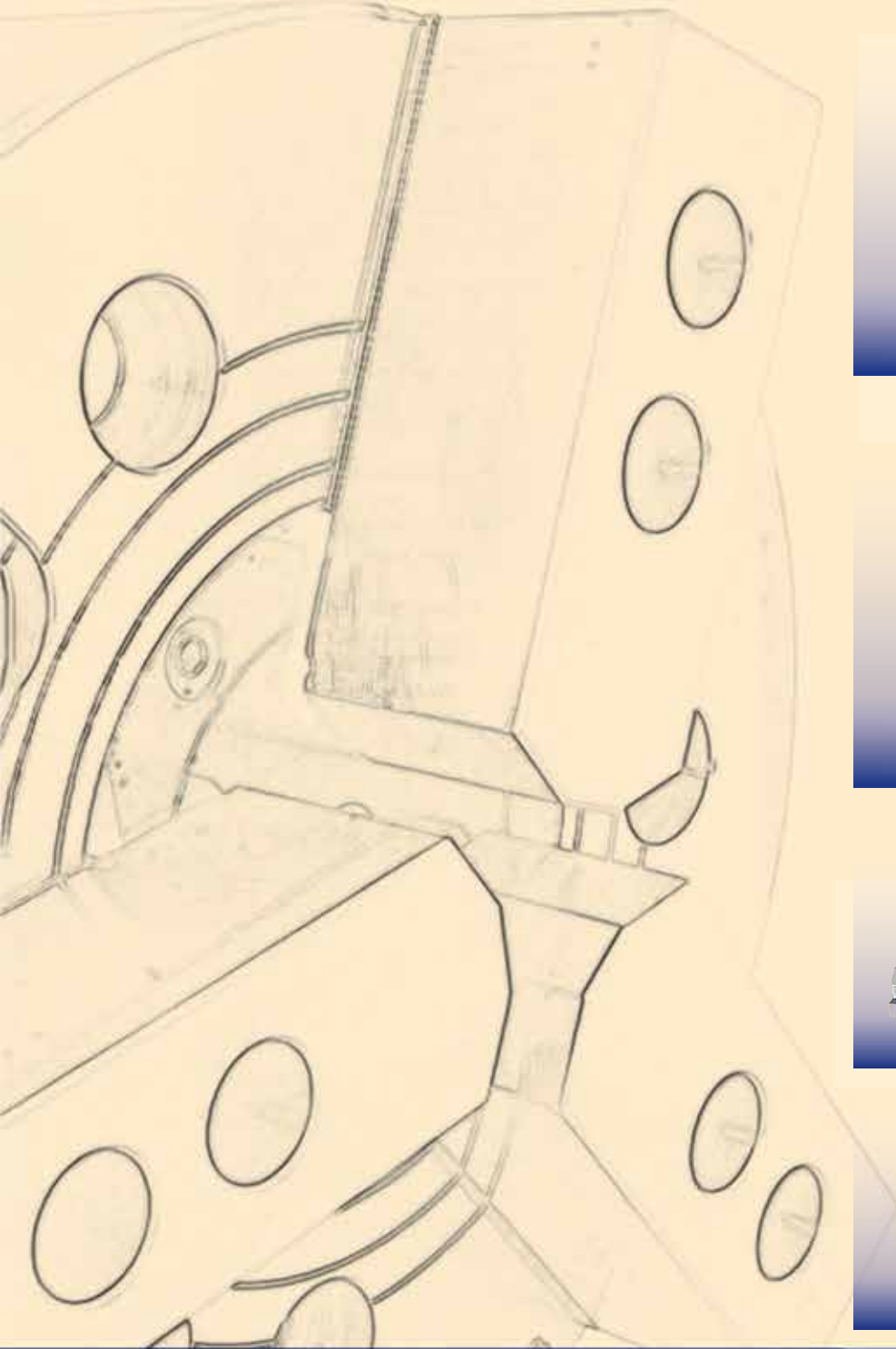




KOMTAŞ



Hassas İş Bağlama Takımları

Precision Chucking Tools

www.komtasmakine.com.tr



KOMTAŞ

ÖNSÖZ / PREFACE

Komtaş, Türkiye'nin lider iş bağlama takımları üreticisidir ve uzun yıllara dayanan tecrübesi ile bu sektörde hem üretim hem de pazarlama alanında Türkiye'nin ilk firmasıdır.

Komtaş, deneyimli mühendis, teknisyen ve diğer çalışanlarla üretim yapmaktadır. Geniş bir ürün yelpazesine sahiptir

Araştırma ve geliştirme çalışmaları sayesinde Komtaş, yüksek kaliteli ve hassas ürünler üretmektedir. Bunun sonucu olarak ta dünyanın dört bir yanına ürünlerini ihraç etmektedir.

Komtaş is the leading precision chucking tools manufacturer in Turkey and having for long years of experiences both of manufacturing and marketing is the first company of Turkey in this business

Komtaş makes production with experienced engineers, technicians and other employees and it has got wide product range.

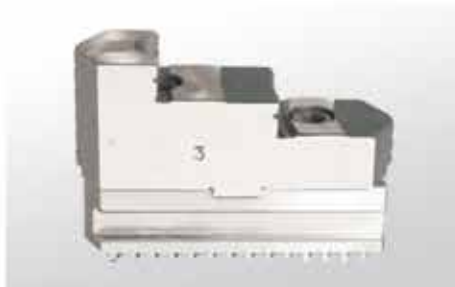
Owing to the research and development working, Komtaş manufactures high quality and precision products. That is the reason Komtaş exports products to all over the world.



Süper Hassas Hidrolik ve Manuel Aynalar Super Precision Hydraulic and Manual Chucks

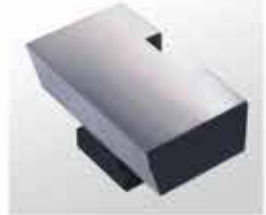
- * Hidrolik Torna Aynaları
- * Yüksek Devirli ve Hızlı Ayak Değiştirmeli Hidrolik Aynalar
- * Pens Aynaları
- * Pnömatik Aynalar
- * Ünlversal Torna Aynaları
- * Döndürülebilir Ayaklı Torna Aynaları
- * Ayarlanabilir Ayaklı Torna Aynaları
- * Kepenkli Torna Aynaları
- * Ayna Yedek Parçaları

- * Hydraulic Power Chucks
- * High Speed Quick Change Power Chucks
- * Collet Chucks
- * Pneumatic Chucks
- * Manual Lathe Chucks
- * Reversible Lathe Chucks
- * Adjustable Lathe Chucks
- * Independent Lathe Chucks
- * Chuck Spare Parts





Süper Hassas Tezgah Mengeneleri Super Precision Machine Vices



Süper Hassas Döner ve Sabit Puntalar Super Precision Live and Dead Centers



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	HSQC YÜKSEK DEVİRLİ VE HIZLI AYAK DEĞİŞTİRMELİ HİDROLİK AYNALAR <i>HIGH SPEED QUICK CHANGE POWER CHUCKS</i>	18 - 21
PENS AYNALARI <i>COLLET CHUCKS</i>	KCR PENS AYNALARI <i>COLLET CHUCKS</i>	22 - 23
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	112 SERİSİ SOMUNLU SABİT PUNTALAR <i>112 SERIES DEAD CENTERS WITH NUT</i>	62
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KOMTAŞ®



AÇIK MERKEZ HİDROLİK AYNALAR
OPEN CENTER POWER CHUCKS



2 AYAKLI AÇIK MERKEZ HİDROLİK AYNALAR

2 JAW OPEN CENTER POWER CHUCKS



KHC AÇIK MERKEZ HİDROLİK AYNALAR, 2-3 VEYA 4 AYAKLI TİPLER

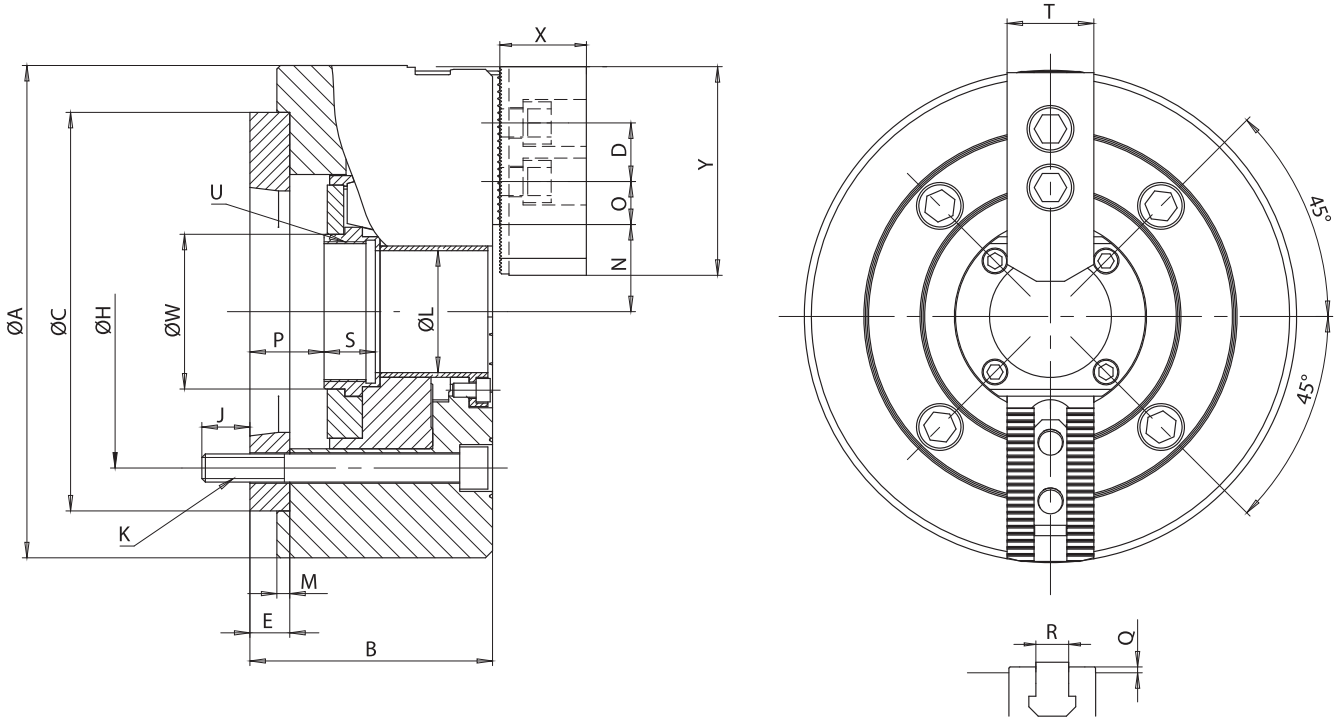
KHC WEDGE TYPE OPEN CENTER POWER CHUCKS, 2-3 AND 4 JAWS VERSIONS

- Taban ayak dişleri 1.5mm x 60° - 3mm x 60° / Serration 1.5mm x 60° - 3mm x 60°
- Standart bağlama ISO-A / Mounting ISO-A
- Hareketli parçalar alaşımli çelikten imal edilmiş, sertleştirilmiş ve taşlanmış. / All parts are made of alloyed steel.
- 2,3 ve 4 ayaklı modelleri mevcuttur. / 2,3 and 4 jaws chucks available
- Aksesuarlar, bağlantı civata ve somunlar. / Accessories, Mounting bolts and nuts

Teknik Özellikler / Technical Specifications

Sipariş Kodu Order Code	Ayna Ebadı Chuck Size	Ayak Sayısı No. of Jaws	Dış Çapı Outside Diameter	Bağlantı Flanşı Flange No.	Delik İç Çapı Thru-Hole	Ayak Stroku Jaw Stroke	Piston Stroku Shifter Stroke	Standart Sert Üst Ayak İle Sıkma Çapı Clamp Dia With Standard Hard Top Jaw		Max. Sıkma Kuvveti Max. Gripping Force	Max. Çekme Kuvveti Max. Drawbar Pull Force	Devir Speed	Ağırlık Weight
								Min	Max				
			mm		mm	mm	mm			kgf / kN	kgf / kN	d / dk - rpm	kg
KHC-2-205A4	5"	2	135	A4	33	Ø5,4	10	6	135	2447 / 24	1189 / 11,6	7000	6,8
KHC-2-206A5	6"	2	169	A5	45	Ø5,5	12	15	169	3875 / 38	1495 / 14,6	6000	13,5
KHC-2-208A6	8"	2	210	A6	52	Ø7,4	16	20	210	5975 / 58,6	2360 / 23,1	5000	23
KHC-2-210A8	10"	2	254	A8	75	Ø8,8	19	25	254	7548 / 74	2930 / 28,7	4200	35
KHC-2-212A8	12"	2	305	A8	91	Ø10,6	23	30	305	9990 / 98	3875 / 38	3300	56,5
KHC-2-215A11	15"	2	381	A11	117,5	Ø10,6	23	50	381	12240 / 120	4827 / 47,3	2500	111
KHC-2-218A11	18"	2	450	A11	117,5	Ø10,6	23	60	450	12240 / 120	4827 / 47,3	2000	164

Teknik Detaylar / Technical Details



Ölçüler / Dimensions

Ayna Ebadı Chuck Size	A	B	C	D	E	H	J	K	L	M	N	O	O	P	P	Q	R	S	T	U	W	X	Y
	(H6)										Min	Max	Min	Max	Min				Max				
5"	135	71	110	14	15	82,55	15,5	4-M10	33	4	26,5	19,75	7,75	16	6	2	10	20	25	40x1,5	45	31	54
6"	169	91	140	20	15	104,78	16	4-M10	45	5	32	22,75	9,25	26	14	2	12	19	31	55x2	60	37	73
8"	210	103	170	25	17	133,35	18	4-M12	52	5	38,7	29,75	14,75	31,5	15,5	2	14	20,5	35	60x2	66	38	95
10"	254	113	220	30	18	171,45	20	6-M16	75	5	51	33,75	14,25	27	8	2	16	25	40	85x2	94	43	110
12"	305	122	220	30	18	171,45	23	6-M16	91	6	61,3	45,75	15,75	26	3	2	21	28	50	100x2	106	51	130
15"	381	149	300	43	22	235	28	6-M20	117,5	6	82	45,25	16,75	29	6	5	22	43	62	130x2	139	66	165
18"	450	149	300	43	22	235	28	6-M20	117,5	6	82	79,75	16,75	29	6	5	22	43	62	130x2	139	66	165



3 AYAKLI AÇIK MERKEZ HİDROLİK AYNALAR

3 JAW OPEN CENTER POWER CHUCKS



KHC AÇIK MERKEZ HİDROLİK AYNALAR, 2-3 VEYA 4 AYAKLI TİPLER

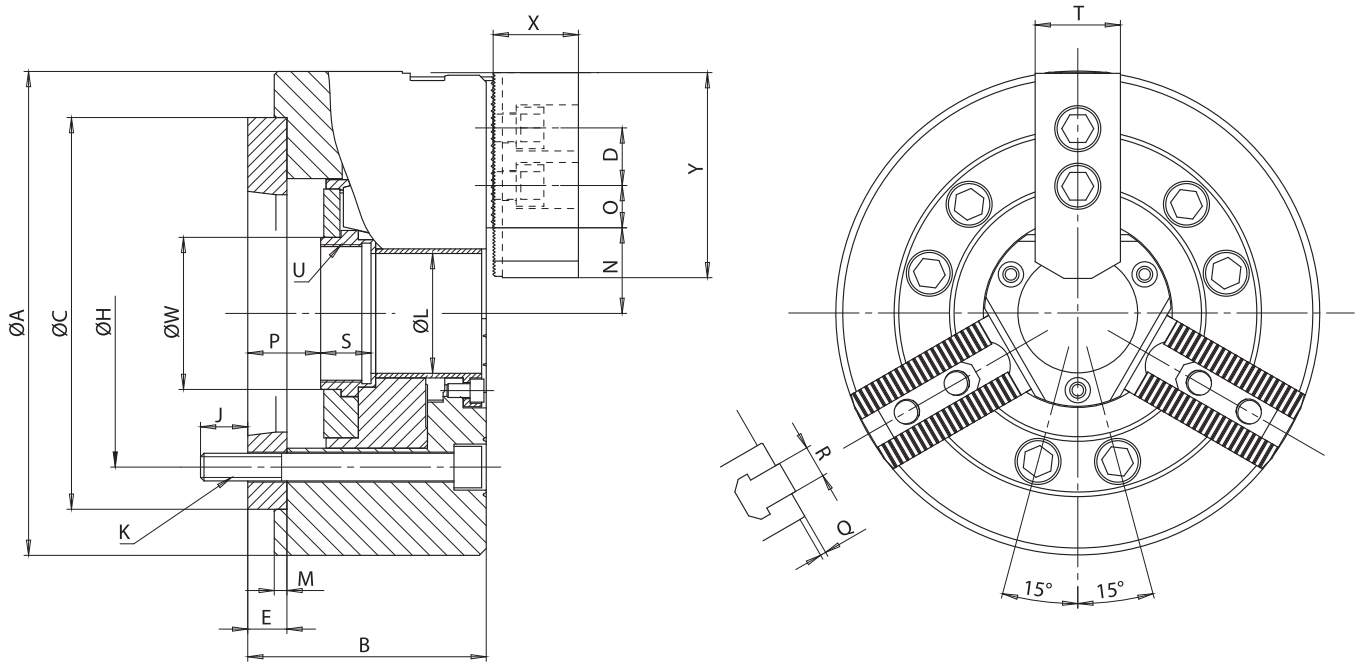
KHC WEDGE TYPE OPEN CENTER POWER CHUCKS, 2-3 AND 4 JAWS VERSIONS

- Taban ayak dişleri 1.5mm x 60° - 3mm x 60° / Serration 1.5mm x 60° - 3mm x 60°
- Standart bağlama ISO-A / Mounting ISO-A
- Hareketli parçalar alaşımli çelikten imal edilmiş, sertleştirilmiş ve taşlanmış. / All parts are made of alloyed steel.
- 2,3 ve 4 ayaklı modelleri mevcuttur. / 2,3 and 4 jaws chucks available
- Aksesuarlar, bağlantı civata ve somunlar. / Accessories, Mounting bolts and nuts

Teknik Özellikler / Technical Specifications

Sipariş Kodu Order Code	Ayna Ebadı Chuck Size	Ayak Sayısı No. of Jaws	Dış Çapı Outside Diameter	Bağlantı Flanşı Flange No.	Delik İç Çapı Thru-Hole	Ayak Stroku Jaw Stroke	Piston Stroku Shifter Stroke	Standart Sert Üst Ayak İle Sıkma Çapı Clamp Dia With Standard Hard Top Jaw		Max. Sıkma Kuvveti Max. Gripping Force	Max. Çekme Kuvveti Max. Drawbar Pull Force	Devir Speed	Ağırlık Weight
								Min	Max				
			mm		mm	mm	mm			kgf / kN	kgf / kN	d / dk - rpm	kg
KHC-3-205A4	5"	3	135	A4	33	Ø5,4	10	6	135	3671 / 36	1784 / 17,5	7000	6,8
KHC-3-206A5	6"	3	169	A5	45	Ø5,5	12	15	169	5820 / 57,1	2250 / 22	6000	13,5
KHC-3-208A6	8"	3	210	A6	52	Ø7,4	16	20	210	9075 / 89	3560 / 34,9	5000	23
KHC-3-210A8	10"	3	254	A8	75	Ø8,8	19	25	254	11325 / 111,1	4385 / 43	4200	35
KHC-3-212A8	12"	3	305	A8	91	Ø10,6	23	30	305	14990 / 147	5820 / 57	3300	56,5
KHC-3-215A11	15"	3	381	A11	117,5	Ø10,6	23	50	381	18355 / 180	7240 / 71	2500	111
KHC-3-218A11	18"	3	450	A11	117,5	Ø10,6	23	60	450	18355 / 180	7240 / 71	2000	164
KHC-3-221A15	21"	3	530	A15	180	Ø10,6	23	120	510	23870 / 234,1	9200 / 90,2	1800	190
KHC-3-224A20	24"	3	610	A20	205	Ø12	26	150	610	23870 / 234,1	9200 / 90,2	1400	270

Teknik Detaylar / Technical Details



Ölçüler / Dimensions

Ayna Ebadı Chuck Size	A	B	C	D	E	H	J	K	L	M	N	O	O	P	P	Q	R	S	T	U	W	X	Y
			(H6)								Min	Max	Min	Max	Min				Max				
5"	135	71	110	14	15	82,55	15,5	3-M10	33	4	26,5	19,75	7,75	16	6	2	10	20	25	40x1,5	45	31	54
6"	169	91	140	20	15	104,78	16	6-M10	45	5	32	22,75	9,25	26	14	2	12	19	31	55x2	60	37	73
8"	210	103	170	25	17	133,35	18	6-M12	52	5	38,7	29,75	14,75	31,5	15,5	2	14	20,5	35	60x2	66	38	95
10"	254	113	220	30	18	171,45	20	6-M16	75	5	51	33,75	14,25	27	8	2	16	25	40	85x2	94	43	110
12"	305	122	220	30	18	171,45	23	6-M16	91	6	61,3	45,75	15,75	26	3	2	21	28	50	100x2	106	51	130
15"	381	149	300	43	22	235	28	6-M20	117,5	6	82	45,25	16,75	29	6	5	22	43	62	130x2	139	66	165
18"	450	149	300	43	22	235	28	6-M20	117,5	6	82	79,75	16,75	29	6	5	22	43	62	130x2	139	66	165
21"	530	155	380	60	27	330,2	33	6-M24	180	6	112,5	69	23	38	15	5	25	38	65	190x3	206	73	180
24"	610	166	520	60	25	463,6	33	6-M24	205	6	139,9	87,5	24,5	41	15	5	25	38	65	215x3	230	73	180



