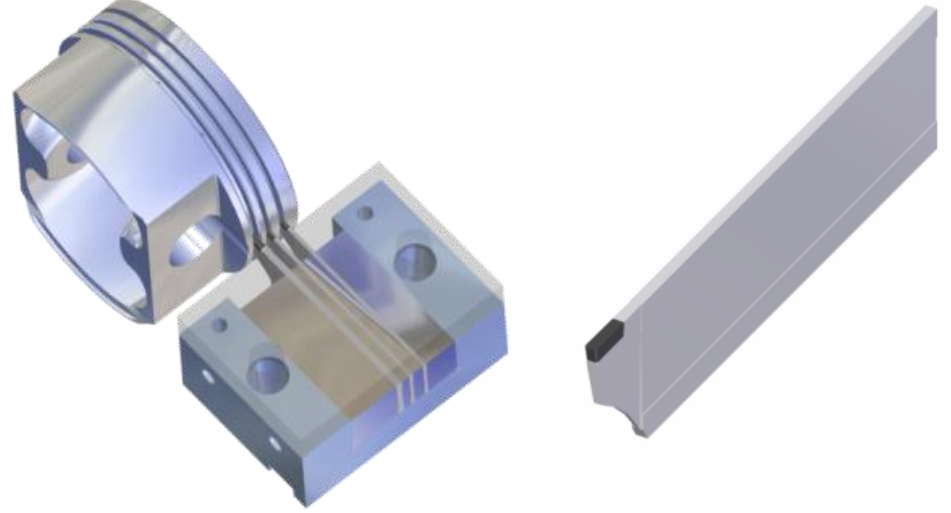
Takım Kodu : 1.015W-0.25R

Kesme Hızı : 300 m/dak

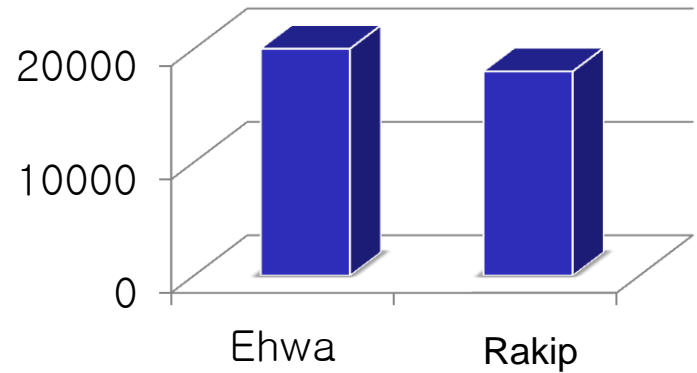
İlerleme : 0.3 mm/dev

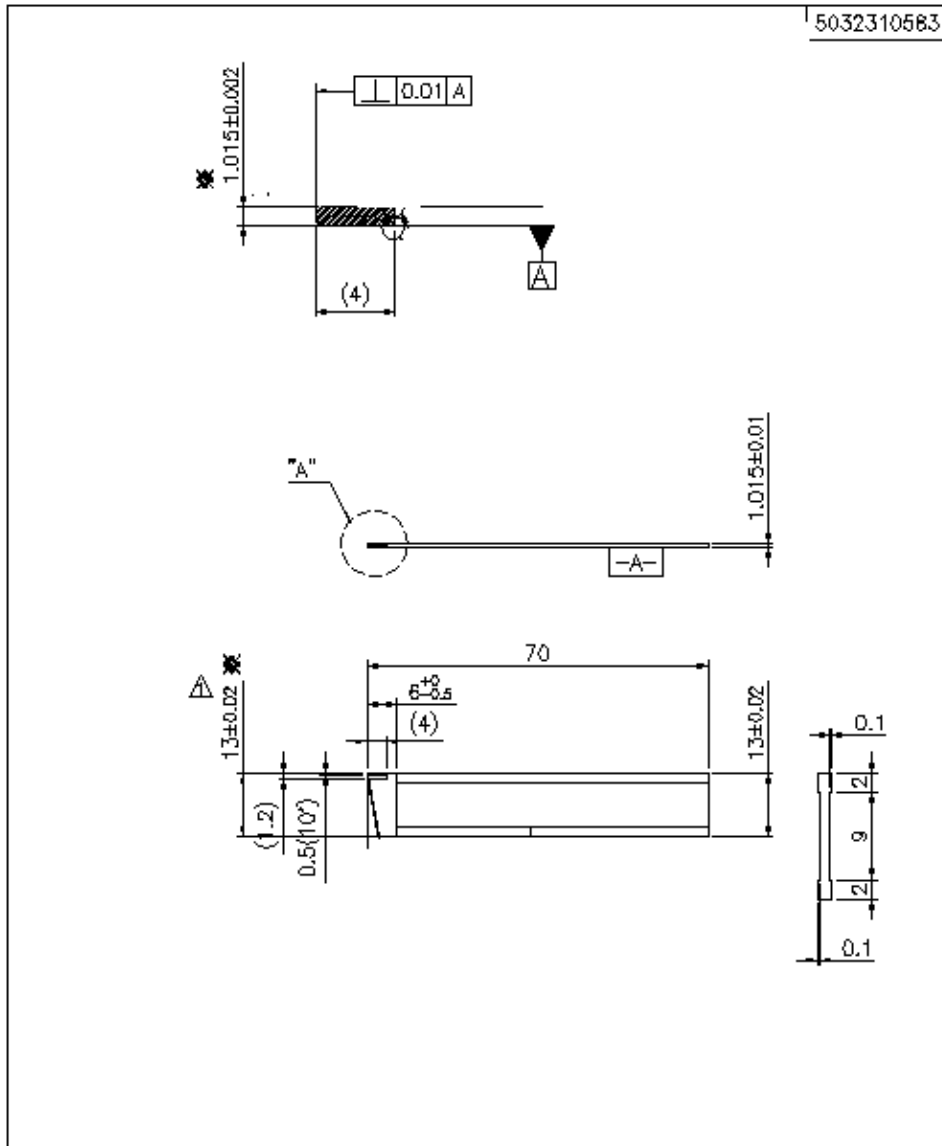
Kesme derinliği d.o.c. : 0.15 mm

Soğutucu : Islak



✓ *Sonuç* : 20,000 Parça/Set





△			CUSTOMER		ITEM	PCD-GC	
△			SIZE	13T-70L-1.015W-0.25R	ITEM No.	TRG 103009	
△			DATE	2009.10.12	SCALE	TOLERANCE	MATERIAL
△					1:1		K10
△			DESIGN	CHECKED	APPROVED	DM'S	PROJ
△	2011.07.25	TPY				mm	DWG No.
							B018855W
REVISIONS					EHWA® EHWA DIAMOND INDUSTRIAL CO.,LTD.		

PİSTON RİNGİNE KANAL AÇMA



✓ İşlenecek Ürün

Parça : Piston

Malzeme : AL Alaşımı

Sertlik :

Yüzey : Finiş

✓ Şartlar

İşlem : Piston ringine kanal açma

Kalite : PCD EP13

Takım Kodu : 1.85W-0.2R

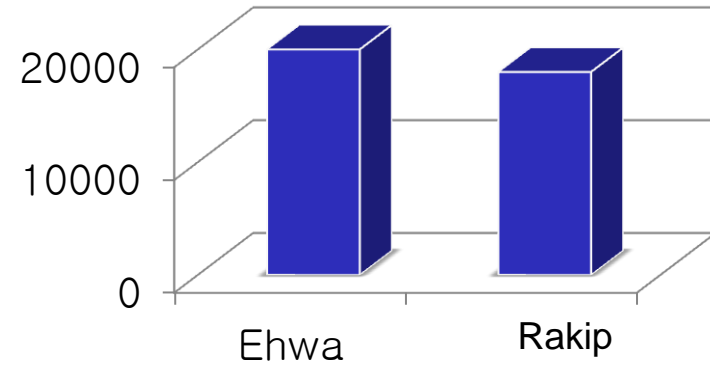
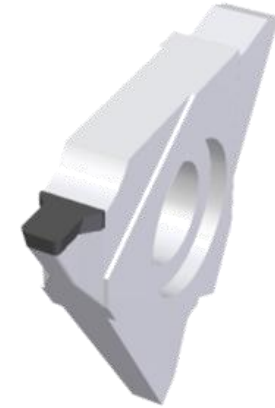
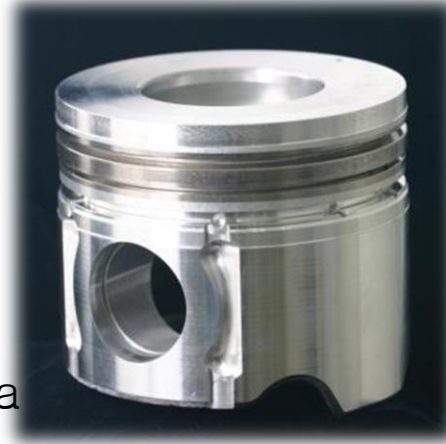
Kesme Hızı : 300 m/dak

