KHS - . - . . . / . . . - . . . . - . . . - . . - . .

	Standart / *Standard*
Y	**Yastıklı** *with cushioning*

Piston Çapı *Piston Diameter*
40, 50, 63, 80, 100, 125, 160, 200

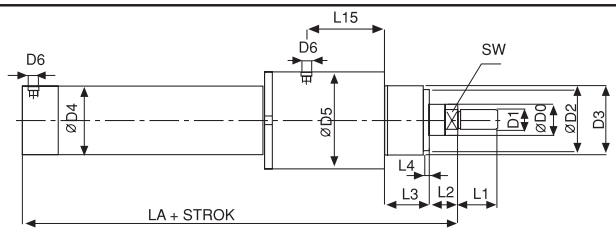
Mil Çapı *Rod Diameter*
22, 28, 36, 45, 56, 70, 90, 110 ,140

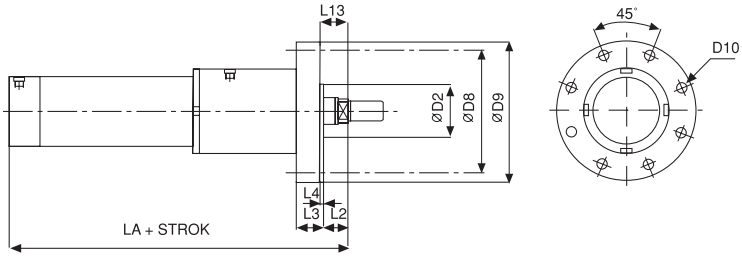
Strok / *Stroke*

Bağlantı Şekli / *Mountings*	
ÖFB	Ön flanş bağlantı / *Front flange mounting*
AFB	Arka flanş bağlantı / *Rear flange mounting*
AEB	Arka eklem bağlantı / *Rear swivel flange mounting*
AEBK	Küresel arka eklem bağlantı *Rear swivel flange mounting with spherical bearing*
ÖEB	Ön eklem bağlantı / *Piston rod swivel mounting*
ÖEBK	Küresel ön eklem bağlantı *Piston rod swivel mounting with spherical bearing*
OEB	Orta eklem bağlantı / *Central trunnion mounting*
AB	Ayak bağlantı / *Foot mounting*

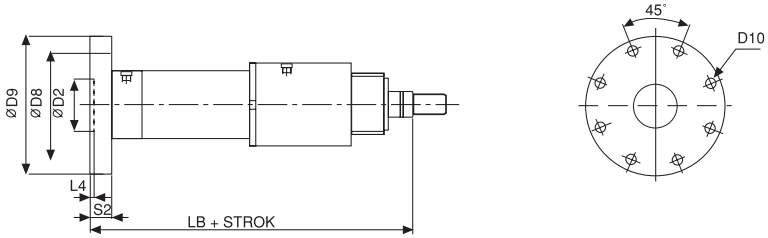
RH	Piston mili sertleştirilmiş ve krom kaplı *Hardened and crome plated piston rod*
RS	Piston mili paslanmaz *Stainless steel piston rod*
	Ck 45 Krom kaplı *Ck 45 crome plated piston rod*

	Nitril sızdırmazlık elemanı *NBR Seal*
SV	Viton sızdırmazlık elemanı *Viton Seal*

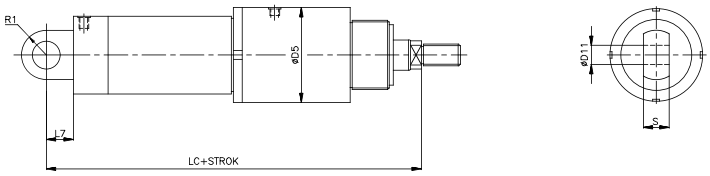




ÖN FLANŞ BAĞLANTI
Front flange mounting

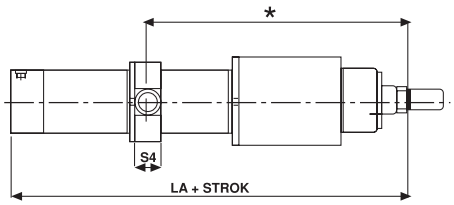


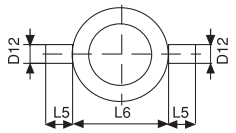
ARKA FLANŞ BAĞLANTI
Rear flange mounting



ARKA EKLEM BAĞLANTI
Rear swivel flange mounting

	ØD0	D1	ØD2	D3	ØD4	ØD5	ØD6	ØD7	ØD8	ØD9	ØD10	ØD11	ØD12	ØD13	ØD14	D15	L1	L2	L3	L4	L5
KHS-40	22	M16X1,5	50	M52x1,5	50	67	G 3/8"	25	106	125	9	20	20	11	20	M16x1,5	22	13	19	3	16
	28		60	M62x1,5																	
KHS-50	28	M20X1,5	60	M62x1,5	60	78	G 1/2"	30	126	150	11	25	25	13	25	M20x1,5	28	14	24	4	20
	36		70	M74x2																	
KHS-63	36	M27x2	70	M74x2	75	93	G 3/4"	38	145	175	14	32	32	13	30	M27x2	36	16	29	4	25
	45		85	M90x2																	
KHS-80	45	M33x2	85	M90x2	95	113	G 3/4"	47	165	200	18	40	40	17	40	M33x2	45	18	36	4	32
	56		102	M106x2																	
KHS-100	56	M42x2	106	M112x2	115	138	G 1"	58	200	240	22	50	50	21	50	M42x2	56	20	37	5	40
	70		120	M125x3																	
KHS-125	70	M48x2	132	M136x3	145	173	G 1"	70	235	280	22	63	63	25	60	M48x2	63	23	37	5	50
	90		160	M165x3																	
KHS-160	90	M64x3	160	M165x3	180	218	G 1 1/4"	90	280	330	22	80	80	30	80	M64x3	85	25	41	5	63
	110		190	M200x3																	
KHS-200	110	M80x3	200	M210x3	230	265	G 1 1/4"	110	340	390	26	100	100	33	100	M80x3	95	30	45	5	80
	140		220	M230x3																	



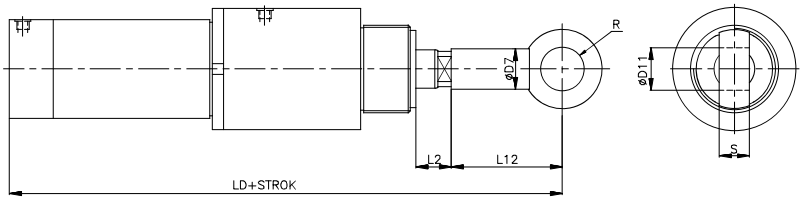


ORTA EKLEM BAĞLANTI

Trunnion mounting

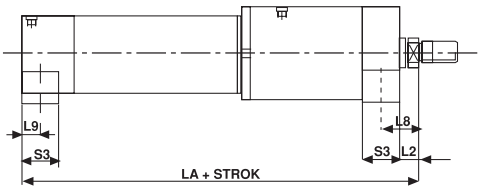
* Bu ölçü müşteri isteğine ve stroğa bağlı olarak değişir.

