

**ABKANT PRES KALIPLARI
PRESS BRAKE TOOLING**



STOKTAN TESLİM



Sac işleme sektöründeki 10 yılı aşkın bilgi ve tecrübesi ile **DURO MAKİNA**'yı kuran Caner AKGÜL ve Murat DURAN, sektördeki tüm firmalara ihtiyaçları doğrultusunda başta abkant kalıpları olmak üzere, teknik destek, makina alım – satım ve danışmanlık hizmetleri vermektedir.

Firmaların ihtiyaçları doğrultusunda yapmak istedikleri ürünler için gerekli olan kalıplandırma hizmeti, en az maliyet ile çözümlendirilip büküm uygulamaları konusunda destek verilmektedir.

Firma politikamız müşteri memnuniyeti odaklı olup, ürünlerimizin kalitesi ve hassasiyeti bu doğrultuda belirlenmiştir.

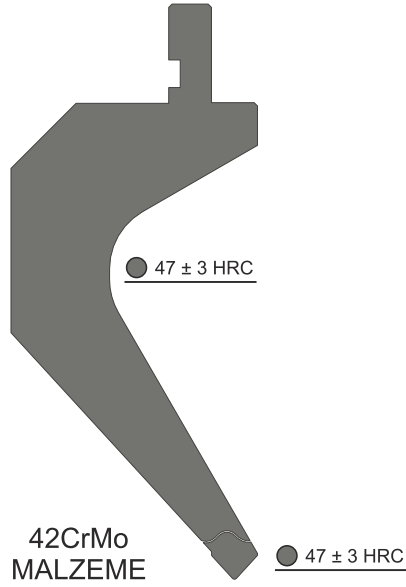
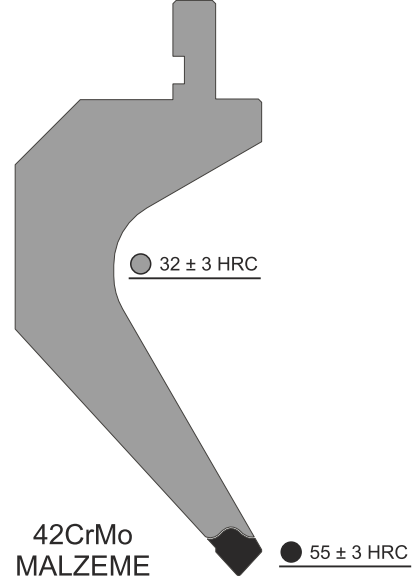
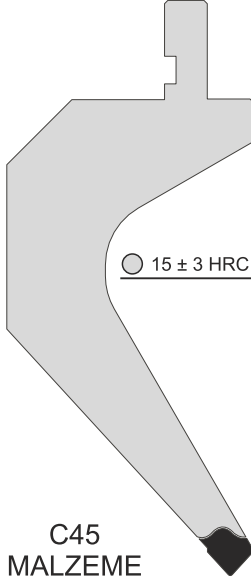
Siz değerli müşterilerimize hizmet vermekten dolayı mutluluk duyar, bizi tercih ettiğiniz için teşekkür ederiz.

Saygılarımızla..



DURO

DURO ABKANT KALIP ÜRÜN ÖZELLİKLERİ



Abkant Kalıplarının En Önemli Özelliği
Kullanılan Malzeme Ve Maliyetli Bir İşlem İle
Tüm Gövdenin Sertleştirilmiş Olmasıdır

KOD TANIM AÇIKLAMASI

DURO 

● 47 ± 3 HRC 20 T/M
PT.135-A85-R08

835

SERTLİK DEĞERİ

DAYANIM

UZUNLUK

DURO 

● 47 ± 3 HRC 20 T/M
DT.80-A60-V8-R08

835

SERTLİK DEĞERİ

DAYANIM

UZUNLUK

UÇ AÇISI

PT.135-A85-R08

YÜKSEKLİK

RADIUS

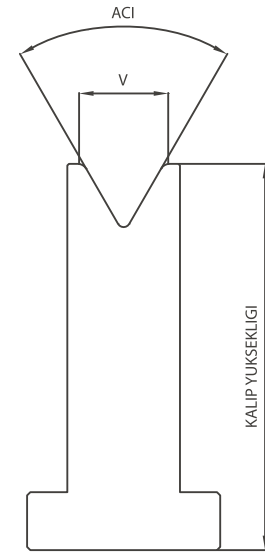
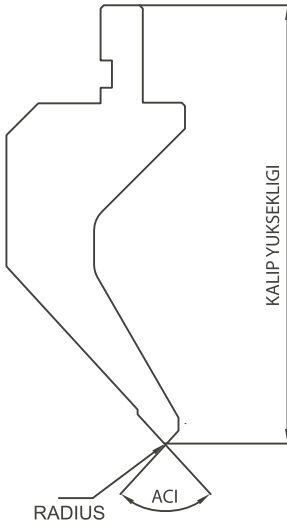
UÇ AÇISI

RADIUS

DT.80-A60-V8-R08

YÜKSEKLİK

KANAL GENİŞLİĞİ





TEK TARAFLI KALIP TUTUCUSU

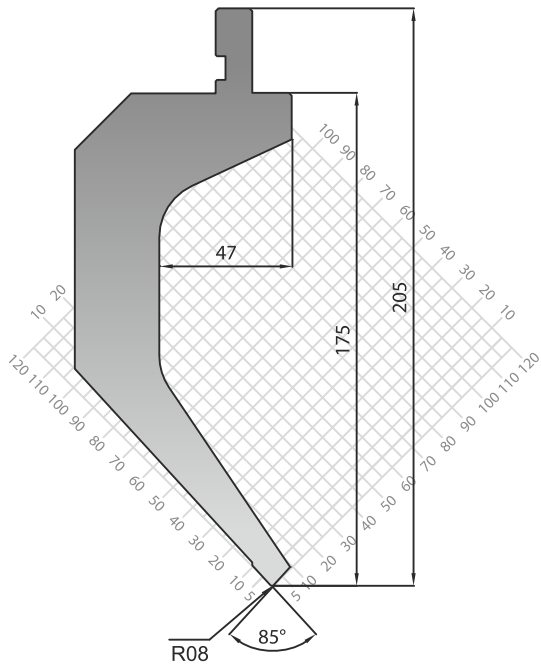


ÇİFT TARAFLI KALIP TUTUCUSU





DURO

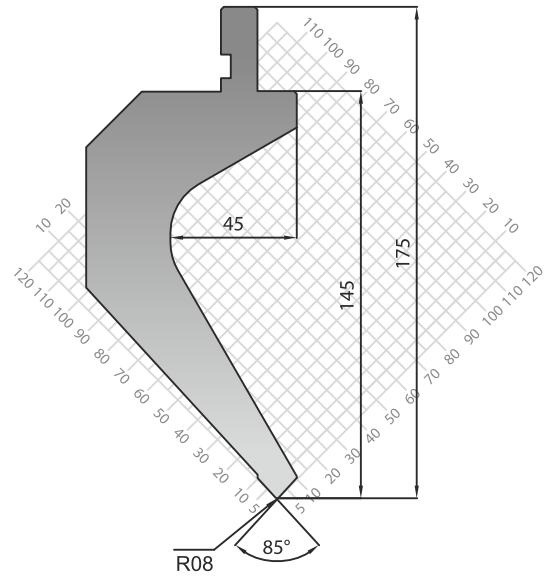


TOPT.205-A85-R08

47 ± 3 HRC

525 mm 495 mm 500 mm

70 T/M

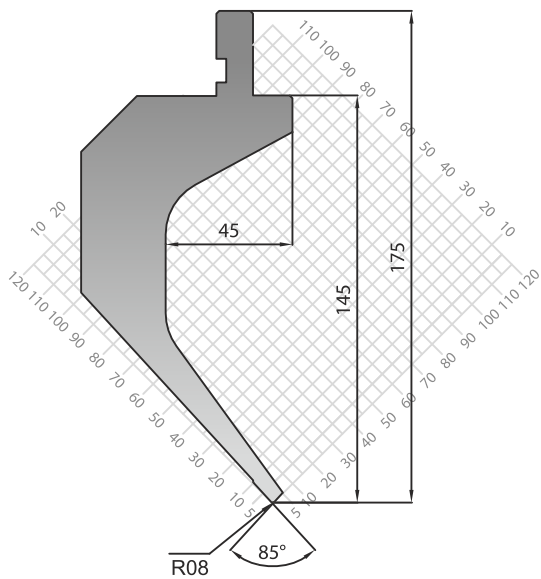


TOPT.175-A85-R08

47 ± 3 HRC

525 mm 495 mm 500 mm

90 T/M

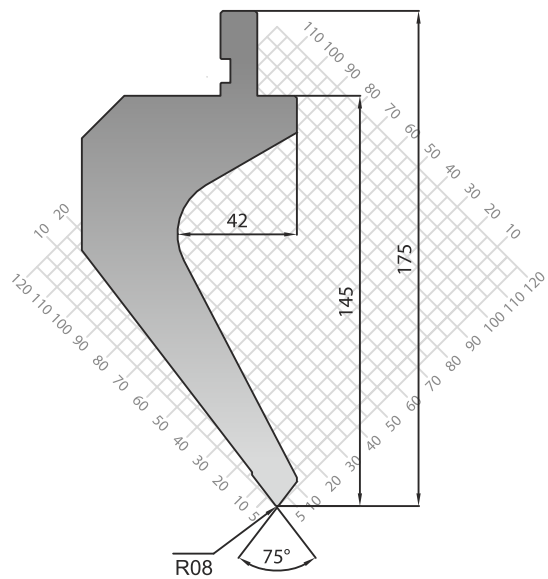


TOPT.175-A85-R08-S

47 ± 3 HRC

525 mm 495 mm 500 mm

20 T/M

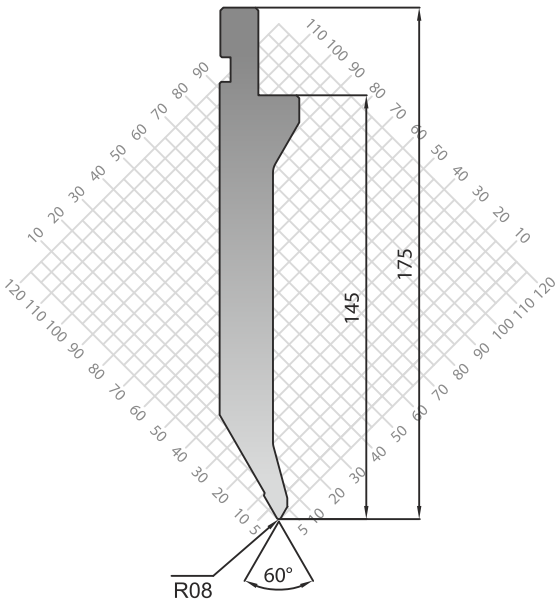


TOPT.175-A75-R08

47 ± 3 HRC

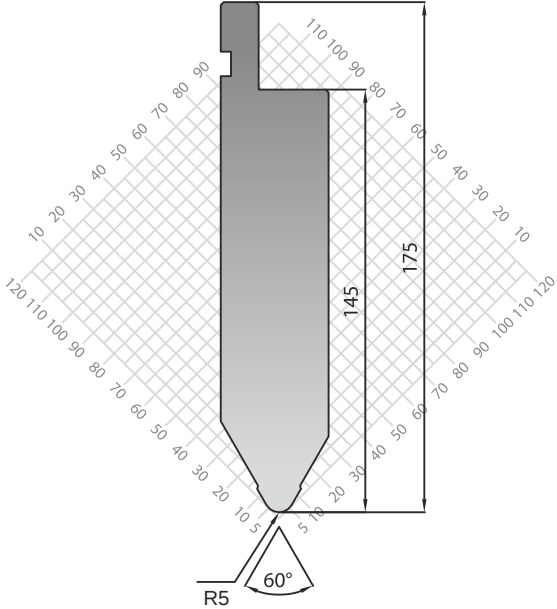
525 mm 495 mm 500 mm

75 T/M



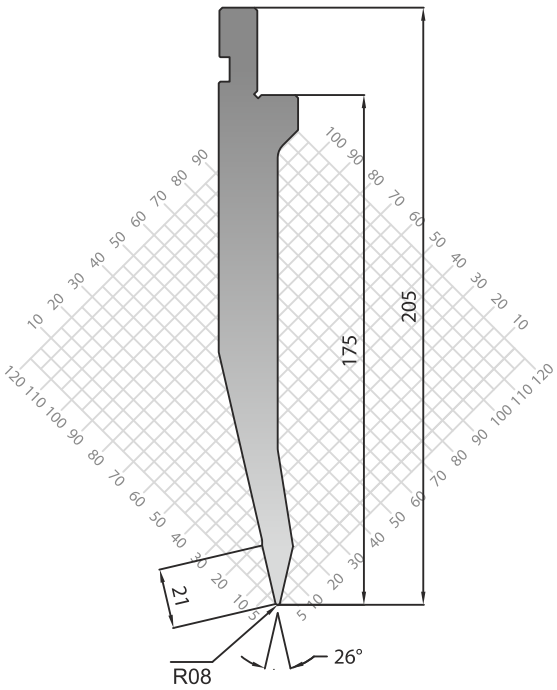
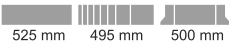
TOPT.175-A60-R08