İlerleme : 0.3 mm/dev

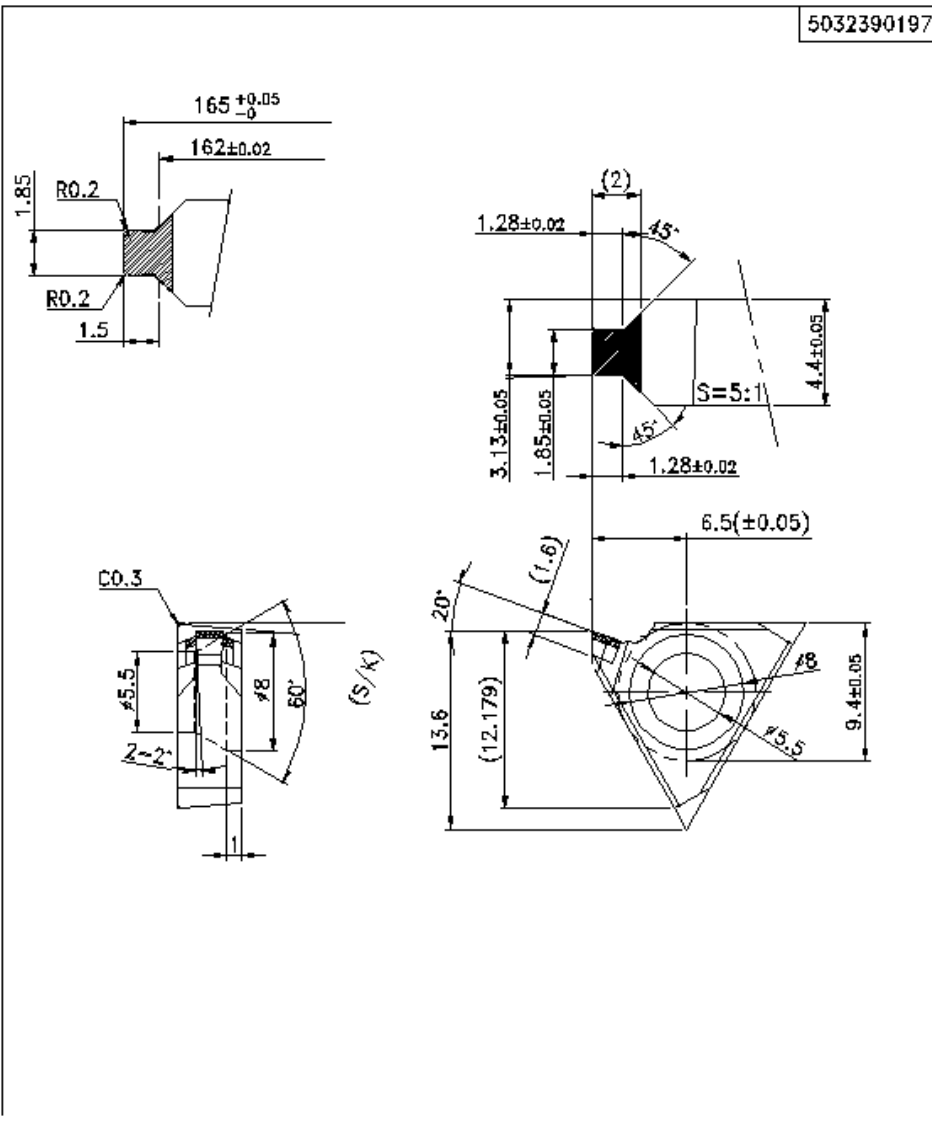
Kesme derinliği d.o.c. : 0.15 mm

Soğutucu : Islak

Sonuç: 20,000 parça/set



5032390197



EP55

△			CUSTOMER		ITEM	PCD-GX	
△			SIZE	TTD18R00Z(1.85W-0.2R)		ITEM No.	
△			DATE	SCALE	TOLERANCE	SK MATERIAL	DIM'S
△			2008.01.10	3:1		K10	mm
△			DESIGN	CHECKED	APPROVED	PROJ	DWS No.
△	2008.09.29	EP55-->EP48 (4x12.2)				☉	B015673W
REVISIONS						 EHWA DIAMOND INDUSTRIAL CO.,LTD.	

ETEK TORNALAMA

✓ İşlenecek Ürün

Parça : Piston

Malzeme : AL alaşımı

Sertlik :

Yüzey : Finiş

✓ Şartlar

İşlem : Piston Dış Çap Tornalam a

Kalite :Tek Kristal Elmas

Takım Kodu:

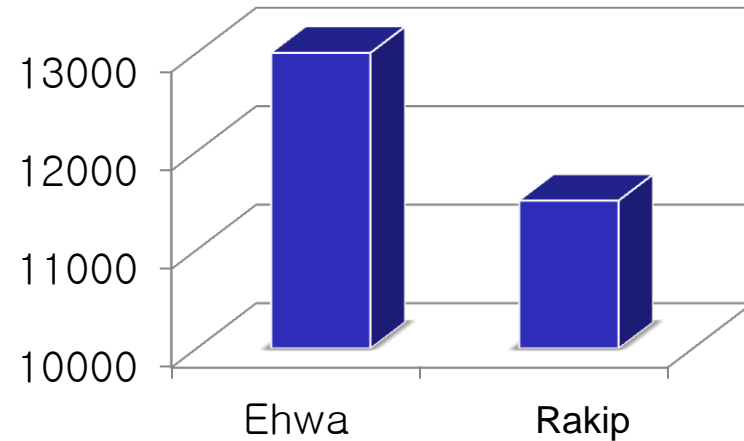
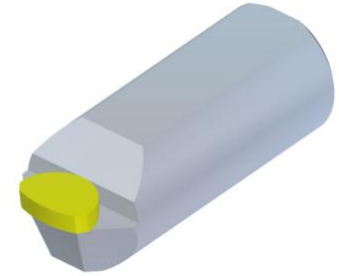
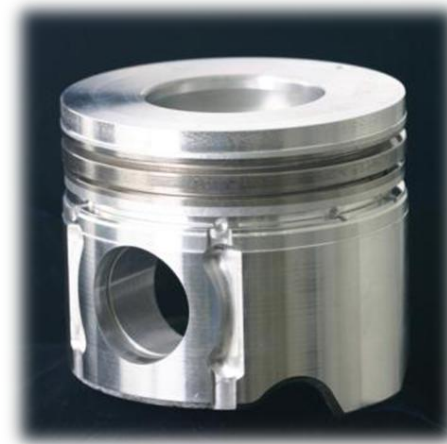
Kesme Hızı:

İlerleme :

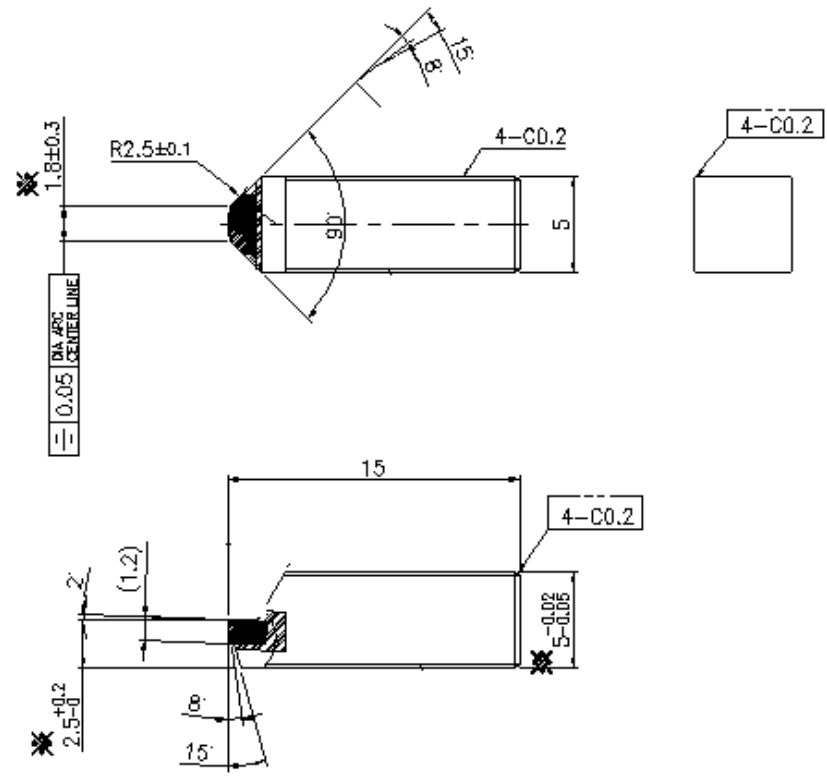
Kesme Derinliği : 0.05 - 0.07 mm

Soğutucu : Islak

✓ **Sonuç** : 13,000 Parça/adet



8058010397



△		CUSTOMER		ITEM	D-BITE	
△		SIZE	5W-15L-5T-90V-2.5R	ITEM No		
△		DATE	2006.12.26	SCALE	4:1	PROJ DWG No.
△		DESIGN	CHECKED	APPROVED		B013751W
△		REVISIONS				

EHWA[®]
EHWA DIAMOND INDUSTRIAL CO.,LTD.