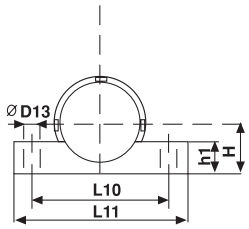
* *This dimention will change according to the stroke and customer needs.*



ÖN EKLEM BAĞLANTI

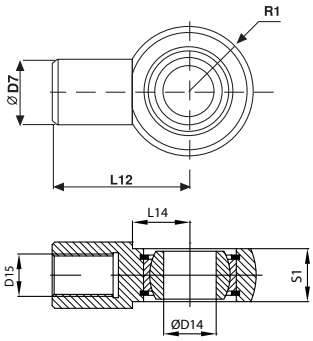
Piston rod swivel mounting





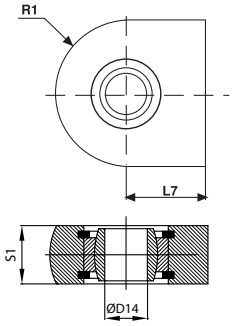
AYAK BAĞLANTI

Foot mounting



Küresel Ön Eklem Bağlantı

Piston rod swivel mounting with spherical bearing



Küresel Arka Eklem Bağlantı

Rear swivel flange mounting with spherical bearing

	L6	L7	L8	L9	L10	L11	L12	L13	L14	LA	LB	LC	LD	H	h1	S	S1	S2	S3	S4	R	R1	SW
KHS-40	90	25	25,5	12,5	105	130	52	16	22	165	181	190	217	39	24	20	20	16	25	30	20	25	17 22
KHS-50	105	32	29	15	125	155	65	18	25	183	203	215	248	45	28	25	25	20	30	35	25	30	22 30
KHS-63	120	40	33,5	17,5	140	170	80	20	36	208	233	248	288	55	34	32	30	25	35	45	35	35	30 36
KHS-80	135	50	38	20	175	215	97	22	39	221	253	271	318	65	38	40	35	32	40	55	40	45	36 46
KHS-100	160	63	42,5	22,5	210	255	120	25	46	265	297	328	385	80	48	50	40	32	45	65	50	55	46 60
KHS-125	195	71	50,5	27,5	250	300	140	28	52	285	317	356	425	100	58	63	50	32	55	80	60	65	60 75
KHS-160	240	90	62,5	37,5	320	380	180	30	67	327	363	417	507	130	74	80	60	36	75	100	80	85	75 100
KHS-200	295	112	77,5	47,5	380	460	210	35	86	399	439	511	609	160	90	100	74	40	95	115	100	105	100 120

TEKNİK ÖZELLİKLER / *TECHNICAL SPECIFICATIONS*

ÇALIŞMA BASINCI *Operating Pressure* : 160 BAR, 250BAR (isteğe bağlı) *(Optional)*

STANDART STROKLAR *Standard stroke* : 50, 100, 160, 200, 300, 400, 500

AKIŞKAN TÜRÜ *Fulid Type* : MINERAL YAĞLAR *: Mineral oils*

SIZDIRMAZLIK ELEMANLARI *Seals* : NBR + PU

PİSTON MİLİ / *Piston rod* : Ck 45 KROM KAPLI / *Ck 45 Crome plated*

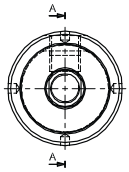
MAX. PİSTON HIZI *Max. Piston speed* : 0.5 m/s

ÇALIŞMA SICAKLIĞI *Operating temperature* : Min.-20°C Max.+80°C

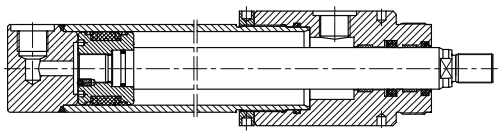
VİZKOZİTE / *Viscosity* : 5 Cst - 300 Cst

SİLİNDİR BORUSU *Cylinder tube* : St 52 BK + S HONLANMIŞ *: St 52 BK + Honed*

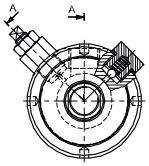
KHS
(Kompakt Hidrolik Silindir)
(Compact Hydraulic Cylinder)



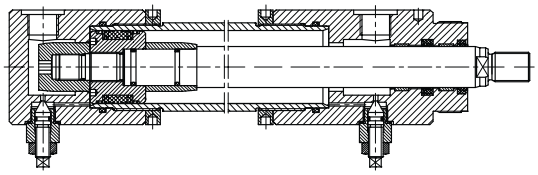
A-A KESİTİ / *SECTION A-A*



KHS - Y
(Kompakt Hidrolik Silindir Yastıklı)
(Compact Hydraulic Cylinder with cushioning)



A-A KESİTİ / *SECTION A-A*



Ağırlık / *Weight* : (kg)

Silindir capı	Strok d	Her10mm. strok icin	ÖEBK	ÖEB	AEBK	AEB	AB (ÖN)	AB (ARKA)	ÖFB	AFB	OEB
40	3.29	0.085	0.29	0.24	0.26	0.30	0.40	0.51	1.21	1.43	0.94
50	4.91	0.116	0.53	0.44	0.49	0.41	0.68	0.83	2.18	2.57	1.29
63	7.94	0.182	0.85	1.00	0.85	0.98	1.06	1.28	3.64	4.43	2.24
80	12.5	0.287	1.66	1.68	1.57	2.02	1.71	2.02	5.80	7.28	3.37
100	23.31	0.394	3.01	3.24	2.81	3.82	2.86	3.39	8.14	10.34	5.64
125	39.08	0.635	5.38	5.72	4.74	6.31	4.87	5.75	11.07	14.18	8.64
160	73.62	0.920	11.04	12.71	9.53	13.60	11.30	13.33	17.29	22.85	16.48
200	135.34	1.543	19.42	23.53	17.88	25.93	21.77	25.69	25.33	34.48	34.30

(CETOP R58H STANDARDI)
(R58H Standard)

NHS ••• - ••• - ••• - •• - ••

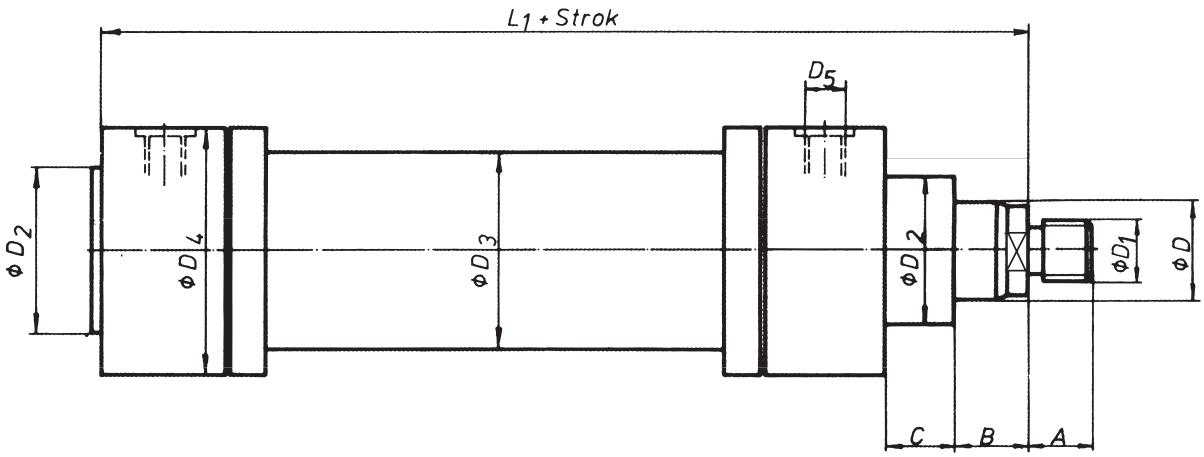
Silindir Çapı Ø *Piston Diameter Ø*
50
63
80
100
125
160
200

Standart Stroklar *Standard Strokes* mm
100
200
300
400
500

Bağlantı Şekilleri / *Mountings*	
ÖFB	Ön Flanş Bağlantı / *Front flange mounting*
AFB	Arka Flanş Bağlantı / *Rear flange mounting*
AEB	Arka Eklem Bağlantı / *Rear swivel flange mounting*
AEBK	Küresel Arka Eklem Bağlantı *Rear swivel flange mounting with spherical bearing*
ÖEB	Ön Eklem Bağlantı / *Piston rod swivel mounting*
ÖEBK	Küresel Ön Eklem Bağlantı *Piston rod swivel mounting with spherical bearing*
OEB	Orta Eklem Bağlantı / *Central trunnion mounting*
AB	Ayak Bağlantı / *Foot mounting*

RH	Piston Mili Sertleştirilmiş ve Krom Kaplı *Hardened and crome plated piston rod*
RS	Piston Mili Paslanmaz *Stainless steel piston rod*
	Ck 45 Krom Kaplı *Ck 45 crome plated piston rod*