4 AYAKLI AÇIK MERKEZ HİDROLİK AYNALAR

4 JAW OPEN CENTER POWER CHUCKS



KHC AÇIK MERKEZ HİDROLİK AYNALAR, 2-3 VEYA 4 AYAKLI TİPLER

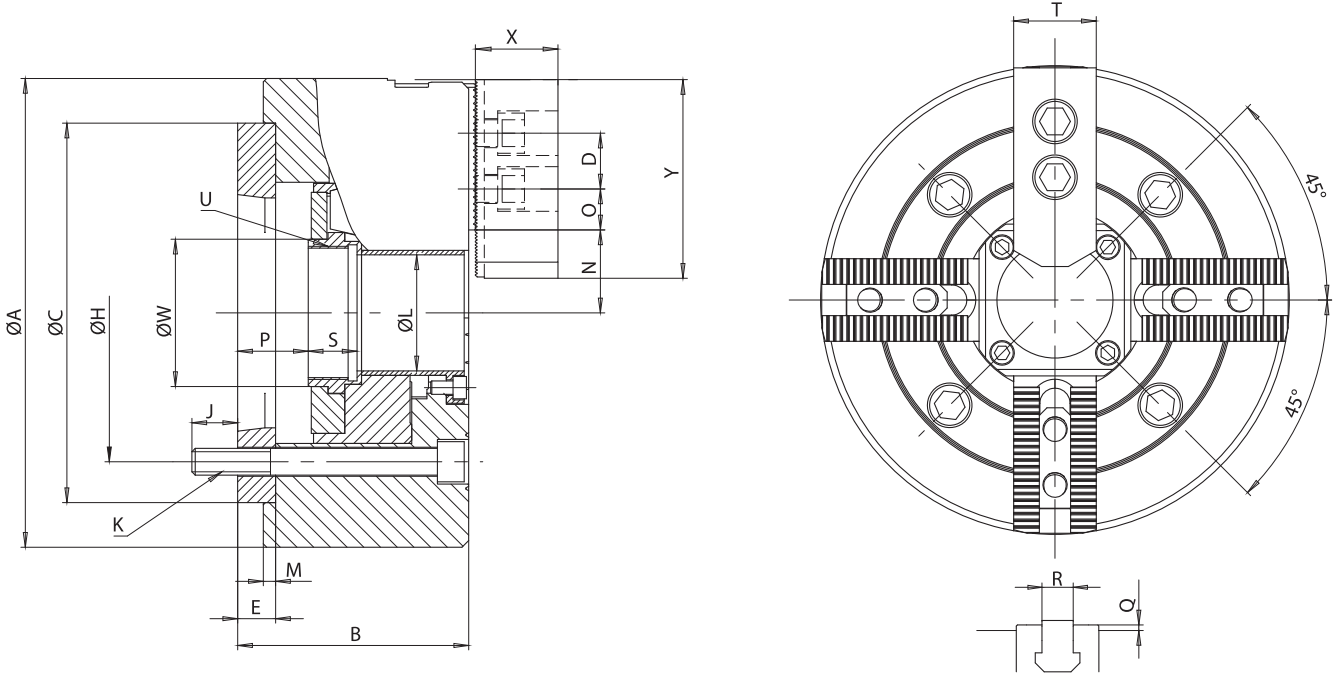
KHC WEDGE TYPE OPEN CENTER POWER CHUCKS, 2-3 AND 4 JAWS VERSIONS

- Taban ayak dişleri 1.5mm x 60° - 3mm x 60° / Serration 1.5mm x 60° - 3mm x 60°
- Standart bağlama ISO-A / Mounting ISO-A
- Hareketli parçalar alaşımli çelikten imal edilmiş, sertleştirilmiş ve taşlanmış. / All parts are made of alloyed steel.
- 2,3 ve 4 ayaklı modelleri mevcuttur. / 2,3 and 4 jaws chucks available
- Aksesuarlar, bağlantı civata ve somunlar. / Accessories, Mounting bolts and nuts

Teknik Özellikler / Technical Specifications

Sipariş Kodu Order Code	Ayna Ebadı Chuck Size	Ayak Sayısı No. of Jaws	Dış Çapı Outside Diameter	Bağlantı Flanşı Flange No.	Delik İç Çapı Thru-Hole	Ayak Stroku Jaw Stroke	Piston Stroku Shifter Stroke	Standart Sert Üst Ayak İle Sıkma Çapı Clamp Dia With Standard Hard Top Jaw		Max. Sıkma Kuvveti Max. Gripping Force	Max. Çekme Kuvveti Max. Drawbar Pull Force	Devir Speed	Ağırlık Weight
								Min	Max				
			mm		mm	mm	mm			kgf / kN	kgf / kN	d / dk - rpm	kg
KHC-4-206A5	6"	4	169	A5	45	Ø5,5	12	15	169	5820 / 57,1	2250 / 22	4500	13,5
KHC-4-208A6	8"	4	210	A6	52	Ø7,4	16	20	210	9075 / 89	3560 / 34,9	3600	23
KHC-4-210A8	10"	4	254	A8	75	Ø8,8	19	25	254	11325 / 111,1	4385 / 43	3200	35
KHC-4-212A8	12"	4	305	A8	91	Ø10,6	23	30	305	14990 / 147	5820 / 57	2700	56,5
KHC-4-215A11	15"	4	381	A11	117,5	Ø10,6	23	50	381	18355 / 180	7240 / 71	1900	111
KHC-4-218A11	18"	4	450	A11	117,5	Ø10,6	23	60	450	18355 / 180	7240 / 71	1500	164
KHC-4-221A15	21"	4	530	A15	180	Ø10,6	23	120	510	23870 / 234,1	9200 / 90,2	1200	190

Teknik Detaylar / Technical Details

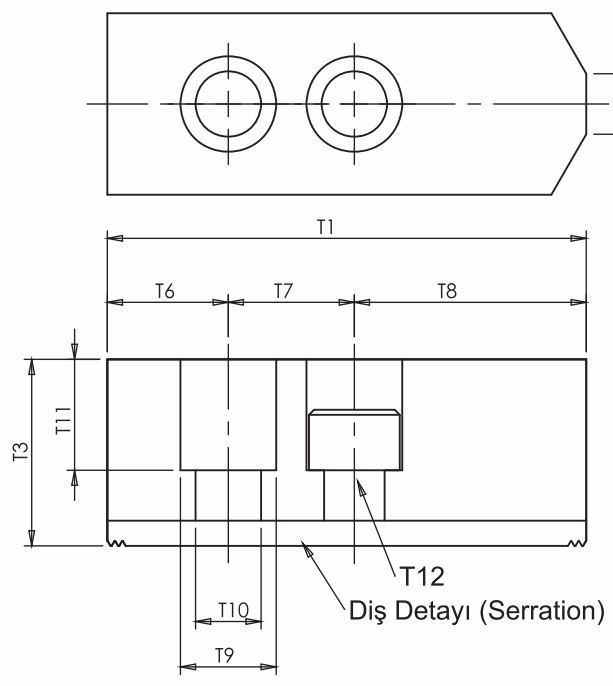


Ölçüler / Dimensions

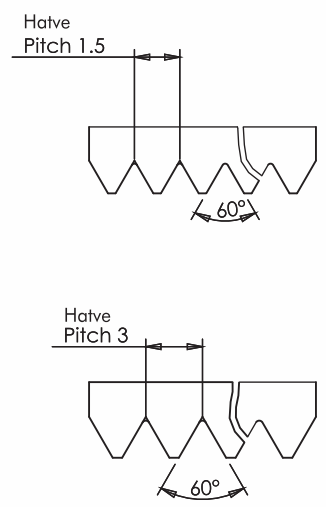
Ayna Ebadı Chuck Size	A	B	C	D	E	H	J	K	L	M	N	O	O	P	P	Q	R	S	T	U	W	X	Y
			(H6)								Min	Max	Min	Max	Min					Max			
6"	169	91	140	20	15	104,78	16	4-M10	45	5	32	22,75	9,25	26	14	2	12	19	31	55x2	60	37	73
8"	210	103	170	25	17	133,35	18	4-M12	52	5	38,7	29,75	14,75	31,5	15,5	2	14	20,5	35	60x2	66	38	95
10"	254	113	220	30	18	171,45	20	4-M16	75	5	51	33,75	14,25	27	8	2	16	25	40	85x2	94	43	110
12"	305	122	220	30	18	171,45	23	4-M16	91	6	61,3	45,75	15,75	26	3	2	21	28	50	100x2	106	51	130
15"	381	149	300	43	22	235	28	4-M20	117,5	6	82	45,25	16,75	29	6	5	22	43	62	130x2	139	66	165
18"	450	149	300	43	22	235	28	4-M20	117,5	6	82	79,75	16,75	29	6	5	22	43	62	130x2	139	66	165
21"	530	155	380	60	27	330,2	33	6-M24	180	6	112,5	69	23	38	15	5	25	38	65	190x3	206	73	180



Standart ve Yüksek Yumuşak Üst Ayaklar / Standard and High Soft Top Jaws



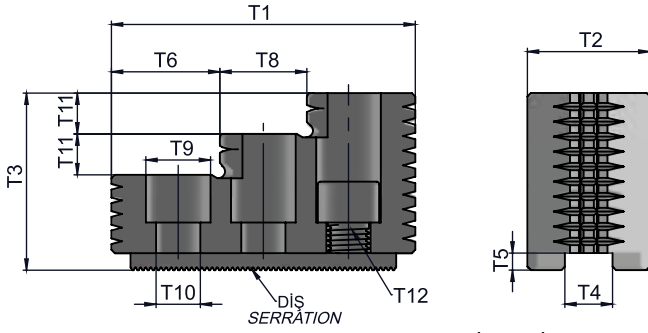
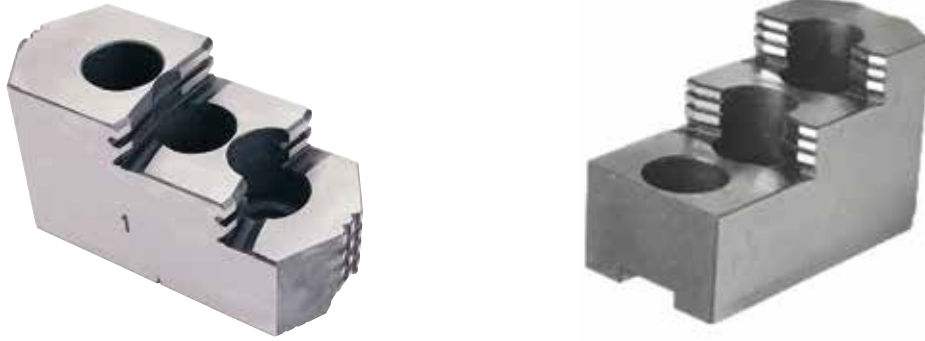
Diş DETAYI
DETAIL OF SERRATION



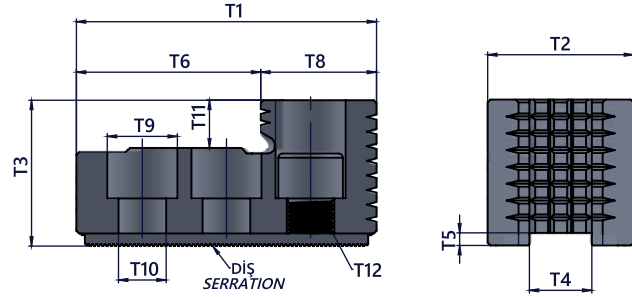
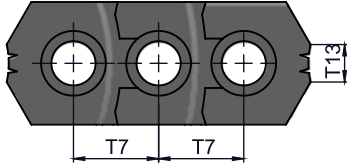
Yumuşak Üst Ayaklar / Soft Top Jaws

Sipariş Kodu Order Code	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	Diş Serration	3 Jaw Weight (kg)
KSJ- 04-K1	53	23	23	10	5	9	14	30	14	9	14	M8	3	1.5x60°	0,45
KSJ- 05-K1	62	25	30	10	5	9	14	39	14	9	21	M8	5	1.5x60°	0,7
KSJ- 06-K1	73	32	32	12	5	15	20	38	17	11	21	M10	10	1.5x60°	1,5
KSJ- 08-K1	95	35	36	14	5	24	25	46	19	13	22	M12	12	1.5x60°	2,4
KSJ- 10-K1	110	40	42	16	5	30	30	50	19	13	27	M12	14	1.5x60°	3,7
KSJ- 12-K1	130	50	50	21	5	39	30	61	25	17	30	M16	18	1.5x60°	6,5
KSJ- 15-K1	165	62	62	22	8	37	43	85	32	21	38	M20	-	1.5x60°	12,5
KSJ-12-1-K1	130	50	50	18	5	39	30	61	23	15	30	M14	18	1.5x60°	6,6
KSJ- 15-1-K1	165	62	62	25,5	5	37	43	85	32	21	38	M20	-	1.5x60°	12,5
KSJ- 24-K3	180	64	70	25	9	40	60	80	32	21	45	M20	-	3.0x60°	15,8
KSJ- 32-K3	210	74	90	25	9	40	80	90	32	21	65	M20	-	3.0x60°	29,2

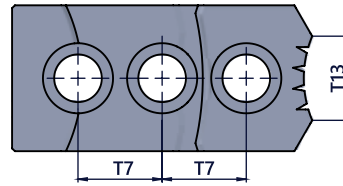
Sert Üst Ayaklar / Hard Top Jaws



Şekil 1 / Fig.1



Şekil 2 / Fig. 2

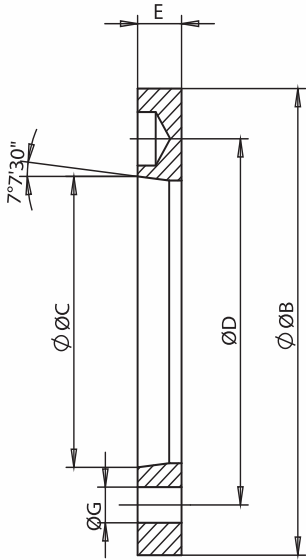


Sert Üst Ayaklar / Hard Top Jaws

Dim Model	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	Diş Serration	Referans	3 Jaw Weight (kg)
KHJ 5	53	23	27,5	10	4	30,5	14	22,5	13,5	8,5	10	M8	6	1.5x60°	Fig-2	0,4
KHJ 6	67	32	36	12	5	40	20	27	17	11	10	M10	10	1.5x60°	Fig-2	1
KHJ 8	90	36	52	14	5	31	25	25	19	13	12	M12	12	1.5x60°	Fig-1	1,9
KHJ 10	101	42	60	16	5	43	30	17	19	13	13	M12	15	1.5x60°	Fig-1	2,9
KHJ 12	103	52	52	21	4	62,5	30	40,5	25	17	17	M16	30	1.5x60°	Fig-2	3,5
KHJ 12-1	103	52	52	18	5	62,5	30	40,5	22	15	17	M14	30	1.5x60°	Fig-2	3,6
KHJ 15	149	62	86	22	8	63	43	34	32	21	20	M20	40	1.5x60°	Fig-1	9,6
KHJ 15-1	149	62	86	25,5	5	63	43	34	32	21	20	M20	40	1.5x60°	Fig-1	9,5
KHJ 24	159,5	80	90	25	9	104,5	50	55	32	21	40	M20	55	3.0x60°	Fig-2	14,3

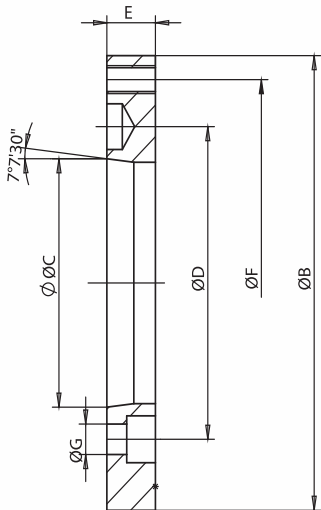


Flanşlar / Adapters



Kısa Koni Flaşı DIN55026 Fener Mili Mounting Adapter on Short Taper Spindle Noses DIN55026

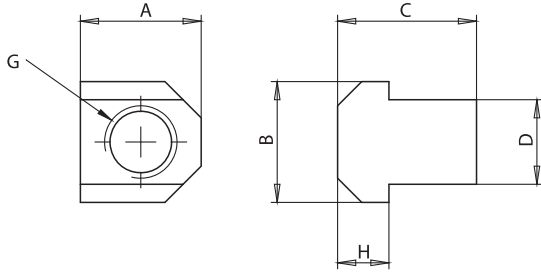
SİPARİŞ KODU ORDER CODE	ØB	ØC	ØD	E	ØG	AYNA MODELİ MATCHING CHUCK
AF05-A04	110	63,513	82,55	15	11	KHC-205
AF06-A05	140	82,563	104,78	15	11	KHC-206
AF08-A06	170	106,375	133,35	17	13	KHC-208
AF10-A08	220	139,719	171,45	18	17	KHC-210
AF12-A08	220	139,719	171,45	18	17	KHC-212
AF15-A11	300	196,869	235	22	21	KHC-215
AF18-A11	300	196,869	235	22	21	KHC-218
AF21-A15	380	285,775	330,2	27	25	KHC-221
AF24-A20	520	412,775	463,6	27	25	KHC-224



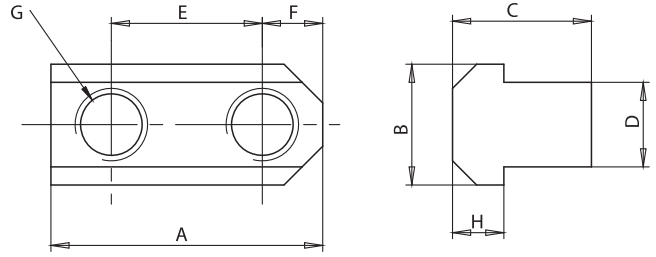
Kısa Koni Flaşı DIN55026 Fener Mili Mounting Adapter on Short Taper Spindle Noses DIN55026

SİPARİŞ KODU ORDER CODE	ØB	ØC	ØD	E	ØF	ØG	AYNA MODELİ MATCHING CHUCK
AF06-A04	140	63,513	82,55	20	104,78	11	KHC-206
AF08-A05	170	82,563	104,78	23	133,35	11	KHC-208
AF10-A06	220	106,375	133,35	25	171,45	13	KHC-210
AF12-A06	220	106,375	133,35	25	171,45	13	KHC-212
AF15-A08	300	139,719	171,4	33	235	17	KHC-215
AF18-A08	300	139,719	171,4	33	235	17	KHC-218
AF21-A11	380	196,869	235	41	330,2	21	KHC-221
AF24-A15	520	285,775	330,2	42	463,6	25	KHC-224

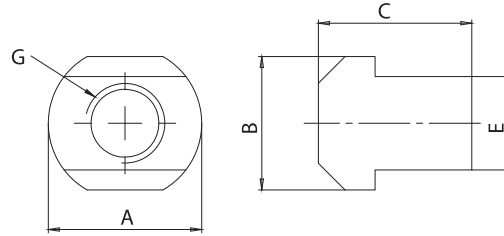
T Somun/ T Nut



Şekil 1 - Figure 1



Şekil 2 - Figure 2



Şekil 3 - Figure 3

Ölçüler / Dimensions

SİPARİŞ KODU ORDER CODE	A	B	C	D	E	G	SEKİL FIGURE	AYNA MODELİ MATCHING CHUCK
TS05-K2	26	14,5	15	10	14	M8	2	KHC-205
TS06-K1	15	17,5	18,5	12	-	M10	1	KHC-206
TS06-K2	36	17,5	18,5	12	20	M10	2	KHC-206
TS08-K1	19	20,5	20,5	14	-	M12	1	KHC-208
TS08-K2	46,5	20,5	20,5	14	25	M12	2	KHC-208
TS10-K1	20	23	23	16	-	M12	1	KHC-210
TS10-K2	50	23	23	16	30	M12	2	KHC-210
TS12-K11	24	29	30	18	-	M14	1	KHC-212
TS12-K12	24	29,5	30	21	-	M16	1	KHC-212
TS12-K21	54	29	30	18	30	M14	2	KHC-212
TS12-K22	55,5	29,5	30	21	30	M16	2	KHC-212
TS15-K2	73	34	41,5	22	43	M20	2	KHC-215
TS15-K3	42	34	41,5	22	-	M20	3	KHC-215

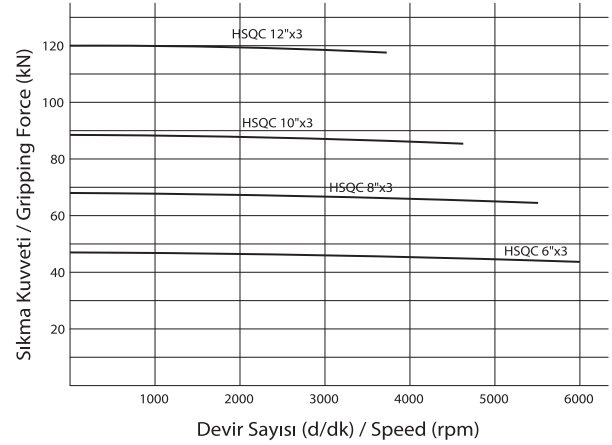


3 AYAKLI AÇIK MERKEZ HİDROLİK AYNALAR

3 JAW OPEN CENTER POWER CHUCKS



- ◆ Büyük Delik Çapı
- ◆ Hızlı Değiştirilebilir Ayaklar. Her aynada iki takım taban ayak bulunur.
- ◆ Yüksek devirlerde kullanım
- ◆ Ayar zamanı ve üretim maliyetlerini düşürür.
- ◆ Gövde içindeki ayar civataları ile salgı ayarlanabilir
- ◆ Large through hole
- ◆ Quick change jaws. Two sets of base jaws are supplied each chucks.
- ◆ High speed application
- ◆ Reduces unit cost and setup time
- ◆ Concetricity- adjustment feature built into the body. This feature allows you to adjust run-out of your machine spindle