YANMA ODASI İŞLEME

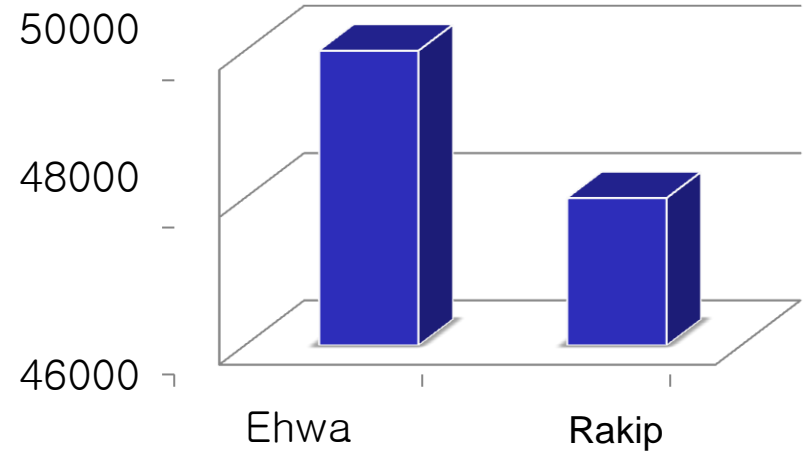
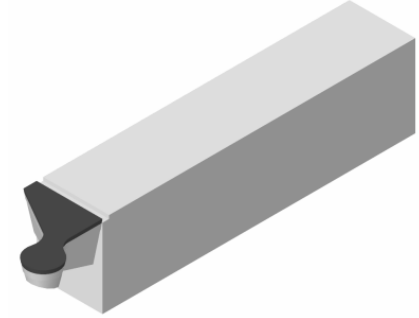
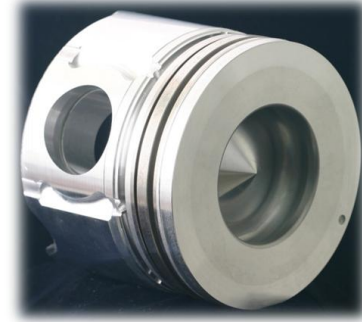
✓ İşlenecek Ürün

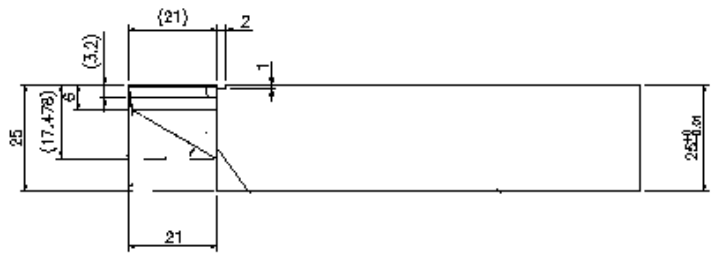
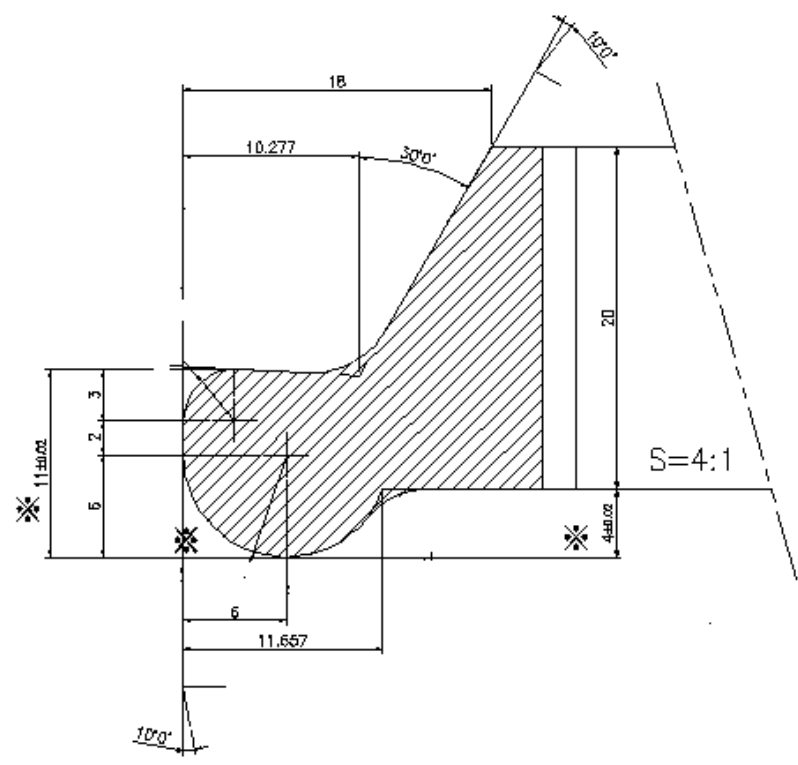
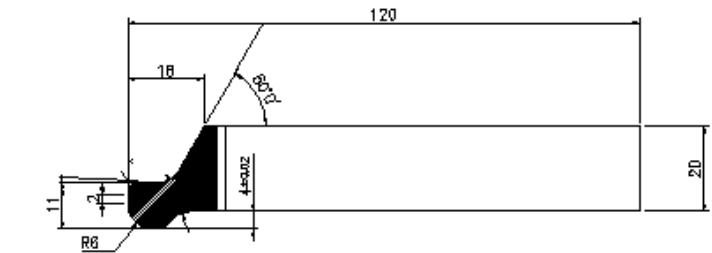
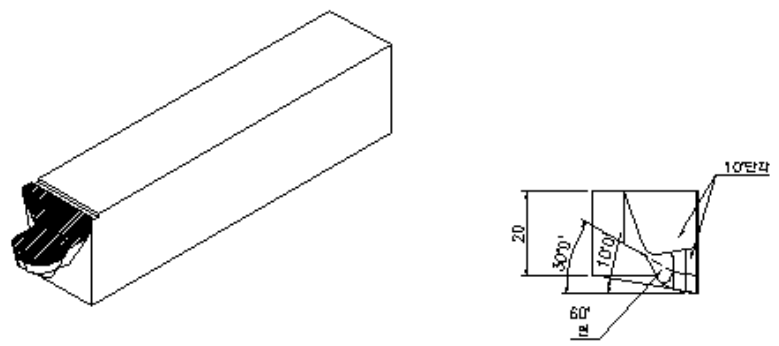
Parça : Piston
Malzeme : AL Alaşımı
Sertlik :
Yüzey : Kaba

✓ Şartlar

İşlem : Yanma odası işleme
Kalite : PCD EP55
Takım Kodu :
25T-120L-20W-26W1-5R
Kesme Hızı : 200-400 m/dak
Devir : 2,200 - 2,500 rpm

İlerleme : 0.1~0.3mm/dev
Kesme derinliği d.o.c.: 0.5 mm
Soğutucu: Islak
Sonuç: 50,000 parça/adet





cP13

		CUSTOMER		ITEM		PCD-TSX	
		SIZE		ITEM No.			
		DATE		SCALE		TOLERANCE	
		2009.07.08		1:1		S45C mm	
		DESIGN		CHECKED		APPROVED	
		2012.03.18					
		REVISIONS					
						 EHWA DIAMOND INDUSTRIAL CO.,LTD.	

YANMA ODASI İŞLEME

✓ İşlenecek Ürün

Parça : Piston

Malzeme : AL Alaşımı

Sertlik :

Yüzey : Finit

✓ Şartlar

İşlem : Yanma odası işleme

Kalite : PCD EP13

Takım Kodu : 8D-4R-70L

Kesme Hızı : 350~450 m/dak

Devir: 2,500~3,000 rpm

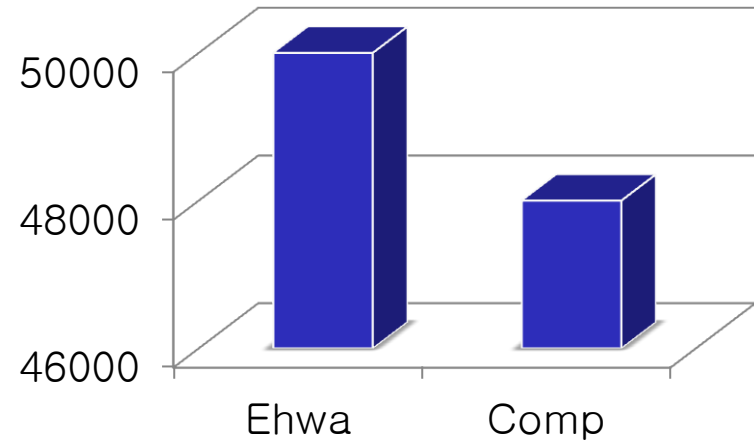
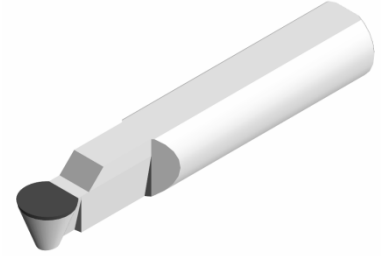
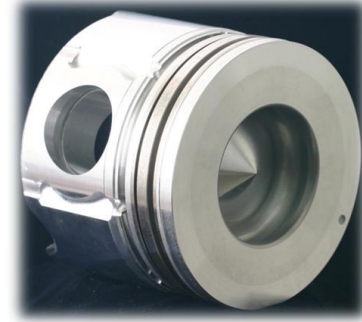
İlerleme: 0.05~0.15mm/dev