	Nitril Sızdırmazlık Elemanı *NBR Seal*
SV	Viton Sızdırmazlık Elemanı *Viton Seal*



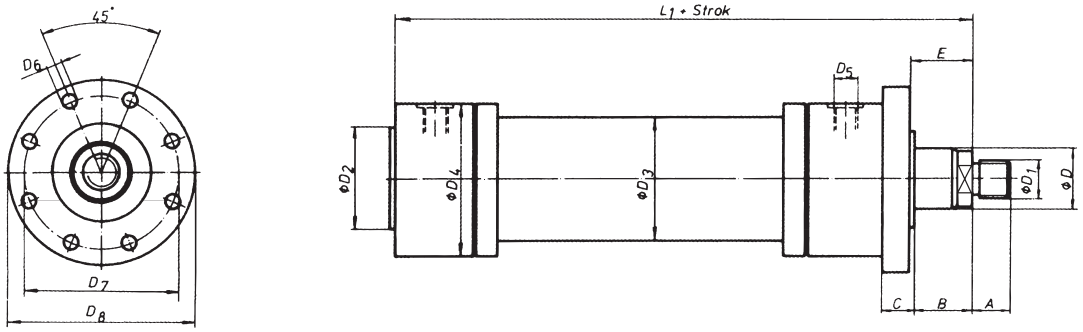
	A	B	C	ØD	D_1	$ØD_2$	$ØD_3$	$ØD_4$	D_5	$ØD_6$	$ØD_7$
NHS - 50	28	14	24	28	M20X1,5	60	60	110	G 1/2”	11	126
NHS - 63	36	16	29	36	M27X2	70	75	125	G 3/4”	14	145
NHS - 80	45	18	36	45	M33X2	85	95	135	G 3/4”	18	165
NHS - 100	56	20	37	56	M42X2	106	115	160	G 1”	22	200
NHS - 125	63	23	37	70	M48X2	132	145	195	G 1”	22	235
NHS - 160	85	25	41	90	M64X3	160	180	250	G 1 1/4”	22	280
NHS - 200	95	30	45	110	M80X3	200	230	310	G 1 1/4”	26	340

	$ØD_8$	$ØD_9$	$ØD_{10}$	E	F	G	H	L_1	L_2	L_3	R	SW
NHS - 50	150	25	30	18	32	25	65	205	225	257	25	22
NHS - 63	175	32	38	20	40	32	80	224	249	289	35	30
NHS - 80	200	40	47	22	50	40	97	250	282	332	40	36
NHS - 100	240	50	58	25	63	50	120	300	332	395	50	46
NHS - 125	280	63	70	28	71	63	140	325	357	428	60	60
NHS - 160	330	80	90	30	90	80	180	370	406	505	80	75
NHS - 200	390	100	110	35	112	100	210	450	490	615	100	100

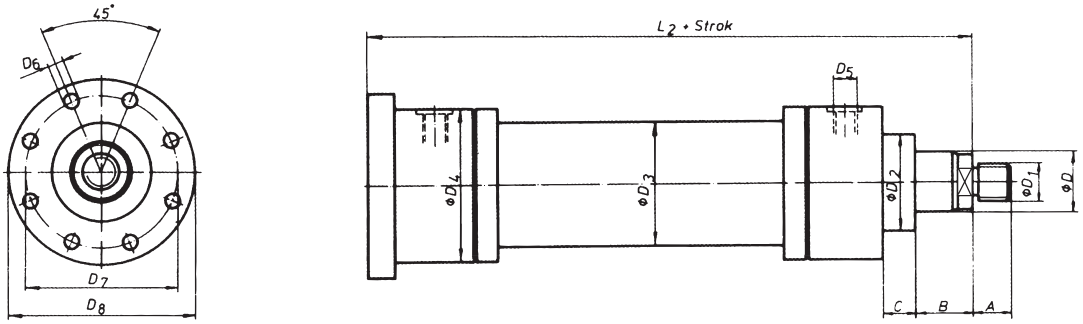
İtme kuvveti / *Compression Force* : (daN) **Basınç / *Pressure* (bar)**

	20	40	60	80	100	120	140	160
NHS - 50	390	780	1170	1560	1950	2340	2730	3120
NHS - 63	620	1240	1860	2480	3100	3720	4340	4960
NHS - 80	1000	2000	3000	4000	5000	6000	7000	8000
NHS - 100	1550	3100	4650	6200	7750	9300	10850	12400
NHS - 125	2450	4900	7350	9800	11250	14700	17150	19600
NHS - 160	4000	8000	12000	16000	20000	24000	28000	32000
NHS - 200	6250	12500	18750	25000	31250	37500	43750	50000

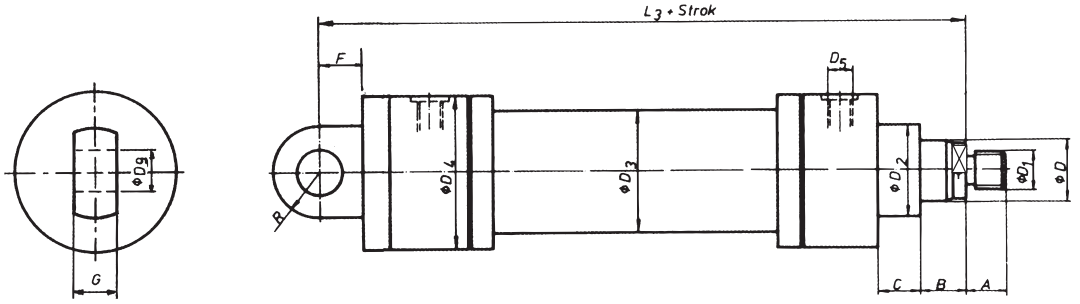
Ön flanş bağlantı / *Front flange mounting* NHS - . . . - . . . - ÖFB



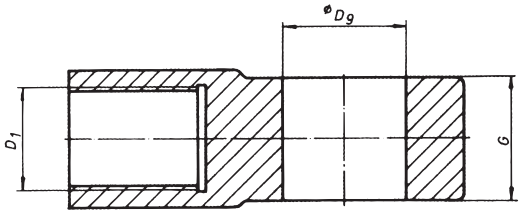
Arka flanş bağlantı / *Rear flange mounting* NHS - . . . - . . . - AFB