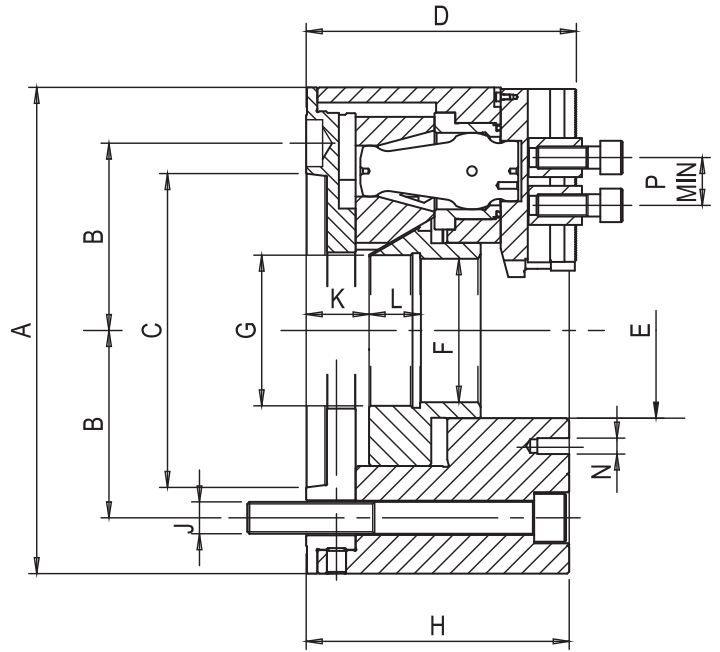
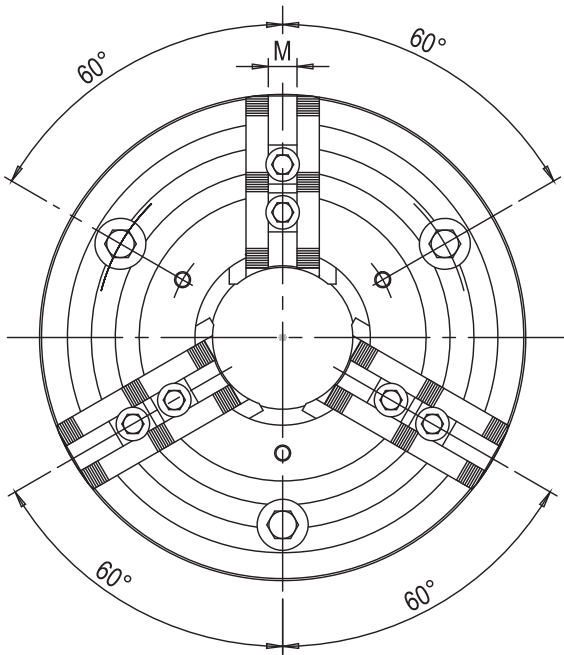


Teknik Özellikler / Technical Specifications

HSQC

Ayna Çapı / Chuck Size		6"	8"	10"	12"
Sipariş Kodu / OrderCode		KHSC 6 x 3	KHSC 8 x 3	KHSC 10 x 3	KHSC 12 x 3
Max. Devir / Max. Speed	rpm	6000	5500	4500	3800
Max. Delik Çapı / Max. Bore	mm	43	66	66.5	90
Ayak Stroku / Jaw Stroke	mm	3.5	3.5	4	4
Piston Stroku / Shifter Stroke	mm	16	16	18.5	18.5
Max. Çekme Kuvveti / Max. Drawbar Pull Force	kN	16	24	32	44
Max. Sıkama Kuvveti / Max. Gripping Force	kN	47	66	88	121
Ağırlık / Weight	kg	16	27	42	68

Teknik Detaylar / Technical Details



Ölçüler / Dimensions

HSQC

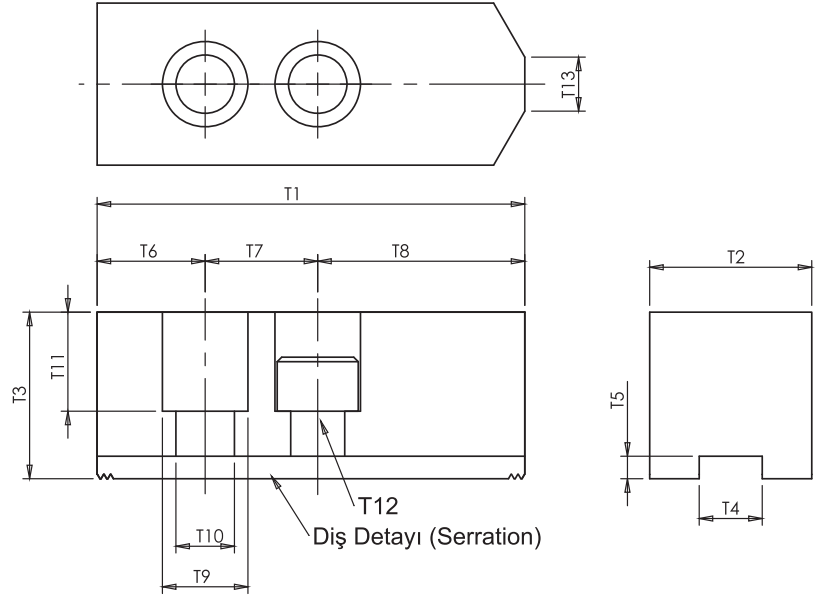
Ayna Ebadı Chucks Size	Flanş No Mount	A	B	C	D	E	F	G max	H	J	K Maxmin	L	M		N	P min
													1.5 x 60°	1/16" x 90°		
6"	A2-5	165	52.4	82.557	126	56	43	M48x1.5	123	M10x120	44/28	20	12	12	M8	17
8"	A2-6	210	66.7	106.375	140	82	66	M72x1.5	136	M12x130	46/30	27	14	17	M8	19
10"	A2-8	254	85.7	139.72	155	85.73	66.5	M72x1.5	150	M16x140	54.5/36	27	16	17	M10	19
12"	A2-11	305	117.5	196.87	172	110	90	M96x1.5	168	M20x160	51.5/33	32	18	21	M10	25

HSQC FLANŞ - AFQ / HSQC ADAPTER PLATES - AFQ


Ayna Çapı Chuck Dia.	Sipariş Kodu Order Code
6"	AFQ 06-A05
8"	AFQ 08-A06
10"	AFQ 10-A08
12"	AFQ 12-A011

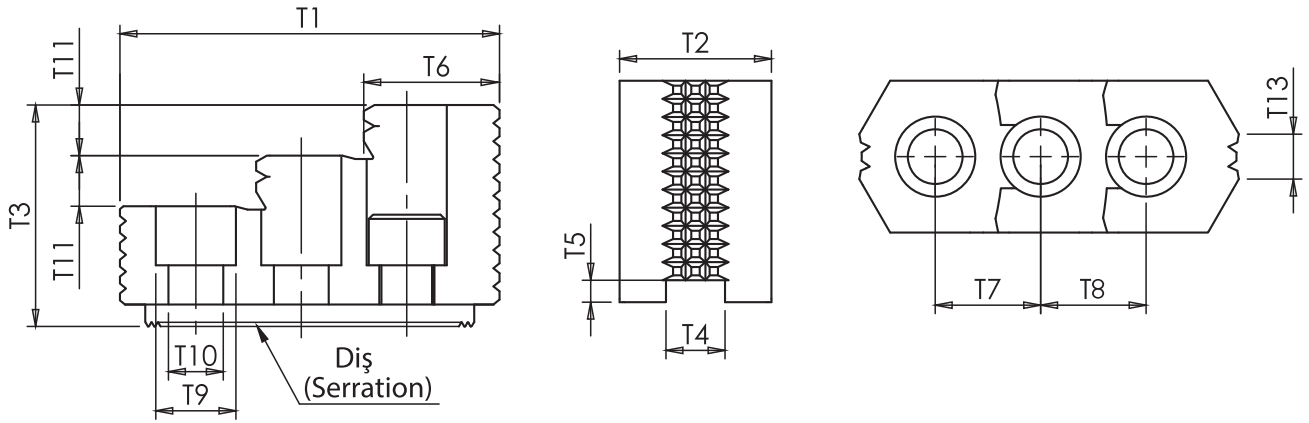
HSQC TABAN AYAK - QTB / HSQC BASE JAW - QTB


Ayna Çapı Chuck Dia.	Sipariş Kodu Order Code
6"	QTB 06
8"	QTB 08
10"	QTB 10
12"	QTB 12

HSQC YUMUŞAK AYAK - SQ / HSQC SOFT JAWS - SQ

Yumuşak Üst Ayaklar / Soft Top Jaws

Ayna Çapı Chuck Dia.	Sipariş Kodu Order Code	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	Diş Serration	3 Jaw Weight (kg)
6"	SQ-06-Q1-30	70	30	30	12	4	11	17	42	17	11	21	M10	14	1,5x60°	1,5
8"	SQ-08-Q1-35	80	35	35	14	4,5	12	19	49	19	13	22	M12	16	1,5x60°	2,4
10"	SQ-10-Q1-40	100	40	40	16	4,5	12	19	69	19	13	27	M12	18	1,5x60°	3,5
12"	SQ-12-Q1-50	120	50	50	18	5	15	25	80	23	15	35	M14	23	1,5x60°	6,3

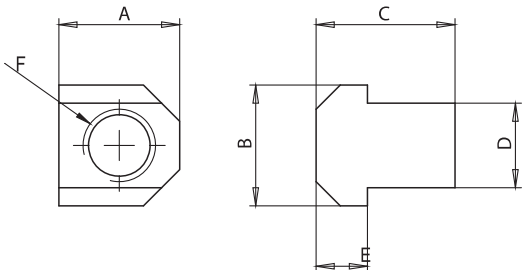
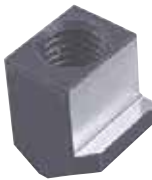
HSQC SERT ÜST AYAK - HQ / HSQC HARD TOP JAW - HQ



Sert Üst Ayaklar / Hard Top Jaws

Ayna Çapı Chuck Dia.	Sipariş Kodu Order Code	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	Diş Serration	3 Jaw Weight (kg)
6"	HQ-06-Q1-30	65	30	40	12	4	17	17	17	17	11	10	M10	11	1,5x60°	1
8"	HQ-08-Q1-35	77	40	50	14	4,5	22	19	19	19	13	11	M12	12	1,5x60°	1,8
10"	HQ-10-Q1-40	77	40	50	16	4,5	22	19	19	19	13	13	M12	15	1,5x60°	2,7
12"	HQ-12-Q1-50	105	50	60	18	5	30	25	25	23	15	15	M14	30	1,5x60°	3,4

HSQC T SOMUN - QTS / HSQC T NUT - QTS



Ölçüler / Dimensions

AYNA ÇAPI CHUCK DIA.	SİPARİŞ KODU ORDER CODE	A	B	C	D	E	F
6"	QTS 06	16,5	17,5	21	12	7,5	M10
8"	QTS 08	18,5	20,5	23,5	14	9	M12
10"	QTS 10	18,5	22	25	16	9,5	M12
12"	QTS 12	24,5	26,5	33	18	13,5	M14

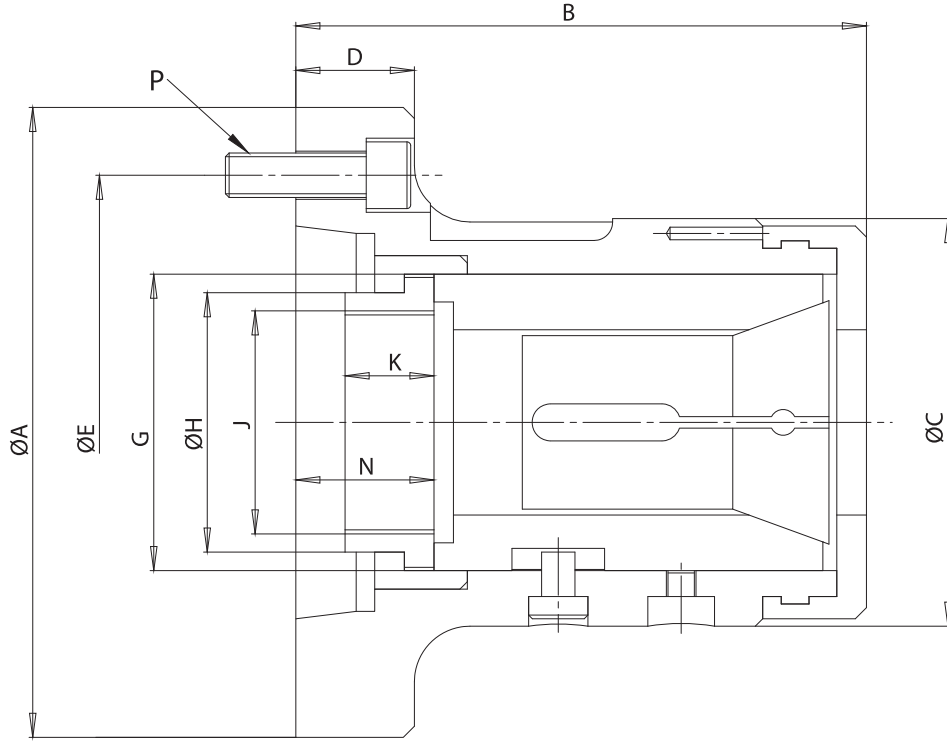


- ◆ Yüksek konsantriklik hassasiyeti ve kompakt dizayn.
- ◆ Çeşitli ölçülerdeki iş millerine uygulama yapılabilir.
- ◆ Sertleştirilmiş ve taşlanmış alaşımlı çelik dizayn.
- ◆ High concentric accuracy and compact design.
- ◆ Offered in various sizes for main spindle subspindle application.
- ◆ Hardened and ground alloy steel design.

SİPARİŞ KODU ORDER CODE	FENER MİLİ SPINDLE	ÇUBUK KAPASİTESİ BAR CAPACITY mm	PİSTON STROKU SLEEVE STROKE mm	MAKS. İTME KUVVETİ MAX. PUSH FORCE kN	MAKS. SIKMA KUVVETİ MAX. GRIPPING FORCE kN	MAKSİMUM DEVİR d/dk MAX. SPEED rpm	AĞIRLIK WEIGHT kg
KCR30A4	A2-4	30	5	20	44	7000	4,1
KCR42A5	A2-5	42	7	25	55	6000	6,2
KCR42A6	A2-6	42	7	25	55	6000	8,2
KCR60A6	A2-6	60	7	30	65	5000	13

Kullanılacak pensler / Applicable Collets
DIN 6343'e göredir / The Collets to DIN 6343





SİPARİŞ KODU ORDER CODE	A	B	C	D	E	G	H	J MAX	K	N	P
KCR30A4	112	103,5	85	30	82,55	M50x1,5	45	M40x1,5	15	21,7	3xM10
KCR42A5	135	124	100	27	104,78	M66x1,5	60	M55x2	15	27,4	4xM10
KCR42A6	170	124	100	32	133,35	M66x1,5	66	M60x2	25	27,4	4xM12
KCR60A6	170	145	130	27	133,35	M90x1,5	80	M74x2	22	30	4xM12



Notlar / Notes:

A series of horizontal dashed lines for writing notes, starting from the 'Notlar / Notes:' label and extending across the width of the page.



KOMTAŞ®



**SÜPER HASSAS ELLE KUMANDALI
TORNA AYNALARI**

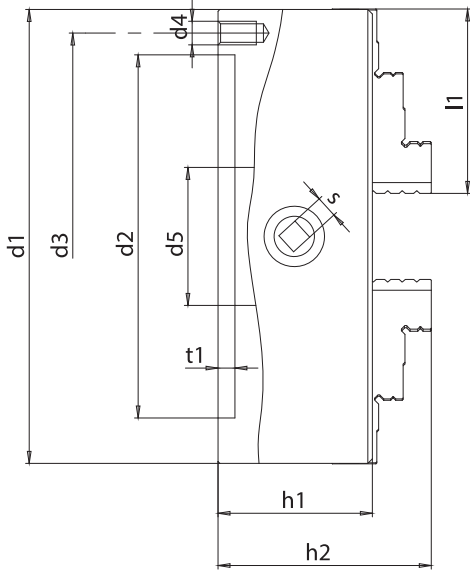
SUPER PRECISIONS MANUAL CHUCKS



3 ve 4 Ayaklı Üniversal Aynalar / 3 and 4 Jaw Manual Chucks

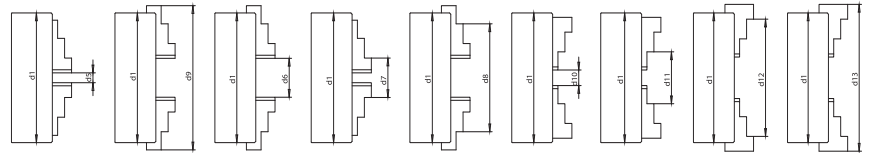


DIN 6350 Form A
Silindirik Merkezi Bağlama
Cylindrical Centre Mount



- Ölçüleri DIN 6350' ye göre dir. Devir sayısı, sıkma kuvveti, salgı ve yalpa değerleri DIN 6386' daki teslim şartlarına uygundur.
Dimensions and mounting according to DIN 6350. RpMs clamping force, precision and balance datas according to DIN 6386
 - Çelik Gövde / Steel body
 - Sertleştirilmiş, balansı alınmış yüksek yüzey kalitesinde spiral
Hardened and balanced scroll with high grade surface quality
 - Kademelendirilmiş, sertleştirilmiş ve taşlanmış ters düz ayaklar.
Stepped, hardened and ground inward and outward jaws.
 - Ayak dış yüzeylerinin her iki tarafı taşlanmıştır.
Jaw flanks ground on both sides.
- Üniversal takım tezgahlarında, divizörlerde ve döner tablalarda kullanılır.
Universal use on lathes, dividing heads and rotary tables

SIKMA ÇAPLARI / CLAMPING AREA



Ölçüler / Dimensions

d1	d5 min	d6 max	d7 min	d8 max	d9 max	d10 min	d11 min	d12 max	d13 max
100	3	33	25	87	115	3	32	93	115
125	3	42	34	112	148	3	38	120	148
160	3	68	42	154	200	3	48	160	200
200	4	90	52	194	250	4	60	200	250
250	5	110	62	240	310	5	75	250	310
315	10	145	80	299	385	10	96	315	385
400	20	200	100	380	480	20	120	400	480

Teknik Özellikler / Technical Specifications

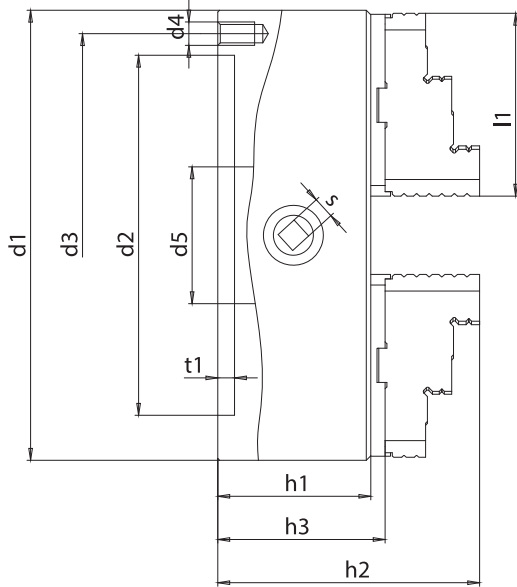
Sipariş Kodu / Order Code		d1	d2H6	d3	d4	d5	h1	h2	l1	t1	s	Ağırlık Weight kg
3 Ayak / 3 Jaws	4 Ayak / 4 Jaws											
103ZNS	104ZNS	100	70	83	3xM8	20	50	68	44.3	3	8	2.4
123ZNS	124ZNS	125	95	108	3xM8	32	56	79.5	55	4	9	4
163ZNS	164ZNS	160	125	140	3xM10	47	66	93.5	70	4	10	7.2
203ZNS	204ZNS	200	160	176	3xM10	55	75	104.8	83	4	11	12.7
253ZNS	254ZNS	250	200	224	3xM12	76	85	117.5	101.5	5	12	22.5
313ZNS	314ZNS	315	260	286	3xM16	103	95	139.4	131	5	14	40.5
403ZNS	404ZNS	400	330	362	3xM16	136	108	156.4	159	5	17	77.5

Döndürülebilir 3 ve 4 Ayaklı Aynalar / Reversible 3 and 4 Jaw Chucks

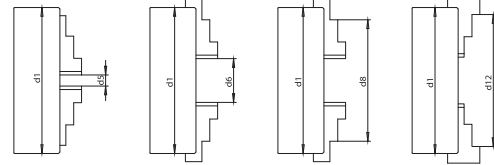


DIN 6350 Form A
Silindirik Merkezi Bağlama
Cylindrical Centre Mount

- İmalat Tezgahları için uygundur. Çünkü bu ayaklar döndürülerek hem düz ayakların hemde ters ayakların görevlerini yaparlar. Ayrıca yumuşak üst ayaklar takılarak da kullanılabilir.
Used on production machines. As reversible jaws can be exchanged for other top or special jaws.
- Çelik Gövde / Steel body
- Sertleştirilmiş, balansı alınmış yüksek yüzey kalitesinde spiral
Hardened and balanced scroll with high grade surface quality
- Kademelendirilmiş, sertleştirilmiş ve taşlanmış ters düz ayaklar.
Stepped, hardened and ground inward and outward jaws.
- Ayak dış yüzeylerinin her iki tarafı taşlanmıştır.
Jaw flanks ground on both sides.