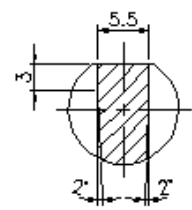
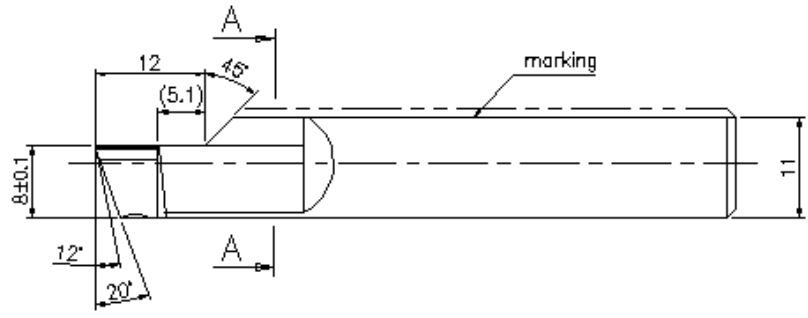
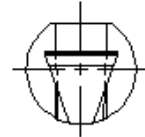
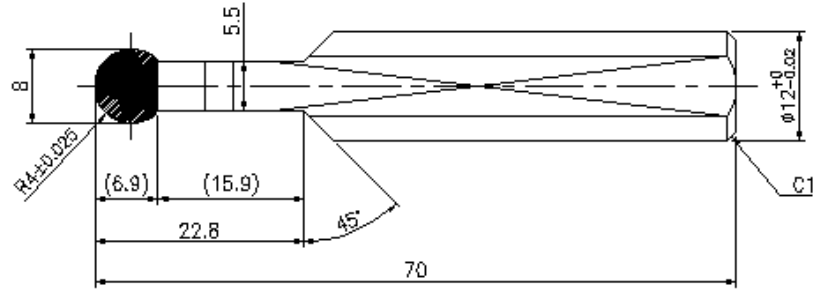
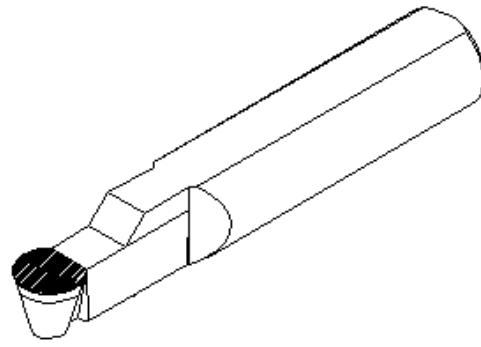
D.O.C : 0.5 mm

Soğutucu : Islak

✓ Sonuç

50,000 Parça/adet





SECTION A-A

EP55

△			CUSTOMER		ITEM	PCD-BRX		
△			SIZE	8D-4R-70L-12Y	ITEM No.	E03-07-816		
△			DATE	2011.09.02	SCALE	TOLERANCE	ISK	MATERIAL
△			DESIGN		2:1	K10	mm	3rd
△			CHECKED		APPROVED			
△			APPROVED					
REVISIONS					 EHWA DIAMOND INDUSTRIAL CO.,LTD.			

PİM DELİĞİ RAYBALAMA

✓ *İşlenecek Ürün*

Parça : Piston

Malzeme : AL Alaşımı

Sertlik :

Yüzey: Kaba

✓ *Şartlar*

İşlem : Kaba pim deliği
işleme

Kalite : PCD

Takım Kodu : 31.6D-100L-BT30

Kesme hızı : 687~800 m/
6,500~7,500 rpm^{dak}

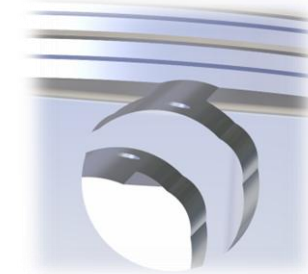
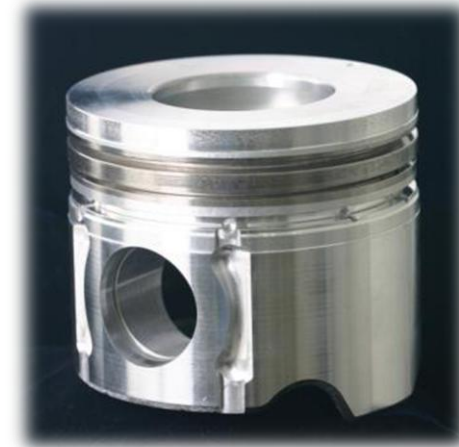
İlerleme : 0.08~0.11 mm/
560~840 mm^{dev}
dak

D.O.C : 2~5 mm

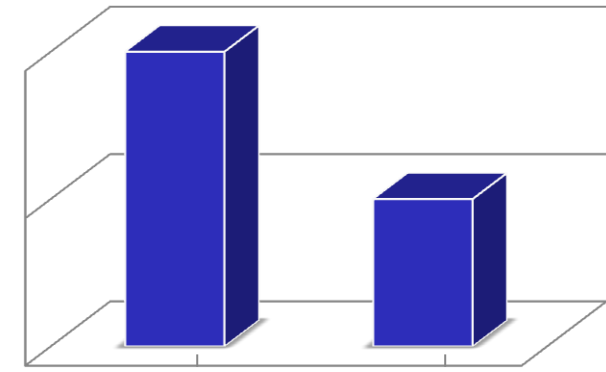
Soğutucu : Islak

✓ *Sonuç*

30,000 Parça/Adet



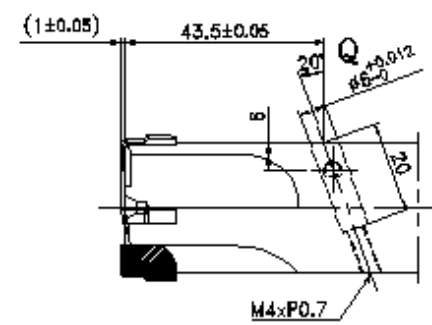
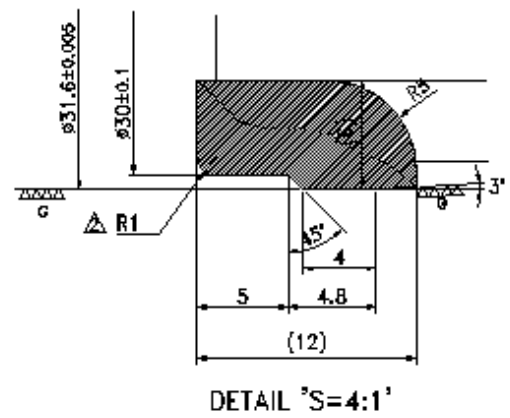
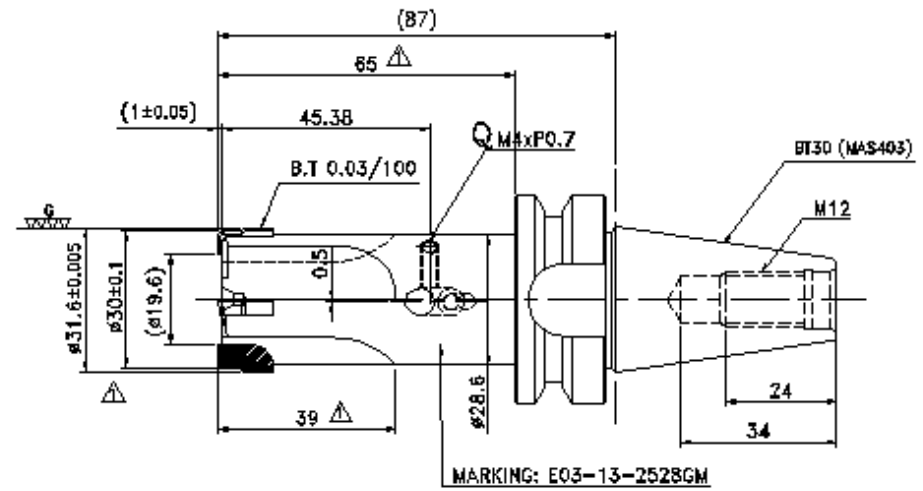
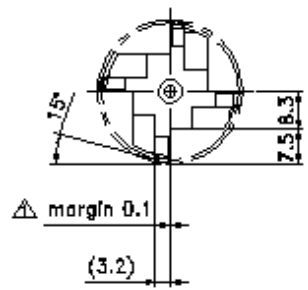
30000
28000
26000



Ehwa

Rakip

- Q (Check Point)**
1. INSPECT THE HOLE WITH MASTER GAUGE
 2. ADD INTERNAL GRINDING
 3. CHECK THE HOLE WITH BOLT



EP75

△		CUSTOMER		ITEM	△	PCD-RMX
△		SIZE	(30/31.6)D-B5L-BT30	ITEM No	E03-13-2528GM	
△		DATE	SCALE	TOLERANCE	ISK MATERIAL	DIN'S
△	2012.01.31	2012.01.31	1:1	SCM440	mm	3rd
△	2012.01.17	01-2012-2429	DESIGN	CHECKED	APPROVED	
△	2012.01.18	01-2012-2429				
REVISIONS				EHWA® EHWA DIAMOND INDUSTRIAL CO.,LTD.		