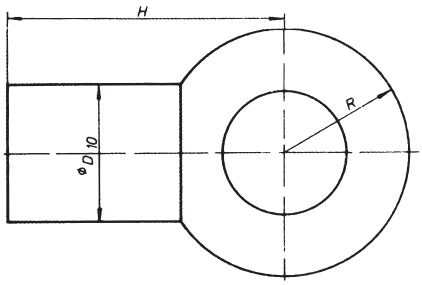


Arka eklem bağlantı / *Rear swivel flange mounting* NHS - . . . - . . . - AEB



Ön eklem bağlantı / *Piston rod swivel mounting* NHS - . . . - . . . - ÖEB





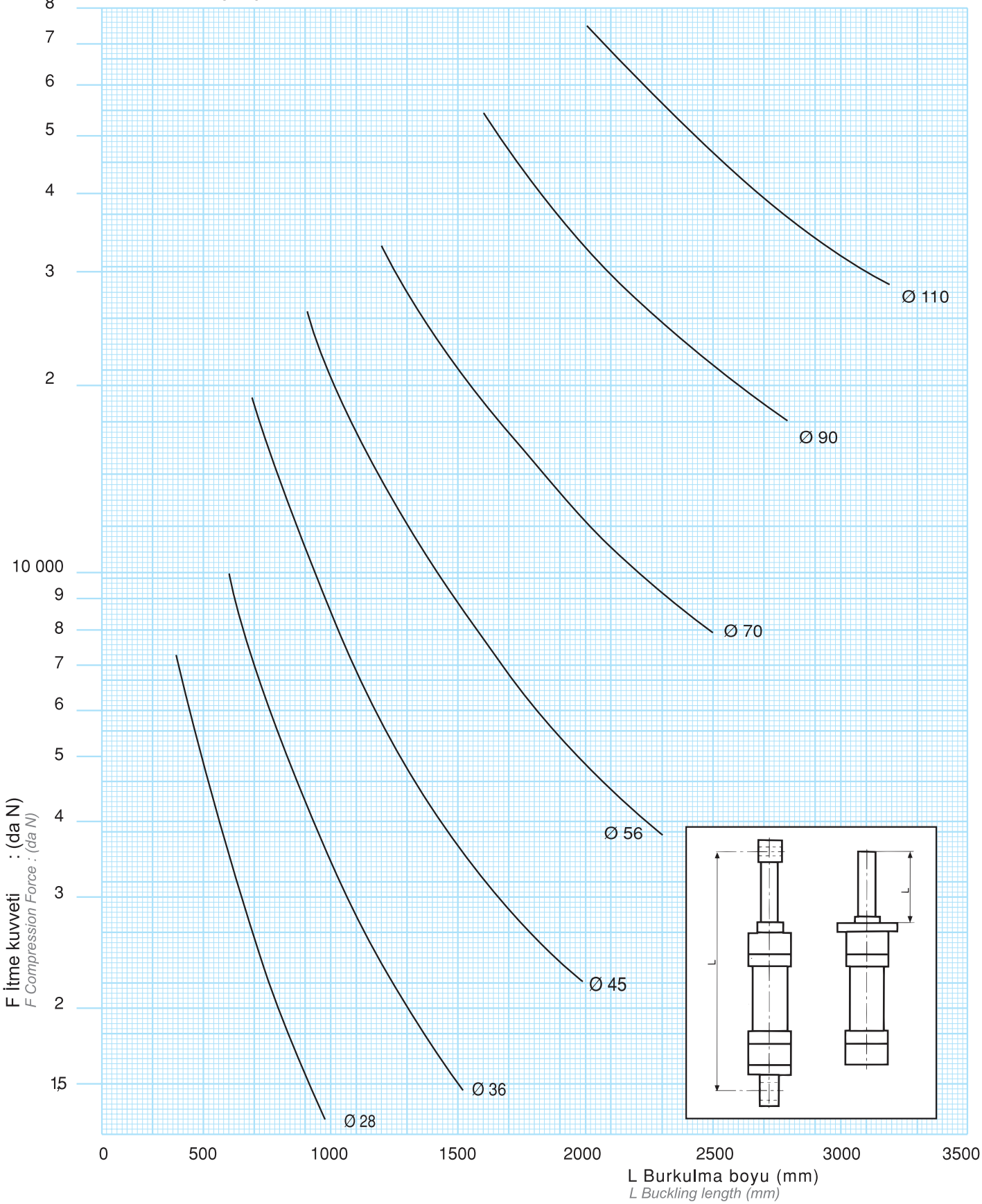
Ağırlık / *Weight* : (kg)

Silindir capi	Strok=0 da	Her10mm. strok icin	ÖEB	AEB	ÖFB	AFB
50	9.75	0.116	0.44	1.63	2.07	2.07
63	14.15	0.182	1.00	3.29	3.55	3.55
80	18.69	0.287	1.68	4.89	5.66	5.66
100	33.22	0.394	3.24	7.49	7.89	7.89
125	55.84	0.635	5.72	11.60	10.36	10.36
160	106.13	0.920	12.71	27.10	15.98	15.98
200	205.00	1.543	23.53	51.33	24.59	24.59

TEKNİK ÖZELLİKLER / *TECHNICAL SPECIFICATIONS*

Çalışma Basıncı / *Max. Operating Pressure*	: 160 bar
Piston Hızı / *Max. Piston Speed*	: 0,5 m/s
Çalışma Sıcaklığı / *Temperature Range*	: -20°C to 80°C
Yağ / *Oil Type*	: Mineral Yağlar / *Mineral Oils*
Viskozite / *Viscosity*	: 5 c St - 300 c St

Piston kolu burkulma eğrisi
Piston rod buckling diagram



MAG®

THS - . . . / . . . - . . . - . . . . . - . . . - . . .

Strok / *Stroke*

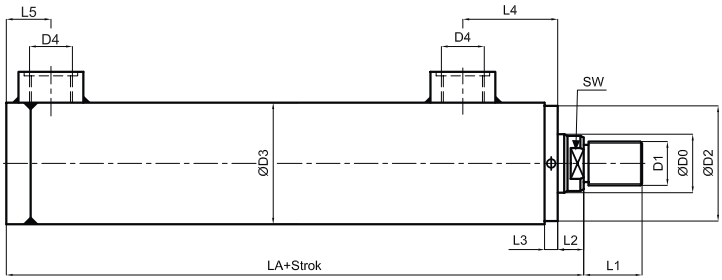
Piston Çapı *Piston Diameter*
40, 50, 63, 80, 100, 125, 160, 200

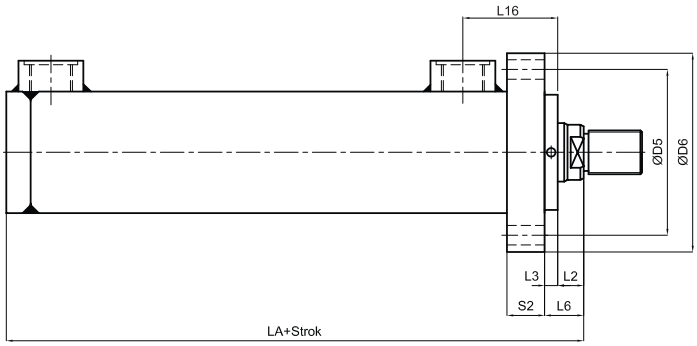
MİL ÇAPI *ROD DIAMETER*
22, 28, 36, 45, 56, 70, 90, 110

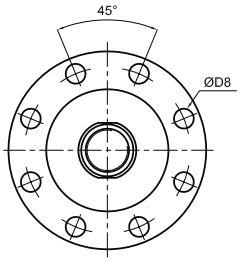
Bağlantı Şekli / *Mountings*	
ÖFB	Ön flanş bağlantı / *Front flange mounting*
AFB	Arka flanş bağlantı / *Rear flange mounting*
AEB	Arka eklem bağlantı / *Rear swivel flange mounting*
AEBK	Küresel arka eklem bağlantı *Rear swivel flange mounting with spherical bearing*
ÖEB	Ön eklem bağlantı / *Piston rod swivel mounting*
ÖEBK	Küresel ön eklem bağlantı *Piston rod swivel mounting with spherical bearing*
OEB	Orta eklem bağlantı / *Central trunnion mounting*
AB	Ayak bağlantı / *Foot mounting*

	Ck 45 Krom kaplı *Ck 45 crome plated piston rod*
RH	Piston mili sertleştirilmiş ve krom kaplı *Hardened and crome plated piston rod*
RS	Piston mili paslanmaz *Stainless steel piston rod*