47 ± 3 HRC
80 T/M



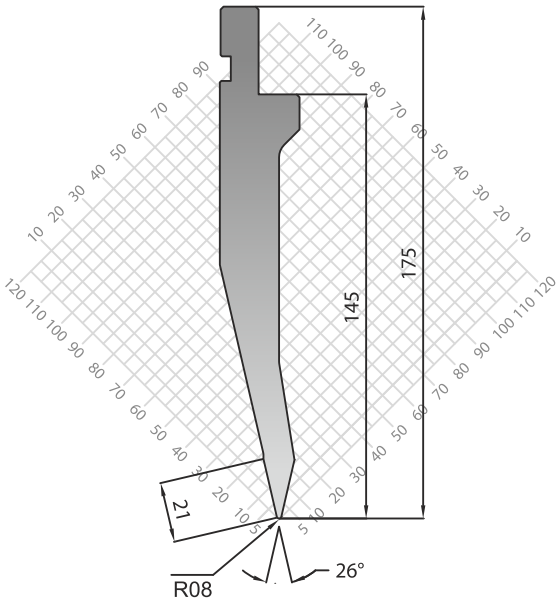
TOPT.175-A60-R5

47 ± 3 HRC
160 T/M



TOPT.205-A26-R08

47 ± 3 HRC
95 T/M



TOPT.175-A26-R08

47 ± 3 HRC
95 T/M

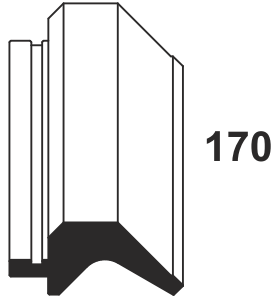




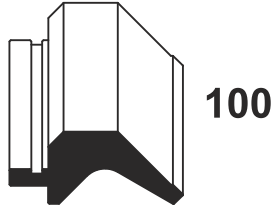
TOPT SERİSİ BİÇAKLAR

PARÇALI KALIP TİPLERİ

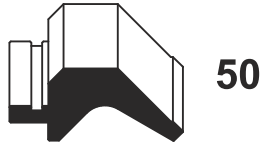
TOPT / SA



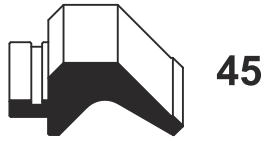
170



100



50



45



40



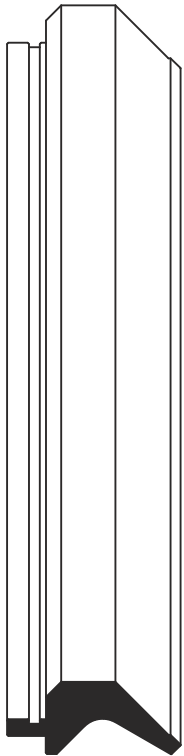
35



30



25

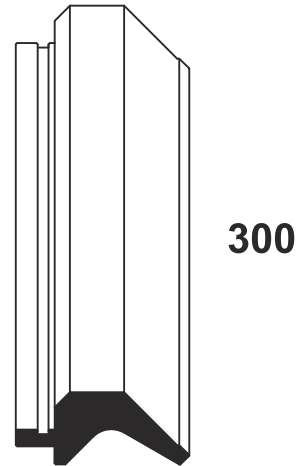


525

TOPT / SB



100
SOL



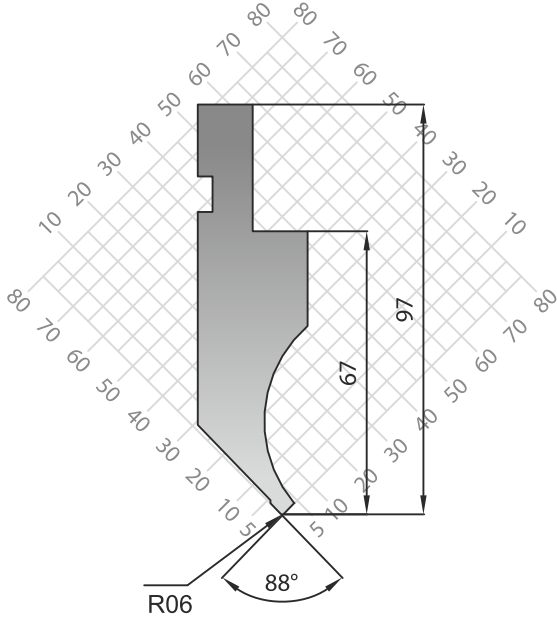
300



100
SAĞ



DURO

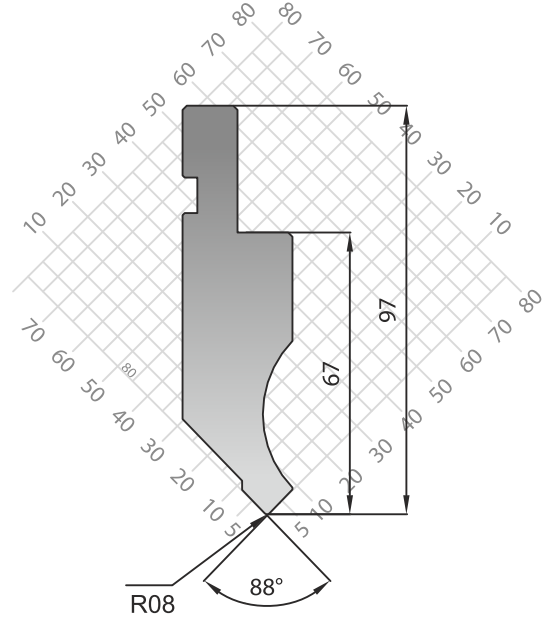


PT.97-A88-R06

47 ± 3 HRC



100 T/M

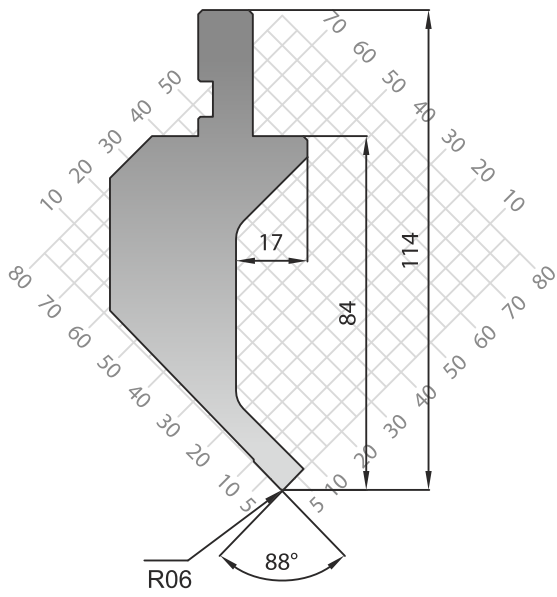


PT.97-A88-R08

47 ± 3 HRC

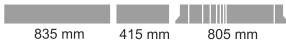


100 T/M

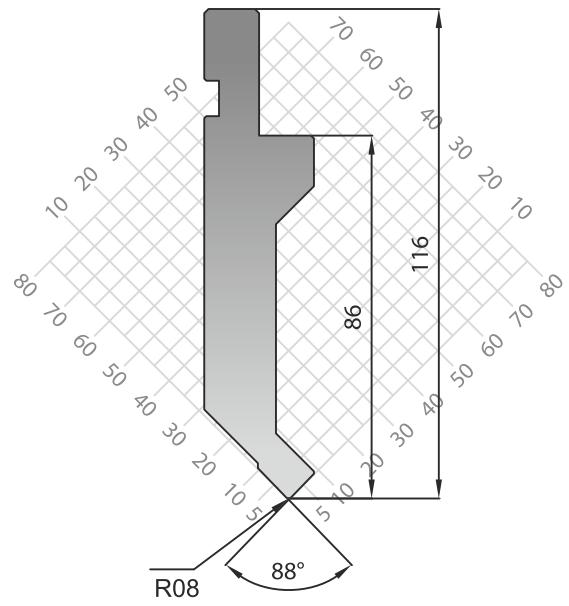


PT.114-A88-R06

47 ± 3 HRC



20 T/M



PT.116-A88-R08

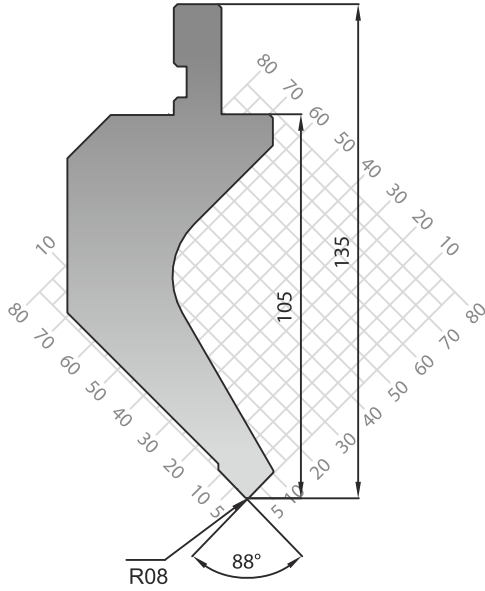
47 ± 3 HRC



40 T/M



DURO

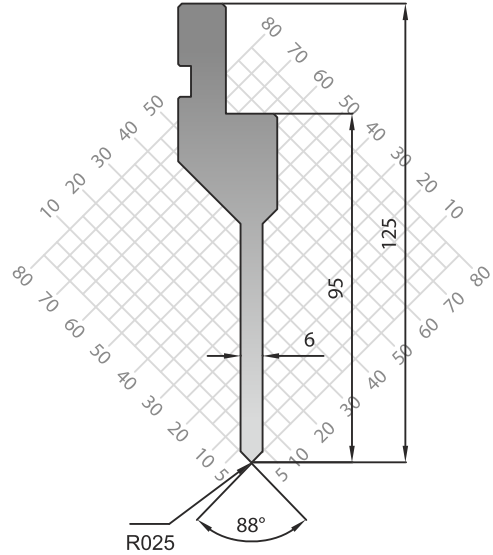


PT.135-A88-R08

47 ± 3 HRC



50 T/M

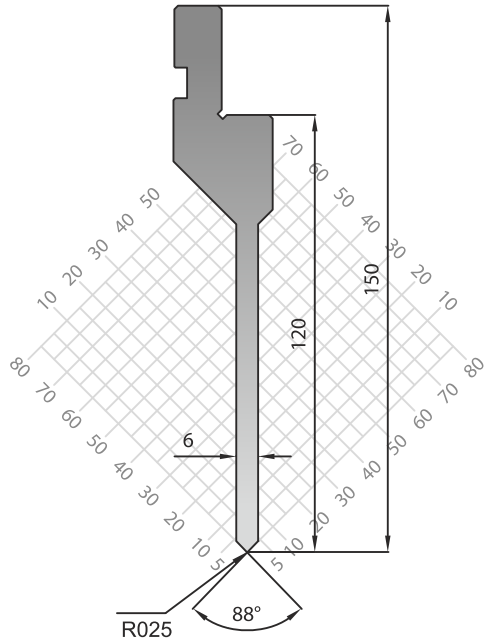


PT.125-A88-R025

47 ± 3 HRC

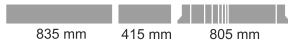


50 T/M

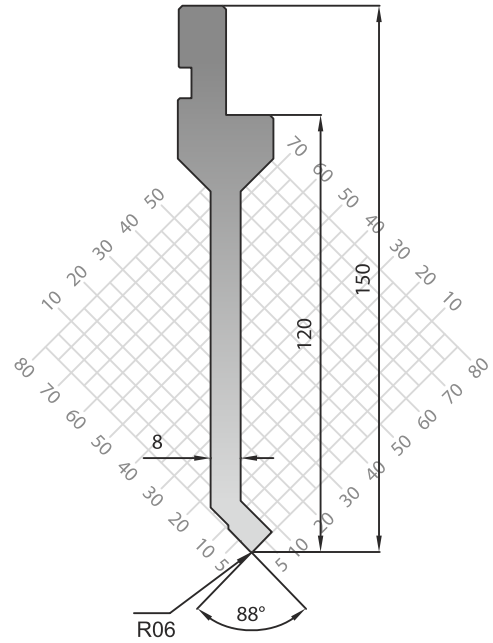


PT.150-A88-R025

47 ± 3 HRC



50 T/M

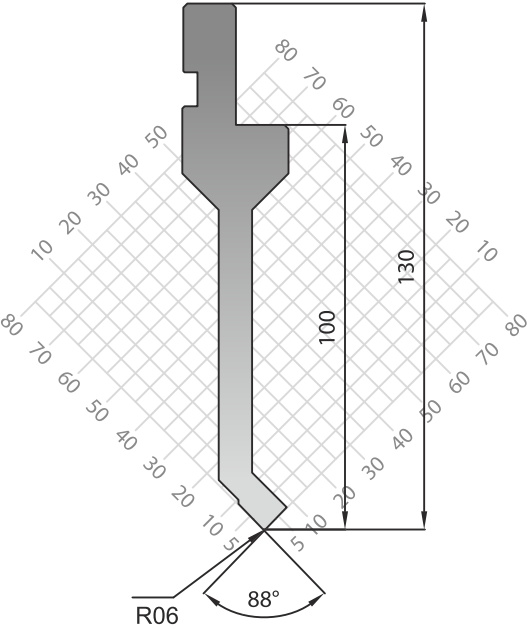


PT.150-A88-R06

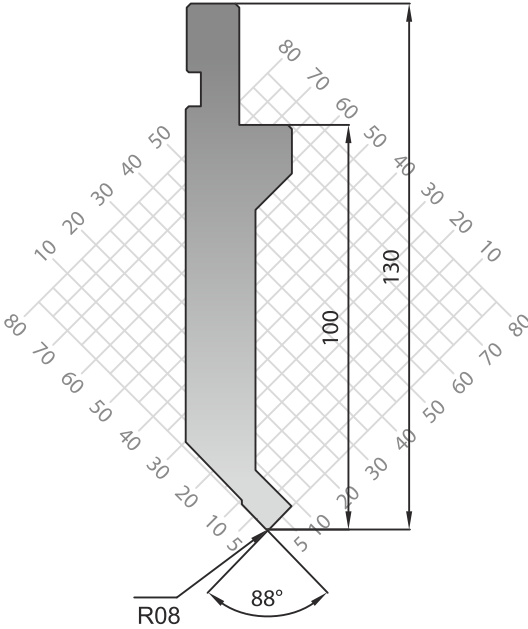
47 ± 3 HRC



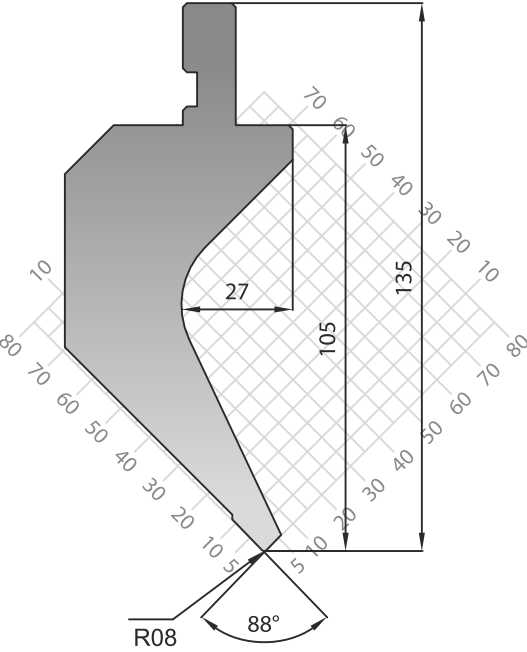
35 T/M



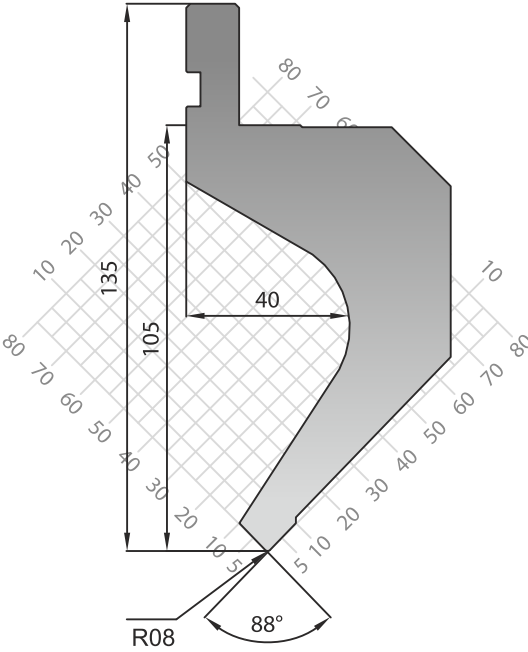
PT.130-A88-R06 47 ± 3 HRC
835 mm 415 mm 805 mm 35 T/M



PT.130-A88-R08 47 ± 3 HRC
835 mm 415 mm 805 mm 40 T/M



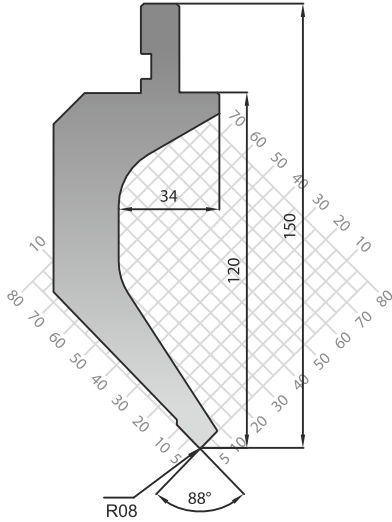
PST.135-A88-R08 47 ± 3 HRC
835 mm 415 mm 805 mm 45 T/M



PRT.135-A88-R08 47 ± 3 HRC
835 mm 415 mm 805 mm 45 T/M



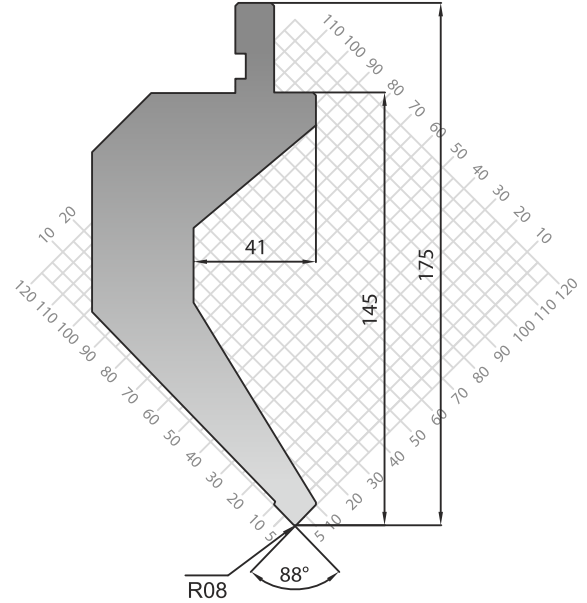
DURO



PT.150-A88-R08

47 ± 3 HRC

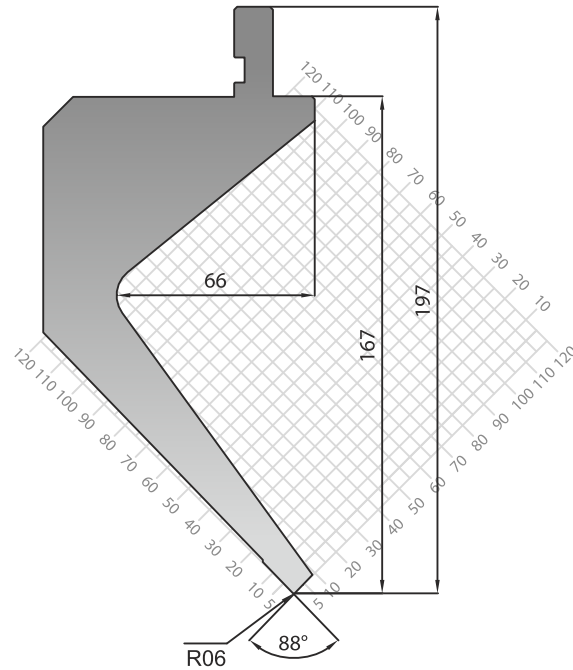
50 T/M



PT.175-A88-R08

47 ± 3 HRC

50 T/M

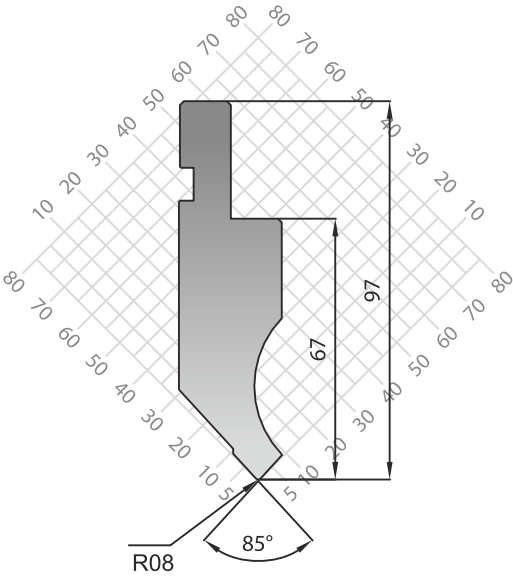


PT.197-A88-R06

47 ± 3 HRC

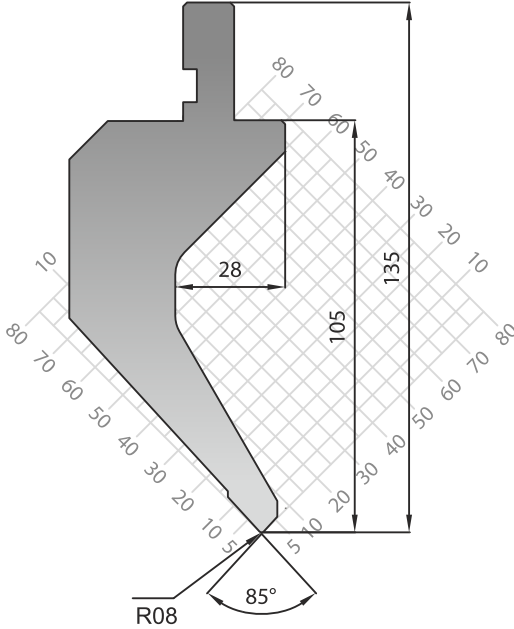
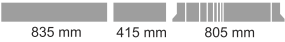
30 T/M





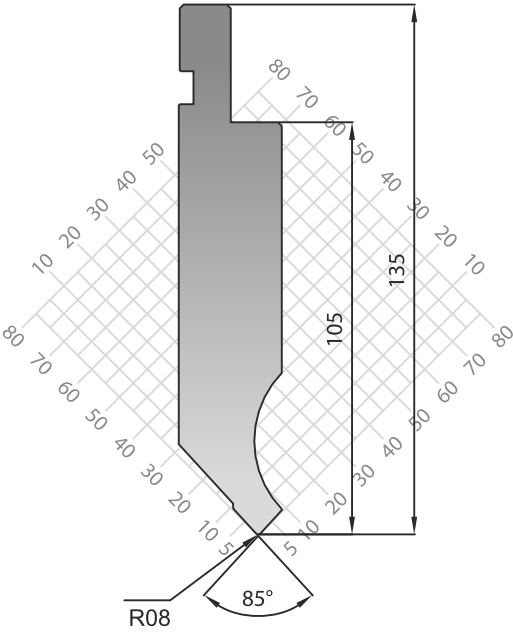
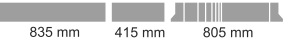
PT.97-A85-R08