PİM DELİĞİ RAYBALAMA



✓ İşlenecek Ürün

Parça: Piston

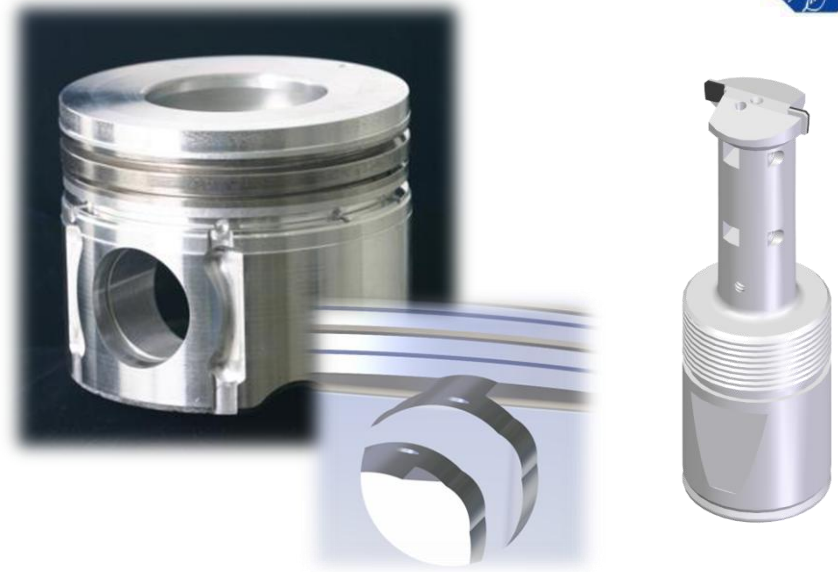
Malzeme: AL Alaşımı

Sertlik :

Yüzey : Kaba

✓ Şartlar

İşlem : Kaba pim deliği
segman **kana**lı , R-Boss



Kalite: PCD

Takım Kodu: 21.4D-120L-42L

Kesme Hızı: 120 -200 m/dak

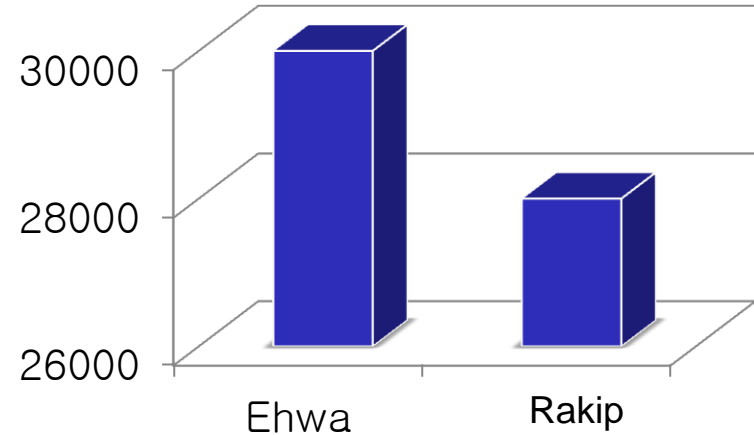
1,400 - 1,800 rpm

İlerleme: 0.3 - 0.5 mm/dev

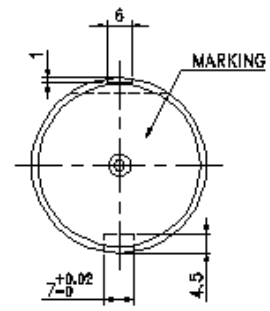
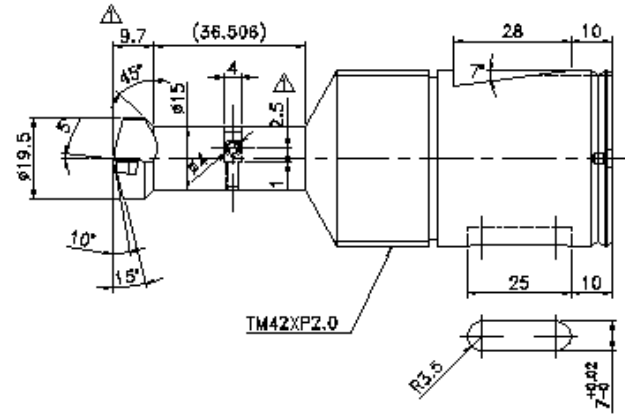
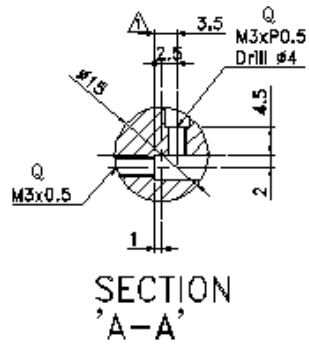
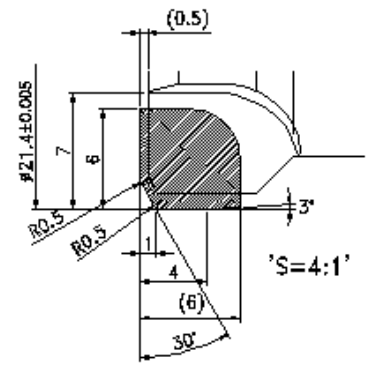
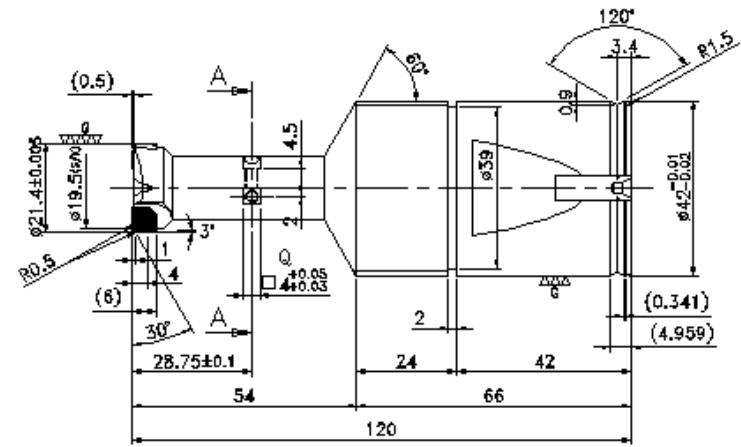
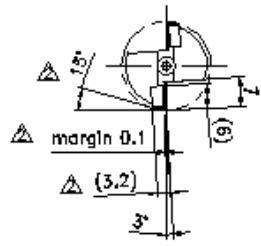
Kesme Derinliği d.o.c. : 2-5 mm

Soğutucu : Islak

✓ Sonuç : 30,000 Parça



- Q (Check Point)
1. INSPECT THE HOLE WITH MASTER GAUGE
 2. ADD INTERNAL GRINDING
 3. CHECK THE HOLE WITH BOLT



△		CUSTOMER	SIZE		ITEM	PCD-RMX	
△			21.4D-120L-42Y		ITEM No.	ED3-08-0067	
△		DATE	SCALE	TOLERANCE	ISK MATERIAL	DIM'S	PROJ DWG No.
△	2013.04.25	2012.07.06	1:1	0.1	SCM440	mm	3rd B024037W
△	2012.04.26	DESIGN	CHECKED	APPROVED			
△	2012.04.26	REVISIONS					



VALF CEBİ FREZELEME



✓ İşlenecek Ürün

Parça: Piston

Malzeme: AL Alaşımı

Sertlik :