SIKMA ÇAPLARI / CLAMPING AREA



Ölçüler / Dimensions

d1	d2 min	d3 max	d4 max	d5 min
100	3	33	92	100
125	3	42	115	125
160	4	68	154	160
200	4	90	194	200
250	5	110	240	250
315	10	145	295	315
400	20	200	375	400

Teknik Özellikler / Technical Specifications

Sipariş Kodu / Order Code		d1	d2H6	d3	d4	d5	h1	h2	h3	l1	t1	s	Ağırlık Weight kg
3 Ayak / 3 Jaws	4 Ayak / 4 Jaws												
103DNS	104DNS	100	70	83	3xM8	20	50	80.4	53.4	49	3	8	2.7
123DNS	124DNS	125	95	108	3xM8	32	56	95.4	60.9	58	4	9	4.5
163DNS	164DNS	160	125	140	3xM10	47	66	107.9	69.9	70	4	10	7.8
203DNS	204DNS	200	160	176	3xM10	55	75	121.4	81.9	83	4	11	14.2
253DNS	254DNS	250	200	224	3xM12	76	85	142.5	93	101.5	5	12	24
313DNS	314DNS	315	260	286	3xM16	103	95	155.1	100.6	131	5	14	41.9
403DNS	404DNS	400	330	362	3xM16	136	108	175.2	116.6	159	5	17	79.3

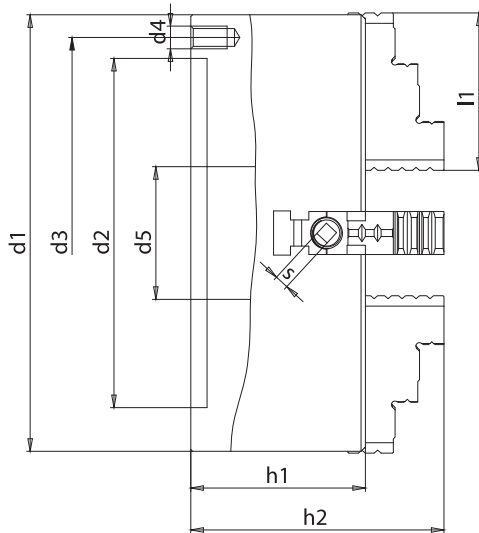


Ayarlanabilir 3 ve 4 Ayaklı Aynalar / Adjustable 3 and 4 Jaw Chucks

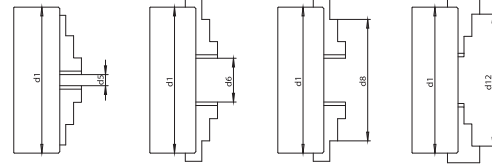


DIN 6351 Form A
Silindirik Merkezi Bağlama
 Ayaklar merkezi sıkmalı ve tek tek ayarlanabilir
 Cylindrical Centre Mount
 Self-centering and individually adjustable

- Bu sistem DIN 6350'ye göre imal edilen aynaların daha gelişmiş şeklidir. Hem döndürülebilir üst ayaklar taban ayaklarla beraber merkezi sıkma özelliğine sahiptirler. Hem de taban ayaklarda aralarında bulunan bir ayar vidasının yardımı ile birbirinden bağımsız olarak kaçık sıkma özelliğine sahiptirler.**
- Bu ayakların yardımı ile salgsız iş parçası bağlanabilir. Ölçüleri ve montaj şekli DIN 6351'e göredir.**
 Basically it's a scroll system acc. to DIN 6350, but due to an adjustable spindle between base and reversible jaws, base jaws together with reversible jaws can be centered and also adjusted independently of one another. Thus it's possible to chuck irregular but similar work-pieces
 Dimensions and mounting as per DIN 6351
- İmalat Tezgahları için uygundur. Çünkü bu ayaklar döndürülerek hem düz ayakların hemde ters ayakların görevlerini yaparlar. Ayrıca yumuşak üst ayaklar takılarak da kullanılabilir.**
 Used on production machines. As reversible jaws can be exchanged for other top or special jaws.
- Çelik Gövde / Steel body**
- Sertleştirilmiş, balansı alınmış yüksek yüzey kalitesinde spiral**
 Hardened and balanced scroll with high grade surface quality
- Kademelendirilmiş, sertleştirilmiş ve taşlanmış ters düz ayaklar.**
 Stepped, hardened and ground inward and outward jaws.



SIKMA ÇAPLARI / CLAMPING AREA



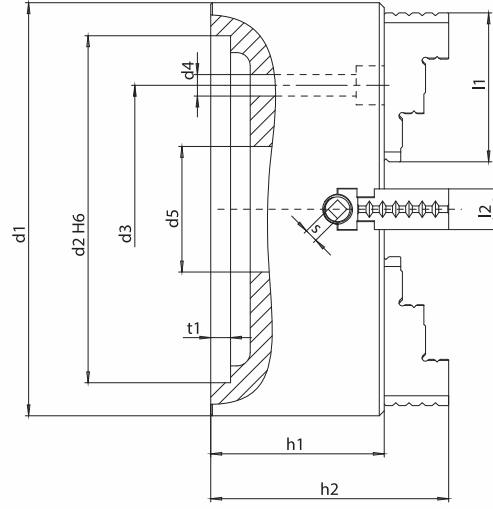
Ölçüler / Dimensions

d1	d2 min	d3 max	d4 max	d5 min
100	4	27	96	102
125	5	44	115	122
160	5	66	160	160
200	6	86	194	200
250	8	110	235	246
315	10	145	295	305
400	20	195	360	370

Teknik Özellikler / Technical Specifications

Sipariş Kodu / Order Code		d1	d2H6	d3	d4	d5	h1	h2	l1	t1	s	Ağırlık Weight kg
3 Ayak / 3 Jaws	4 Ayak / 4 Jaws											
103ANS	104ANS	100	70	83	3xM8	20	68	86	56	3	4	4.2
123ANS	124ANS	125	95	108	3xM8	32	76	100	56	4	4	5.6
163ANS	164ANS	160	125	140	3xM10	47	85	118	69	4	5	10
203ANS	204ANS	200	160	176	3xM10	55	97	130	85	4	5	18.7
253ANS	254ANS	250	200	224	3xM12	76	105	144	90	5	8	30
313ANS	314ANS	315	260	286	3xM16	103	118	164	125	5	9	52
403ANS	404ANS	400	330	362	3xM16	136	124	171	130	5	9	69

4 Ayaklı Kepenkli Aynalar / 4 Jaw Independent Chucks



- ◆ Döküm Gövde
- ◆ Kademelendirilmiş, Sertleştirilmiş ve Taşlanmış döndürülebilir üst ayaklar
- ◆ Ayaklar birbirinden bağımsız hareket eder.

- ◆ Cast iron body.
- ◆ Stepped, Hardened and Ground reversible top jaws
- ◆ Jaws individually adjustable through threaded adjusting spindle

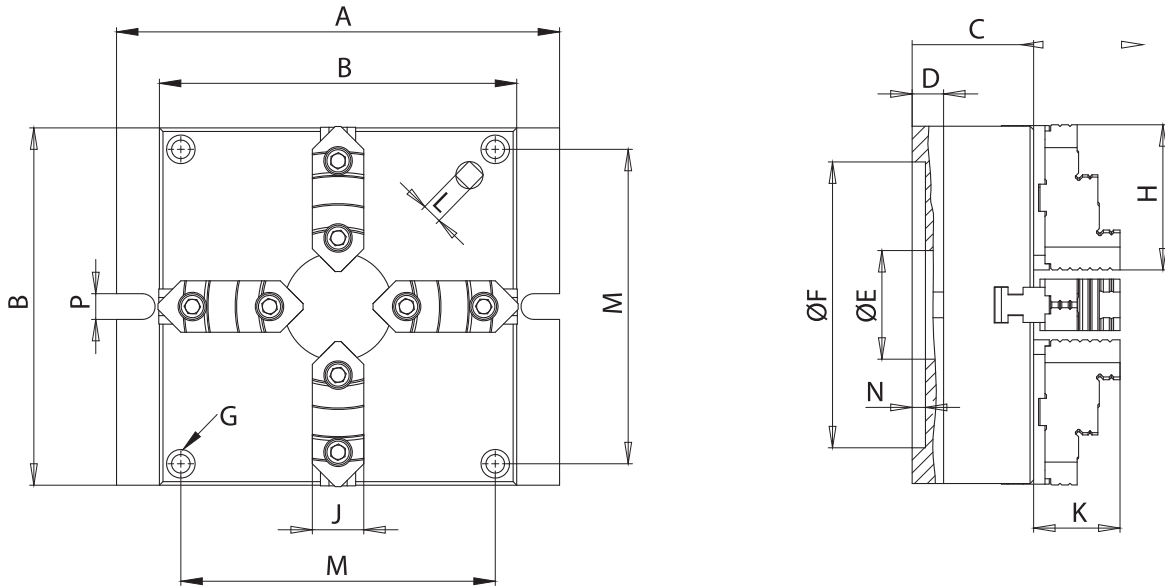
SİPARİŞ KODU ORDER CODE	d1	d2 H6	d3	d4	d5	h1	h2	l1	l2	t1	s	Ağırlık Weight kg
314KG00	310	130	105	4x13,5	75	95	129	94	35	8	10	32
404KG00	400	210	175	4x17	97	105	149	112	40	18	13	60
504KG00	500	210	175	4x17	97	105	157	136	40	18	13	91

Sıkma Çapları / Clamping Areas





d1	d2 min.	d3 max.	d4 max.	d5 max.
310	24	176	300	305
400	40	246	390	400
500	70	310	490	500



4 Ayaklı Kare Aynalar / 4 Jaw Square Chucks


- ◆ İnce dizayn kolay kullanım
 - ◆ Döndürülebilir sert ve yumuşak ayaklar
 - ◆ Özellikle işleme merkezleri için uygundur
 - ◆ Seri imalatta birden fazla ayna gövde üzerindeki kama kanalı ile tezgah tablasına bağlanabilir
 - ◆ Tezgah tablasına kolay montaj ve demontaj
- ◆ Thin design, multifunction, easy operation
 - ◆ Reversible hard and soft top jaw
 - ◆ Specially suitable for machining centers
 - ◆ For mass production several chucks can be mounted on the machine table by using key slot from chuck body
 - ◆ Easy and quick mounting and dismounting to the machine table






Ölçüler / Dimensions






Sipariş Kodu Order Code	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Sıkma Çapları Clamping Range		
															Dıştan External Max.	Dıştan External Min.	İçten Internal Min.
164DKS	215	165	57	18	47	125	M10	70	28	42	12	144	5	16	128	4	52
204DKS	250	200	65	20	55	160	M12	83	30	47	12	174	5	16	163	5	56
254DKS	310	250	72	22	76	200	M12	101,5	36	57	14	220	6	18	205	5	72
314DKS	380	310	85	25	103	260	M16	131	42	60	14	274	6	22	265	10	92





	ZNS Ayna Yedek Parçaları / Spare Parts For ZNS Chucks					
						
Ayna Çapı Chuck Dia. (mm)	Sipariş Kodu Order Code		Sipariş Kodu Order Code		Sipariş Kodu Order Code	
	3 Ayak / 3 Jaw	4 Ayak / 4 Jaw	3 Ayak / 3 Jaw	4 Ayak / 4 Jaw	3 Ayak / 3 Jaw	4 Ayak / 4 Jaw
100	103NDA	104NDA	103NTA	104NTA	103NYA	104NYA
125	123NDA	124NDA	123NTA	124NTA	123NYA	124NYA
160	163NDA	164NDA	163NTA	164NTA	163NYA	164NYA
200	203NDA	204NDA	203NTA	204NTA	203NYA	204NYA
250	253NDA	254NDA	253NTA	254NTA	253NYA	254NYA
315	313NDA	314NDA	313NTA	314NTA	313NYA	314NYA
400	403NDA	404NDA	403NTA	404NTA	403NYA	404NYA








	ZNS Ayna Yedek Parçaları / Spare Parts For ZNS Chucks			
				
Ayna Çapı Chuck Dia. (mm)	Sipariş Kodu Order Code	Sipariş Kodu Order Code	Sipariş Kodu Order Code	Sipariş Kodu Order Code
	3 Ayak / 3 Jaw	4 Ayak / 4 Jaw	3 Ayak / 3 Jaw	4 Ayak / 4 Jaw
100	10NA	10NS	10NVP	10NP
125	12NA	12NS	12NVP	12NP
160	16NA	16NS	16NVP	16NP
200	20NA	20NS	20NVP	20NP
250	25NA	25NS	25NVP	25NP
315	31NA	31NS	31NVP	31NP
400	40NA	40NS	40NVP	40NP








 Ayna Çapı Chuck Dia. (mm)	DNS Ayna Yedek Parçaları / Spare Parts For DNS Chucks					
	 DNTA Taban Ayak / Master Jaw		 DNUA Üst Ayak / Top Jaw		 DNYA Yumuşak Ayak / Soft Jaw	
	Sipariş Kodu Order Code		Sipariş Kodu Order Code		Sipariş Kodu Order Code	
	3 Ayak / 3 Jaw	4 Ayak / 4 Jaw	3 Ayak / 3 Jaw	4 Ayak / 4 Jaw	3 Ayak / 3 Jaw	4 Ayak / 4 Jaw
100	103DNTA	104DNTA	103DNUA	104DNUA	103DNYA	104DNYA
125	123DNTA	124DNTA	123DNUA	124DNUA	123DNYA	124DNYA
160	163DNTA	164DNTA	163DNUA	164DNUA	163DNYA	164DNYA
200	203DNTA	204DNTA	203DNUA	204DNUA	203DNYA	204DNYA
250	253DNTA	254DNTA	253DNUA	254DNUA	253DNYA	254DNYA
315	313DNTA	314DNTA	313DNUA	314DNUA	313DNYA	314DNYA
400	403DNTA	404DNTA	403DNUA	404DNUA	403DNYA	404DNYA





 Ayna Çapı Chuck Dia. (mm)	DNS Ayna Yedek Parçaları / Spare Parts For DNS Chucks			
	 NA Anahtar / Wrench	 NS Spiral / Scroll	 NVP Pinyon Pimi / Pinion Pin	 NP Pinyon / Pinion
	Sipariş Kodu Order Code	Sipariş Kodu Order Code	Sipariş Kodu Order Code	Sipariş Kodu Order Code
100	10NA	10NS	10NVP	10NP
125	12NA	12NS	12NVP	12NP
160	16NA	16NS	16NVP	16NP
200	20NA	20NS	20NVP	20NP
250	25NA	25NS	25NVP	25NP
315	31NA	31NS	31NVP	31NP
400	40NA	40NS	40NVP	40NP





	ANS Ayna Yedek Parçaları / Spare Parts For ANS Chucks					
	 ANTA Taban Ayak / Master Jaw	 ANUA Üst Ayak / Top Jaw	 ANYA Yumuşak Ayak / Soft Jaw			
Ayna Çapı Chuck Dia. (mm)	Sipariş Kodu Order Code		Sipariş Kodu Order Code		Sipariş Kodu Order Code	
	3 Ayak / 3 Jaw	4 Ayak / 4 Jaw	3 Ayak / 3 Jaw	4 Ayak / 4 Jaw	3 Ayak / 3 Jaw	4 Ayak / 4 Jaw
100	103ANTA	104ANTA	103ANUA	104ANUA	103ANYA	104ANYA
125	123ANTA	124ANTA	123ANUA	124ANUA	123ANYA	124ANYA
160	163ANTA	164ANTA	163ANUA	164ANUA	163ANYA	164ANYA
200	203ANTA	204ANTA	203ANUA	204ANUA	203ANYA	204ANYA
250	253ANTA	254ANTA	253ANUA	254ANUA	253ANYA	254ANYA
315	313ANTA	314ANTA	313ANUA	314ANUA	313ANYA	314ANYA
400	403ANTA	404ANTA	403ANUA	404ANUA	403ANYA	404ANYA

	ANS Ayna Yedek Parçaları / Spare Parts For ANS Chucks					
	 NS Spiral / Scroll	 NAV Vidalı Mil Spindle	 NAA Ayar Anahtarı Adjusting Wrench	 NVP Pinyon Pimi Pinion Pin	 NP Pinyon / Pinion	 NA Anahtar / Wrench
Ayna Çapı Chuck Dia. (mm)	Sipariş Kodu Order Code	Sipariş Kodu Order Code	Sipariş Kodu Order Code	Sipariş Kodu Order Code	Sipariş Kodu Order Code	Sipariş Kodu Order Code
	100	10NS	10NAV	10NAA	10NVP	10NP
125	12NS	12NAV	12NAA	12NVP	12NP	12NA
160	16NS	16NAV	16NAA	16NVP	16NP	16NA
200	20NS	20NAV	20NAA	20NVP	20NP	20NA
250	25NS	25NAV	25NAA	25NVP	25NP	25NA
315	31NS	31NAV	31NAA	31NVP	31NP	31NA
400	40NS	40NAV	40NAA	40NVP	40NP	40NA

	KG Kepekli Ayna Yedek Parçaları / KG Independent Chuck Spare Parts			
	 KA Üst Ayak / Top Jaw	 KV Vidalı Mil / Screwed Spindle	 KP Çatal Pim / Pin	 KAA Ayar Anahtarı / Adjusting Wrench
Ayna Çapı Chuck Dia. (mm)	Sipariş Kodu Order Code	Sipariş Kodu Order Code	Sipariş Kodu Order Code	Sipariş Kodu Order Code
	310	31KA	31KV	31KP
400	40KA	40KV	40KP	40KAA
500	50KA	50KV	50KP	50KAA

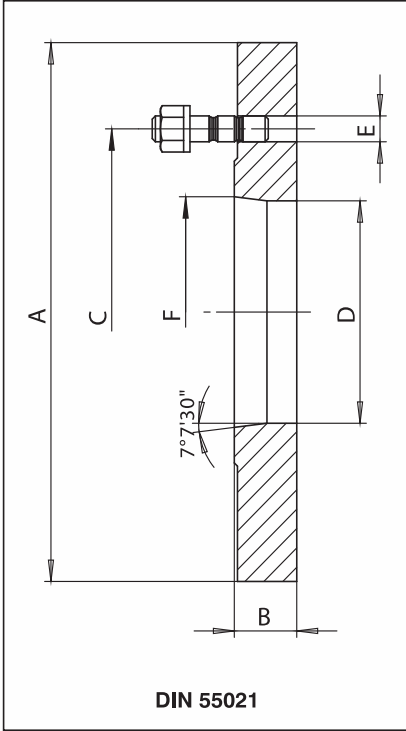


DKS Kare Ayna Yedek Parçaları / Spare Parts For DKS Square Chucks			
	 <p>DKTA Taban Ayak / Master Jaw</p>	 <p>DKUA Üst Ayak / Top Jaw</p>	 <p>DKYA Yumuşak Ayak / Soft Jaw</p>
	Ayna Boyutu Chuck Size (mm)	Sipariş Kodu Order Code	Sipariş Kodu Order Code
160	164DKTA	164DKUA	164DKYA
200	204DKTA	204DKUA	204DKYA
250	254DKTA	254DKUA	254DKYA
310	314DKTA	314DKUA	314DKYA

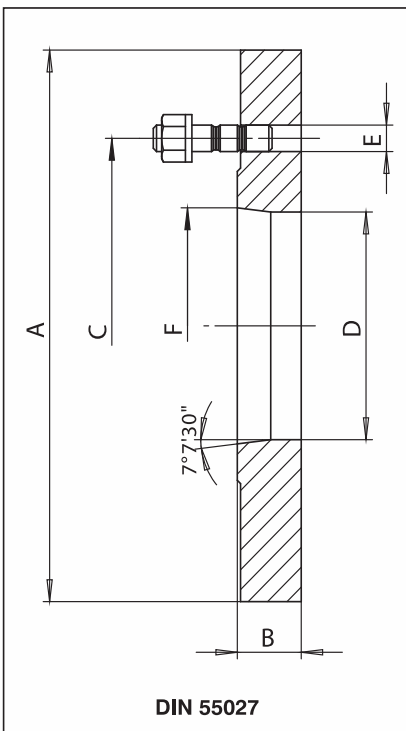
DKS Kare Ayna Yedek Parçaları / Spare Parts For DKS Square Chucks			
	 <p>DKA Anahtar / Wrench</p>	 <p>DKNS Spiral / Scroll</p>	 <p>DKP Pinyon / Pinion</p>
	Ayna Boyutu Chuck Size (mm)	Sipariş Kodu Order Code	Sipariş Kodu Order Code
160	164DKA	164DKNS	164DKP
200	204DKA	204DKNS	204DKP
250	254DKA	254DKNS	254DKP
310	314DKA	314DKNS	314DKP



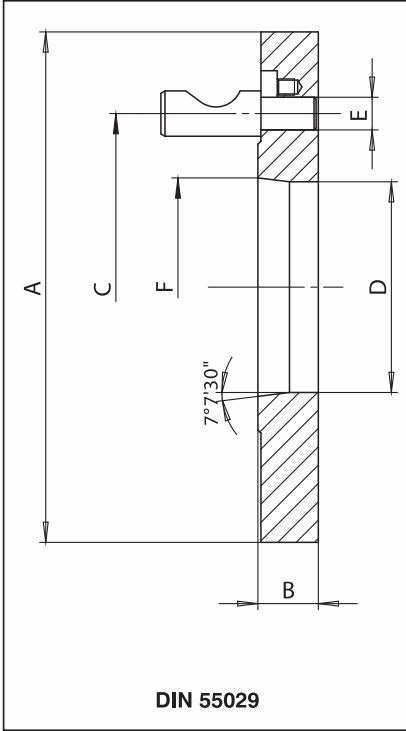
Flanşlar / Adaptor Plates (DIN 55021 - 55027)



