



MERT AKIŞKAN GÜCÜ SAN. ve TİC. A.Ş.

## ŞARTLANDIRICILAR AIR PREPARATION UNITS

- 5-10 Şartlandırıcı **MFRY 1/4"-3/8"**  
Air Preparation Unit **MFRY 1/4"-3/8"**
- 11-16 Şartlandırıcı **FRY 1/4"**  
Air Preparation Unit **FRY 1/4"**
- 17-22 Şartlandırıcı **MFRY 1/2"-3/8" B**  
Air Preparation Unit **MFRY 1/2"-3/8" B**
- 23-26 Şartlandırıcı **FRY 1/2"**  
Air Preparation Unit **FRY 1/2"**
- 27-30 Şartlandırıcı **FRY 1"**  
Air Preparation Unit **FRY 1"**
- 31-34 Şartlandırıcı Kullanma Talimatı  
Air Preparation Unit User Guide

## VALFLER VALVES

- 35-40 Pnömatik Yön Denetim Valfi **SV 1/8"**  
Pneumatic Directional Control Valve **SV 1/8"**
- 41-44 Pnömatik Yön Denetim Valfi **SV 1/4"** Bobinli Valfler  
Pneumatic Directional Control Valve **SV 1/4"** Electrically Actuated
- 45-46 Pnömatik Yön Denetim Valfi **SV 1/4"** Namur Valfler  
Pneumatic Directional Control Valve **SV 1/4"** Namur Actuated
- 47-52 Pnömatik Yön Denetim Valfi **SV 1/4"** Mekanik Uyarılı Valfler  
Pneumatic Directional Control Valve **SV 1/4"** Mechanically Actuated
- 53-56 Pnömatik Yön Denetim Valfi **SV 1/2"**  
Pneumatic Directional Control Valve **SV 1/2"**
- 57-58 Pnömatik Yön Denetim Valfi **SVE 1/8"** Bobinli Valfler  
Pneumatic Directional Control Valve **SVE 1/8"** Electrically Actuated
- 59-60 Pnömatik Yön Denetim Valfi **SVE 1/4"** Bobinli Valfler  
Pneumatic Directional Control Valve **SVE 1/4"** Electrically Actuated
- 61-62 Pnömatik Yön Denetim Valfi **SVE 1/2"** Bobinli Valfler  
Pneumatic Directional Control Valve **SVE 1/2"** Electrically Actuated
- 63-64 Pnömatik Yön Denetim Valf Adası **SVE-P**  
Pneumatic Directional Control Valve Island **SVE-P**
- 65-66 Pnömatik Yön Denetim Valfi **NMSVE 1/4"** Namur Valfler  
Pneumatic Directional Control Valve **NMSVE 1/4"** Namur Actuated
- 67-68 D-SUB Konnektörlü Valf Adası **MSVE**  
Valve Island With D-SUB Connector **MSVE**
- 69-70 Solenoid Valf **MSP**  
Solenoid Valve **MSP**
- 71-72 Akış Kontrol Valfi **FKV 1/8"-1/4"-1/2"**  
Flow Control Valve **FKV 1/8"-1/4"-1/2"**
- 73-74 Çabuk Egzost Valfi **ÇE 3/8"-1/2"-3/4"**  
Quick-Exhaust Valve **ÇE 3/8"-1/2"-3/4"**
- 75-76 Bobinli Valfler **BV 3/2**  
Solenoid Valve **BV 3/2**

### PNEUMATIC CYLINDERS PNÖMATİK SİLİNDİRLER

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Steel Body Pneumatic Cylinder (CETOP RP 53P) <b>NS</b>	
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Mert Akışkan Gücü, sürekli ürün geliştirme politikasını benimsediğinden bu katalogta bulunan ürünlerde değişiklik yapma hakkını saklı tutar. Lütfen tüm teknik özellikler ve ölçüleri salt bilgilendirme amaçlı olarak değerlendiriniz.

*Tüm teknik çizimlerdeki ölçüler mm cinsindedir. Ürün görselleri, gerçek ürünlerden farklılık gösterebilir.*

Mert Akışkan Gücü is following a research and development program continuously and all products may be modified or updated at any time without prior announcement. All technical specifications and dimensions are only intended for informational purposes.

*All technical drawing dimensions are in milimeters. Actual product may differ from image shown.*



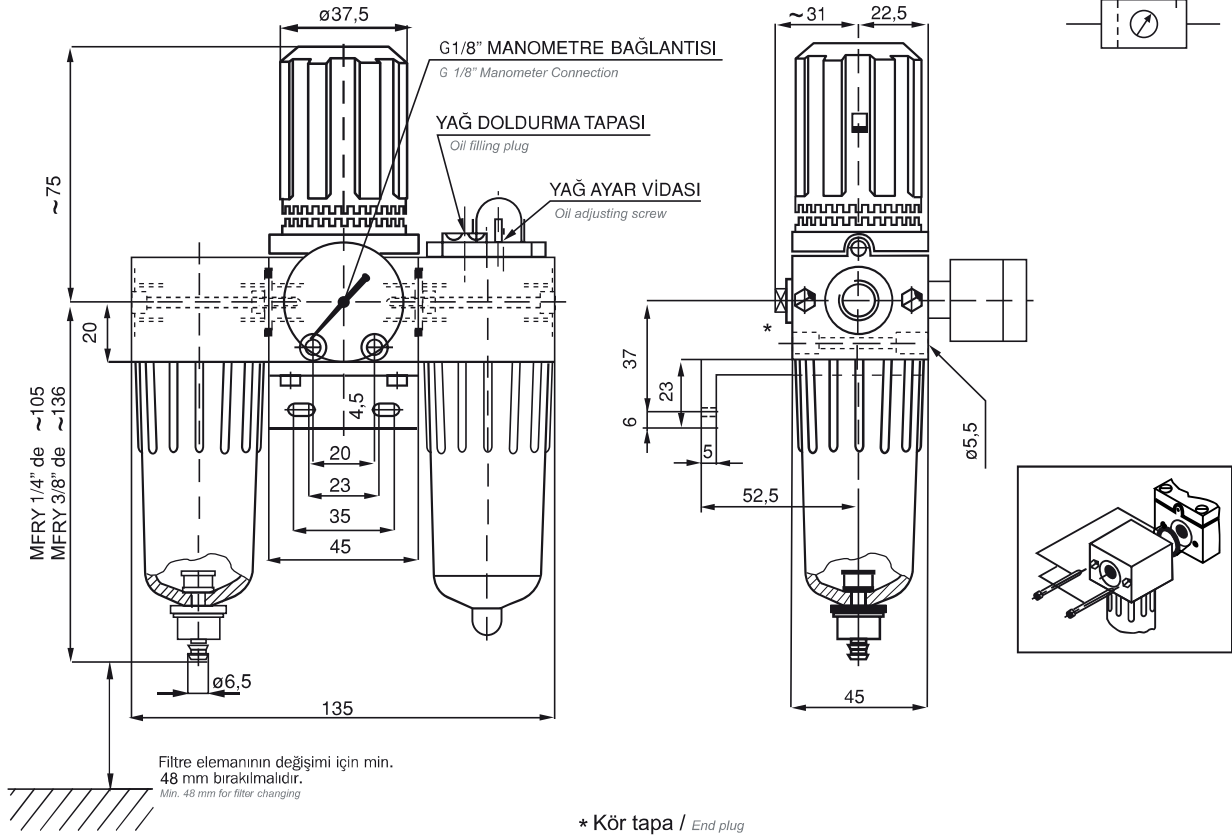
## MFRY - . . .

MFRY	Üç Gövdeli / Triple Bodied	G 1/4"
M(FR)Y	İki Gövdeli / Double Bodied	G 3/8"

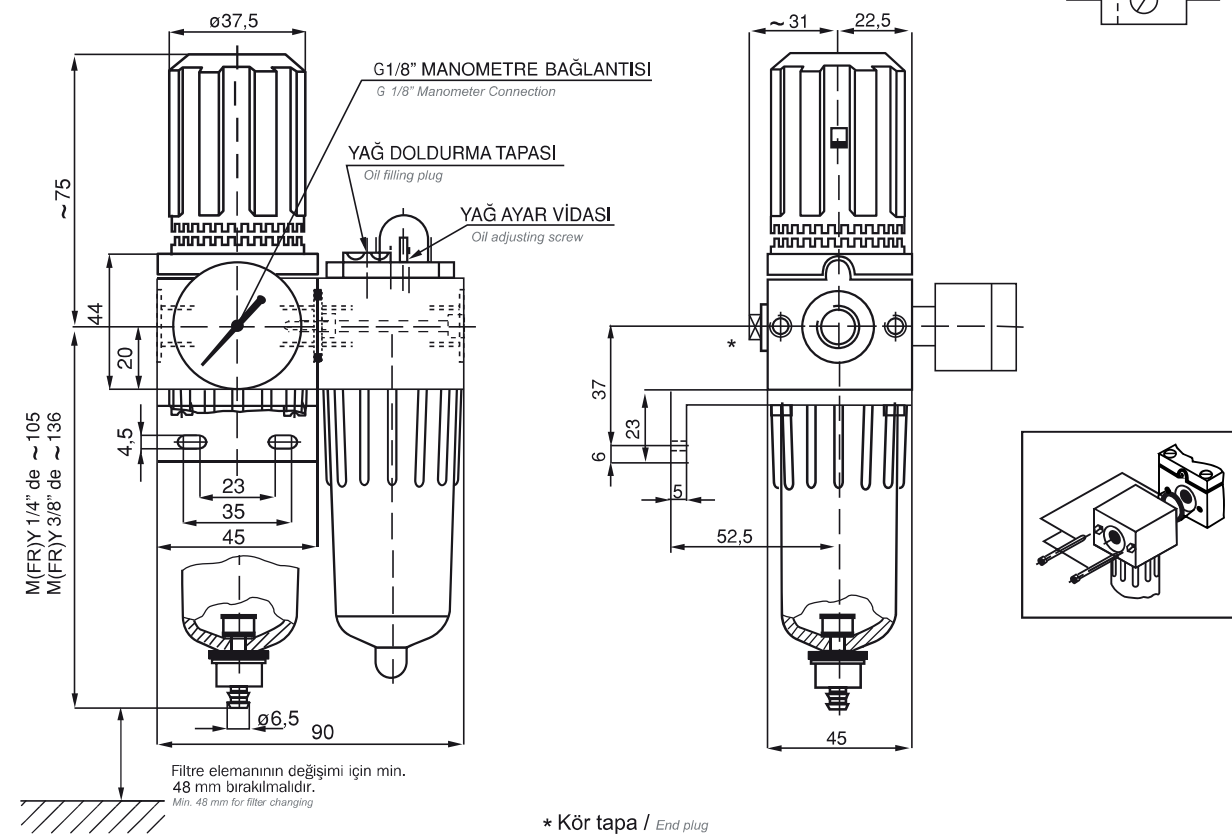
## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

- G1/4", G3/8" ölçülerinde
  - Birbirine kolay bağlanabilme
  - Yüksek debi ve verim
  - Hassas basınç ayarı
  - Yarı otomatik su tahliyesi
  - Uzun ömür
  - Yedek parça ve servis garantisi
- G1/4", G3/8" Connections
  - Combining together with ease
  - High flow rate and efficiency
  - Accurate pressure setting
  - Semi - automatic drain
  - Long-lasting
  - Accessories and service warranty

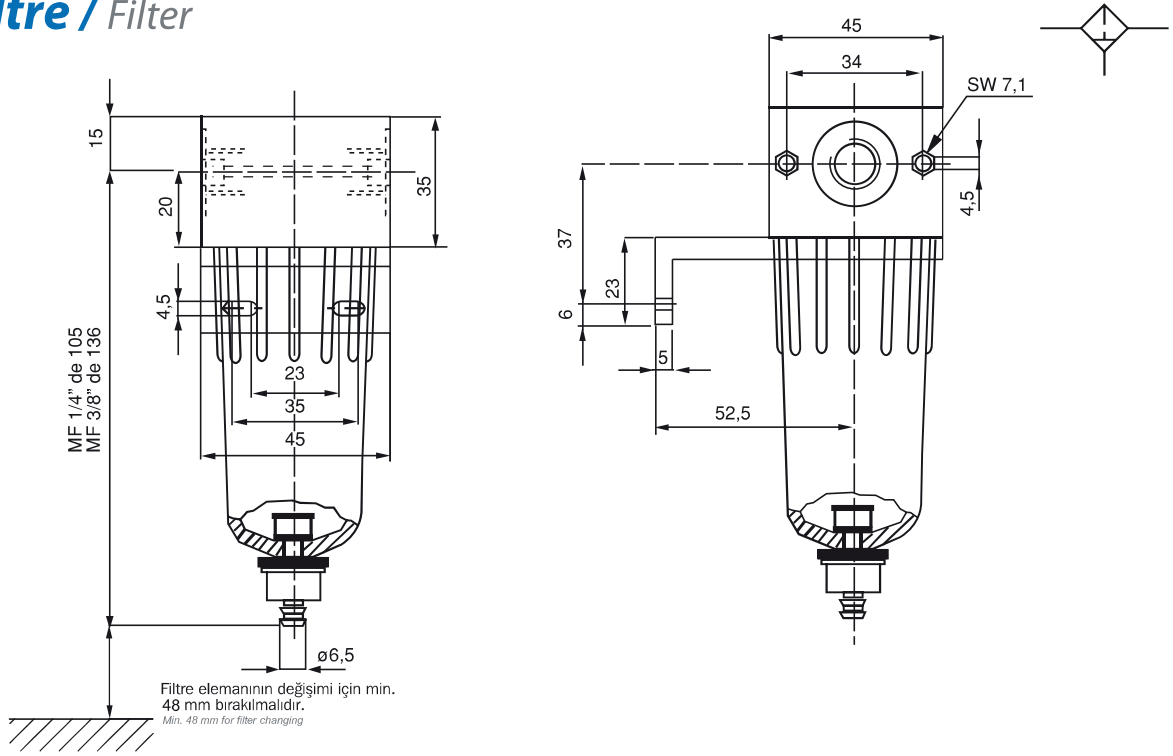
## MFRY 1/4" - 3/8"



## M (FR)Y 1/4" - 3/8"



# Filtre / Filter

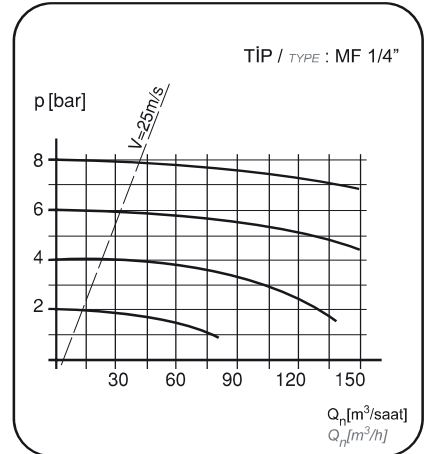


## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

TİP / TYPE	MF 1/4"	MF 3/8"
Ölçü / Connection	G 1/4"	G 3/8"
Filtreleme Değeri Pore size of filter element	30 µm	
Tahliye Şekli / Drain type	Yarı Otomatik / Semi - Automatic	
Bağlantı Konumu / Installation	Dikey / Vertical	
Çalışma Sıcaklığı Temp. range	0 °C ~ +50 °C (10 bar'da) / at 10 bar	
Çalışma Basıncı Operating pressure range	0 - 16 bar	
Debi / Flow rate	550 lt/dk / lt/min	850 lt/dk / lt/min
Verim / Efficiency	% 95	% 93
Ağırlık / Weight	0.30 kg	0.35 kg

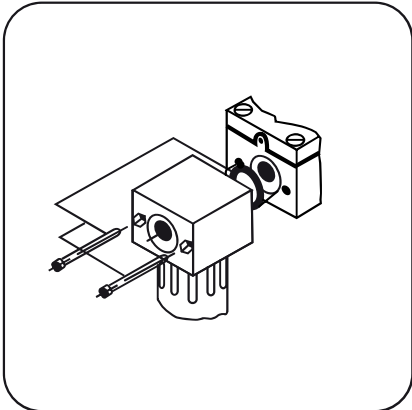
### Akış Özellikleri

Flow characteristics



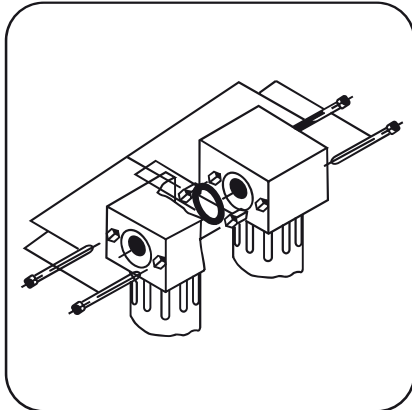
### Filtre + Regülatör + Yağlayıcı Bağlantı Kombinasyonu

Filter + Regulator + Lubricator  
Combination



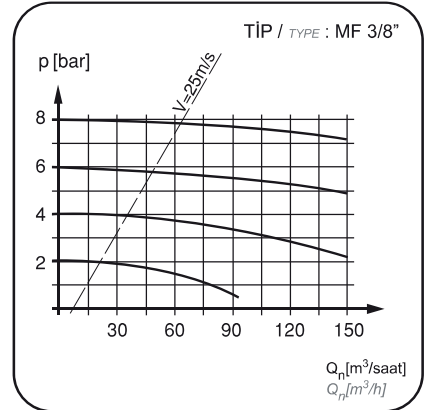
### Filtre + Yağlayıcı Bağlantı Kombinasyonu

Filter + Lubricator Combination

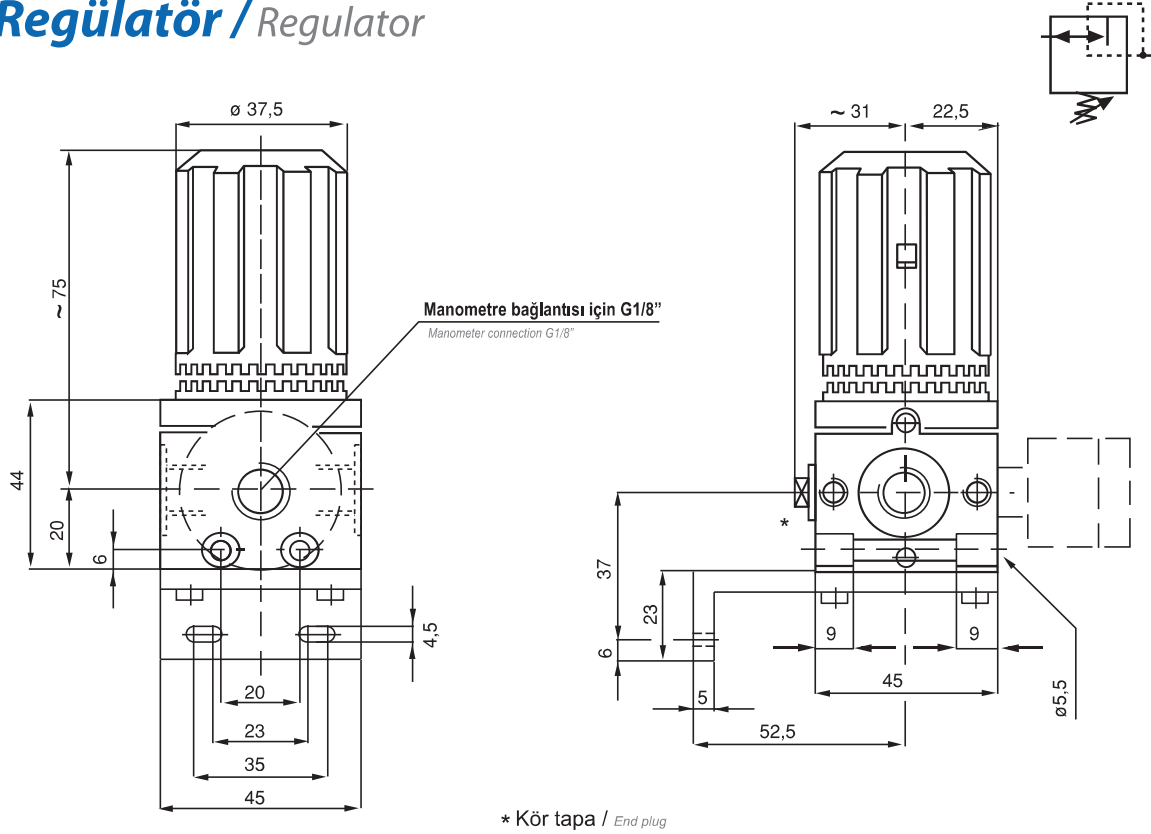


### Akış Özellikleri

Flow characteristics



# Regülatör / Regulator

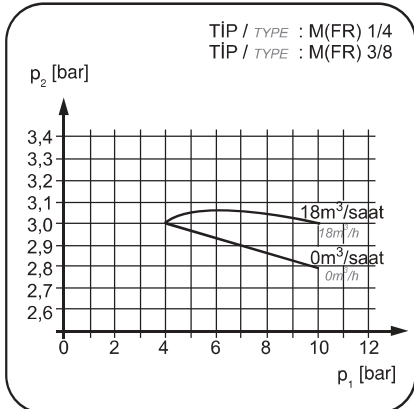


## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

TİP / TYPE	MR 1/4"	MR 3/8"
Ölçü / Connection	G 1/4"	G 3/8"
Çalışma Sıcaklığı / Temp. range	0 °C ~ +60 °C (10 bar'da) / at 10 bar	
Giriş Basıncı / Inlet pressure	0 - 16 bar	
Çıkış Basıncı / Outlet pressure	0.5 - 8 bar, isteğe göre 0.5 - 4 ve 0.5 - 16 bar yapılabilir. 0.5 - 8 bar; 0.5 - 4 and 0.5 - 16 bar optional	
Min. Basınç Farkı / Pressure drop	P <sub>1</sub> - P <sub>2</sub> = 0.2 bar	
Debi / Flow rate	550 lt/dk / lt/min	850 lt/dk / lt/min
Ağırlık / Weight	0.60 kg	

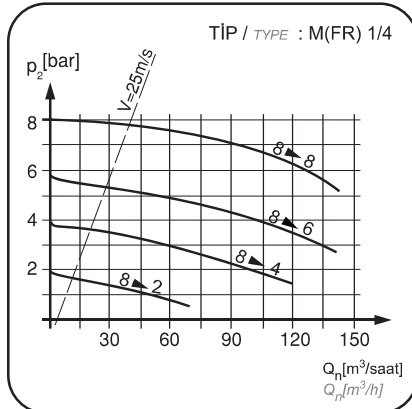
### Giriş Basıncına Bağımlılık Eğrisi

Outlet pressure variation with fluctuating inlet pressure



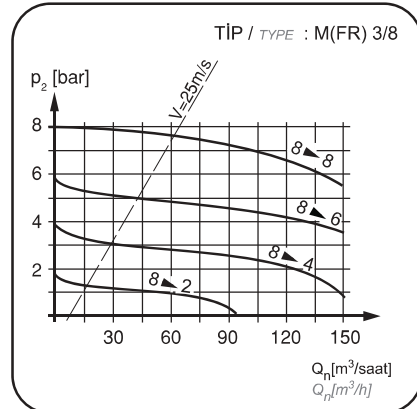
### Akış Özellikleri

Flow characteristics



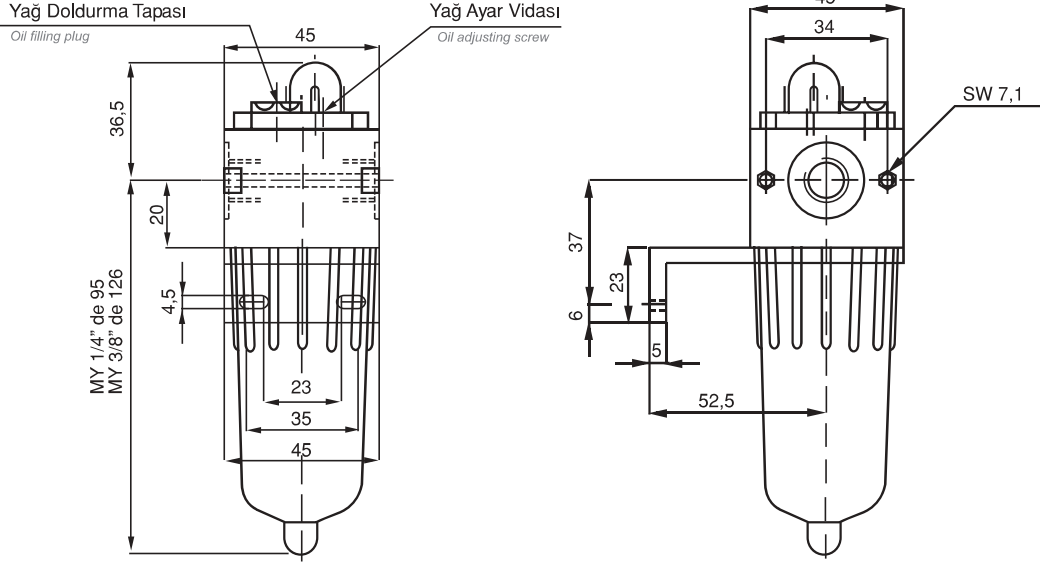
### Akış Özellikleri

Flow characteristics





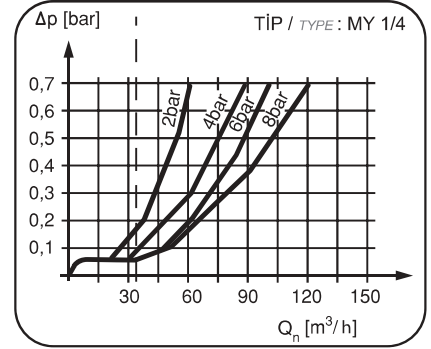
# Yağlayıcı / Lubricator



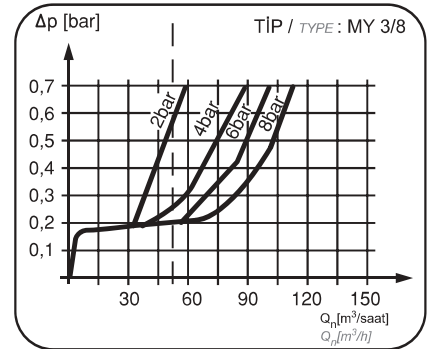
## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

TİP / TYPE	MY 1/4"	MY 3/8"
Ölçü / Connection	G 1/4"	G 3/8"
Hava Yağ Karışım Oranı Oil / Air ratio	Ayar vidası ile ayarlanabilir Adjustable	
Bağlantı Konumu / Installation	Di key / Vertical	
Çalışma Sıcaklığı Temp. range	-20 °C ~ +50 °C (10 bar'da) / at 10 bar	
Çalışma Basıncı Operating pressure range	0 - 16 bar	
Debi / Flow rate	550 lt/dk / lt/min	850 lt/dk / lt/min
Ağırlık / Weight	0.35 kg	0.40 kg
Debi Aralığı / Flow rate range	0.2...30m <sup>3</sup> /saat / m <sup>3</sup> /h	0.2...54m <sup>3</sup> /saat / m <sup>3</sup> /h

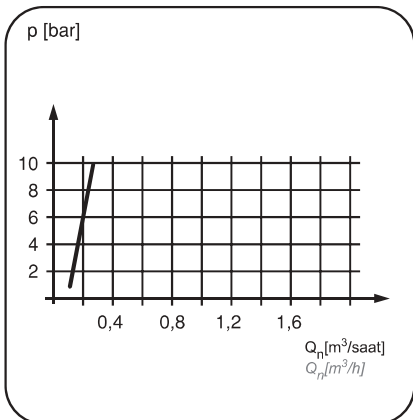
Akış Eğrisi / Flow characteristics



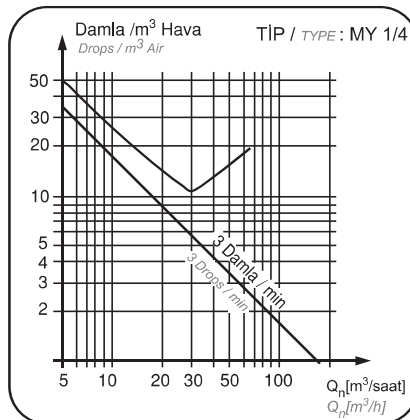
Akış Eğrisi / Flow characteristics



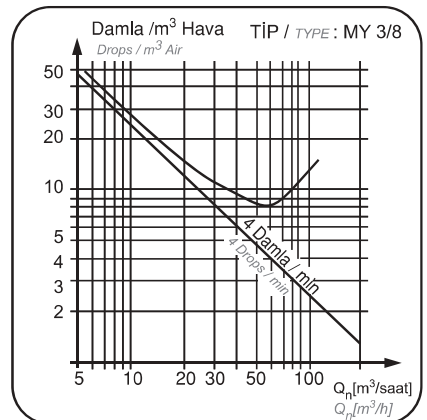
Yağlama Grafiği / Lubrication curve



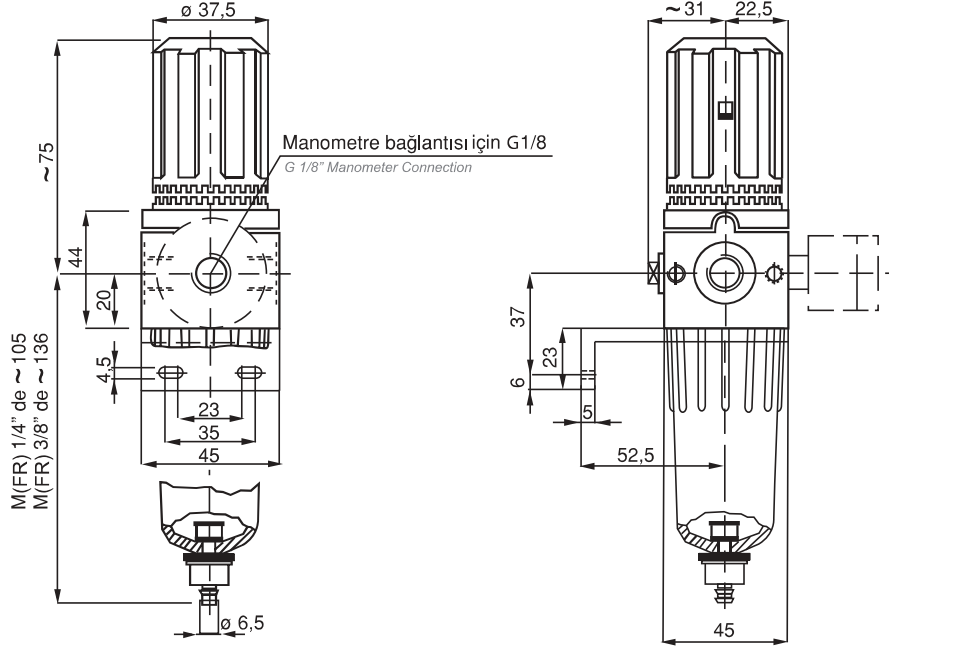
Karışım Eğrisi / Oil - air ratio



Karışım Eğrisi / Oil - air ratio



# Filtre + Regülatör / Filter + Regulator

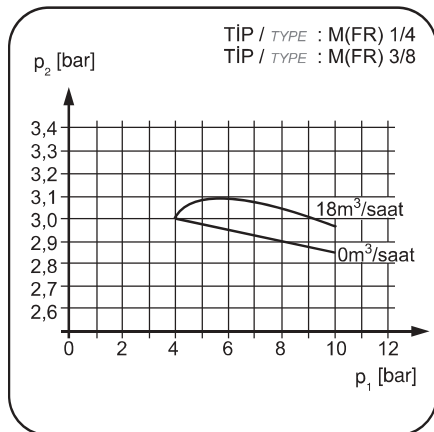


## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

TİP / TYPE	MFR 1/4"	MFR 3/8"
Ölçü / Connection	G 1/4"	G 3/8"
Filtreleme Değeri / Pore size of filter element	30 µm	
Tahliye Şekli / Drain type	Yarı otomatik / Semi - Automatic	
Bağlantı Şekli / Installation	Dikey / Vertical	
Çalışma Sıcaklığı / Temp. range	0 °C ~ +50 °C (10 bar'da) / at 10 bar	
Giriş Basıncı / Inlet pressure	0 - 16 bar	
Çıkış Basıncı / Outlet pressure	0.5 - 8 bar, isteğe göre 0.5 - 4 ve 0.5 - 16 bar yapılabilir. 0.5 - 8 bar; 0.5 - 4 and 0.5 - 16 bar optional	
Min. Basınç Farkı / Pressure drop	$P_1 - P_2 = 0.2$ bar	
Debi / Flow rate	550 lt/dk / lt/min	850 lt/dk / lt/min
Verim / Efficiency	% 95	% 93
Ağırlık / Weight	0.60 kg	0.65 kg

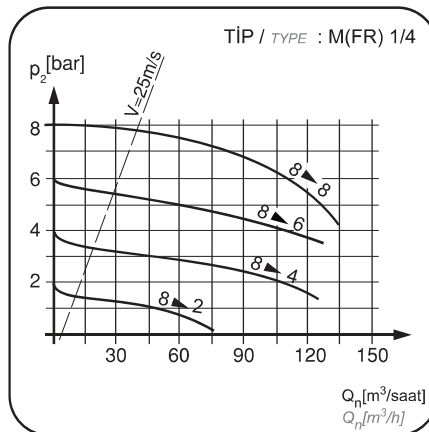
### Giriş Basıncına Bağımlılık Eğrisi

Outlet pressure variation with fluctuating inlet pressure



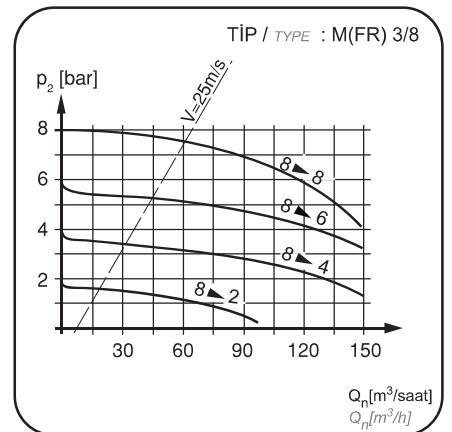
### Akış Özellikleri

Flow characteristics



### Akış Özellikleri

Flow characteristics





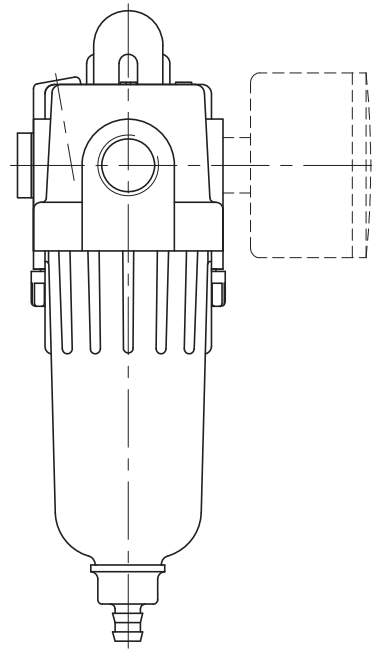
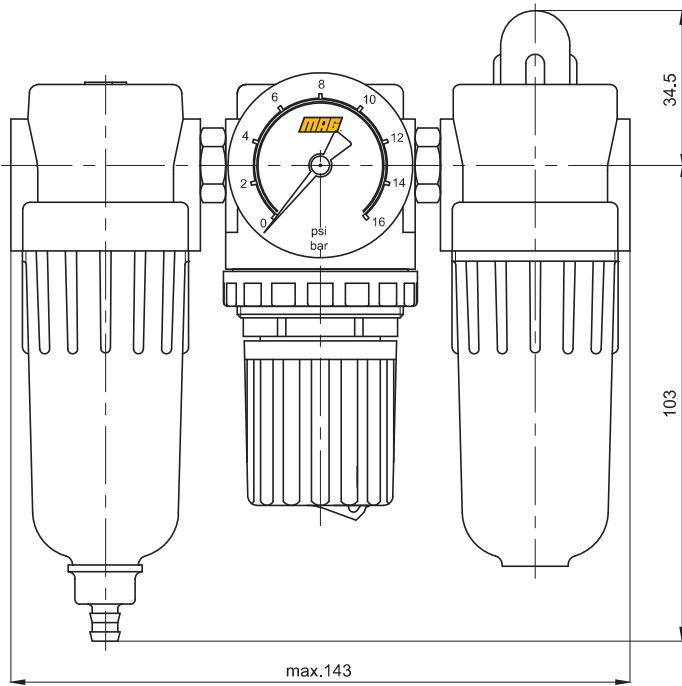
## FRY - 1/4"

## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

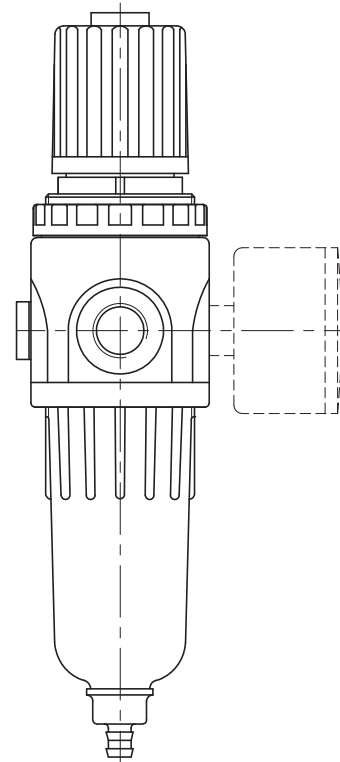
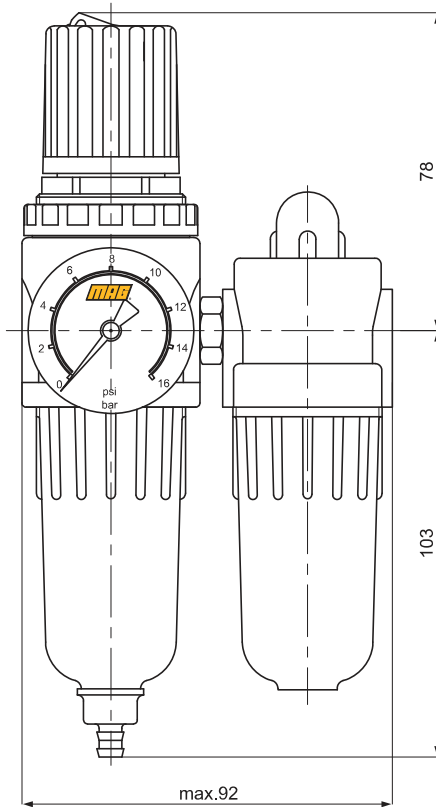
Giriş basıncı / Inlet pressure range :0 ... 16 bar  
Çıkış basıncı / Outlet pressure range :0,5 ... 10 bar  
Çalışma sıcaklığı / Temperature range :-10°C ... +50°C (10 barda)  
(at 10 bar)

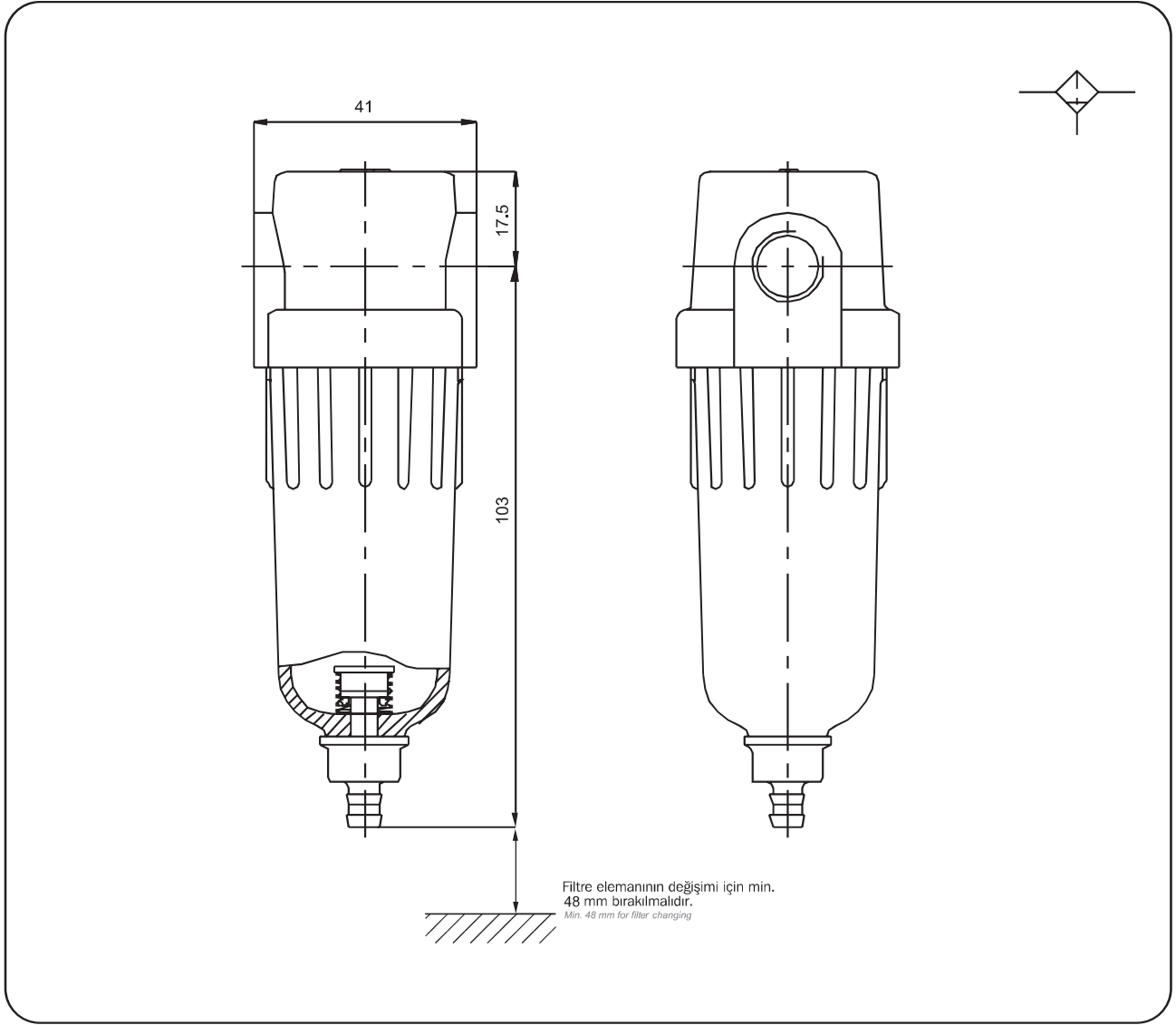
FRY	Üç Gövdeli / Triple Bodied
(FR)Y	İki Gövdeli / Double Bodied

**FRY - 1/4"**



**(FR)Y - 1/4"**

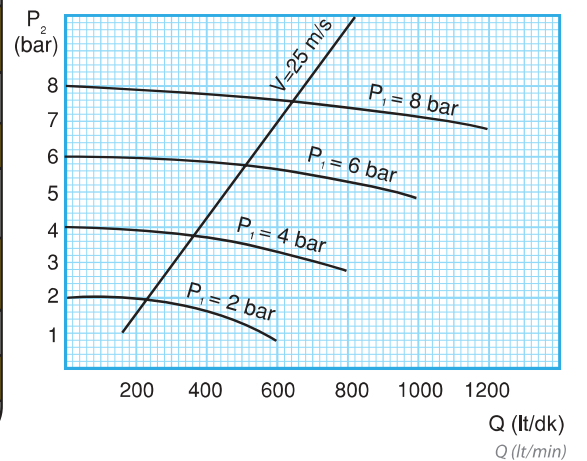


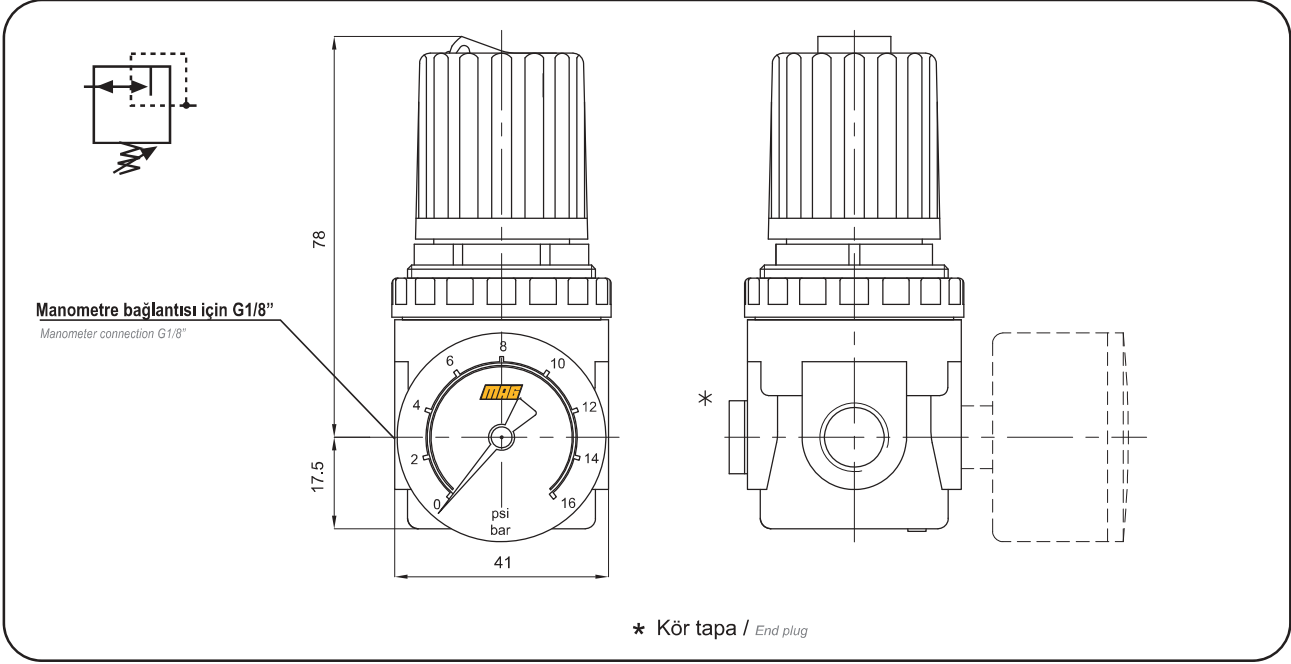


## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

TİP / TYPE	F 1/4"
Ölçü / Connection	G 1/4"
Filtreleme Deęeri Pore size of filter element	30 µm
Tahliye Şekli / Drain type	Manuel / Manual
Baęlantı Konumu / Installation	Dikey / Vertical
Çalışma Sıcaklığı Temp. range	0 °C ~ +50 °C (10 bar'da) / at 10 bar
Çalışma Basıncı Operating pressure range	0 - 16 bar
Debi / Flow rate	550 lt/dk / lt/min
Verim / Efficiency	% 95
Ağırlık / Weight	0.11 Kg

Akış eğrisi / Flow characteristics

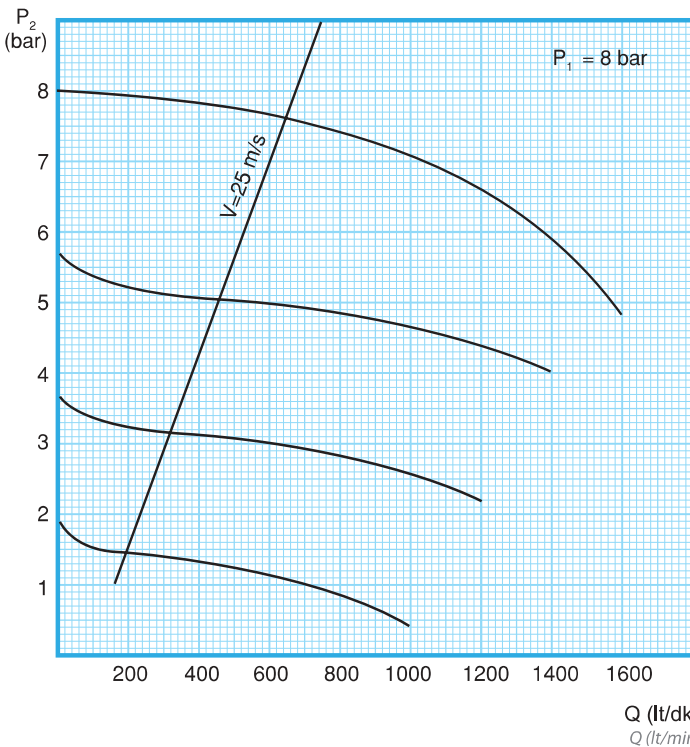




## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

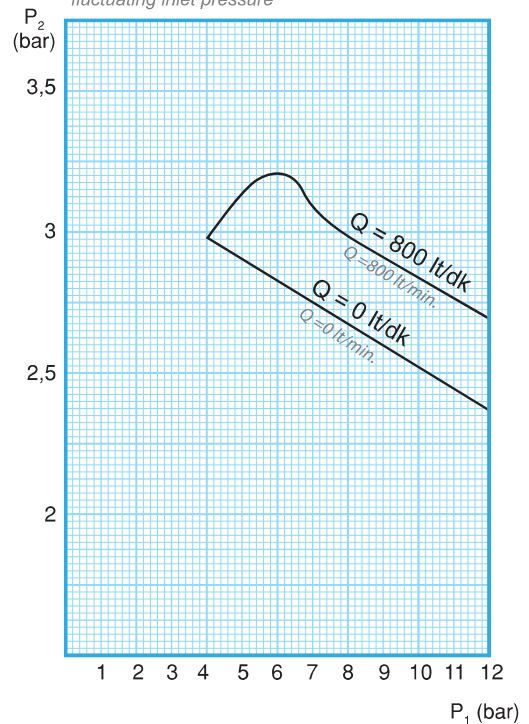
TİP / TYPE	R 1/4"
Ölçü / Connection	G 1/4"
Çalışma Sıcaklığı / Temp. range	0 °C ~ +60 °C (10 bar'da) / at 10 bar
Giriş Basıncı / Inlet pressure	0 - 16 bar
Çıkış Basıncı / Outlet pressure	0.5 - 8 bar, isteğe göre 0.5 - 4 ve 0.5 - 16 bar yapılabilir. 0.5 - 8 bar; 0.5 - 4 and 0.5 - 16 bar optional
Min. Basınç Farkı / Pressure drop	$P_1 - P_2 = 0.2$ bar
Debi / Flow rate	550 lt/dk / lt/min.
Ağırlık / Weight	0,28 Kg