47 ± 3 HRC
100 T/M



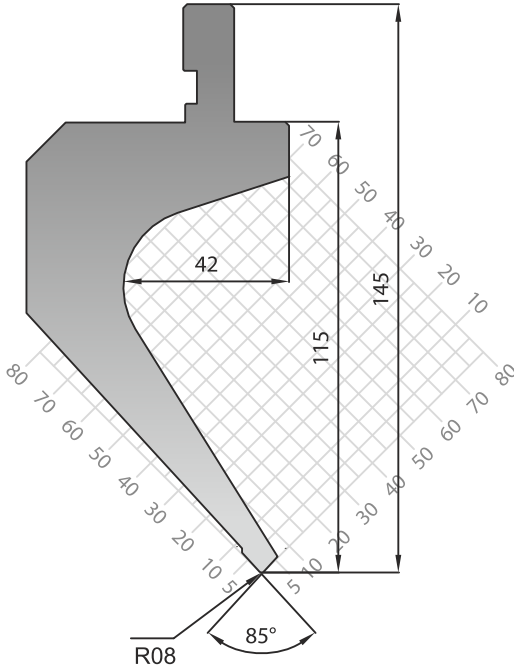
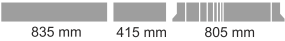
PT.135-A85-R08

47 ± 3 HRC
80 T/M



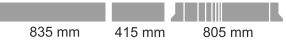
PST.135-A85-R08

47 ± 3 HRC
100 T/M



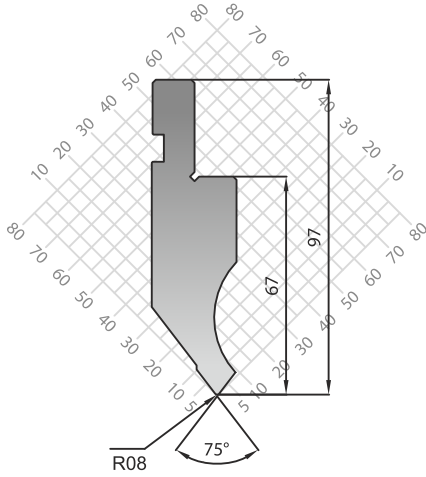
PT.145-A85-R08

47 ± 3 HRC
60 T/M



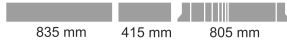


DURO

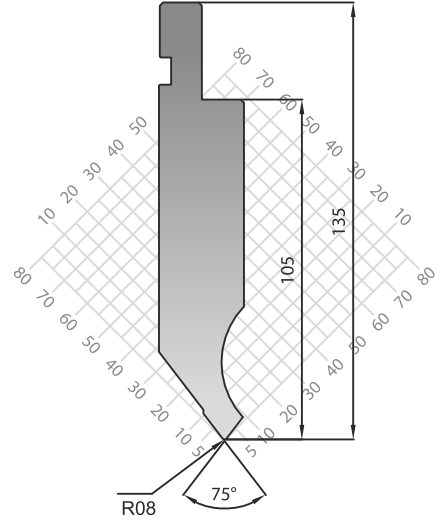


PT.97-A75-R08

47 ± 3 HRC



100 T/M

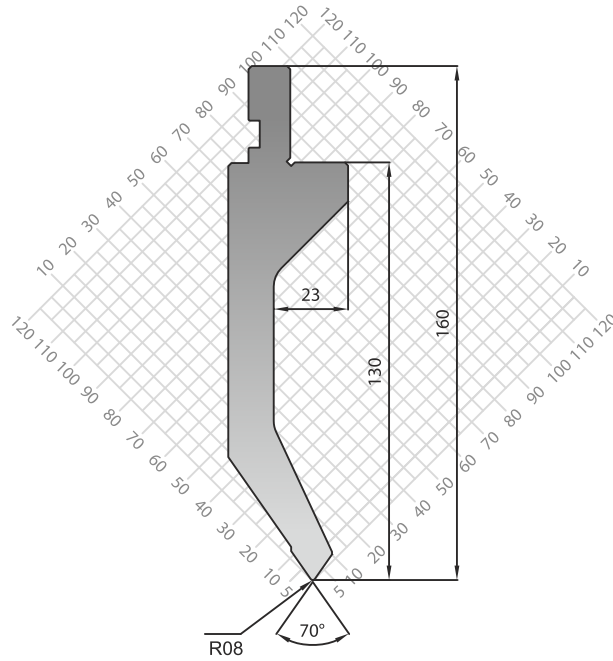


PT.135-A75-R08

47 ± 3 HRC



100 T/M



PT.160-A70-R08

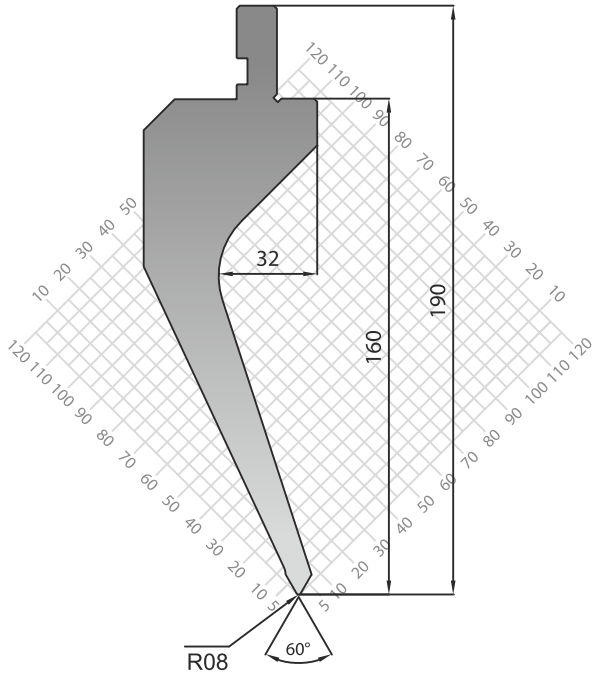
47 ± 3 HRC



45 T/M



DURO

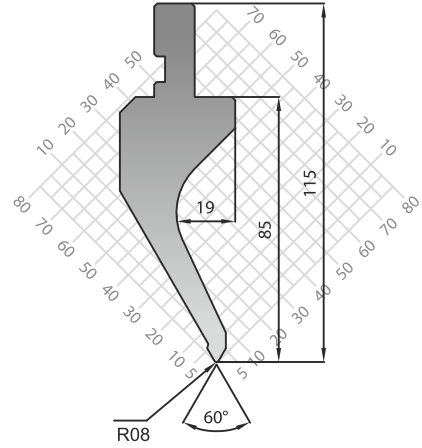


PT.190-A60-R08

47 ± 3 HRC



40 T/M

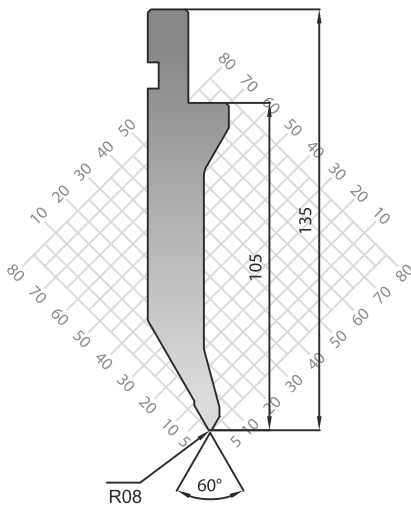


PT.115-A60-R08

47 ± 3 HRC

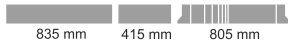


40 T/M

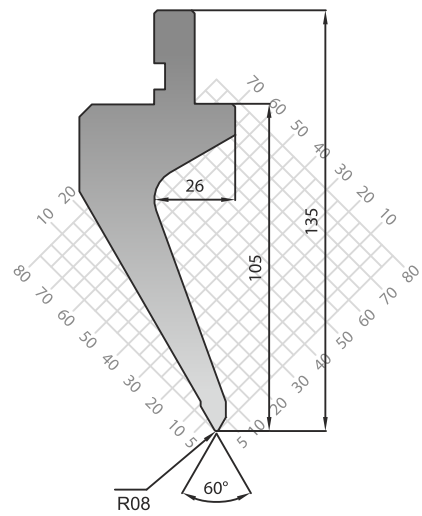


PT.135-A60-R08

47 ± 3 HRC



80 T/M

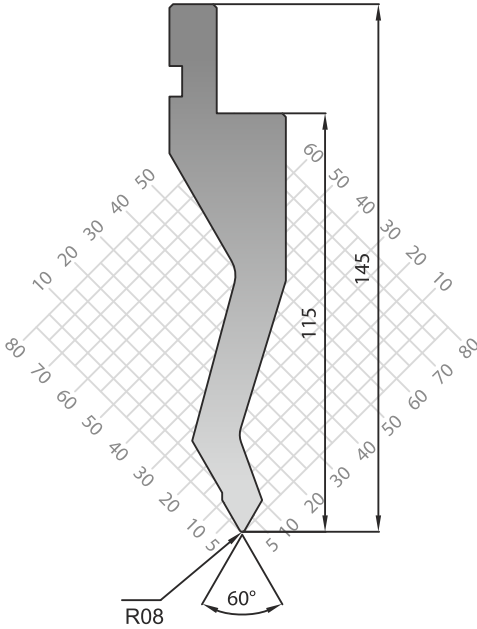


PGT.135-A60-R08

47 ± 3 HRC

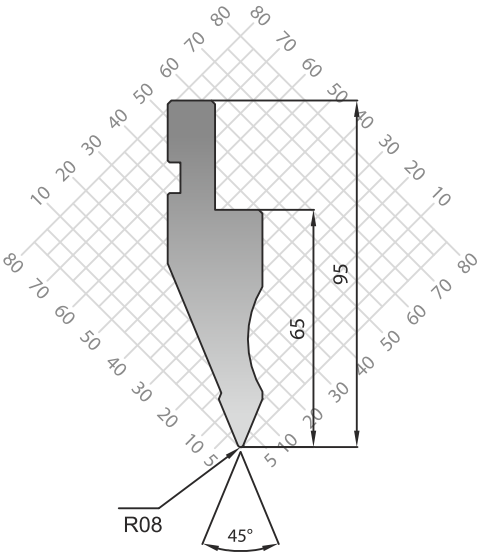


70 T/M



PT.145-A60-R08

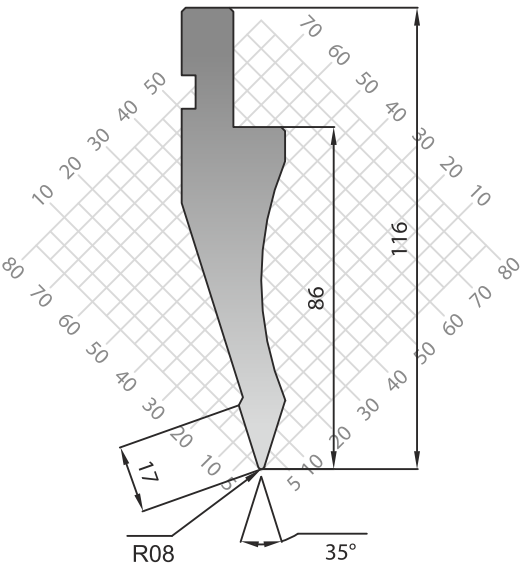
47 ± 3 HRC
70 T/M



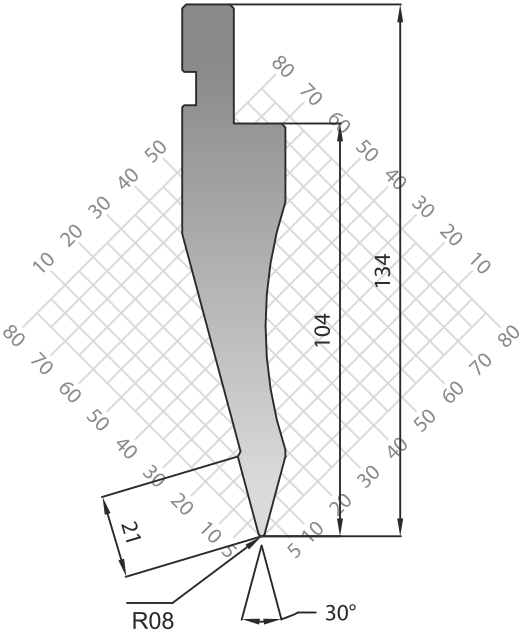
PT.95-A45-R08

47 ± 3 HRC
80 T/M

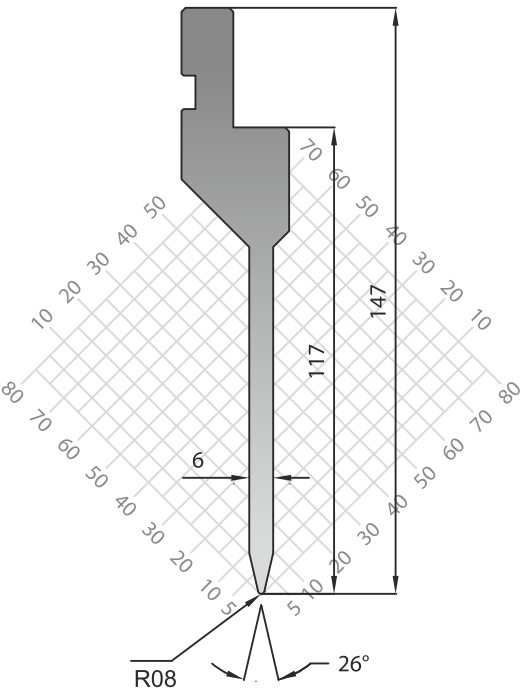




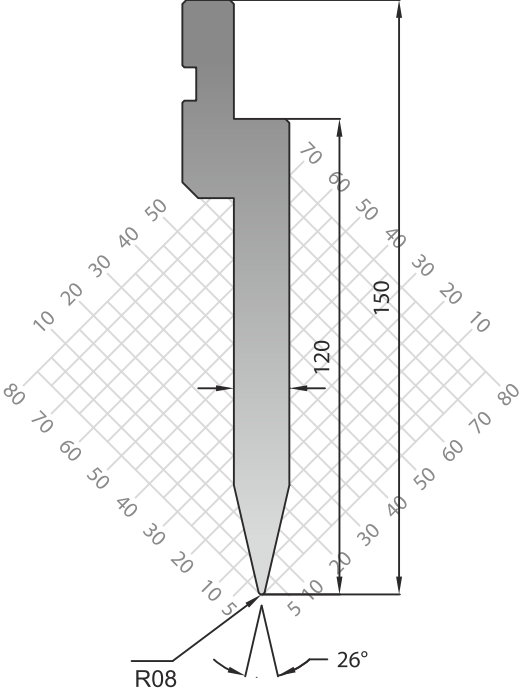
PT.116-A35-R08 47 ± 3 HRC
835 mm 415 mm 805 mm 70 T/M



PST.134-A30-R08 47 ± 3 HRC
835 mm 415 mm 805 mm 70 T/M



PT.147-A26-R08 47 ± 3 HRC
835 mm 415 mm 805 mm 100 T/M



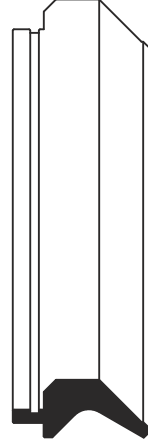
PUT.150-A26-R08 47 ± 3 HRC
835 mm 415 mm 805 mm 100 T/M



PT SERİSİ BİÇAKLAR

PARÇALI KALIP TİPLERİ

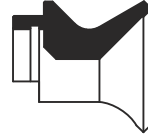
PT / SF



370



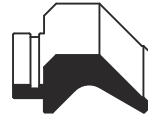
100 SOL



100 SAĞ



100



50



40



20

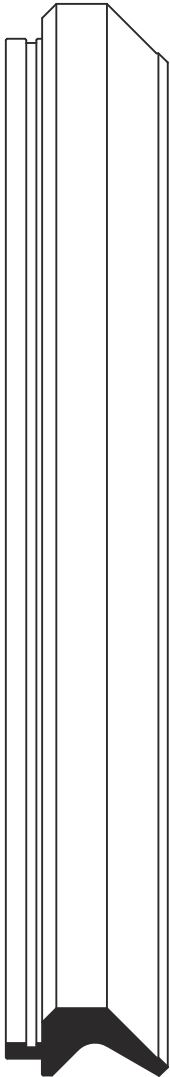


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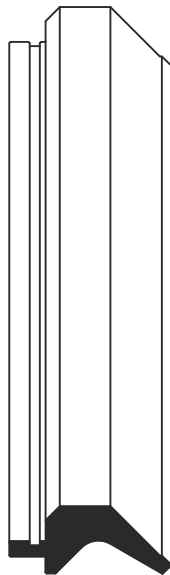


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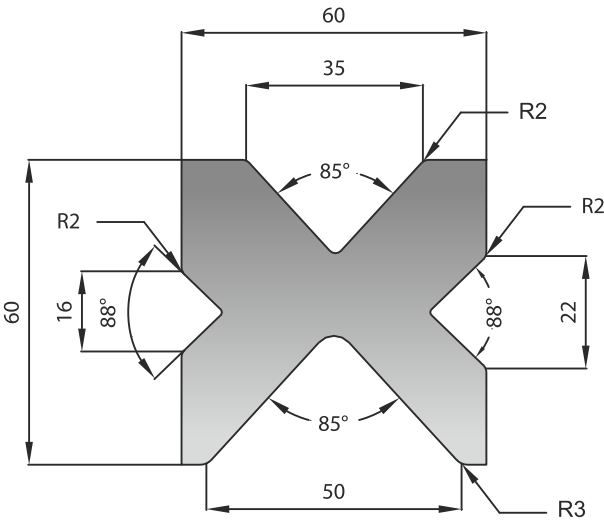
PT / SC



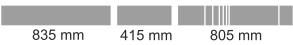
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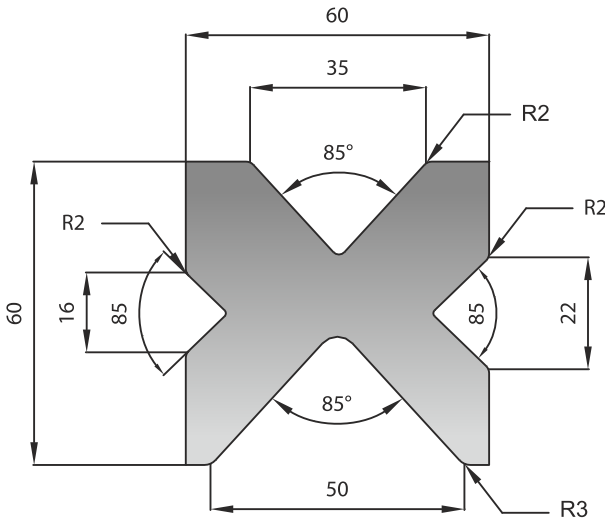
415