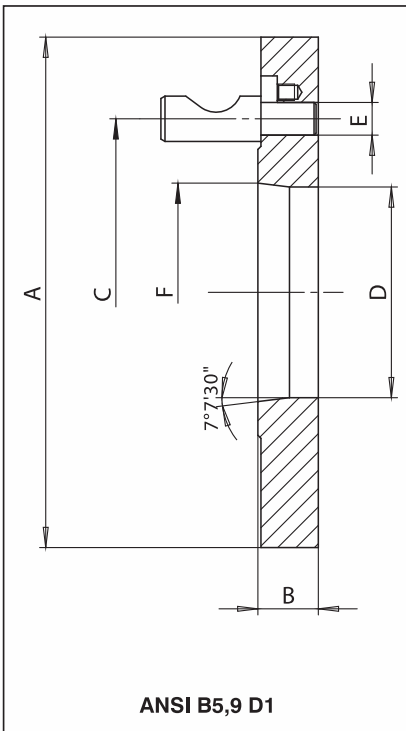
Ayna Çapı Chuck Dia. (mm)	Sipariş Kodu Order Code Flanş Flange	Sipariş Kodu Order Code Saplama Bolt	Flanş No. Flange No.	Ölçüler / Dimensions						Saplama Adedi Bolt Pcs.
				A	B	C	D	E	F	
100	10F13	FS13	3	100	18	75	51,5	M10	53,975	3
	12F13	FS13	3	125	20	75	51,5	M10	53,975	3
125	12F14	FS14	4	125	20	85	61	M10	63,513	3
	16F13	FS13	3	160	20	75	51,5	M10	53,975	3
	16F14	FS14	4	160	25	85	61	M10	63,513	3
	16F15	FS15	5	160	25	104,8	79,6	M10	82,563	4
160	16F16	FS16	6	160	25	133,4	103,2	M12	106,375	4
	20F14	FS14	4	200	25	85	61	M10	63,513	3
	20F15	FS15	5	200	25	104,8	79,6	M10	82,563	4
200	20F16	FS16	6	200	25	133,4	103,2	M12	106,375	4
	25F15	FS15	5	250	30	104,8	79,6	M10	82,563	4
	25F16	FS16	6	250	30	133,4	103,2	M12	106,375	4
250	25F18	FS18	8	250	30	171,4	136,2	M16	139,72	4
	31F15	FS15	5	315	35	104,8	79,6	M10	82,563	4
	31F16	FS16	6	315	35	133,4	103,2	M12	106,375	4
315	31F18	FS18	8	315	35	171,4	136,2	M16	139,72	4
	31F11	FS11	11	315	35	235	192,9	M20	196,869	6
	40F16	FS16	6	400	36	133,4	103,2	M12	106,375	4
400	40F18	FS18	8	400	36	171,4	136,2	M16	139,72	4
	40F11	FS11	11	400	36	235	192,9	M20	196,869	6



Ayna Çapı Chuck Dia. (mm)	Sipariş Kodu Order Code Flanş Flange	Sipariş Kodu Order Code Saplama Bolt	Flanş No. Flange No.	Ölçüler / Dimensions						Saplama Adedi Bolt Pcs.
				A	B	C	D	E	F	
100	10F73	FS73	3	100	18	75	51,5	M10	53,975	3
	12F73	FS73	3	125	20	75	51,5	M10	53,975	3
125	12F74	FS74	4	125	20	85	61	M10	63,513	3
	16F73	FS73	3	160	20	75	51,5	M10	53,975	3
	16F74	FS74	4	160	25	85	61	M10	63,513	3
	16F75	FS75	5	160	25	104,8	79,6	M10	82,563	4
160	16F76	FS76	6	160	25	133,4	103,2	M12	106,375	4
	20F74	FS74	4	200	25	85	61	M10	63,513	3
	20F75	FS75	5	200	25	104,8	79,6	M10	82,563	4
200	20F76	FS76	6	200	25	133,4	103,2	M12	106,375	4
	25F75	FS75	5	250	30	104,8	79,6	M10	82,563	4
	25F76	FS76	6	250	30	133,4	103,2	M12	106,375	4
250	25F78	FS78	8	250	30	171,4	136,2	M16	139,72	4
	31F75	FS75	5	315	35	104,8	79,6	M10	82,563	4
	31F76	FS76	6	315	35	133,4	103,2	M12	106,375	4
315	31F78	FS78	8	315	35	171,4	136,2	M16	139,72	4
	31F71	FS71	11	315	35	235	192,9	M20	196,869	6
	40F76	FS76	6	400	36	133,4	103,2	M12	106,375	4
400	40F78	FS78	8	400	36	171,4	136,2	M16	139,72	4
	40F71	FS71	11	400	36	235	192,9	M20	196,869	6


Flanşlar / Adaptor Plates (DIN 55029 - ANSI B5,9 D1)


Ayna Çapı Chuck Dia. (mm)	Sipariş Kodu Order Code Flanş Flange	Sipariş Kodu Order Code Saplama Bolt	Flanş No. Flange No.	Ölçüler / Dimensions						Saplama Adedi Bolt Pcs.
				A	B	C	D	E	F	
100	10F93	FS93	3	100	25	70,66	51,5	M10x1	53,975	3
	12F93	FS93	3	125	25	70,66	51,5	M10x1	53,975	3
125	12F94	FS94	4	125	25	82,55	61	M10x1	63,513	3
	16F93	FS93	3	160	25	70,66	51,5	M10x1	53,975	3
160	16F94	FS94	4	160	25	82,55	61	M10x1	63,513	3
	16F95	FS95	5	160	28	104,8	79,6	M12x1	82,563	6
	16F96	FS96	6	160	33	133,4	103,2	M16x1,5	106,375	6
	20F94	FS94	4	200	25	82,55	61	M10x1	63,513	3
200	20F95	FS95	5	200	28	104,8	79,6	M12x1	82,563	6
	20F96	FS96	6	200	33	133,4	103,2	M16x1,5	106,375	6
	25F95	FS95	5	250	30	104,8	79,6	M12x1	82,563	6
250	25F96	FS96	6	250	33	133,4	103,2	M16x1,5	106,375	6
	25F98	FS98	8	250	38	171,4	136,2	M20x1,5	139,72	6
	31F95	FS95	5	315	35	104,8	79,6	M12x1	82,563	6
315	31F96	FS96	6	315	35	133,4	103,2	M16x1,5	106,375	6
	31F98	FS98	8	315	38	171,4	136,2	M20x1,5	139,72	6
	31F91	FS91	11	315	45	235	192,9	M22x1,5	196,869	6
400	40F96	FS96	6	400	40	133,4	103,2	M16x1,5	106,375	6
	40F98	FS98	8	400	40	170,4	136,2	M20x1,5	139,72	6
	40F91	FS91	11	400	45	235	192,9	M22x1,5	196,869	6



Ayna Çapı Chuck Dia. (mm)	Sipariş Kodu Order Code Flanş Flange	Sipariş Kodu Order Code Saplama Bolt	Flanş No. Flange No.	Ölçüler / Dimensions						Saplama Adedi Bolt Pcs.
				A	B	C	D	E	F	
100	10FD3	FSD3	3	100	25	70,66	51,5	7/16" UNF	53,975	3
	12FD3	FSD3	3	125	25	70,66	51,5	7/16" UNF	53,975	3
125	12FD4	FSD4	4	125	25	82,55	61	7/16" UNF	63,513	3
	16FD3	FSD3	3	160	25	70,66	51,5	7/16" UNF	53,975	3
160	16FD4	FSD4	4	160	25	82,55	61	7/16" UNF	63,513	3
	16FD5	FSD5	5	160	28	104,8	79,6	1/2" UNF	82,563	6
	16FD6	FSD6	6	160	33	133,4	103,2	5/8" UNF	106,375	6
	20FD4	FSD4	4	200	25	82,55	61	7/16" UNF	63,513	3
200	20FD5	FSD5	5	200	28	104,8	79,6	1/2" UNF	82,563	6
	20FD6	FSD6	6	200	33	133,4	103,2	5/8" UNF	106,375	6
	25FD5	FSD5	5	250	30	104,8	79,6	1/2" UNF	82,563	6
250	25FD6	FSD6	6	250	33	133,4	103,2	5/8" UNF	106,375	6
	25FD8	FSD8	8	250	38	171,4	136,2	3/4" UNF	139,72	6
	31FD5	FSD5	5	315	35	104,8	79,6	1/2" UNF	82,563	6
315	31FD6	FSD6	6	315	35	133,4	103,2	5/8" UNF	106,375	6
	31FD8	FSD8	8	315	38	171,4	136,2	3/4" UNF	139,72	6
	31FD1	FSD1	11	315	45	235	192,9	7/8" UNF	196,869	6
400	40FD6	FSD6	6	400	40	133,4	103,2	5/8" UNF	106,375	6
	40FD8	FSD8	8	400	40	170,4	136,2	3/4" UNF	139,72	6
	40FD1	FSD1	11	400	45	235	192,9	7/8" UNF	196,869	6



Notlar / Notes:

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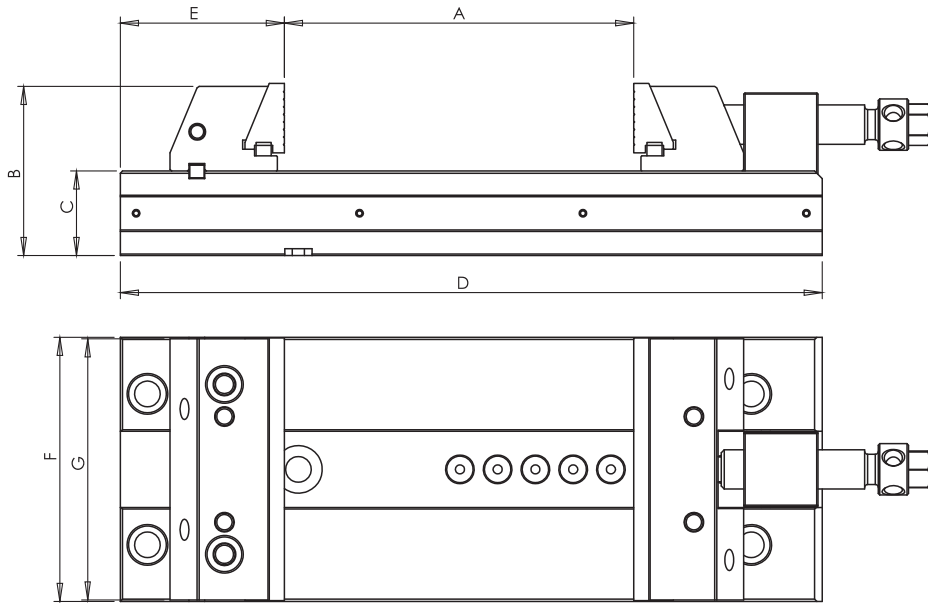
KOMTAS®



SÜPER HASSAS TEZGAH MENGENELERİ
SUPER PRECISION MACHINE VICES




- Sertleştirilmiş ve hassas taşlanmış Çelik Gövde
- Hızlı strok ayarı
- Seri imalat ve kalıp için ideal çözüm
- Yüksek yüzey kalitesinde çene ve papuçlar
- Hardened and ground steel body
- Quick stroke adjusting
- Suitable for mass production
- High surface quality clamping jaws

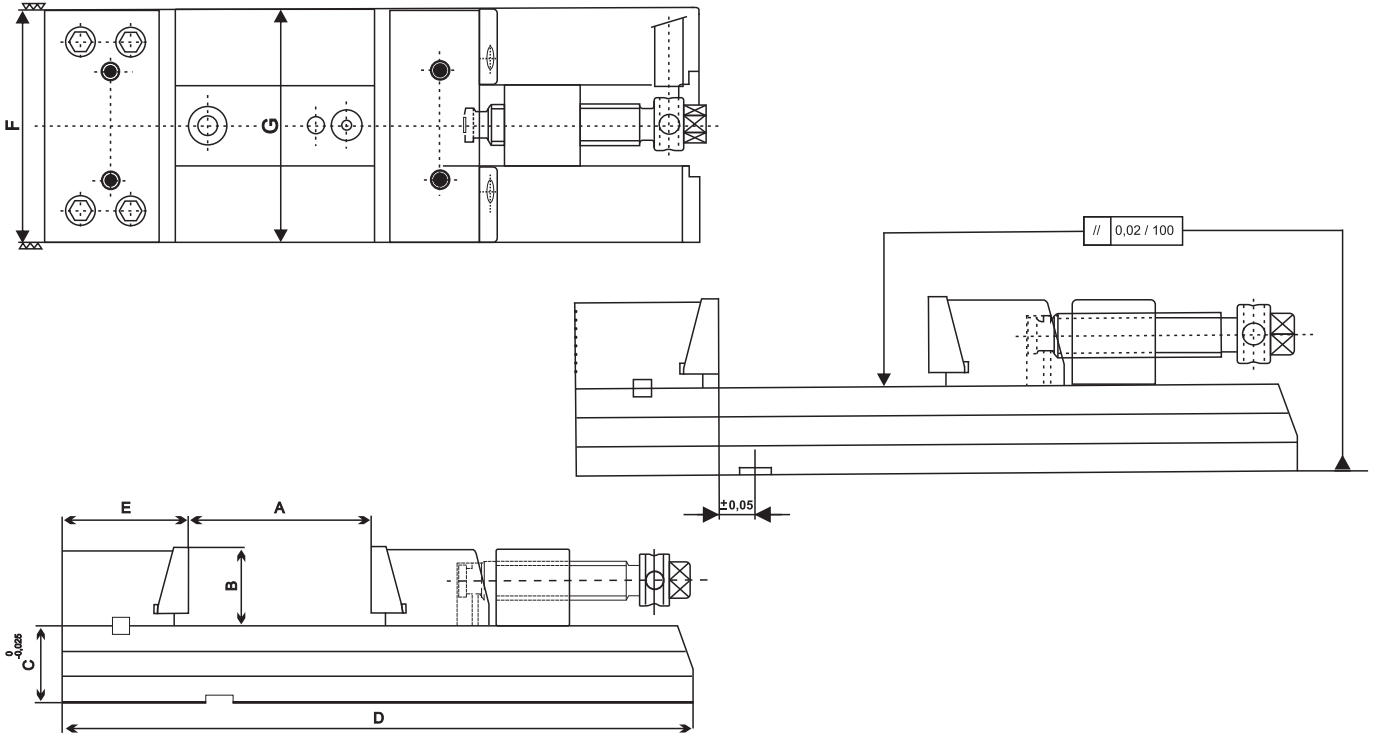



Sipariş Kodu Order Code	A	B	C	D	E	F	G	Ağırlık Weight kg
MVQ125	130	82	42	323	89	125	124	14,5
MVQ150	200	107	51	423	99	150	149	28
MVQ175	250	114	56	453	109	175	173	36
MVQ200	300	127	61	483	117	200	198	48
MVQ250	400	138	66	583	117	250	248	74

MVN MENGENE / MVN MACHINE VICE



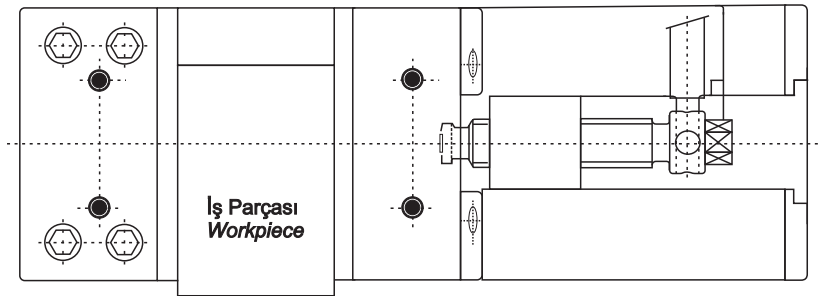
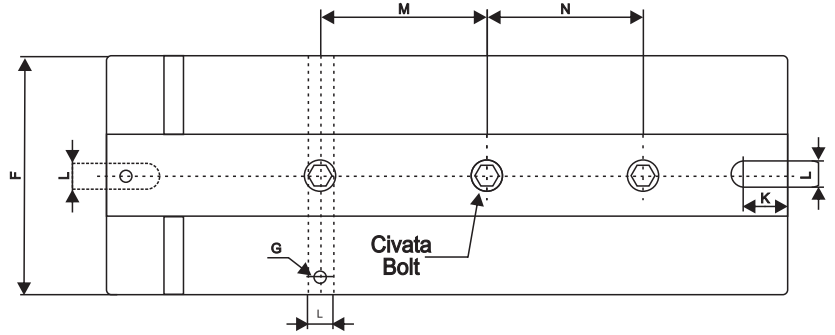
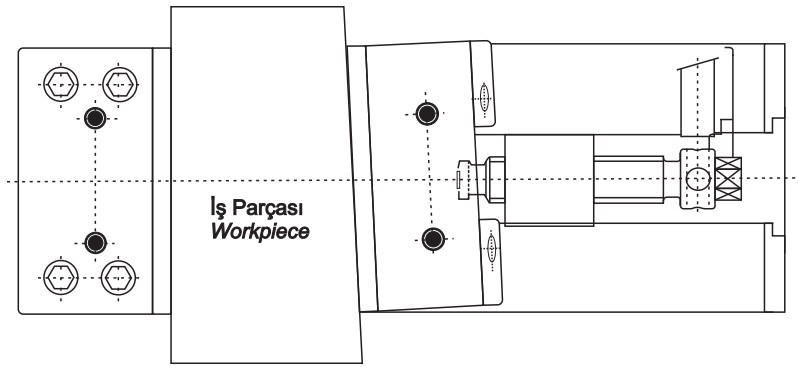
- Sementasyonla sertleştirilmiş çelik gövde ve çeneler
- Hareketli yüzeylerin tamamı hassas taşlanmıştır.
- Gövdeler arası düzlemsellik farkı max 0,025 mm'dir.
- 0.02 mm'nin altında paralellik toleransı
- Mekanik ve hidrolik sıkma üniteleri birbiri ile değiştirilebilir.
- Sabit çene iki yönlü kullanılabilir
- Hareketli çenenin gövde üzerinde boşluklu yada boşluksuz çalışması ayarlanabilir
- Case hardened steel body and jaws.
- Sliding surfaces are precisely ground.
- Flatness of the guide ways are less than 0,025 mm
- Parallelism is less than 0,02 mm
- Interchangeable mechanical and hydraulic clamping units
- Quick stroke adjusting.
- Both surfaces on the fix jaws can be used.
- The sliding jaw has a tilting effect which allows clamping asymmetrical parts. Or it can be fixed.



Süper Hassas TezgaH Mengenesi - Super Precision Machine Vice

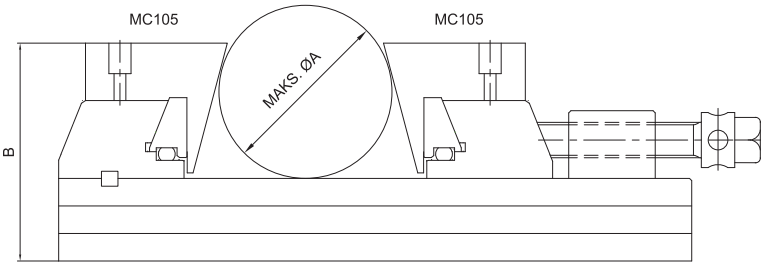
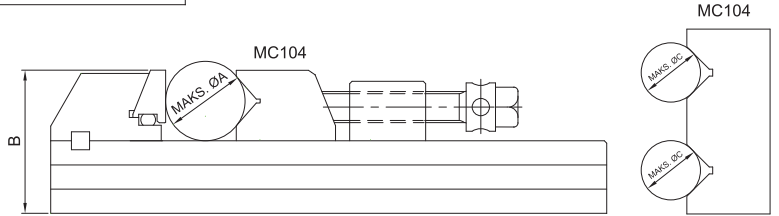
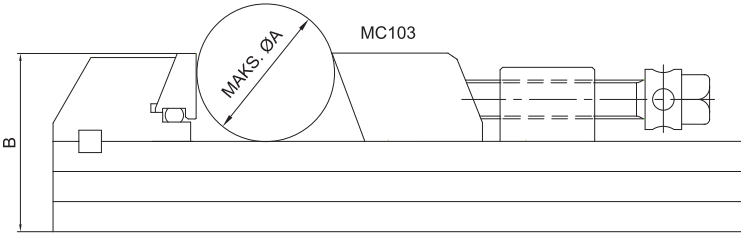
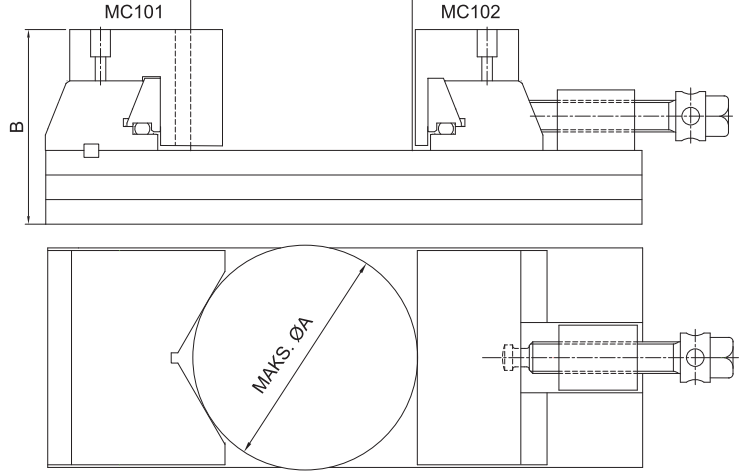
Sipariş Kodu Order Code	A	B	C	D	E	F	G	Ağırlık Weight (kg)
MVN125	0-130	40	42	323	73	125	124	14,5
MVN150	0-200	52	51	423	84	150	149	28
MVN175	0-225	58	58	470	93	175	174	38
MVN200	0-250	66	66	520	105	200	199	51
MVN250	0-330	74	74	600	110	250	249	78

- Küplere, açılı pleytlere ve tezgah tablalarına kolay adaptasyon.
- Modüler sistemlere uyumlu mengenerler
- Easy adaptation to the cubes, angle plates and machine tool tables.
- Suitable for modular systems.