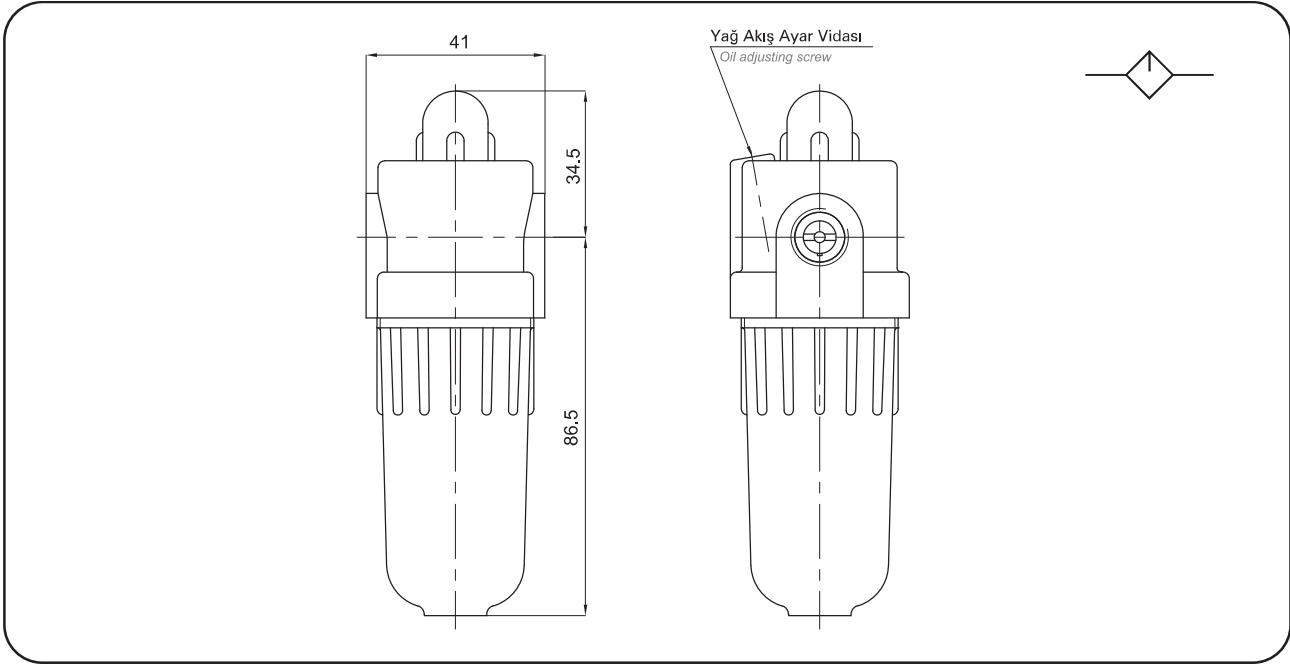
Akış eğrisi / Flow characteristics



Giriş basıncına bağlılık eğrisi

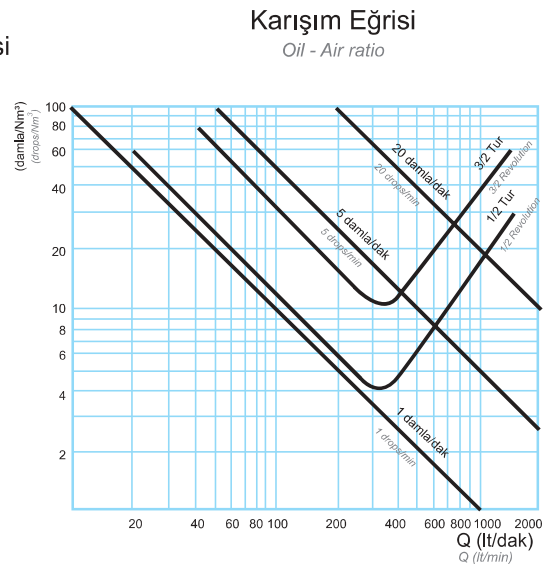
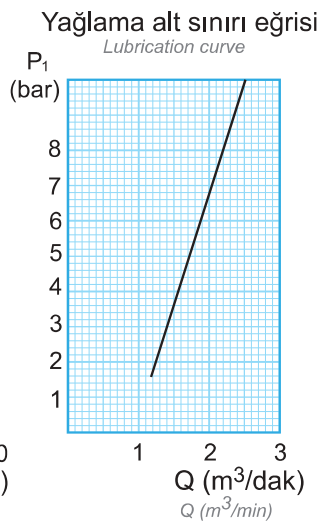
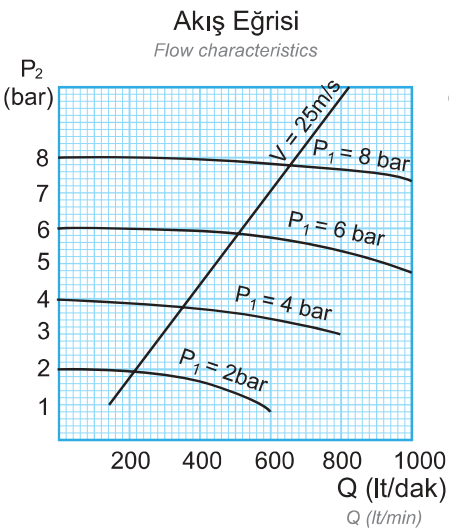
Outlet pressure variation with fluctuating inlet pressure





## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

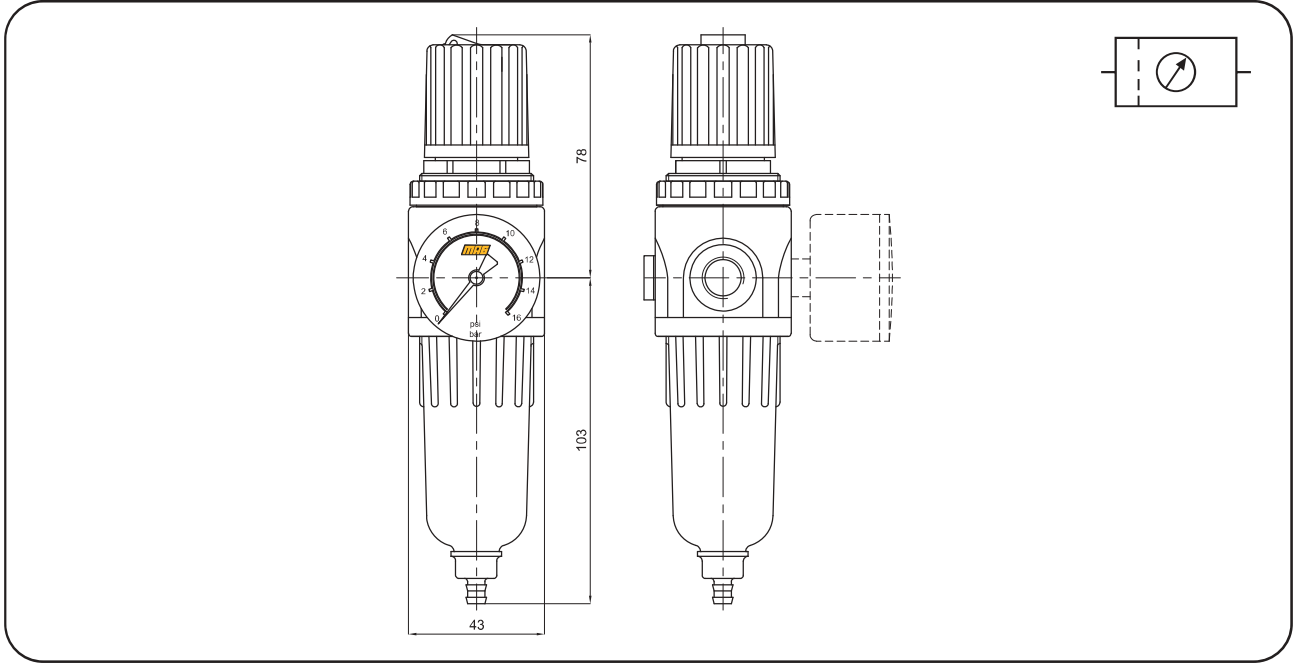
TİP / TYPE	Y 1/4"
Ölçü / Connection	G 1/4"
Hava Yağ Karışım Oranı / Oil / Air ratio	Ayar vidası ile ayarlanabilir / Adjustable
Bağlantı Konumu / Installation	Dikey / Vertical
Çalışma Sıcaklığı / Temp. range	-20 °C ~ +50 °C (10 bar'da) / at 10 bar
Çalışma Basıncı / Operating pressure range	0 - 16 bar
Debi / Flow rate	550 lt/dk / lt/min
Ağırlık / Weight	0.09 Kg
Debi Aralığı / Flow rate range	0.2...30 m <sup>3</sup> /saat / m <sup>3</sup> /h



# Filtre - Regülatör

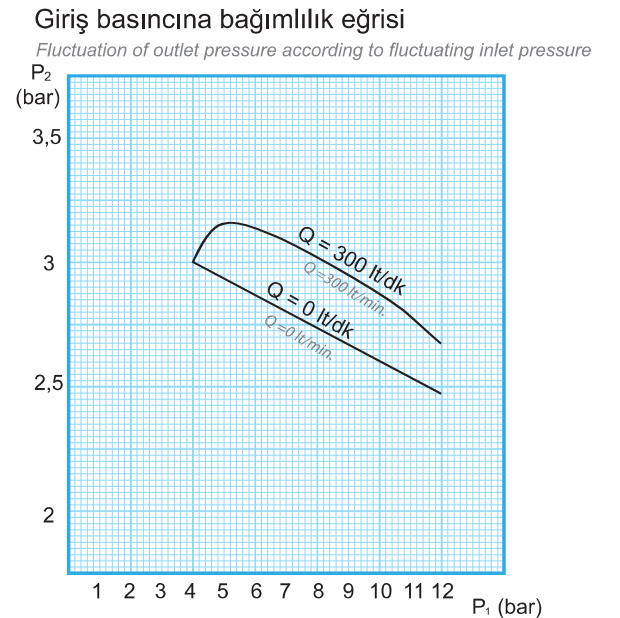
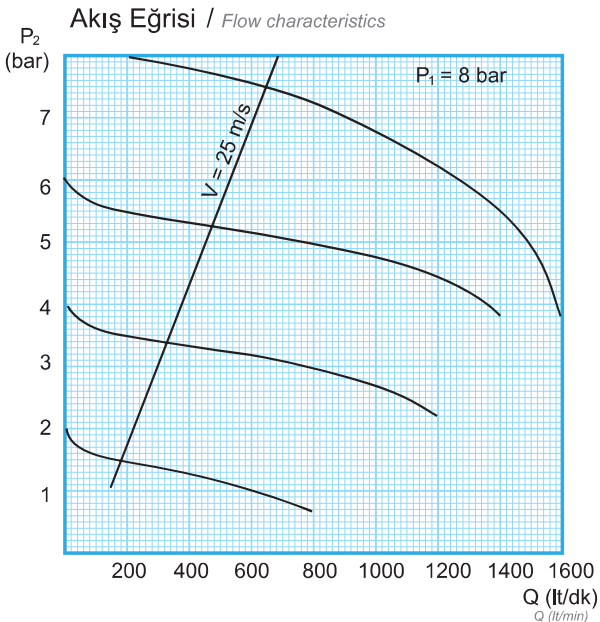
Filter + Pressure Regulator

(FR) - 1/4"



## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

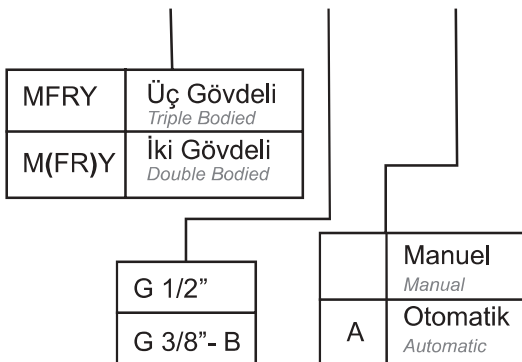
TİP / TYPE	FR 1/4"
Ölçü / Connection	G 1/4"
Filtreleme Değeri / Pore size of filter element	30 µm
Tahliye Şekli / Drain type	Manuel / Manual
Bağlantı Şekli / Installation	Dikey / Vertical
Çalışma Sıcaklığı / Temp. range	0 °C ~ +50 °C (10 bar'da) / at 10 bar
Giriş Basıncı / Inlet pressure	0 - 16 bar
Çıkış Basıncı / Outlet pressure	0.5 - 10 bar, isteğe göre 0.5 - 4 ve 0.5 - 16 bar yapılabilir. 0.5 - 10 bar ; 0.5 - 4 and 0.5 - 16 bar optional
Min. Basınç Farkı / Pressure drop	$P_1 - P_2 = 0.2 \text{ bar}$
Debi / Flow rate	550 lt/dk / lt/min
Verim / Efficiency	% 95
Ağırlık / Weight	0.32 Kg







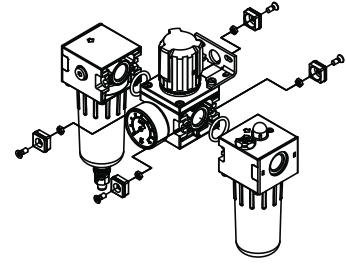
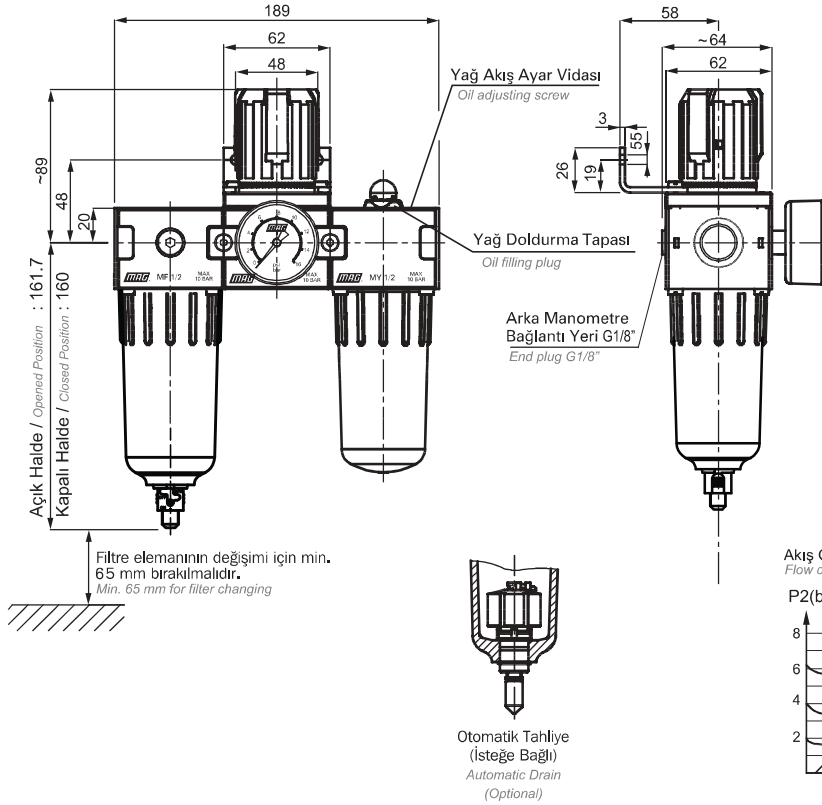
## MFRY - ... / ...



## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

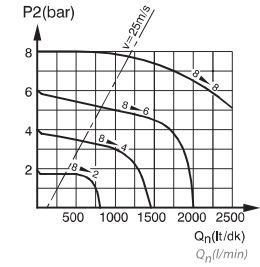
- G1/2", G3/8" ölçülerinde *G1/2", G3/8" Connections*
- Birbirine kolay bağlanabilme *Combining together with ease*
- Yüksek debi ve verim *High flow rate and efficiency*
- Hassas basınç ayarı *Accurate pressure setting*
- Yarı otomatik su tahliyesi *Semi - automatic drain*
- Otomatik su tahliyesi (İsteğe bağlı) *Automatic drain (Optional)*
- Uzun ömür *Long-lasting*
- Yedek parça ve servis garantisi *Accessories and service warranty*

## MFRY 3/8"-B - 1/2"

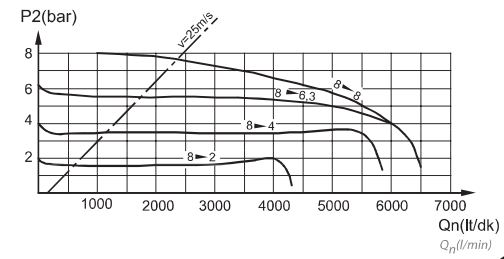


Filtre + Regülatör + Yağlayıcı Bağlantı Kombinasyonu  
Filter + Regulator + Lubricator Combination

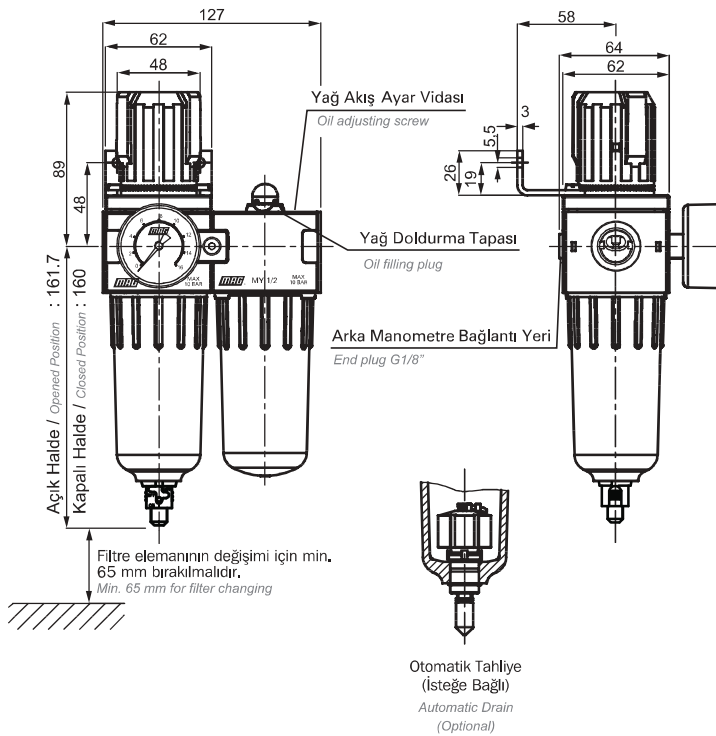
Akış Özellikleri (MFRY 3/8-B)  
Flow characteristics (MFRY 3/8-B)



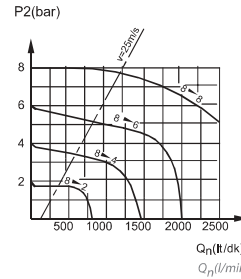
Akış Özellikleri (MFRY 1/2)  
Flow characteristics (MFRY 1/2)



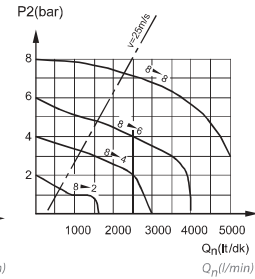
## M(FR)Y 3/8"-B - 1/2"



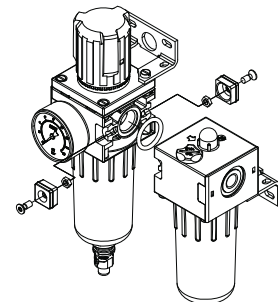
Akış Özellikleri (M(FR)Y 3/8-B)  
Flow characteristics (M(FR)Y 3/8-B)



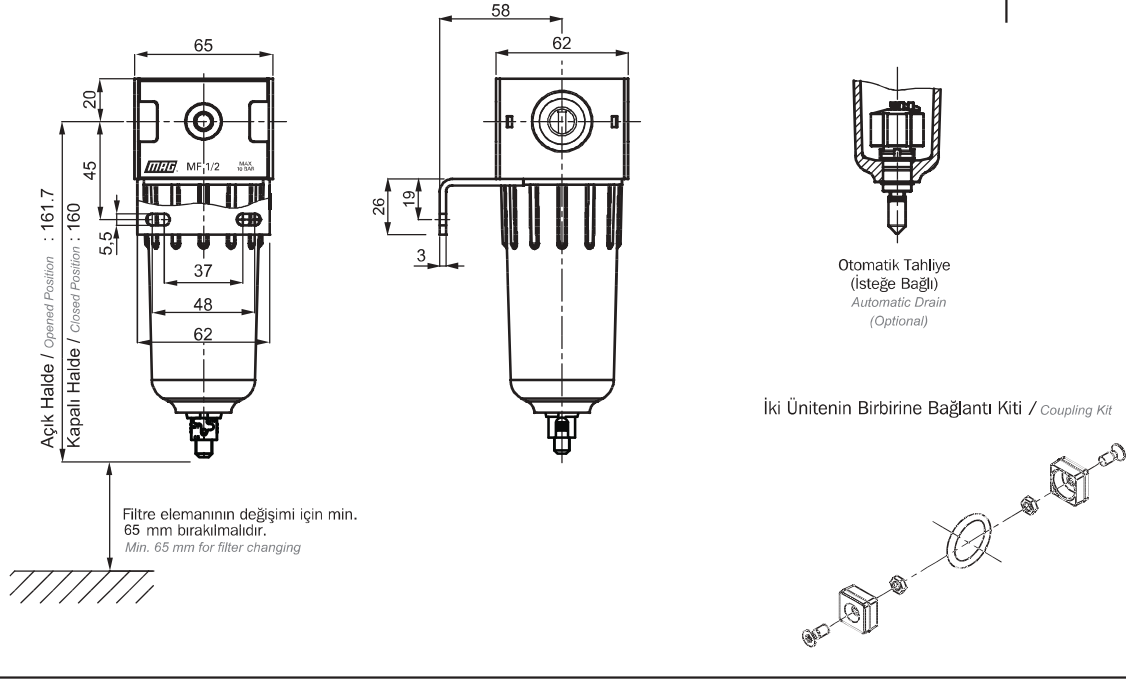
Akış Özellikleri (M(FR)Y 1/2)  
Flow characteristics (M(FR)Y 1/2)



Filtre + Regülatör + Yağlayıcı Bağlantı Kombinasyonu  
Filter + Regulator + Lubricator Combination



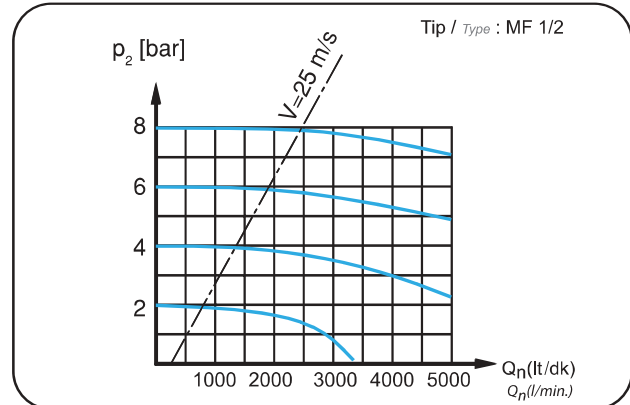
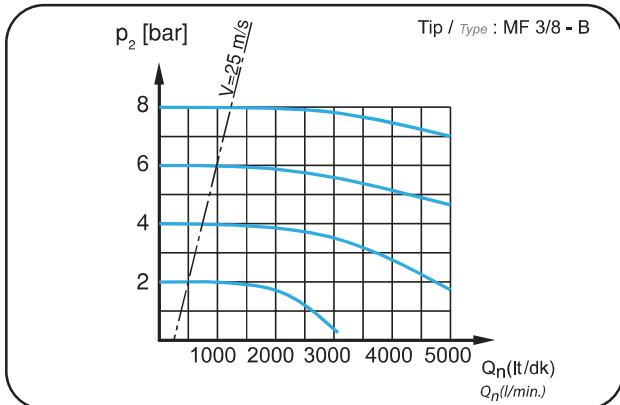
## Filtre / Filter



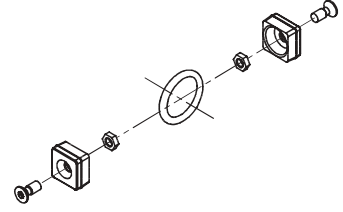
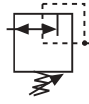
## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

TİP	MF 3/8" - B	MF 1/2"
Ölçü / Connection	G 3/8"	G 1/2"
Filtreleme Değeri Pore size of filter element	30 $\mu$ m	
Tahliye Şekli / Drain type	Manuel ( isteğe göre otomatik yapılabilir) / Manual - Automatic (Optional)	
Bağlantı Konumu / Installation	Dikey / Vertical	
Çalışma Sıcaklığı Temp. range	0 °C ~ +50 °C (10 bar'da) / at 10 bar	
Çalışma Basıncı Operating pressure range	0 - 16 bar	
Debi / Flow rate	850 lt/dk / lt/min	1900 lt/dk / lt/min
Verim / Efficiency	%98	%98
Ağırlık / Weight	0,55 kg	0,60 kg

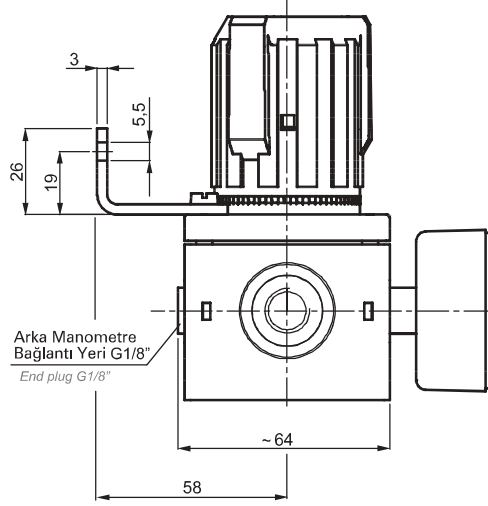
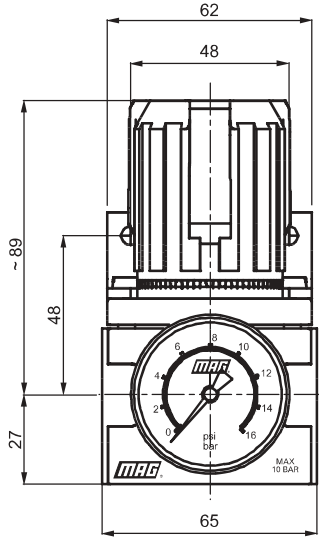
### Akış Özellikleri / Flow characteristics



# Regülatör / Regulator



İki Ünitenin Birbirine Bağlantı Kiti / Coupling Kit

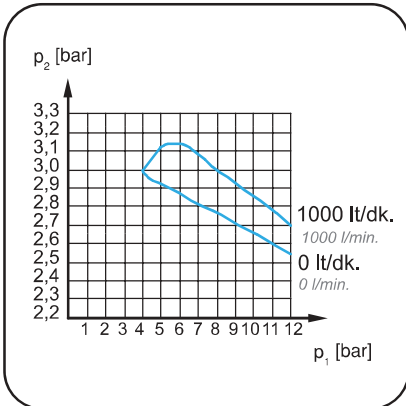


## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

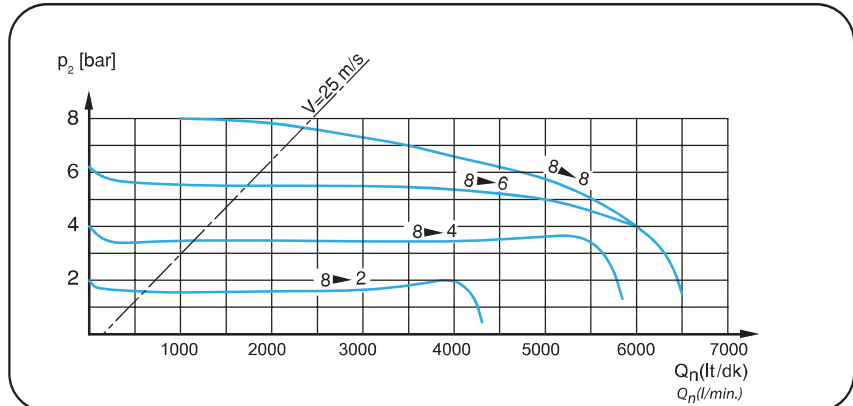
Tip / Type	MR 3/8" - B	MR 1/2"
Ölçü / Connection	G 3/8"	G 1/2"
Çalışma Sıcaklığı / Temp. range	0 °C ~ +60 °C (10 bar'da) / at 10 bar	
Giriş Basıncı / Inlet pressure	0 - 16 bar	
Çıkış Basıncı / Outlet pressure	0.5 - 8 bar, isteğe göre 0.5 - 4 ve 0.5 - 16 bar yapılabilir. 0.5 - 8 bar; 0.5 - 4 and 0.5 - 16 bar optional	
Min. Basınç Farkı / Pressure drop	P1-P2 = 0.2 bar	
Debi / Flow rate	1900 lt/dk / l/min	
Ağırlık / Weight	0,90 kg	

### Giriş Basıncına Göre Bağımlılık Eğrisi

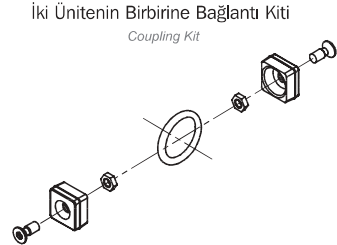
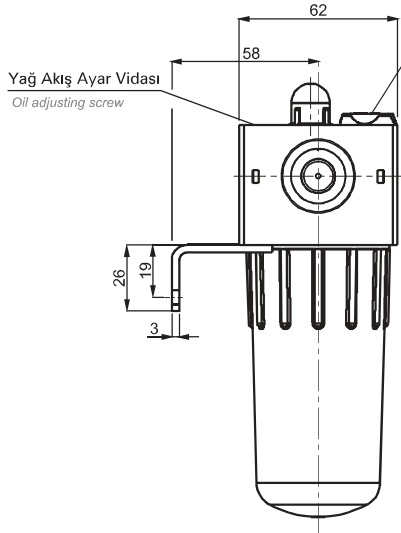
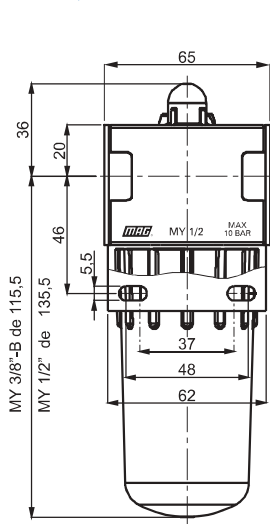
Outlet pressure variation with fluctuating inlet pressure



### Akış Özellikleri / Flow characteristics

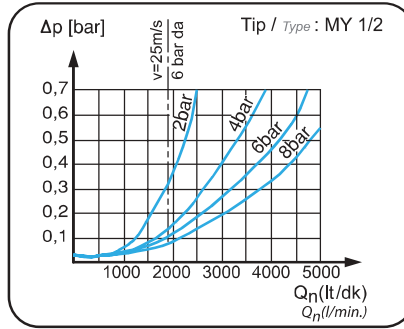


# Yağlayıcı / Lubricator

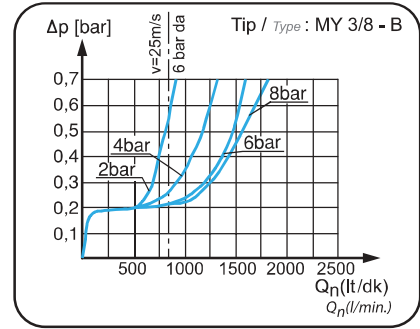


## TEKNİK ÖZELLİKLER TECHNICAL SPECIFICATIONS

### Akış Özellikleri / Flow characteristics

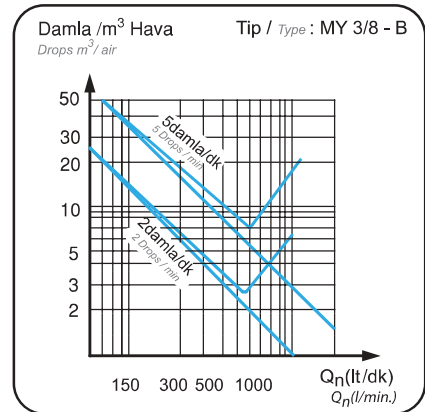


### Akış Özellikleri / Flow characteristics

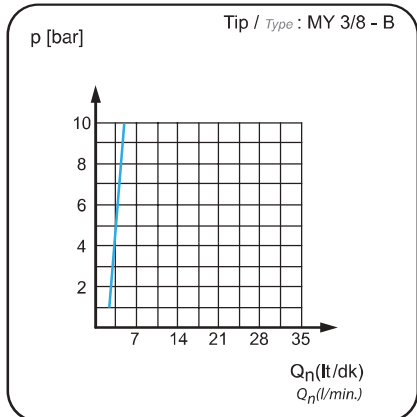


TİP / TYPE	MY 3/8"- B	MY 1/2"
Ölçü / Connection	G 3/8"	G 1/2"
Hava Yağ Karışım Oranı Oil / Air ratio	Ayar vidası ile ayarlanabilir Adjustable	
Bağlantı Konumu / Installation	Dikey / Vertical	
Çalışma Sıcaklığı Temp. range	-20 °C ~ +50 °C (10 bar'da) / at 10 bar	
Çalışma Basıncı Operating pressure range	0 - 16 bar	
Debi / Flow rate	850 lt/dk / lt/min	1900 lt/dk / lt/min
Ağırlık / Weight	0,60 kg	0,65 kg

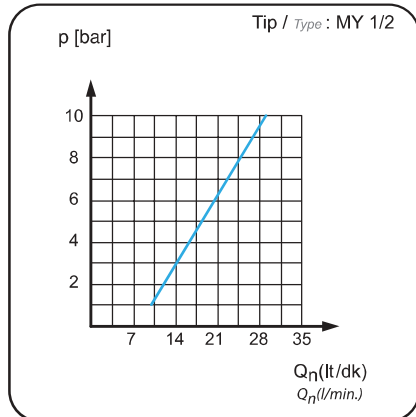
### Karışım Eğrisi / Oil - air ratio



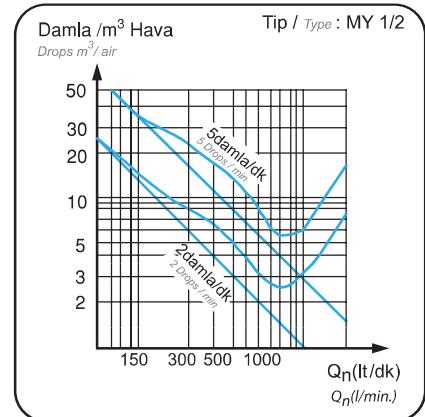
### Min. Çalışma Durumu Min. working condition



### Min. Çalışma Durumu Min. working condition

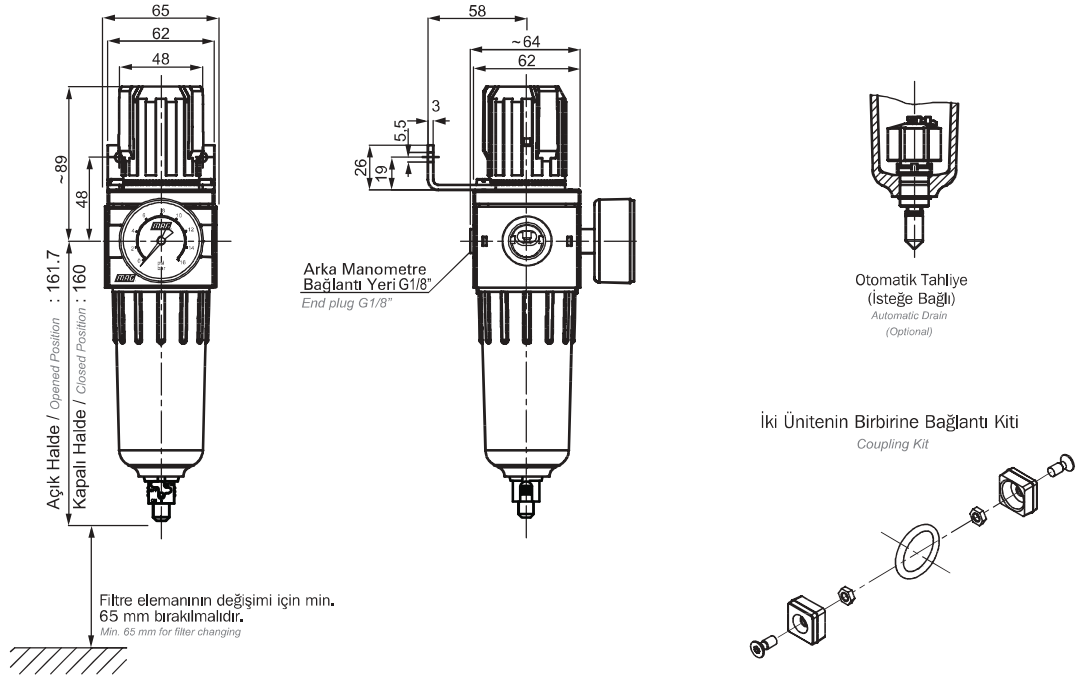


### Karışım Eğrisi / Oil - air ratio



# Filtre + Regülatör

## Filter + Pressure Regulator

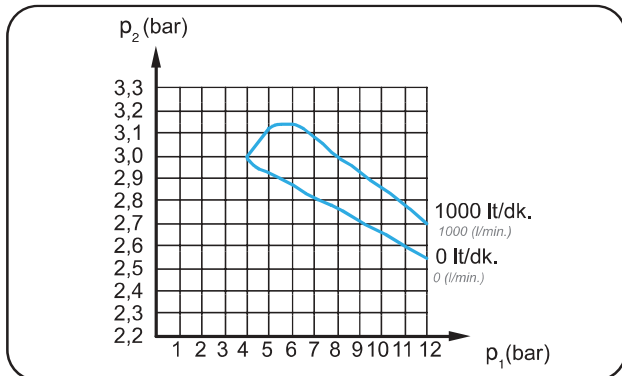


### TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

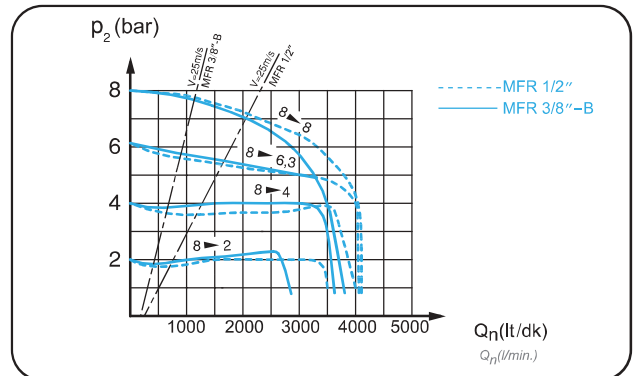
TİP / TYPE	MFR 3/8" - B	MFR 1/2"
Ölçü / Connection	G 3/8"	G 1/2"
Filtreleme Değeri / Pore size of filter element	30 $\mu$ m	
Tahliye Şekli / Drain Type	Manuel (İsteğe göre otomatik yapılabilir) / Manual - Automatic (Optional)	
Bağlantı Şekli / Installation	Dikey / Vertical	
Çalışma Sıcaklığı / Temp. range	0 °C ~ +50 °C (10 bar'da) / at 10 bar	
Giriş Basıncı / Inlet pressure	0 - 16 bar	
Çıkış Basıncı / Outlet pressure	0.5 - 8 bar, isteğe göre 0.5 - 4 ve 0.5 - 10 bar yapılabilir. 0.5 - 8 bar; 0.5 - 4 and 0.5 - 10 bar optional	
Min. Basınç Farkı / Pressure drop	$P_1 - P_2 = 0.2$ bar	
Debi / Flow rate	850 lt/dk / lt/min	1900 lt/dk / lt/min
Verim / Efficiency	%96	%95
Ağırlık / Weight	1kg	

#### Giriş Basıncına Bağımlılık Eğrisi

Outlet pressure variation with fluctuating inlet pressure



#### Akış Özellikleri / Flow characteristics





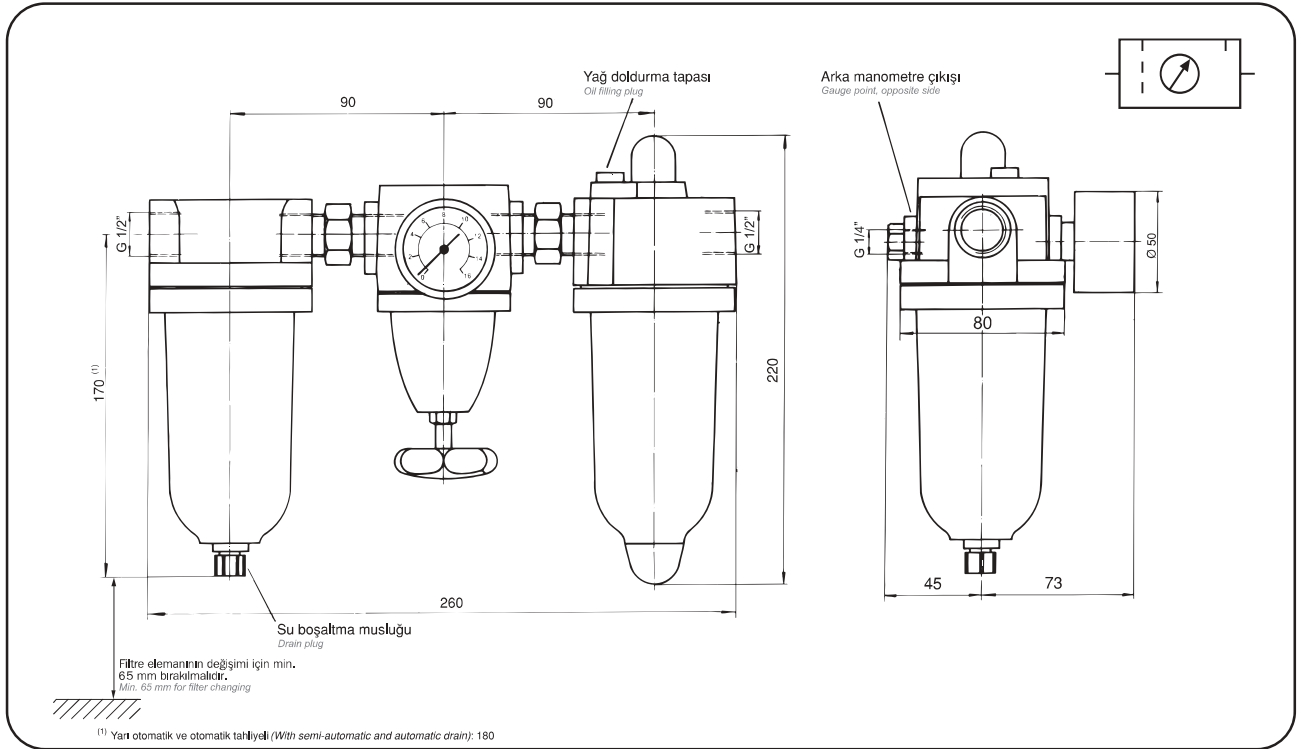
## FRY - 1/2" ..