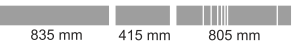
DM.60-4



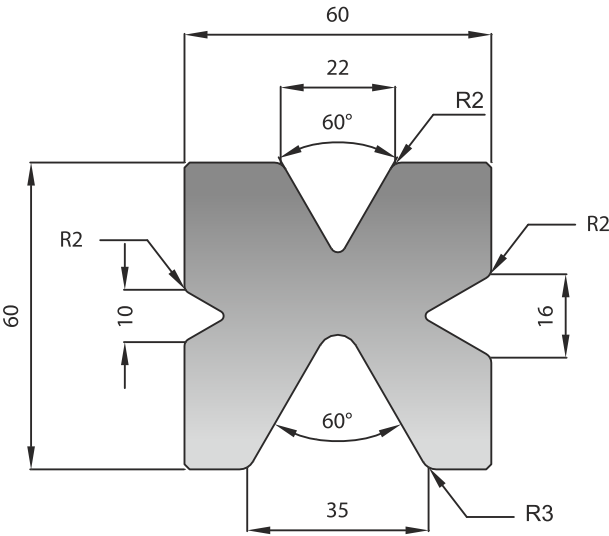
47 ± 3 HRC
80 T/M



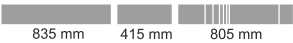
DM.60-4-A85



47 ± 3 HRC
80 T/M



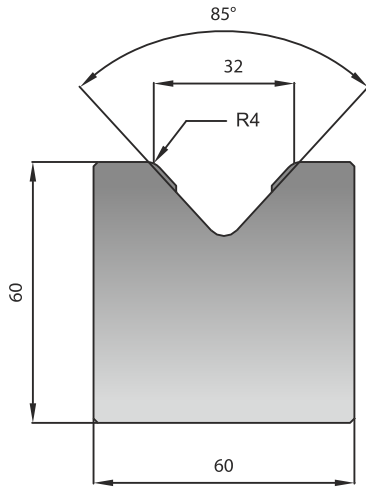
DM.60-4-A60



47 ± 3 HRC
60 T/M



DURO

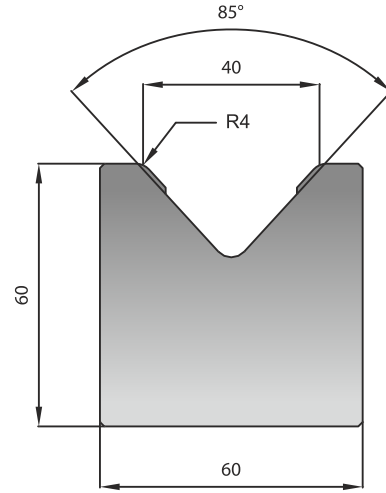


DM.60-A85-V32-R4

47 ± 3 HRC

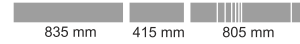


100 T/M

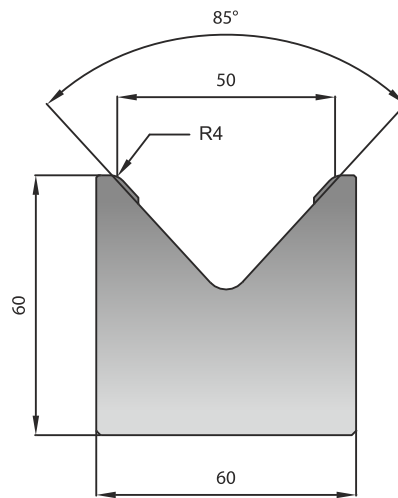


DM.60-A85-V40-R4

47 ± 3 HRC



100 T/M



DM.60-A85-V50-R4

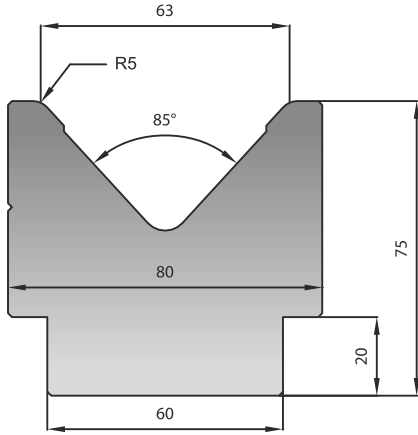
47 ± 3 HRC



100 T/M

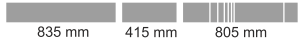


DURO

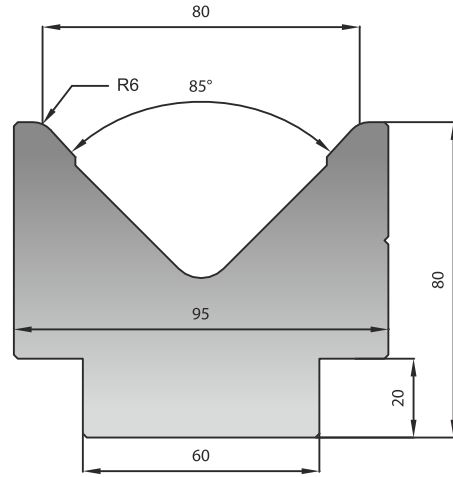


DM.75-A85-V63-R5

47 ± 3 HRC

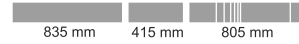


100 T/M

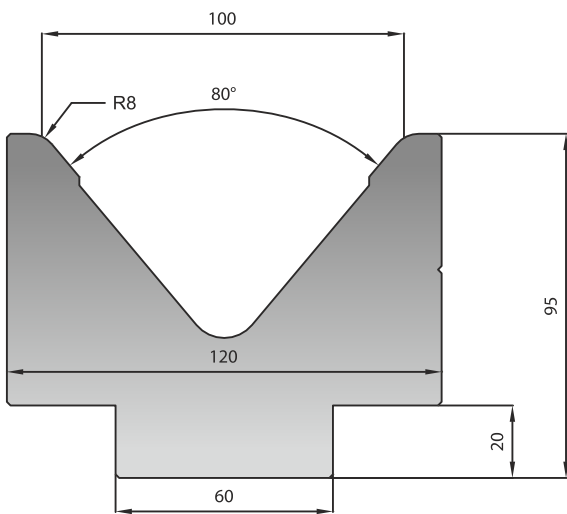


DM.80-A85-V80-R6

47 ± 3 HRC

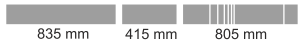


100 T/M

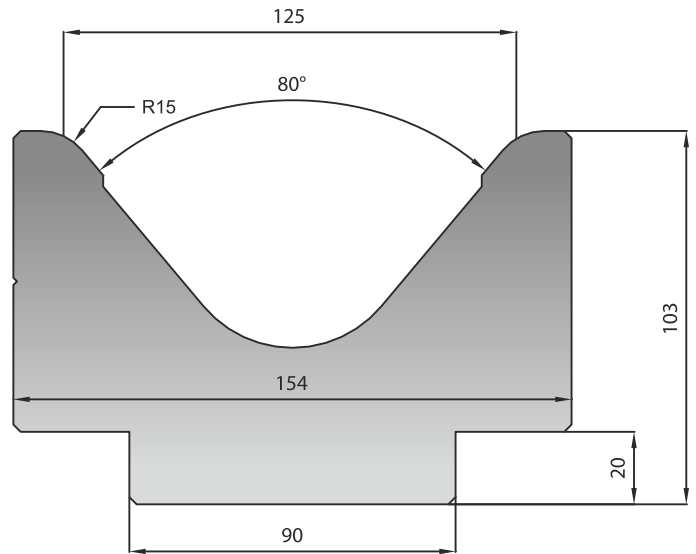


DM.95-A80-V100-R8

47 ± 3 HRC



100 T/M



DM.103-A80-V125-R15

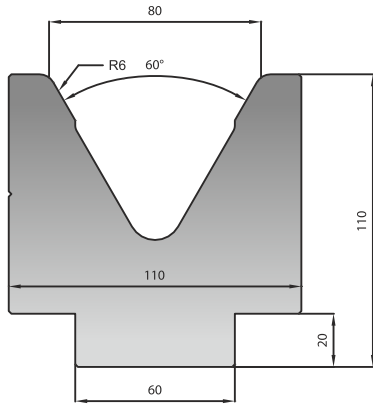
47 ± 3 HRC



100 T/M



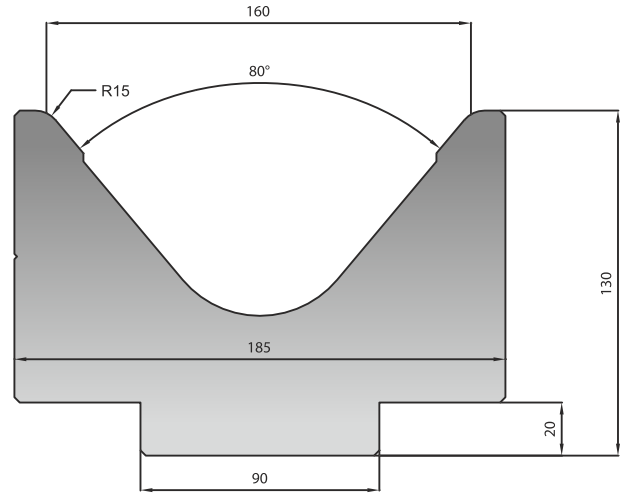
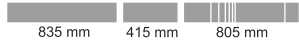
DURO



DM.110-A60-V80-R6

47 ± 3 HRC

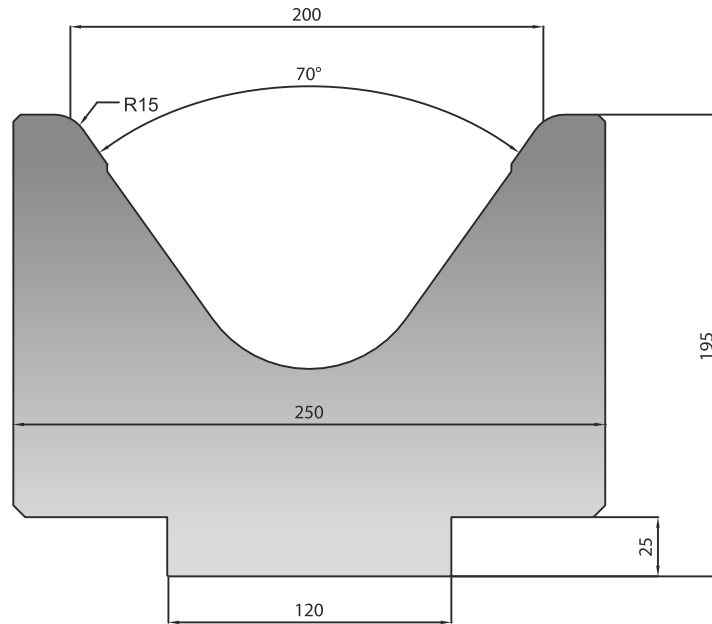
100 T/M



DM.130-A80-V160-R15

47 ± 3 HRC

100 T/M



DM.195-A70-V200-R15

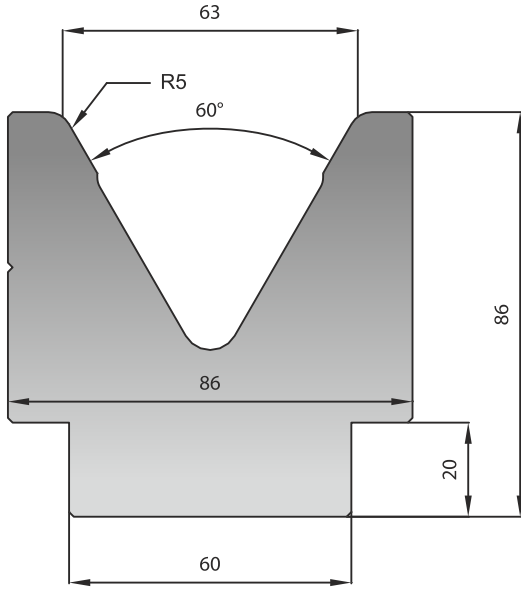
47 ± 3 HRC

180 T/M



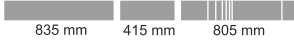


DURO

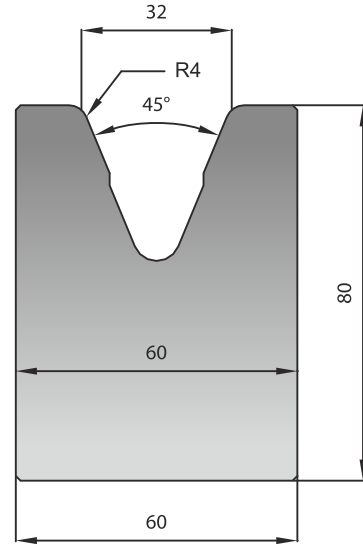


DM.86-A60-V63-R5

47 ± 3 HRC



100 T/M

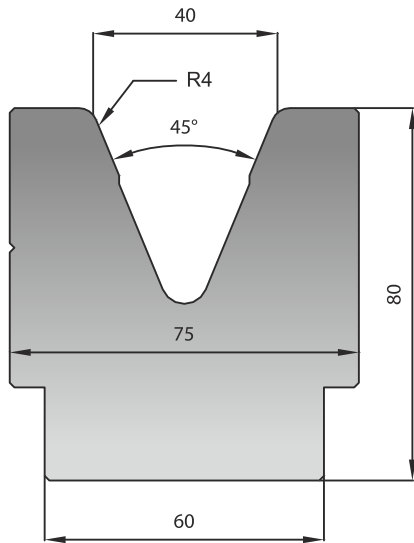


DM.80-A45-V32-R4

47 ± 3 HRC

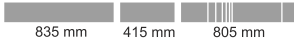


100 T/M

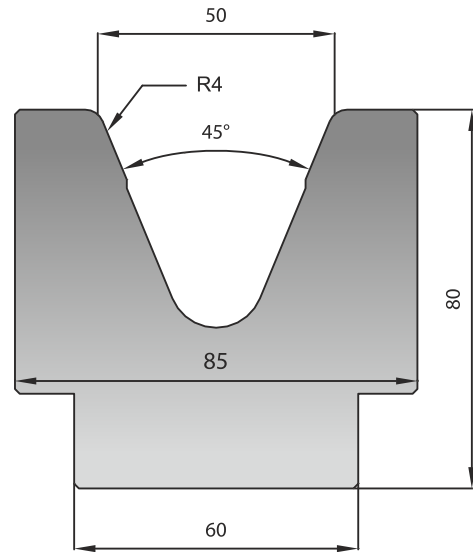


DM.80-A45-V40-R4

47 ± 3 HRC

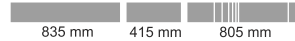


100 T/M



DM.80-A45-V50-R4

47 ± 3 HRC

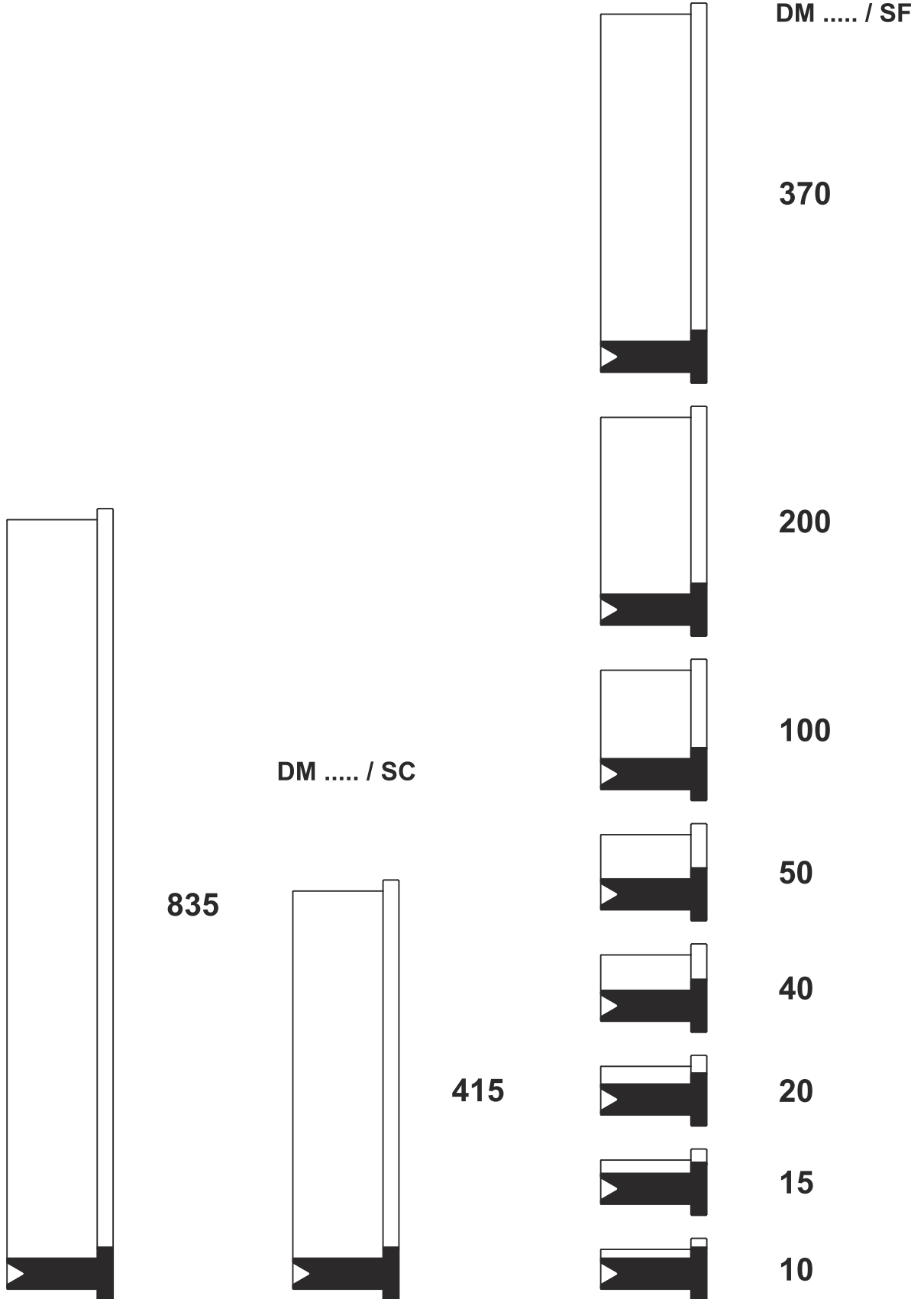


95 T/M



DM SERİSİ KALIPLAR

PARÇALI KALIP TİPLERİ





DURO

DT SERİSİ 80 mm

A	Ve mm	R mm	S mm	Ton
90°	6	0,4	14	100
	8	0,5	14	100
	10	0,6	18	100
	12	0,8	18	100
88°	6	0,4	14	100
	8	0,5	14	100
	10	0,8	18	100
	12	2,75	18	100
	16	2,75	24	100
	20	3	30	100
	25	3	35	100
	6	2,75	14	100
85°	8	2,75	14	100
	10	2,75	18	100
	12	2,75	18	100
	16	2,75	24	100
	20	3	30	100
	25	3	35	100
	6	2,75	14	95
	8	2,75	14	95
80°	10	2,75	18	95
	12	2,75	18	95
	16	2,75	24	95
	20	3	30	95
	25	3	35	95
	6	0,5	14	60
	8	0,8	14	60
	10	0,8	18	60
60°	12	0,8	18	60
	16	2,75	24	60
	20	3	30	60
	25	3	35	60
	6	1,5	14	60
	8	1,5	14	60
	10	2,75	18	60
	12	2,75	18	60
45°	6	0,8	14	50
	8	1	18	50
	10	1,2	18	50
	12	1,6	24	50
	16	2,75	26	50
	20	3	30	50
	25	3	37	50
	6	0,8	14	35
35°	8	1	16	35
	10	1,2	20	40
	12	1,6	22	40
	16	3	30	45
	20	3	35	50
	25	3	40	50
	6	0,6	14	35
	8	0,8	18	35
30°	10	1	24	50
	12	1,5	24	40
	16	2	30	45
	20	2,5	35	50
	25	3	40	50
	6	0,8	16	20
	8	1	20	20
	10	1,2	24	20
26°	12	1,6	26	20