	NBR + PU
SV	Viton sızdırmazlık elemanı *Viton Seal*

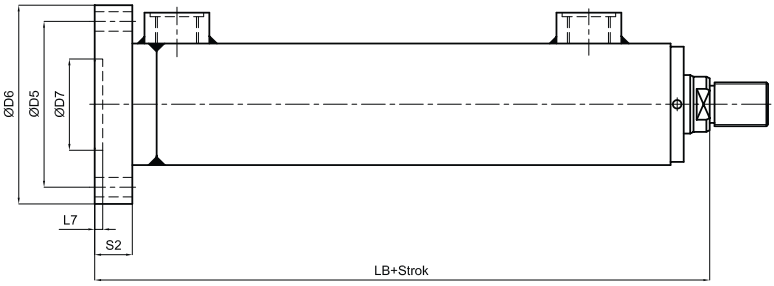


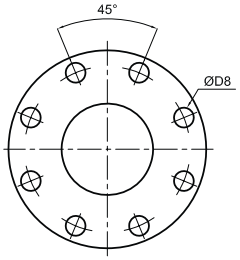




ÖN FLANŞ BAĞLANTI

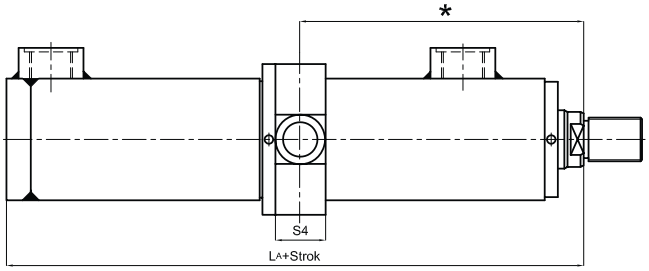
Front flange mounting

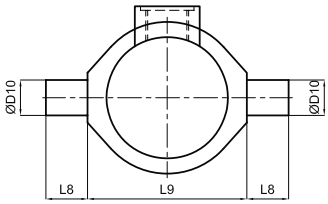




ARKA FLANŞ BAĞLANTI

Rear flange mounting





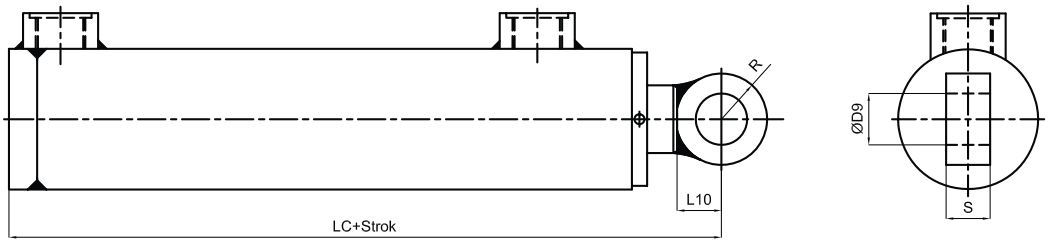
ORTA EKLEM BAĞLANTI

Trunnion mounting

* Bu ölçü müşteri isteğine ve stroğa bağlı olarak değişir.

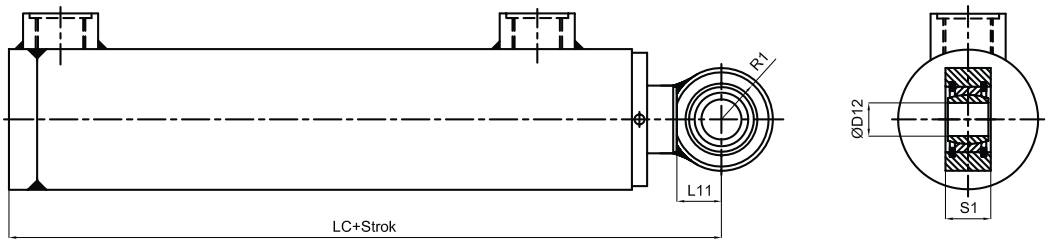
* *This dimention will change according to the stroke and customer needs.*

	ØD0 f7	D1	ØD2 f8	ØD3	D4	ØD5 js13	ØD6	ØD7 H8	ØD8 H13	ØD9 H9	ØD10 f8	ØD11 H13	ØD12 H7	L1	L2	L3	L4	L5	L6	L7 min.	L8 js13
THS-40	22	M16x1,5	48	50	G1/4"	85	108	48	9	20	20	11	20	22	13	8	44	24	21	3	16
THS-50	28	M20x1,5	58	60	G3/8"	100	128	58	11	25	25	13	25	28	14	10	54	26	24	4	20
THS-63	36	M27x2	73	75	G1/2"	120	148	73	14	32	32	13	30	36	16	10	60	36	26	4	25
THS-80	45	M33x2	89	95	G1/2"	150	188	89	18	40	40	17	40	45	18	10	65	46	28	4	32
THS-100	56	M42x2	113	115	G3/4"	180	218	113	22	50	50	21	50	56	20	12	67.5	27.5	32	5	40
THS-125	70	M48x2	138	145	G3/4"	200	238	138	22	63	63	25	60	63	23	13	82.5	32.5	36	5	50
THS-160	90	M64x3	178	180	G1"	240	288	178	22	80	80	30	80	85	25	15	93	45	40	5	63
THS-200	110	M80x3	217	230	G1"	295	340	217	26	100	100	33	100	95	30	15	105	50	45	5	80



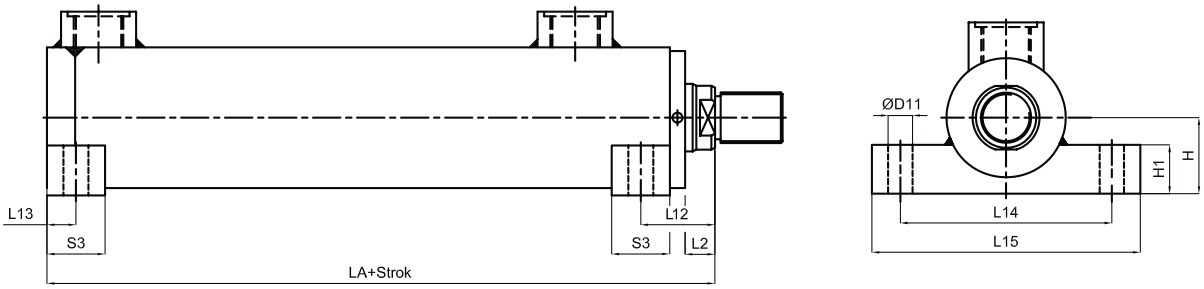
ÖN EKLEM BAĞLANTI

Piston rod swivel mounting



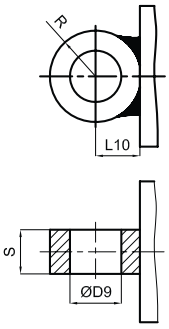
KÜRESEL ÖN EKLEM BAĞLANTI

Piston rod swivel mounting with spherical bearing



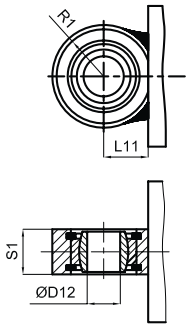
AYAK BAĞLANTI

Foot mounting



ARKA EKLEM BAĞLANTI

Rear swivel flange mounting



KÜRESEL ARKA EKLEM BAĞLANTI

Rear swivel flange mounting with spherical bearing

	L9 h12	L10	L11	L12	L13	L14 js13	L15	L16	LA	LB	LC	H h10	H1	R	R1	S h14	S1 h12	S2 js13	S3 js13	S4	SW
THS-40	90	23.5	26	31	10	88	108	49	122	136	146	30	19	24.5	27	20	20	14	20	30	17
THS-50	105	26	31	36.5	12.5	105	130	57	140	156	169	36	24	27	32	25	25	16	25	35	22
THS-63	120	33	38	38.5	12.5	120	150	63	161	181	198	46	28	34	39	32	32	20	25	45	30
THS-80	135	43	46.5	45.5	17.5	155	195	65	185	210	232	56	32	44	47.5	40	40	25	35	55	36
THS-100	160	53	56.5	52	20	185	230	67.5	176	201	233	68	38	54	57.5	50	50	25	40	65	46
THS-125	195	63	69	61	25	220	270	82.5	199	231	268	85	44	64	70	63	63	32	50	80	60
THS-160	240	83	89	72.5	32.5	280	340	93	238	274	327	105	54	84	90	80	80	36	65	100	75
THS-200	295	98	113	84	39	345	425	105	285	325	398	135	64	99	115	100	100	40	78	115	100

TEKNİK ÖZELLİKLER / *TECHNICAL SPECIFICATIONS*

ÇALIŞMA BASINCI *Operating Pressure* : 160 BAR, 250BAR (isteğe bağlı) *(Optional)*