	Manuel / Manual
A	Otomatik / Automatic

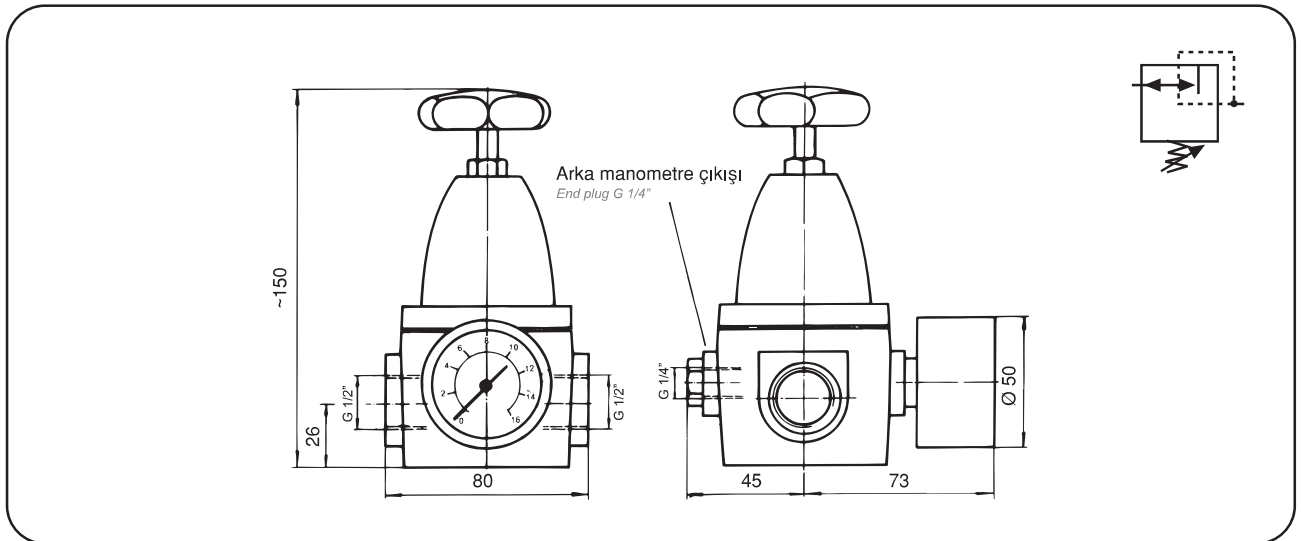
## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

Giriş basıncı / Inlet pressure range :0 ... 16 bar  
Çıkış basıncı / Outlet pressure range :0,5 ... 10 bar  
Çalışma sıcaklığı / Temperature range :-10°C ... +50°C (10 barda)  
(at 10 bar)

## Ölçüler / Dimensions



## Regülatör / Regulator R - 1/2"

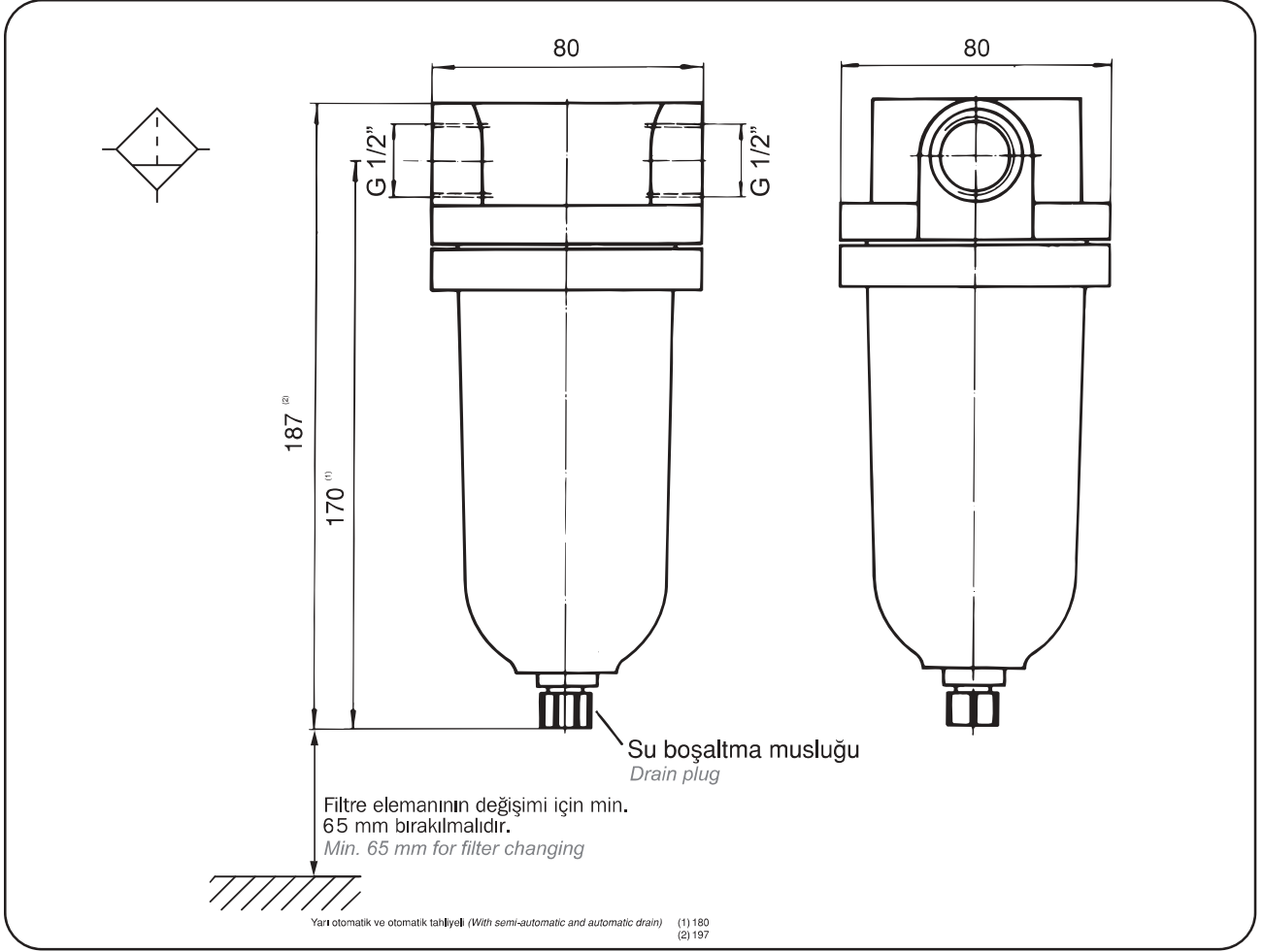


## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

TİP / TYPE	R 1/2"
Ölçü / Connection	G 1/2"
Çalışma Sıcaklığı / Temp. range	0 °C ~ +60 °C (10 bar'da) / at 10 bar
Giriş Basıncı / Inlet pressure	0 - 16 bar
Çıkış Basıncı / Outlet pressure	0.5 - 10 bar, isteğe göre 0.5 - 4 ve 0.5 - 16 bar yapılabilir. 0.5 - 10 bar; 0.5 - 4 and 0.5 - 16 bar optimal
Min. Basınç Farkı / Pressure drop	$P_1 - P_2 = 0.2$ bar
Debi NI/dak. / Flow rate NI/min.	1900 NI/dak ( $p_1=8$ bar, $p_2=6$ bar, $v=25$ m/s) 2850 NI/dak ( $p_1=6$ bar, $\Delta p=1$ bar)
Ağırlık / Weight	0.72 Kg



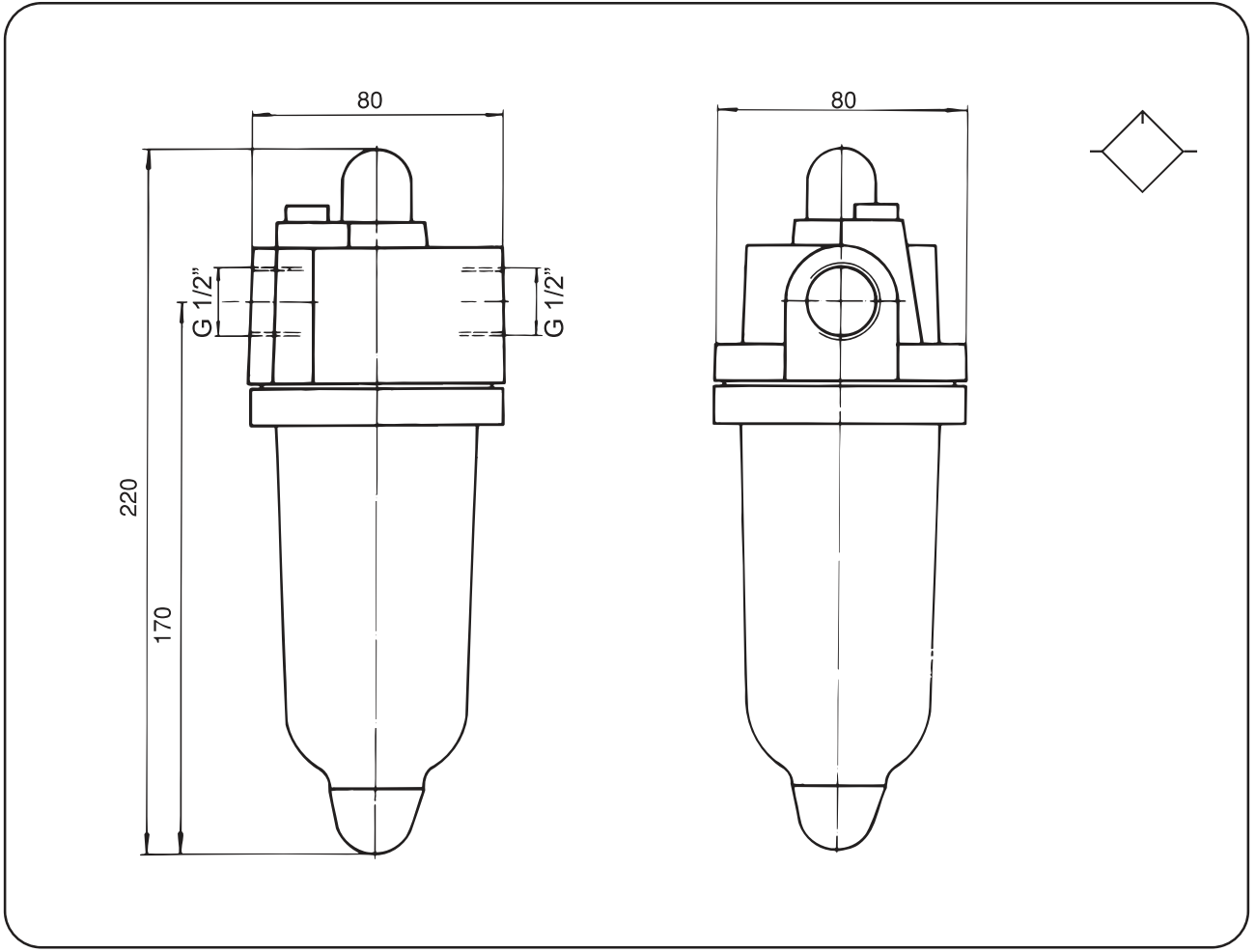
## Filtre F-1/2" / Filter F-1/2"



## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

TİP / TYPE	F 1/2
Ölçü / Connection	G 1/2"
Filtreleme Değeri / Pore size of filter element	30 µm
Tahliye Şekli / Drain type	Manuel/Yarı otomatik (İsteğe göre otomatik yapılabilir) Manual/Semi automatic - Automatic (Optional)
Bağlantı Konumu / Installation	Dikey / Vertical
Çalışma Sıcaklığı / Temp. range	0 °C ~ +50 °C (10 bar'da) / at 10 bar
Çalışma Basıncı / Operating pressure range	0 - 16 bar
Debi lt/dk / Flow rate l/min.	1900 (p <sub>1</sub> = 6 bar, v=25 m/s) 4150 (p <sub>1</sub> = 6 bar, Δp=1 bar)
Verim / Efficiency	% 95
Ağırlık / Weight	0.60 Kg

## Yağlayıcı Y-1/2" / Lubricator Y-1/2"



### TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

TİP / TYPE	Y 1/2
Ölçü / Connection	G 1/2"
Hava Yağ Karışım Oranı / Oil / Air ratio	Ayar vidası ile ayarlanabilir / Adjustable
Bağlantı Konumu / Installation	Dikey / Vertical
Çalışma Sıcaklığı / Temp. range	-20 °C ~ +50 °C (10 bar'da) / at 10 bar
Çalışma Basıncı / Operating pressure range	0 - 16 bar
Debi lt/dk / Flow rate l/min.	1900 ( $p_1 = 6 \text{ bar}$ , $v=25 \text{ m/s}$ ) 4200 ( $p_1 = 6 \text{ bar}$ , $\Delta p=1 \text{ bar}$ )
Ağırlık / Weight	0.53 Kg



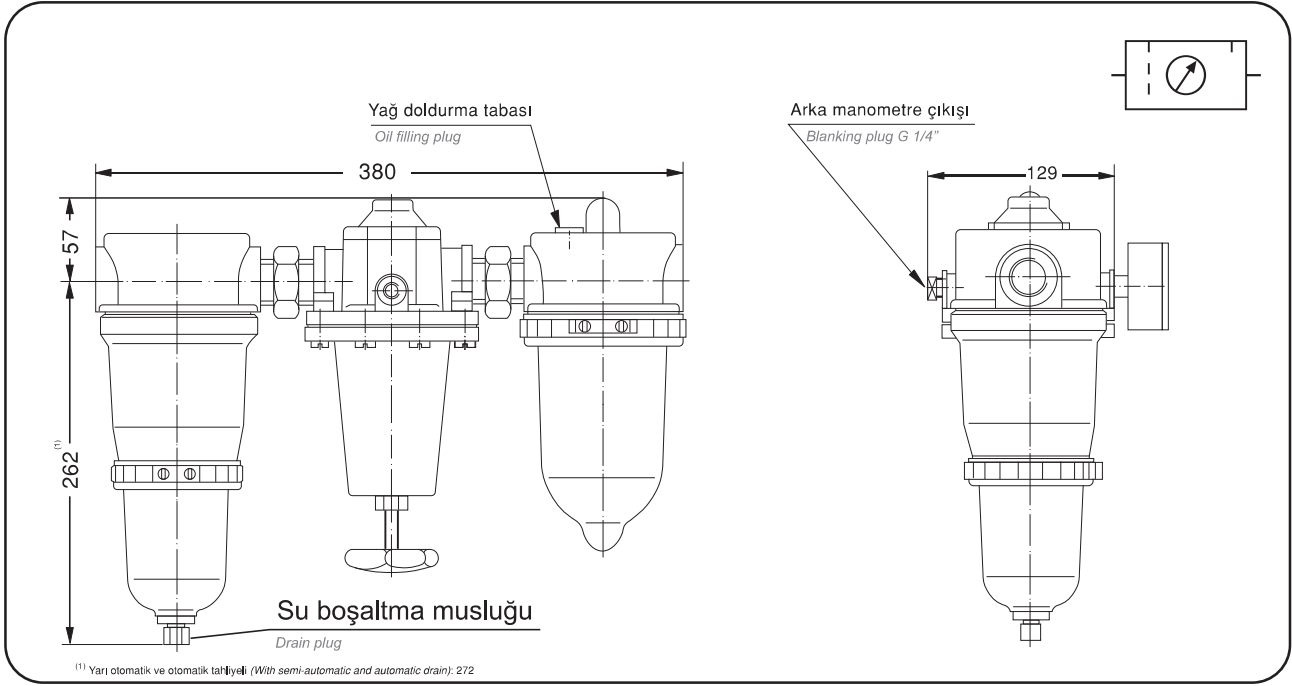
## FRY - 1" ..

## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

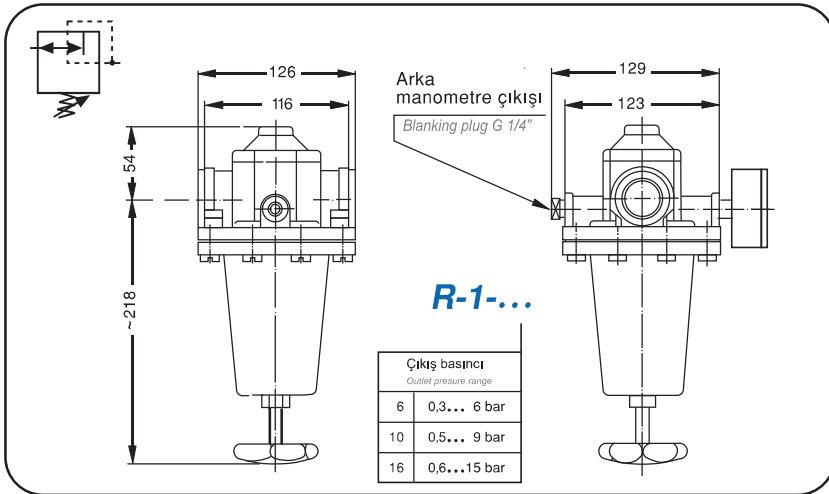
	Manuel / Manual
A	Otomatik / Automatic

Giriş basıncı / Inlet pressure range : 0 ... 16 bar  
Çıkış basıncı / Outlet pressure range : 0,5 ... 9 bar  
Çalışma sıcaklığı / Temperature range : 0°C ... 50°C (10 barda)  
(at 10 bar)

## Ölçüler / Dimensions

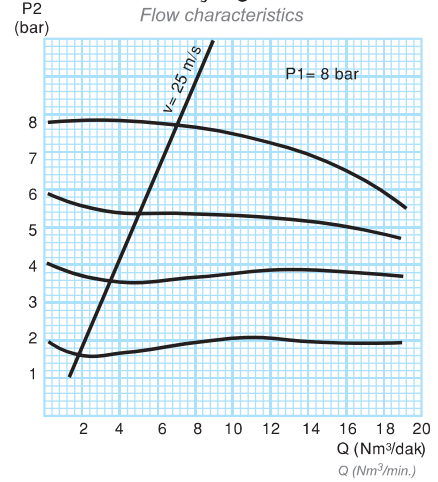


## Regülatör / Regulator



### Akış eğrisi

Flow characteristics

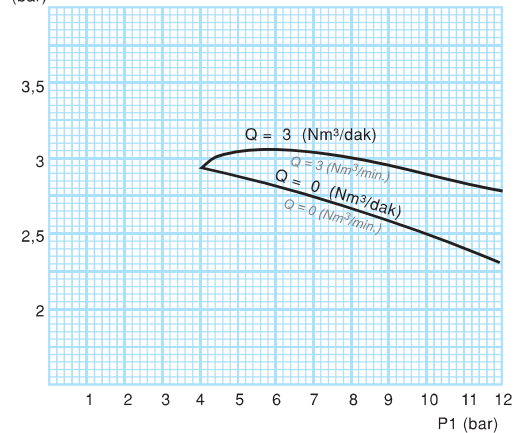


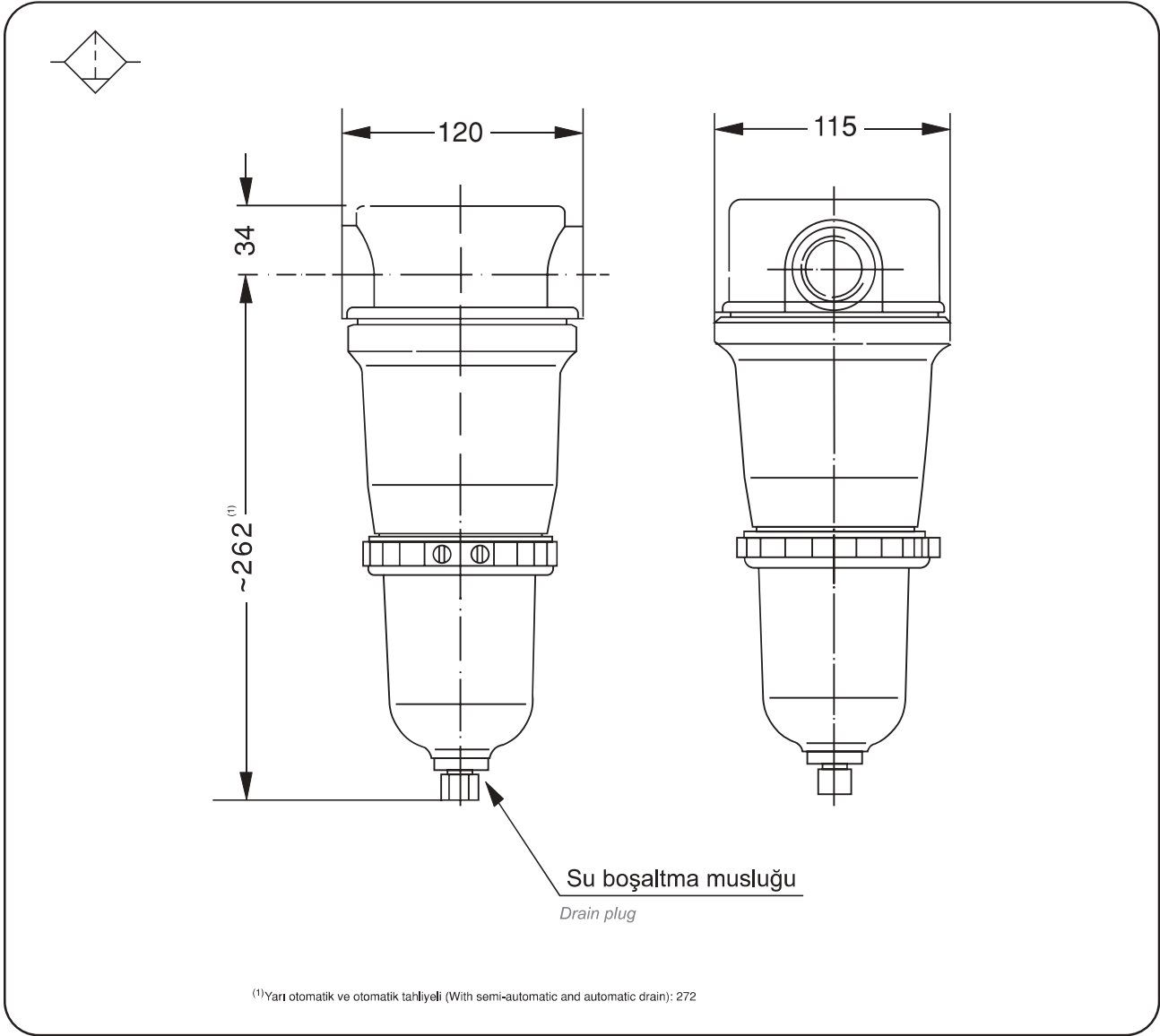
## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

TİP / TYPE	R 1"
Ölçü / Connection	G 1"
Çalışma Sıcaklığı Temp. range	0 °C ~ +60 °C (10 bar'da) / at 10 bar
Giriş Basıncı Inlet pressure	0 - 16 bar
Çıkış Basıncı Outlet pressure	0.5 - 9 bar, isteğe göre 0.3 - 6 ve 0.6 - 15 bar yapılabilir 0.5 - 9 bar; 0.3 - 6 and 0.6 - 15 bar optional
Min. Basınç Farkı Pressure drop	$P_1 - P_2 = 0.2 \text{ bar}$
Debi lt/dk Flow rate l/min.	5.000 ( $p_1 = 6 \text{ bar}$ , $v = 25 \text{ m/s}$ ) 11.700 ( $p_1 = 6 \text{ bar}$ , $\Delta p = 1 \text{ bar}$ )
Ağırlık / Weight	2.12 Kg

### Giriş basıncına bağlılık eğrisi

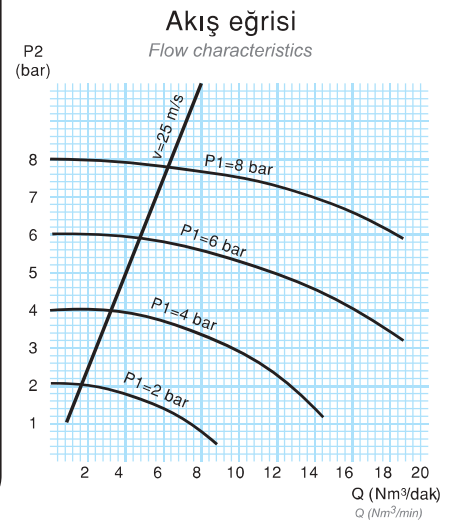
Outlet pressure variation with fluctuating inlet pressure

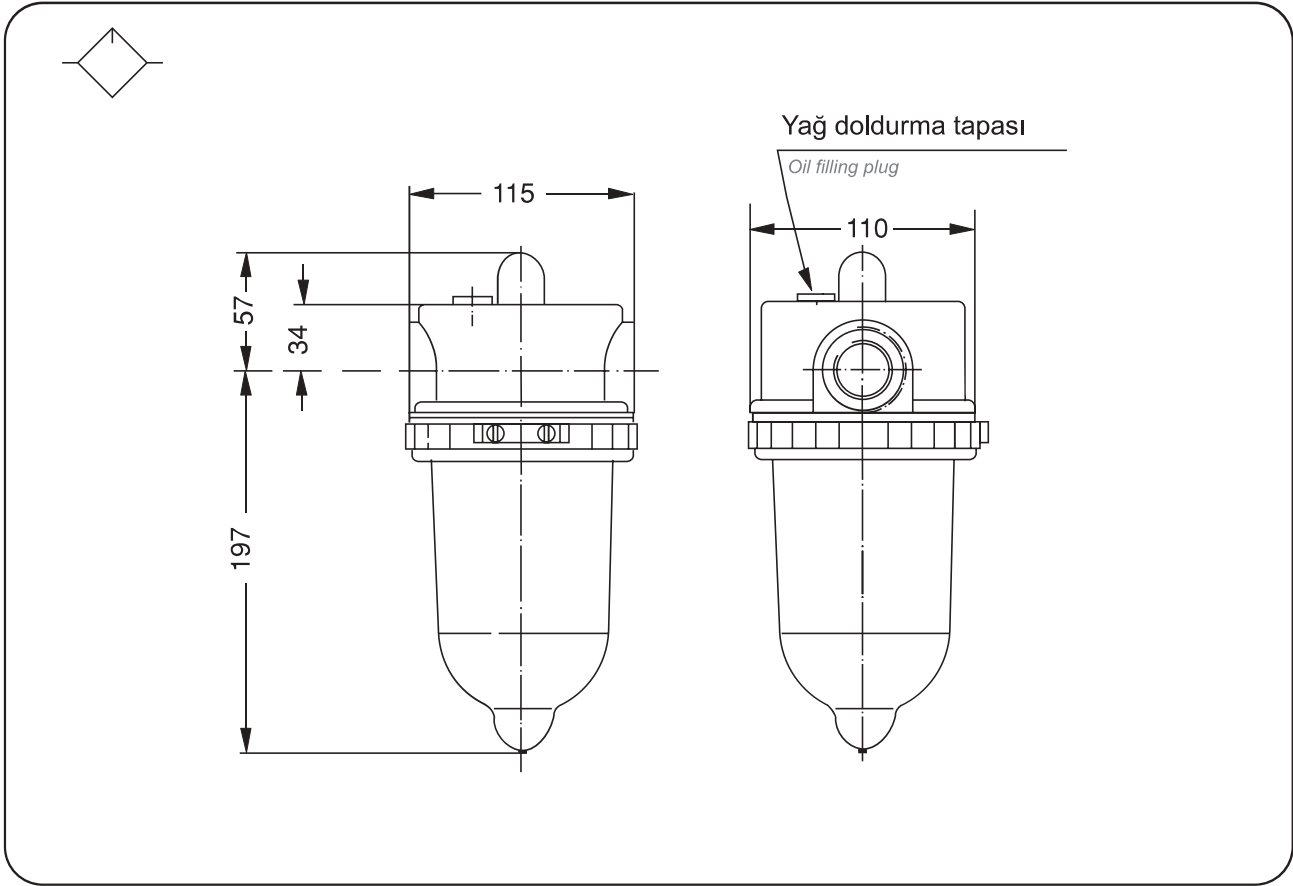




## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

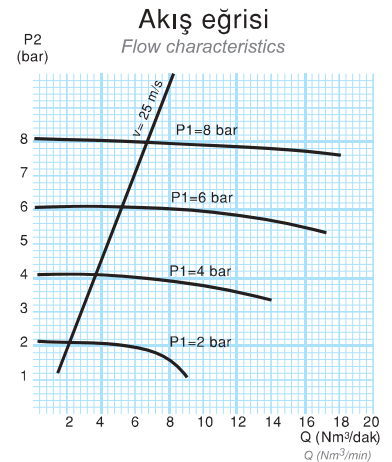
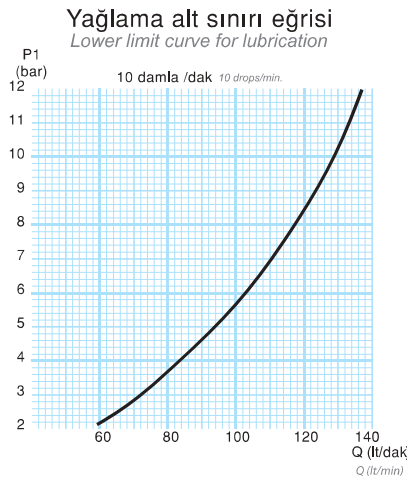
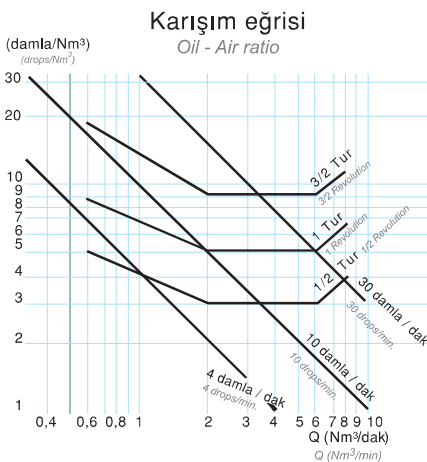
TİP / TYPE	F 1
Ölçü / Connection	G 1"
Filtreleme Değeri Pore size of filter element	30 µm
Tahliye Şekli / Drain type	Manuel/Yarı otomatik (İsteğe göre otomatik yapılabilir) Manual/Semi automatic - Automatic (Optional)
Bağlantı Konumu / Installation	Dikey / Vertical
Çalışma Sıcaklığı / Temp. range	0 °C ~ +50 °C (10 bar'da) / at 10 bar
Çalışma Basıncı Operating pressure range	0 - 16 bar
Debi lt/dk / Flow rate l/min.	5.000 ( $p_1 = 6$ bar, $v=25$ m/s) 12.000 ( $p_1 = 6$ bar, $\Delta p=1$ bar)
Verim / Efficiency	% 95
Ağırlık / Weight	1.54 Kg





## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

TİP / TYPE	Y 1
Ölçü / Connection	G 1"
Hava Yağ Karışım Oranı / Oil / Air ratio	Ayar vidası ile ayarlanabilir / Adjustable
Bağlantı Konumu / Installation	Dikey / Vertical
Çalışma Sıcaklığı / Temp. range	-20 °C ~ +50 °C (10 bar'da) / at 10 bar
Çalışma Basıncı / Operating pressure range	0 - 16 bar
Debi lt/dk / Flow rate l/min.	5.000 ( $p_1 = 6$ bar, $v=25$ m/s) 18.700 ( $p_1 = 6$ bar, $\Delta p=1$ bar)
Ağırlık / Weight	1.20 Kg





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web : [www.mert.com](http://www.mert.com)

## FİLTRE-REGÜLATÖR-YAĞLAYICI KULLANMA TALİMATI

### FİLTRE

Filtrenin görevi, havanın içinde bulunan parçacıkları ve sıvı moleküllerini ayırmaktır.

#### MONTAJ :

- Akış sırasına göre filtre, regülatörden önce takılmalıdır.
- Filtre mümkün olduğunca kullanıcıya yakın konulmalıdır.
- Hava geçişi, filtre üzerindeki ok yönünde olmalıdır.
- Filtre, dik (filtre kavanozu aşağı gelecek şekilde) takılmalıdır.
- Titreşimli yerlerde manuel veya yarı otomatik tahliyelili filtre tercih edilmelidir.

(\*) Filtre kavanozunu etkileyen kimyasal maddeler ile ilgili **DİKKAT** bölümüne bakınız.

#### BAKIM :

- **Suyun boşaltılması (Kısa aralıklarla-Günlük-Haftalık)**  
Manuel Tahliyelili Tip : (F1/2-F-1)

F-1/2 ve F-1 için ; Su boşaltma musluğu gevşeterek (saat yönünün tersine) biriken suyu boşaltınız (Şekil-1b)

Biriken suyun düzeyi kavanoz üzerinde işaretli seviyeyi (en yüksek su düzeyi) aşmamalıdır.

Yarı Otomatik Tahliyelili Tip : (F1/4-FR1/4-MF1/4-MFR1/4)  
Filtre içinde yoğunlaşan su hat giriş basıncı 0.2 bar'ın altında olduğu zaman otomatik olarak boşalır.

Hat basıncı 0.2 bardan yüksek olduğu zaman sübap itilerek su boşaltılabilir. (şekil-1a)

Manuel ve Yarı Otomatik Tahliyelili Tip : (MF 1/2 ve MFR 1/2)  
Su boşaltma subabı; OFF iken kavanoz içinde yoğunlaşan su boşaltılamaz, ON konumuna alınıp yukarı doğru basıldığında (hava basıncı var iken) biriken su boşaltılır, AUTO konumuna alındığında basıncı 0,2 bar'ın altına düşüğünde biriken su boşalır. (Şekil-1c)

Otomatik Tahliyelili Tip : (F1/2-F1-MF1/2 için isteğe bağlı)  
Filtre içinde yoğunlaşan su belli bir düzeye geldiğinde kavanoz içinde yüzen plastik disk sübapı açarak suyun kendiliğinden boşaltmasını sağlar. Su boşalınca sübap kapanır. Tahliye edilen suyun çevreye zarar verebileceği durumlarda bir hortum ile gidere aktarılması gerekir. Tahliye suyunun tehlike yaratmaması için kavanoz altında elektrik donanımı ( motor, pano, kablo vs.) bulunmamalıdır.

- **Filtre elemanının temizlenmesi (3-6 ay) (\*\*)**

Filtrede belirgin bir basınç kaybı varsa filtre elemanının temizlenmesi gerekir. Bunun için girişteki vanayı kapatınız ve devredeki havayı boşaltınız, kavanozu çıkarınız ve plastik diski sökünüz. Filtre elemanını solvent veya benzeri maddelerle temizleyiniz. Filtre elemanını içinden dışına doğru hava sıkarak kurutunuz ve yerine takınız. Filtre kavanozunu ve diğer plastik parçaları yalnız sabunlu suyla temizleyiniz. (\*\*) kullanılan havanın kalitesi, filtre elemanının özelliğine ve günlük çalışma süresine bağlı olarak değişebilir.

### REGÜLATÖR

Regülatörün görevi, çalışma basıncını hava giriş tarafındaki basınç dalgalanmalarından bağımsız bir şekilde istenilen değerde sabit tutmaktır. Regülatöre giren basınç daima istenen çıkış basıncından büyük olmalıdır.

#### MONTAJ :

- Regülatör mümkün olduğunca kullanıcıya yakın olmalıdır.
- Regülatör, (varsa) filtreden sonra, (varsa) yağlayıcıdan önce monte edilmelidir.
- Hava akış yönü regülatör üzerindeki ok yönünde olmalıdır.

#### KULLANIM :

- Kilitlemeli tiplerde önce kilit açılmalıdır
  - R1/2" ve R1"de kontra somun gevşetilerek kilit açılır (1), ayar yapılır (2), somun sıkılarak kilitlenir (3) (Şekil-2a)
  - R1/4"de kilit düğmesine basılarak kilit açılır (1), ayar yapılır (2), tekrar basılarak kilitlenir (3) (Şekil-2b)
  - MR1/4" ve MR1/2"de ayar volanı geri çekilerek kilit açılır (1), ayar yapılır (2), ayar volanı ileri itilerek kilitlenir (3) (Şekil-2c)
- Önce regülatör ayar volanını saat yönünün tersi istikametinde tamamen çevirip regülatörü kapalı konuma getiriniz. Sisteme hava veriniz
- Hava giriş vanasını açtıktan sonra, ayar volanını saat yönünde çevirerek basıncın istenilen seviyeye gelmesini sağlayınız.
- Basınç düşürülmek isteniyorsa, önce ayar volanını saat yönü tersine çevirerek ayarlanmak istenilen basınç değerinin altına düşünüz, daha sonra ayar volanını saat yönünde döndürüp istenilen basınca çıkınız. (Şekil-2)
- Basıncı ayarlandıktan sonra bu değerin sabit kalması için ayar volanını kilitleyiniz.

### FİLTRE - REGÜLATÖR

Bu ürün, hem filtre hem de regülatörün tek gövdede birleştirilmiş halidir. Montaj, kullanım ve bakım özellikleri filtre ve regülatör ile aynı şekildedir.

Filtre-Regülatör, regülatör ayar volanı üste gelecek şekilde monte edilmelidir.

### YAĞLAYICI

Yağlayıcı, pnömatik elemanların uygun miktarda yağla yağlanmasını sağlar.

#### MONTAJ :

- Yağlayıcı takılmadan önce hava hattının temiz olmasına dikkat edilmeli, gerekirse bir kere hava verilerek temizlenmelidir. Sağlıklı bir çalışma için yağlayıcıdan önce filtre kullanılmalıdır.
- Yağlayıcı mümkün olduğunca kullanıcıya yakın olmalıdır.
- Hava geçişi, yağlayıcı üzerindeki ok yönünde olmalıdır.
- Yağlayıcı dik (yağlayıcı kavanozu aşağı gelecek şekilde) takılmalıdır.

(\*) Yağlayıcı kavanozunu etkileyen kimyasal maddeler ile ilgili **DİKKAT** bölümüne bakınız.

#### KULLANIM :

- Yağ doldurma tapasını sökerek, aşağıdaki yağlardan birisiyle kavanoz üzerinde gösterilen düzeye kadar yağ doldurunuz. Bu işlemi devredeki havayı boşaltmadan da yapabilirsiniz.
- Y-1/4" de bu işlem, basınç sıfırlandıktan sonra kavanozun sökülerek içine yağ doldurulması suretiyle gerçekleştirilir.
- Yağ akış miktarını sistem çalışırken ayarlayınız. Sisteme giden yağ miktarı, ayar vidası saat yönünde çevirilerek azaltılır, saat yönünün tersine çevirilerek artırılır (Şekil-3). Ayar vidasının fazla çevrülmesi, vidanın yuvadan fırlamasına neden olabilir. Gösterge camından sisteme gönderilen yağ miktarını kontrol ediniz. Uygun bir yağlama için yağ miktarı 4-8 damla/1000 NI olmalıdır.

#### Kullanılacak Yağlar :

**MAG Özel Hava Hazırlayıcı Yağı**

**BP Energol HLP 32**

**Mobil DTE 24**

**Castrol Hyspin AWS 32**

**Shell Tellus 32 veya muadilleri**

#### BAKIM :

- Kavanozdaki yağ miktarını kontrol ediniz ve gerekirse (en düşük yağ düzeyinin altında ise) yağ ekleyiniz.
- Yağlayıcı kavanozu ve gösterge camı kirlendiği zaman yalnız sabunlu veya deterjanlı suyla temizlenmelidir.

#### UYARILAR

- Bağlantılarda sızdırmazlık için teflon bant kullanılması durumunda, sisteme teflon bant parçalarının kaçması önlenmelidir.

- Firmamız her tipteki MAG marka şartlandırıcı için bakım, onarım ve yedek parça desteği sağlamaktadır. Herhangi bir arızada lütfen firmamıza başvurunuz. Arızalı ürünlere müdahale edilmesi ürünü garanti kapsamından çıkarır.
- Şekil-1'de (\*\*) ile belirtilen ürünler manuel veya yarı otomatik tahlilyelidir.

### (\*) DİKKAT

Aşağıdaki kimyasal maddeler ne sıvı, ne de buhar halinde filtre ve yağlayıcı kavanozuna değmemelidir. Bu gibi ortamlarda kesinlikle metal kavanoz kullanılmalıdır.

Aseton, benzol, fren yağı, kloroform, asidik asit, gliserin, metil alkol, karbondisülfid, trikloretilen, perkloretilen, karbondioksit ve benzerleri, toluol, ksilol (selülozik inceltici), ateşe dayanıklı yağlar (fosfat ester esaslı)

Filtre ve yağlayıcı kavanozlarını olumsuz etkilediği belirlenmiş olan yukarıdaki kimyasallar dışındaki özel uygulamalar için lütfen firmamıza danışınız.

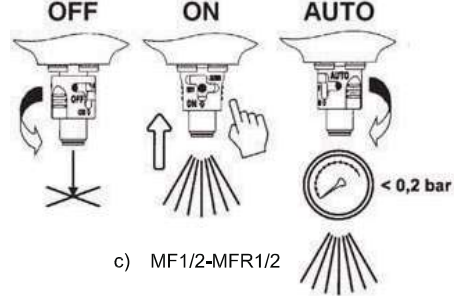
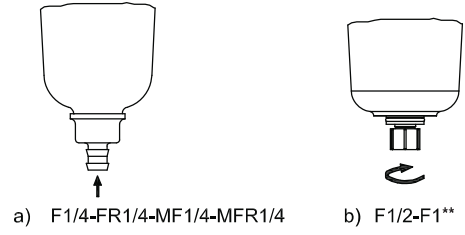
YUKARIDA BELİRTİLEN HUSUSLARA UYULMAMASINDAN KAYNAKLANABİLECEK SORUNLAR ÜRÜNÜN GARANTİ KAPSAMI DIŞINDA DEĞERLENDİRİLİR.

## TEKNİK ÖZELLİKLER

Ürün Kodu	Çalışma Basıncı (bar)	Giriş Basıncı (bar)	Çıkış Basıncı (bar)	Çalışma Sıcaklığı (°C)
F1/2	0 - 16			0 ... +50 (10 bar)
R1/2		0 - 16	0.5 - 10 * 0.5 - 4 * 0.5 - 16	0 ... +60
Y1/2	0 - 16			-20 ... +50 (10 bar)
F1/4	0 - 16			0 ... +50 (10 bar)
R1/4		0 - 16	0.5 - 10 * 0.5 - 4 * 0.5 - 16	0 ... +60
Y1/4	0 - 16			-20 ... +50 (10 bar)
FR1/4		0 - 16	0.5 - 10 * 0.5 - 4 * 0.5 - 16	0 ... +50 (10 bar)
F1	0 - 16			0 ... +50 (10 bar)
R1		0 - 16	0.5 - 9 * 0.3 - 6 * 0.6 - 15	0 ... +50
Y1	0 - 16			-20 ... +50 (10 bar)
MF1/4	0 - 16			0 ... +50 (10 bar)
MR1/4 - MFR1/4		0 - 16	0.5 - 8 * 0.5 - 4 * 0.5 - 16	0 ... +60 0 ... +50 (10 bar)
MY1/4	0 - 16			-20 ... +50 (10 bar)
MF1/2	0 - 16			0 ... +50 (10 bar)
MR1/2 - MFR1/2		0 - 16	0.5 - 8 * 0.5 - 4 * 0.5 - 10	0 ... +60 0 ... +50 (10 bar)
MY1/2	0 - 16			-20 ... +50 (10 bar)

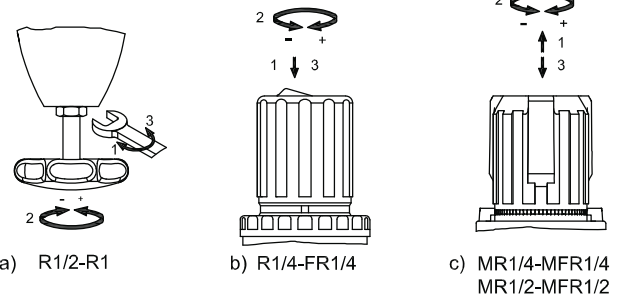
(\*) İşaretti çıkış basınç değerleri isteğe bağlıdır.

### FILTRE SUYUNUN BOSALTIMASI (MANUEL) (Sekil-1)



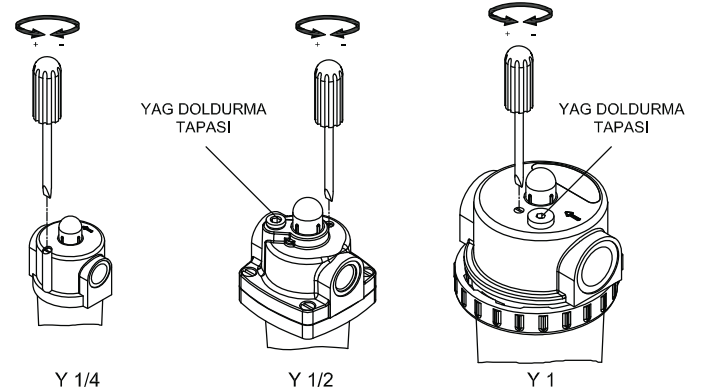
### REGÜLATÖRÜN AYARLANMASI

(Sekil-2)

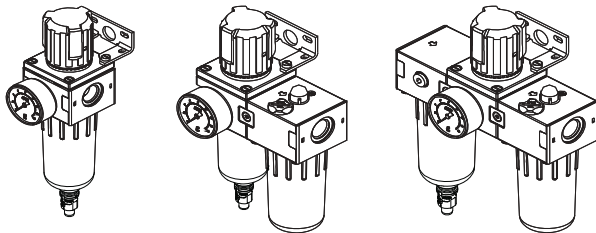


### YAG MİKTARININ AYARLANMASI

(Sekil-3)



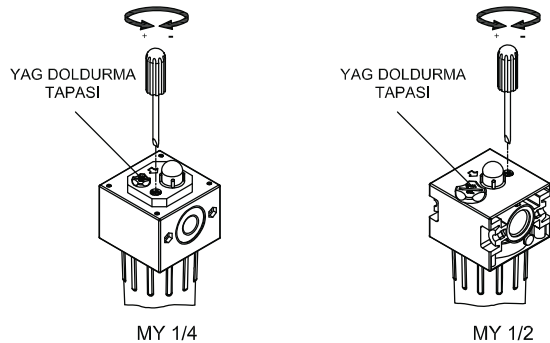
Tornavida : TS 59-3 A , 0.8x4 mm  
Allen anahtar : TS 3797-1, 5 mm (Y1/2), 6 mm (Y1)



MFR-1/2"

M(FR)Y-1/2"

MFRY-1/2"



MY 1/4

MY 1/2

Tornavida : TS 59-3 A , 0.8x4 mm (MY1/4 yağ ayar vidası)  
0.6x3 mm (MY1/2 yağ ayar vidası)  
1.2x8 mm (yağ dolum tapası)





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web : [www.mert.com](http://www.mert.com)

## FILTER-REGULATOR-LUBRICATOR OPERATING INSTRUCTIONS

### FILTER

The purpose of the filter is separating the particles and liquid molecules in the air.

#### ASSEMBLY :

- According to the direction of the flow of air, the filter must be assembled before the regulator.
- The filter must be as close as possible to the user.
- Air passage must be in the direction shown on the filter body.
- Filter must be assembled vertically (The bowl must be at downwards).
- Manual or semi-automatic drain filters must be preferred if there is vibration.

(\* Please refer to the **CAUTION** section to see the chemical components that affects the filter bowl.

#### MAINTANANCE:

- Draining the water (Within short periods or daily or weekly)

#### Manual Drain type : (F 1/2 – F-1)

For the models F1/2 and F1, please untighten the drain tap counter-clockwise to drain the water collected (See Figure 1b). The level of the water collected shall not exceed the "max.water level" mark on the bowl

#### Semi-Automatic Drain Type: (F-1/4, FR-1/4, MF-1/4, MFR-1/4)

The water collected in the bowl is automatically drained when the inlet pressure is below 0,2 bar. The water can be drained manually by pressing the outlet valve if the line pressure is above 0,2 bar (See Figure 1a)

#### Manual and Semi-Automatic Drain Type: (MF-1/2, MFR-1/2)

When the water outlet valve is at OFF position, the water collected in the bowl can not be drained. When it's position is changed to ON and pushed upwards afterwards the bowl can be drained if there is pressure in the line. When it is set to AUTO, the water will be drained automatically if the line pressure falls below 0,2 bar.

#### Automatic Drain Type: (Optional) (F-1/2, F-1, MF-1/2)

The water collected in the bowl that reaches to a certain level enables the plastic disc floating by the lifting force of the water collected to open the outlet valve automatically and drain the water by itself. When the water drained off the valve closes automatically. If there is condition that the environment may be effected , the water must be drained by a tube to a safe area. There must not be any electrical equipment (electric motor, control box, terminal etc.) not to cause any danger.

#### - Cleaning of the filter element (every 6-12 months) (\*\*)

The filter must be cleaned if there is an evident sign of pressure drop on the filter. In order to do this, please close the valve on the inlet side and release the air on the line, then remove the bowl and the plastic disc attached to the filter element. Clean the filter element by using some solvent or similar matetials. Apply presurised air from the inside to outside surfaces of the filter element and assemble to the filter housing. Clean the filter bowl and the other plastic components with some soapy water, rinse and dry.

(\*\*) The quality of air can be change according to filter element features and daily working time.

(\*\*) The quality of the air may change due to the characteristics of the filter element and working period.

### REGULATOR

The purpose of the filter is to maintain the outlet pressure constant independently from the inlet pressure fluctuations. The inlet pressure must always be higher than the outlet pressure.

#### ASSEMBLY:

- The regulator must be as close as possible to the user.
- If there is a filter or lubricator on the pressure line, the regulator must be assembled after the filter and before the lubricator.
- Air passage must be in the direction shown on the regulator body

#### USAGE :

- Please unlock the lock before using the regulators having lock mechanism.
- In order to use the models R-1/2 and R-1, please unthighten the nut on the handle(1), then turn the handle to set to the desired pressure(2) and finally tighten the nut to maintain the position of the handle(3) (See Figure-2a).
- In order to use the model R-1/4, please push the button on the handle(1), then turn the handle to set to desired pressure(2) and finally push the other side of the button to maintain the position of the handle(3) (See Figure 2-b).
- In order to use the models MR-1/4 and MR-1/2, please pull the handle out to open the lock(1), make the setting by turning the handle(2) and finally push the handle in to lock the handle(3) (Figure 2-c)
- First of all, please turn the handle counter-clockwise as far it goes to shut down the regulator. Pressurise the inlet side.
- After opening the inlet valve, turn the handle clockwise to set to the desired pressure.
- If the inlet pressure has to be decreased, please turn the handle counter-clockwise to set below the desired pressure and then turn clochwise to increase the pressure to reach to the pressure needed. (Figure 2)
- The handle has to be locked in order to maintain the set pressure.

### FILTER - REGULATOR

This product is the combination of the filter and regulator within one body. The assembly, usage and maintenance features are same as given for each component.

Filter-regulator must be assembled as the handle of the regulator to be upwards.

### LUBRICATOR

The purpose of the lubricator is to lubricate pneumatic components with sufficient amount of oil.

#### ASSEMBLY :

- Please pay attention to the cleanliness of the line before assembling the lubricator to the pressure line or clean the line once with pressurised air before the assembly. Use a filter before the lubricator for a robust operation.
- The lubricator must be as close as possible to the user.
- Air passage must be in the direction shown on the lubricator body.
- The lubricator must be assembled vertically (The bowl must be at downwards).

(\* Please refer to the **CAUTION** section to see the chemical components that affects the lubricator bowl.

#### USAGE :

- You can fill the lubricator with the oils given below by opening the tap on the body to the specified max.level mark on the bowl. It is also possible to do this operation without depressurising the line. This operation has to be done by disassembling and filling the bowl apart after depressurising the line for the model Y-1/4.
- Please adjust the amount of flow of the oil while the system is online. The flow rate will decrease by turning the set screw clockwise and will increase counter-clockwise direction (See Figure-3).

The set screw can pop out of its slot if it is loosened to much. Check the amount of oil sent to the system from the sight glass on the body. For an optimum lubrication 4-8 drops/1000NI is enough. Loosening the setscrew too much can cause the throwing it out. Check the amount of oil to the system from gauge glass. For a reliable lubrication, the amount of oil should be 4-8 drops/1000 NI.

#### Suitable Oils:

MAG Special Air Preparation Oil

BP Energol HLP 32

Mobil DTE 24

Castrol Hyspin AWS 32

Shell Tellus 32 or equipollent

**MAINTANANCE:**

- Check the amount of oil in the bowl and if it is necessary or below the min.level mark, add more oil.
- Please clean the bowl and sight glass only with soapy water or detergent.

**WARNINGS**

- If it is desired to use teflon tape on the connections, please prevent any teflon particles to go in to the line.
- Our company will provide all types of maintenance and repair services and spare parts. Please consult us for any malfunctioning. Any interference done by the user will cancel the ongoing guarantee period.
- The products indicated (\*\*) on Figure-1 are with manual or semi-automatic drain.

**(\*) CAUTION**

The materials given below shall not contact the bowl of the filter and lubricator neither in liquid nor gas phases. In such environments please use metal bowls.

Acetone, benzole, brake oil, chloroform, scetic acid, glycerine, methyl alcohol, carbon dioxide-sulphide, trichlorethylene, tetrachlorethylene, carbontetrachloride and equivalents, tuloul, xylo (cellulosic thinner), fire-resistant oils (phosphate ester based).

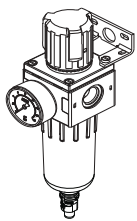
Please contact us for the chemicals going to be used for special applications safely other than the list given above that affects the bowl negatively.

THE PRODUCTS GUARANTEE PERIOD WILL END BECAUSE OF NOT USING THE PRODUCTS FOR THE ABOVE REGULATIONS.