Yüzey : Finiş

✓ Şartlar

İşlem : Subap Haznesi işleme

Kalite : PCD

Takım türü : 18D-32Y-110L-4N

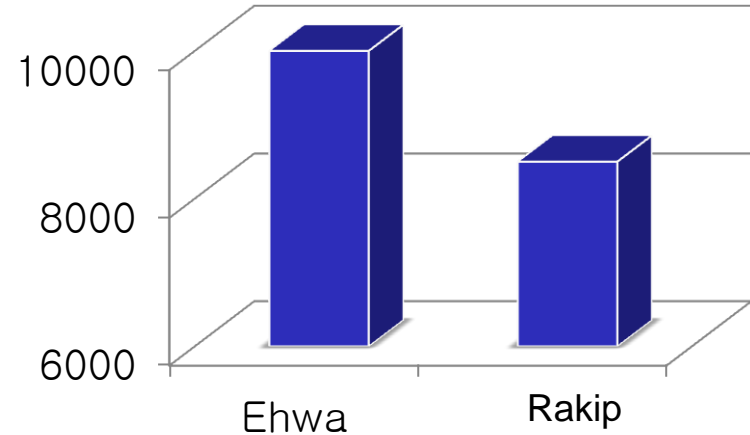
Kesme Hızı : 700~800 m/dak

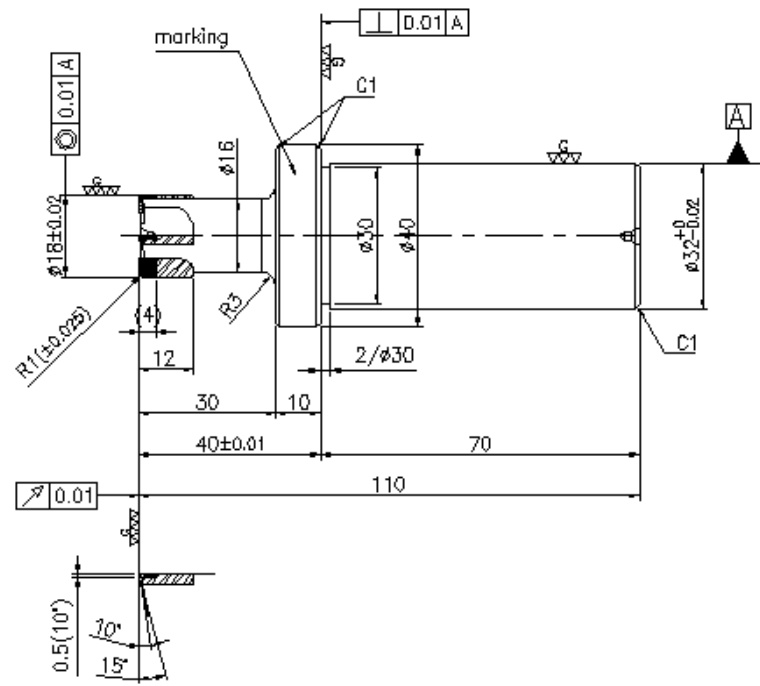
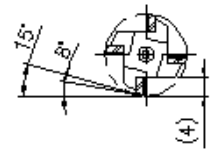
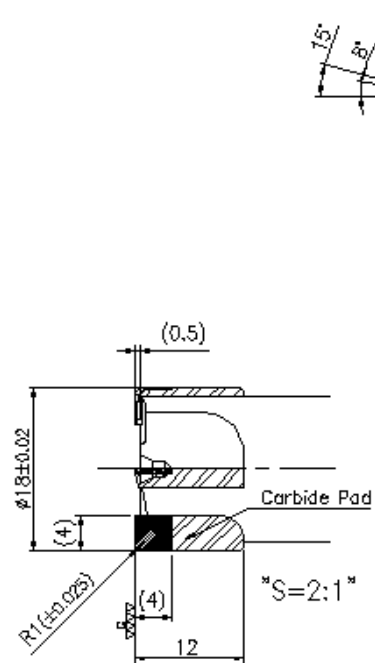
İlerleme Oranı : 0.12~0.17 mm/rev

D.O.C : 2.0 mm

Soğutucu : Islak

✓ **Sonuç** :10,000 Parça/adet





NOTE)
 1. S/K: STEEL(SCM435)
 2. Runout: 0.01

△		CUSTOMER		ITEM	CVD-EMX
△		SIZE	18D-110L-3ZY-1R-4N	ITEM No.	E03-10-0107
△		DATE	SCALE	TOLERANCE	SK MATERIAL DIM'S PROJ DWG No.
△		2011.12.16	1:1	SCM435	mm 3rd B022832W
△		DESIGN	CHECKED	APPROVED	
△	2012.06.13	PCD->CVD 8/24/8			
REVISIONS				EHWA® EHWA DIAMOND INDUSTRIAL CO.,LTD.	

SEGMAN KANALI AÇMA

✓ İşlenecek Ürün

Parça : Piston

Malzeme : AL Alaşımı

Sertlik:

Yüzey : Finiş

✓ Şartlar

İşlem : Segman kanalı açma

Kalite : PCD EP75

Takım Kodu : 25D-4T-13H-1.42W-6N

Kesme Hızı : 500~800 m/dak

5,000~7,000 rpm

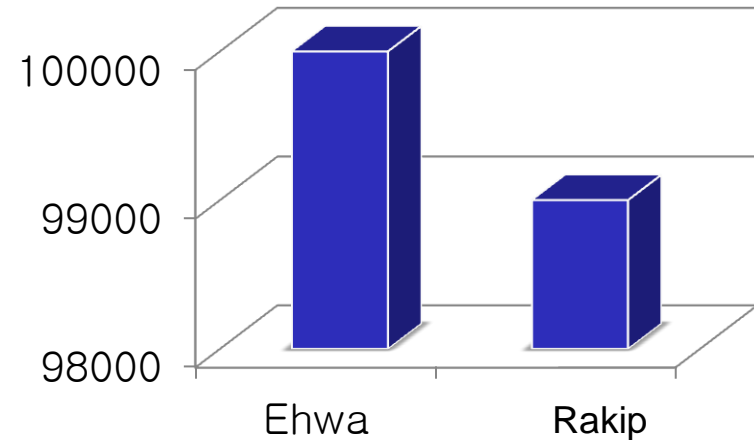
İlerleme Oranı : 0.1~0.2 mm/devir

900~1,200 mm/dak

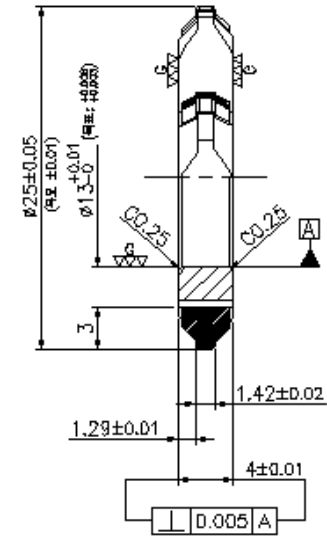
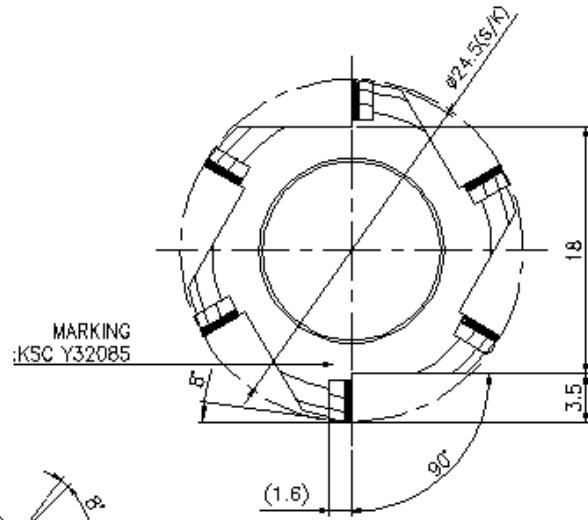
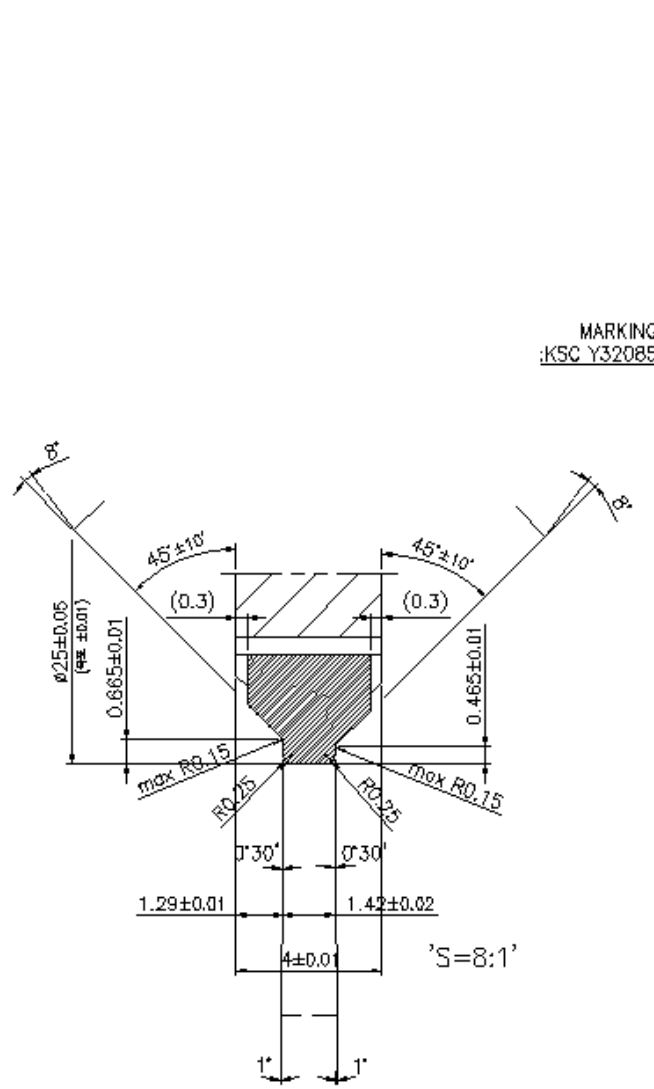
D.O.C : 1.25 mm

Soğutucu : Islak

✓ *Sonuç* :100,000 Parça/adet



V=550m/min (N=7000min⁻¹)
f=0.06mm/rev



△		CUSTOMER		ITEM	PCD-CTX
△		SIZE	25D-4T-13H-1.42W1-6N	ITEM No.	E03-15-0035
△		DATE	2012.07.24	SCALE	3:1
△		TOLERANCE	0.1	MATERIAL	K10
△		DESIGN	CHECKED	DIM'S	mm
△			APPROVED	PROJ	3rd
				DWG No.	B024153W
REVISIONS				EHWA DIAMOND INDUSTRIAL CO.,LTD.	