STANDART STROKLAR *Standard stroke* : 50, 100, 160, 200, 300, 400, 500

AKIŞKAN TÜRÜ *Fulid Type* : MINERAL YAĞLAR *: Mineral oils*

SIZDIRMAZLIK ELEMANLARI *Seals* : NBR + PU

PİSTON MİLİ / *Piston rod* : Ck 45 KROM KAPLI / *Ck 45 Crome plated*

MAX. PİSTON HIZI *Max. Piston speed* : 0.5 m/s

ÇALIŞMA SICAKLIĞI *Operating temperature* : Min.-20°C Max.+80°C

VİZKOZİTE / *Viscosity* : 5 Cst - 300 Cst

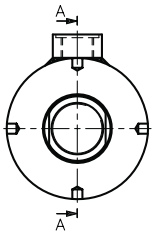
SİLİNDİR BORUSU *Cylinder tube* : St 52 BK + S HONLANMIŞ *: St 52 BK + Honed*

THS

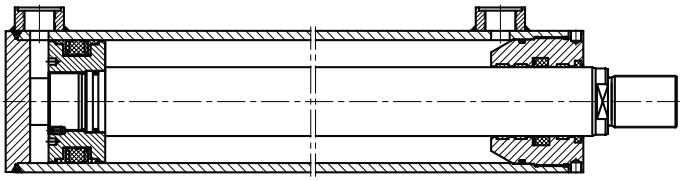
(Tarım Tip Hidrolik Silindir)

(Agricultural Type Hydraulic Cylinder)

(40-50-63-80-100-125-160-200)



A-A KESİTİ / *SECTION A-A*



Ağırlık / *Weight* : (kg)

Silindir capi	Strok=0 da	Her10mm. strok icin	ÖEBK	ÖEB	AEBK	AEB	AB ÖN	AB ARKA	ÖFB	AFB	OEB
40	1.67	0.085	0.24	0.22	0.27	0.25	0.22	0.22	0.73	0.82	0.94
50	2.66	0.116	0.40	0.28	0.47	0.35	0.42	0.42	1.17	1.29	1.29
63	4.76	0.182	0.74	0.55	0.90	0.71	0.60	0.60	1.82	2.08	2.24
80	8.75	0.287	1.27	1.22	1.57	1.52	1.20	1.20	3.66	4.22	3.37
100	11.84	0.394	2.27	2.22	2.88	2.83	1.90	1.90	4.70	5.40	5.64
125	21.28	0.635	4.57	3.93	5.47	4.83	3.19	3.19	6.27	7.84	8.64
160	39.69	0.920	9.04	8.63	11.19	10.78	6.54	6.54	10.37	12.88	16.48
200	80.24	1.543	19.42	15.30	23.17	18.03	12.17	12.17	14.15	19.07	34.30

ISO 6264-08 (CETOP R08)

Not: 25 µm veya daha ince filtreleme önerilir. Basınç sınırlama valfi ve sıralama valfinde ön uyarı (X) içten yapılmıştır.

Note: 25mic. or better filtration is recommended. Relief valves and sequence valves are manufactured as internal pilot type.

BSV — 20 — ••• — •••

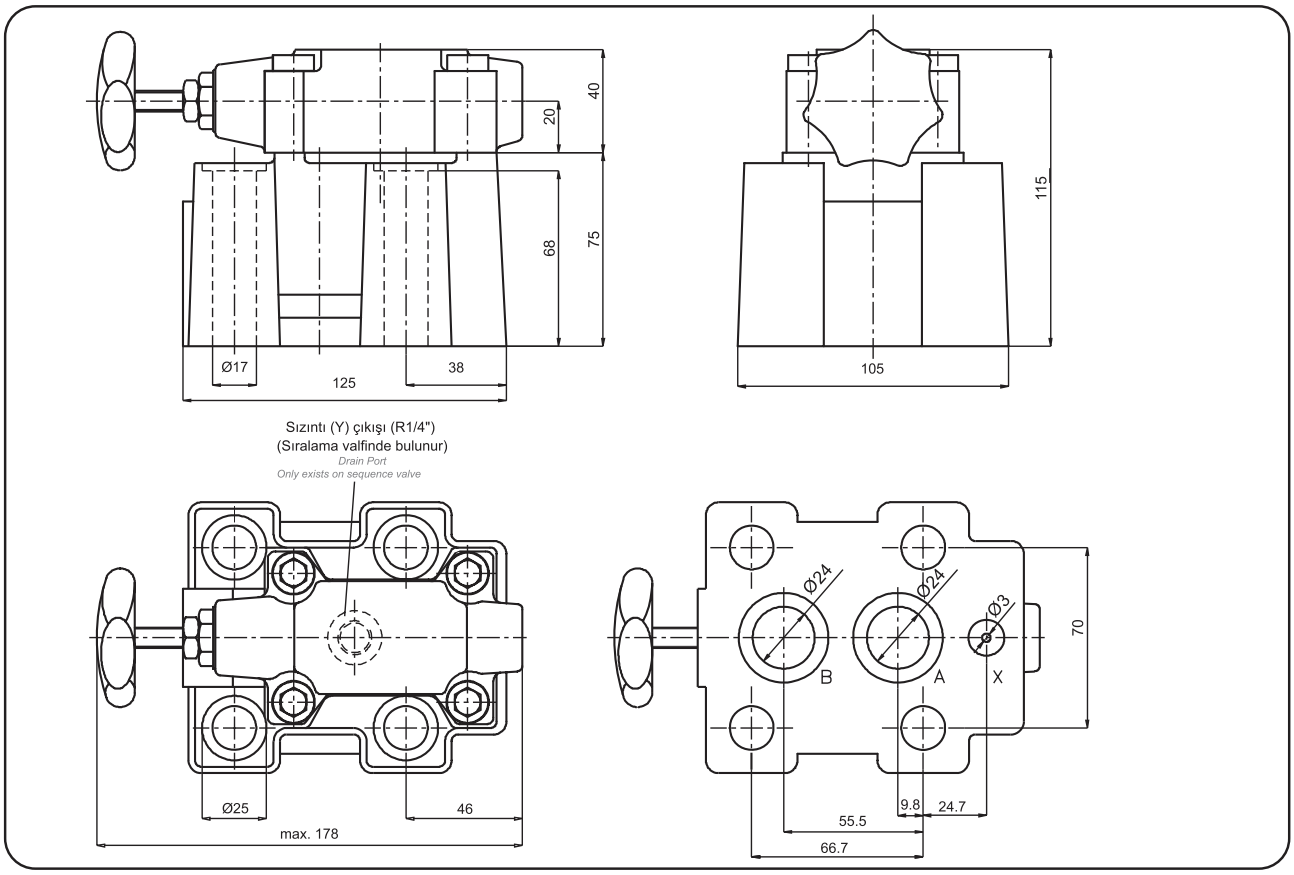
BSV	Basınç Denetim Valfi / *Relief Valve*
20	Anma Ölçüsü Ø 20 / *Nominal Size*

	Basınç Sınırlama Valfi / *Relief Valve*
B	Boşaltma Valfi / *Unloading Valve*
S	Sıralama Valfi / *Sequence Valve*

105	2 . . . 105 bar
210	3 . . . 210 bar
315	4 . . . 315 bar

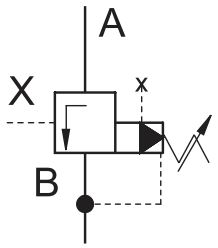
Ölçüler

TEKNİK ÖZELLİKLER / *TECHNICAL SPECIFICATIONS*	
Çalışma basıncı / *Operating Pressure Range*	En çok / *max.* 315 bar
Çalışma sıcaklığı / *Temp. range*	- 20 °C . . . + 80 °C
Akışkan türü / *Fulid type*	Mineral yağlar / *Mineral Oils*
Viskozite / *Viscosity*	5 cSt . . . 300 cSt



Boşaltma valfi
Unloading Valve

BSV-20-B . . .



Boşaltma valfi, ön uyarının ayarlanan basıncın üzerinde olduğu sürece devrenin basınçsız boşaltmasını sağlar.

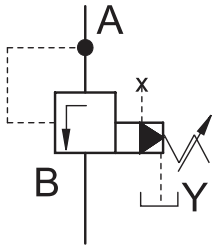
Boşaltma valfinin ön uyarı (X) bağlantısı dıştan yapılmalıdır.