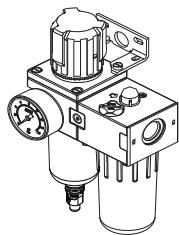
**TECHNICAL PROPERTIES**

Type	Operating pressure range (bar)	Inlet pressure (bar)	Outlet pressure (bar)	Temp. range (°C)
F1/2	0 – 16			0...+50 (10 bar)
R1/2		0 – 16	0,5 – 10 * 0,5 – 4 * 0,5 – 16	0 ... +60
Y1/2	0 – 16			-20...+50 (10 bar)
F1/4	0 – 16			0...+50 (10 bar)
R1/4		0 – 16	0,5 – 10 * 0,5 – 4 * 0,5 – 16	0 ... +60
Y1/4	0 – 16			-20...+50 (10 bar)
FR1/4		0 – 16	0,5 – 10 * 0,5 – 4 * 0,5 – 16	0...+50 (10 bar)
F1	0 – 16			0...+50 (10 bar)
R1		0 – 16	0,5 – 9 * 0,3 – 6 * 0,6 – 15	0...+50
Y1	0 – 16			-20...+50 (10 bar)
MF1/4	0 – 16			0...+50 (10 bar)
MR1/4 –		0 – 16	0,5 – 8 * 0,5 – 4 * 0,5 – 16	0...+60
MFR1/4				0...+50 (10 bar)
MY1/4	0 – 16			-20...+50 (10 bar)
MF1/2	0 – 16			0...+50 (10 bar)
MR1/2 –		0 – 16	0,5 – 8 * 0,5 – 4 * 0,5 – 10	0...+60
MFR1/2				0...+50 (10 bar)
MY1/2	0 – 16			-20...+50 (10 bar)

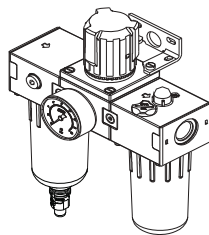
(\*) optional



MFR-1/2"

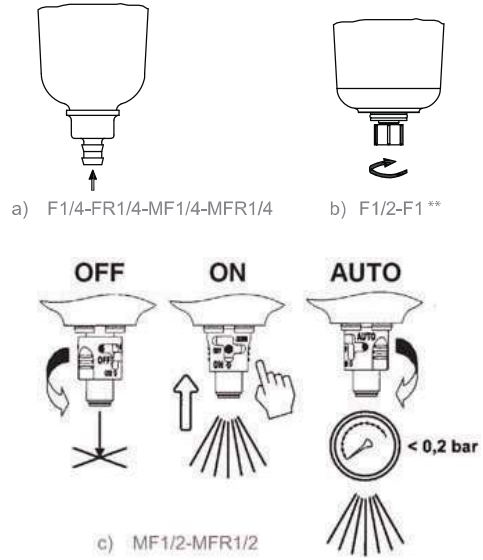


M(FR)Y-1/2"



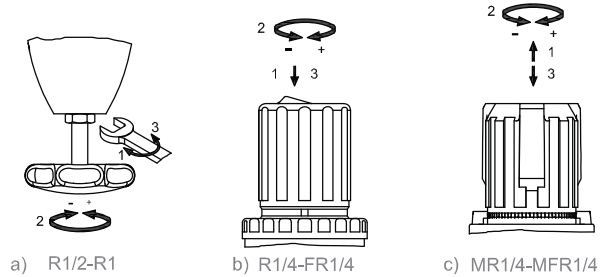
MFRY-1/2"

**DRAINING WATER OF THE FILTER (MANUEL)** (Figure-1)



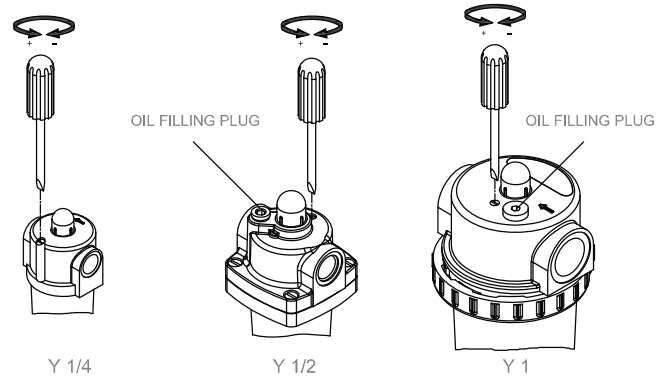
**ADJUSTING THE REGULATOR**

(Figure-2)

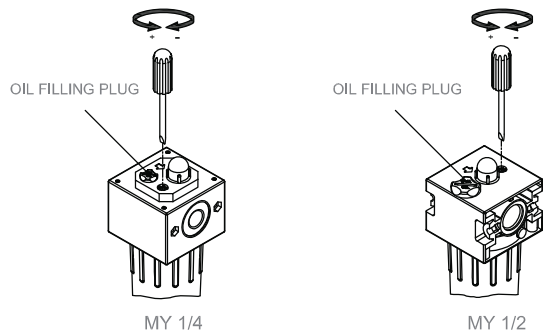


**ADJUSTING OIL LEVEL**

(Figure-3)



Screwdriver: TS 59-3 A , 0,8x4 mm  
Allen wrench: TS 3797-1, 5 mm (Y1/2), 6 mm (Y1)

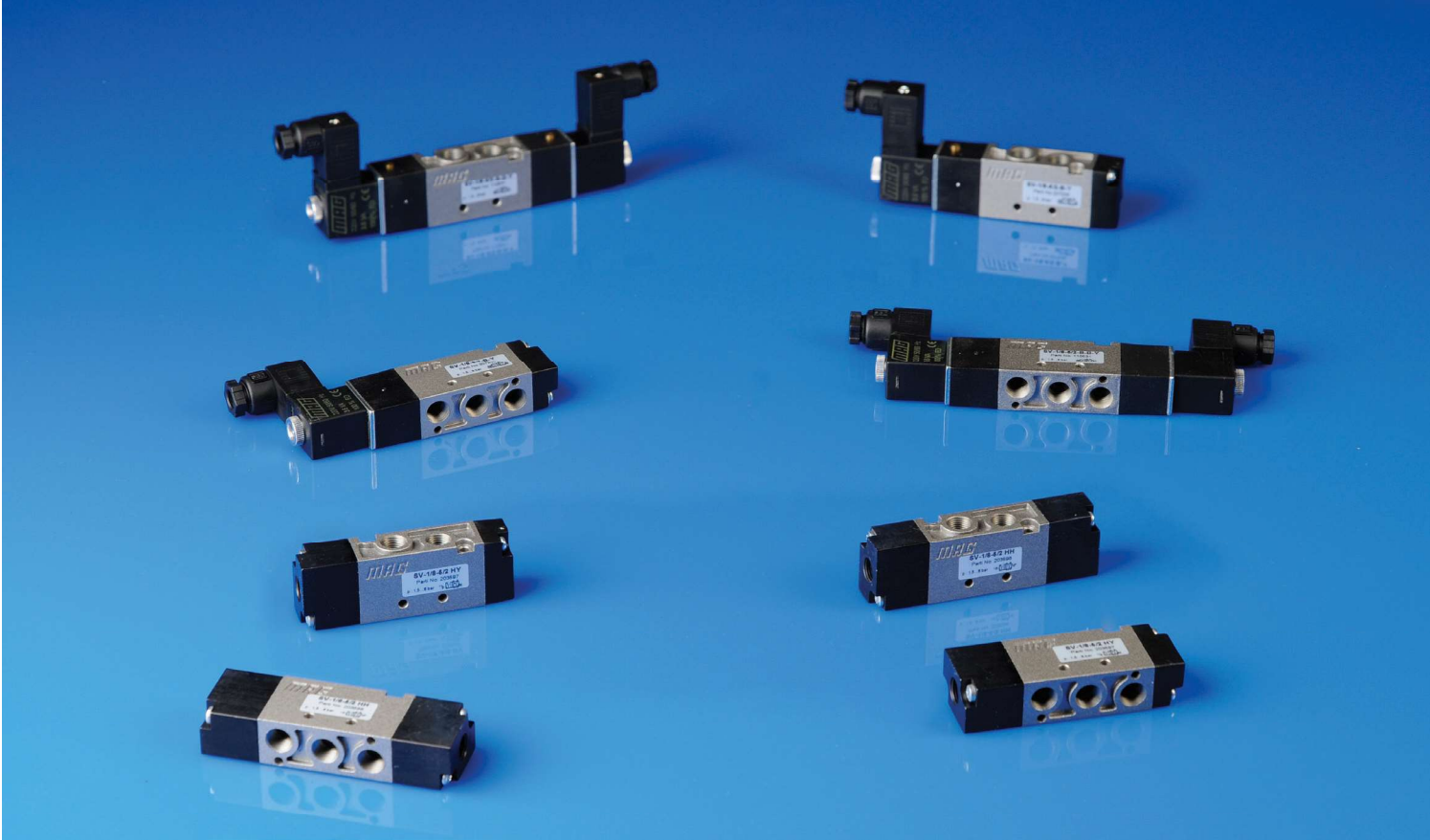


Screwdriver : TS 59-3 A , 0,8x4 mm (MY1/4 yağ ayar vidası)  
0,6x3 mm (MY1/2 yağ ayar vidası)  
1,2x8 mm (yağ dolum tapası)

# PNÖMATİK YÖN DENETİM VALFİ

## PNEUMATIC DIRECTIONAL CONTROL VALVE

VALVES VALFLER



### SV - 1/8 - 5/

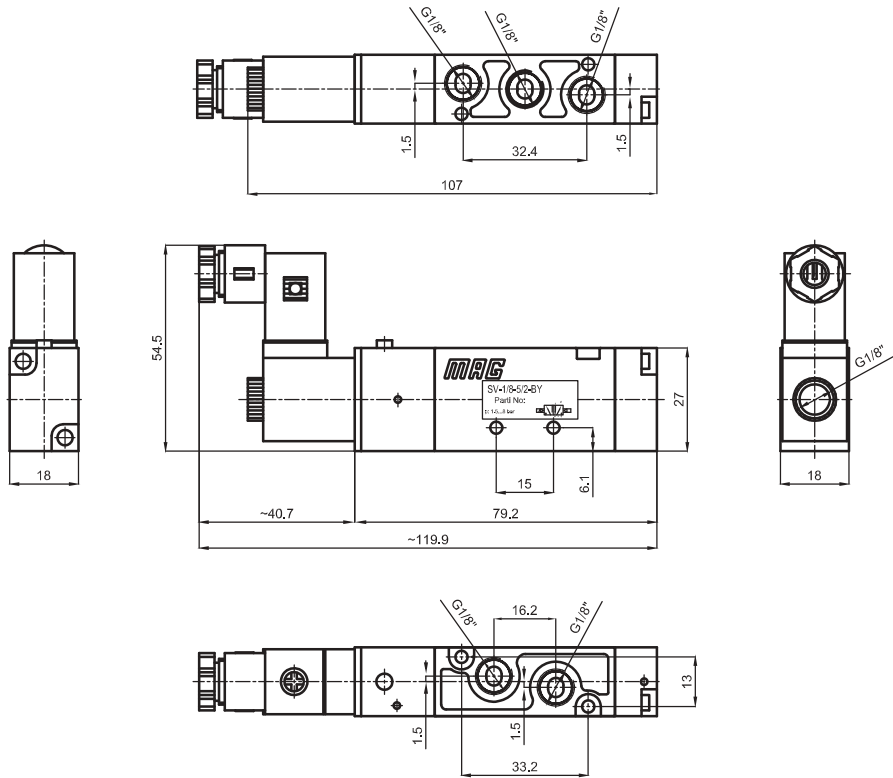
Ölçü Connection	Yol Sayısı Number of Ways	Konum Sayısı Number of Positions	Uyarı Tipi Actuation Type	Geri Geliş Şekli Return Actuation Type	Bobin Gerilimi Voltage Type
G 1/8"	5	2 3	B Bobin Solenoid H Hava Air impulse	Y Pilot Uyarılı Air spring B Bobin Solenoid H Hava Air impulse	12 V DC 24 V DC 24 V AC 110 V AC 220 V AC

#### TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

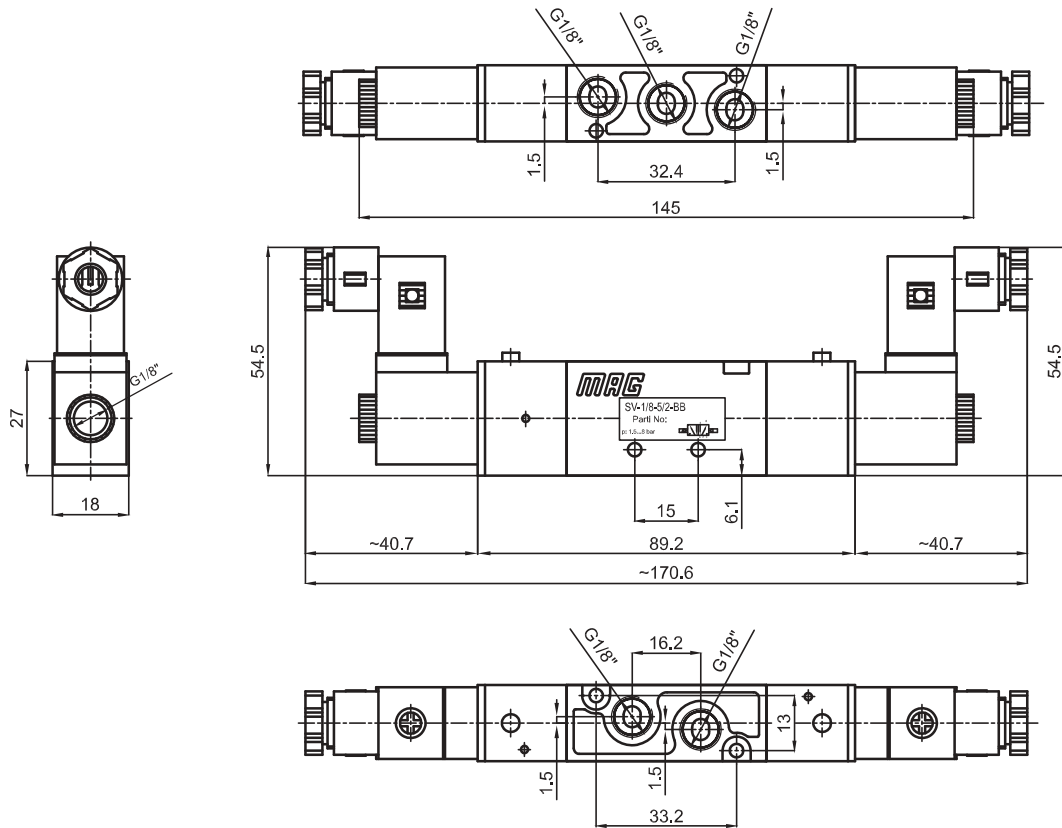
Çalışma Basıncı / Operating Pressure Range	: 1.5 ... 8 bar
Debi / Flow Rate (6 bar)	: 600 NI / dak. / NI/min.
Çalışma Sıcaklığı / Temperature range	: 5 ... 50 °C
Çalışma Ortamı / Medium	: Filtre edilmiş yağlı hava / Lubricated filtered compressed air.
Ağırlık / Weight	: 120 gr. (SV-1/8-5/2-BY), 175 gr. (SV-1/8-5/2-BB), 81 gr. (SV-1/8-5/2-HY), 98 gr. (SV-1/8-5/2-HH), 197 gr. (SV-1/8-5/3-BB), 120 gr. (SV-1/8-5/3-HH)

\* Üç konum seçeneği BB ve HH için geçerlidir / Three positions option is available for BB and HH.

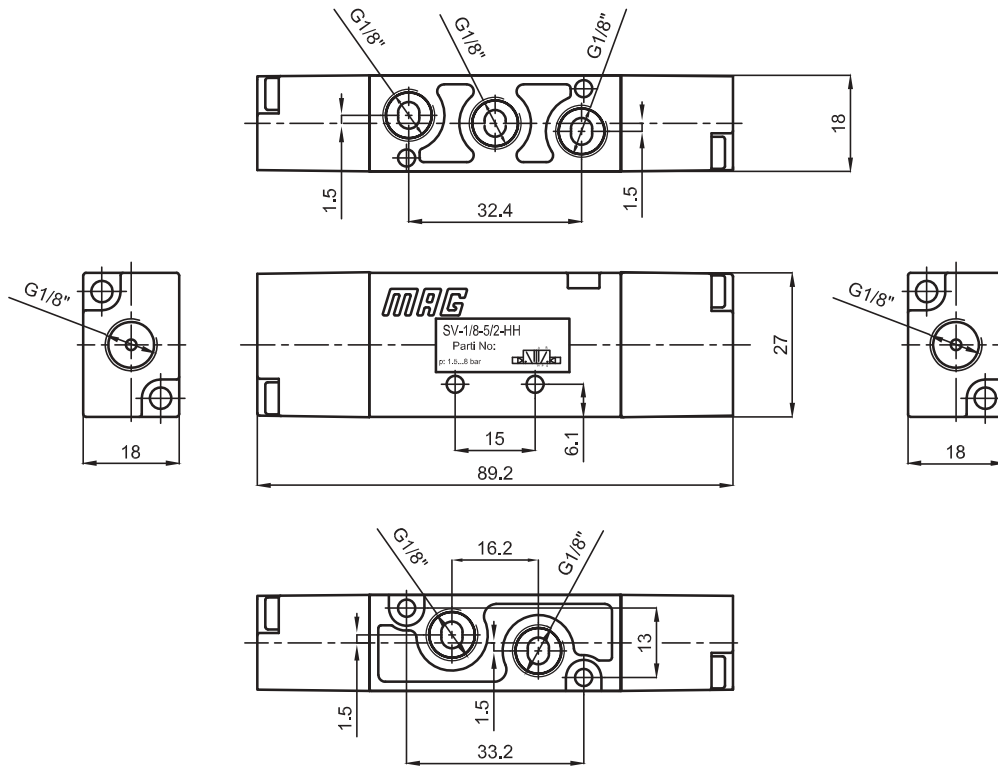
## SV - 1/8 - 5/2 - BY



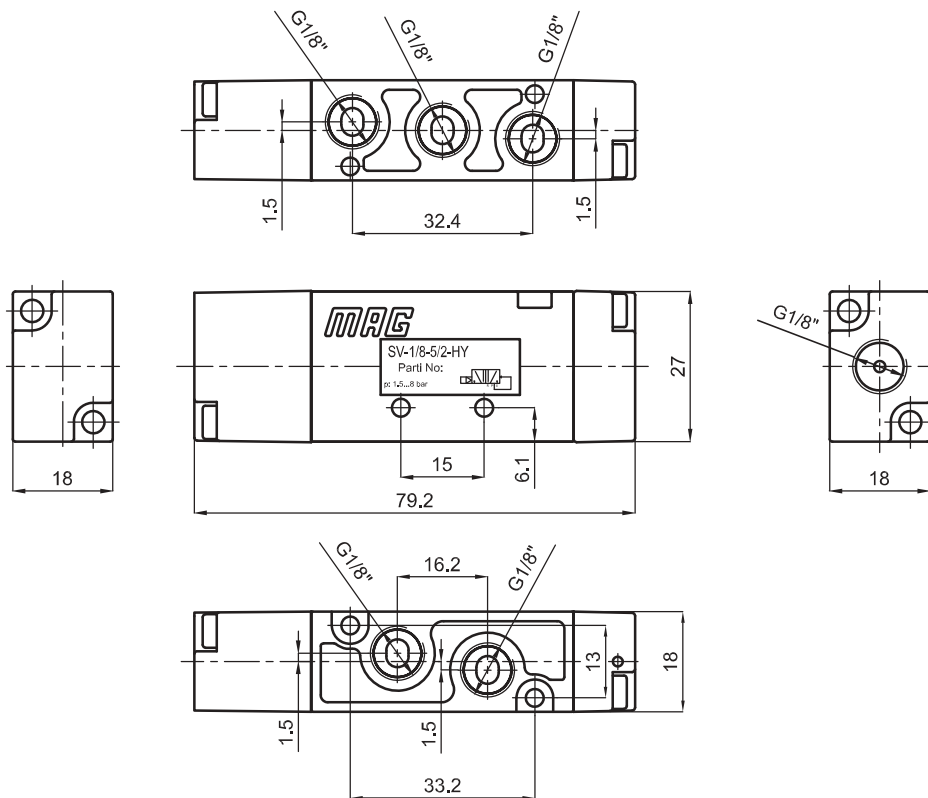
## SV - 1/8 - 5/2 - BB



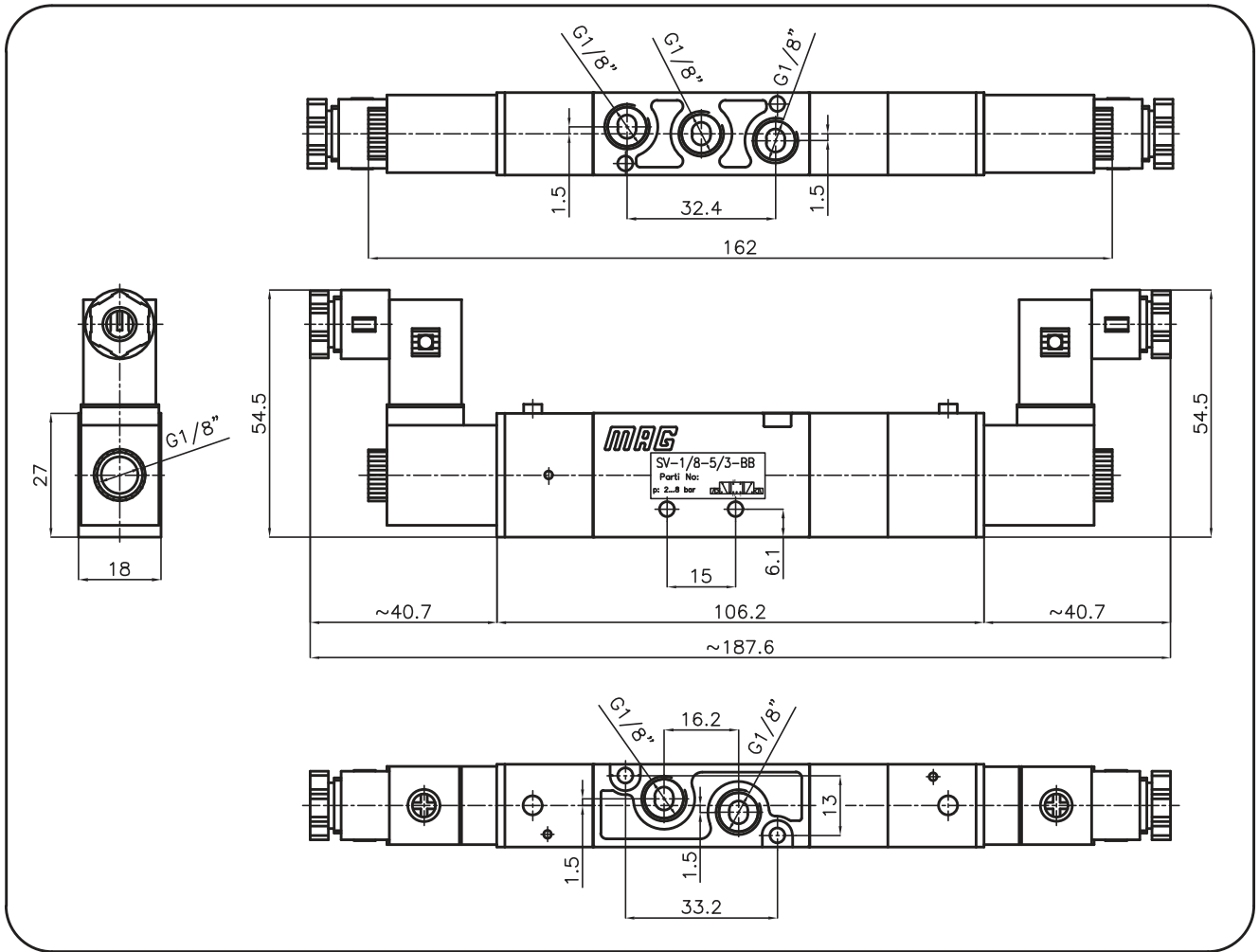
## SV - 1/8 - 5/2 - HH



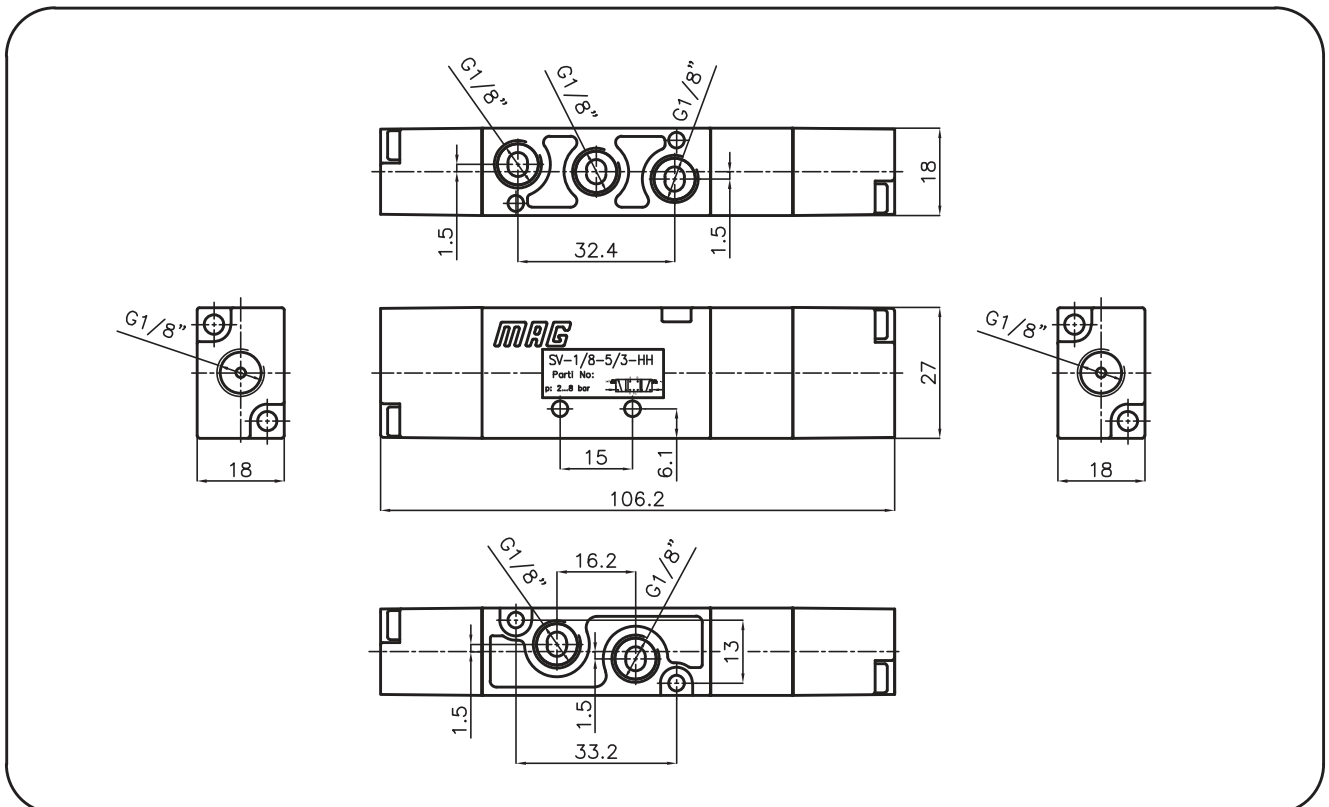
## SV - 1/8 - 5/2 - HY



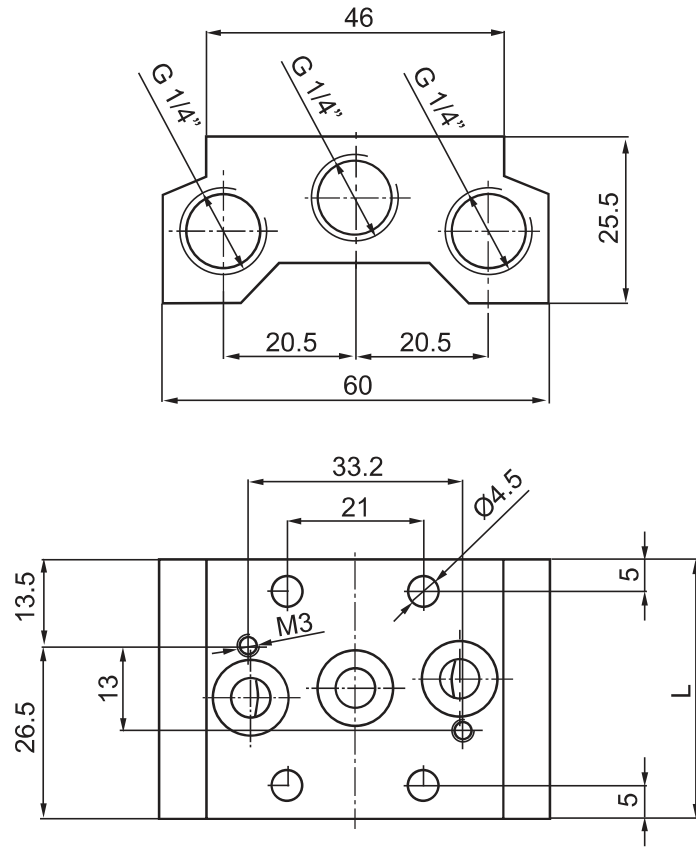
## SV-1/8-5/3-BB



## SV-1/8-5/3-HH



# SV - 1/8 VALF ADASI ÖLÇÜLERİ / VALVE ISLAND DIMENSIONS



SİPARİŞ ŞEKLİ  
ORDER INSTRUCTIONS

**SVP - 1/8 - . .**

Valf Sayısı / Number of valves

Valf Sayısı Number of valves	L
2	59
3	78
4	97
5	116
6	135
7	154
8	173
9	192
10	211

Çoklu Valf Altlıkları için Boy /

*Lenght for valve island :*

$$L = 21 + (n \times 19)$$

n = Valf Sayısı / Number of valves



# PNÖMATİK YÖN DENETİM VALFİ PNEUMATIC DIRECTIONAL CONTROL VALVE

ELECTRICALLY ACTUATED VALVES BOBİNLİ VALFLER



## SV - 1/4 -

Ölçü / Connection
G 1/4"

Yol Sayısı Number of ways
3
5

Konum Sayısı Number of positions
2
3

Geri Geliş Şekli Return Actuation Type
B Bobin / Solenoid
H Hava Uyarı Air impulse
Y Yay / Mechanical spring

Bobin Tipi Solenoid Type
Dik / Vertical
Y Yatık / Horizontal

Bobin Gerilimi Voltage Type
12 V DC
24 V DC
24 V AC
110 V AC
220 V AC

### TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

Çalışma Basıncı / Operating Pressure Range : 1-3 ... 10 bar

Debi / Flow Rate (6 bar) : 990 NI / dak. / NI/min.

Çalışma sıcaklığı / Temperature Range : -10 ... +80 °C

Çalışma ortamı / Medium : Filtre edilmiş yağlı hava / Lubricated filtered compressed air.

Uyarı Şekli Actuation Type
B Bobin / Solenoid

A Normalde Açık Normally open
Normalde Kapalı Normally closed
E A-B Egzoza Açık A-B Exhaust open

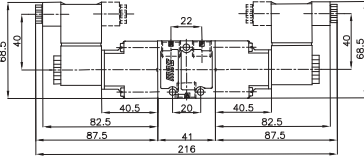
\* Üç konum ve egzozu açık seçenekleri beş yollu valfler için geçerlidir / Three positions and exhaust open options are available for five ways valves.

# SV - 1/4 - 3/2

## Yatık Bobinli Valf

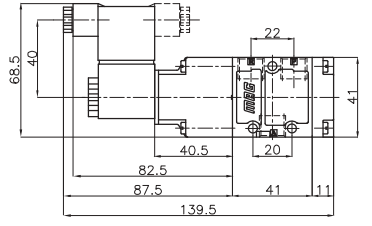
Horizontal type solenoid

SV-1/4-3/2-B-B-Y



Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-3/2-B-B-Y	1....10	397
	SV-1/4-3/2-B-Y-Y	3....10	265
	SV-1/4-3/2-B-Y-Y-A	3....10	265

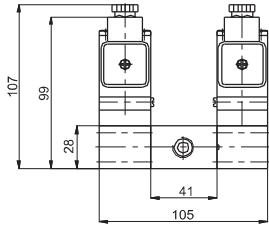
SV-1/4-3/2-B-Y-Y



## Dik Bobinli Valf

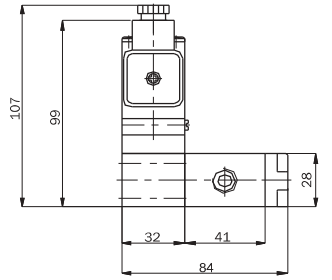
Vertical type solenoid

SV-1/4-3/2-B-B

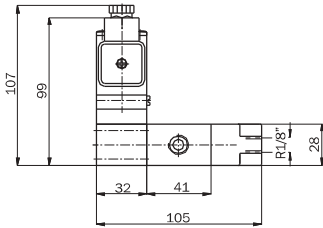


Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-3/2-B-B	1....10	1075
	SV-1/4-3/2-B-H	1....10	780
	SV-1/4-3/2-B-Y	3....10	650
	SV-1/4-3/2-B-Y-A	3....10	650

SV-1/4-3/2-B-Y

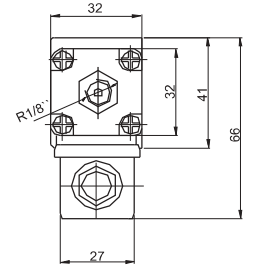


SV-1/4-3/2-B-H



## Bobin Kapağının Üstten Görünüşü

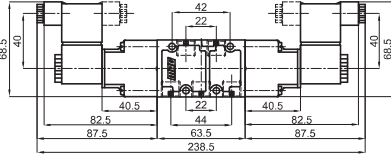
Upside view for solenoid cover



# SV-1/4-5/2

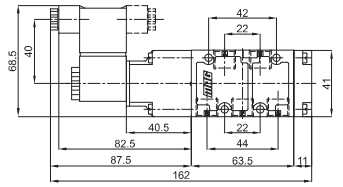
## Yatık Bobinli Valf Horizontal type solenoid

SV-1/4-5/2-B-B-Y

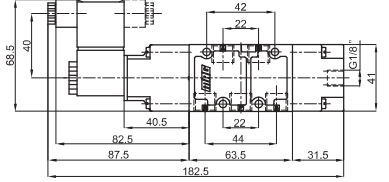


Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-5/2-B-B-Y	1....10	447
	SV-1/4-5/2-B-Y-Y	3....10	314
	SV-1/4-5/2-B-H-Y	1....10	480

SV-1/4-5/2-B-Y-Y

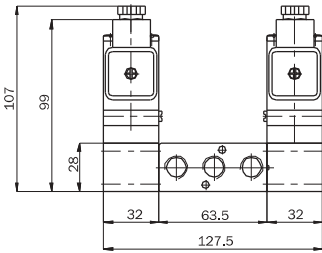


SV-1/4-5/2-B-H-Y



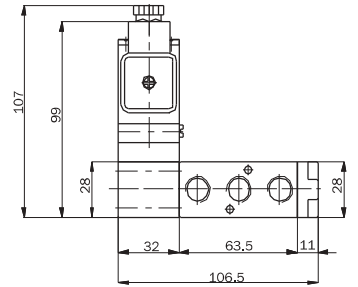
## Dik Bobinli Valf Vertical type solenoid

SV-1/4-5/2-B-B

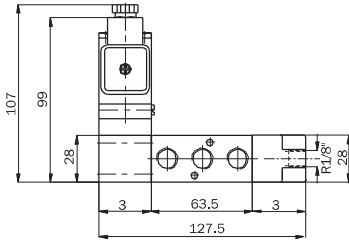


Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-5/2-B-B	1.....10	1380
	SV-1/4-5/2-B-H	1.....10	1035
	SV-1/4-5/2-B-Y	3....10	680

SV-1/4-5/2-B-Y

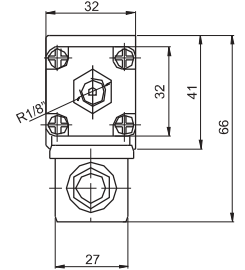


SV-1/4-5/2-B-H



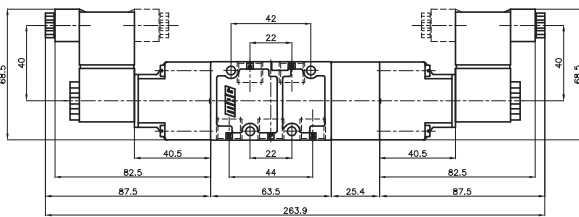
## Bobin Kapağının Üstten Görünüşü

Upside view for solenoid cover



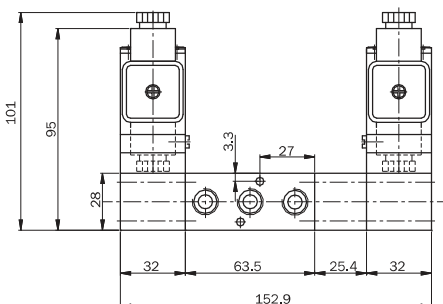
# SV-1/4-5/3

## Yatık Bobinli Valf / Horizontal type solenoid



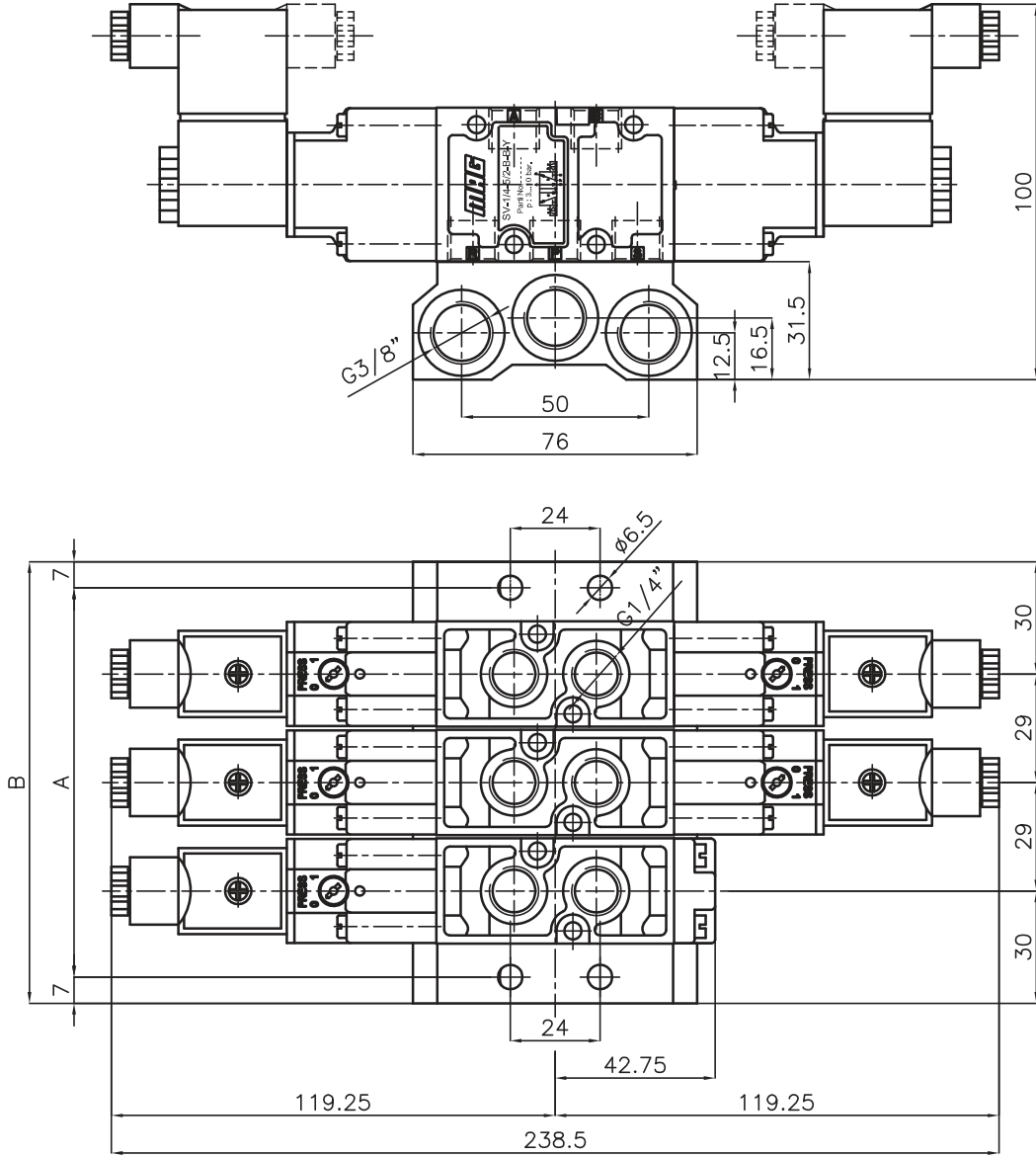
Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-5/3-B-B-Y	3....10	560
	SV-1/4-5/3-B-B-Y-E	3....10	560

## Dik Bobinli Valf / Vertical type solenoid



Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-5/3-B-B	3....10	1400
	SV-1/4-5/3-B-B-E	3....10	1400

# SV - 1/4 VALF ADASI ÖLÇÜLERİ / VALVE ISLAND DIMENSIONS



SİPARİŞ ŞEKLİ <sup>(1)</sup>  
ORDER INSTRUCTIONS

**SVP - 1/4 - . . .**

Valf Sayısı / Number of valves

Valf Sayısı Number of valves	A	B
2	75	89
3	104	118
4	133	147
5	162	176
6	191	205
7	220	234
8	249	263
9	278	292
10	307	321

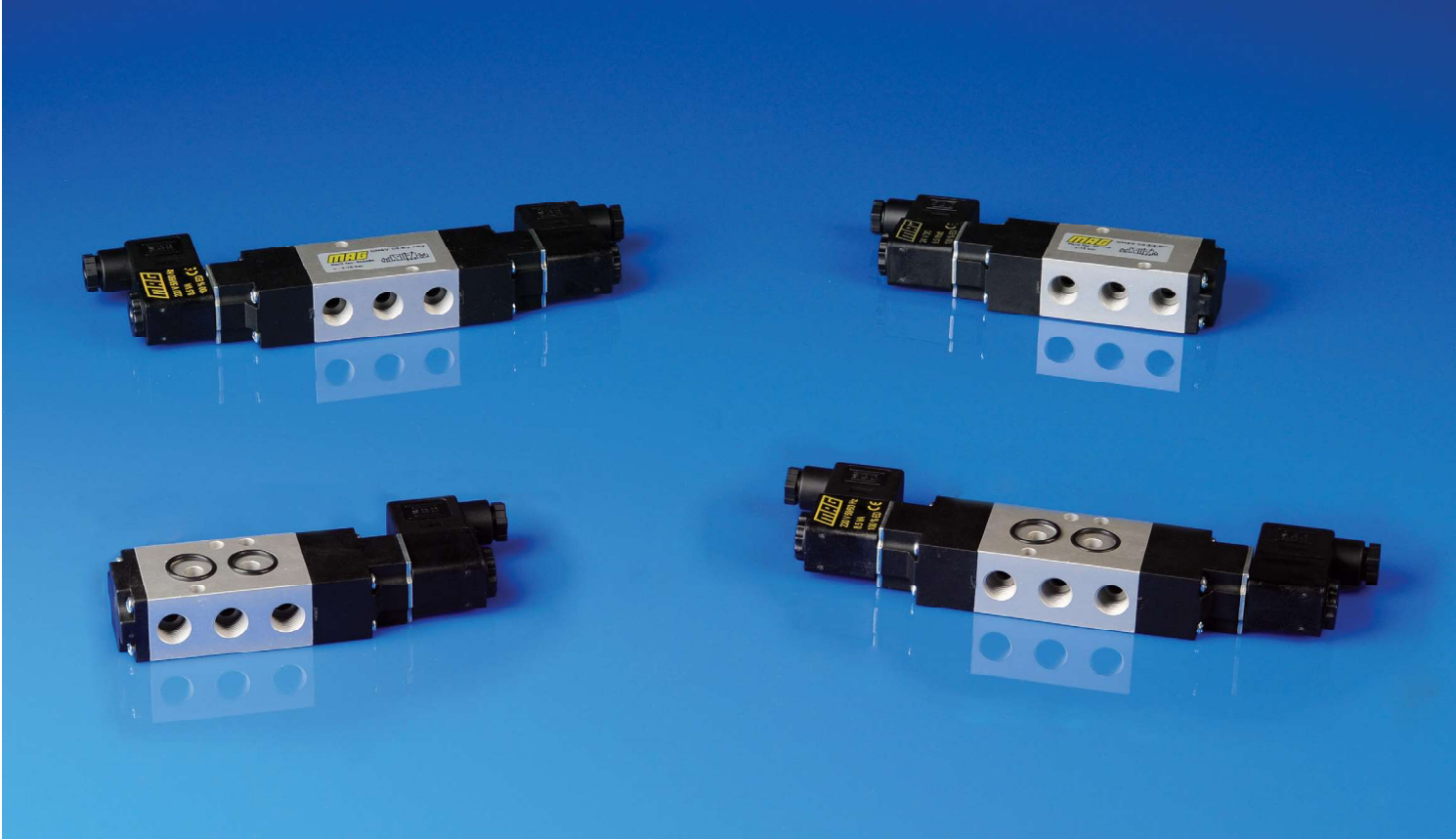
(1) BU ADA TİPİ BEŞ YOLLU İKİ KONUMLU VE BEŞ YOLLU ÜÇ KONUMLU VALF TİPLERİ İÇİN GEÇERLİDİR.

(1) This valve island is suitable for only 5 position - 2 way and 3 way valves.

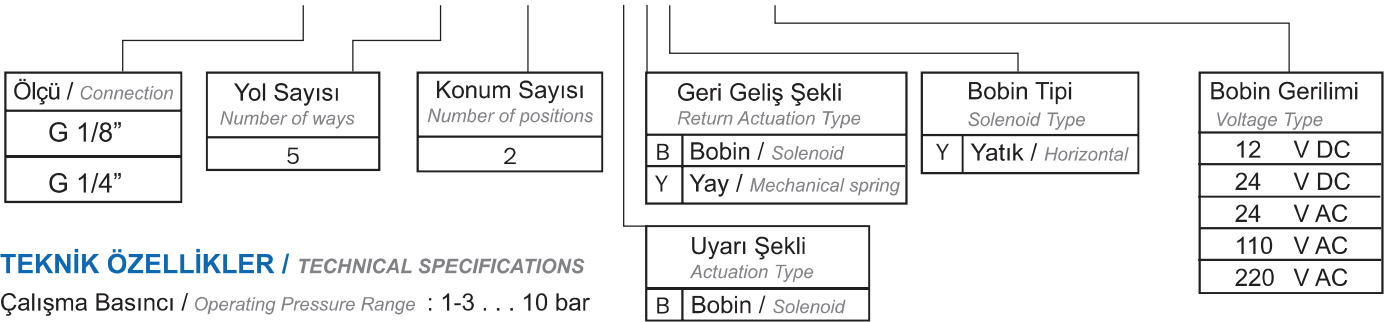
# PNÖMATİK YÖN DENETİM VALFİ

## PNEUMATIC DIRECTIONAL CONTROL VALVE

ELECTRICALLY ACTUATED NAMUR VALVES BOBİNLİ NAMUR VALFLER

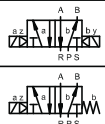



### NMSV - . . . . - . - . . . . .



#### TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

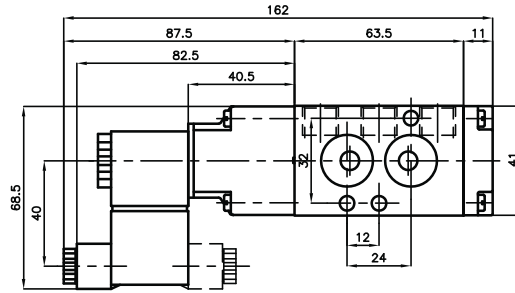
Çalışma Basıncı / Operating Pressure Range : 1-3 . . . 10 bar  
Debi / Flow Rate (6 bar) G 1/8" : 600 NI / dak.  
Debi / Flow Rate (6 bar) G 1/4" : 990 NI / dak. / NI/min.  
Çalışma sıcaklığı / Temperature Range : -10 . . . +80 °C  
Çalışma ortamı / Medium : Filtre edilmiş yağlı hava / Lubricated filtered compressed air.

Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	NMSV-1/4-5/2-B-B-Y	1....10	490
	NMSV-1/4-5/2-B-Y-Y	3....10	360

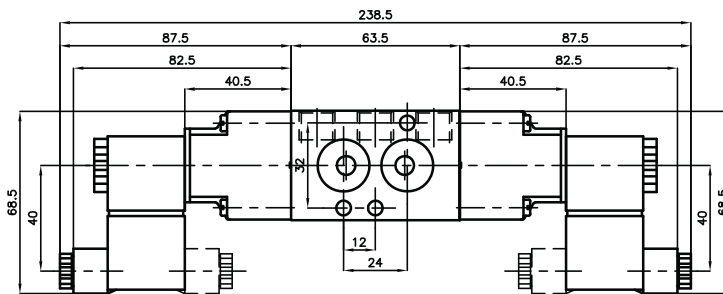
### Yatık Bobinli Namur Gövdeli Valf

Horizontal type solenoid namur body

NMSV-1/4-5/2-B-Y-Y



NMSV-1/4-5/2-B-B-Y



# PNÖMATİK YÖN DENETİM VALFİ PNEUMATIC DIRECTIONAL CONTROL VALVE

MECHANICALLY ACTUATED VALVES MEKANİK UYARILI VALFLER



SV - 1/4 -

Ölçü Connection	Yol Sayısı Number of ways	Konum Sayısı Number of positions	Uyarı Şekli Actuation Type	Geri Geliş Şekli Return Actuation Type
G 1/4"	3 5	2 3	D Düğme / Push button H Hava Uyarı / Air impulse K Kol / Lever M Makara / Cam P Pedal / Pedal	H Hava Uyarı / Air impulse Y Yay / Mechanical spring M Makara / Cam O Uyarı Şekli Aynı / Same as actuation type

## TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

Çalışma Basıncı / Operating Pressure Range : -1...0...12 bar

Debi / Flow Rate (6 bar) : 990 NI / dak. / NI/min.

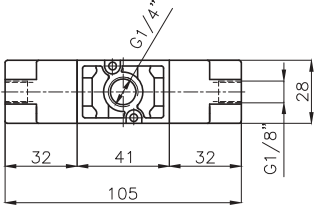
Çalışma sıcaklığı / Temperature Range : -10 . . . +80 °C

Çalışma ortamı / Medium : Filtre edilmiş yağlı hava / Lubricated filtered compressed air.