DTR
DTR
DTR

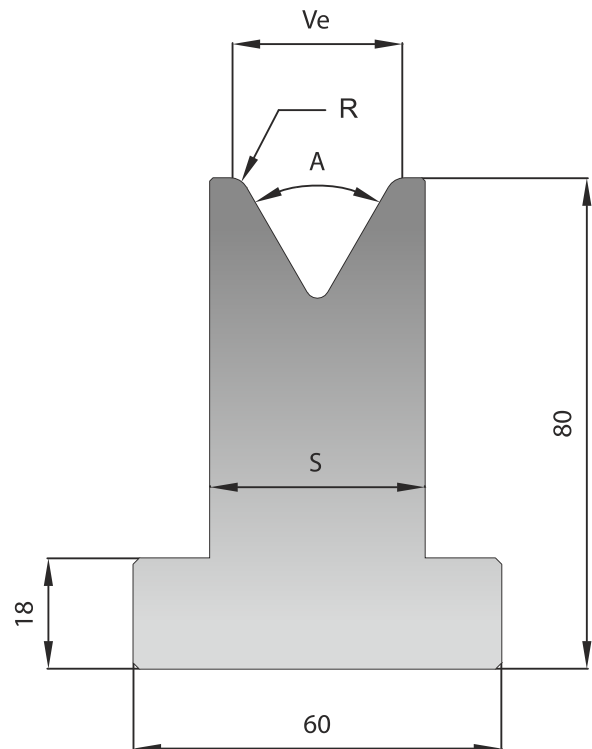
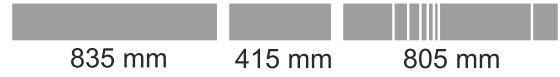
DTR
DTR
DTR
DTR



DT



DTR





DURO

DT SERİSİ 120 mm

A	Ve mm	R mm	S mm	Ton
90°	6	0,4	14	100
	8	0,5	14	100
	10	0,6	18	100
	12	0,8	18	100
88°	6	0,4	14	100
	8	0,5	14	100
	10	0,8	18	100
	12	2,75	18	100
	16	2,75	24	100
	20	3	30	100
	25	3	35	100
	6	2,75	14	100
85°	8	2,75	14	100
	10	2,75	18	100
	12	2,75	18	100
	16	2,75	24	100
	20	3	30	100
	25	3	35	100
	6	2,75	14	95
	8	2,75	14	95
80°	10	2,75	18	95
	12	2,75	18	95
	16	2,75	24	95
	20	3	30	95
	25	3	35	95
	6	0,5	14	60
	8	0,8	14	60
	10	0,8	18	60
60°	12	0,8	18	60
	16	2,75	24	60
	20	3	30	60
	25	3	35	60
	6	1,5	14	60
	8	1,5	14	60
	10	2,75	18	60
	12	2,75	18	60
45°	6	0,8	14	50
	8	1	18	50
	10	1,2	18	50
	12	1,6	24	50
	16	2,75	26	50
	20	3	30	50
	25	3	37	50
	6	0,8	14	35
35°	8	1	16	35
	10	1,2	20	40
	12	1,6	22	40
	16	3	30	45
	20	3	35	50
	25	3	40	50
	6	0,6	14	35
	8	0,8	18	35
30°	10	1	24	50
	12	1,5	24	40
	16	2	30	45
	20	2,5	35	50
	25	3	40	50
	6	0,8	16	20
	8	1	20	20
	10	1,2	24	20
26°	12	1,6	26	20

DTR
DTR
DTR

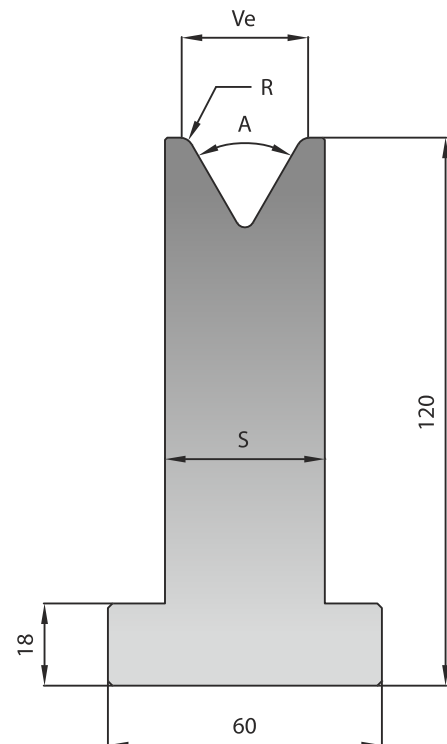
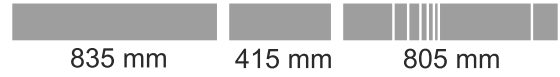
DTR
DTR
DTR
DTR



DT



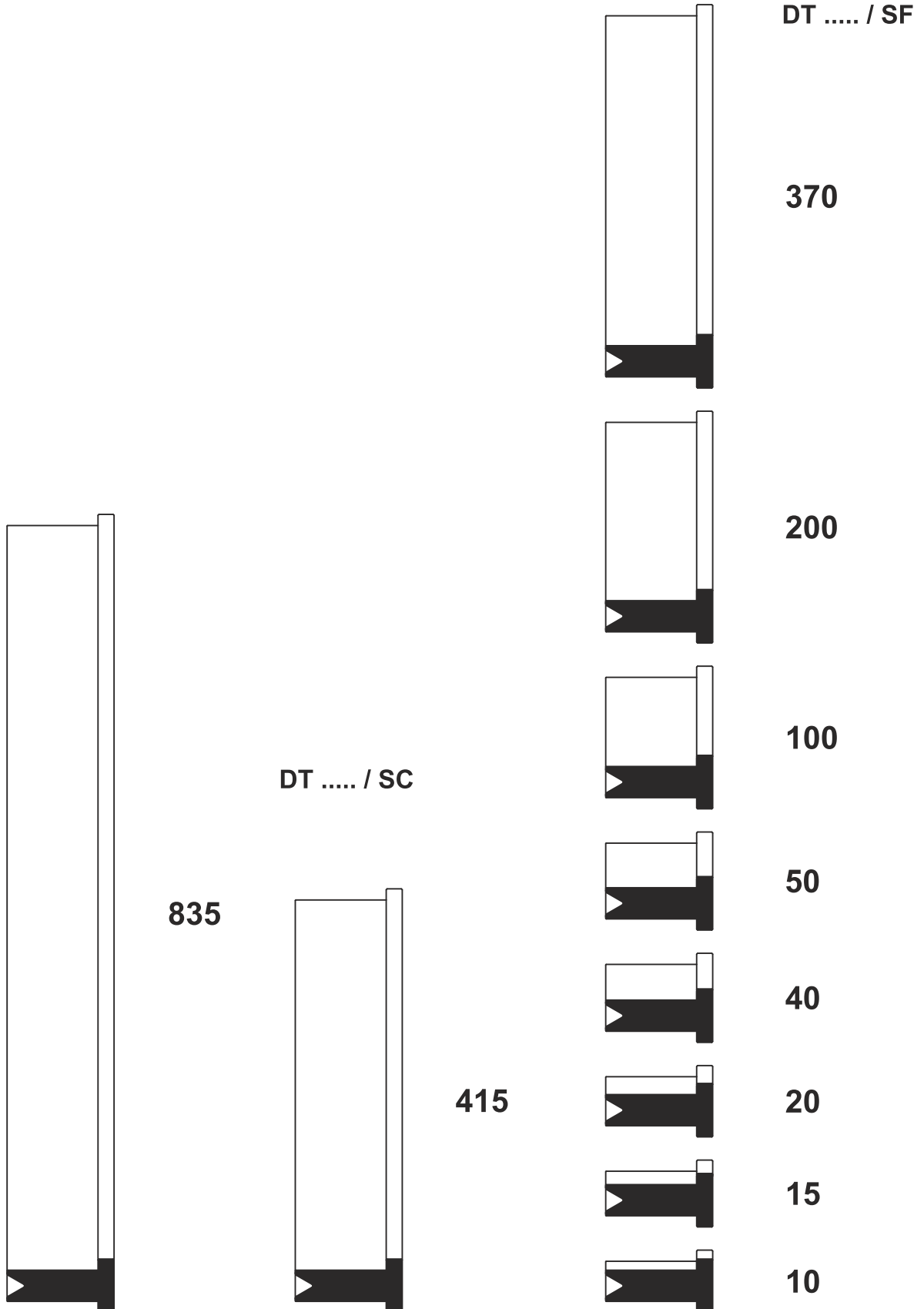
DTR

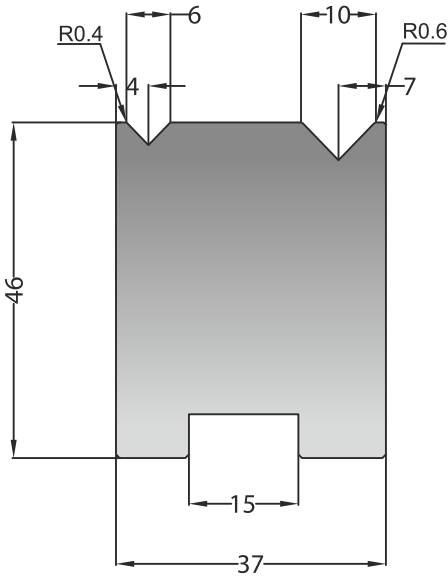




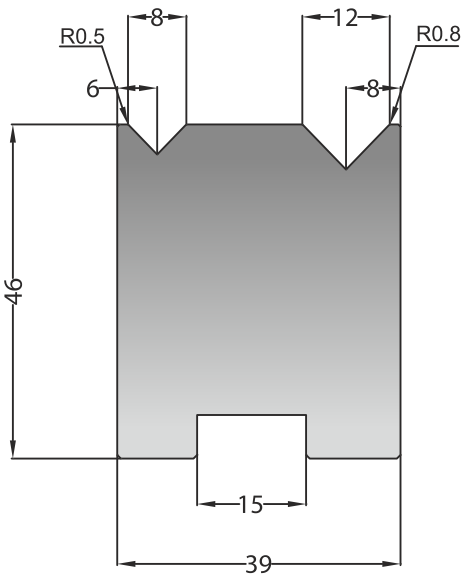
DT SERİSİ KALIPLAR

PARÇALI KALIP TİPLERİ

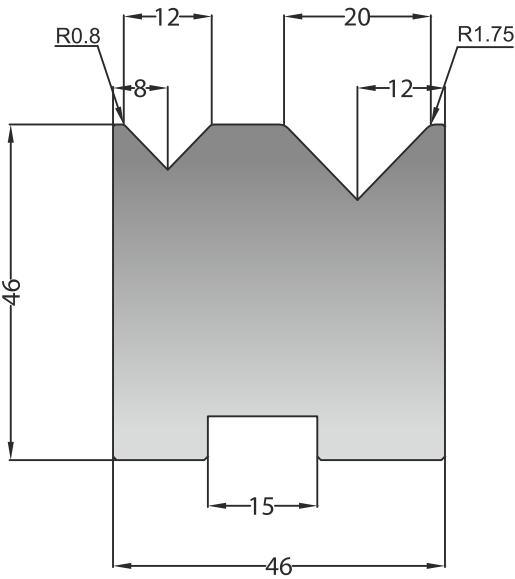




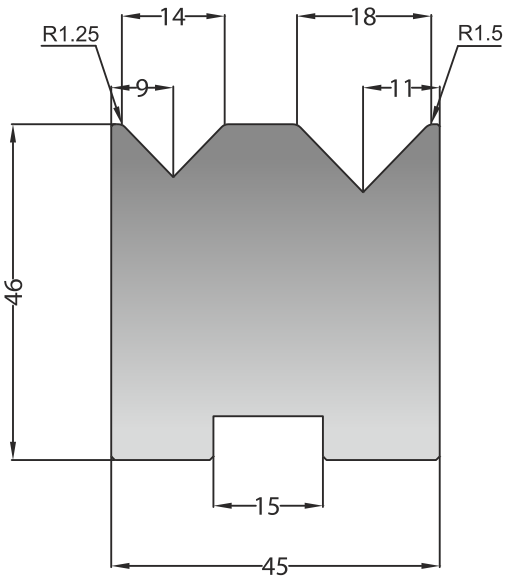
AMDT.46-A88-V6.10 47 ± 3 HRC
835 mm 415 mm 805 mm 80 T/M



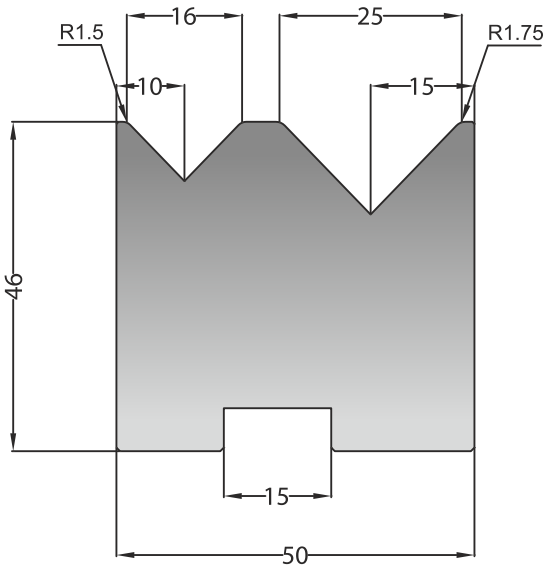
AMDT.46-A88-V8.12 47 ± 3 HRC
835 mm 415 mm 805 mm 80 T/M



AMDT.46-A88-V12.20 47 ± 3 HRC
835 mm 415 mm 805 mm 80 T/M

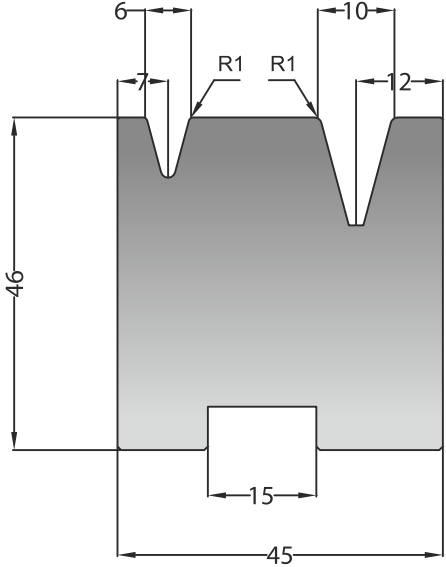


AMDT.46-A88-V14.18 47 ± 3 HRC
835 mm 415 mm 805 mm 80 T/M



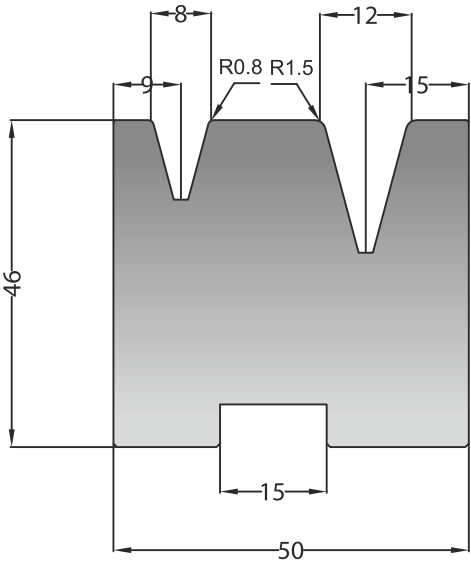
AMDT.46-A88-V16.25

47 ± 3 HRC
80 T/M



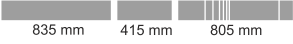
AMDT.46-A30-V6.10

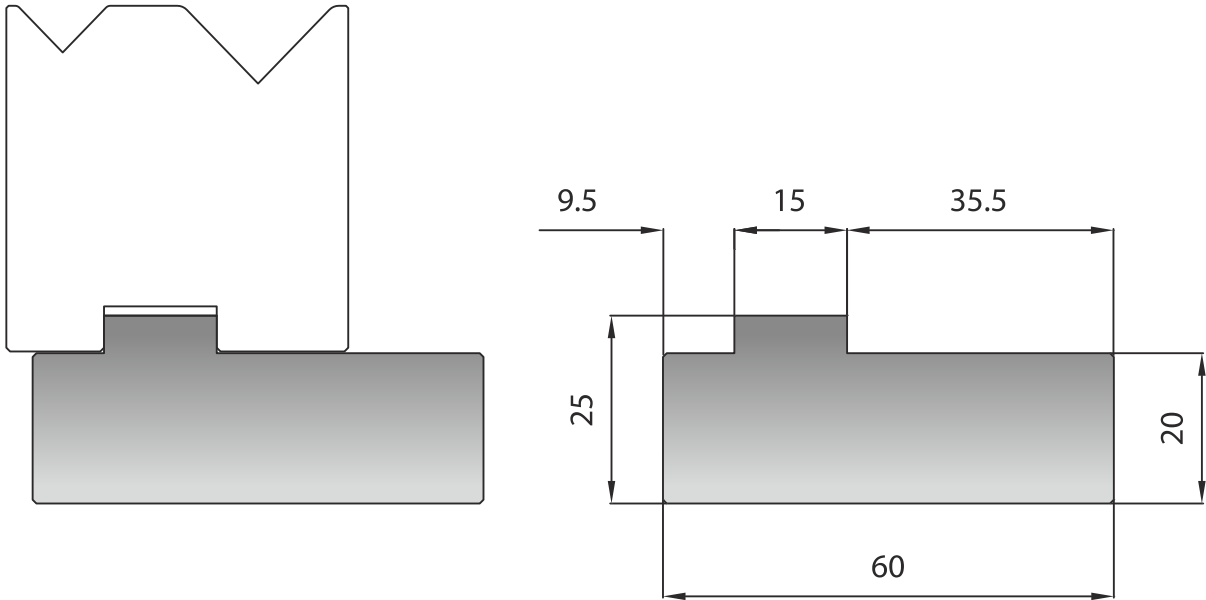
47 ± 3 HRC
40 T/M



AMDT.46-A30-V8.12

47 ± 3 HRC
40 T/M

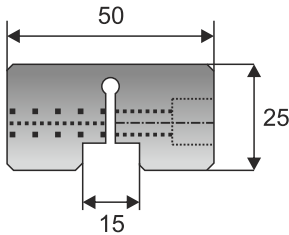
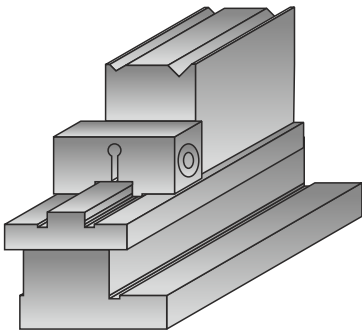