R- BOSS İŞLEME



✓ İşlenecek Ürün

Parça : Piston

Malzeme : AL Alaşımı

Sertlik

Yüzey : Finiş

✓ Şartlar

İşlem : R- Boss İşleme

Kalite: PCD EP75

Takım Kodu : 26D-4T-13H-1.5R-6N

Kesme Hızı: 500~800 m/dak

5,000~7,000 rpm

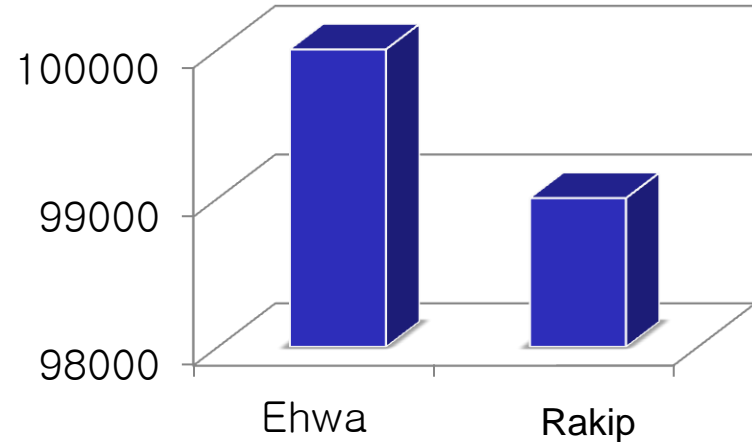
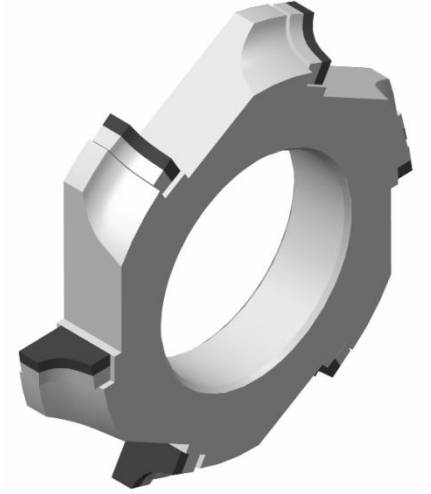
İlerleme : 0.1 - 0.2 mm/dev

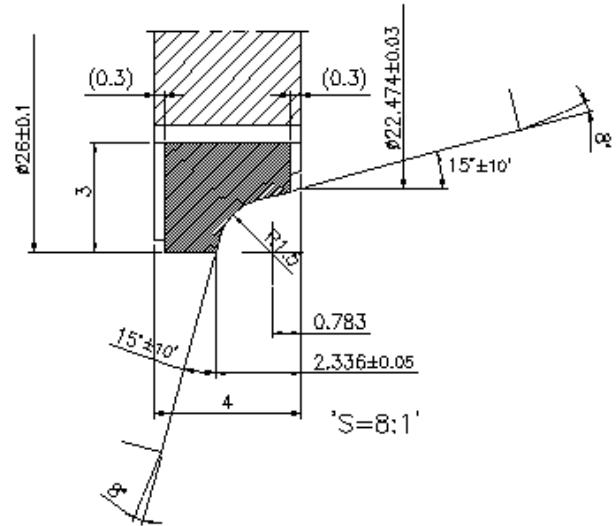
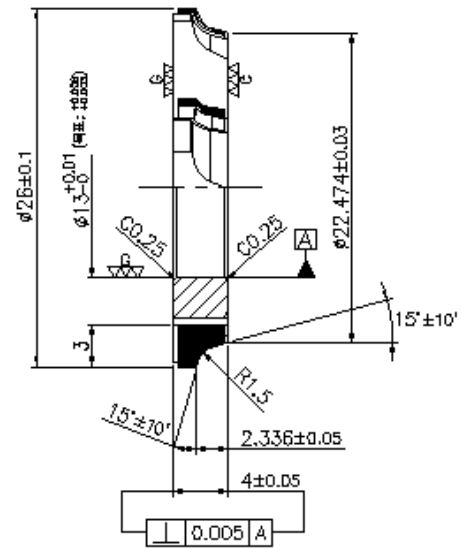
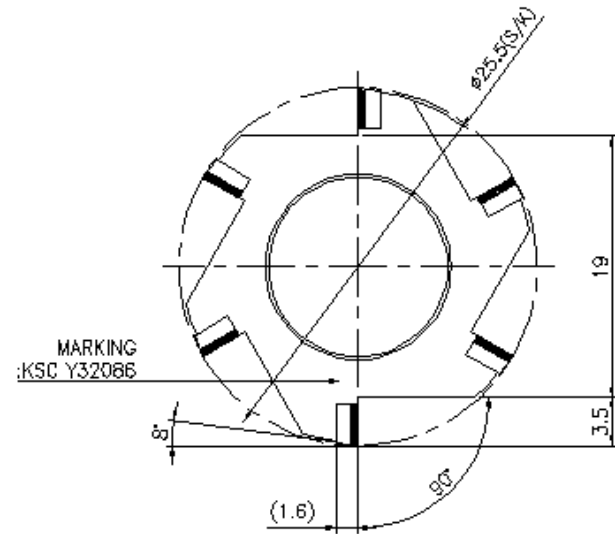
900 - 1,200 mm/dak

Kesme Derinliği d.o.c. : 1-1.5 mm

Soğutucu : Islak

✓ **Sonuç** : 100,000 parça/adet

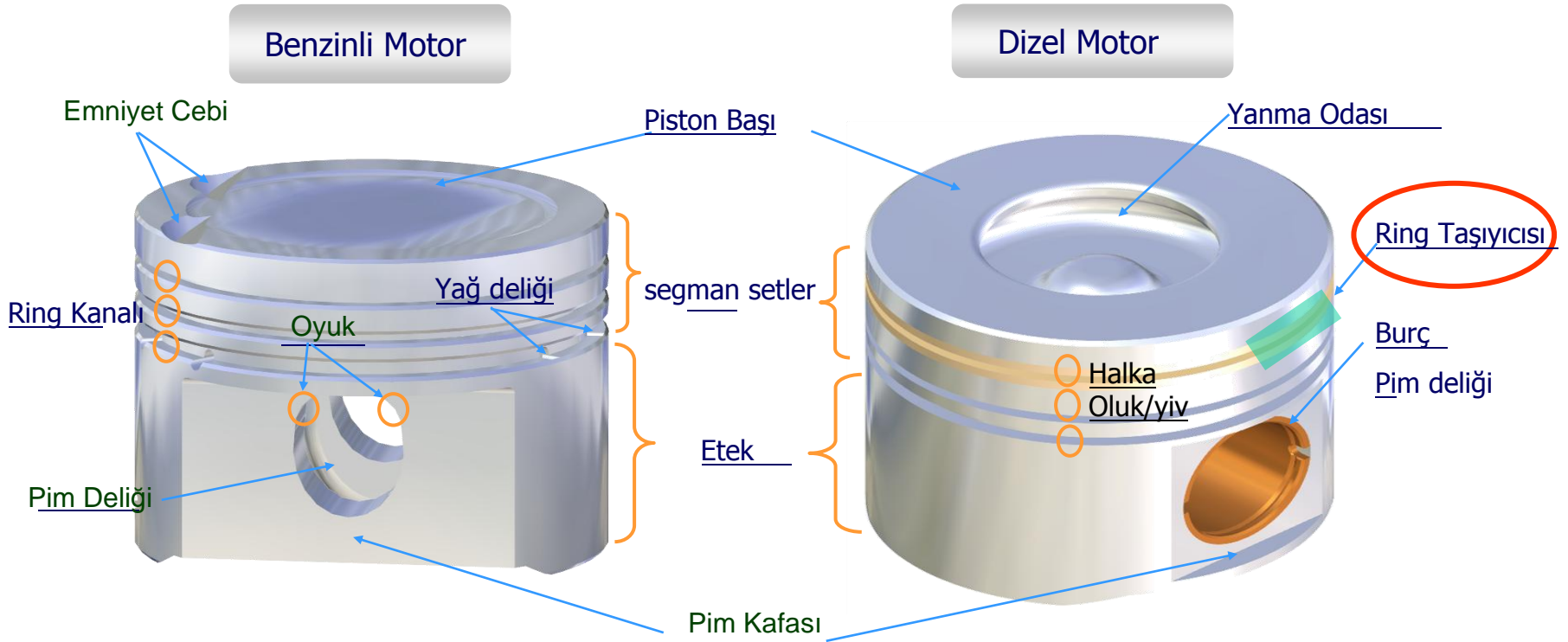




△		CUSTOMER		ITEM	PCD-CTX		
△		SIZE	26D-4T-13H-1.5R-6N	ITEM No.	E03-15-0036		
△		DATE	2012.07.24	SCALE	3:1	TOLERANCE	0.1
△		DESIGN	CHECKED	APPROVED	MATERIAL	K10	DIM'S
△					mm	3rd	B024152W
REVISIONS				EHWA®			
				EHWA DIAMOND INDUSTRIAL CO.,LTD.			