# SV-1/4-3/2

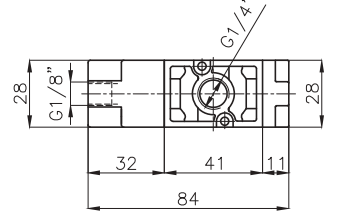
## Hava Uyarılı Valf Air impulse operated valve

SV-1/4-3/2-H-H



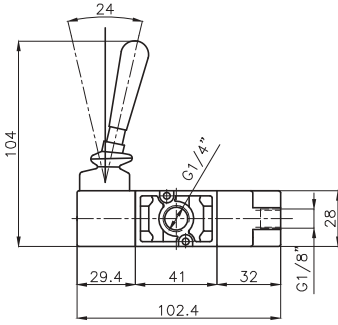
Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-3/2-H-H	1....12	460
	SV-1/4-3/2-H-Y	3....12	280

SV-1/4-3/2-H-Y



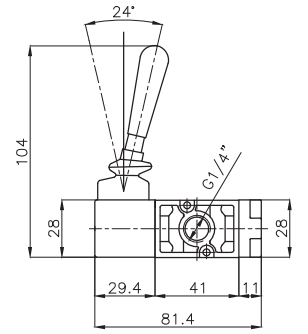
## Kollu Valf Lever operated valve

SV-1/4-3/2-K-H



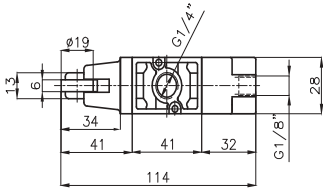
Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-3/2-K-H	1....12	460
	SV-1/4-3/2-K-Y	-1...0....12	280
	SV-1/4-3/2-K-O	-1...0....12	350

SV-1/4-3/2-K-Y ve  
SV-1/4-3/2-K-O



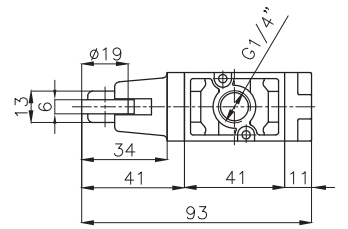
## Makaralı Valf Cam operated valve

SV-1/4-3/2-M-H

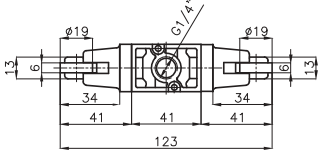


Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-3/2-M-H	1...12	360
	SV-1/4-3/2-M-M	-1...0...12	260
	SV-1/4-3/2-M-Y	-1...0...12	200

SV-1/4-3/2-M-Y

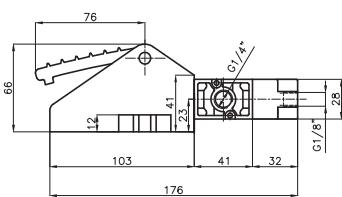


SV-1/4-3/2-M-M



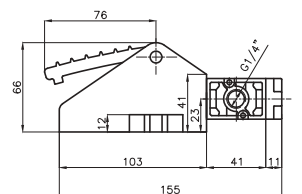
## Pedallı Valf Pedal operated valve

SV-1/4-3/2-P-H

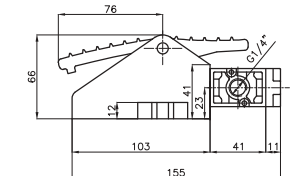


Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-3/2-P-H	1....12	1470
	SV-1/4-3/2-P-Y	-1...0...12	1335
	SV-1/4-3/2-P-O	-1....0...12	1430

SV-1/4-3/2-P-Y



SV-1/4-3/2-P-O

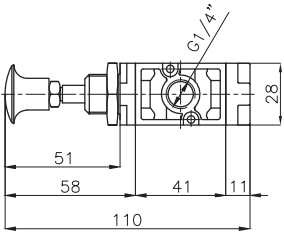




## Düğmeli Valf

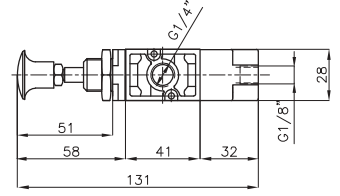
Push button operated valve

SV-1/4-3/2-D-0

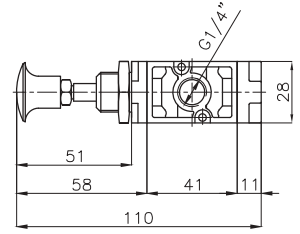


Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-3/2-D-H	1...12	380
	SV-1/4-3/2-D-Y	-1...0..12	210
	SV-1/4-3/2-D-0	-1...0..12	205

SV-1/4-3/2-D-H



SV-1/4-3/2-D-Y

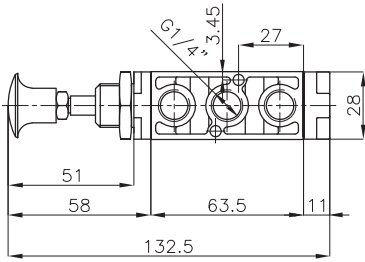


## SV - 1/4 - 5/2

## Düğmeli Valf

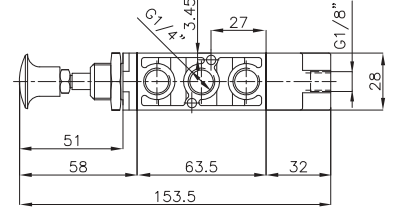
Push button operated valve

SV-1/4-5/2-D-0

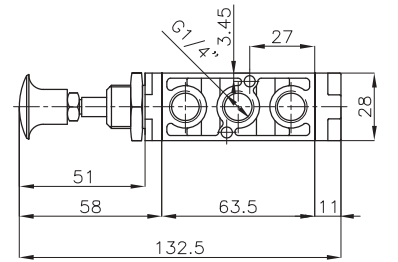


Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-5/2-D-H	1...12	615
	SV-1/4-5/2-D-Y	-1...0..12	255
	SV-1/4-5/2-D-0	-1...0..12	255

SV-1/4-5/2-D-H



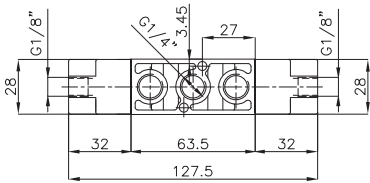
SV-1/4-5/2-D-Y



## Hava Uyarılı Valf

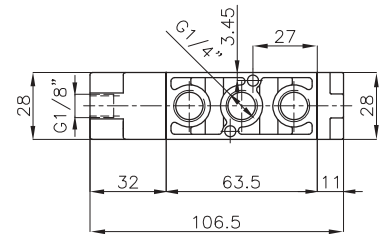
Air impulse operated valve

SV-1/4-5/2-H-H



Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-5/2-H-H	1...12	520
	SV-1/4-5/2-H-Y	3...12	354

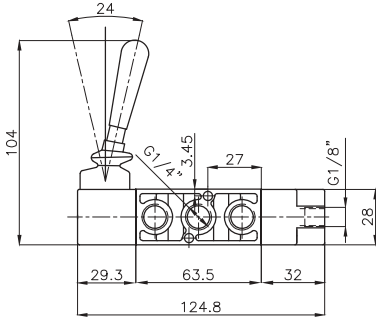
SV-1/4-5/2-H-Y



## Kollu Valf

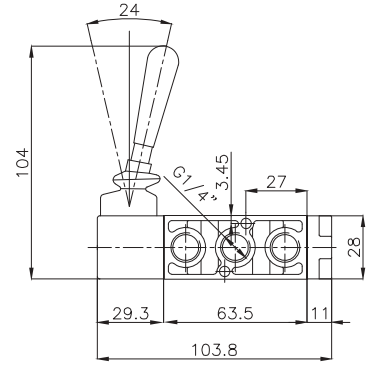
Lever operated valve

SV-1/4-5/2-K-H



Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-5/2-K-H	1...12	561
	SV-1/4-5/2-K-Y	-1...0...12	395
	SV-1/4-5/2-K-O	-1...0...12	395

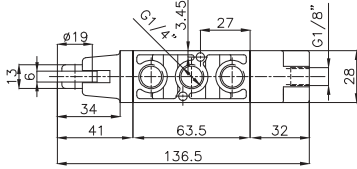
SV-1/4-5/2-K-Y ve  
SV-1/4-5/2-K-O



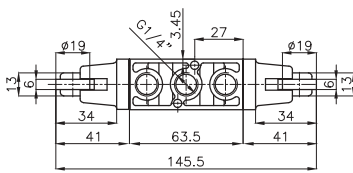
## Makaralı Valf

Cam operated valve

SV-1/4-5/2-M-H

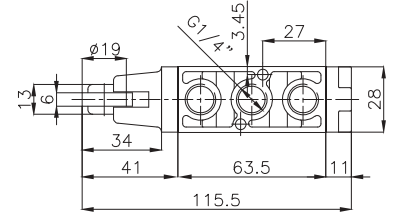


SV-1/4-5/2-M-M



Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-5/2-M-H	1...12	615
	SV-1/4-5/2-M-M	-1...0...12	515
	SV-1/4-5/2-M-Y	-1...0...12	260

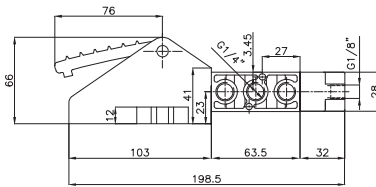
SV-1/4-5/2-M-Y



## Pedallı Valf

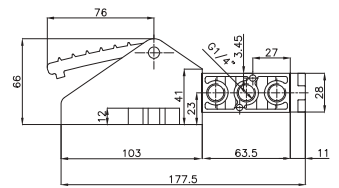
Pedal operated valve

SV-1/4-5/2-P-H

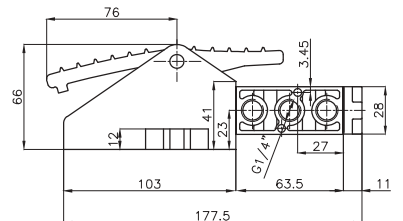


Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-5/2-P-H	1...12	1780
	SV-1/4-5/2-P-Y	-1...0...12	1495
	SV-1/4-5/2-P-O	-1...0...12	1420

SV-1/4-5/2-P-Y



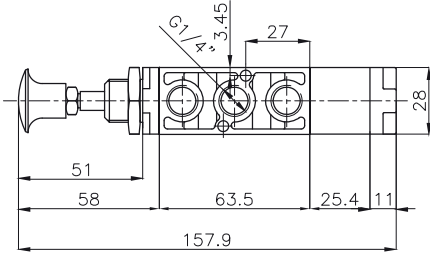
SV-1/4-5/2-P-O



# SV - 1/4 - 5/3

## Düğmeli Valf

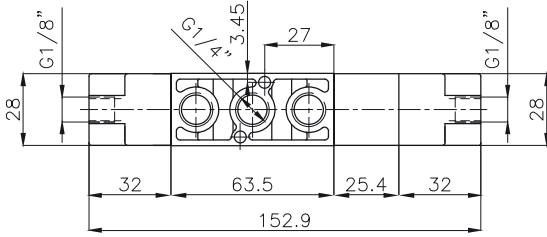
Push button operated valve



Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-5/3-D-Y	-1..0..12	390

## Hava Uyarılı Valf

Air impulse operated valve

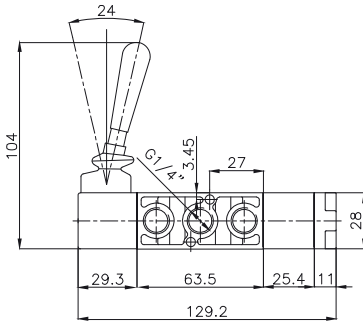


Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-5/3-H-H	3.....12	600

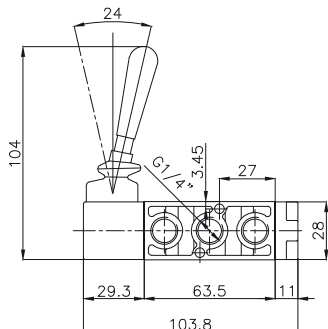
## Kollu Valf

Lever operated valve

SV-1/4-5/3-K-Y



SV-1/4-5/3-K-O



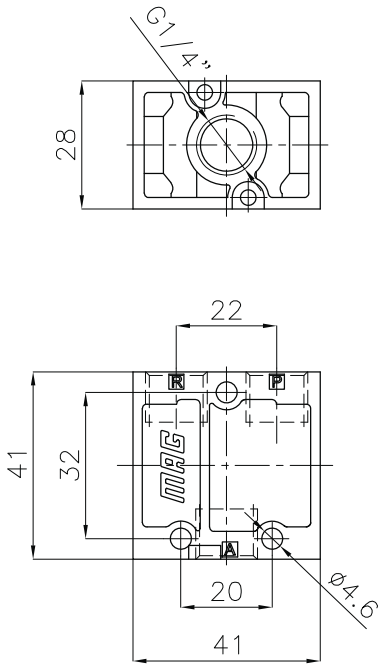
Simge / Symbol	Tip / Type	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
	SV-1/4-5/3-K-Y	-1..0..12	480
	SV-1/4-5/3-K-Y-E*	-1..0..12	480
	SV-1/4-5/3-K-O	-1..0..12	394

\* A-B Egzoza açık / A-B Exhaust Open

SV-1/4-3/2-.....

## Gövdesi

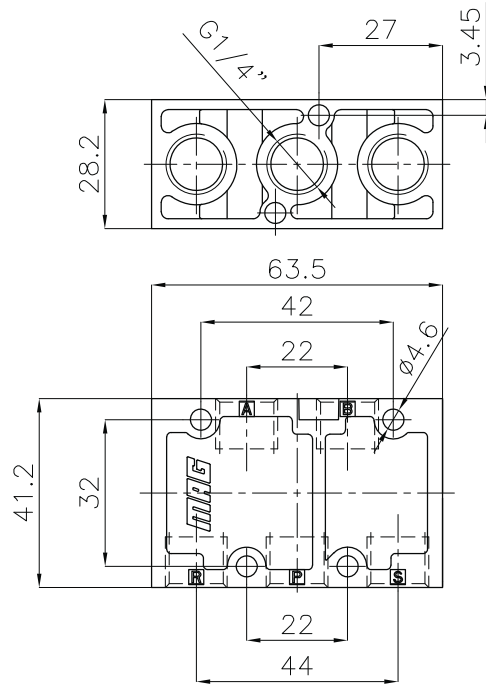
Main Body Dimensions



SV-1/4-5/2-.....

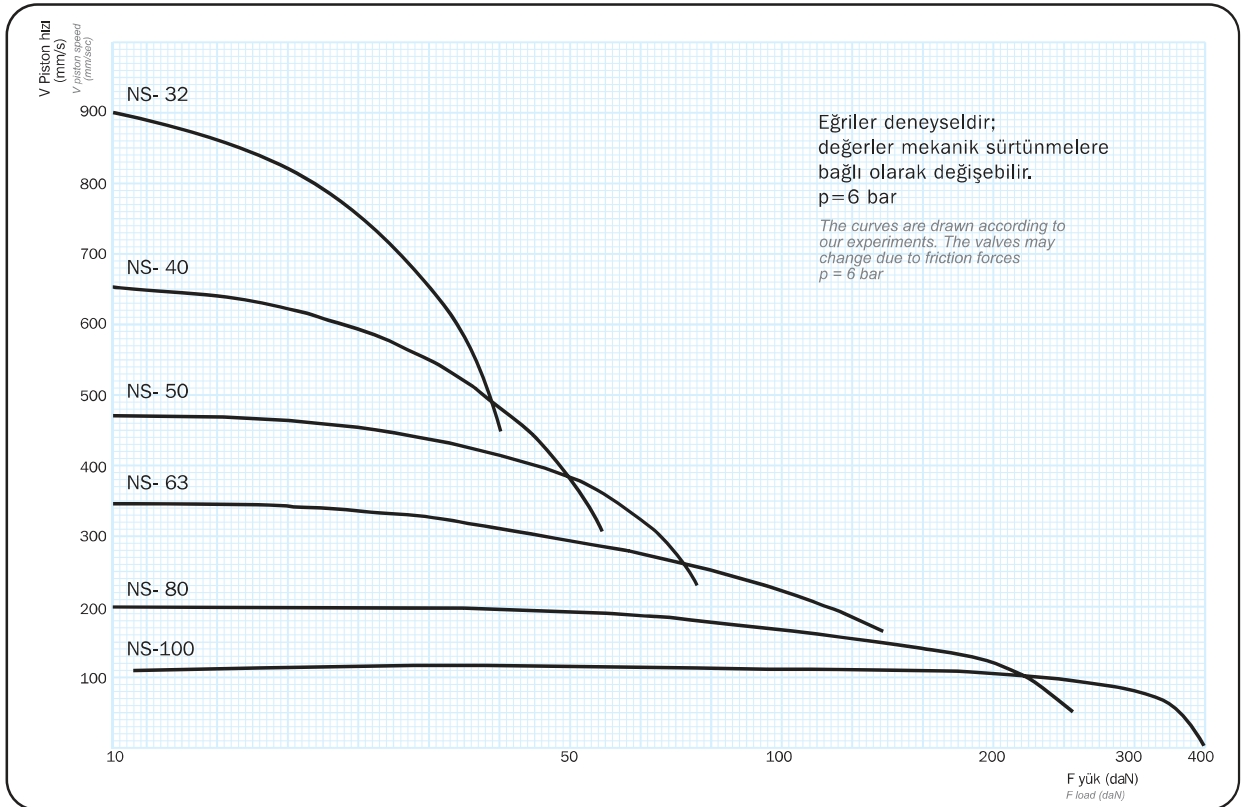
## Gövdesi

Main Body Dimensions



## SV - 1/4 - ..... ile elde edilen piston hızı eğrisi

Piston speed graph formed by using SV - 1/4



# PNÖMATİK YÖN DENETİM VALFİ

## PNEUMATIC DIRECTIONAL CONTROL VALVE

VALVES VALFLER



### SV - 1/2 - 5/2 - . . . - . . .

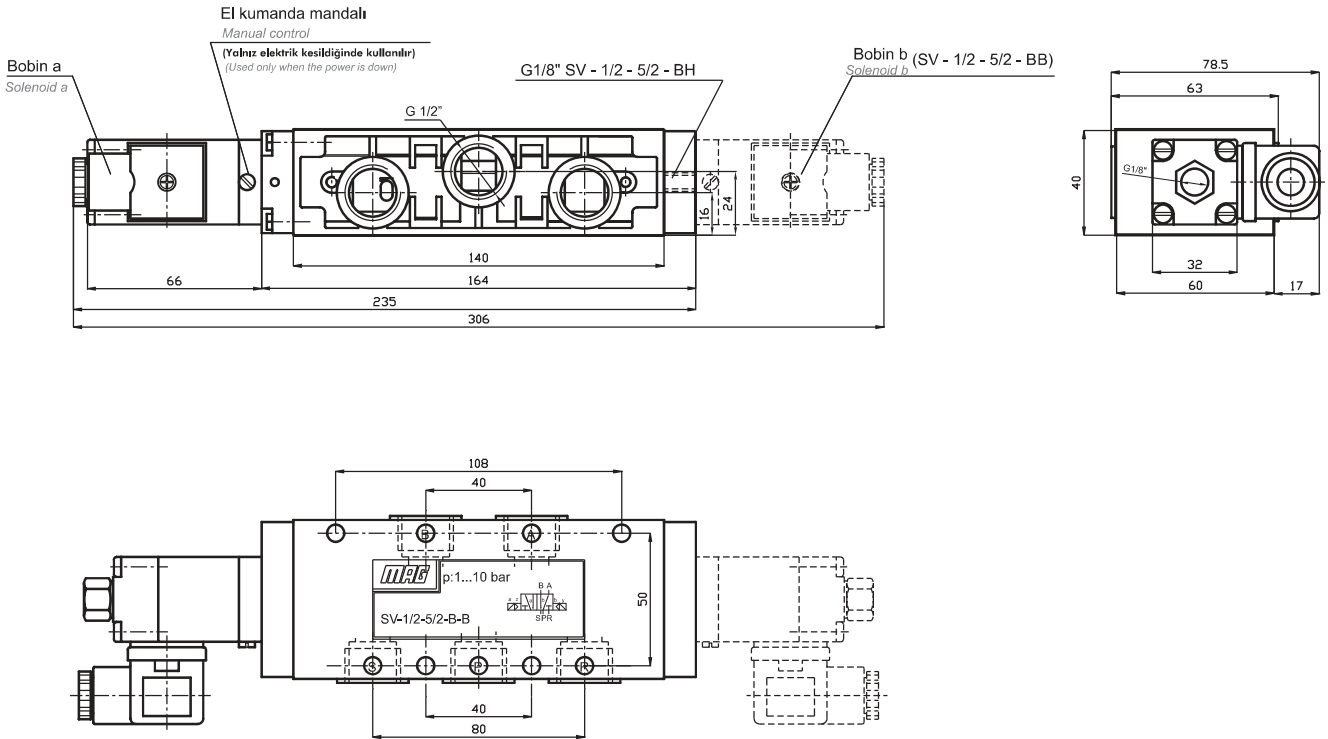
Ölçü / Connection	Uyarı Şekli Actuation Type	Geri Geliş Şekli Return Actuation Type	Bobin Gerilimi Voltage Type
G 1/2"	B Bobin / Solenoid	B Bobin / Solenoid	12 V DC
	H Hava Uyarı Air impulse	H Hava Uyarı / Air impulse	24 V DC
	K Kol / Lever	Y Yay / Mechanical spring	24 V AC
		O Uyarı Şekli Aynı Same as actuation type	110 V AC
			220 V AC

# Bobinli Valf / Solenoid Valves

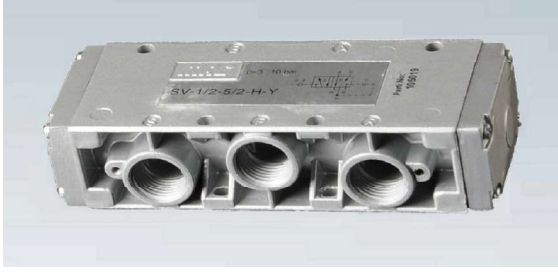
Çalışma basıncı / Operating Pressure Range : 1 ... 10 bar  
 Çalışma sıcaklığı / Ambient Temperature Range : +10 °C ... +80 °C  
 Akış miktarı / Flow Rate : 3,700 NI / dk.. / NI/min



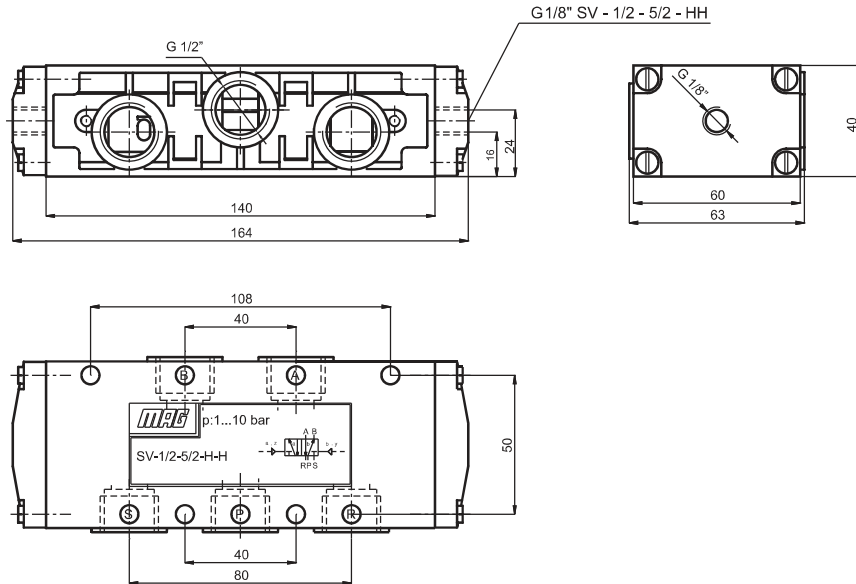
Tip / Type	Simge / Symbol	Çalışma Basıncı (bar) / Operating Pressure Range (bar)	Ağırlık (g) / Weight (g)
SV - 1/2 - 5/2 - BB		1...10	1200
SV - 1/2 - 5/2 - BH		1...10	950
SV - 1/2 - 5/2 - BY		3...10	950



## Hava Uyarılı Valf / Air impulse operated valve



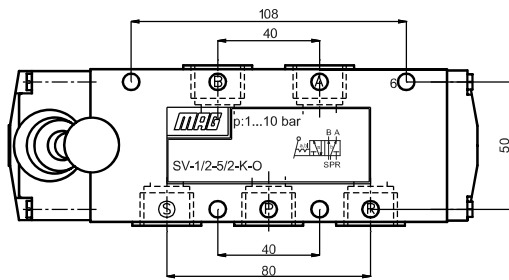
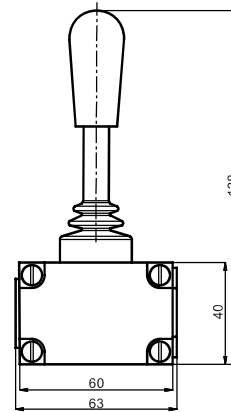
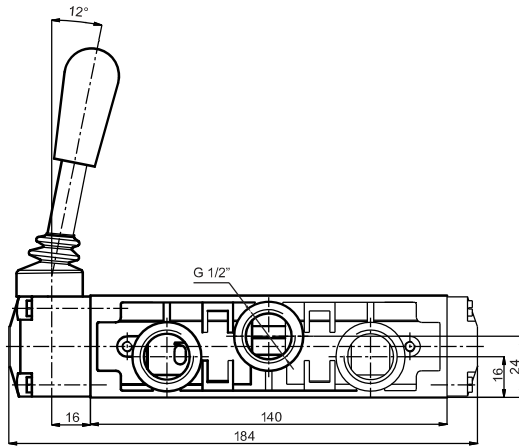
Tip / Type	Simge / Symbol	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
SV - 1/2 - 5/2 - HH		1...10	700
SV - 1/2 - 5/2 - HY		3...10	700



## Kollu Valf / Lever operated valve



Tip / Type	Simge / Symbol	Çalışma Basıncı (bar) Operating Pressure Range (bar)	Ağırlık (g) Weight (g)
SV - 1/2 - 5/2 - KO		1...10	960
SV - 1/2 - 5/2 - KY		3...10	960





# PNÖMATİK YÖN DENETİM VALFİ PNEUMATIC DIRECTIONAL CONTROL VALVE

ELECTRICALLY ACTUATED VALVES BOBİNLİ VALFLER



## SVE - 1/8 - 5/. - B . - . . . - . . . .

Konum Sayısı Number of positions
2
3

Geri Geliş Şekli Return Actuation Type
Y Pilot Uyarı Air spring
B Bobin Solenoid

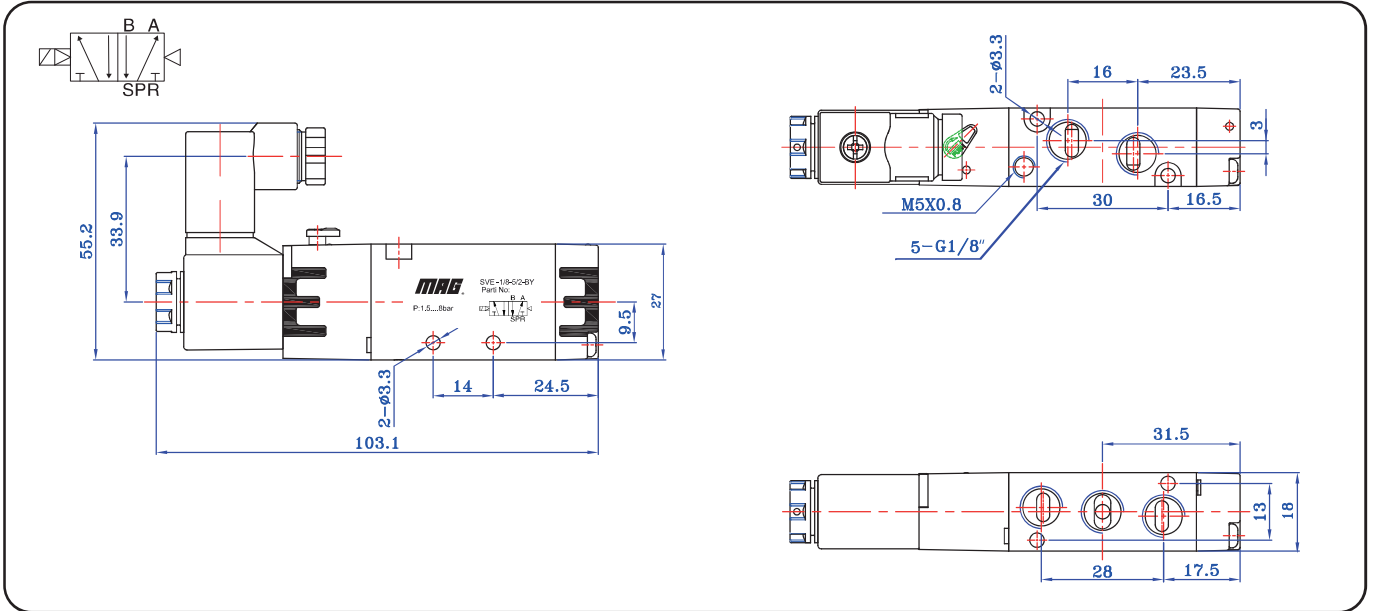
Bobin Gerilimi Voltage Type
12 V DC
24 V DC
24 V AC
110 V AC
220 V AC

Fonksiyon Function
5/3 Kapalı Merkez 5/3 Closed Center
AB-T 5/3 Açık Merkez 5/3 Open Center
P-AB 5/3 Basınç Merkez 5/3 Pressure Center

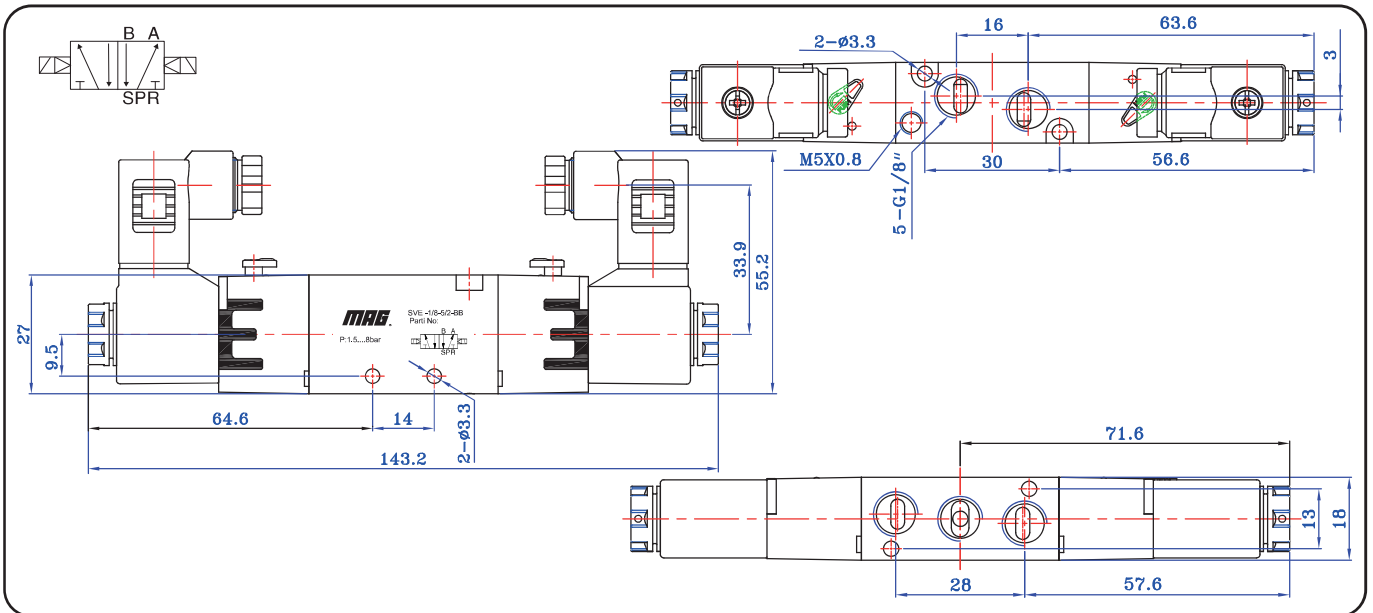
### TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

Çalışma Basıncı / Operating Pressure Range	: 1.5 ... 8 bar
Debi / Flow Rate (6 bar)	: 600 NI / dak. / NI/min.
Çalışma Sıcaklığı / Temperature range	: -20 ... 70 °C
Çalışma Ortamı / Medium	: Filtre edilmiş kuru veya yağlı hava / Lubricated or unlubricated filtered compressed air.
Ağırlık / Weight	: 110 g. (SVE-1/8-5/2-BY), 171 g. (SVE-1/8-5/2-BB), 181 g. (SVE-1/8-5/3-BB)

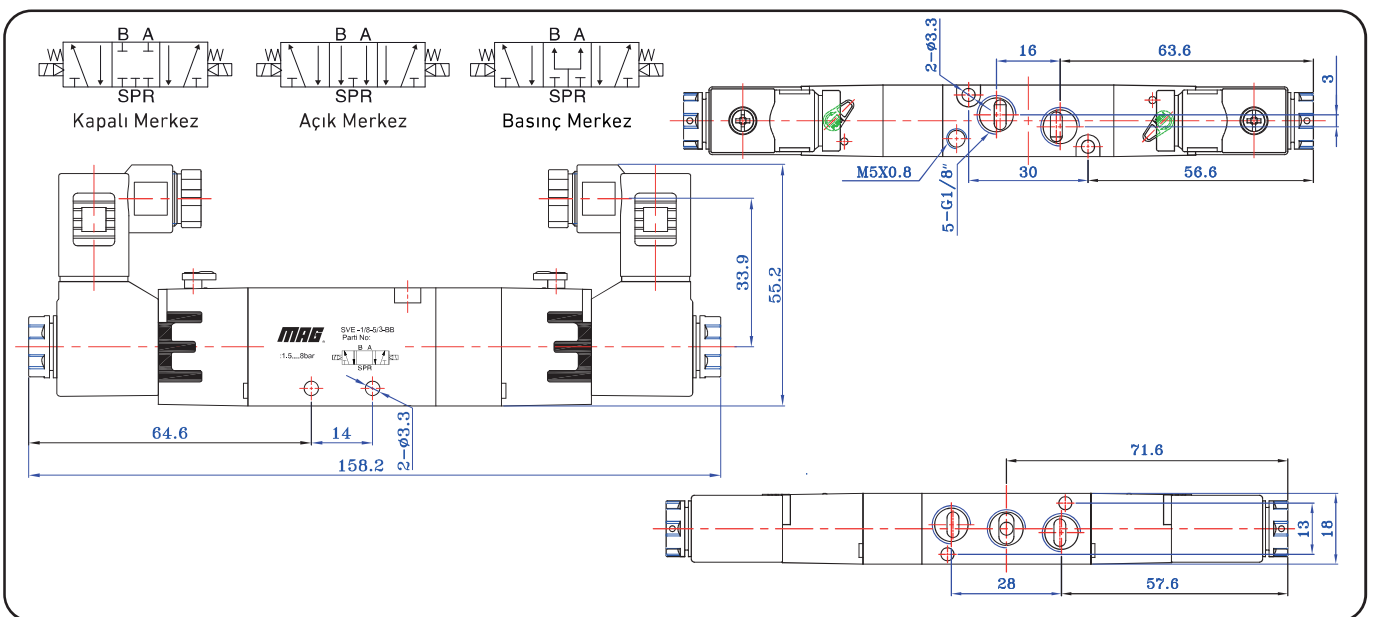
# SVE - 1/8 - 5/2 - BY



# SVE - 1/8 - 5/2 - BB



# SVE - 1/8 - 5/3 - BB



# PNÖMATİK YÖN DENETİM VALFİ PNEUMATIC DIRECTIONAL CONTROL VALVE

ELECTRICALLY ACTUATED VALVES BOBİNLİ VALFLER



## SVE - 1/4 - 5/ . - B . - . . . . .

Konum Sayısı Number of positions
2
3

Geri Geliş Şekli Return Actuation Type
Y Pilot Uyarı Air spring
B Bobin Solenoid

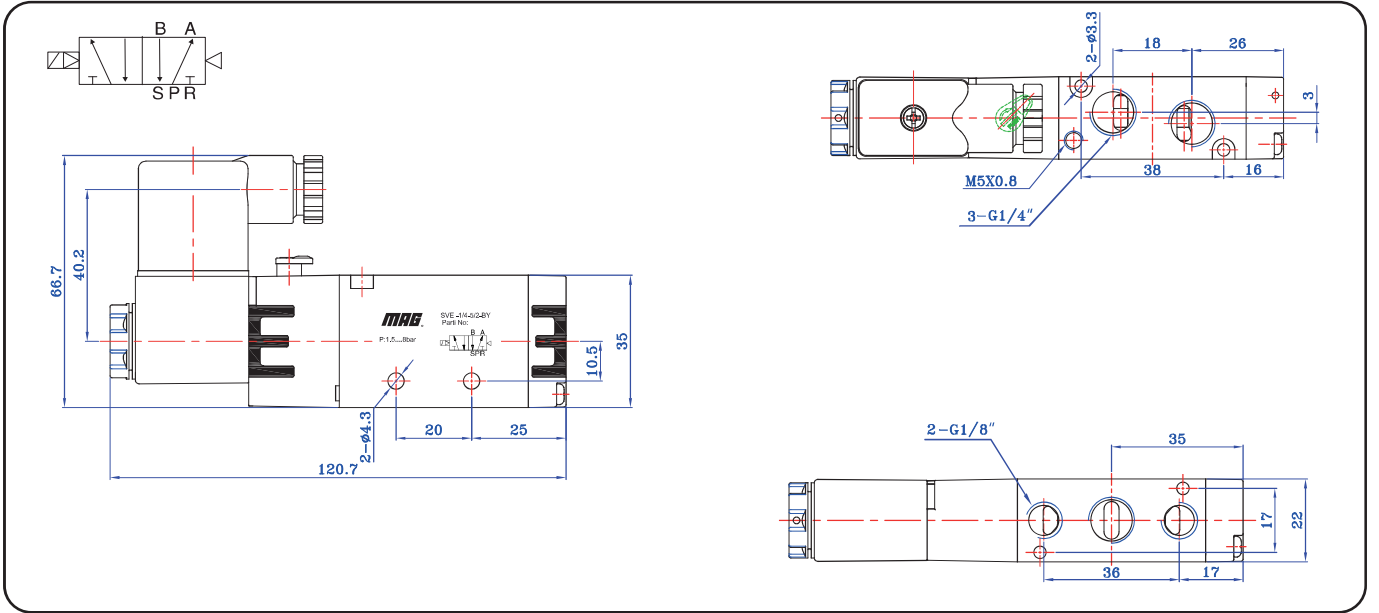
Bobin Gerilimi Voltage Type
12 V DC
24 V DC
24 V AC
110 V AC
220 V AC

Fonksiyon Function
5/3 Kapalı Merkez 5/3 Closed Center
AB-T 5/3 Açık Merkez 5/3 Open Center
P-AB 5/3 Basınç Merkez 5/3 Pressure Center

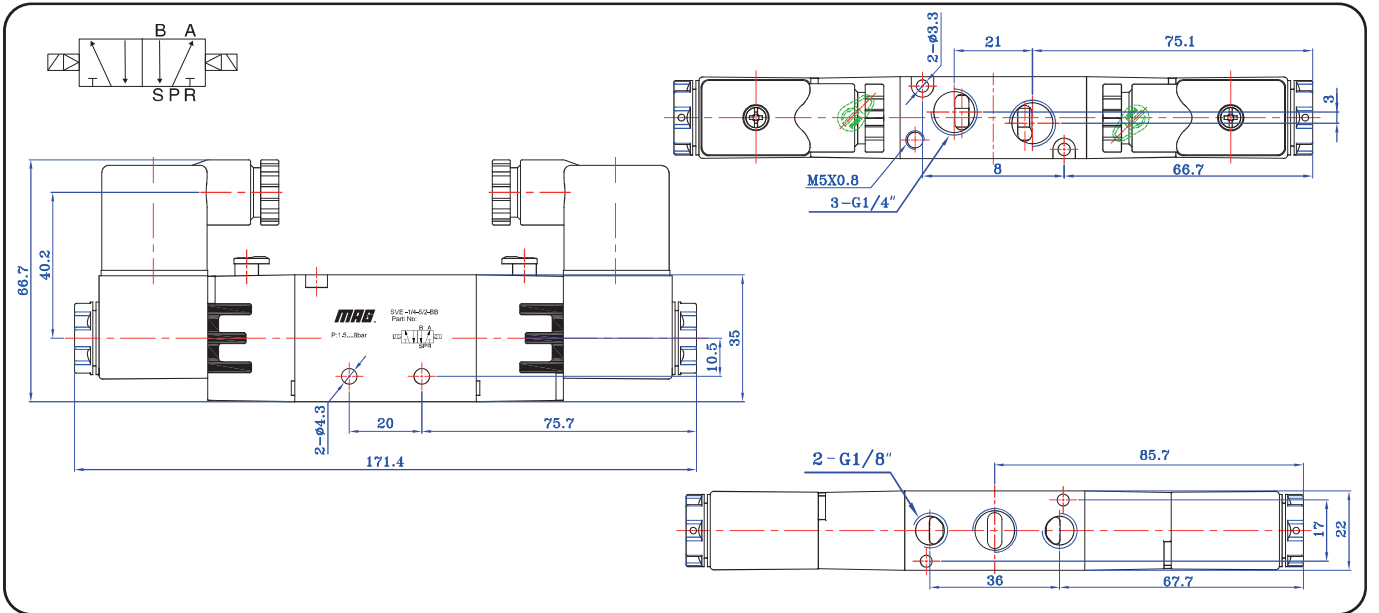
### TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

Çalışma Basıncı / Operating Pressure Range	: 1.5 ... 8 bar
Debi / Flow Rate (6 bar)	: 1000 NI / dak. / NI/min.
Çalışma Sıcaklığı / Temperature range	: -20 ... 70 °C
Çalışma Ortamı / Medium	: Filtre edilmiş kuru veya yağlı hava / Lubricated or unlubricated filtered compressed air.
Ağırlık / Weight	: 209 g (SVE-1/4-5/2-BY), 314 g (SVE-1/4-5/2-BB), 357 g. (SVE-1/4-5/3-BB)

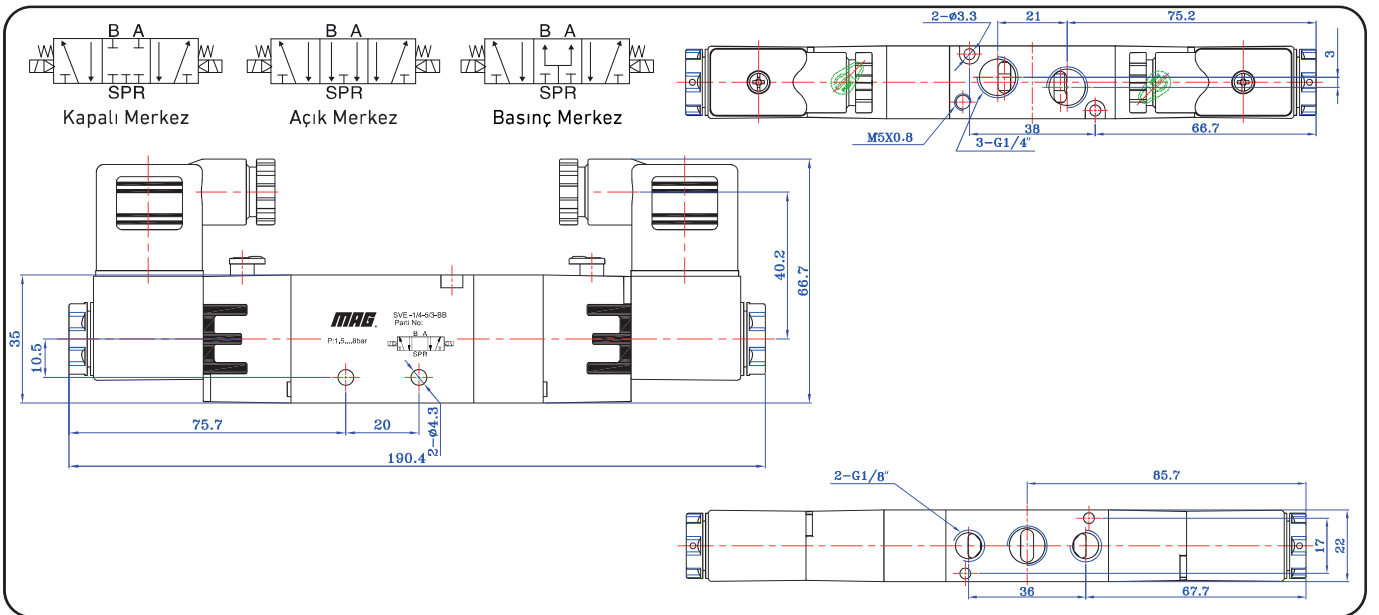
# SVE - 1/4 - 5/2 - BY



# SVE - 1/4 - 5/2 - BB



# SVE - 1/4 - 5/3 - BB



# PNÖMATİK YÖN DENETİM VALFİ PNEUMATIC DIRECTIONAL CONTROL VALVE

ELECTRICALLY ACTUATED VALVES BOBİNLİ VALFLER



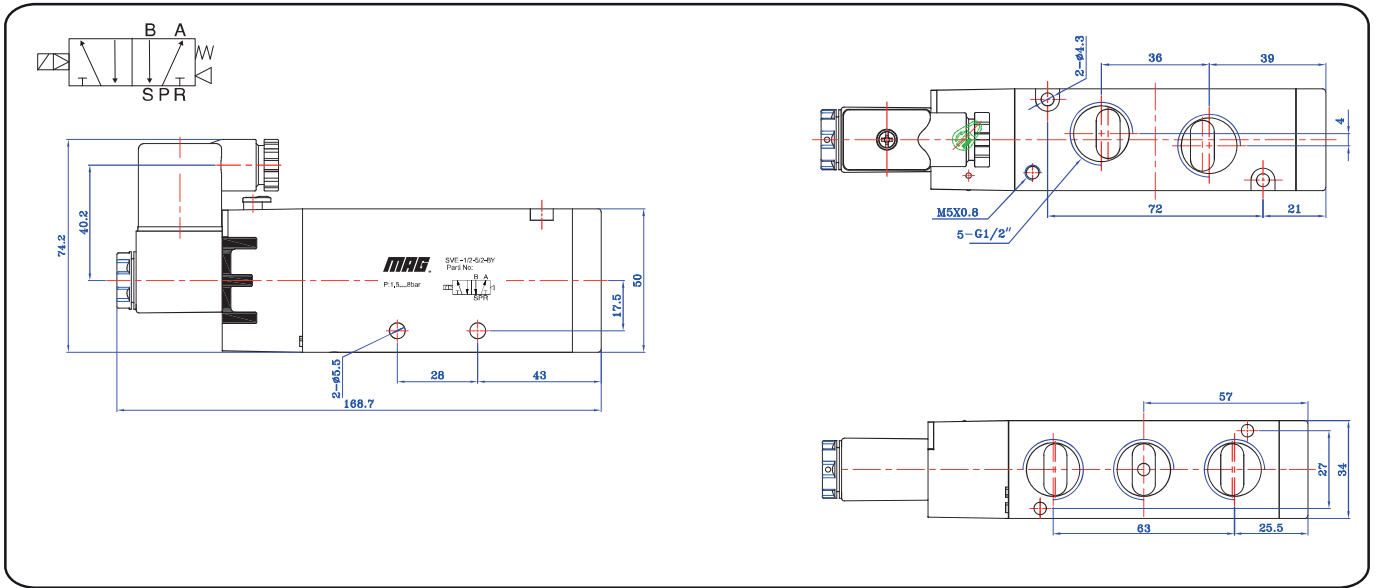
## SVE - 1/2 - 5/3 - B . . . . .