AMDT-PM.60

835 mm

47 ± 3 HRC
80 T/M



AMDT-PB.60

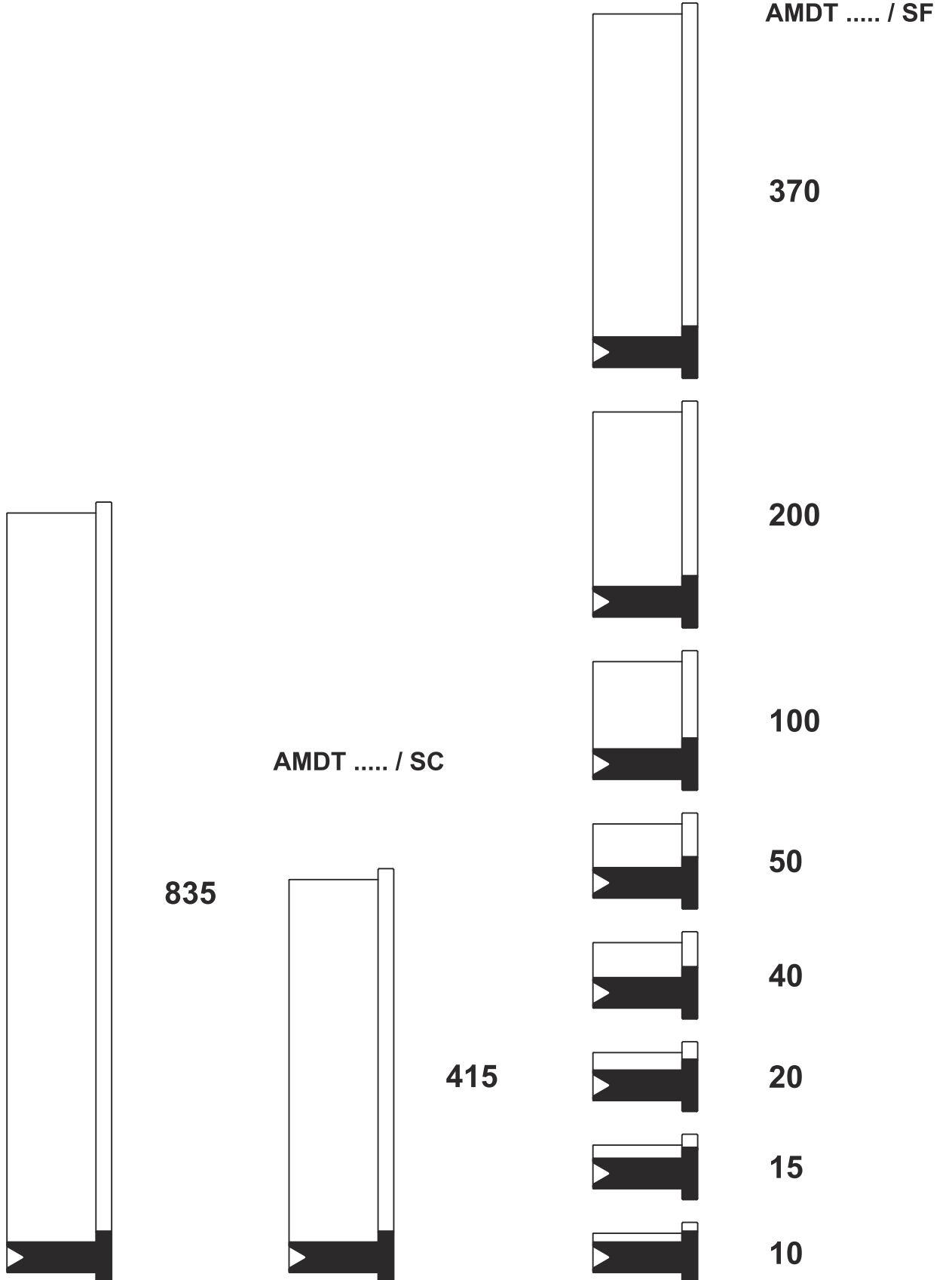
835 mm

47 ± 3 HRC
20 T/M



AMDT SERİSİ KALIPLAR

PARÇALI KALIP TİPLERİ



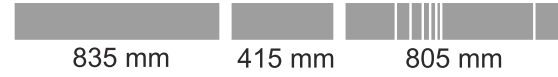
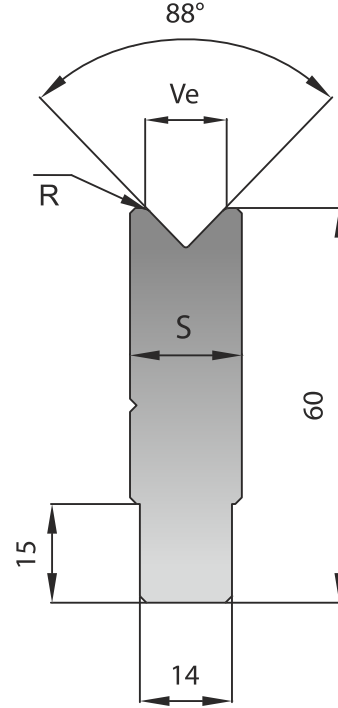


DURO

DT.SU SERİSİ

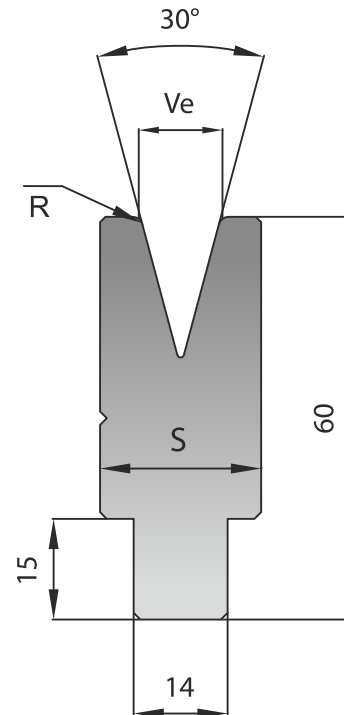
88°

Ve	R	S	Ton
mm	mm	mm	
4	0,60	14	100
6	0,80	14	100
8	1,00	14	100
10	1,20	18	100
12	1,50	18	100
16	2,00	24	100
20	2,00	30	100
25	3,00	35	100



30°

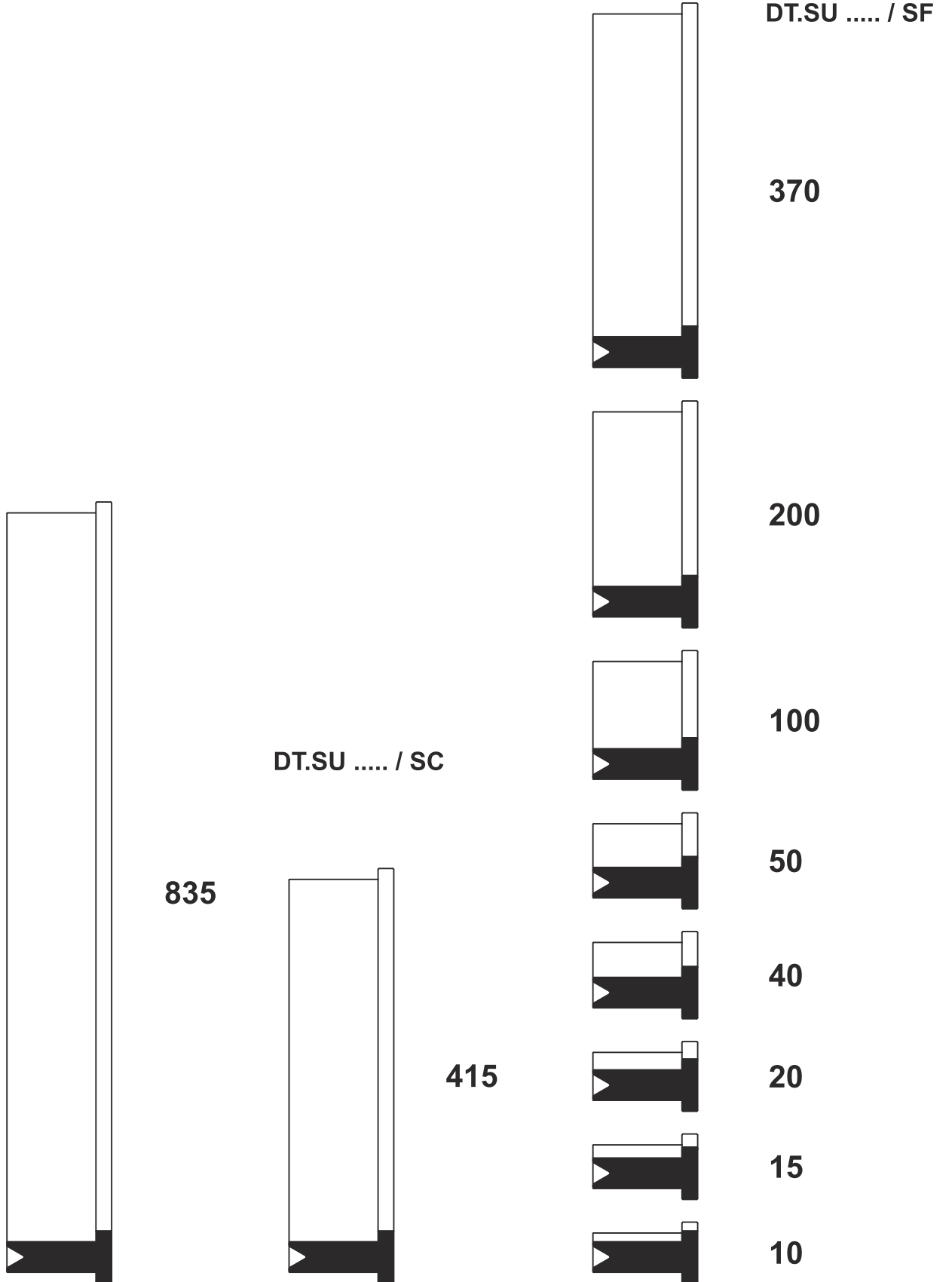
Ve	R	S	Ton
mm	mm	mm	
6	0,60	14	35
8	0,80	18	35
10	1,00	24	50
12	1,50	24	40
16	2,00	30	45
20	2,50	35	50
25	3,00	45	50





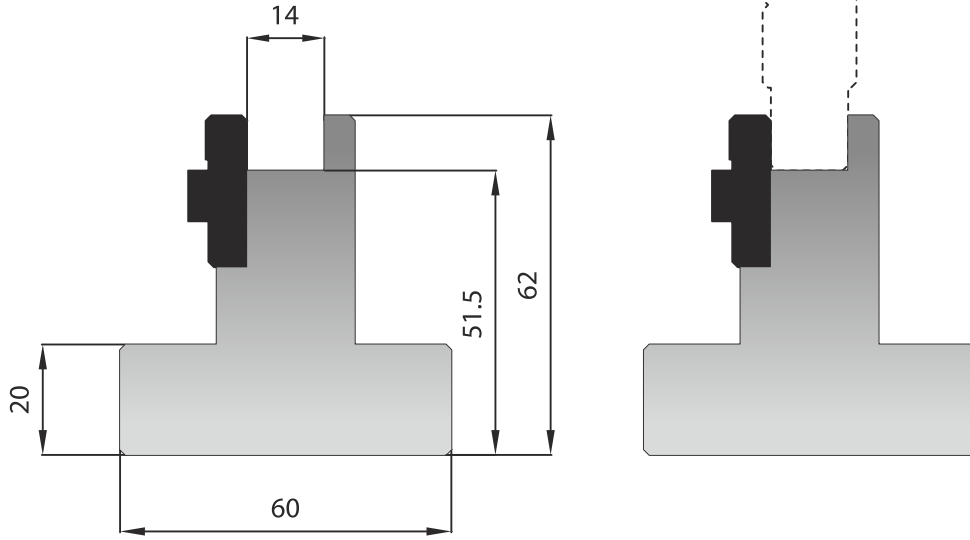
DT.SU SERİSİ KALIPLAR

PARÇALI KALIP TİPLERİ





DT.SU SERİSİ / BAĞLAMA APARATI



DT.SU-14

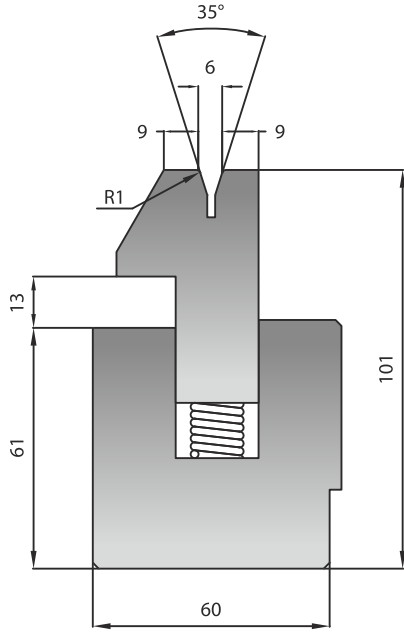
835 mm 415 mm

47 ± 3 HRC

100 T/M



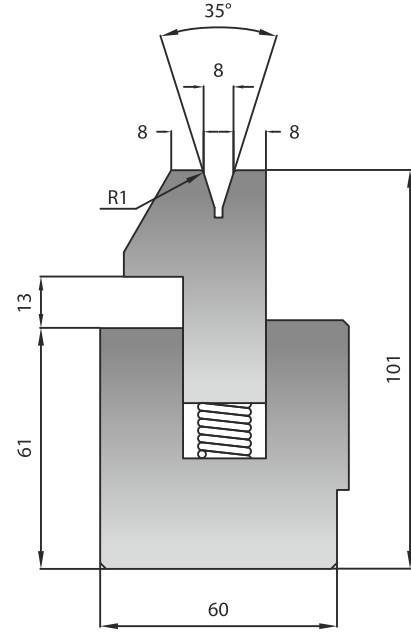
DURO



HDS.101-A35-V6-R1

47 ± 3 HRC
60 T/M

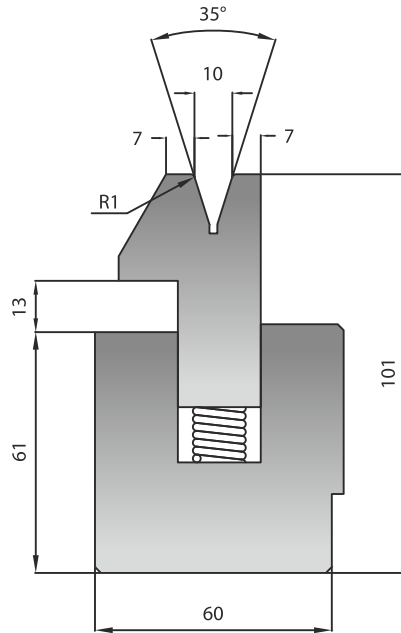
835 mm



HDS.101-A35-V8-R1

47 ± 3 HRC
60 T/M

835 mm



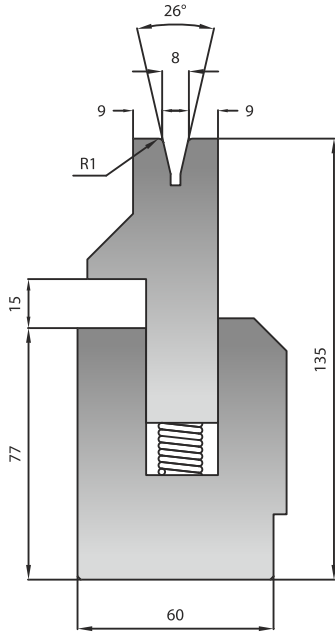
HDS.101-A35-V10-R1

47 ± 3 HRC
60 T/M

835 mm



DURO

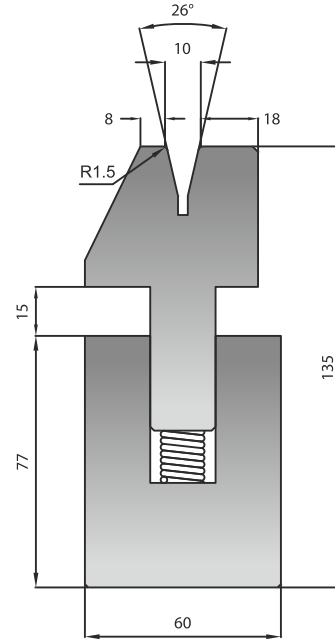


HDS.135-A26-V8-R1

47 ± 3 HRC

40 T/M

835 mm

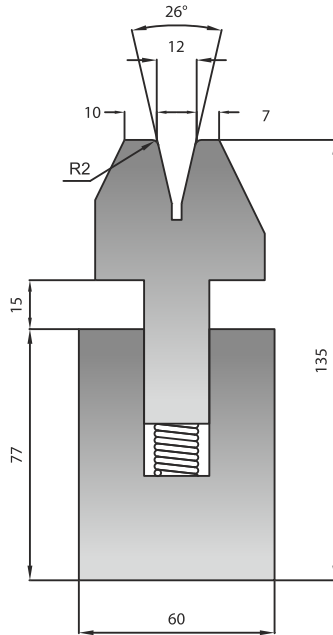


HDS.135-A26-V10-R1.5

47 ± 3 HRC

100 T/M

835 mm



HDSA.135-A26-V12-R2

47 ± 3 HRC

100 T/M

835 mm



DURO

HDS SERİSİ / Kalınlık - Tonaj Çizelgesi



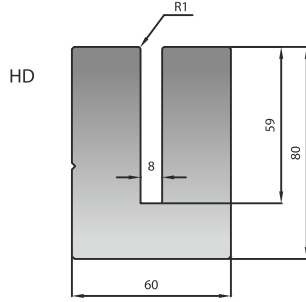
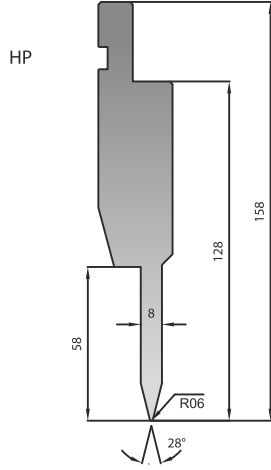
S	A	St45	St70
mm	mm	Ton	Ton
0,60	3,00	9	15
0,80	3,00	12	20
1,00	3,50	15	25
1,25	3,50	17	26
1,50	4,60	22	38
2,00	5,50	30	50
2,50	6,50	55	*
3,00	8,00	70	*