The unloading valve diverts the pump pressure to the reservoir at very low pressure when the pilot pressure is greater than the pre-determined system pressure.

The pilot connection (X) has to be conneted externally.

Sıralama valfi
Sequence Valve

BSV- 20-S . . .



Sınırlama valfi ayarlanan basınca ulaşılmasından sonra akış elde edilmesini sağlar.
Sıralama valfinde sızıntı (Y) bağlantısı dıştan yapılmalıdır.

Sıralama valfi tek yönde geçişe izin verdiğinden diğer yönde geçiş istendiğinde ayrıca çek valf kullanılmalıdır.

Sequence valve opens flow path right after the inlet port pressure exceeds the pre-determined pressure.

The drain connection (Y) has to be connected externally.

In order to have flow to the opposite direction, a check valve has to be used seperately.

BBSV — 20 — ••• — •••

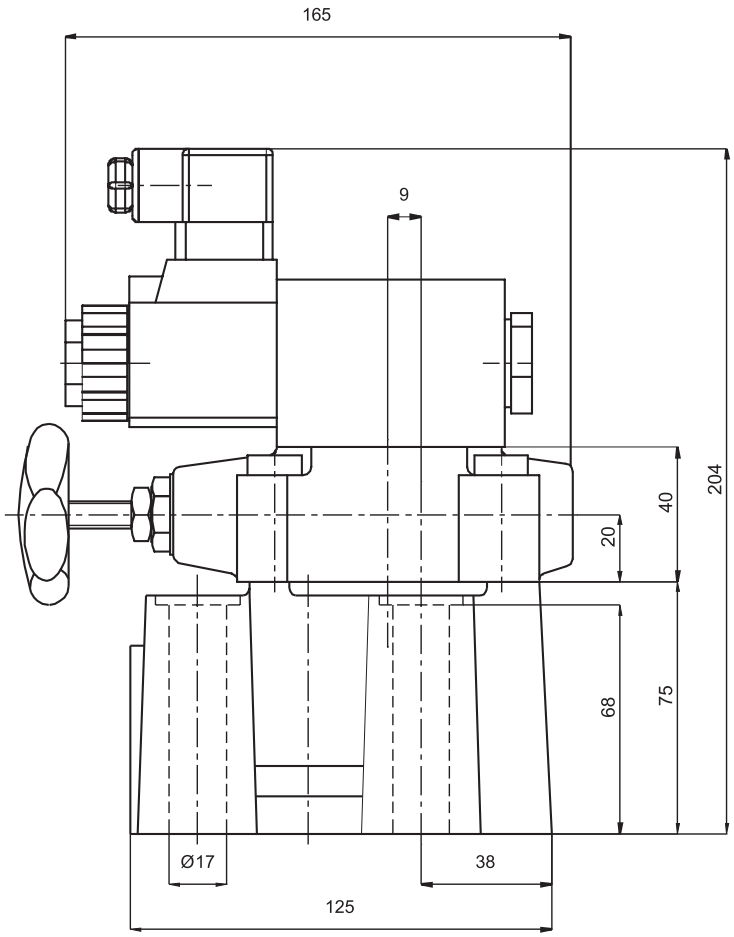
BBSV	Bobinli Basınç Sınırlama Valfi *Solenoid Controlled Relief Valves*
20	Anma Ölçüsü Ø 20 *Nominal Size*

105	2 . . . 105 bar
210	3 . . . 210 bar
315	4 . . . 315 bar

Bobin Gerilimi / *Voltage Type*
24 V / =
220 V / 50 Hz

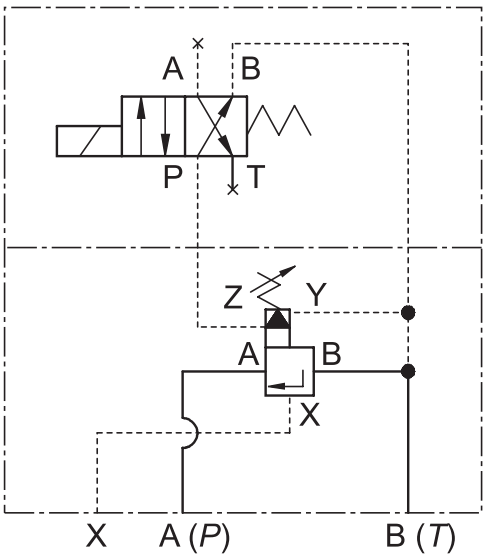
Ölçüler

TEKNİK ÖZELLİKLER / *TECHNICAL SPECIFICATIONS*	
Çalışma basıncı / *Operating Pressure Range*	En çok / *max.* 315 bar
Çalışma sıcaklığı / *Ambient temp. range*	- 20 °C . . . + 80 °C
Akışkan türü / *Fulid type*	Mineral yağlar / *Mineral Oils*
Viskozite / *Viscosity*	5 cSt . . . 300 cSt



Bobinli basınç sınırlama valfi / *Solenoid Controlled Relief Valves*

BBSV- 20- . . .



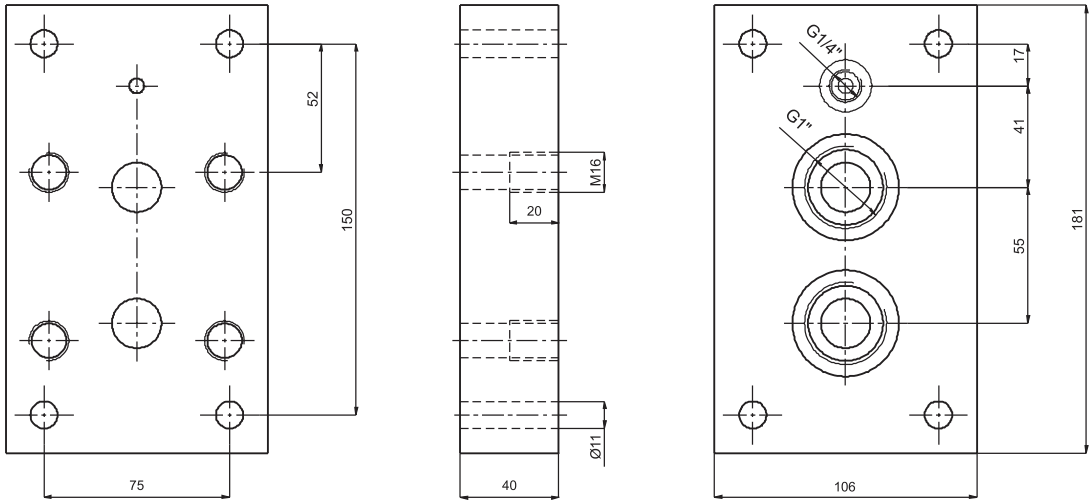
Bobinli basınç sınırlama valfi, üzerindeki yön valfinin normal konumunda devrenin basınçsız boşaltılmasını, diğer konumda ise istenen basınca ayarlanabilmesini sağlar.

Solenoid controlled relief valve is used for unloading the pump pressure to the reservoir. When an electric signal applied to the solenoid valve the system will have pressure and it can be set.