Teknik Veri

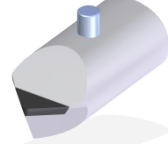
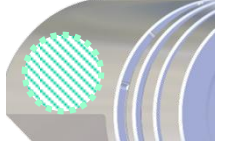

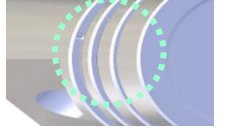
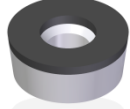
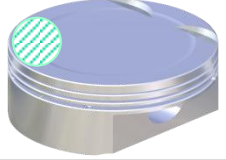

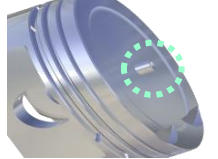
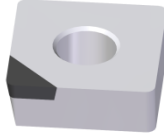
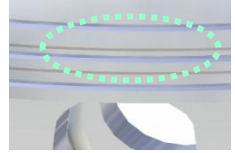
Dizel & Benzin Otomobil Pistonu



- ✓ Piston Gövdesi : **Aliminyum**
- ✓ Dizel piston (1st) or (1st & 2nd) Ring Kanalı : **dökme demir, sertleştirilmiş çelik**
(**Halka Taşıyıcısı**)
- ✓ Diğer ring kanalı : **Aliminyum**


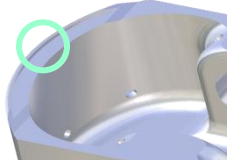
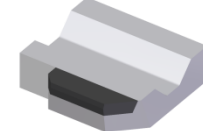

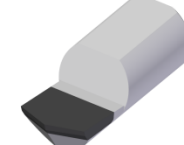
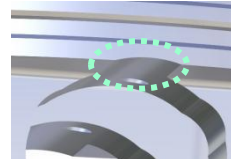

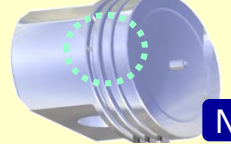
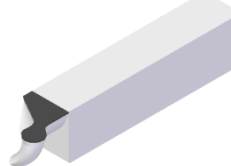

Piston İşleme-1

İşleme Örnekleri: Takım özelliği müşteri tarafından değiştirilebilir.

İşlem	Koşul	Ehwa Uç Kodu		İş Parçası
Etek Profili İşleme	Rpm : 2,300 V : 450m/dak F : 0.1 mm/dev	PCD-BRR 8D-17L-0.5R		
Yüzey Tornalama	Rpm : 2,500 V : 500m/dak	PCD-Uç CCGW120408		
Kafa Yüzeyi Tornalama	Rpm : 2,500 V : 500m/dak	PCD-Uç RCGW1203		
Merkez Açma	Rpm : V : 500m/dak	PCD-Uç TPGN110304		
Ring Pahlama	Rpm : 2800 V : 668m/dak, f 0.4	PCD-Uç SNGA120408		

Piston İşleme -2

İşleme Örnekleri : Takım özelliği müşteri tarafından değiştirilebilir.

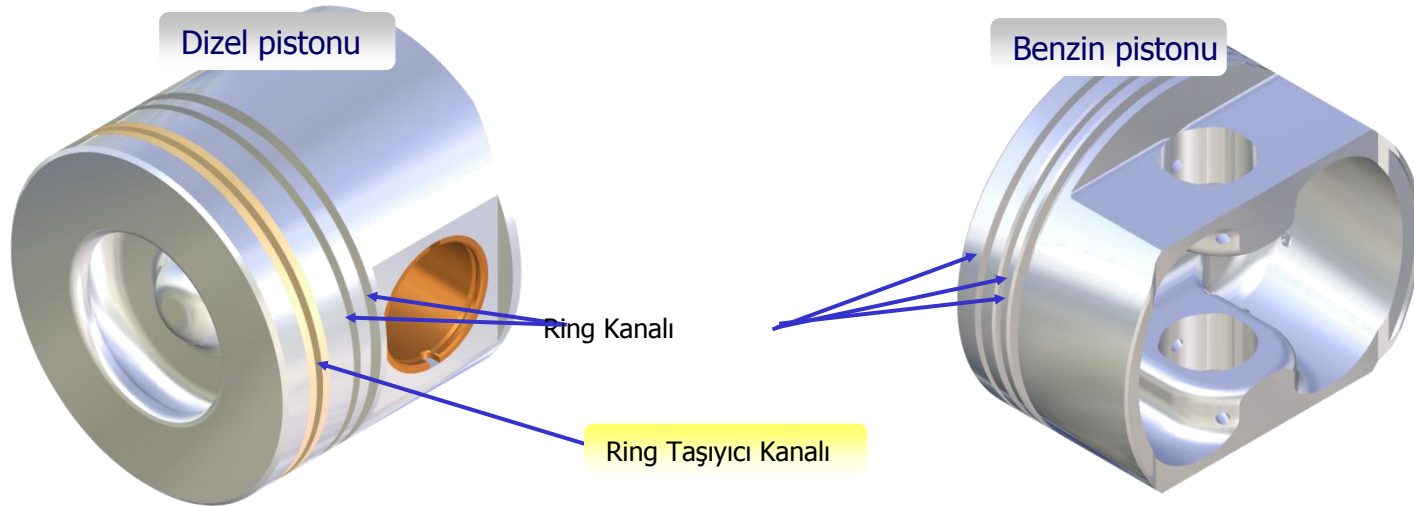
İşlem	Koşul	Ehwa Uç Kodu		İş Parçası
İç ve taban tornalama	Rpm : 2,500 V : 500m /dak	PCD-INSERT CCGW120403		
Pim Deliği Tornalama	Rpm : 1,900 V : 107m/dak	PCD-BRX 2.9T-10L-9.65W		
Pim Deliği Pahlama	Rpm : 2,000 V : 300m/dak	PCD-INSERT 5D-12L-20V		
Ring Kanalı Açma	Rpm : 1,400 V : 308m/dak F: 0.02mm/devir	PCD,PCBN- GROOVING		
Yanma Odasına Kanal Açma		PCD-TSX 5R-26W-20-25-120		

NEXT

Oluk Açma Çözümleri

PCD ve PCBN takım seçimi

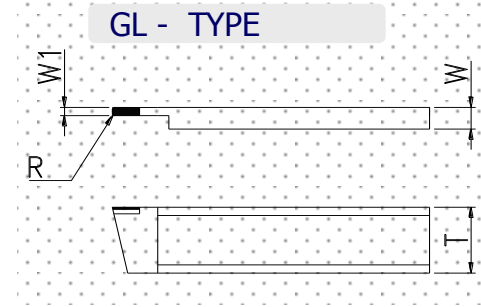
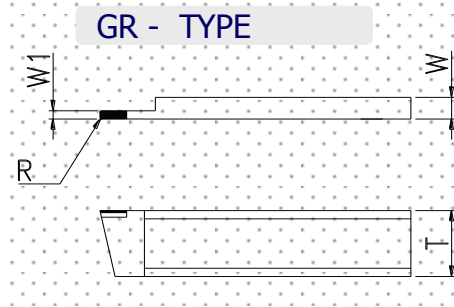
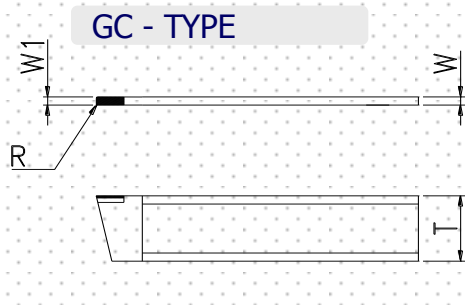
İş Parçası	Ring Taşıyıcı Kanalı	Ring Kanalı(Gaz, Dizel)
	Dökme Demir, Sertleştirilmiş Çelik	Alüminyum
M/T Takımı	PCBN-TOOL	PCD-Takım



Kanal Açma Takımları

: EHWA Kanal Açma Takım Çeşitleri ve Çizimleri

✓ Takım Çeşidi



✓ Kater Çeşidi