Konum Sayısı Number of Positions	Geri Geliş Şekli Return Actuation Type	Bobin Gerilimi Voltage Type	Fonksiyon Function
2	Y Pilot Uyarı Air spring	12 V DC	5/3 Kapalı Merkez 5/3 Closed Center
3	B Bobin Solenoid	24 V DC	AB-T 5/3 Açık Merkez 5/3 Open Center
		24 V AC	P-AB 5/3 Basınç Merkez 5/3 Pressure Center
		110 V AC	
		220 V AC	

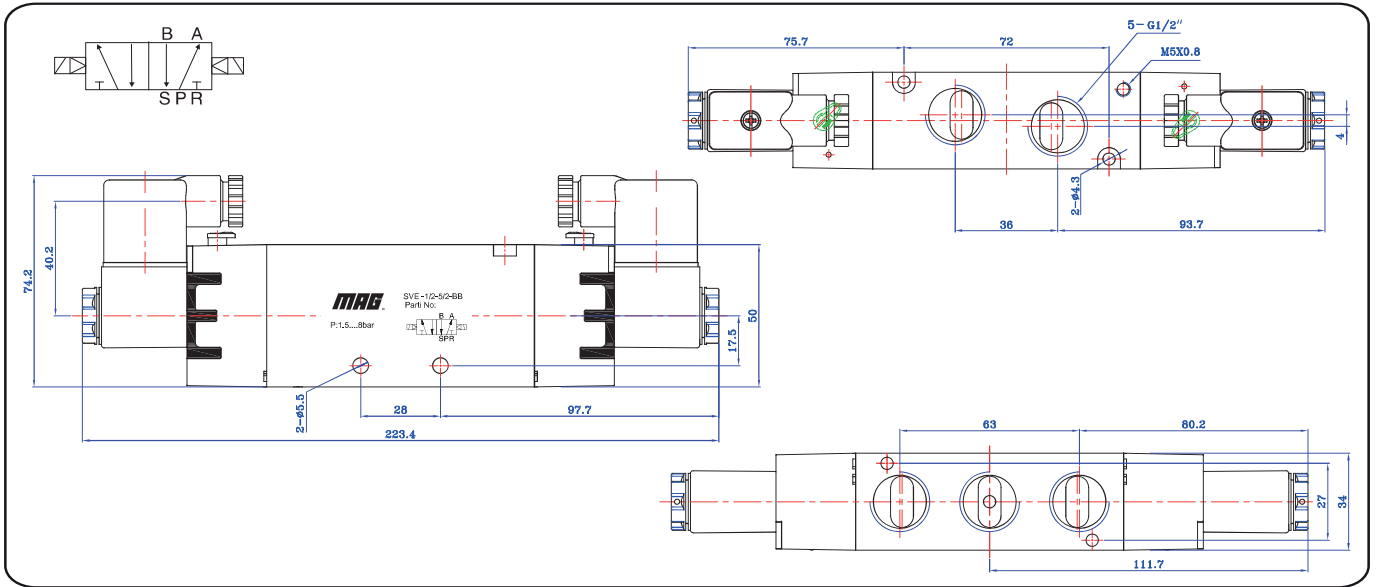
### TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

Çalışma Basıncı / Operating Pressure Range	: 1.5 ... 8 bar
Debi / Flow Rate (6 bar)	: 2000 NI / dak. / NI/min.
Çalışma Sıcaklığı / Temperature range	: -20 ... 70 °C
Çalışma Ortamı / Medium	: Filtre edilmiş kuru veya yağlı hava / Lubricated or unlubricated filtered compressed air.
Ağırlık / Weight	: 528 g (SVE-1/2-5/2-BY), 638 g (SVE-1/2-5/2-BB), 727 g (SVE-1/2-5/3-BB)

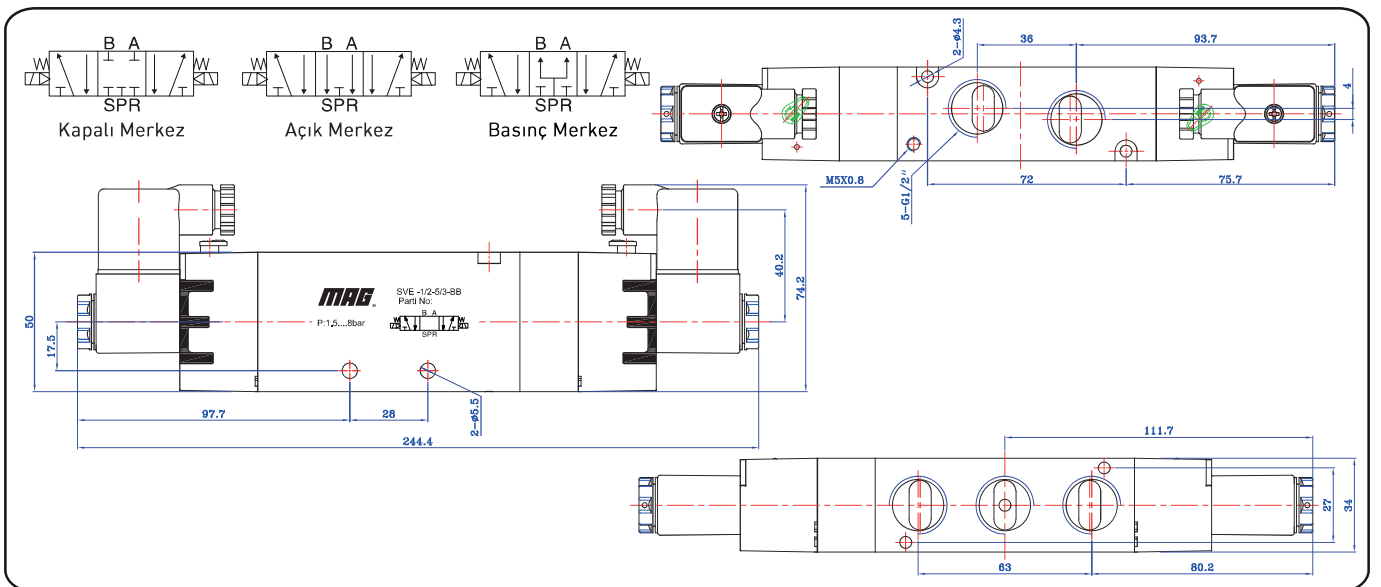
# SVE - 1/2 - 5/2 - BY



# SVE - 1/2 - 5/2 - BB



# SVE - 1/2 - 5/3 - BB



# PNÖMATİK YÖN DENETİM VALF PLEYTİ PNEUMATIC DIRECTIONAL CONTROL VALVE PLATES

SVE VALVE PLATES SVE VALF PLEYTİ

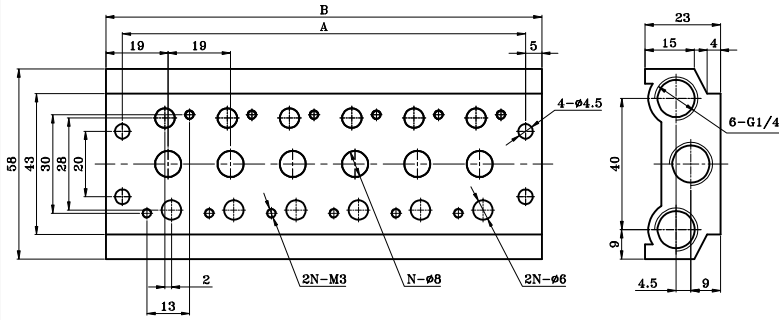


## SVE - P - . . . . . 5/2 - . . .

Ölçü Connection	
1/8	G 1/8"
1/4	G 1/4"
1/2	G 1/2"

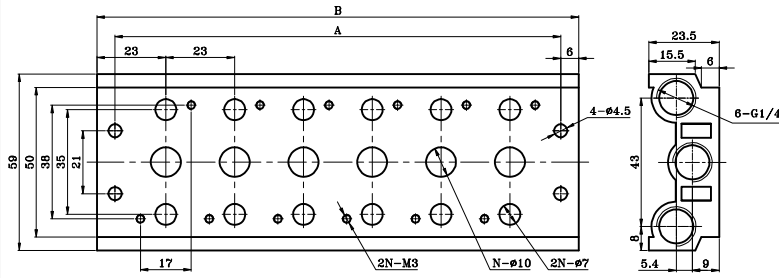
Valf Sayısı Number of valves
2
3
4
5
6
7
8
9
10

## SVE – 1/8 VALF PLEYTİ ÖLÇÜLERİ / VALVE PLATES DIMENSIONS



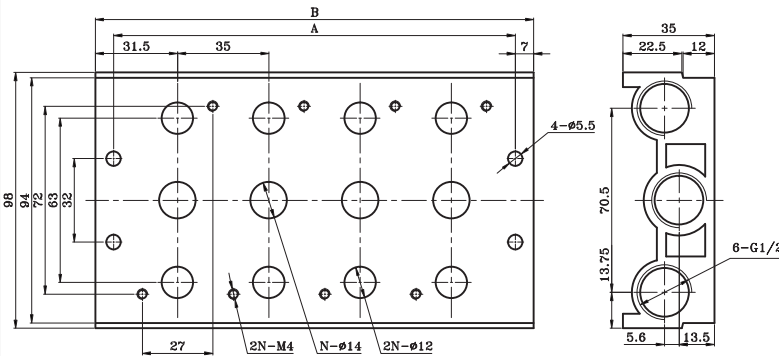
Valf Sayısı Number of valves	A	B
2	47	57
3	66	76
4	85	95
5	104	114
6	123	133
7	142	152
8	161	171
9	180	190
10	199	209

## SVE – 1/4 VALF PLEYTİ ÖLÇÜLERİ / VALVE PLATES DIMENSIONS



Valf Sayısı Number of valves	A	B
2	57	69
3	80	92
4	103	115
5	126	138
6	149	161
7	172	184
8	195	207
9	218	230
10	241	253

## SVE – 1/2 VALF PLEYTİ ÖLÇÜLERİ / VALVE PLATES DIMENSIONS

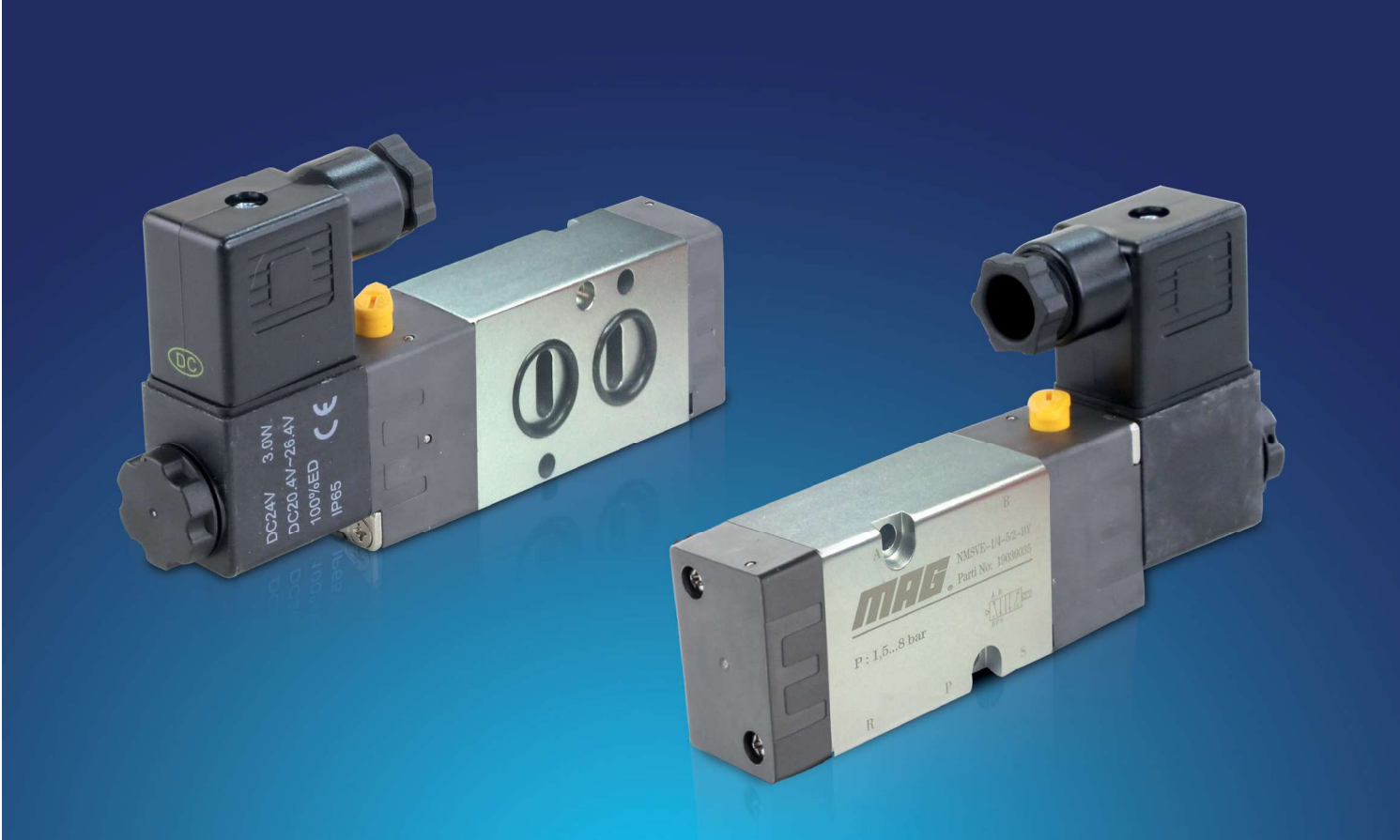


Valf Sayısı Number of valves	A	B
2	84	98
3	119	133
4	154	168
5	189	203
6	224	238
7	259	273
8	294	308
9	329	343
10	364	378



# PNÖMATİK YÖN DENETİM VALFİ PNEUMATIC DIRECTIONAL CONTROL VALVE

ELECTRICALLY ACTUATED NAMUR VALVES BOBİNLİ NAMUR VALFLER



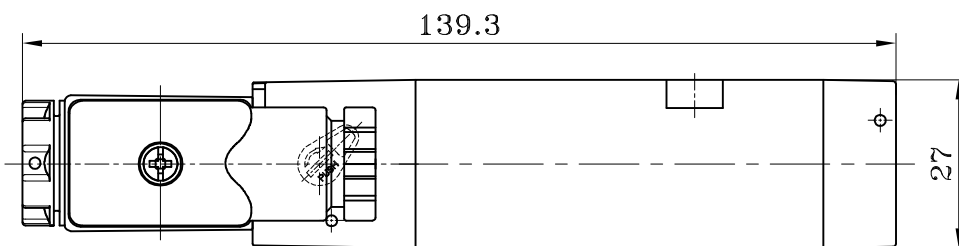
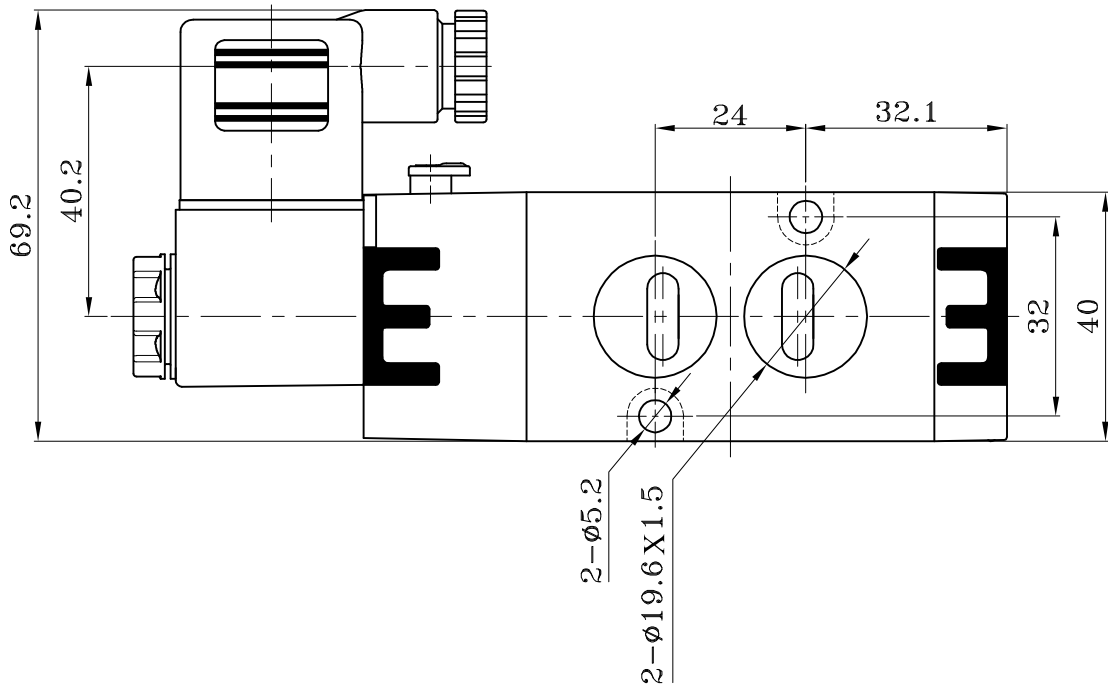
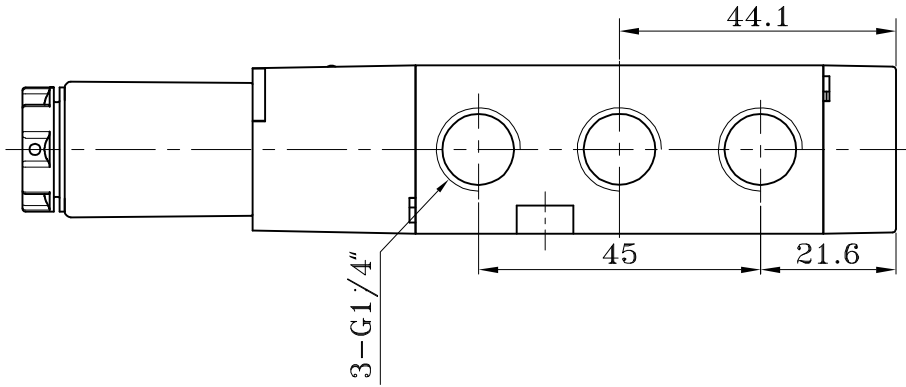
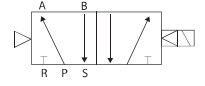
## NMSVE - 1/4 - 5/2 - BY - ...

Bobin Gerilimi Voltage Type
12 V DC
24 V DC
24 V AC
110 V AC
220 V AC

### TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

Çalışma Basıncı / Operating Pressure Range	: 1.5 ... 8 bar
Debi / Flow Rate (6 bar)	: 1000 NI / dak. / NI/min.
Çalışma Sıcaklığı / Temperature range	: -20 ... 70 °C
Çalışma Ortamı / Medium	: Filtre edilmiş kuru veya yağlı hava / Lubricated or unlubricated filtered compressed air.
Ağırlık / Weight	: 300 g

# NMSVE - 1/4 - 5/2 - BY



# PNÖMATİK YÖN DENETİM VALFİ PNEUMATIC DIRECTIONAL CONTROL VALVE

MSVE VALVE ISLAND WITH D-SUB CONNECTOR D-SUB KONNEKTÖRLÜ VALF ADASI



**MSVE - . . . - 5/2 - BY - . . . - . . .**

Ölçü Connection	
1/8	G 1/8"
1/4	G 1/4"

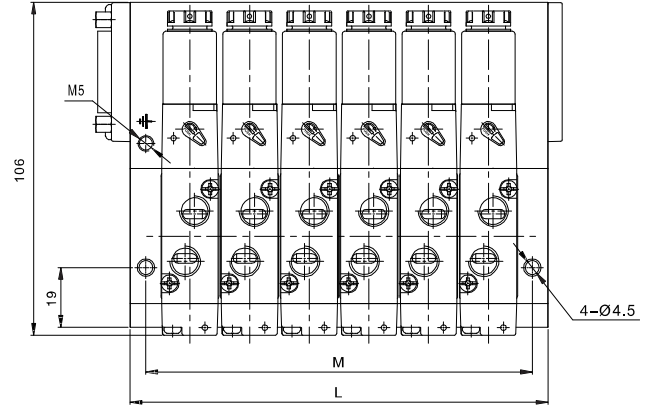
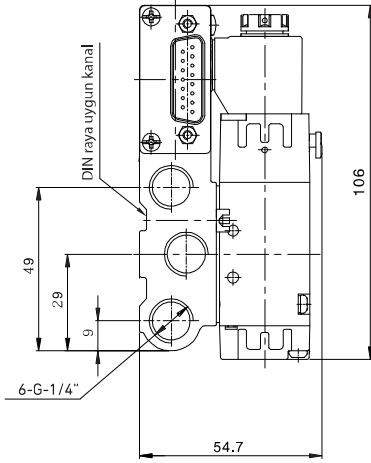
Bobin Gerilimi Voltage Type
24 V DC

Valf Sayısı Number of valves	
6	6 Valf / Valves
8	8 Valf / Valves
10	10 Valf / Valves
12	12 Valf / Valves
14	14 Valf / Valves

## Bağlantı Kablosu

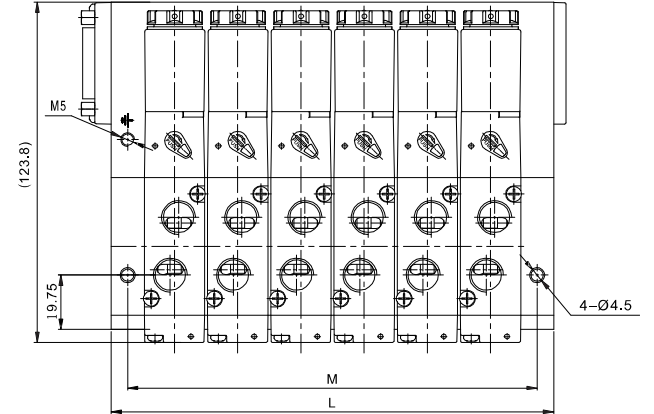
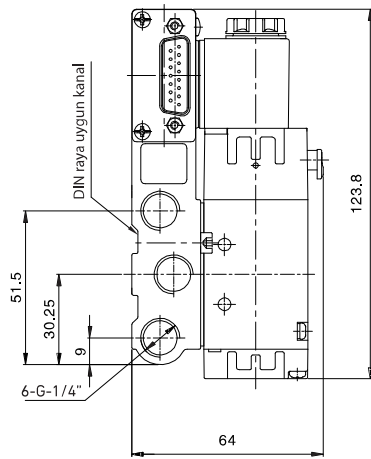
<b>D-SUB-15-15-5M</b>	5MT 16X0.2MM 15PİN 2 SIRA DIŞI D-SUB KONNEKTÖRLÜ KABLO
-----------------------	--

## MSVE 1/8



Model	6'li	8'li	10'lu	12'li	14'lü
L	133	171	209	247	285
M	123	161	199	237	275

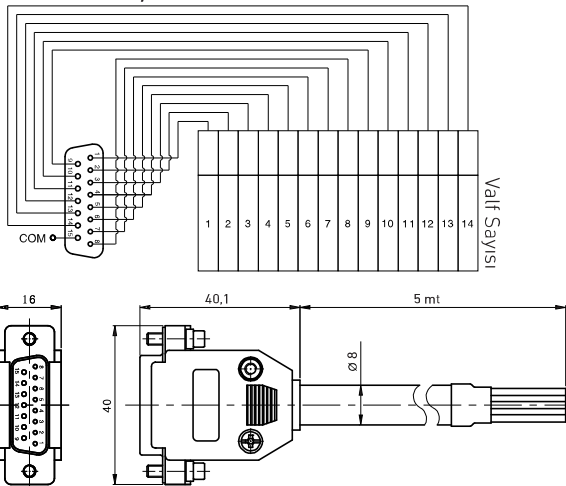
## MSVE 1/4



Model	6'li	8'li	10'lu	12'li	14'lü
L	161	207	253	299	345
M	149	195	241	287	333

## Bağlantı Kablosu

### Kablolama Şeması



Pin No	Renk / Color
1	Kahve-Yeşil / Brown-Green
2	Yeşil-Beyaz / Green-White
3	Gri-Pembe / Grey-Pink
4	Pembe / Pink
5	Mavi / Blue
6	Kırmızı / Red
7	Siyah / Black
8	Mor / Purple
9	Gri / Grey
10	Sarı / Yellow
11	Kahve / Brown
12	Yeşil / Green
13	Beyaz / White
14	Sarı-Beyaz / Yellow-White
15	Sarı-Kahve / Yellow-Brown



## MSP - ... - ...

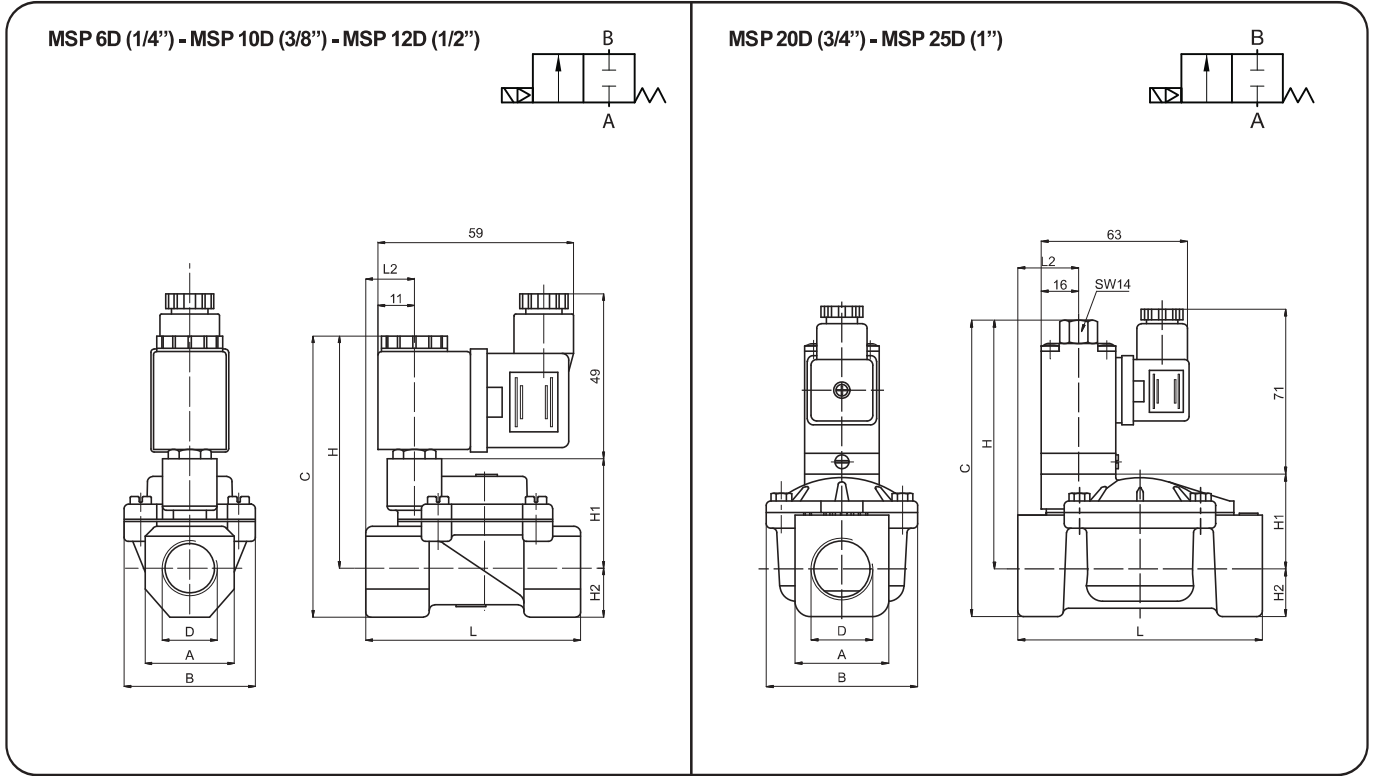
Diş Ölçüsü Connection
6D (1/4") -10D (3/8")
12D (1/2") - 20D (3/4")
25D (1")

Bobin Gerilimi Voltage Type
12 V DC
24 V DC
24 V AC
110 V AC
220 V AC

### Teknik Özellikler / Technical Specifications

Çalışma Basıncı Operating Pressure Range	: 1 ... 8 bar
Çalışma Sıcaklığı Ambient Temperature Range	: - 10 ... + 60 °C
Akışkan Türü Fluid Type	: Filtre edilmiş kuru veya yağlı hava : Lubricated or unlubricated filtered compressed air.

# Ölçüler / Dimensions



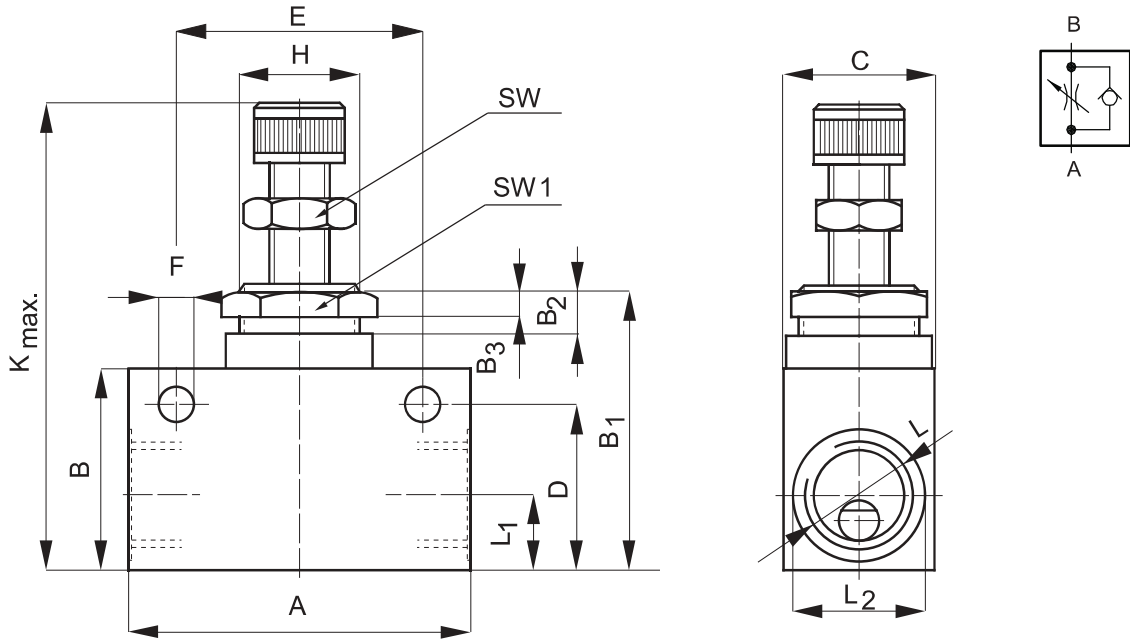
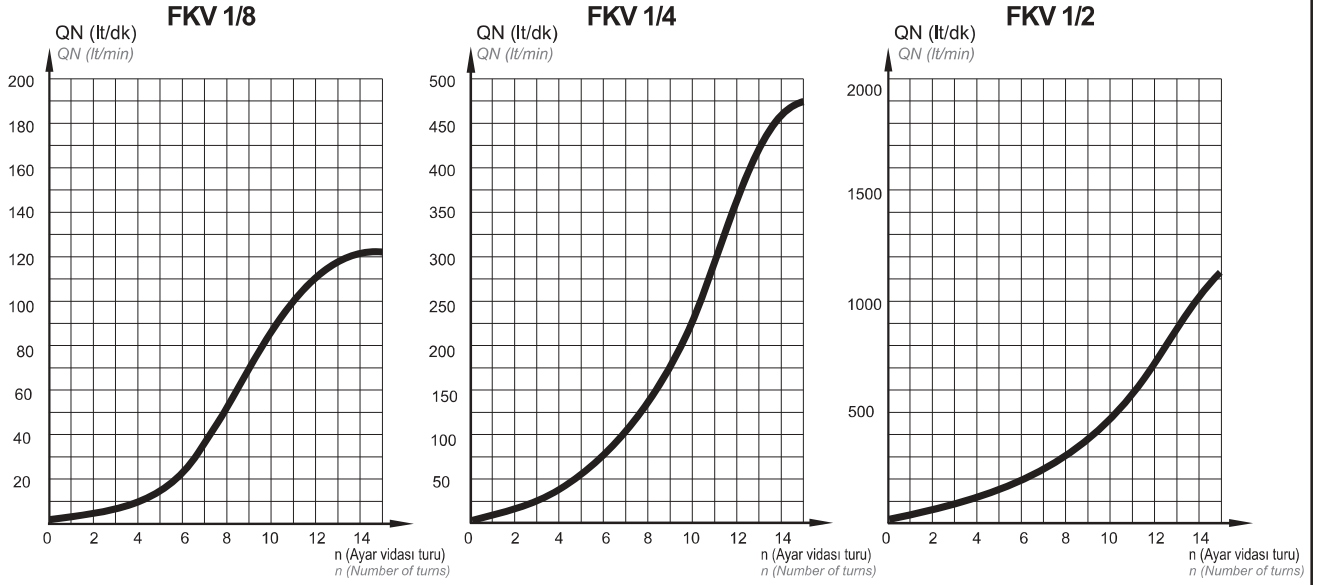
	A	B	C	D	H	H <sub>1</sub>	H <sub>2</sub>	L	L <sub>2</sub>	Ağırlık (gr) Weight (gr)
<b>MSP - 6D - 1/4''</b>	27	42	84	G 1/4''	70	33.3	14	65	14	480
<b>MSP - 10D - 3/8''</b>	27	42	84	G 3/8''	70	33.3	14	65	14	455
<b>MSP - 12D - 1/2''</b>	27	42	84	G 1/2''	70	33.3	14	65	14	425
<b>MSP - 20D - 3/4''</b>	40	65	127.8	G 3/4''	107.8	41.8	20	105	25.1	1335
<b>MSP - 25D - 1''</b>	40	65	127.8	G 1''	107.8	41.8	20	105	25.1	1260



## FKV - 1/8" - 1/4" - 1/2"

Akış Miktarı Flow Rate	FKV 1/8	FKV 1/4	FKV 1/2
Kısma Yönünde Through adjusting direction	0 . . . 125 lt/dak / lt/min	0 . . . 450 lt/dak / lt/min	0 . . . 800 lt/dak / lt/min
Serbest Yönünde Through free flow direction	125 lt/dak / lt/min	450 lt/dak / lt/min	800 lt/dak / lt/min
Bağlantı Ölçüsü Connection	G 1 / 8"	G 1 / 4"	G 1 / 2"
Ağırlık / Weight	0,035 kg	0,130 kg	0,245 kg
Çalışma Basıncı Operating pressure range	0,5 . . . 10 bar		
Çalışma Sıcaklığı Ambient temp. range	-20 . . . +80 °C		
Akışkan Türü / Fluid type	Filtre edilmiş kuru veya yağlı hava / Lubricated or unlubricated filtered air		

# AKIŞ ÖZELLİKLERİ / FLOW CHARACTERISTICS



	A	B	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	C	D	E	øF	H	L <sub>1</sub>	L <sub>2</sub>	øL	K <sub>MAX.</sub>	SW	SW <sub>1</sub>
<b>FKV 1/8</b>	32.5	22	31.5	6	2.5	16	17.5	24	4.4	M12x1	G1/8	9	13.5	52	10	17
<b>FKV 1/4</b>	55	32	48	10	4.5	25	25	35	6.5	M20x1.5	G1/4	12	-	72	13	22
<b>FKV 1/2</b>	68	40	57	10	5.0	30	33	50	6.5	M24x1.5	G1/2	15	-	92	19	27



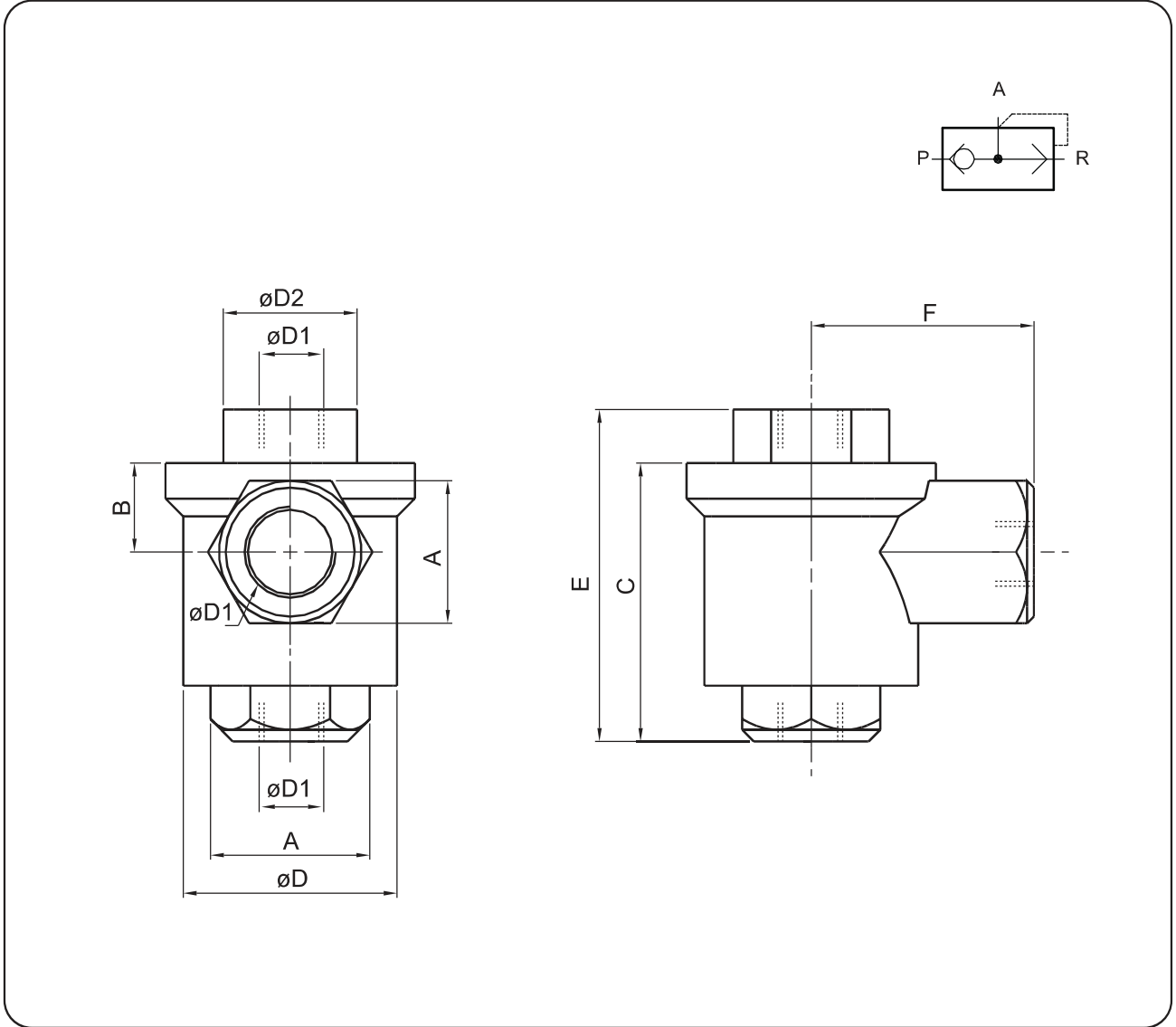


## ÇE 3/8" - 1/2" - 3/4"

### Teknik Özellikler / Technical Specifications

Çalışma Basıncı Operating Pressure Range	: 10 bar
Çalışma Sıcaklığı Ambient Temperature Range	: - 20 . . . + 60 °C
Akışkan Türü Fluid Type	: Filtre edilmiş kuru veya yağlı hava : Lubricated or unlubricated filtered compressed air.

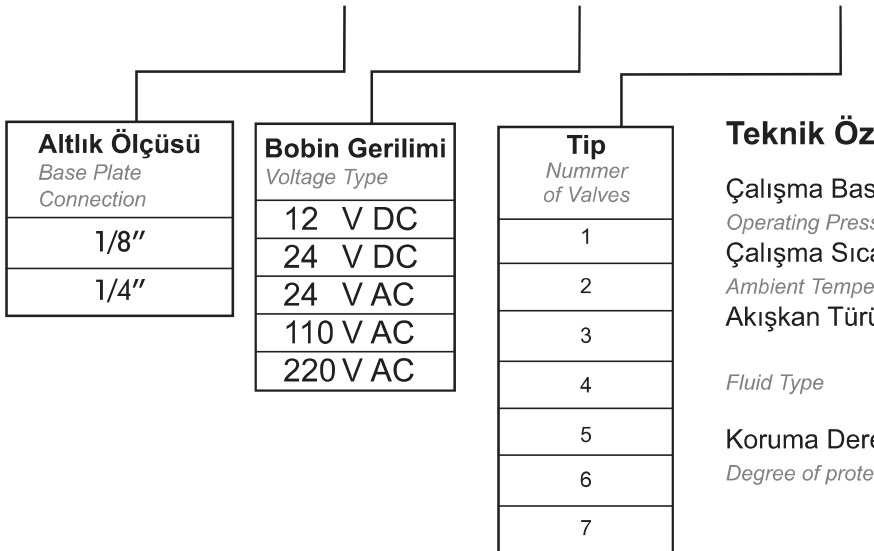
# Ölçüler / Dimensions



	A	B	C	$\phi D$	$\phi D1$	$\phi D2$	E	F
ÇE 3/8"	SW 24	16.3	52.3	41	G 3/8"	25	59.5	37.5
ÇE 1/2"	SW 32	21.5	66	48	G 1/2"	36	78	47
ÇE 3/4"	SW 32	21.5	66	48	G 3/4"	36	78	47



### BV - 3/2



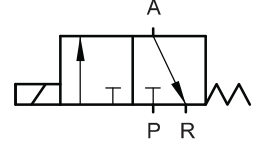
Altlık Ölçüsü Base Plate Connection
1/8"
1/4"

Bobin Gerilimi Voltage Type
12 V DC
24 V DC
24 V AC
110 V AC
220 V AC

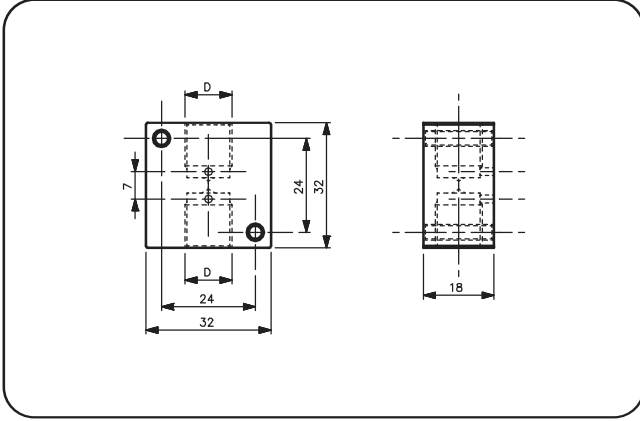
Tip Number of Valves
1
2
3
4
5
6
7

### Teknik Özellikler / Technical Specifications

Çalışma Basıncı Operating Pressure Range	: 1 ... 8 bar
Çalışma Sıcaklığı Ambient Temperature Range	: - 10 ... + 60 °C
Akışkan Türü Fluid Type	: Filtre edilmiş kuru veya yağlı hava : Lubricated or unlubricated filtered compressed air.
Koruma Derecesi Degree of protection	: IP 65 (DIN 40050)

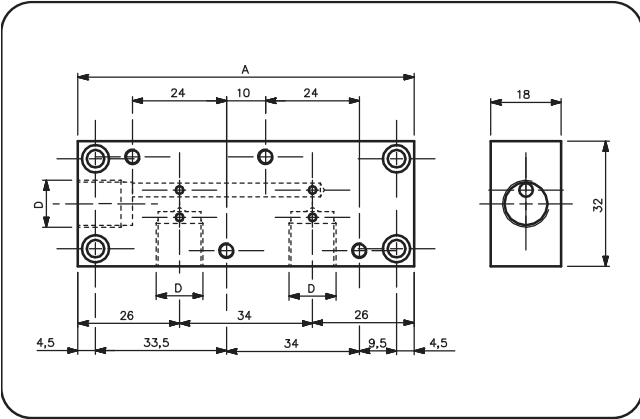


## Tekli Valf Altlığı / Single Base Plate



	D
BV-3/2-1/4-1	G 1/4"
BV-3/2-1/8-1	G 1/8"

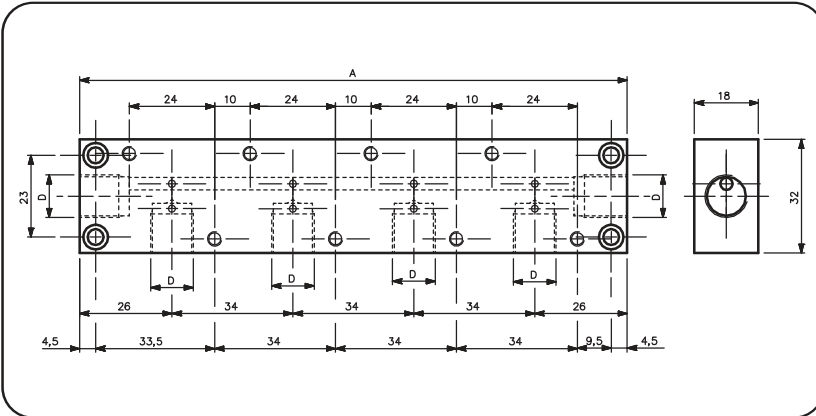
## İkili ve Üçlü Valf altlığı / Double and Triple Valve base



	A	D
BV-3/2-1/4-2	86	G 1/4"
BV-3/2-1/4-3	120	G 1/4"

## Dörtlü, Beşli, Altılı ve Yedili Valf Altlığı

Base Plate For 4, 5, 6 and 7 Valves



	A	D
BV-3/2-1/4-4	154	G 1/4"
BV-3/2-1/4-5	188	G 1/4"
BV-3/2-1/4-6	222	G 1/4"
BV-3/2-1/4-7	256	G 1/4"

# MINİ PNÖMATİK SİLİNDİR MINI PNEUMATIC CYLINDER

CYLINDERS SİLİNDİRLER



**(ISO6432 STANDARDI)**

**(ISO6432 Standard)**

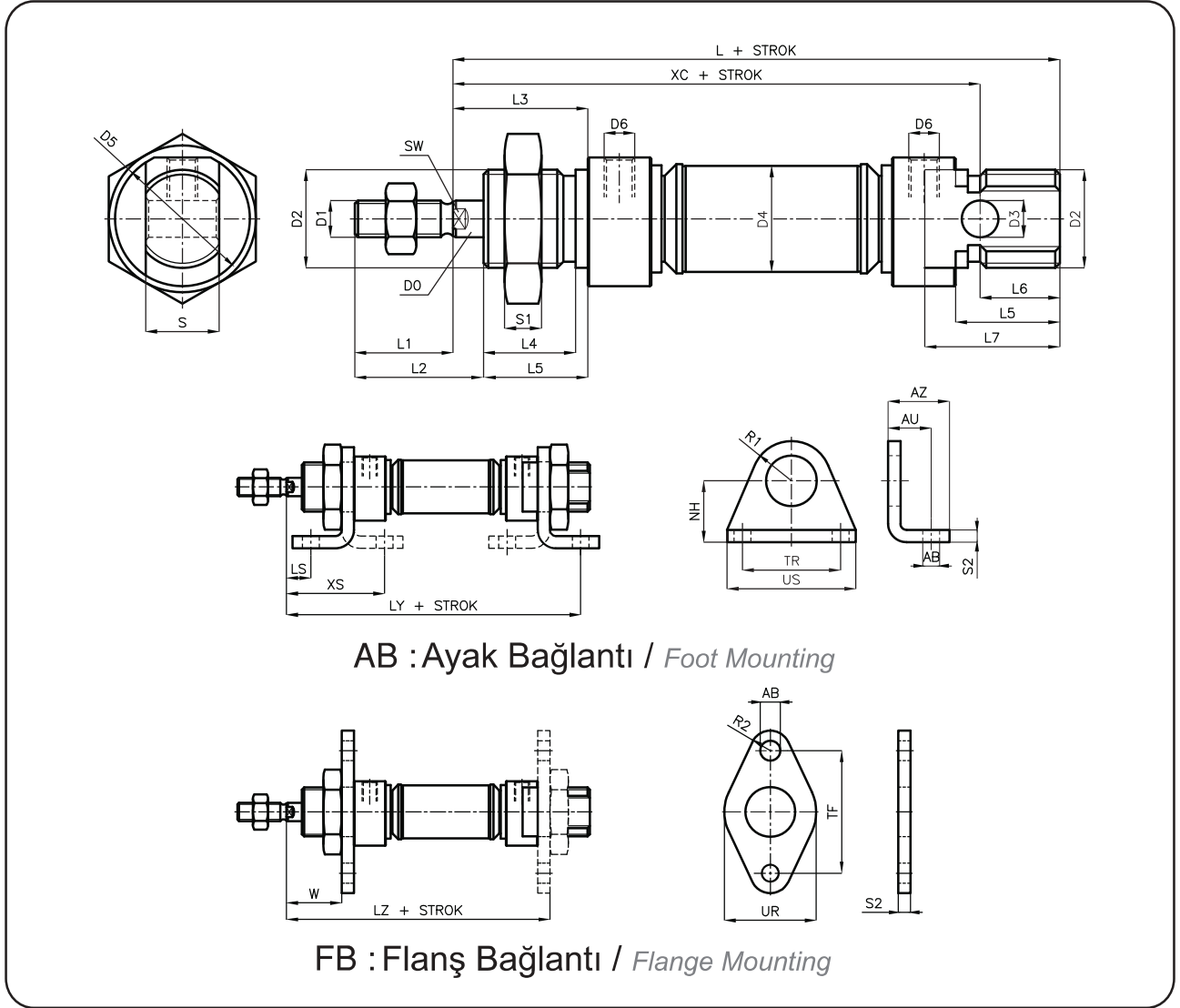
• **NS** • - • • - • • • - • •

Silindir Kodu Cylinder Code		Piston Çapı Piston Diameter	Standart Stoklar Standard Strokes		Bağlantı Şekli Mountings	
NS	Çift Etkili Double Acting	12,16, 20, 25	Çift Etkili Double Acting	10, 25, 40, 50, 80, 100, 125,160,200	AB	Ayak Bağlantı Foot Mounting
MNS	Manyetik Magnetic				FB	Flanş Bağlantı Flange Mounting
MNSY <sup>(1)</sup>	Manyetik Yastıklı with cushioning and magnetic		Tek Etkili Single Acting	10, 25, 50		
NST <sup>(1)</sup>	Tek Etkili Single Acting					

1) 16, 20 ve 25 çaplarda yapılabilmektedir. / Can be produced only diameters 16, 20 and 25.

Not: Manyetik sensörler için 119-120 nolu sayfalara bakınız. See pages 119-120 for magnetic sensors.

TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS	
Silindir Gövdesi / Cylinder Tube	Paslanmaz Çelik / Stainless Steel
Silindir Kapakları / Cylinder End Caps	Alüminyum / Aluminum
Silindir Mili / Piston Rod	Paslanmaz Çelik / Stainless Steel
Boğaz Keçesi / Rod Seal	Poliüretan / Polyurethane
Piston Keçesi / Piston Seal	Poliüretan / Polyurethane
Max. Çalışma Basıncı / Max. Operating Pressure	10 BAR
Çalışma Sıcaklığı / Temperature Range	-20°C, +80°C



	ØD0	D1	D2	ØD3 H9	ØD4	ØD5 max.	D6	L max.	L1	L2	L3 ±1.2	L4	L5	L6 max.	L7	R1	R2
NS 12	6	M6x1	M16x1.5	6	13.3	20	M5	89	16	20	21	15	17	14	23	13	6.5
NS 16	6	M6x1	M16x1.5	6	17.3	22	M5	94	16	21	22	15	17	13	22	13	6.5
NS 20	8	M8x1.25	M22x1.5	8	21.3	30	G1/8"	111	20	24	24	18	20	16	29	20	8
NS 25	10	M10x1.25	M22x1.5	8	26.5	30	G1/8"	120	22	28	28	20	22	16	29	20	8

	S d13	S1	S2	W ±1.4	ØAB H13	AU	AZ	LS	LY	LZ	NH	TF JS14	TR JS14	US	UR	SW	XC ±1	XS ±1.4
NS 12	12	6	4	17	5.5	14	20	7	86	76	20	40	32	42	30	5	75	31
NS 16	12	6	4	18	5.5	14	20	8	91	81	20	40	32	42	30	5	81	32
NS 20	16	8	5	19	6.6	17	25	7	108	96	25	50	40	54	40	7	95	36
NS 25	16	8	5	23	6.6	17	25	11	115	103	25	50	40	54	40	9	104	40

# YUVARLAK PNÖMATİK SİLİNDİR

## ROUND PNEUMATIC CYLINDER

CYLINDERS SİLİNDİRLER

# MAG



## YS - - - - -

Silindir Kodu Cylinder Code		Piston Çapı Piston Diameter	Standart Stroklar Standard Strokes
YS	Çift Etkili (Manyetik) Double Acting (Magnetic)	32, 40, 50, 63	25, 50, 80, 100, 125, 160, 200, 250, 300, 400, 500
YSY	Çift Etkili Yastıklı (Manyetik) With Cushioning and Double Acting (Magnetic)		

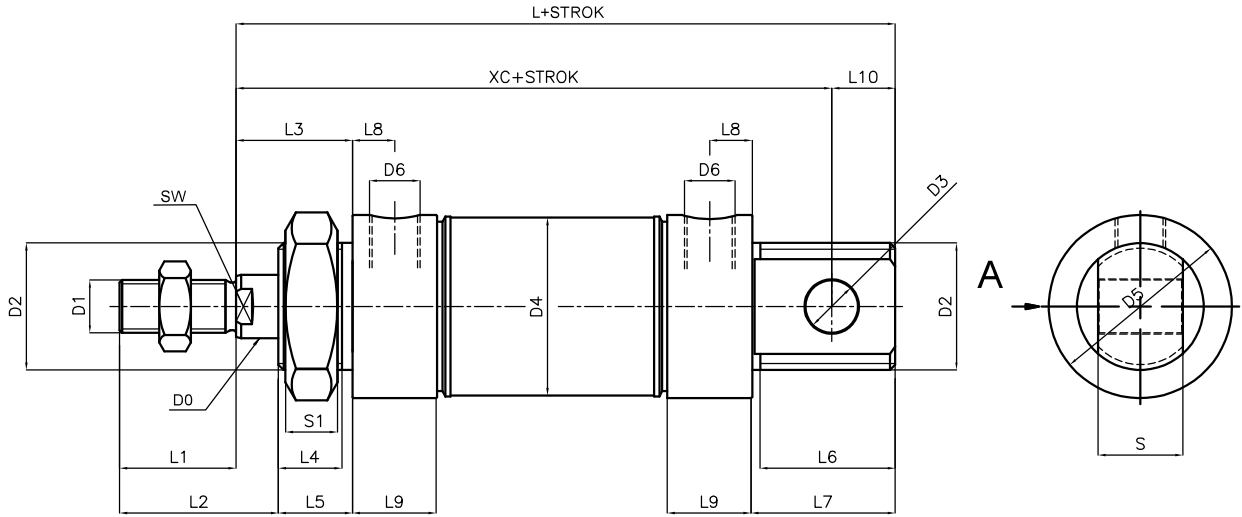
### TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

Çalışma Basıncı / Operating Pressure Range	: Max. 10 Bar
Standart Stroklar / Standard Strokes	: 25, 50, 80, 100, 125, 160, 200, 250, 300, 400, 500
Kullanılacak Akışkan / Fluid Type	: Filtre edilmiş yağlı hava / Lubricated filtered compressed air.
Sızdırmazlık Elemanları / Seals	: NBR, PU
Piston Mili / Rod Material	: X20Cr13 Krom kaplı X20Cr13 Chrome plated piston rod.
Max. Piston Hızı / Max. Piston Speed	: 1 m/s
Çalışma Sıcaklığı / Temperature Range	: -20 ... +80°C
Silindir Gövdesi / Cylinder Bore	: AISI 316

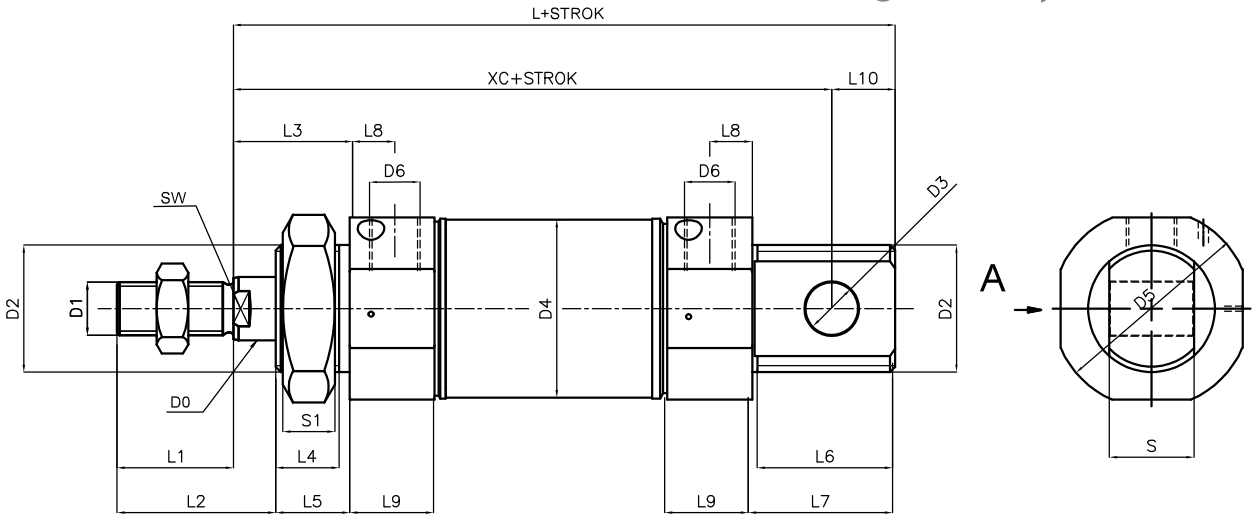
\* Tek etkili, yaylı ve çift millî silindir ihtiyaçlarınızda bilgi alınız. /  
Get information on your single-action, spring-loaded and double rod cylinder needs.