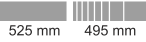
S	A	St45	St70
mm	mm	Ton	Ton
0,60	1,20	23	35
0,80	1,60	32	50
1,00	2,00	40	60
1,25	2,50	50	80
1,50	3,00	63	95
2,00	4,00	80	130
2,50	5,00	90	*
3,00	6,00	100	*



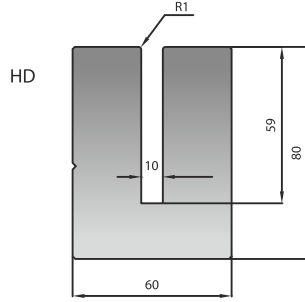
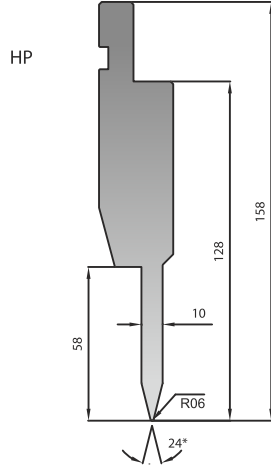
DURO



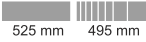
HP.134-A28-S8-R06
HD.134-A28-V8-R1



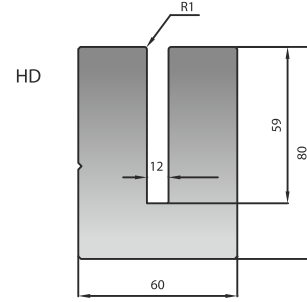
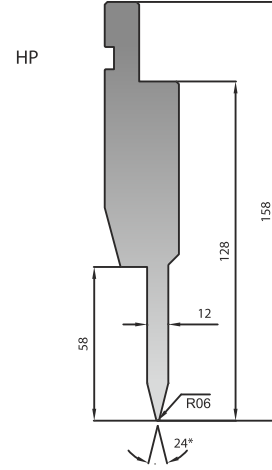
47 ± 3 HRC



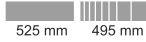
HP.134-A24-S10-R06
HD.134-A24-V10-R1



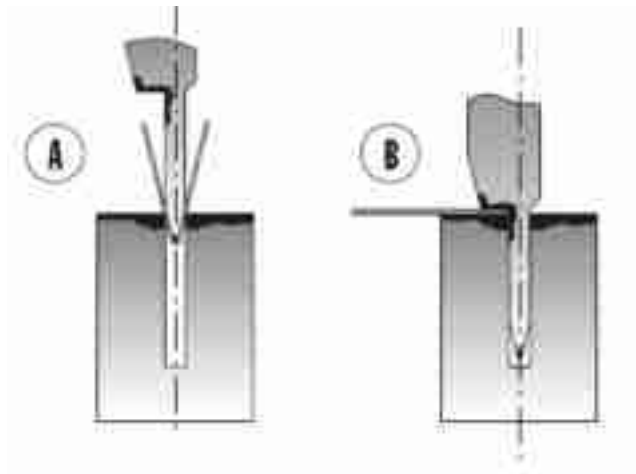
47 ± 3 HRC



HP.134-A24-S12-R06
HD.134-A24-V12-R1



47 ± 3 HRC



DAYANIM

HP 80 T/M

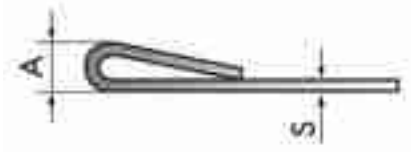
DAYANIM

HP 100 T/M



DURO

HP HD SERİSİ / Kalınlık - Tonaj Çizelgesi



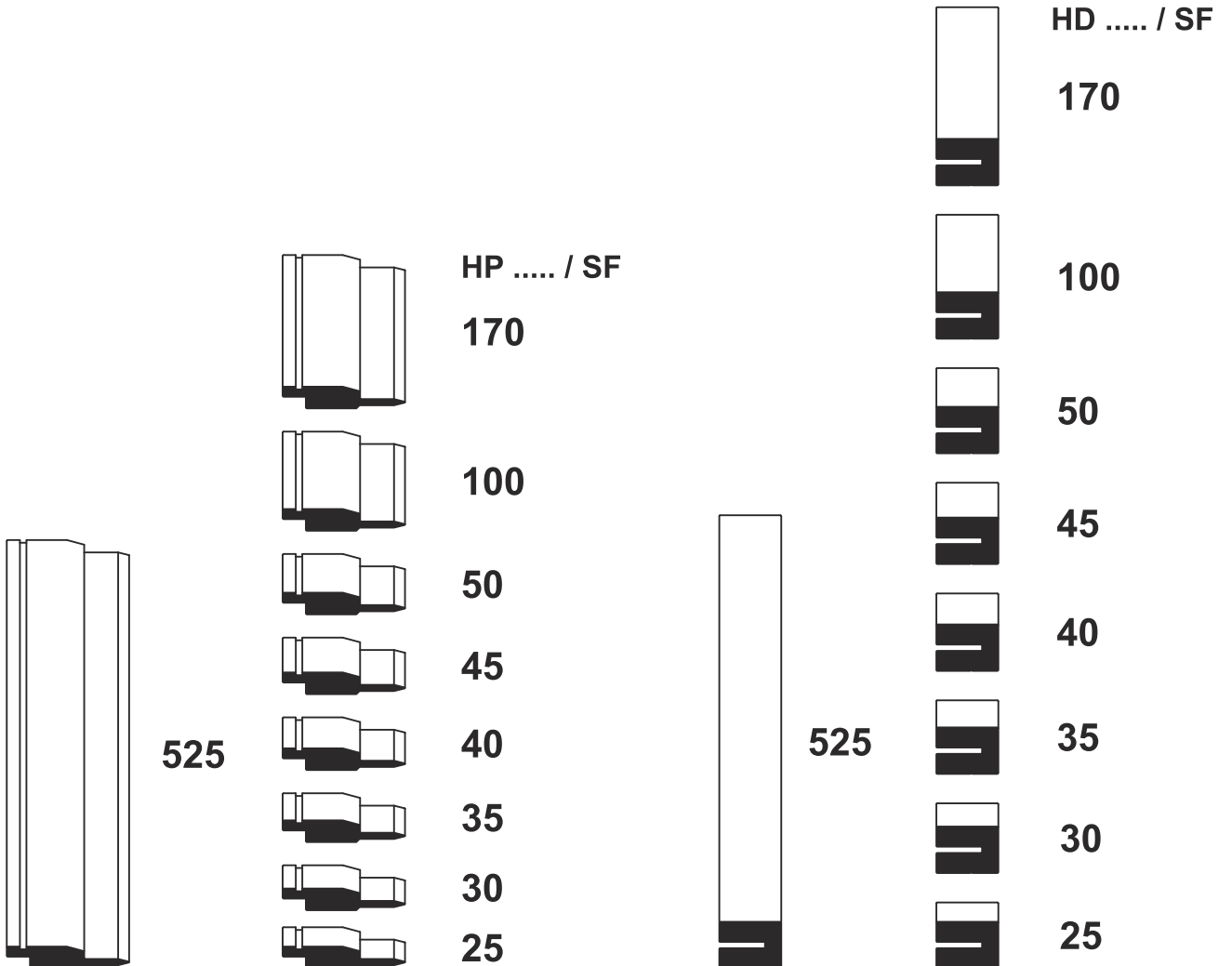
S	A	St45	St70
mm	mm	Ton	Ton
0,60	3,00	9	15
0,80	3,00	12	20
1,00	3,50	15	25
1,25	3,50	17	26
1,50	4,60	22	38
2,00	5,50	30	50



S	A	St45	St70
mm	mm	Ton	Ton
0,60	1,20	23	35
0,80	1,60	32	50
1,00	2,00	40	60
1,25	2,50	50	80
1,50	3,00	63	95
2,00	4,00	80	130

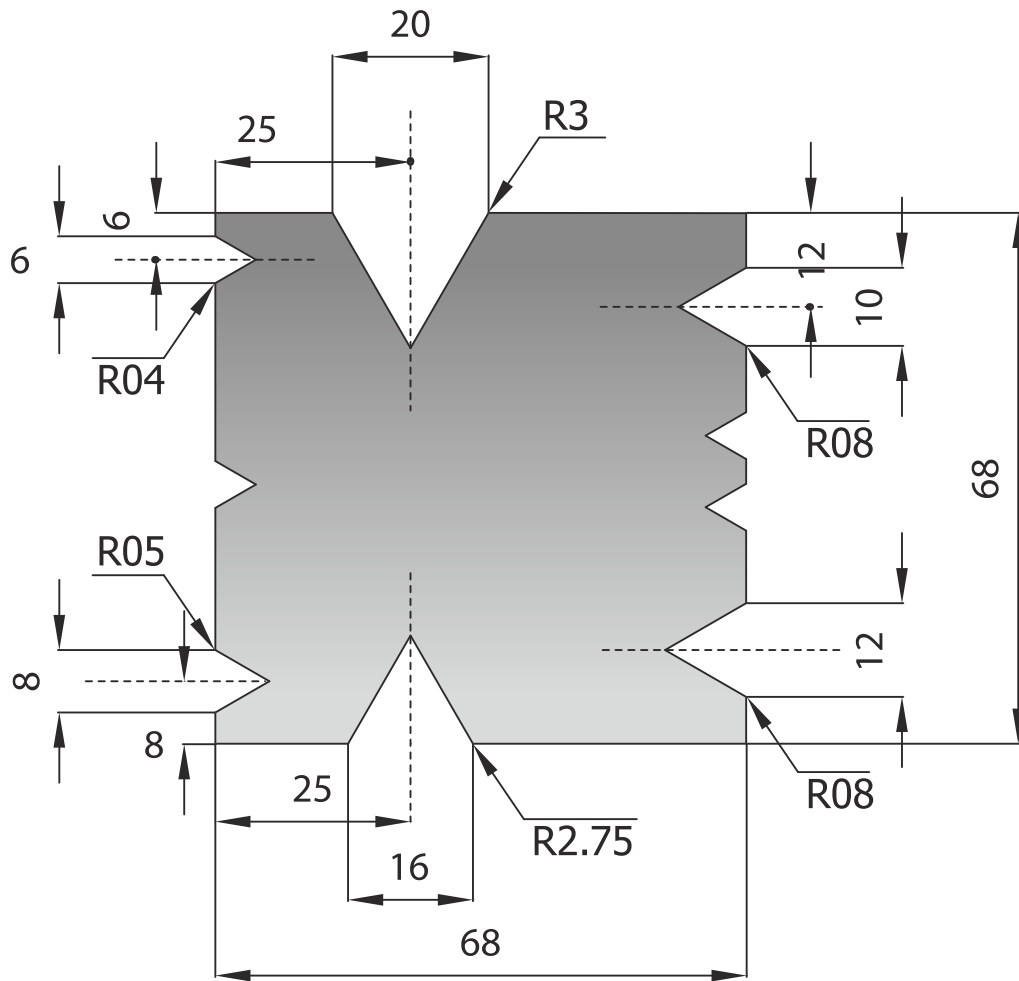
HP HD SERİSİ KALIPLAR

PARÇALI KALIP TİPLERİ





DURO



DT.70 - (88 / 60 / 45 / 35)

525 mm

47 ± 3 HRC

Açı mm	Ve mm	Max Ton
88°	6	100
	8	100
	10	100
	12	100
	16	100
	20	100

Açı	Ve	Max
mm	mm	Ton
60°	6	60
	8	60
	10	60
	12	60
	16	80
	20	80

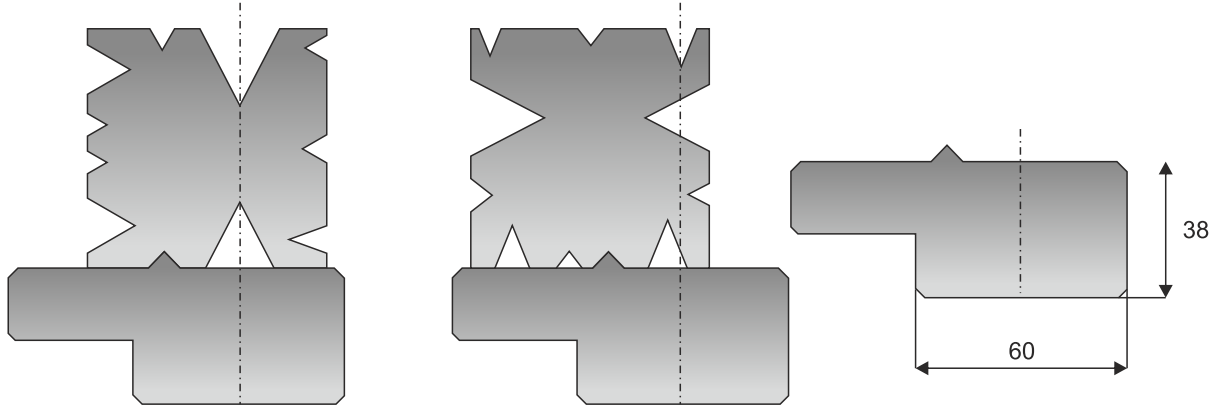
Açı	Ve	Max
mm	mm	Ton
45°	6	40
	8	40
	10	50
	12	50
	16	70
	20	70

Açı	Ve	Max
mm	mm	Ton
35°	6	30
	8	35
	10	45
	12	45
	16	50
	20	50



DURO

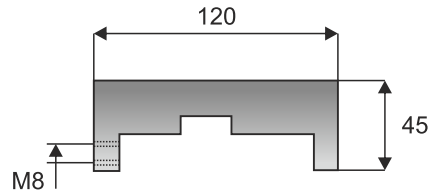
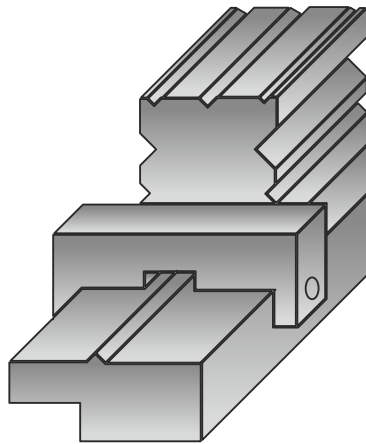
DT.70 SERİSİ / BAĞLAMA APARATLARI