Süper Hassas Tezgah Mengenerleri - Super Precision Machine Vices

Sipariş Kodu Order Code	F	G	K	L	M	N	Civata Bolt
MVN125	125	M5	30	12	100	100	M12
MVN150	150	M6	30	18	120	120	M12
MVN175	175	M6	30	18	100	150	M12
MVN200	200	M6	30	20	150	150	M16
MVN250	250	M6	30	20	150	150	M16



Ölçüler / Dimensions

SİPARİŞ KODU ORDER CODE	ÖLÇÜLER DIMS.	MVQ125	MVQ150	MVQ175	MVQ200	MVQ250
MC101/MC102	B	80	108	120	135	150
	MAKS. ØC	110	165	190	220	270
MC103	B	40	56	58	66	72
	MAKS. ØC	65	90	96	110	124
MC104	B	40	56	58	66	72
	MAKS. ØA	35	45	50	55	60
	MAKS. ØC	20	30	35	40	60
MC105	B	80	108	120	135	150
	MAKS. ØC	100	130	160	180	200



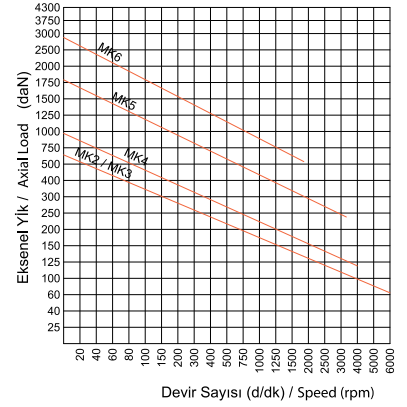
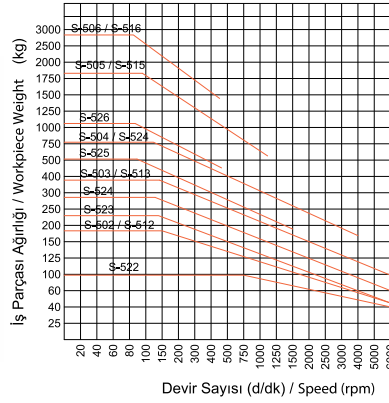
Notlar / Notes:

A series of horizontal dashed lines for writing notes, starting from the text 'Notlar / Notes:' and extending across the width of the page.

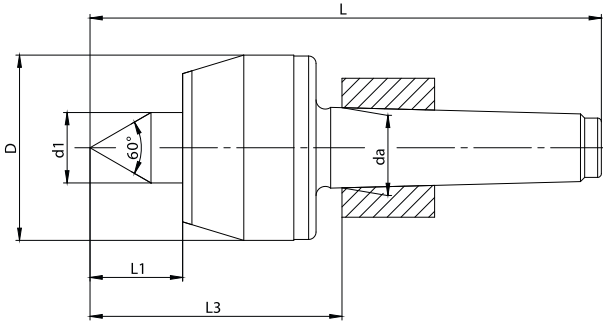


SÜPER HASSAS PUNTALAR
SUPER PRECISION LIVE CENTERS

200 SERİSİ SUPER HASSAS DÖNER PUNTALAR / 200 SERIES SUPER PRECISION LIVE CENTERS

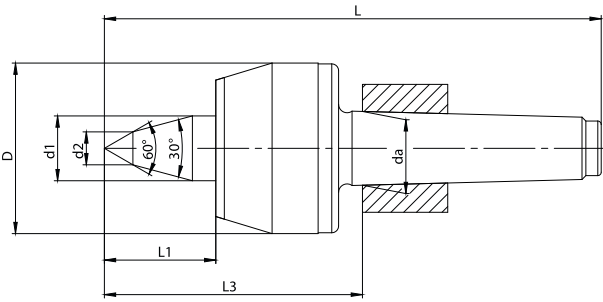


Ölçüler / Dimensions

202

MODEL 202

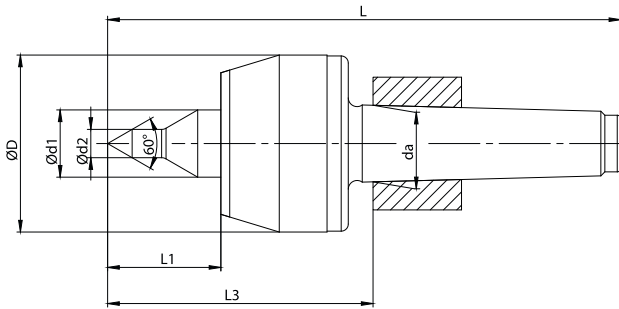
MORS KONIĞI (MK) MORSE TAPER (MT)	2	3	4	5	6
D	45	58	68	88	105
d1	20	25	32	40	50
L	130	164	205	259	334
L1	24	30,5	41	50,5	57,5
L3	65	82	102,5	129	152
da	17,78	23,825	31,267	44,399	63,348
Salgı değeri / Run out (Max. mm)	0,005	0,005	0,005	0,005	0,01
Ağırlık / Weight - kg	0,5	0,8	1,95	4,45	9,1
Sipariş kodu / Order code	MK2-202	MK3-202	MK4-202	MK5-202	MK6-202

Ölçüler / Dimensions

203

MODEL 203

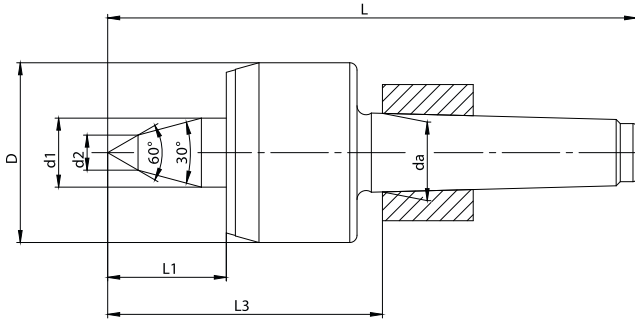
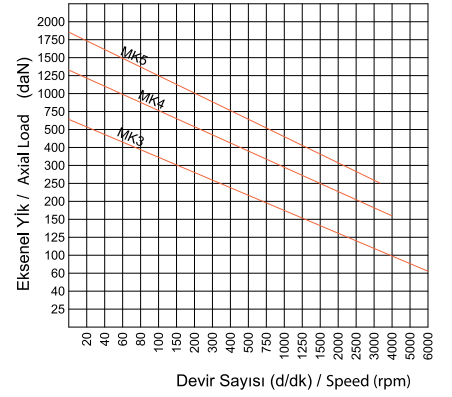
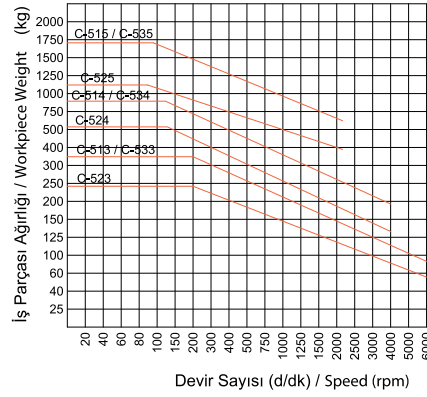
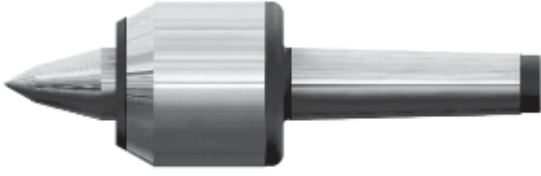
MORS KONIĞI (MK) MORSE TAPER (MT)	2	3	4	5	6
D	45	58	68	88	105
d1	20	25	32	40	50
d2	10	12	14	16	18
L	139,5	179,5	217,5	273	354,5
L1	34	47	53	65	78
L3	75	98,5	114,5	143,5	172,5
da	17,78	23,825	31,267	44,399	63,348
Salgı değeri / Run out (Max. mm)	0,005	0,005	0,005	0,005	0,01
Ağırlık / Weight - kg	0,5	0,8	1,95	4,45	9,1
Sipariş kodu / Order code	MK2-203	MK3-203	MK4-203	MK5-203	MK6-203

Ölçüler / Dimensions

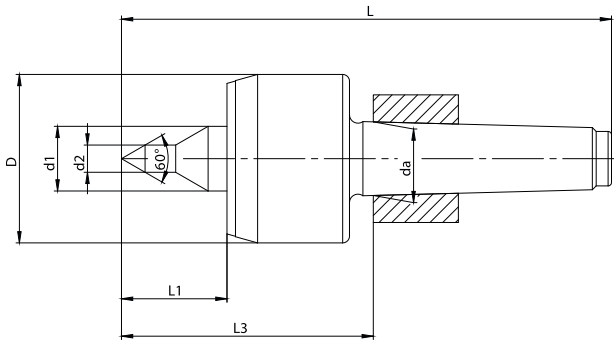
204

MODEL 204

MORS KONIĞI (MK) MORSE TAPER (MT)	2	3	4	5	6
D	45	58	68	88	105
d1	20	25	32	40	50
d2	8	10	12	14	16
L	139,5	179,5	217,5	273	354,5
L1	34,5	47,5	53,5	65	78
L3	75,5	99	115	143,5	172,5
da	17,78	23,825	31,267	44,399	63,348
Salgı değeri / Run out (Max. mm)	0,005	0,005	0,005	0,005	0,01
Ağırlık / Weight - kg	0,5	0,8	1,95	4,45	9,1
Sipariş kodu / Order code	MK2-204	MK3-204	MK4-204	MK5-204	MK6-204

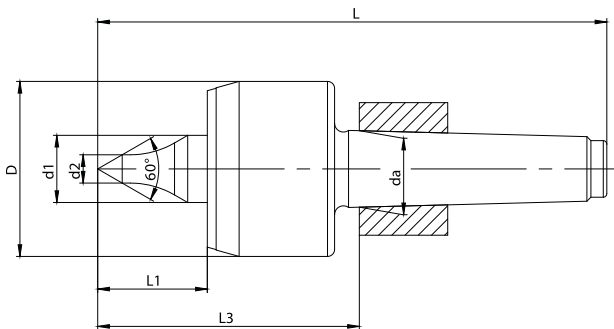
210 SERİSİ SUPER HASSAS DÖNER PUNTALAR / 210 SERIES SUPER PRECISION LIVE CENTERS



MODEL 212



MODEL 213



MODEL 214

Ölçüler / Dimensions

212

MORS KONIĞI (MK) MORSE TAPER (MT)	3	4	5	6
D	58	70	95	120
d1	25	32	32	45
d2	12	16	20	26
L	189	224	279,5	362
L1	41	44	59	77
L3	108	122	150	180
da	23,825	31,267	44,399	63,348
Salgı değeri / Run out (Max. mm)	0,005	0,005	0,005	0,01
Ağırlık / Weight - kg	1,35	2,55	5,1	10,5
Sipariş kodu / Order code	MK3-212	MK4-212	MK5-212	MK6-212

Ölçüler / Dimensions

213

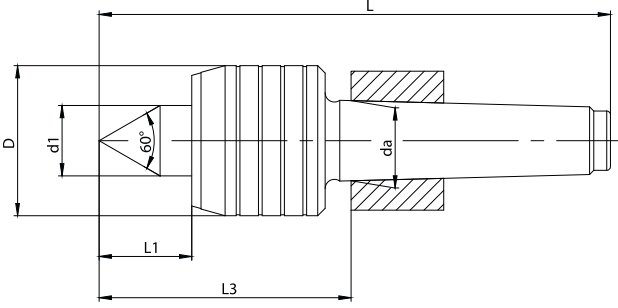
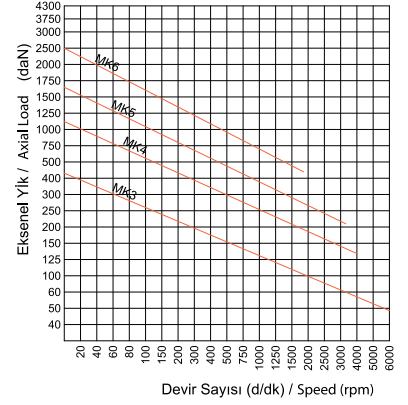
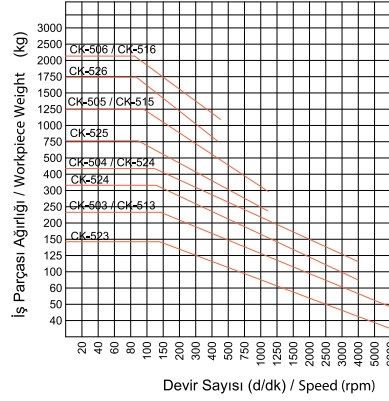
MORS KONIĞI (MK) MORSE TAPER (MT)	3	4	5	6
D	58	70	95	120
d1	25	32	32	45
d2	10	14	16	18
L	189	224	279,5	362
L1	41	44	59	77
L3	108	122	150	180
da	23,825	31,267	44,399	63,348
Salgı değeri / Run out (Max. mm)	0,005	0,005	0,005	0,01
Ağırlık / Weight - kg	1,35	2,55	5,1	10,5
Sipariş kodu / Order code	MK3-213	MK4-213	MK5-213	MK6-213

Ölçüler / Dimensions

214

MORS KONIĞI (MK) MORSE TAPER (MT)	3	4	5	6
D	58	70	95	120
d1	25	32	32	45
d2	10	14	16	18
L	189	224	279,5	362
L1	41	44	59	77
L3	108	122	150	180
da	23,825	31,267	44,399	63,348
Salgı değeri / Run out (Max. mm)	0,005	0,005	0,005	0,01
Ağırlık / Weight - kg	1,35	2,55	5,1	10,5
Sipariş kodu / Order code	MK3-214	MK4-214	MK5-214	MK6-214

220 SERİSİ SUPER HASSAS DÖNER PUNTALAR / 220 SERIES SUPER PRECISION LIVE CENTERS

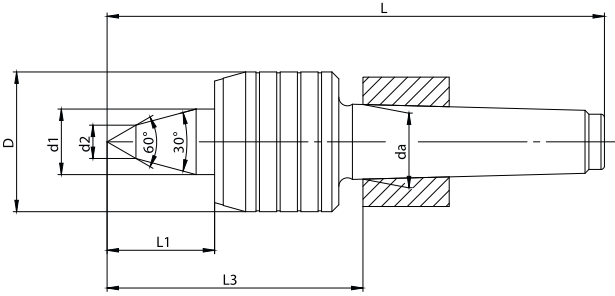


MODEL 222

Ölçüler / Dimensions

222

MORS KONIĞI (MK) MORSE TAPER (MT)	2	3	4	5
D	32	34	42	58
d1	15	15	20	30
L	126	143	178	233,5
L1	18	18	25	34
L3	62	62	75,5	104
da	17,78	23,825	31,267	44,399
Salgı değeri / Run out (Max. mm)	0,005	0,005	0,005	0,005
Ağırlık / Weight - kg	0,5	1,1	1,40	3,25
Sipariş kodu / Order code	MK2-222	MK3-222	MK4-222	MK5-222

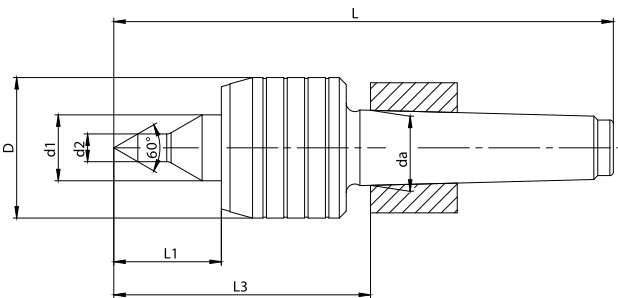


MODEL 223

Ölçüler / Dimensions

223

MORS KONIĞI (MK) MORSE TAPER (MT)	2	3	4	5
D	32	34	42	58
d1	15	15	20	30
d2	10	11	13	14
L	137	155	191	248,5
L1	29	30	38	49
L3	73	74	88,5	119
da	17,78	23,825	31,267	44,399
Salgı değeri / Run out (Max. mm)	0,005	0,005	0,005	0,005
Ağırlık / Weight - kg	0,5	1,1	1,40	3,25
Sipariş kodu / Order code	MK2-223	MK3-223	MK4-223	MK5-223



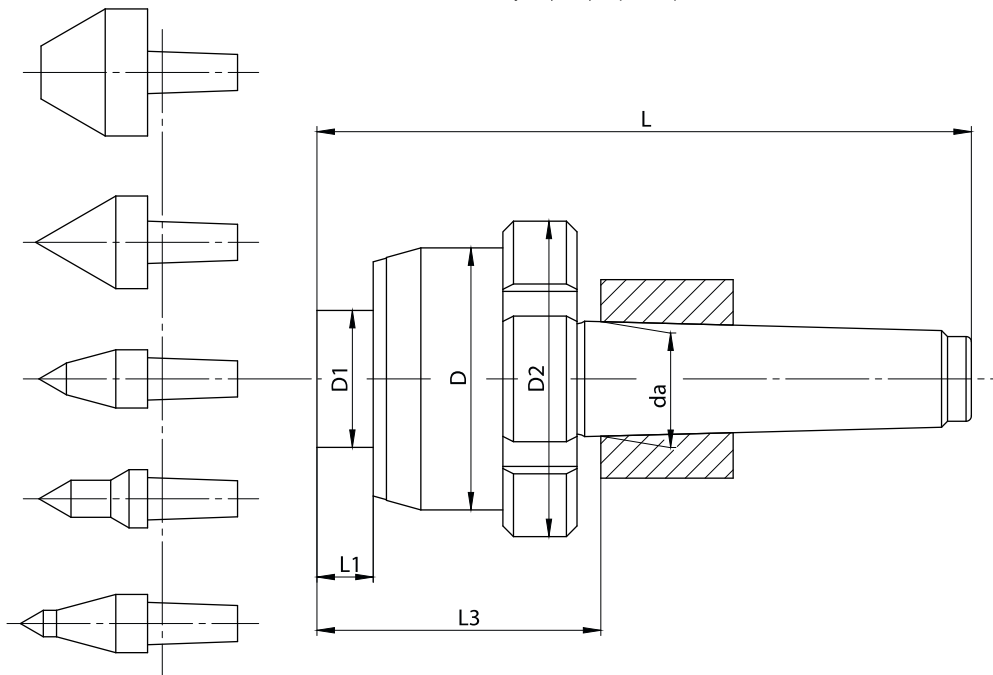
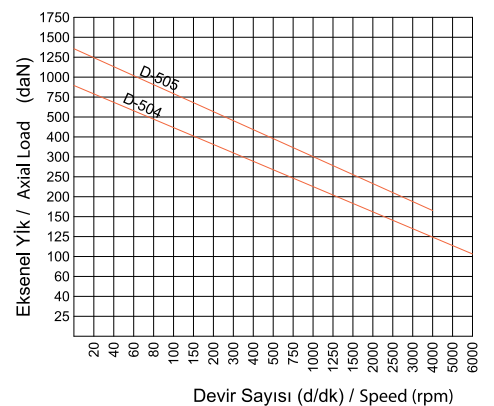
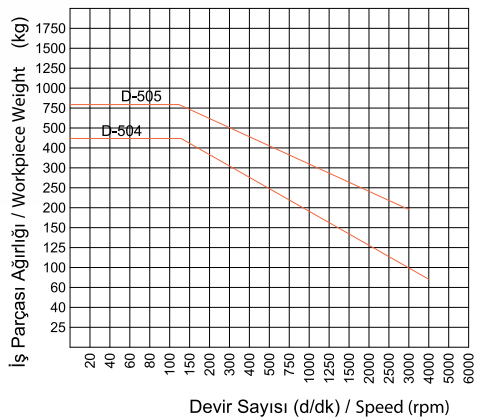
MODEL 224

Ölçüler / Dimensions

224

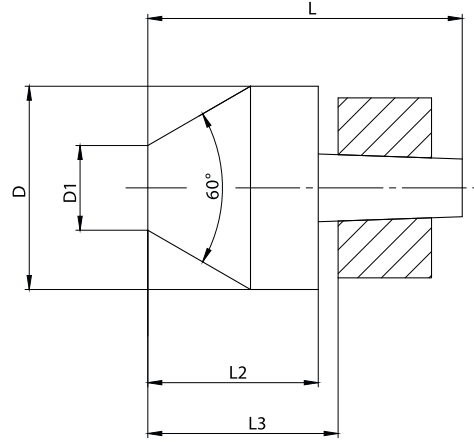
MORS KONIĞI (MK) MORSE TAPER (MT)	2	3	4	5
D	32	34	42	58
d1	15	15	20	30
d2	6	8	10	12
L	137	155	191	248,5
L1	29	30	38	49
L3	73	74	88,5	119
da	17,78	23,825	31,267	44,399
Salgı değeri / Run out (Max. mm)	0,005	0,005	0,005	0,005
Ağırlık / Weight - kg	0,5	1,1	1,40	3,25
Sipariş kodu / Order code	MK2-224	MK3-224	MK4-224	MK5-224

240 SERİSİ DEĞİŞTİRİLEBİLİR UÇLU HASSAS DÖNER PUNTALAR / 240 SERIES CHANGEABLE PRECISION LIVE CENTERS

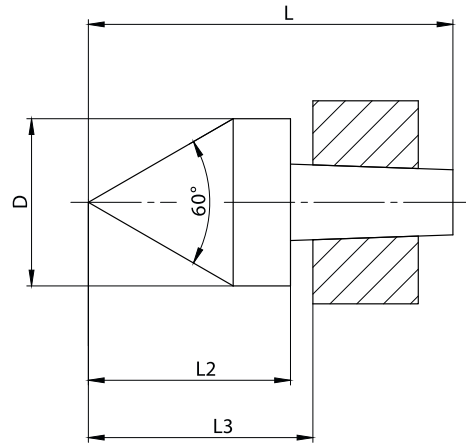


Ölçüler / Dimensions 240

SİPARİŞ KODU ORDER CODE	Mors Koniği - MK Morse Taper - MT	D	D1	D2	da	L	L1	L3
MK4-240	4	68	35	85	31,267	183	12,5	81
MK5-240	5	68	35	85	44,399	226	12,5	87