Not: Manyetik sensörler için 119-120 nolu sayfalara bakınız. /  
See pages 119-120 for magnetic sensors.

## Çift Etkili Sivamalı Silindir / Double Acting Round Cylinder



## Çift Etkili Yastıklı Sivamalı Silindir / With Cushioning and Double Acting Round Cylinder



	D0 Ø	D1	D2	D3 Ø	D4 Ø	D5 Ø	D6	L	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	S	SW	S1	XC
YS 32	12	M10x1,25	M24x2	10	33,6	34,6	G1/8"	125	22	30	22	12	14	26	27	8	16	12	16	10	10	113
YS 40	16	M12x1,25	M30x2	12	41,6	41,6	G1/8"	125	24	32	22	13	14	26	27	8	16	12	20	13	12	113
YS 50	16	M16x1,5	M36x2	12	52	50	G1/4"	150	24	32	28	18	20	26	27	11,5	23	11	20	13	14	139
YS 63	16	M16x1,5	M36x2	12	65	63,5	G1/4"	150	24	32	28	18	20	26	27	11,5	23	11	20	13	14	139

	D0 Ø	D1	D2	D3 Ø	D4 Ø	D5 Ø	D6	L	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	S	SW	S1	XC
YSY 32	12	M10x1,25	M24x2	10	33,6	37,6	G1/8"	125	22	30	22	12	14	26	27	8	16	12	16	10	10	113
YSY 40	16	M12x1,25	M30x2	12	41,6	45,8	G1/8"	125	24	32	22	13	14	26	27	8	16	12	20	13	12	113
YSY 50	16	M16x1,5	M36x2	12	52	53	G1/4"	150	24	32	28	18	20	26	27	11,5	23	11	20	13	14	139
YSY 63	16	M16x1,5	M36x2	12	65	66,5	G1/4"	150	24	32	28	18	20	26	27	11,5	23	11	20	13	14	139



# KISA STROK PNÖMATİK SİLİNDİR

## SHORT STROKE PNEUMATIC CYLINDER

CYLINDERS SİLİNDİRLER



### (ISO21287 STANDARDI)

(ISO21287 Standard)

**KS**

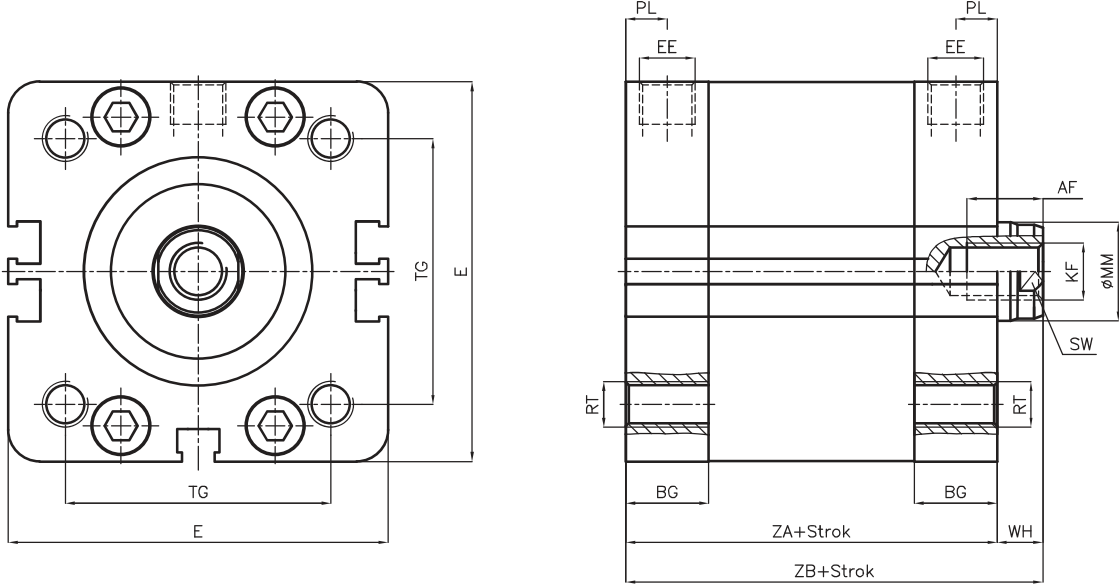
Silindir Kodu Cylinder Code	Piston Çapı Piston Diameter	Standart Strok Standard Strokes	Bağlantı Şekli <sup>1)</sup> Mountings	Piston Kolu Malzemesi Piston Rod Material
Çift Etkili Double acting	32	10, 15, 25, 40, 50, 80, 100	IAB Ayak Bağlantı Foot mounting	Ck 45 Krom kaplı Ck 45 chrome plated piston rod
Manyetik Magnetic	40		IFB Flanş Bağlantı Flange mounting	S X20Cr13 Krom kaplı X20Cr13 chrome plated piston rod
	50		IEB Eklem Bağlantı Swivel flange mounting	
	63		IEYB Eklem Yer Bağlantı Swivel flange mounting with clevis foot	
	80		IAEBK Küresel Arka Eklem Bağlantı Rear swivel flange mounting with spherical bearing	
	100			

\* NBR+PU Sızdırmazlık Elemanları  
NBR+PU Seal  
Çalışma Sıcaklığı : -20 °C, +80 °C  
Ambient Temperature Range

1) Bağlantı şekilleri ISO 15552 Standardı (IS Serisi Silindirler) ile aynıdır.  
Ölçüler için katalogdaki IS silindirlere bakınız.  
Same mountings with ISO 15552 standard (IS Series Cylinders).  
Please check IS cylinders for dimensions.

Not: Manyetik sensörler için 119-120 nolu sayfalara bakınız.  
See pages 119-120 for magnetic sensors.

# Ölçüler / Dimensions



	AF min.	WH	ZA	ZB	MM	KF	EE	BG	TG	E	RT	PL	SW	KS Ağırlık (kg) KS Weight (kg)	
														Strok=0'da At 0 stroke	Her 10mm Strok için Weight per 10mm stroke length
<b>KS-32</b>	12	7 <sup>±1.6</sup>	45 <sup>±0.5</sup>	52 <sup>±1.6</sup>	12	M8	G1/8	15	32.5 <sup>±0.5</sup>	47.5	M6	7.8	10	0.229	0.030
<b>KS-40</b>	12	7 <sup>±1.6</sup>	45 <sup>±0.7</sup>	52 <sup>±1.6</sup>	12	M8	G1/8	14.5	38 <sup>±0.5</sup>	56.5	M6	7.2	10	0.326	0.037
<b>KS-50</b>	16	8 <sup>±1.6</sup>	45 <sup>±0.7</sup>	53 <sup>±1.6</sup>	16	M10	G1/8	14.5	46.5 <sup>±0.6</sup>	66.5	M8	7.2	13	0.458	0.048
<b>KS-63</b>	16	8 <sup>±1.6</sup>	50 <sup>±0.8</sup>	58 <sup>±1.6</sup>	16	M10	G1/8	14.5	56.5 <sup>±0.7</sup>	79.5	M8	7.2	13	0.686	0.059
<b>KS-80</b>	20	10 <sup>±2</sup>	55 <sup>±0.8</sup>	65 <sup>±2</sup>	20	M12	G1/8	16	72 <sup>±0.7</sup>	100	M10	8	17	1.181	0.093
<b>KS-100</b>	20	10 <sup>±2</sup>	67 <sup>±1</sup>	77 <sup>±2</sup>	20	M12	G1/4	19.5	89 <sup>±0.7</sup>	120	M10	10	17	2.014	0.106

\* Bağlantı ölçüleri ISO 15552 Standardı (IS Serisi Silindirler) ile aynıdır.

\* Same mounting dimensions with ISO 15552 Standard (IS Series Cylinders).

# KISA STROK PNÖMATİK SİLİNDİR

## SHORT STROKE PNEUMATIC CYLINDER

CYLINDERS SİLİNDİRLER



### (ISO21287 STANDARDI)

(ISO21287 Standard)

**KSD**

Silindir Kodu Cylinder Code	Piston Çapı Piston Diameter	Standart Strok Standard Strokes	Bağlantı Şekli <sup>1)</sup> Mountings	Piston Kolu Malzemesi Piston Rod Material
Çift Etkili Double acting	32	10, 15, 25, 40, 50, 80, 100	IAB Ayak Bağlantı <i>Foot mounting</i>	Ck 45 Krom kaplı Ck 45 chrome plated piston rod
Manyetik Magnetic	40		IFB Flanş Bağlantı <i>Flange mounting</i>	S X20Cr13 Krom kaplı X20Cr13 chrome plated piston rod
	50		IEB Eklem Bağlantı <i>Swivel flange mounting</i>	
	63		IEYB Eklem Yer Bağlantı <i>Swivel flange mounting with clevis foot</i>	
	80		IAEBK Küresel Arka Eklem Bağlantı <i>Rear swivel flange mounting with spherical bearing</i>	
	100			

\* NBR+PU Sızdırmazlık Elemanları  
NBR+PU Seal

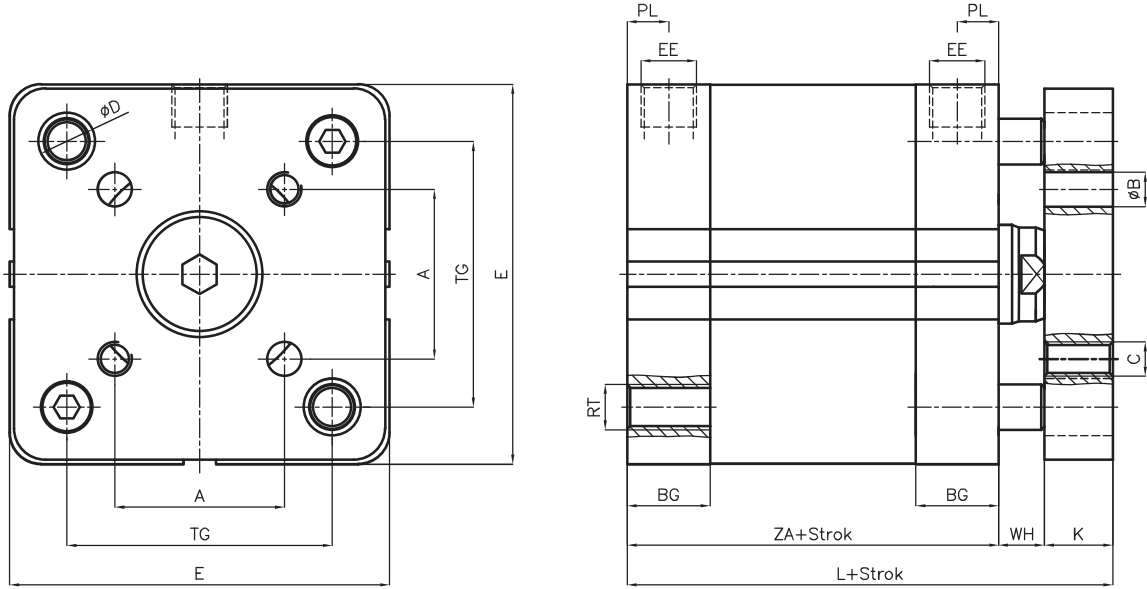
Çalışma Sıcaklığı : -20 °C, +80 °C  
Ambient Temperature Range

1) Bağlantı şekilleri ISO 15552 Standardı (IS Serisi Silindirler) ile aynıdır.  
Ölçüler için katalogdaki IS silindirlere bakınız.

Same mountings with ISO 15552 standard (IS Series Cylinders).  
Please check IS cylinders for dimensions.

Not: Manyetik sensörler için 119-120 nolu sayfalara bakınız.  
See pages 119-120 for magnetic sensors.

# Ölçüler / Dimensions



	A	WH	ZA	L	B	C	D	EE	BG	TG	E	RT	PL	K	KSD Ağırlık (kg) KSD Weight (kg)	
															Strok=0'da At 0 stroke	Her 10mm Strok için Weight per 10mm stroke length
<b>KSD-32</b>	19.8	7 $\pm$ 1.6	45 $\pm$ 0.5	62 $\pm$ 1.6	5	M5	8	G1/8	15	32.5 $\pm$ 0.5	47.5	M6	7.8	10	0.302	0.034
<b>KSD-40</b>	23.3	7 $\pm$ 1.6	45 $\pm$ 0.7	62 $\pm$ 1.6	5	M5	8	G1/8	14.5	38 $\pm$ 0.5	56.5	M6	7.2	10	0.426	0.041
<b>KSD-50</b>	29.7	8 $\pm$ 1.6	45 $\pm$ 0.7	65 $\pm$ 1.6	6	M6	10	G1/8	14.5	46.5 $\pm$ 0.6	66.5	M8	7.2	12	0.625	0.056
<b>KSD-63</b>	35.4	8 $\pm$ 1.6	50 $\pm$ 0.8	70 $\pm$ 1.6	6	M6	10	G1/8	14.5	56.5 $\pm$ 0.7	79.5	M8	7.2	12	0.913	0.067
<b>KSD-80</b>	46	10 $\pm$ 2	55 $\pm$ 0.8	79 $\pm$ 2	8	M8	12	G1/8	16	72 $\pm$ 0.7	100	M10	8	14	1.603	0.107
<b>KSD-100</b>	56.5	10 $\pm$ 2	67 $\pm$ 1	91 $\pm$ 2	10	M10	12	G1/4	19.5	89 $\pm$ 0.7	120	M10	10	14	2.596	0.120

\* Bağlantı ölçüleri ISO 15552 Standardı (IS Serisi Silindirler) ile aynıdır. Diğer tüm ölçüler (Ağırlık hariç) KS ile aynıdır.

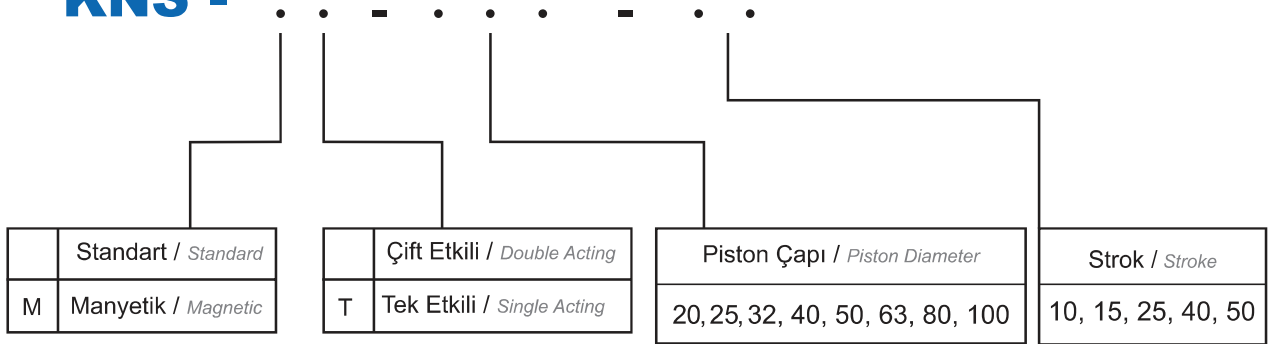
\* Same mounting dimensions with ISO 15552 Standard (IS Series Cylinders). All other dimensions (except Weight) are same with KS.

# KISA STROK PNÖMATİK SİLİNDİR SHORT STROKE PNEUMATIC CYLINDER

CYLINDERS SİLİNDİRLER



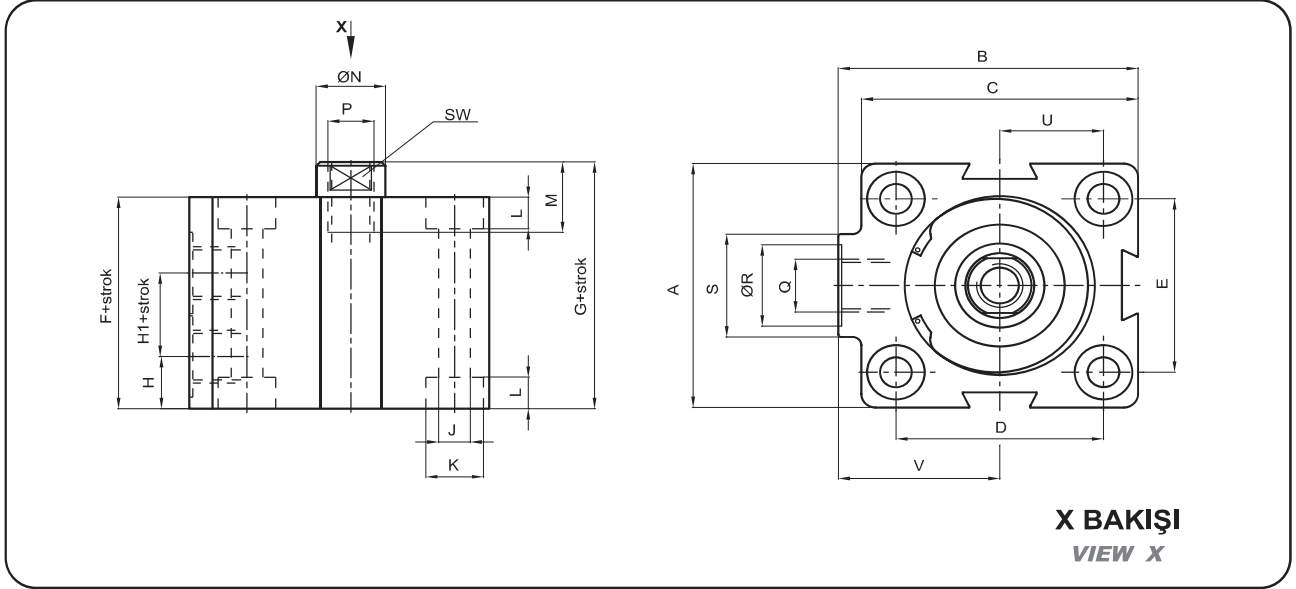
**KNS -**



Not: Manyetik sensörler için 119-120 nolu sayfalara bakınız.  
See pages 119-120 for magnetic sensors.

# Ölçüler / Dimensions

TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS	
Silindir Gövdesi / Cylinder Tube	Alüminyum / Aluminum
Silindir Kapakları / Cylinder End Caps	Alüminyum / Aluminum
Silindir Mili / Piston Rod	CK 45 Krom Kaplı / CK 45 Chrome Plated
Boğaz Keçesi / Rod Seal	Poliüretan / Polyurethane
Piston Keçesi / Piston Seal	Poliüretan / Polyurethane
Max. Çalışma Basıncı / Max Operating Pressure	10 BAR
Çalışma Sıcaklığı / Temperature Range	-20°C, +80°C



	A	B	C	D	E	F	G	H	H1	J	K	L	M	N
KNS-20	32	34	32	22	22	36	42	8,15	16,2	4,8	7,5	4,8	10	10
KNS-25	37	44	39	28	26	38	45	9	17	4,8	7,5	4,8	10	12
KNS-32	45	53,5	48	36	32	39	46	9,5	17,2	5,5	10	5,8	13	12
KNS-40	55	61	55	40	40	40	48	10	17,4	5,5	10	6,8	13	16
KNS-50	65	72	65	50	50	45	53	12,3	19	6,5	11	6,8	15	20
KNS-63	80	88	80	62	62	46	54	11,8	21,3	8,5	14	9	15	20
KNS-80	94	104	94	73	73	55	64	16,2	24,4	8,5	14	9	20	25
KNS-100	117	125,5	117	90,5	90,5	60	70	15,9	28,2	11	18	11	20	25

	P	Q	R	S	U	V	SW	KNS Ağırlık (kg) KNS Weight (kg)		KNSM Ağırlık (kg) KNSM Weight (kg)	
								Strok =0'da At 0 Stroke	Her 10 mm. Strok için Weight Per 10 mm Stroke length	Strok =0'da At 0 Stroke	Her 10 mm. Strok için Weight Per 10 mm Stroke length
KNS-20	M5	M5	8	11	11	18	8	0.082	0.020	0.084	0.020
KNS-25	M6	G1/8"	15	19	14	24,5	10	0.132	0.032	0.135	0.032
KNS-32	M8	G1/8"	15	18	18	29,5	10	0.192	0.041	0.196	0.041
KNS-40	M8	G1/8"	15	19	20	33,5	13	0.284	0.059	0.291	0.059
KNS-50	M10	G1/8"	15	20	25	39,5	17	0.452	0.078	0.461	0.078
KNS-63	M10	G1/8"	15	23	31	48	17	0.659	0.104	0.676	0.104
KNS-80	M12	G1/4"	20	23	36,5	57	22	1.160	0.136	1.187	0.136
KNS-100	M12	G1/4"	20	23	45,25	67	22	1.822	0.181	1.863	0.181

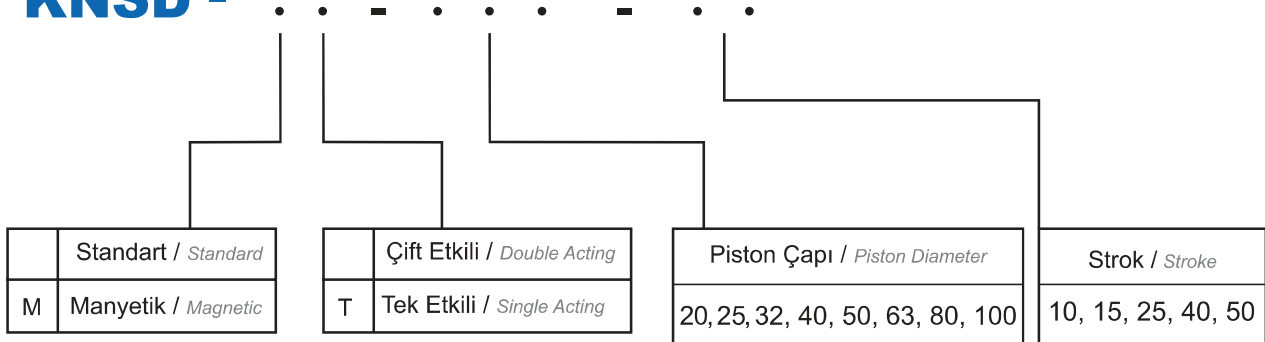
# KISA STROK PNÖMATİK SİLİNDİR

## SHORT STROKE PNEUMATIC CYLINDER

CYLINDERS SİLİNDİRLER



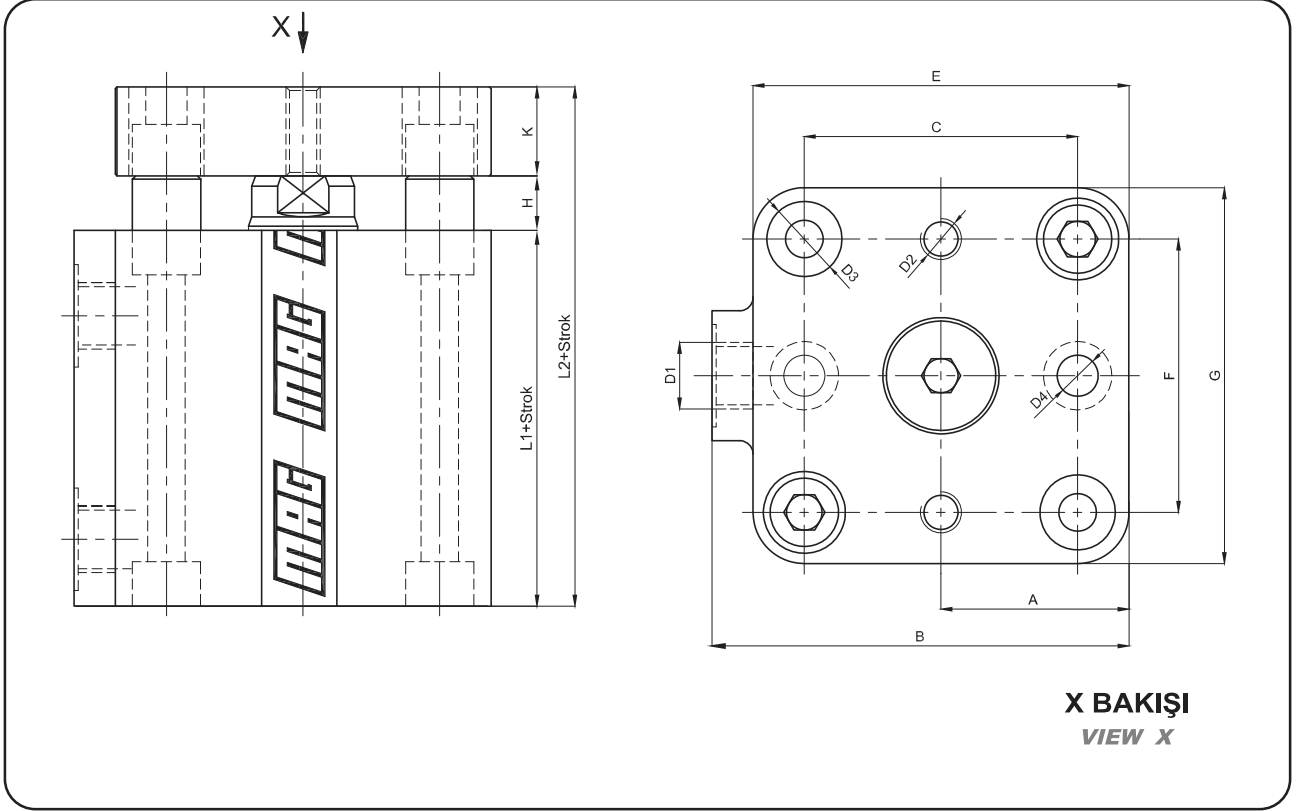
### KNSD -



Not: Manyetik sensörler için 119-120 nolu sayfalara bakınız.  
See pages 119-120 for magnetic sensors.

# Ölçüler / Dimensions

TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS	
Silindir Gövdesi / Cylinder Tube	Alüminyum / Aluminum
Silindir Kapakları / Cylinder End Caps	Alüminyum / Aluminum
Silindir Mili / Piston Rod	CK 45 Krom Kaplı / CK 45 Chrome Plated
Boğaz Keçesi / Rod Seal	Poliüretan / Polyurethane
Piston Keçesi / Piston Seal	Poliüretan / Polyurethane
Max. Çalışma Basıncı / Max. Operating Pressure	10 BAR
Çalışma Sıcaklığı / Temperature Range	-20°C, +80°C



	A	B	C	D1	D2	D3	D4	E	F	G	H	K	L1	L2	KNSD Ağırlık (kg) KNSD Weight (kg)	
															Strok=0'da At 0 Stroke	Her 10 mm. Strok için Weight Per 10 mm Stroke length
KNSD-20	16	34	22	M5	M4	7,5	4,5	32	22	32	6	8	36	50	0.142	0.026
KNSD-25	19,5	44	28	G1/8"	M4	7,5	4,5	39	26	37	7	8	38	53	0.207	0.038
KNSD-32	24	53,5	36	G1/8"	M5	9	5	48	32	45	7	11	39	57	0.293	0.049
KNSD-40	27,5	61	40	G1/8"	M5	11	6	55	40	55	8	13	40	61	0.449	0.071
KNSD-50	32,5	72	50	G1/8"	M6	11,5	6	65	50	65	8	13	45	66	0.670	0.090
KNSD-63	40	88	62	G1/8"	M6	14	7	80	62	80	8	15	46	69	1.012	0.122
KNSD-80	47	104	73	G1/4"	M8	14	9	94	73	94	9	16	55	80	1.651	0.154
KNSD-100	58,5	125,5	90,5	G1/4"	M10	19	9	117	90,5	117	10	16	60	86	2.760	0.225

Diğer tüm ölçüler ( Ağırlık hariç ) KNS ile aynıdır. / All other dimensions are same with KNS



# YATAKLAMALI PNÖMATİK SİLİNDİR

## GUIDED PNEUMATIC CYLINDER

CYLINDERS SİLİNDİRLER

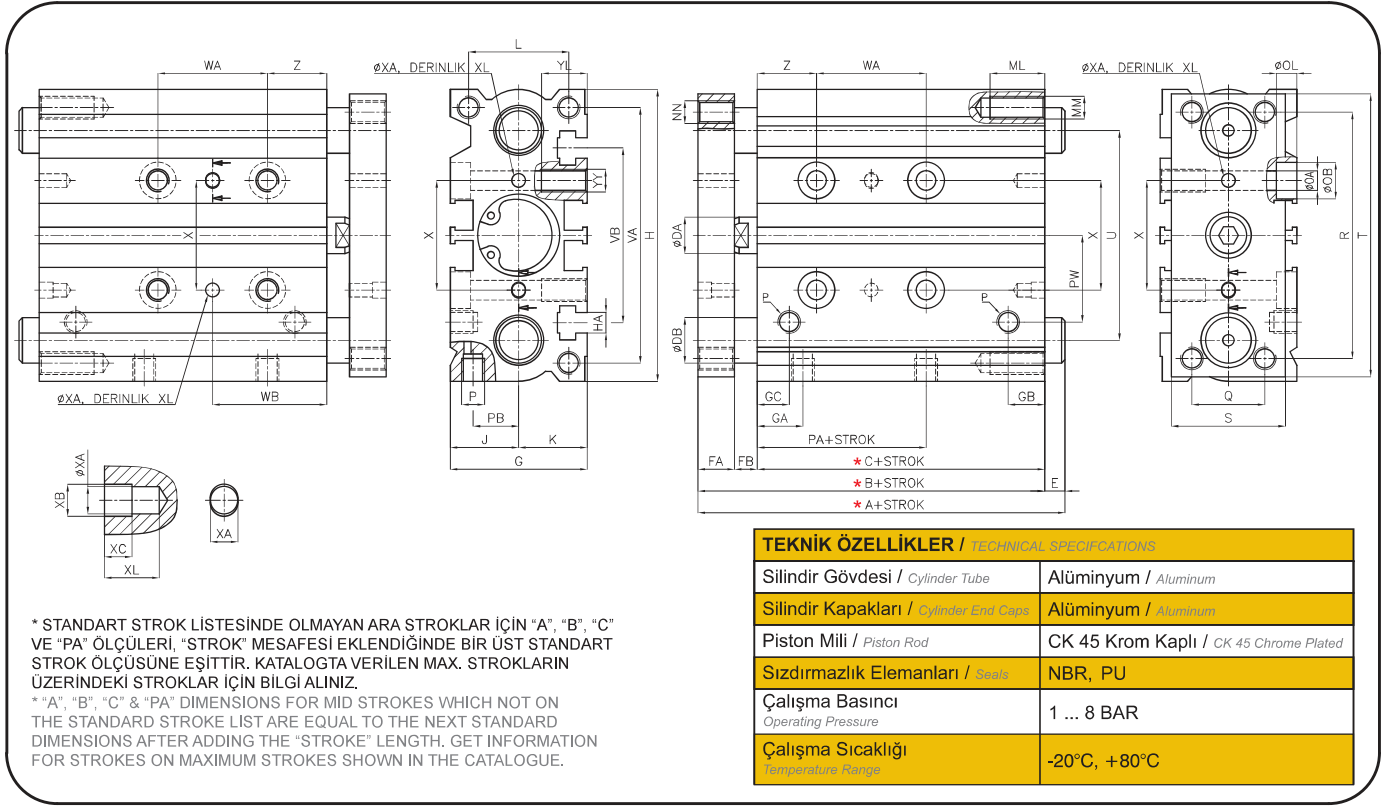


**MYS**

Silindir Kodu Cylinder Code	Piston Çapı Piston Diameter	Standart Strok Standard Strokes	Sızdırmazlık Elemanı Seal
Çift Etkili Double acting	16	16	NBR+PU Sızdırmazlık elemanı NBR + PU Seal
Manyetik Magnetic	20	20, 30, 40, 50, 75, 100, 125	Çalışma Sıcaklığı: -20°C, +80°C Temperature Range
	25	32	Viton Sızdırmazlık elemanı Viton Seal
	32	40	Çalışma Sıcaklığı: -30°C, +200°C Temperature Range
	40		

Not: Manyetik sensörler için 119-120 nolu sayfalara bakınız.  
See pages 119-120 for magnetic sensors.

# Ölçüler / Dimensions



TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS	
Silindir Gövdesi / Cylinder Tube	Alüminyum / Aluminum
Silindir Kapakları / Cylinder End Caps	Alüminyum / Aluminum
Piston Mili / Piston Rod	CK 45 Krom Kaplı / CK 45 Chrome Plated
Sızdırmazlık Elemanları / Seals	NBR, PU
Çalışma Basıncı / Operating Pressure	1 ... 8 BAR
Çalışma Sıcaklığı / Temperature Range	-20°C, +80°C

	B	C	DA	FA	FB	G	GA	GB	GC	H	HA	J	K	L	MM	ML	NN	OA	OB	OL	P	PA	PB	PW	Q	R
MYS-16	46	33	8	8	5	30	11	8	11	64	M4	15	15	22	M5	12	M5	4.3	8	4.5	M5	15	10	19	16	54
MYS-20	53	37	10	10	6	36	10.5	8.5	10.5	83	M5	18	18	24	M5	13	M5	5.6	9.5	5.5	G1/8"	12.5	10.5	25	18	70
MYS-25	53	37.5	12	10	6	42	11.5	9	11.5	93	M5	21	21	30	M6	15	M6	5.6	9.5	5.5	G1/8"	12.5	13.5	28.5	26	78
MYS-32	59.5	37.5	16	12	10	48	12.5	9	12.5	112	M6	24	24	34	M8	20	M8	6.6	11	7.5	G1/8"	7	15	34	30	96
MYS-40	66	44	16	12	10	54	14	10	14	120	M6	27	27	40	M8	20	M8	6.6	11	7.5	G1/8"	13	18	38	30	104

	S	T	U	VA	VB	X	XA	XB	XC	XL	YY	YL	Z
MYS-16	25	62	46	56	38	24	3	3.5	3	6	M5	10	5
MYS-20	30	81	54	72	44	28	3	3.5	3	6	M6	12	17
MYS-25	38	91	64	82	50	34	4	4.5	3	6	M6	12	17
MYS-32	44	110	78	98	63	42	4	4.5	3	6	M8	16	21
MYS-40	44	118	86	106	72	50	4	4.5	3	6	M8	16	22

	WA			WB		
	30 Strok ve altı ≤30 Strokes	40-100 Strok arası 40-100 Strokes	125 Strok 125 Strokes	30 Strok ve altı ≤30 Strokes	40-100 Strok arası 40-100 Strokes	125 Strok 125 Strokes
MYS-16	24	44	110	17	27	60
MYS-20	24	44	120	29	39	77
MYS-25	24	44	120	29	39	77

	A			DB	E		
	50 Strok ve altı ≤50 Strokes	50-100 Strok arası 50-100 Strokes	100 Strok üstü >100 Strokes		50 Strok ve altı ≤50 Strokes	50-100 Strok arası 50-100 Strokes	100 Strok üstü >100 Strokes
MYS-16	46	63	91	10	0	17	45

	WA			WB		
	25 Strok 25 Strokes	50-75-100 Strok 50-75-100 Strokes	100 Strok ve üstü ≥100 Strokes	25 Strok 25 Strokes	50-75-100 Strok 50-75-100 Strokes	100 Strok ve üstü ≥100 Strokes
MYS-32	24	48	124	33	45	83
MYS-40	24	48	124	34	46	84

	A		DB	E	
	50 Strok ve altı ≤50 Strokes	50-125 Strok arası 50-125 Strokes		50 Strok ve altı ≤50 Strokes	50-125 Strok arası 50-125 Strokes
MYS-20	53	76	12	0	23
MYS-25	53	76	16	0	23
MYS-32	97	91	20	37.5	31.5
MYS-40	97	91	20	31	26

## Ağırlık / Weight : (kg)

Silindir Çapı / Cylinder Diameter	Strok / Strokes							
	20	25	30	40	50	75	100	125
16	0.373	0.423	0.423	0.469	0.516	0.666	0.788	0.950
20	0.637	0.704	0.704	0.788	0.867	1.101	1.299	1.487
25	0.876	1.016	1.016	1.119	1.195	1.544	1.805	2.077
32	1.625	1.646	1.982	1.976	1.976	2.355	2.743	3.125
40	1.859	1.859	2.325	2.325	2.325	2.678	3.144	3.537

# ÇELİK GÖVDELİ PNÖMATİK SİLİNDİR

## STEEL BODY PNEUMATIC CYLINDER

CYLINDERS SİLİNDİRLER



(CETOP RP 43P STANDARDI)  
(RP 43P Standard)

NS

Silindir Kodu / Cylinder Code	
NS	Çift Etkili / Double acting
NSY	Çift Etkili Yastıklı Double acting with cushioning
NST	Tek Etkili / Single acting

Piston Çapı Piston Diameter
32,40,50,63, 80,100

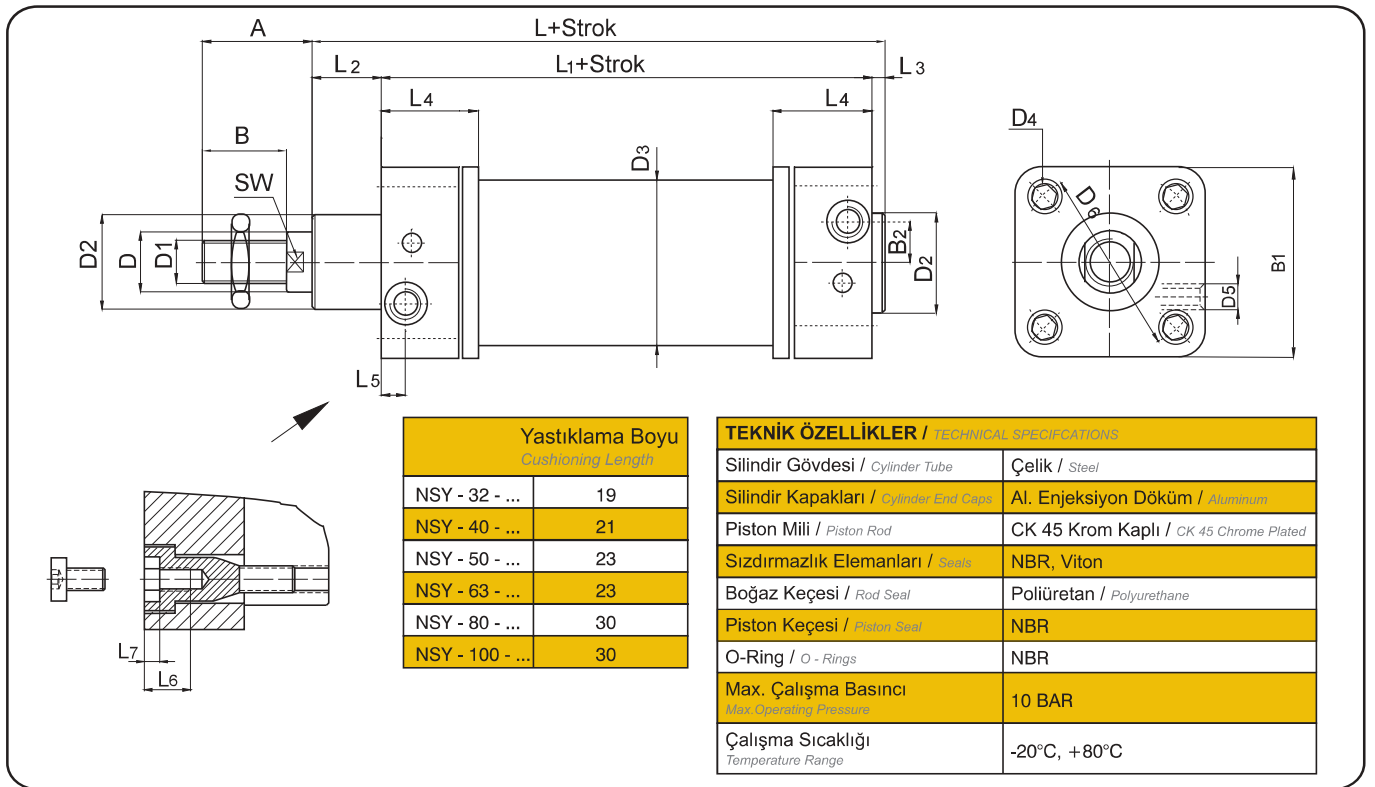
Standart Strokler Standard Strokes
50,100,160,200 300,400,500

Bağlantı Şekli / Mountings	
AB	Ayak Bağlantı / Foot mounting
FB	Flanş Bağlantı / Flange mounting
EB	Eklem Bağlantı / Swivel flange mounting
EYB	Eklem Yer Bağlantı Swivel flange mounting with clevis foot
ÇB	Çatal Bağlantı / Piston rod clevis mounting
OEB	Orta Eklem Bağlantı Trunnion mounting

Piston Kolu Malzemesi Piston Rod Material	
	Ck 45 Krom Kaplı Ck 45 chrome plated piston rod
S	X20Cr13 Krom Kaplı X20Cr13 chrome plated piston

	NBR + PU Sızdırmazlık Elemanı NBR + PU Seal
	Çalışma Sıcaklığı Temperature range -20°C ~ +80°C
V	Viton Sızdırmazlık Elemanı Viton Seal
	Çalışma Sıcaklığı Temperature range -20°C ~ +200°C

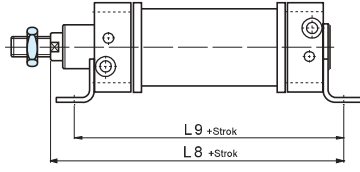
# Ölçüler / Dimensions



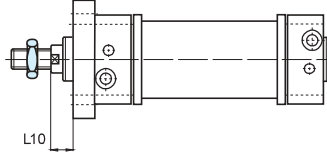
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NS - 32-...	30	20	45	0	32	45	26	54	10	45	4	10	8	8	20	16	12	M10x1.25	30	37	M5	G 1/8"	46	7
NS - 40-...	34	24	54	4.5	36	52	28	62	12	54	5	10	9	10	24	22	16	M12x1.25	35	45	M5	G 1/4"	56	9
NS - 50-...	44	32	65	5.5	45	60	32	70	16	65	6	12	11	12	32	22	20	M16x1.5	40	55	M6	G 1/4"	68	9
NS - 63-...	44	32	80	13	50	70	40	82	16	80	6	15	12	12	32	28	20	M16x1.5	42	68	M6	G 3/8"	84	9
NS - 80-...	54	40	96	16	63	90	50	102	20	96	8	18	14	14	40	28	25	M20x1.5	48	86	M8	G 3/8"	100	12
NS - 100-...	53	40	126	16	75	110	60	126	20	126	8	18	15	15	40	40	25	M20x1.5	55	106	M8	G 1/2"	132	14

	D <sub>8</sub> Ø	D <sub>9</sub> Ø	D <sub>10</sub> Ø	D <sub>11</sub> Ø	D <sub>12</sub> Ø	D <sub>13</sub> Ø	E	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>	E <sub>4</sub>	E <sub>5</sub>	E <sub>6</sub>	E <sub>7</sub>	E <sub>8</sub>	E <sub>9</sub>	F	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	F <sub>4</sub>	H	H <sub>1</sub>	H <sub>2</sub>
NS - 32-...	10	10	5.5	18	10	12	32	24	22	18	31	38	51	40	52	32	77	64	5.7	50	12	32	24	27.5
NS - 40-...	12	10	5.5	22	12	16	38	28	25	22	35	41	54	48	62	38	90	72	5.7	65	16	36	25	30.5
NS - 50-...	12	11	6.6	28	16	16	40	32	27	30	45	50	65	64	83	51	110	90	6.8	80	16	45	32	40.5
NS - 63-...	16	11	6.6	28	16	20	50	35	35	35	50	52	67	64	83	51	125	100	6.8	95	20	50	36	44.5
NS - 80-...	16	15	9	36	20	20	60	43	38	40	60	66	86	80	105	65	154	126	9	110	20	63	47	57
NS - 100-...	20	15	9	36	20	25	57	43	43	50	70	76	96	80	105	65	186	150	9	135	25	71	54	65

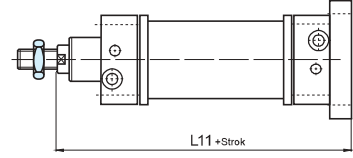
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NS - 32-...	114	94	16	4	38	9	13	5	144	142	16	130	142	56	72	74	10	10	10
NS - 40-...	130	105	20	5	38	11.5	13	5	163	161	20	145	160	64	79	86	13	11	13
NS - 50-...	136	106	25	5	38	11.5	13	5	175	170	25	155	170	83	86	94	16	13	17
NS - 63-...	149	115	28	6	45	14	13	5	190	185	25	170	190	83	99	99	18	15	17
NS - 80-...	164	124	34	6	48	14	16.5	6	215	210	30	190	210	103	110	110	18	15	22
NS - 100-...	181	134	40	7	55	16	16.5	6	230	220	35	205	230	102	128	128	23	19	22



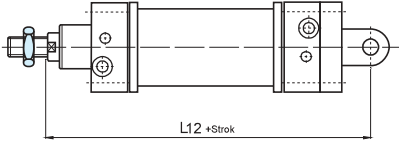
**Ayak bağlantı**  
Foot mounting



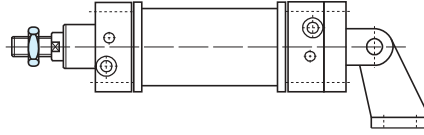
**Ön flanş bağlantı**  
Front flange mounting



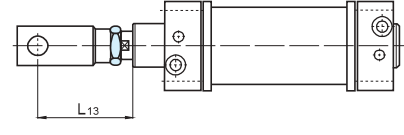
**Arka flanş bağlantı**  
Rear flange mounting



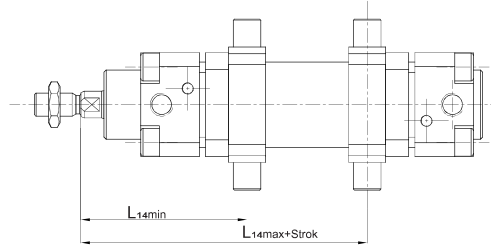
**Eklem bağlantı**  
Swivel flange mounting



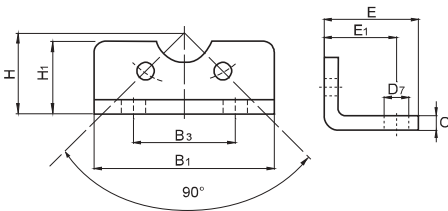
**Eklem yer bağlantı**  
Swivel flange mounting with clevis foot



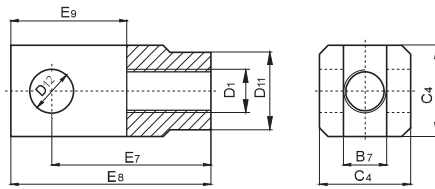
**Çatal bağlantı**  
Piston rod clevis mounting



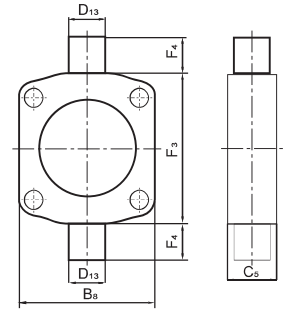
**Orta eklem bağlantı**  
Trunnion mounting