DT-SU.70

525 mm

47 ± 3 HRC



DT-PB.70

525 mm

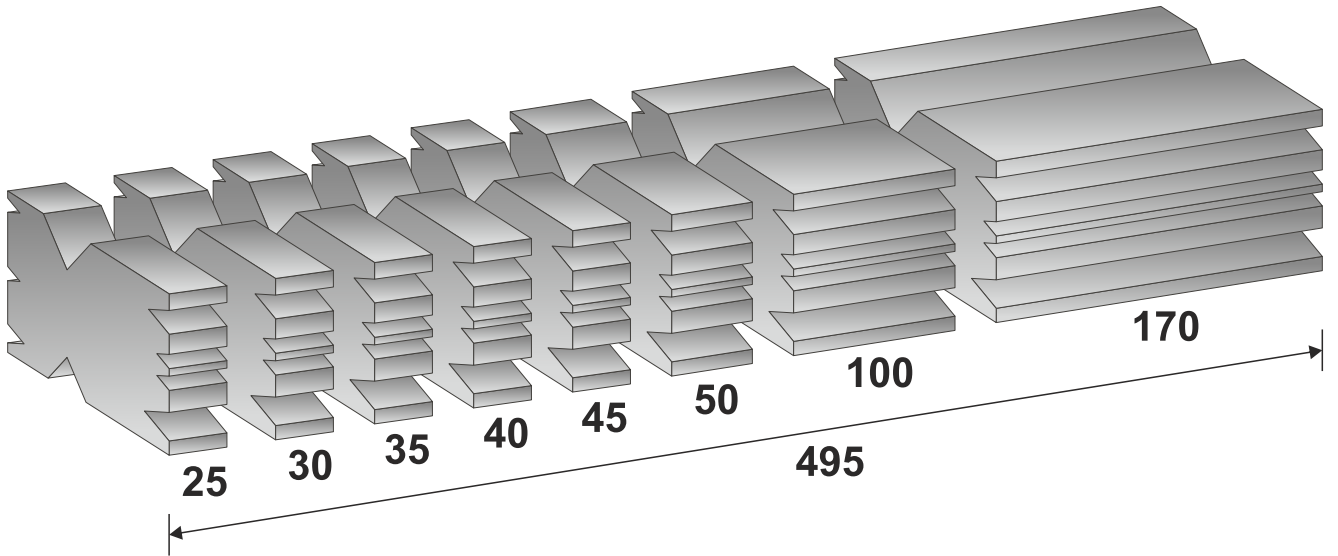
47 ± 3 HRC



DT.70 SERİSİ / MULTİ KALIPLAR

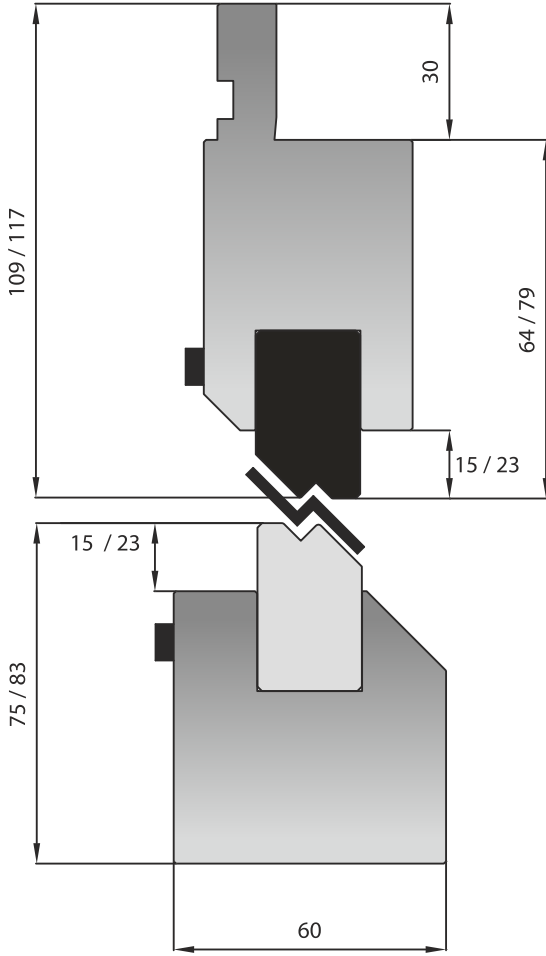
PARÇALI KALIP TİPLERİ

DT.70 / SF





DURO



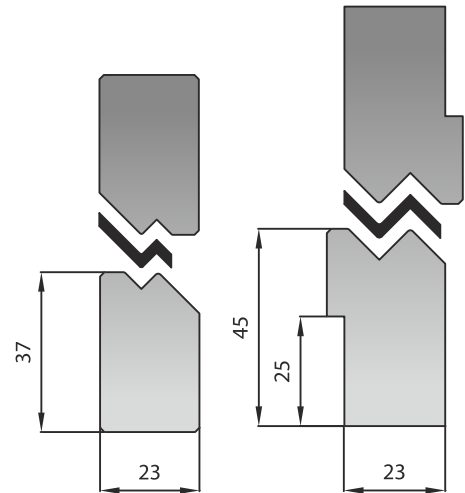
DZ

835 mm

47 ± 3 HRC

100 T/M

Z	Açı	S	Max
min	mm	mm	Ton
1,00	160	1,2	100
1,50	160	1,5	100
2,00	150	1,4	100
2,50	140	1,3	100
3,00	90	1	100
3,50	90	1	100
4,00	90	1,2	100
4,50	90	1,2	100
5,00	90	1,3	100
5,50	90	1,4	100
6,00	90	1,5	100
6,50	90	1,5	100
7,00	90	1,5	100
7,50	90	1,6	100
8,00	90	1,6	100
9,00	90	1,8	100
10,00	90	1,8	100
11,00	90	2	100
12,00	90	2	100
13,00	90	2	100
14,00	90	2	100
15,00	90	2,3	100

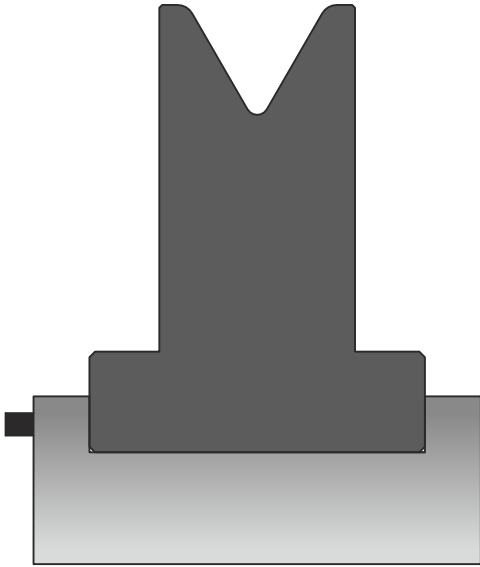
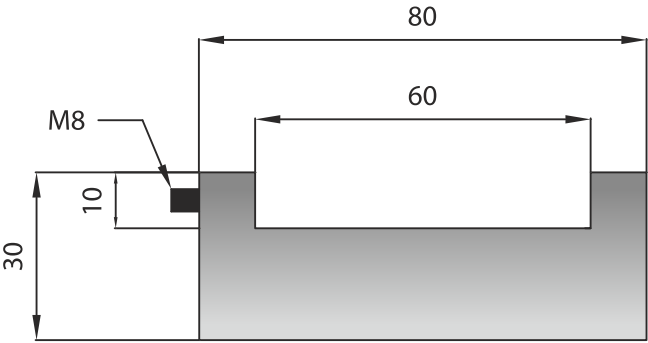


DZ-1 / DZ-2

835 mm

47 ± 3 HRC

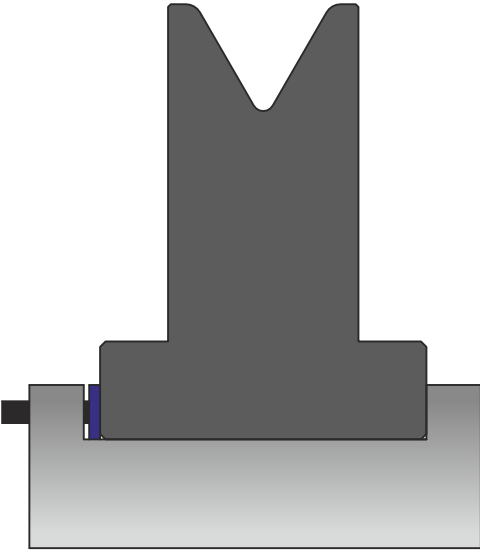
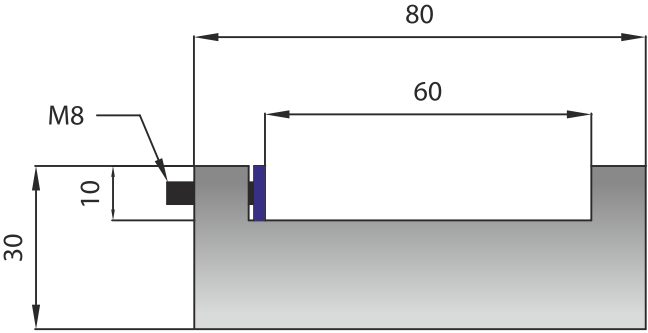
100 T/M



DH.1050-R



47 ± 3 HRC



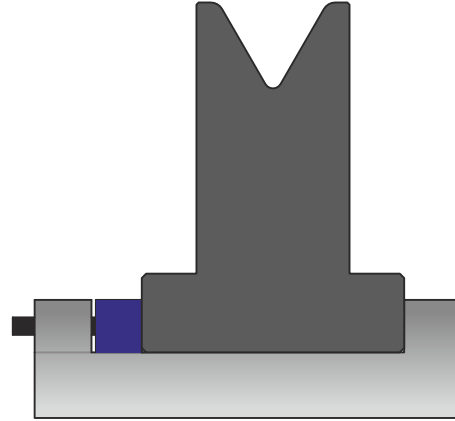
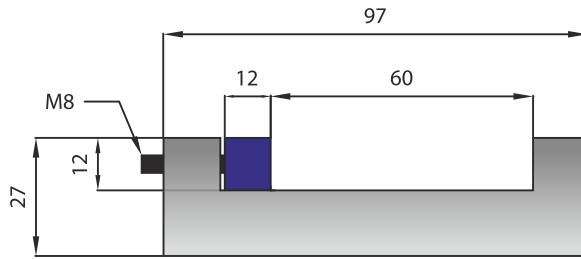
DH.1050-RS



47 ± 3 HRC



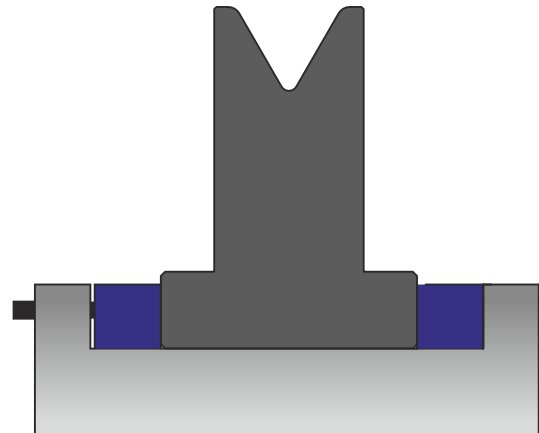
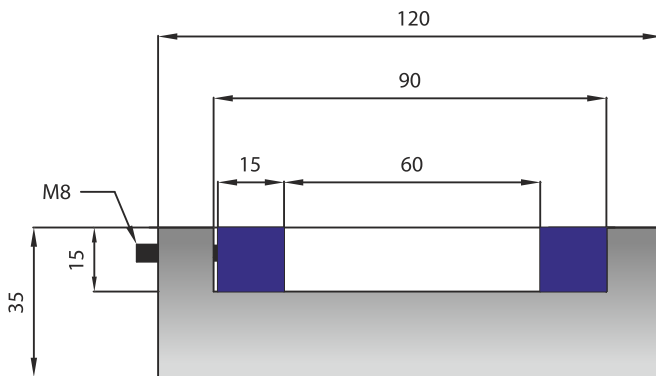
DURO



DH.2000-S / DH.2500-S / DH.3000-S / DH.4000-S

1050 mm 520 mm

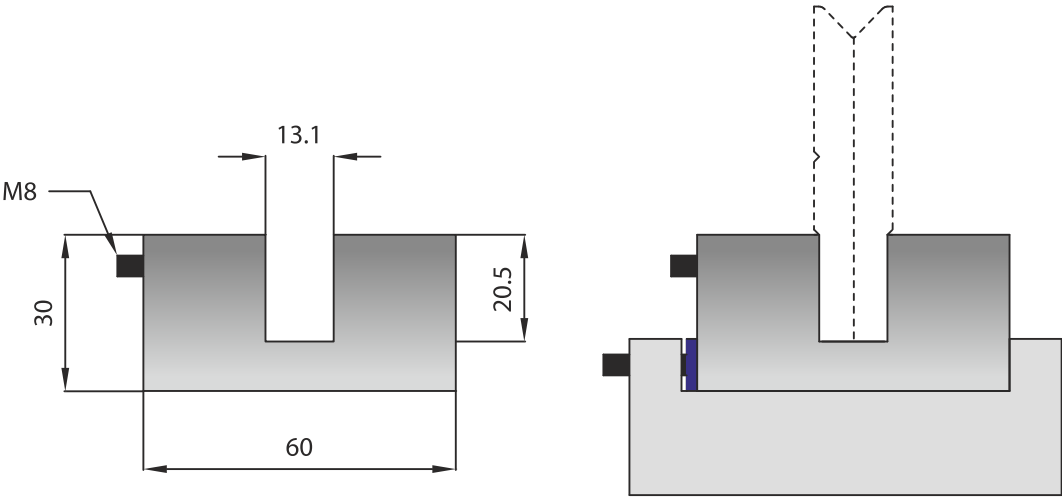
47 ± 3 HRC



DH.1050-90

2050 / 2550 / 3050 / 4050 mm

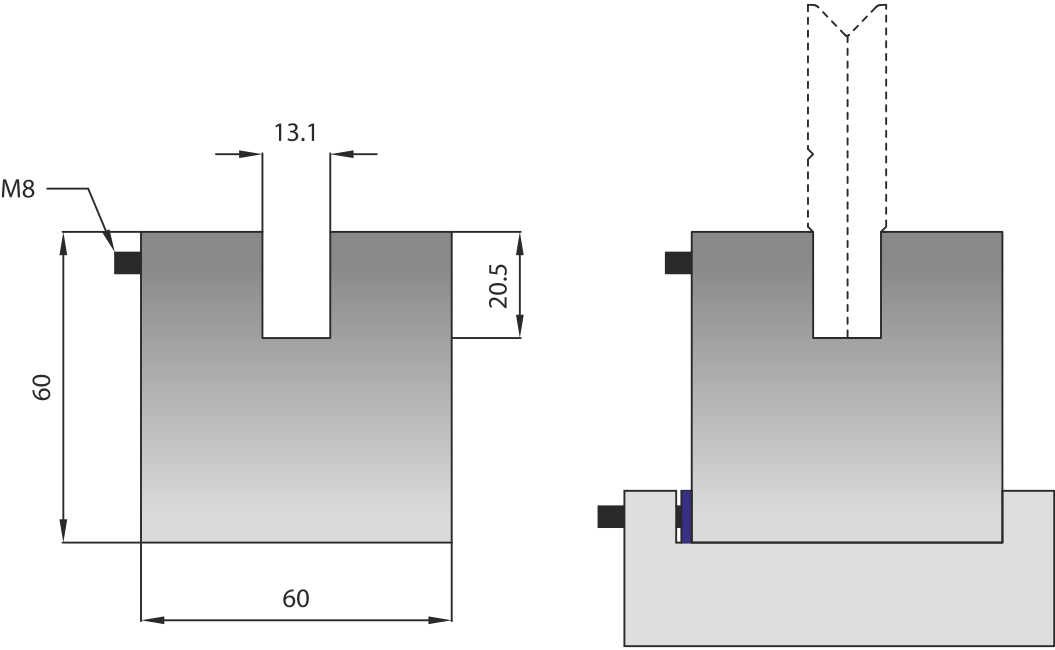
47 ± 3 HRC



DH.AD-6



47 ± 3 HRC



DH.AD-5



47 ± 3 HRC

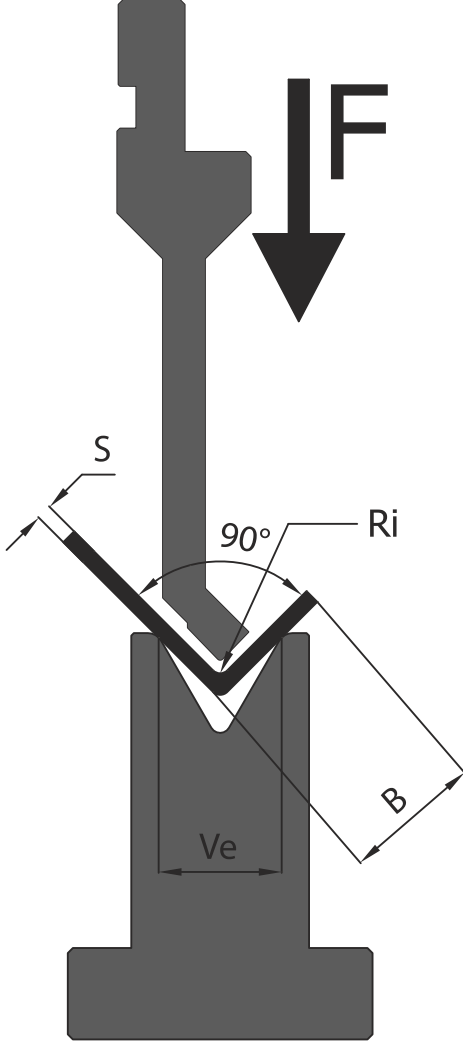
42 kg/mm²

S / mm	4	5	6	8	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	Ve
B	3	3,5	4	5,5	6,5	8	10,5	13	16,5	21	26	32,5	41	52	65	81,5	104	130	163	
Ri	0,5	0,7	0,8	1	1,3	1,5	2	2,5	3,2	4,4	5	6,5	8	10	12	15	20	25	37	F
0,6	6	5	3	2																
0,8	12	9	7	5	4															
1		15	11	8	6	5														
1,2			18	12	9	7	5													
1,5				21	15	12	8	6												
2					30	23	16	12	9											
2,5						39	27	20	14	11										
3							43	31	23	16	12									
4								60	44	32	23	18								
5									76	54	39	29	22							
6										85	62	45	33	25						
8											121	88	70	46	35					
10												151	109	79	58	44				
12													173	124	91	66	50			
15														213	155	113	81	62		
20															302	220	158	115	89	
25																378	269	197	144	

TON / M



BÜKÜM KUVVETİ HESAPLAMALARI



- F** BÜKME KUVVETİ / Metre
S MALZEME KALINLIĞI / mm
Ri BÜKÜLEN MALZEMENİN İÇ YARI ÇAPI / mm
B KISA BÜKÜM UZUNLUĞU (Dış-Dış) / mm
Ve BÜKÜM YAPILAN KANALIN AĞIZ GENİŞLİĞİ / mm
St MALZEME KOPMA DEĞERİ
Ks KATSAYI

$$Ks = 1 + \frac{4S}{Ve}$$

$$F = \frac{Ks * St * S^2}{Ve} \quad \text{Ton / Metre}$$

St 20 Alüminyum için

St 42 Demir için

St 70 Paslanmaz için Alınmalıdır

B Ölçüsü Büküm Derecesine Göre;

30° B * 1,6 Katı

60° B * 1,1 Katı

90° B * 1 Katı

120° B * 0,9 Katı

150° B * 0,7 Katı

PRATİK HESAP İLE UYGUN KALIP SEÇİMİ

S	0,5 - 2,5 mm	ARASINDA	S * 6
S	3,0 - 8,00 mm		S * 8
S	9,0 - 10,0 mm		S * 10
S	12,0 - 30,0 mm		S * 12

PRATİK HESAP İLE TONAJ KARŞILAŞTIRMA

BAKIR	Ton * Metre * %50 St42
ALÜMİNYUM	Ton * Metre * %50 St42
SERTLEŞTİRİLMİŞ ALÜMİNYUM	Ton * Metre * %150 St42
PASLANMAZ ÇELİK	Ton * Metre * %150 St42