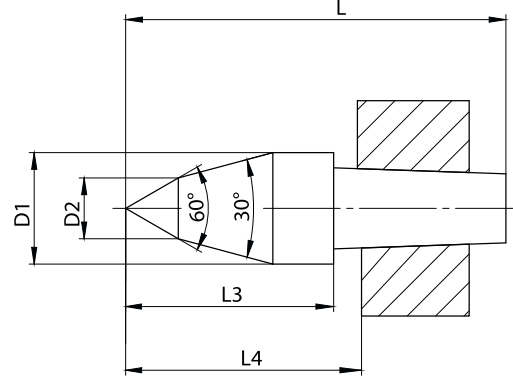

240SERİSİ DEĞİŞTİRİLEBİLİR UÇLU HASSAS DÖNER PUNTALAR / 240 SERIES CHANGEABLE PRECISION LIVE CENTERS

Ölçüler / Dimensions **240**

SİPARİŞ KODU ORDER CODE	Mors Koniği - MK Morse Taper - MT	D	D1	L	L2	L3
240-4-01	4	48	20	73,5	41	46
240-5-01	5	58	30	70	37,5	42,5


Ölçüler / Dimensions **240**

SİPARİŞ KODU ORDER CODE	Mors Koniği - MK Morse Taper - MT	D	L	L2	L3
240-4-02	4	34	73,5	41,5	46
240-5-02	5	55	85	53	57,5

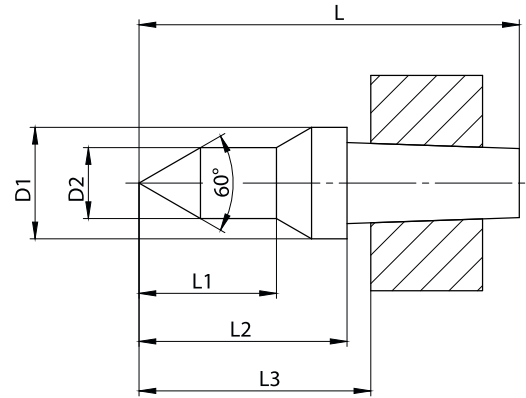
240 SERİSİ DEĞİŞTİRİLEBİLİR UÇLU HASSAS DÖNER PUNTALAR / 240 SERIES CHANGEABLE PRECISION LIVE CENTERS



Ölçüler / Dimensions

240

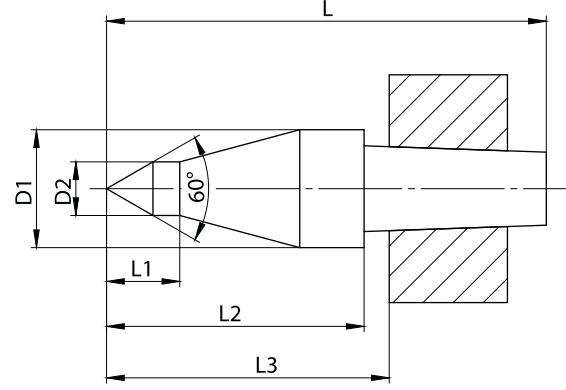
SİPARİŞ KODU ORDER CODE	Mors Koniği - MK Morse Taper - MT	D1	D2	L	L3	L4
240-4-03	4	22	10	73,5	41,5	46
240-5-03	5	30	14	85	53	58



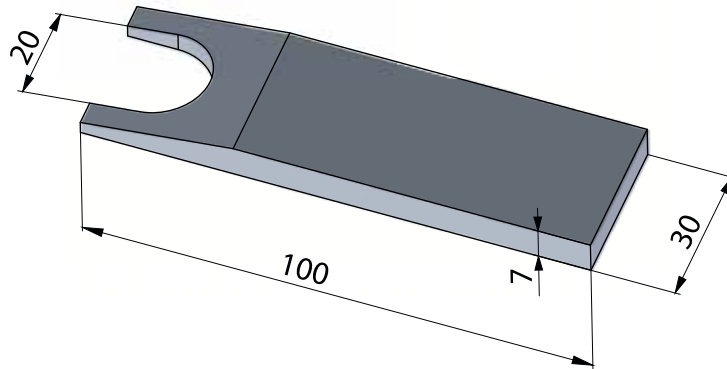
Ölçüler / Dimensions

240

SİPARİŞ KODU ORDER CODE	Mors Koniği - MK Morse Taper - MT	D1	D2	L	L1	L2	L3
240-4-04	4	22	14	73,5	25	41,5	46
240-5-04	5	30	20	85	30	53	58


240 SERİSİ DEĞİŞTİRİLEBİLİR UÇLU HASSAS DÖNER PUNTALAR / 240 SERIES CHANGEABLE PRECISION LIVE CENTERS

Ölçüler / Dimensions **240**

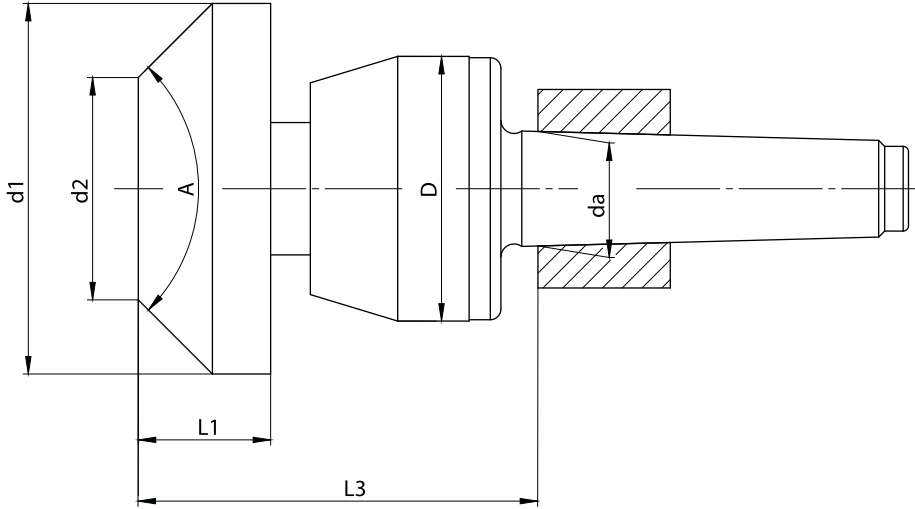
SİPARİŞ KODU ORDER CODE	Mors Koniği - MK Morse Taper - MT	D1	D2	L	L1	L2	L3
240-4-05	4	22	8	73,5	12,5	41,5	46
240-5-05	5	30	10	85	15	53	58


Ölçüler / Dimensions **240**

SİPARİŞ KODU ORDER CODE	Mors Koniği - MK Morse Taper - MT
240-4-06	4
240-5-06	5



250 SERİSİ DEĞİŞEBİLİR KAFALI HASSAS BORU PUNTALARI / 250 SERIES CHANGEABLE HEADED PRECISION PIPE CENTERS



Ölçüler / Dimensions

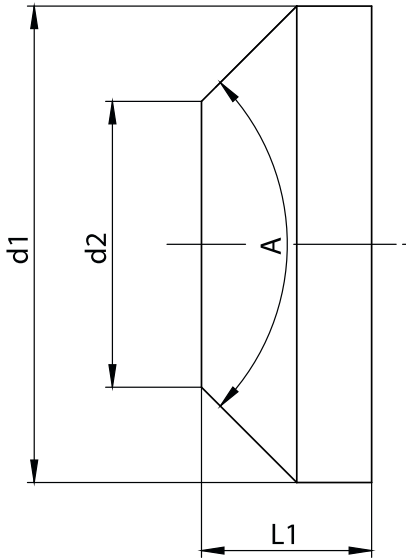
250

SİPARİŞ KODU ORDER CODE	D	d1	d2	da	L1	L3	A	Mors Konik Morse Taper
MK4-250	68	100	45	31,267	52	126	90°	4
MK5-250	88	100	45	44,399	52	142	90°	5


250 SERİSİ PUNTA KAFALARI / 250 SERIES LIVE CENTER HEAD

Ölçüler / Dimensions
250
MORS KONİK 4 / MORSE TAPER 4

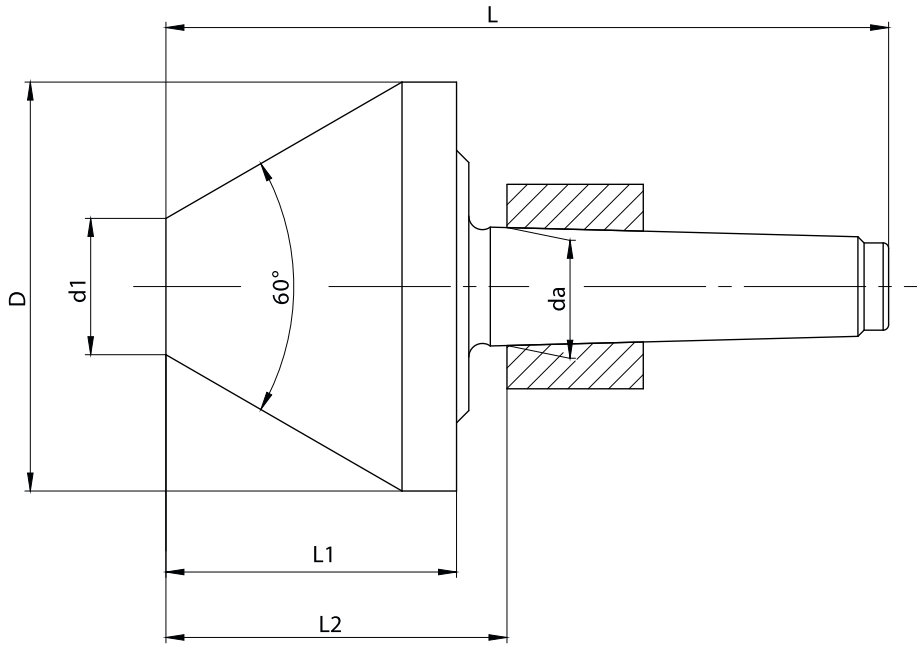
SİPARİŞ KODU ORDER CODE	d1	d2	L1	A
250-4-100-60	100	45	52	60°
250-4-100-75	100	45	52	75°
250-4-100-90	100	45	52	90°
250-4-150-60	150	95	52	60°
250-4-150-75	150	95	52	75°
250-4-150-90	150	95	52	90°
250-4-200-60	200	145	52	60°
250-4-200-75	200	145	52	75°
250-4-200-90	200	145	52	90°


Ölçüler / Dimensions
250
MORS KONİK 5 / MORSE TAPER 5

SİPARİŞ KODU ORDER CODE	d1	d2	L1	A
250-5-100-60	100	45	52	60°
250-5-100-75	100	45	52	75°
250-5-100-90	100	45	52	90°
250-5-150-60	150	95	52	60°
250-5-150-75	150	95	52	75°
250-5-150-90	150	95	52	90°
250-5-200-60	200	145	52	60°
250-5-200-75	200	145	52	75°
250-5-200-90	200	145	52	90°

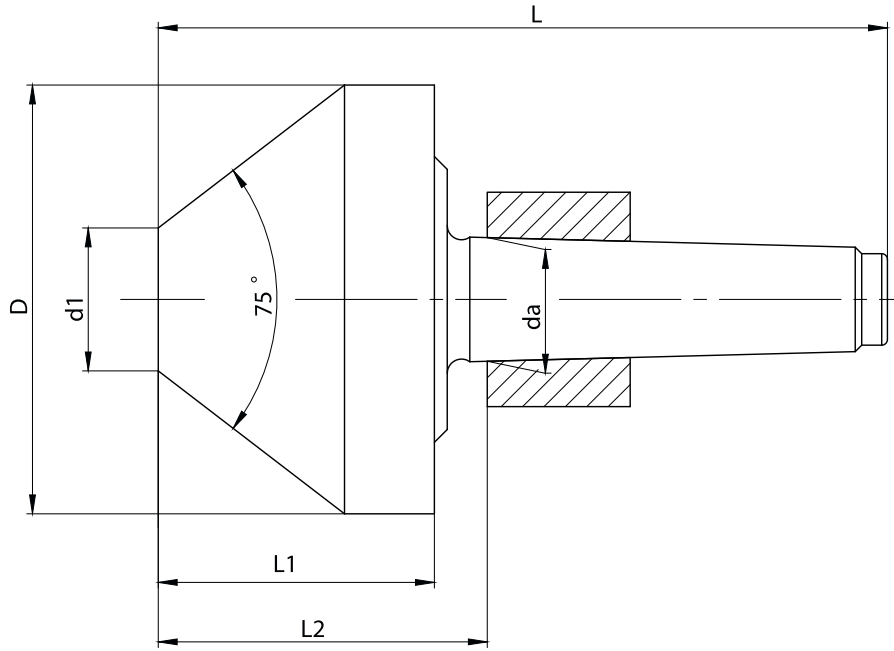


300 SERİSİ HASSAS BORU PUNTALARI / 300 SERIES PRECISION LIVE CENTERS FOR PIPE



Ölçüler / Dimensions **60° Açılı / 60° Angle** **300**

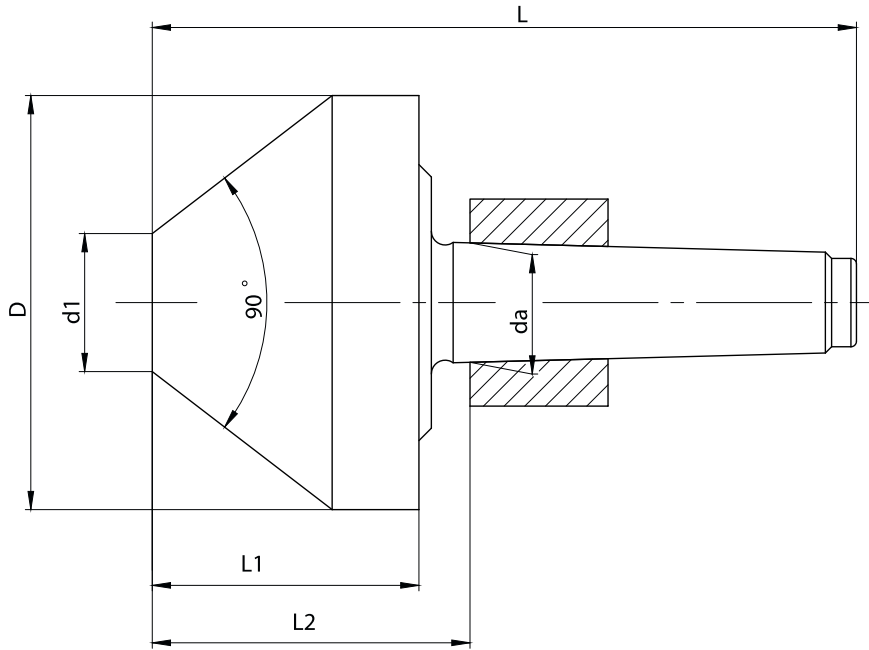
MORS KONIĞI (MK) MORSE TAPER (MT)	3			4				5			6
	80	100	125	80	100	125	150	100	125	150	175
D	80	100	125	80	100	125	125	100	125	150	175
d1	25	25	35	25	25	35	50	25	35	50	70
L	156	169,5	175,5	177,5	191,5	197,5	213	221,5	227,5	240,5	305
L1	64	77	83	64	77	83	95	77	83	95	105
L2	75	88,5	94,5	75	89,5	89,5	110,5	91,5	97,5	110,5	122
da	23,825	23,825	23,825	31,267	31,267	31,267	31,267	44,399	44,399	44,399	63,348
Salgı değeri / Run out (Max. mm)	0,005	0,005	0,005	0,005	0,005	0,005	0,005	0,01	0,01	0,01	0,01
Sipariş kodu / Order code	MK3-300-80	MK3-300-100	MK3-300-125	MK4-300-80	MK4-300-100	MK4-300-125	MK4-300-150	MK5-300-100	MK5-300-125	MK5-300-150	MK6-300-175


301 SERİSİ HASSAS BORU PUNTALARI / 301 SERIES PRECISION LIVE CENTERS FOR PIPE

Ölçüler / Dimensions
75° Açılı / 75° Angle
301

MORS KONİĞİ (MK) MORSE TAPER (MT)	3			4					5				6
	80	100	125	80	100	125	150	175	100	125	150	175	175
D	80	100	125	80	100	125	150	175	100	125	150	175	175
d1	25	25	30	25	25	30	50	50	25	30	50	50	50
L	156	169,5	165,5	177,5	191,5	187,7	208,3	211,3	221,5	217,5	235,2	238,2	293
L1	64	77	73	64	77	73	90	93	77	73	90	93	93
L2	75	88,5	84,5	75	89,5	85,3	105,8	105,8	91,5	87,5	105,6	108,6	111
da	23,825	23,825	23,825	31,267	31,267	31,267	31,267	31,267	44,399	44,399	44,399	44,399	63,348
Salgı değeri / Run out (Max. mm)	0,005	0,005	0,005	0,005	0,005	0,005	0,005	0,005	0,01	0,01	0,01	0,01	0,01
Sipariş kodu / Order code	MK3-301-80	MK3-301-100	MK3-301-125	MK4-301-80	MK4-300-100	MK4-300-125	MK4-300-150	MK4-300-175	MK5-300-100	MK5-300-125	MK5-300-150	MK5-300-175	MK6-300-175



302 SERİSİ HASSAS BORU PUNTALARI / 302 SERIES PRECISION LIVE CENTERS FOR PIPE



Ölçüler / Dimensions

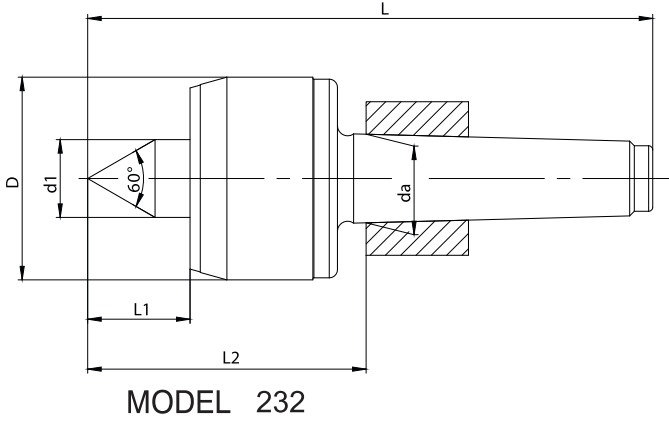
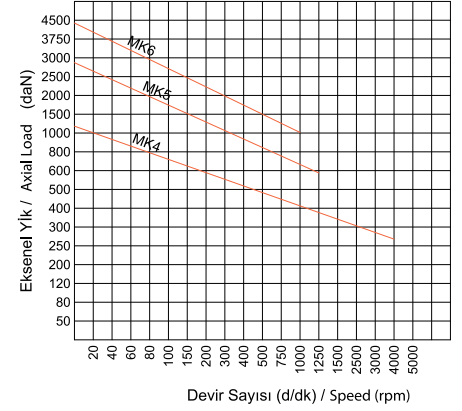
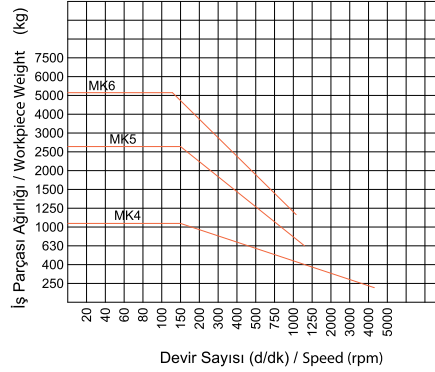
90° Açılı / 90° Angle

302

MORS KONİĞİ (MK) MORSE TAPER (MT)	4			5				6			
	150	175	200	150	175	200	250	150	175	200	250
D	150	175	200	150	175	200	250	150	175	200	250
d1	50	50	50	50	50	50	75	50	50	50	75
L	208,4	211,5	211,5	235	238	238	275	290	293	293	330,5
L1	90	93	93	90	93	93	130	90	93	93	130
L2	105,6	108,7	108,7	105,5	108,5	108,5	145,5	107,5	110,5	110,5	148,5
da	31,267	31,267	31,267	44,399	44,399	44,399	44,399	63,348	63,348	63,348	63,348
Salgı değeri / Run out (Max. mm)	0,005	0,005	0,005	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01
Sipariş kodu / Order code	MK4-302-150	MK4-302-175	MK4-302-200	MK5-302-150	MK5-302-175	MK5-302-200	MK5-302-250	MK6-302-150	MK6-302-175	MK6-302-200	MK6-302-250

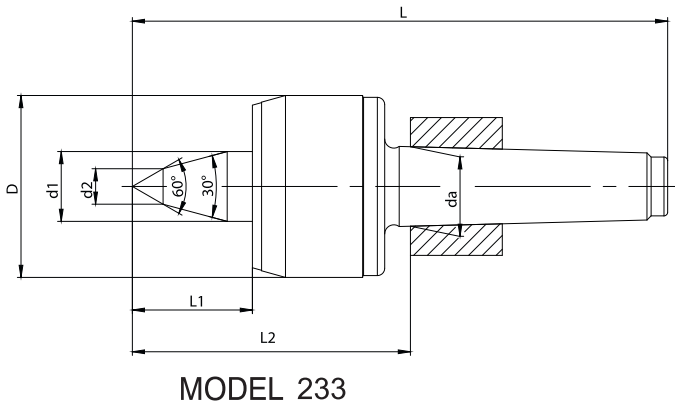


230 SERİSİ AĞIR YÜK HASSAS DÖNER PUNTALAR / 230 SERIES HEAVY DUTY PRECISION LIVE CENTERS



Ölçüler / Dimensions 232

MORS KONİĞİ (MK) MORSE TAPER (MT)	4	5	6
D	82	95	115
d1	44,45	50	70
L	237,5	281	366
L1	50,5	57,5	77
L2	134,7	151,5	184,2
da	31,267	44,399	63,348
Salgı değeri / Run out (Max. mm)	0,005	0,01	0,01
Sipariş kodu / Order code	MK4-232	MK5-232	MK6-232