Ölçüler / *Dimensions*

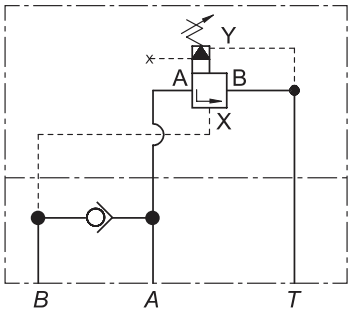
Altlık / *Sub-plate*

BSV- 20- A



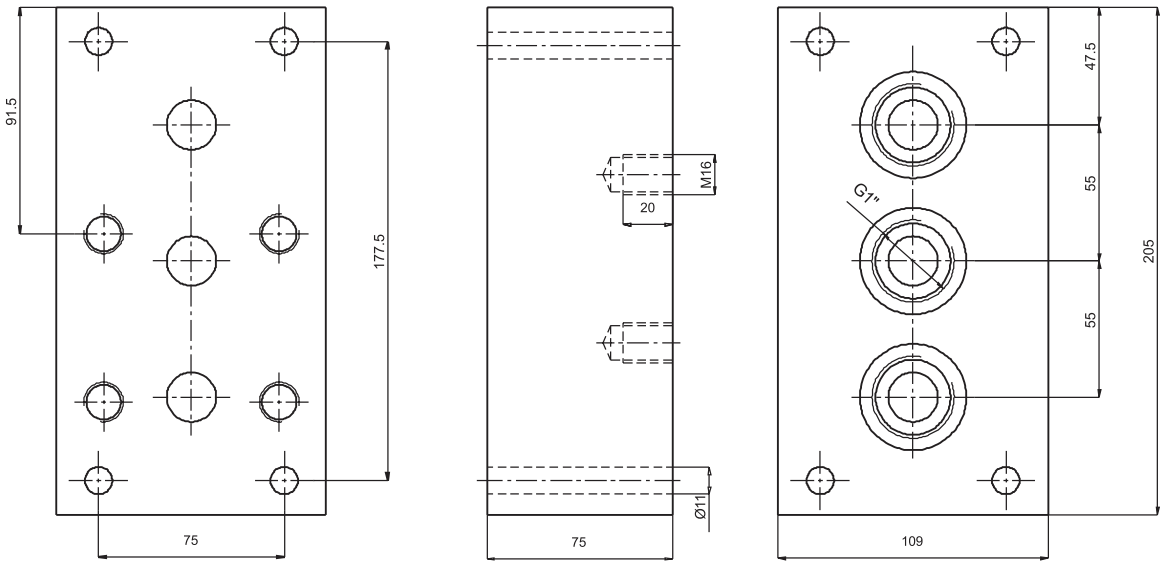
Boşaltma valfi altlığı / *Sub-plate for Unloading Valve*

BSV- 20- BA



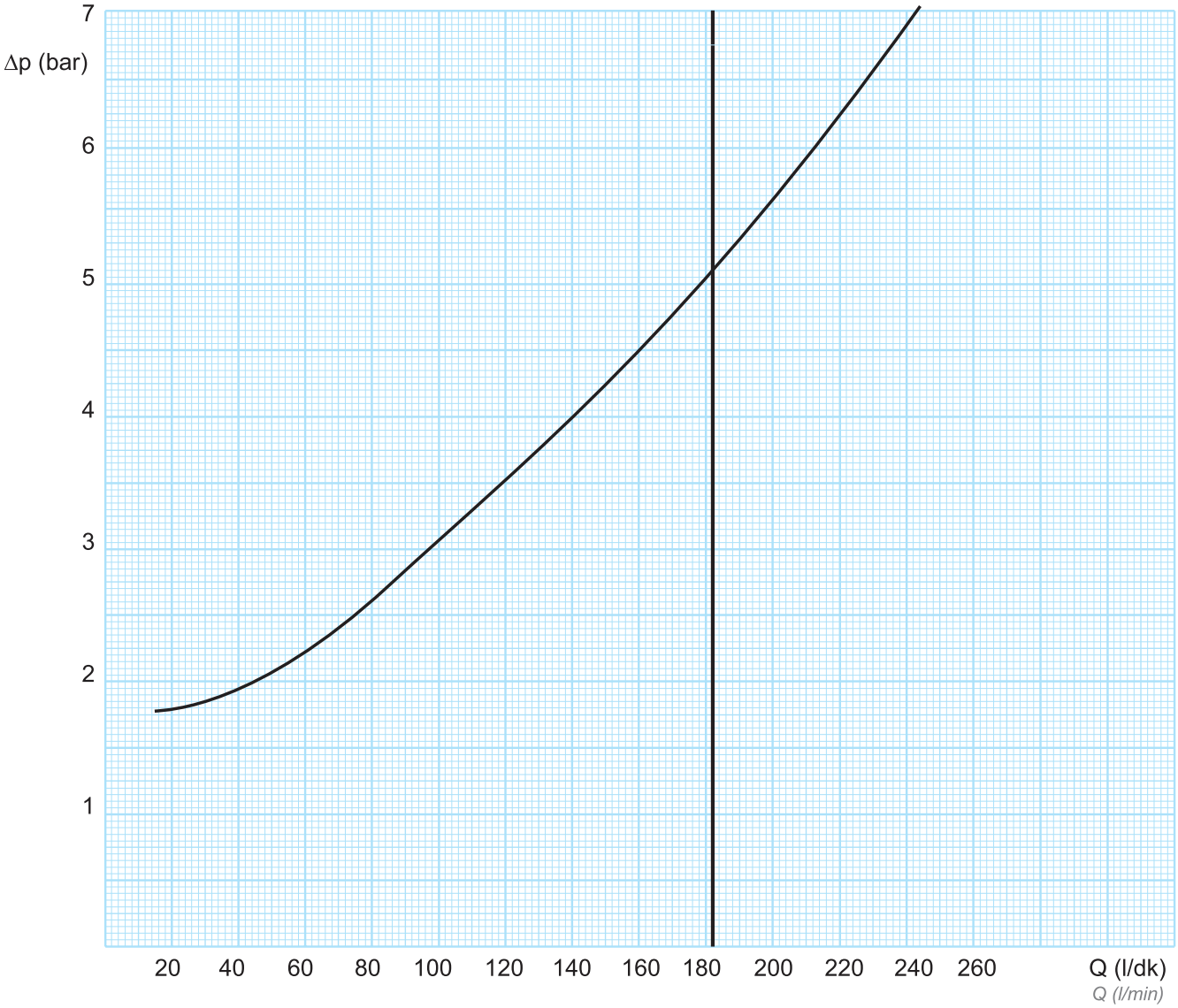
Biriktirici valfi, boşaltma valfi ve boşaltma valfi altlığından oluşur. Biriktirici valfi, biriktiricinin ayarlanan basıncına kadar doldurulmasından sonra pompadan gelen yağın basınçsız boşaltılmasını, biriktiricideki basıncın %10 azalması halinde ise kapanarak tekrar ayarlanan basınca kadar doldurulmasını sağlar.

Accumulator valve consists of unloading valve and a sub-plate for unloading valve. Accumulator valve unloads the pump pressure to the reservoir right after filling of the accumulator to desired pressure. When the accumulator pressure decreases 10%, it starts to fill the accumulator again.

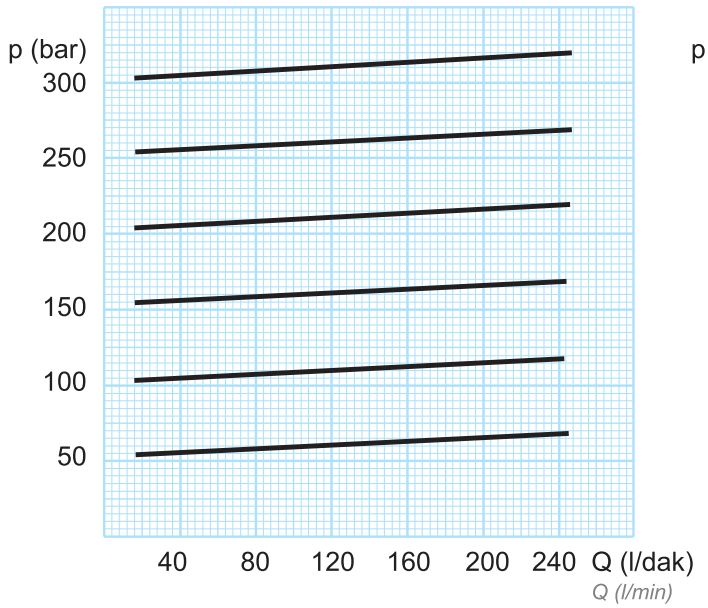


Basınç düşümü eğrisi (yapışkanlık 20 cSt)

Presure drop curve viscosity 20 cSt



Açma basınç eğrileri / *Cracking pressure curves*



Boşaltma valfi basınç eğrileri

Unloading valve pressure curves