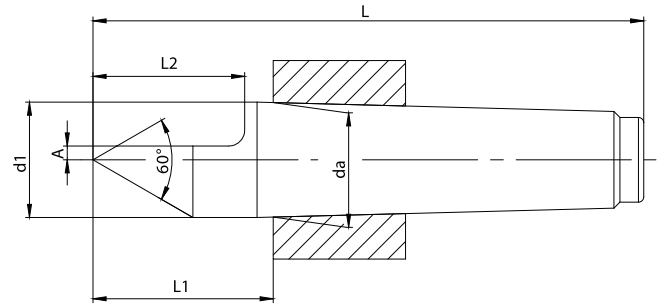
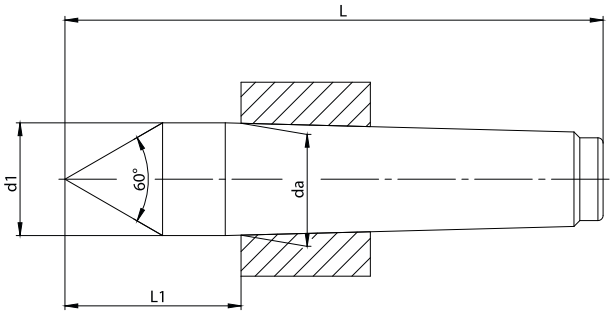


Ölçüler / Dimensions 233

MORS KONİĞİ (MK) MORSE TAPER (MT)	4	5	6
D	82	95	115
d1	35	41	50
d2	14	20	18
L	245	288,5	367,2
L1	58	65	78
L2	142,5	159,5	185,5
da	31,267	44,399	63,348
Salgı değeri / Run out (Max. mm)	0,005	0,01	0,01
Sipariş kodu / Order code	MK4-233	MK5-233	MK6-233

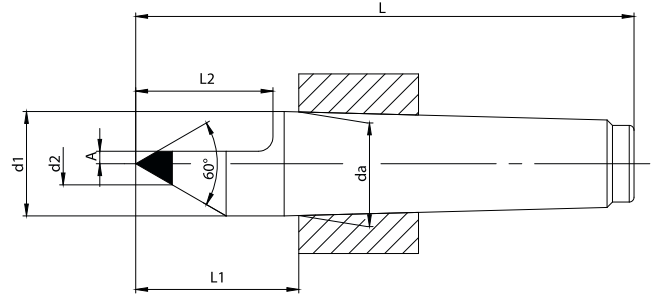
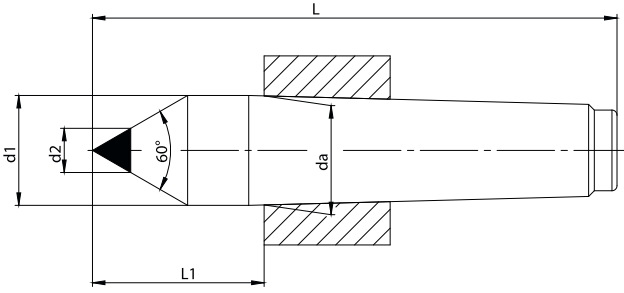
101 SERİSİ STANDART SABİT PUNTALAR
101 SERIES STANDARD DEAD CENTERS

102 SERİSİ KESİK UÇLU SABİT PUNTALAR
102 SERIES HALF TIPPED DEAD CENTERS



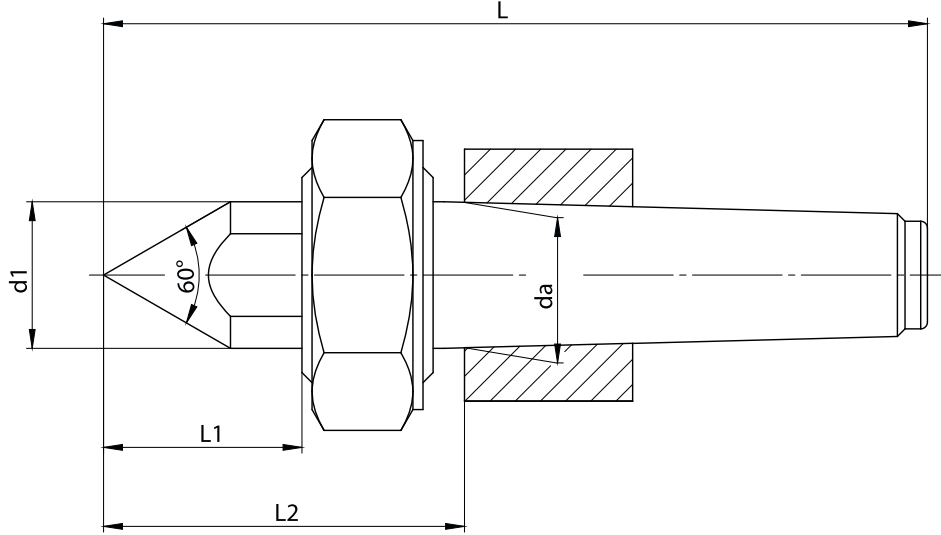
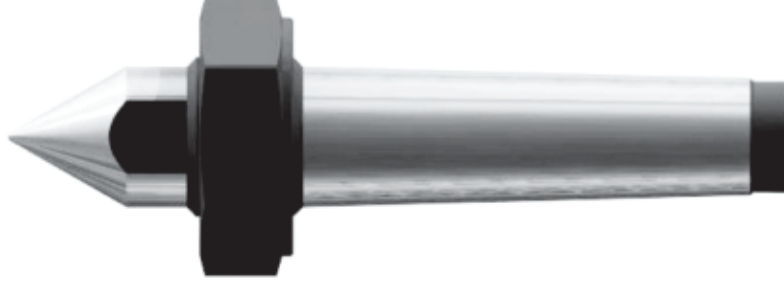
Ölçüler / Dimensions

MORS KONIĞI (MK) MORSE TAPER (MT)	101				102			
	3	4	5	6	3	4	5	6
d1	24,1	31,6	44,7	63,8	24,1	31,6	44,7	63,8
L	125	160	200	270	125	160	200	270
L1	44	57,5	70,5	88	44	57,5	70,5	88
L2	-	-	-	-	38	50	63	79
A	-	-	-	-	3	5	7	10
da	23,825	31,267	44,399	63,348	23,825	31,267	44,399	63,348
Ağırlık / Weight (kg)	0,34	0,76	1,92	5,2	0,31	0,71	1,85	4,8
Sipariş kodu / Order code	MK3-101	MK4-101	MK5-101	MK6-101	MK3-102	MK4-102	MK5-102	MK6-102


103 SERİSİ SERT MADEN UÇLU SABİT PUNTALAR
103 SERIES HARD METAL TIPPED DEAD CENTERS
104 SERİSİ SERT MADEN UÇLU KESİK SABİT PUNTALAR
104 HALF TIPPED SERIES WITH HARD METAL DEAD CENTERS

Ölçüler / Dimensions

MORS KONIĞI (MK) MORSE TAPER (MT)	103				104			
	3	4	5	6	3	4	5	6
d1	24,1	1,6	44,7	63,8	24,1	31,6	44,7	63,8
d2	11	14	18	18,7	11	14	18	18,7
L	125	160	200	270	125	160	200	270
L1	44	57,5	70,5	88	44	57,5	70,5	88
L2	-	-	-	-	38	50	63	79
A	-	-	-	-	3	5	7	10
da	23,825	31,267	44,399	63,348	23,825	31,267	44,399	63,348
Ağırlık / Weight (kg)	0,4	0,85	2,16	5,5	0,36	0,81	2,11	5,1
Sipariş kodu / Order code	MK3-103	MK4-103	MK5-103	MK6-103	MK3-104	MK4-104	MK5-104	MK6-104

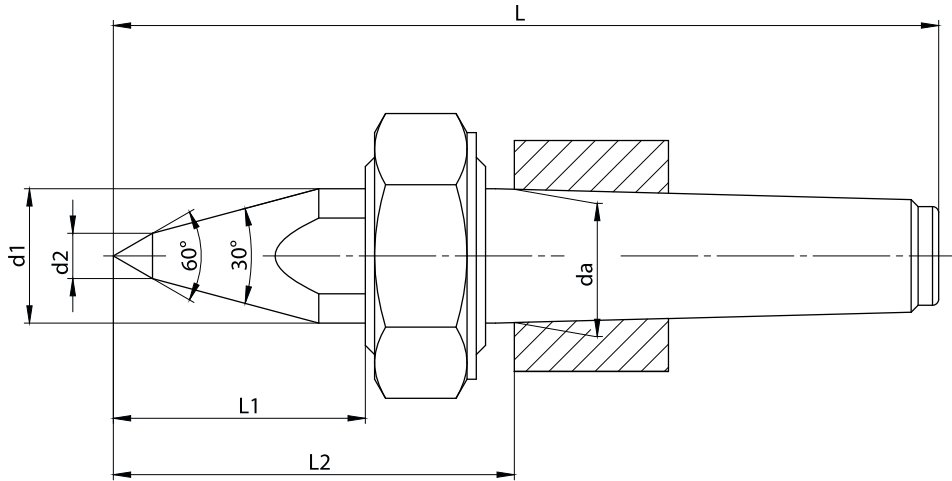
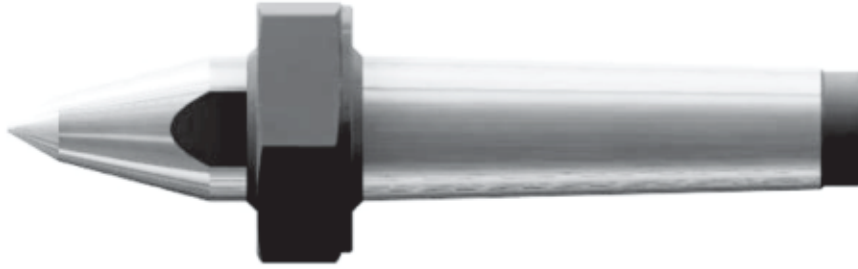
111 SERİSİ SOMUNLU SABİT PUNTALAR / 111 SERIES DEAD CENTERS WITH NUT



Ölçüler / Dimensions

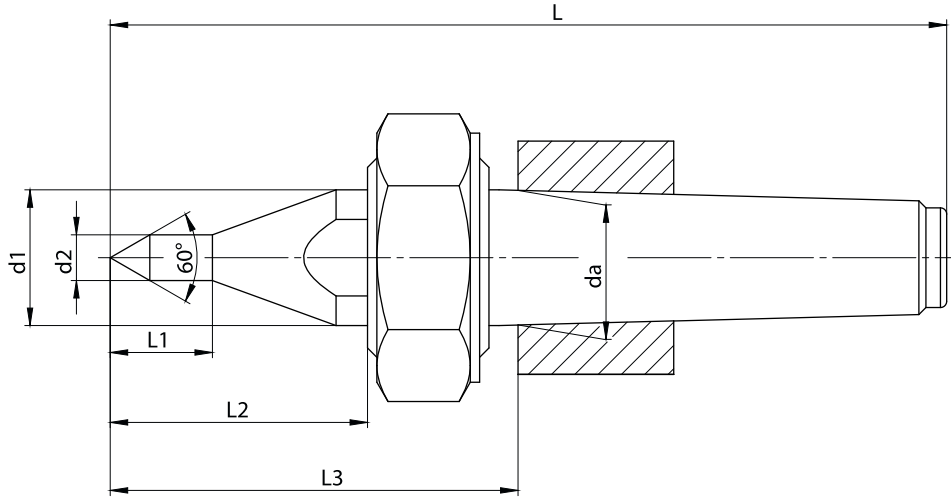
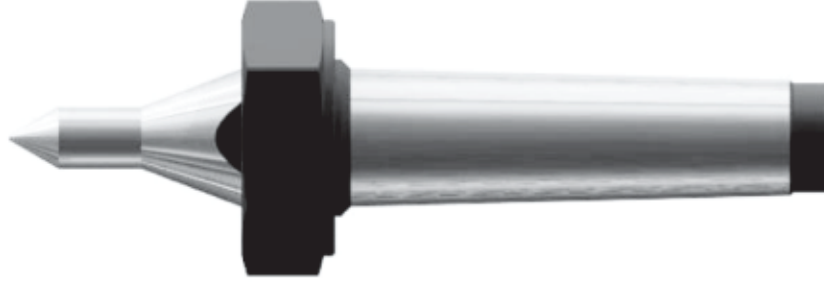
111

MORS KONIĞI (MK) MORSE TAPER (MT)	3	4	5	6
d1	24,1	31,6	44,7	63,8
L	138	175	217	290
L1	32,5	42,9	54,9	71,7
L2	57	72,5	87,5	108
AA / SW	41	55	75	100
da	29,825	31,268	44,399	63,348
Ağırlık / Weight - kg	0,58	0,8	2,9	7,2
Sipariş kodu / Order code	MK3-111	MK4-111	MK5-111	MK6-111


112 SERİSİ SOMUNLU SABİT PUNTALAR / 112 SERIES DEAD CENTERS WITH NUT

Ölçüler / Dimensions **112**

MORS KONIĞI (MK) MORSE TAPER (MT)	3	4	5	6
d1	24,1	31,6	44,7	63,8
d2	10	14	16	18
L	148	186,5	242	330
L1	41,5	53,7	78,25	121,5
L2	67	84	112	148
AA / SW	41	55	75	100
da	23,825	31,267	44,399	63,348
Ağırlık / Weight - kg	0,6	1,28	3	7,9
Sipariş kodu / Order code	MK3-112	MK4-112	MK5-112	MK6-112

113 SERİSİ SOMUNLU SABİT PUNTALAR / 113 SERIES DEAD CENTERS WITH NUT



Ölçüler / Dimensions

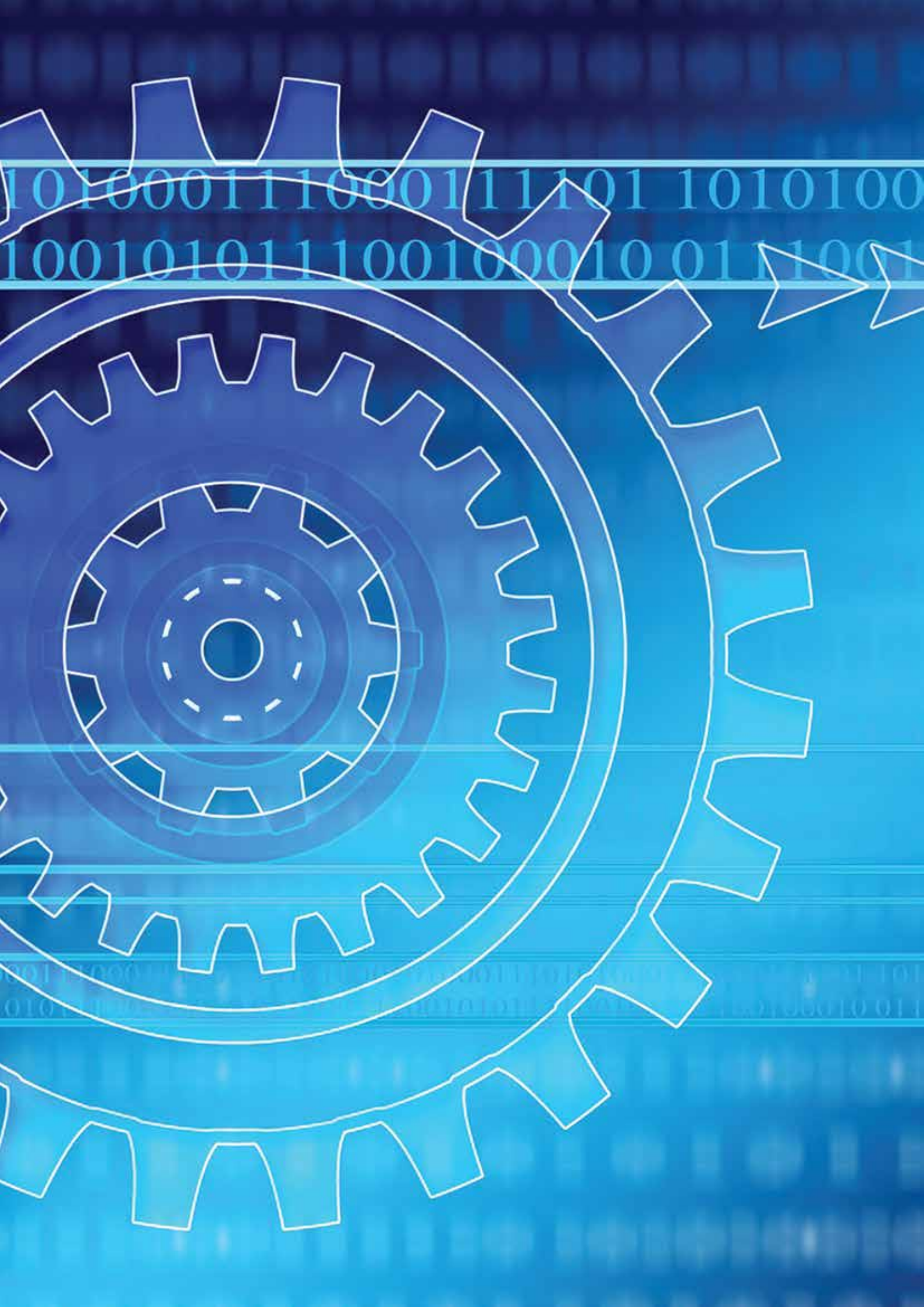
113

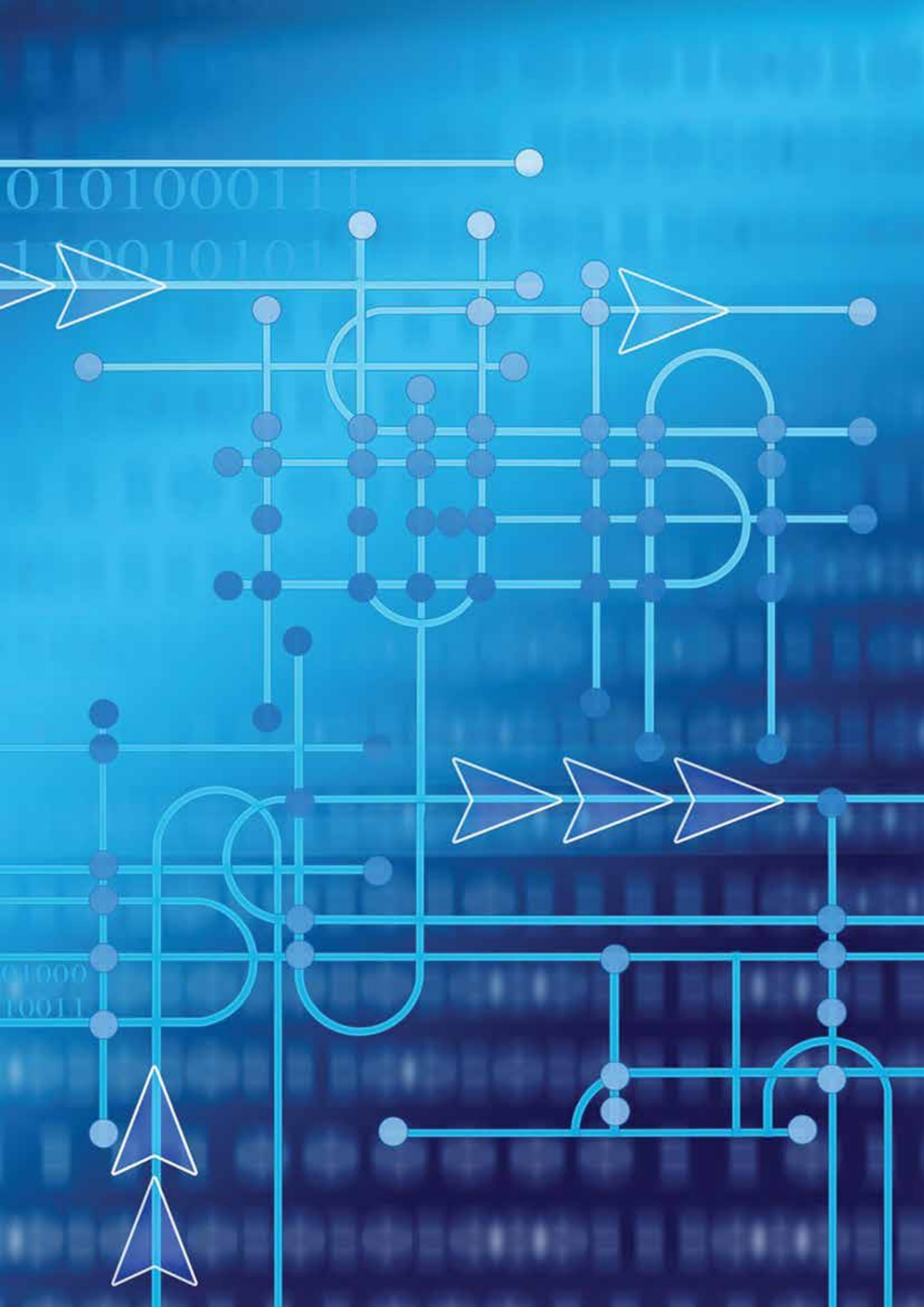
MORS KONIĞI (MK) MORSE TAPER (MT)	3	4	5	6
d1	24,1	31,6	44,7	63,8
d2	10	14	16	18
L	148	186,5	242	330
L1	20	30	32	45
L2	41,5	53,7	78,25	121,5
L3	67	84	112	148
AA / SW	41	55	75	100
da	23,825	31,267	44,399	63,348
Ağırlık / Weight - kg	0,6	1,28	3	7,9
Sipariş kodu / Order code	MK3-113	MK4-113	MK5-113	MK6-113



Notlar / Notes:

A series of horizontal dashed lines for writing notes, starting from the text 'Notlar / Notes:' and extending across the width of the page.





Hassas İş Baęlama Takımları

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