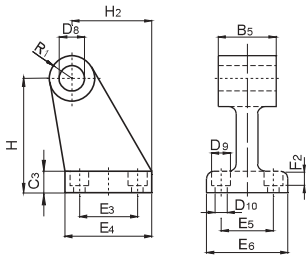
**AB: Ayak bağlantı**  
Foot mounting



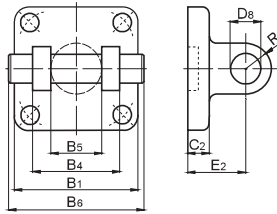
**ÇB: Çatal bağlantı**  
Piston rod clevis mounting



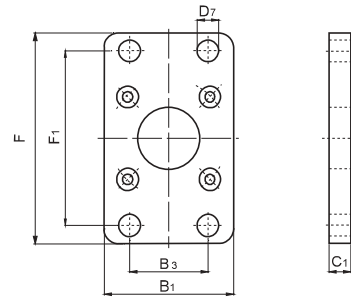
**OEB: Orta eklem bağlantı**  
Trunnion mounting



**YB: Yer bağlantı**  
Clevis foot

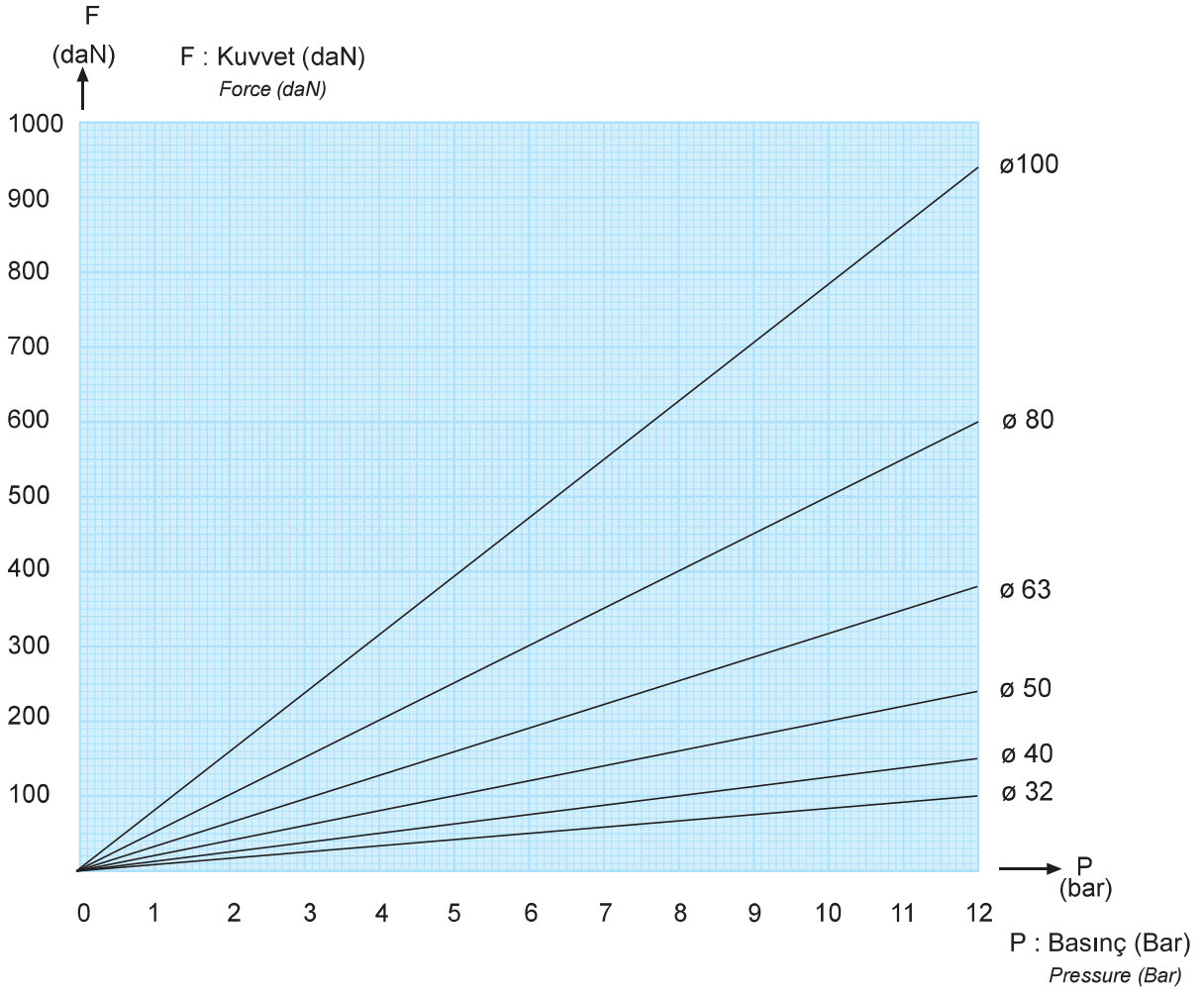


**EB: Eklem bağlantı**  
Swivel flange mounting



**FB: Flanş bağlantı**  
Flange mounting

## İtme kuvveti / Compression force : (daN)



$$F = p \times A - R$$

F : itme kuvveti / compression force (daN)  
p : basınç / pressure (bar)  
A : alan / area (cm)<sup>2</sup>  
R : sürtünme kuvveti / friction force (daN)

## Ağırlık / Weight : (kg)

Silindir Çapı Piston diameter (Ø mm)	Strok=0 At 0 Stroke (kg)	Her 10 mm. strok için Weight per 10 mm. stroke	AB	FB	EB	YB	ÇB	OEB
32	0.675	0.030	0.120	0.065	0.080	0.060	0.088	0.117
40	1.040	0.042	0.200	0.087	0.140	0.090	0.144	0.305
50	1.520	0.057	0.350	0.163	0.208	0.160	0.296	0.412
63	2.250	0.065	0.540	0.306	0.378	0.210	0.296	0.768
80	3.505	0.099	1.050	0.558	0.550	0.350	0.690	0.809
100	5.350	0.168	1.400	0.900	1.070	0.500	0.690	2.045

# ALUMİNYUM PROFİLLİ PNÖMATİK SİLİNDİR

## ALUMINUM PROFILE PNEUMATIC CYLINDER

CYLINDERS SİLİNDİRLER



**(CETOP RP 43P'ye uygun)**  
**(according to CETOP RP 43P)**

**ANS**

Silindir Kodu / Cylinder Code	
ANS	Çift Etkili / Double acting
ANSY	Çift Etkili Yastıklı Double acting with cushioning
ANST	Tek Etkili / Single acting
MNSY	Çift Etkili Manyetik Yastıklı Double acting with cushioning and magnetic
MNS	Çift Etkili Manyetik Double acting and magnetic

Piston Çapı Piston Diameter
32,40,50,63, 80,100

Standart Stroklar Standart Strokes
50,100,160,200 300,400,500

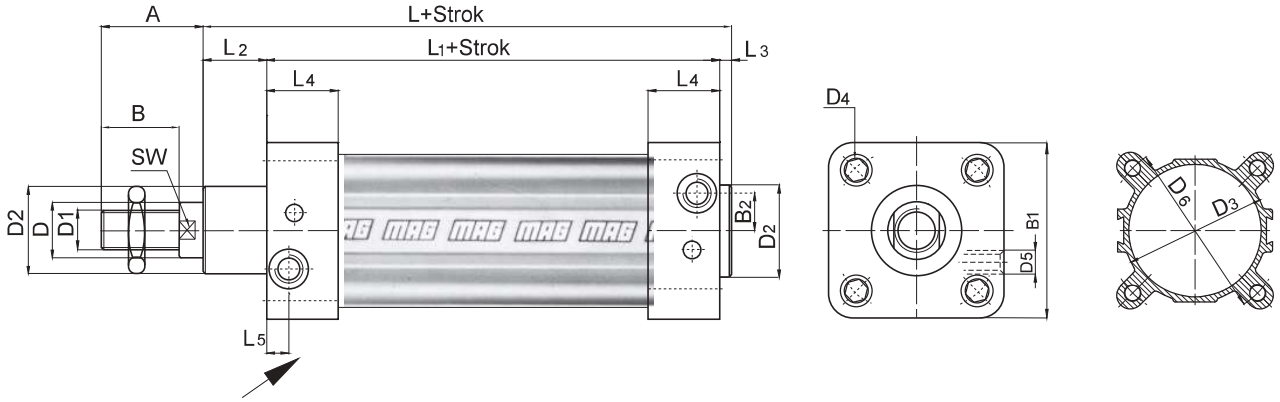
Bağlantı Şekli / Mountings	
AB	Ayak Bağlantı / Foot mounting
FB	Flanş Bağlantı / Flange mounting
EB	Eklem Bağlantı / Swivel flange mounting
EYB	Eklem Yer Bağlantı Swivel flange mounting with clevis foot
ÇB	Çatal Bağlantı / Piston rod clevis mounting
OEB	Orta Eklem Bağlantı Trunnion mounting

Piston Kolu Malzemesi Piston Rod Material	
	Çk 45 Krom Kaplı Ck 45 chrome plated piston rod
S	X20Cr13 Krom Kaplı X20Cr13 chrome plated piston

	NBR + PU Sızdırmazlık Elemanı NBR + PU Seal
	Çalışma Sıcaklığı Temperature range -20°C ~ +80°C
V	Viton Sızdırmazlık Elemanı Viton Seal
	Çalışma Sıcaklığı Temperature range -30°C ~ +200°C

Not: Manyetik sensörler için 119-120 nolu sayfalara bakınız.  
See pages 119-120 for magnetic sensors.

# Ölçüler / Dimensions



Yastıklama Boyu Cushioning Length	
ANS - 32 - ...	19
ANS - 40 - ...	21
ANS - 50 - ...	23
ANS - 63 - ...	23
ANS - 80 - ...	30
ANS - 100 - ...	30

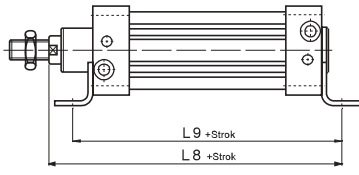
TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS	
Silindir Gövdesi / Cylinder Tube	Alüminyum / Aluminum
Silindir Kapakları / Cylinder End Caps	Al. Enjeksiyon Döküm / Aluminum
Piston Mili / Piston Rod	CK 45 Krom Kaplı / CK 45 Chrome Plated
Sızdırmazlık Elemanları / Seals	NBR, Viton
Boğaz Keçesi / Rod Seal	Poliüretan / Polyurethane
Piston Keçesi / Piston Seal	NBR
O-Ring / O-Rings	NBR
Max. Çalışma Basıncı Max Operating Pressure	10 BAR
Çalışma Sıcaklığı Temperature Range	-20°C, +80°C

	A	B	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	B <sub>4</sub>	B <sub>5</sub>	B <sub>6</sub>	B <sub>7</sub>	B <sub>8</sub>	C	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	D Ø	D <sub>1</sub>	D <sub>2</sub> Ø	D <sub>3</sub> Ø	D <sub>4</sub>	D <sub>5</sub>	D <sub>6</sub> Ø	D <sub>7</sub> Ø
ANS - 32-...	30	20	45	0	32	45	26	54	10	45	4	10	8	8	20	16	12	M10x1.25	30	37	M5	G 1/8"	46	7
ANS - 40-...	34	24	54	4.5	36	52	28	62	12	54	5	10	9	10	24	22	16	M12x1.25	35	45	M5	G 1/4"	56	9
ANS - 50-...	44	32	65	5.5	45	60	32	70	16	65	6	12	11	12	32	22	20	M16x1.5	40	55	M6	G 1/4"	68	9
ANS - 63-...	44	32	80	13	50	70	40	82	16	80	6	15	12	12	32	28	20	M16x1.5	42	68	M6	G 3/8"	84	9
ANS - 80-...	54	40	96	16	63	90	50	102	20	96	8	18	14	14	40	28	25	M20x1.5	48	86	M8	G 3/8"	100	12
ANS - 100-...	53	40	126	16	75	110	60	126	20	126	8	18	15	15	40	48	25	M20x1.5	55	106	M8	G 1/2"	132	14

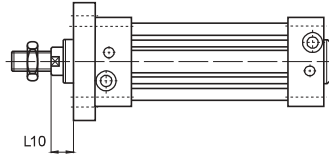
	D <sub>8</sub> Ø	D <sub>9</sub> Ø	D <sub>10</sub> Ø	D <sub>11</sub> Ø	D <sub>12</sub> Ø	D <sub>13</sub> Ø	E	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>	E <sub>4</sub>	E <sub>5</sub>	E <sub>6</sub>	E <sub>7</sub>	E <sub>8</sub>	E <sub>9</sub>	F	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	F <sub>4</sub>	H	H <sub>1</sub>	H <sub>2</sub>
ANS - 32-...	10	10	5.5	18	10	12	32	24	22	18	31	38	51	40	52	32	77	64	5.7	50	12	32	24	27.5
ANS - 40-...	12	10	5.5	22	12	16	38	28	25	22	35	41	54	48	62	38	90	72	5.7	65	16	36	25	30.5
ANS - 50-...	12	11	6.6	28	16	16	40	32	27	30	45	50	65	64	83	51	110	90	6.8	80	16	45	32	40.5
ANS - 63-...	16	11	6.6	28	16	20	50	35	35	35	50	52	67	64	83	51	125	100	6.8	95	20	50	36	44.5
ANS - 80-...	16	15	9	36	20	20	60	43	38	40	60	66	86	80	105	65	154	126	9	110	20	63	47	57
ANS - 100-...	20	15	9	36	20	25	57	43	43	50	70	76	96	80	105	65	186	150	9	132	25	70	54	65

	L	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	L <sub>6</sub>	L <sub>7</sub>	L <sub>8</sub>	L <sub>9</sub>	L <sub>10</sub>	L <sub>11</sub>	L <sub>12</sub>	L <sub>13</sub>	L <sub>14</sub> min	L <sub>14</sub> max	R	R <sub>1</sub>	SW
ANS - 32-...	114	94	16	4	38	9	13	5	144	142	16	130	142	56	72	74	10	10	10
ANS - 40-...	130	105	20	5	38	11.5	13	5	163	161	20	145	160	64	79	86	13	11	13
ANS - 50-...	136	106	25	5	38	11.5	13	5	175	170	25	155	170	83	86	94	16	13	17
ANS - 63-...	149	115	28	6	45	14	13	5	190	185	25	170	190	83	99	99	18	15	17
ANS - 80-...	164	124	34	6	48	14	16.5	6	215	210	30	190	210	103	110	110	18	15	22
ANS - 100-...	181	134	40	7	55	16	16.5	6	230	220	35	205	230	102	132	132	23	19	22

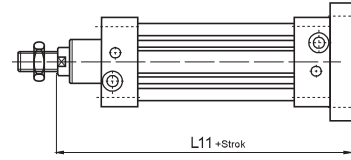




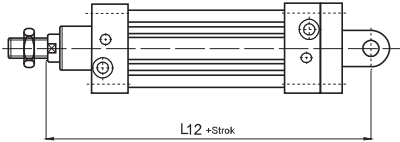
**Ayak bağlantı**  
Foot mounting



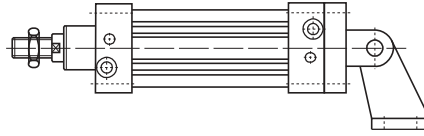
**Ön flanş bağlantı**  
Front flange mounting



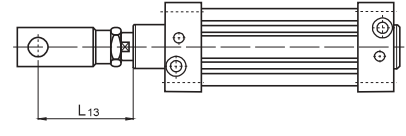
**Arka flanş bağlantı**  
Rear flange mounting



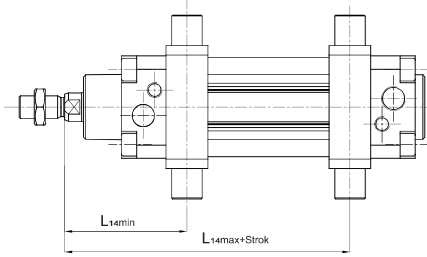
**Eklem bağlantı**  
Swivel flange mounting



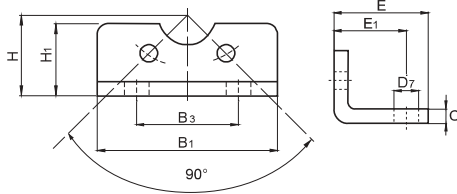
**Eklem yer bağlantı**  
Swivel flange mounting with clevis foot



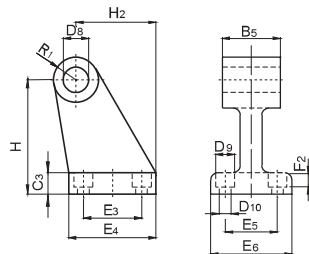
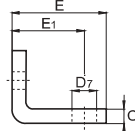
**Çatal bağlantı**  
Piston rod clevis mounting



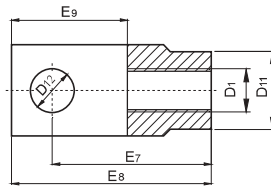
**Orta eklem bağlantı**  
Trunnion mounting



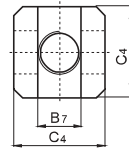
**AB: Ayak bağlantı**  
Foot mounting



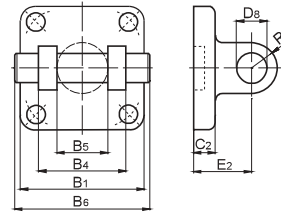
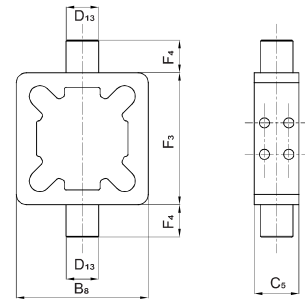
**YB: Yer bağlantı**  
Clevis foot



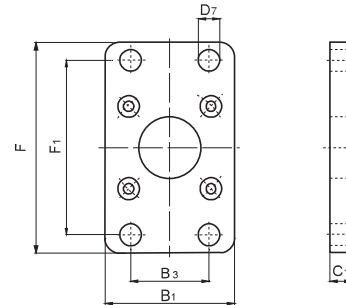
**ÇB: Çatal bağlantı**  
Piston rod clevis mounting



**OEB: Orta eklem bağlantı**  
Trunnion mounting

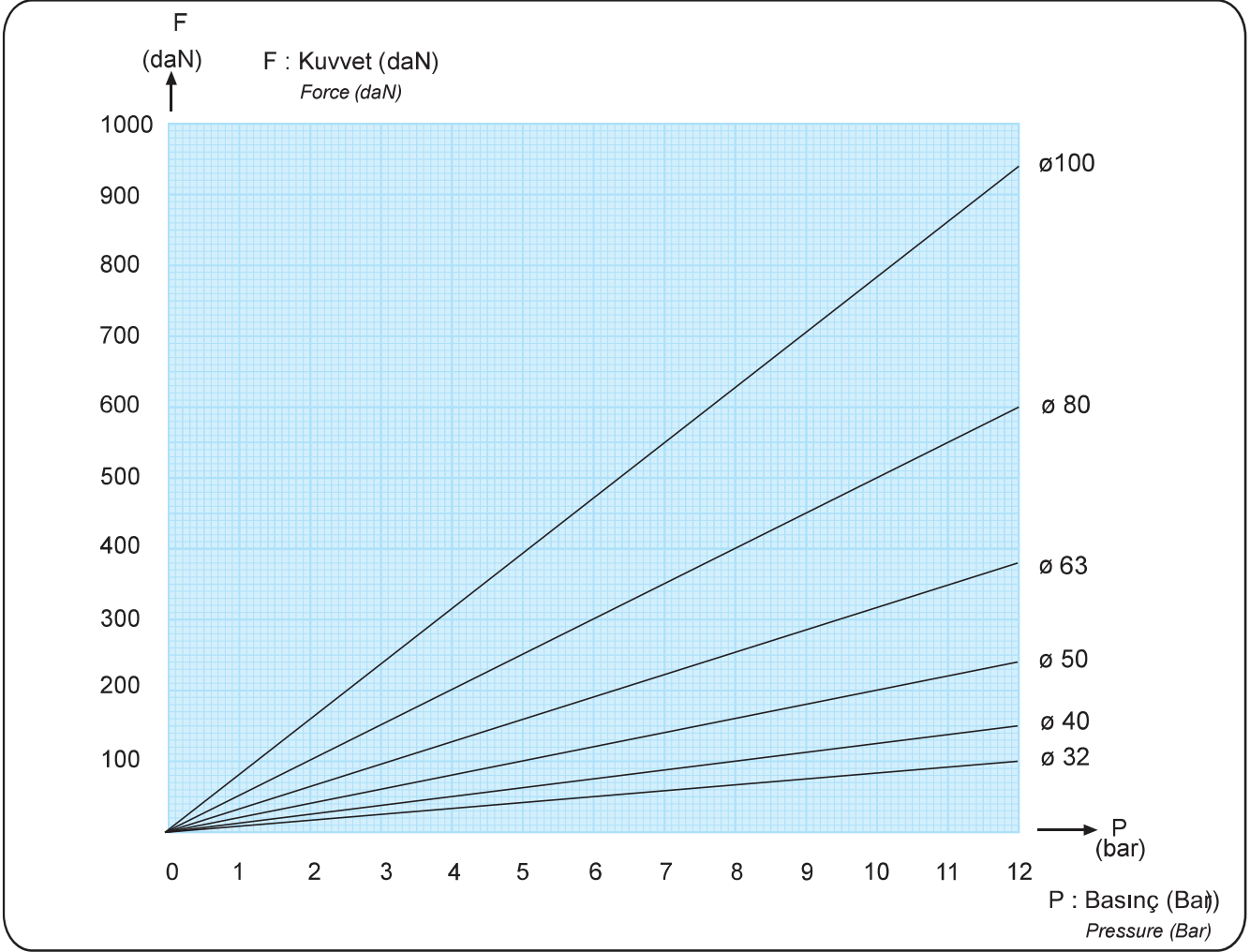


**EB: Eklem bağlantı**  
Swivel flange mounting



**FB: Flanş bağlantı**  
Flange mounting

## İtme kuvveti / Compression force : (daN)



## Ağırlık / Weight : (kg)

Silindir Çapı Piston diameter (Ø mm)	Strok=0 At 0 Stroke (kg)	Her 10 mm. strok için Weight per 10 mm. stroke	AB	FB	EB	YB	ÇB	OEB
32	0.530	0.025	0.120	0.065	0.080	0.060	0.088	0.114
40	0.840	0.037	0.200	0.087	0.140	0.090	0.144	0.287
50	1.230	0.047	0.350	0.163	0.208	0.160	0.296	0.383
63	1.650	0.058	0.540	0.306	0.378	0.210	0.296	0.712
80	2.715	0.088	1.050	0.558	0.550	0.350	0.690	0.952
100	3.200	0.145	1.400	0.900	1.070	0.500	0.690	2.376

# ÇELİK GÖVDELİ PNÖMATİK SİLİNDİR STEEL BODY PNEUMATIC CYLINDER

CYLINDERS SİLİNDİRLER



## (CETOP RP 53P STANDARDI) (RP 53P Standard)

**NS**

Silindir Kodu Cylinder Code	
NS	Çift Etkili / Double acting
NSY	Yastıklı Double acting with cushioning
NST	Tek Etkili / Single acting

Piston Çapı Piston Diameter
125, 160, 200, 250, 320

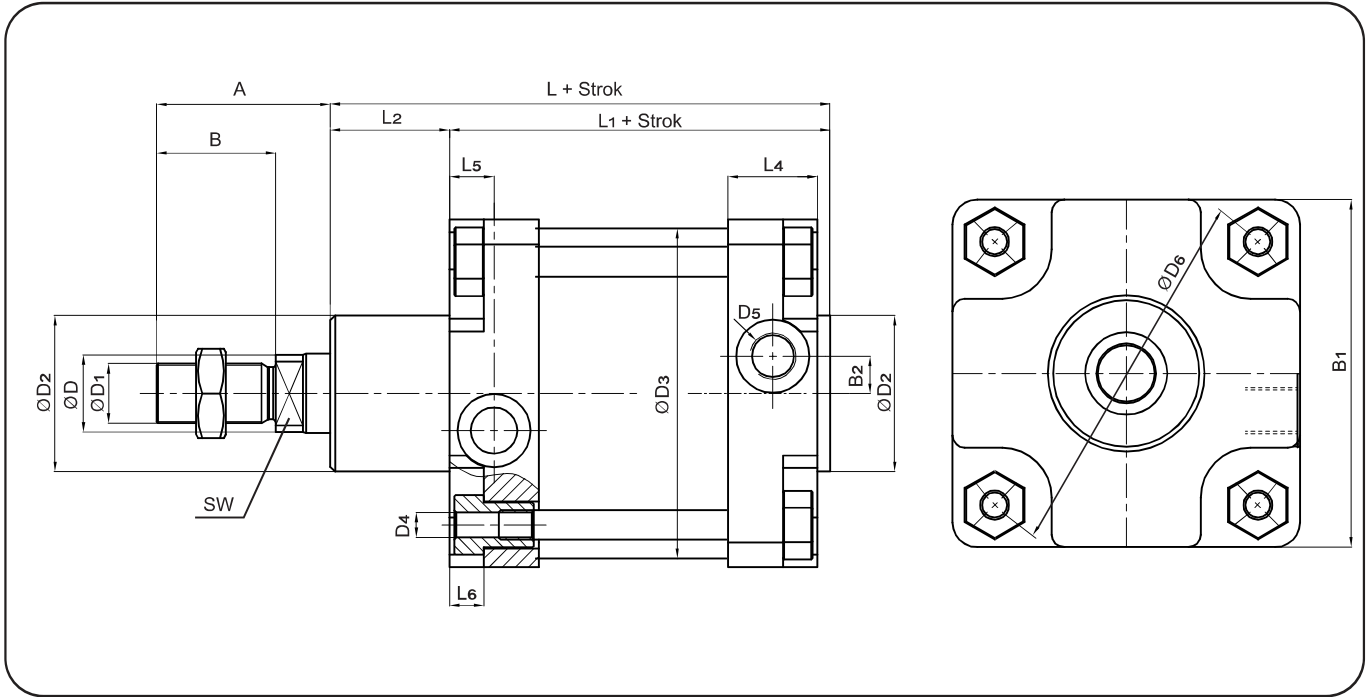
Standart Strok Standard Strokes
50, 100, 160, 200, 300, 400, 500

Bağlantı Şekli / Mountings	
AB	Ayak Bağlantı / Foot mounting
FB	Flanş Bağlantı / Flange mounting
EB	Eklem Bağlantı / Swivel flange mounting
EYB	Eklem Yer Bağlantı Swivel flange mounting with clevis foot
ÇB	Çatal Bağlantı / Piston rod clevis mounting
OEB	Orta Eklem Bağlantı Trunnion mounting

Piston Kolu Malzemesi Piston Rod Material	
	Ck 45 Krom Kaplı Ck 45 chrome plated piston rod
S	X20Cr13 Krom Kaplı X20Cr13 chrome plated piston

	NBR + PU Sızdırmazlık Elemanı NBR + PU Seal
	Çalışma Sıcaklığı Temperature range -20°C ~ +80°C
V	Viton Sızdırmazlık Elemanı Viton Seal
	Çalışma Sıcaklığı Temperature range -30°C ~ +200°C

# Ölçüler / Dimensions

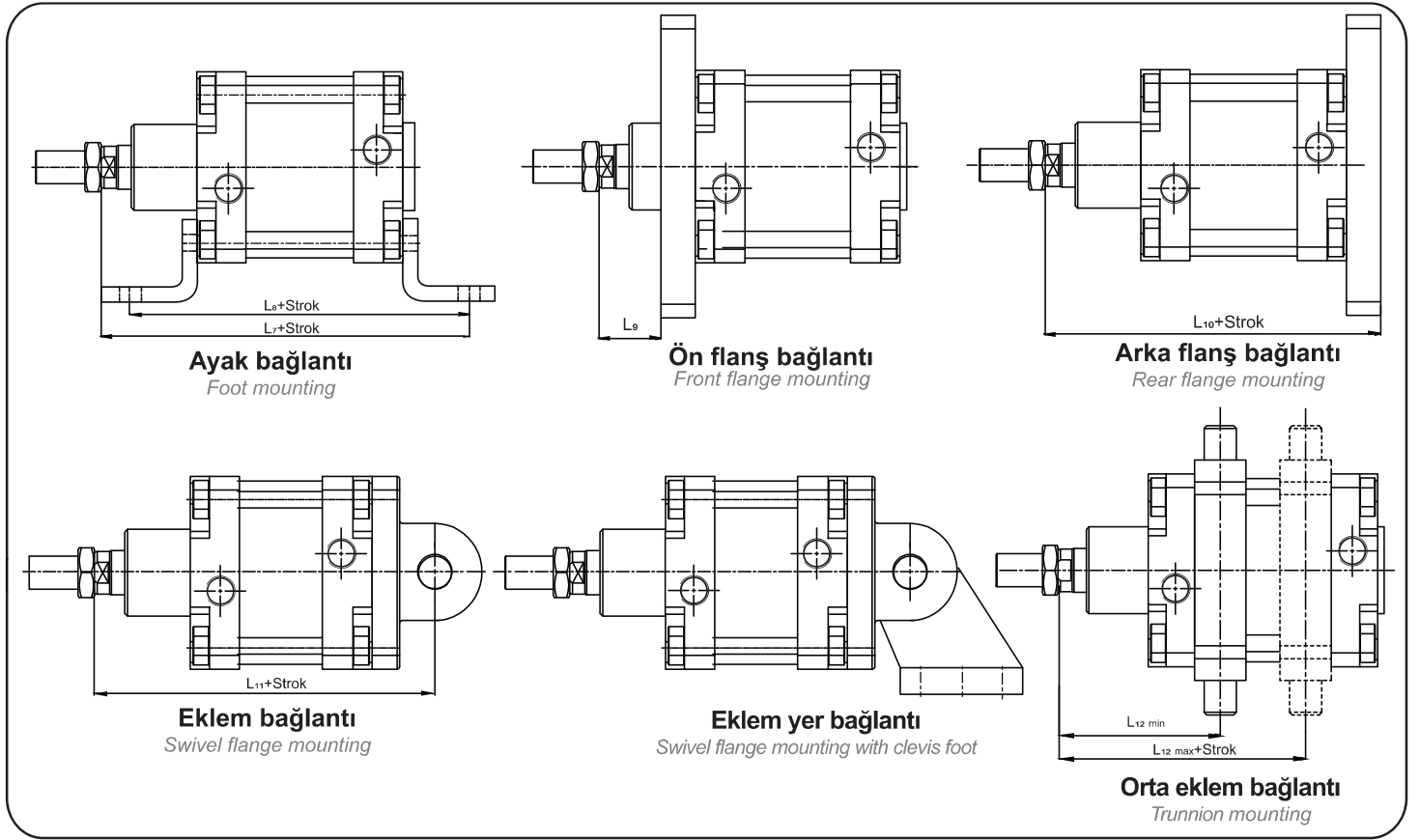


	A	B	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	B <sub>4</sub>	B <sub>5</sub>	B <sub>6</sub>	B <sub>7</sub>	B <sub>8</sub>	C	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	D	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	D <sub>5</sub>	D <sub>6</sub>	D <sub>7</sub>
NS - 125-...	70	48	140	15	90	130	70	150	25	146	11	25	20	20	50	40	32	M24X2	63	133	M12	G 1/2"	150	16
NS - 160-...	102	72	180	22	115	170	90	192	35	180	13	25	22	25	70	48	45	M36X2	80	168	M14	G 3/4"	190	18
NS - 200-...	102	72	220	25	135	170	90	192	35	220	15	25	25	30	70	50	45	M36X2	80	210	M16	G 3/4"	234	22
NS - 250-...	114	84	270	25	165	200	110	232	45	270	20	25	25	35	80	65	50	M42X2	100	260	m20	G 1"	288	26
NS - 320-...	126	96	340	30	200	220	120	254	50	340	23	30	30	40	90	70	63	M48X2	110	330	M24	G 1"	360	33

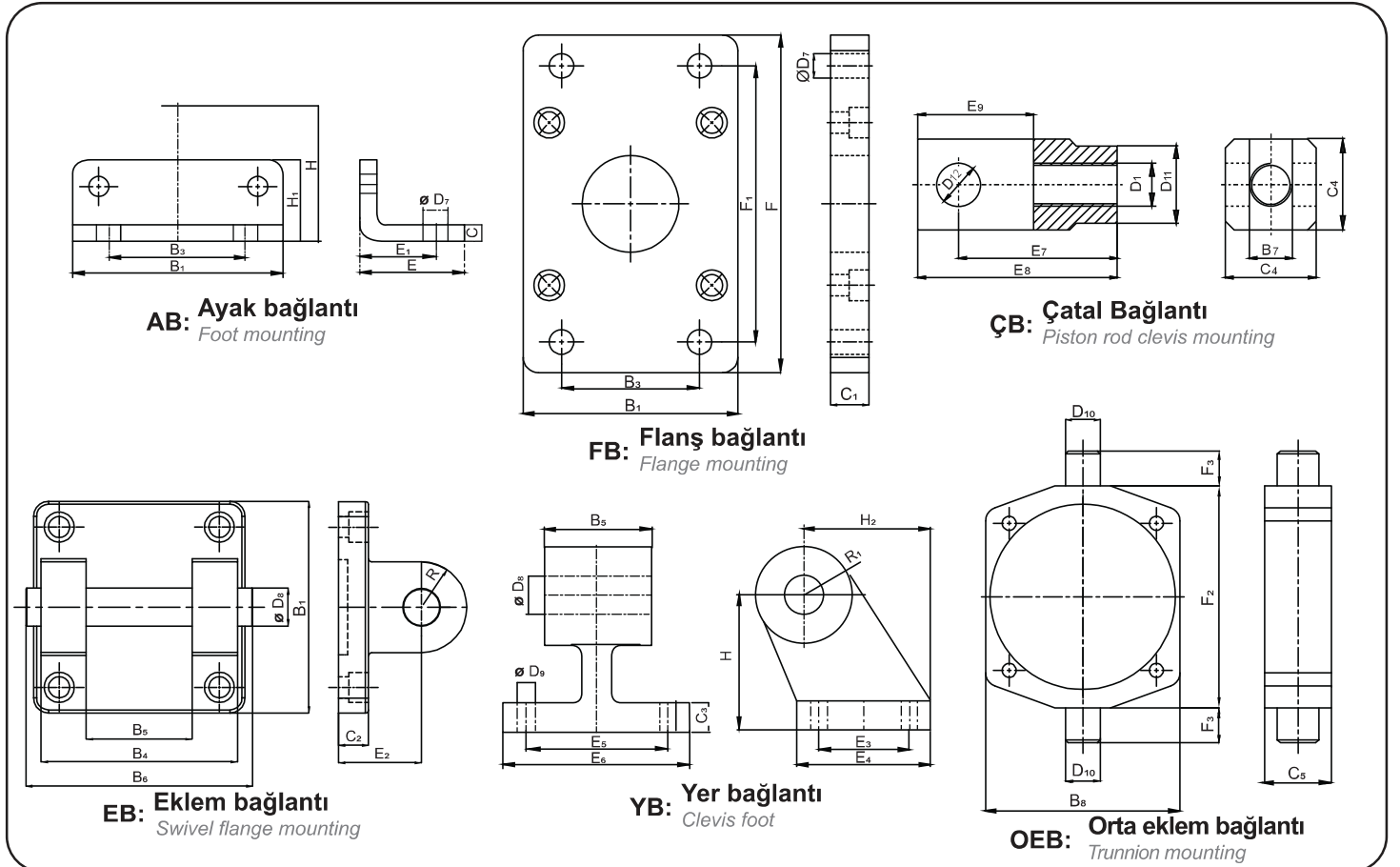
	D <sub>8</sub>	D <sub>9</sub>	D <sub>10</sub>	D <sub>11</sub>	D <sub>12</sub>	E	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>	E <sub>4</sub>	E <sub>5</sub>	E <sub>6</sub>	E <sub>7</sub>	E <sub>8</sub>	E <sub>9</sub>	F	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	H	H <sub>1</sub>
NS - 125-...	25	11	25	45	25	69	50	55	60	90	94	124	100	130	70	220	180	160	25	90	55
NS - 160-...	30	14	32	65	36	87	65	60	88	126	118	156	140	180	90	280	230	200	32	115	70
NS - 200-...	30	16	32	65	36	95	70	60	90	130	122	162	140	180	90	320	270	250	32	135	80
NS - 250-...	40	20	40	75	40	105	75	70	110	160	150	200	160	210	120	390	330	320	40	165	100
NS - 320-...	45	26	50	80	50	125	85	80	122	186	170	234	192	265	168	470	400	400	50	200	120

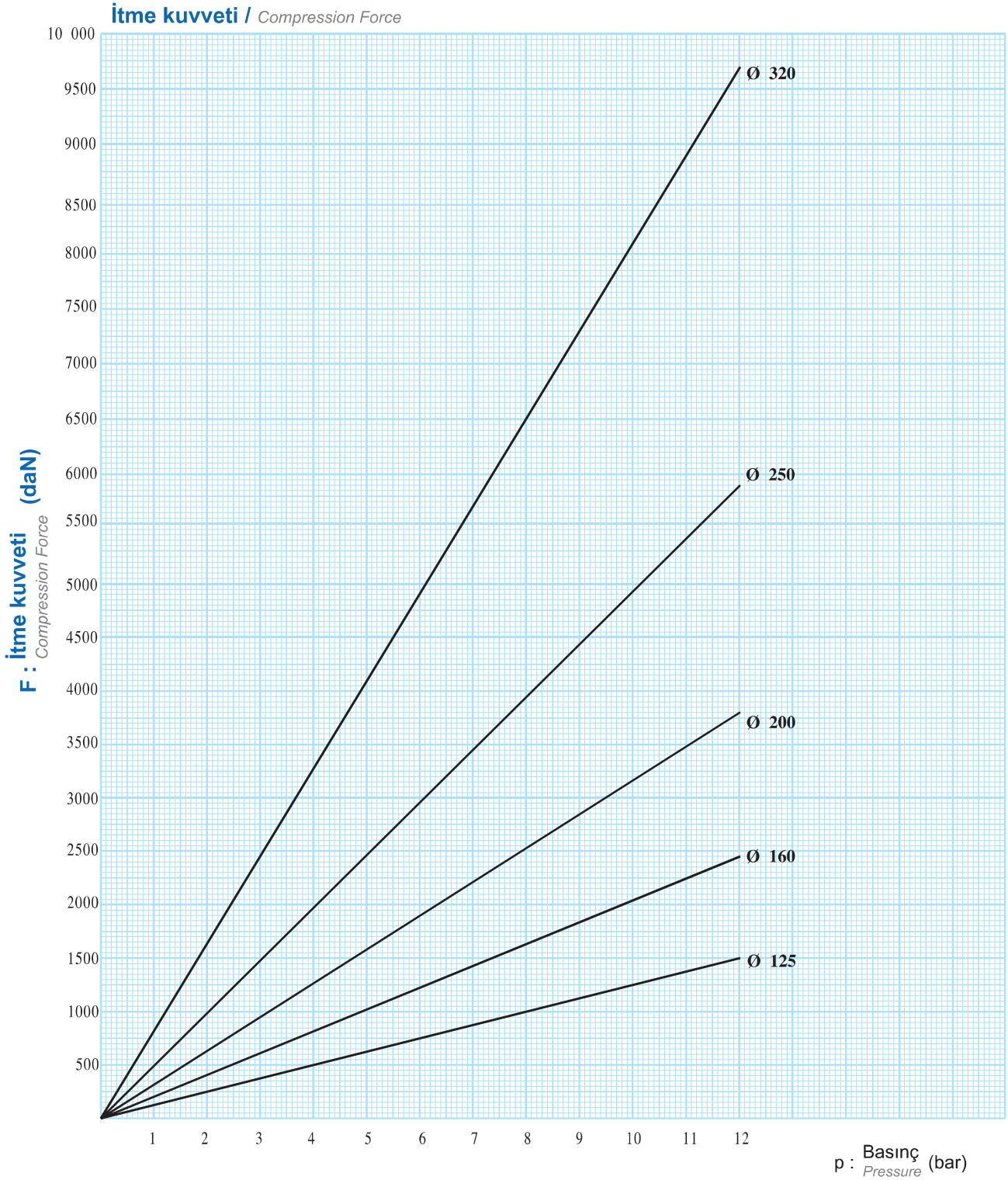
	H <sub>2</sub>	L	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	L <sub>6</sub>	L <sub>7</sub>	L <sub>8</sub>	L <sub>9</sub>	L <sub>10</sub>	L <sub>11</sub>	L <sub>12 min</sub>	L <sub>12 max</sub>	R	R <sub>1</sub>	SW
NS - 125-...	85	203	150	48	5	36	18	17	270	250	45	245	275	126	164	30	22.5	27
NS - 160-...	115	230	170	55	5	46	23	25	320	300	60	280	315	155	185	32	31.5	41
NS - 200-...	125	250	180	65	5	46	23	25	345	320	70	300	335	166	204	35	31.5	41
NS - 250-...	153	285	200	75	10	50	25	25	380	350	80	330	375	187.5	222.5	45	40	46
NS - 320-...	182	320	220	90	10	56	28	28	425	390	90	370	420	211	249	54	45	50

# Bağlantı şekilleri / Mountings types



# Bağlantı parçaları / Mountings





### Ağırlık / Weight : (kg)

Silindir çapı	Strok=0 da	Her10mm. strok için	AB	FB	EB	YB	ÇB	OEB
125	15.240	0.260	2.52	1.76	1.56	1.04	1.42	2.15
160	27.725	0.336	4.63	2.78	2.78	2.70	3.78	4.23
200	43.193	0.442	7.83	4.25	3.71	3.00	3.78	6.08
250	49.450	0.570	15.13	17.93	18.55	16.36	5.77	13.08
320	90.622	0.791	26.52	33.61	32.83	26.58	8.60	21.59



**(ISO 15552 STANDARDI)**  
**(ISO 15552 Standard)**

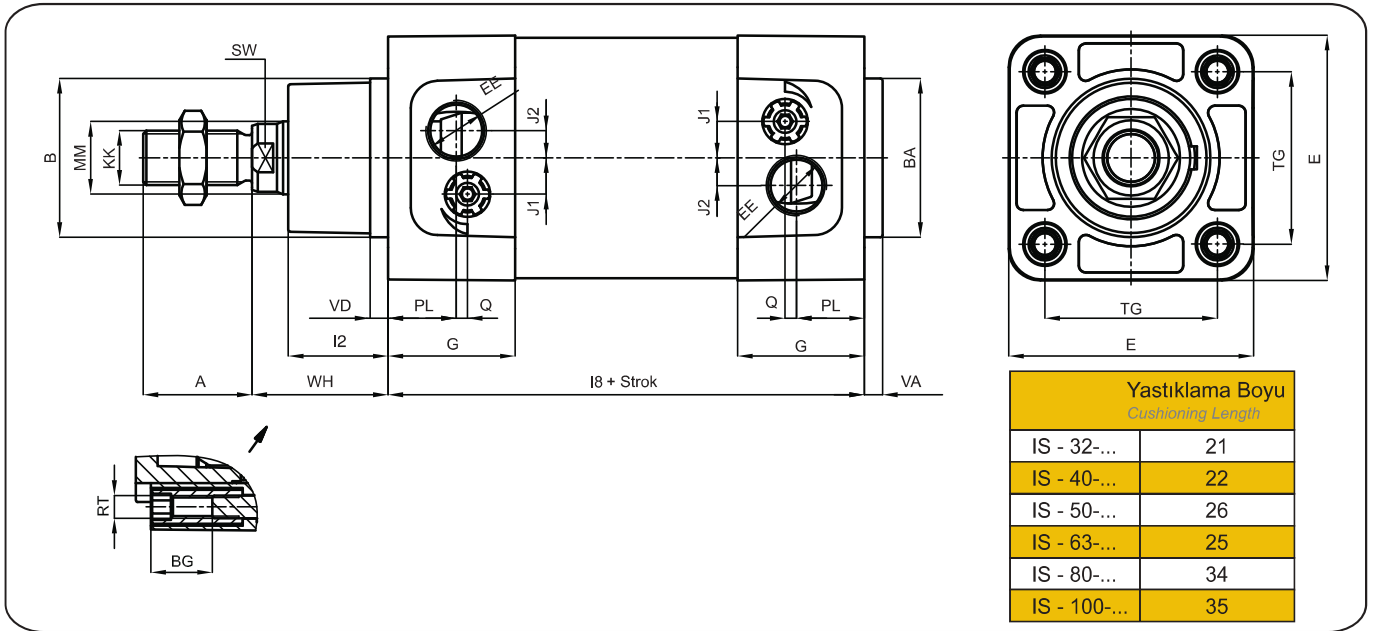


**IS**

Silindir Kodu Cylinder Code	Piston Çapı Piston Diameter	Standart Strok Standard Strokes	Bağlantı Şekli / Mountings	Piston Kolu Malzemesi Piston Rod Material
Çift Etkili / Double acting	32	50, 100, 160, 200, 300, 400, 500	IAB Ayak Bağlantı / Foot mounting	Ck 45 Krom kaplı Ck 45 chrome plated piston rod
Yastıklı Double acting with cushioning	40		IAEBK Küresel Arka Eklem Bağlantı Rear swivel flange mounting with spherical bearing	S X20Cr13 Krom kaplı X20Cr13 chrome plated piston rod
Manyetik / Magnet	50		IFB Flanş Bağlantı / Flange mounting	NBR + PU sızdırmazlık elemanı NBR + PU Seal Çalışma sıcaklığı : -20°C ~ +80°C Temperature Range
	63		IEB Eklem Bağlantı / Swivel flange mounting	
	80		IEYB Eklem Yer Bağlantı Swivel flange mounting with clevis foot	
	100		IÇB Çatal Bağlantı / Piston rod clevis mounting	
		IOEB Orta eklem bağlantı Trunnion mounting		
		IÖEBK Küresel Ön Eklem Bağlantı Piston rod swivel mounting with spherical bearing		

Not: Manyetik sensörler için 119-120 nolu sayfalara bakınız.  
See pages 119-120 for magnetic sensors.

# Ölçüler / Dimensions



	A -2	AB H14	AH JS16	AO	AT	AU ±0.2	AV min.	B/BA d11	BG	BR	BT	CB H14	CD H9	CH	CK H9	CL H9	CM	CN H9	CX H7	D H11	E	ED	EE
<b>IS-32</b>	22	7	32	6	4 <sup>+0.3</sup>	24	20	30	16	10	8	26	10	43	10	10	10	10	10	30	45	19	G1/8
<b>IS-40</b>	24	10	36	9	4 <sup>+0.3</sup>	28	22	35	16	11	10	28	12	50	12	12	12	12	12	35	54	22	G1/4
<b>IS-50</b>	32	10	45	10	5 <sup>+0.3</sup>	32	28	40	16	13	12	32	12	64	12	16	16	16	16	40	64	27	G1/4
<b>IS-63</b>	32	10	50	12	5 <sup>+0.3</sup>	32	28	45	16	15	12	40	16	64	16	16	16	16	16	45	75	27	G3/8
<b>IS-80</b>	40	12	63	15	6 <sup>+0.5</sup>	41	33	45	18	15	14	50	16	77	16	20	20	20	20	45	93	34	G3/8
<b>IS-100</b>	40	14	71	17	6 <sup>+0.5</sup>	41	33	55	17	19	15	60	20	77	20	20	20	20	20	55	110	34	G1/2

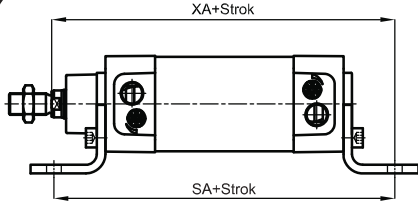
	EF	EM -0.2 -0.6	EN H12	EP	EU	EX ±0.1	F	FB H13	FE	FG	FL ±0.2	G	GL JS14	H	HB H13	I2	I8	J1	J2	KK	L +1	LF min	L1 ±1
<b>IS-32</b>	13	26	14	10.5	10.5	14	40	7	12	20	22	27	21	20	7	18	94 <sup>+0.4</sup>	5	6	M10x1.25	12	15	5.5
<b>IS-40</b>	15	28	16	12	12	16	48	9	14	24	25	28	24	24	7	22	105 <sup>+0.7</sup>	6	8	M12x1.25	15	17	5.5
<b>IS-50</b>	19	32	21	15	15	21	64	9	19	32	27	30	33	32	9	26	106 <sup>+0.7</sup>	6,85	9,15	M16x1.5	16	22	6.5
<b>IS-63</b>	19	40	21	15	15	21	64	9	19	32	32	35	37	32	9	28	121 <sup>+0.8</sup>	9.7	10.8	M16x1.5	21	22	6.5
<b>IS-80</b>	23	50	25	18	18	25	80	12	25	40	36	37.5	47	40	11	31	128 <sup>+0.8</sup>	9.5	12	M20x1.5	22	26	7
<b>IS-100</b>	23	60	25	18	18	25	80	14	25	40	41	40	55	40	11	35	138 <sup>±1</sup>	14	12.5	M20x1.5	27	26	7

	L2 ±0.5	L3	L4 ±0.5	L5	L7	MF JS14	MM	MR	MS	PL	PH JS15	R JS14	RA JS14	RT	R1 min	R2 H15	R3	Q	SA	SW	SW1	TD e9
<b>IS-32</b>	5	4	5.5		32.5	10	12	11	16	13	32	32	18	M6	12	15	0.5	2	142 <sup>±1.25</sup>	10	17	12
<b>IS-40</b>	5	4	5.5		31.5	10	16	13	18	15	36	36	22	M6	14	17.5	0.5	2.5	161 <sup>±1.25</sup>	13	19	16
<b>IS-50</b>	5	5	6.5	51	37	12	20	13	21	15	45	45	30	M8	19	20	0.8	3	170 <sup>±1.25</sup>	17	22	16
<b>IS-63</b>	5	5	6.5		36	12	20	17	23	17	50	50	35	M8	19	22.5	0.8	3.5	185 <sup>±1.25</sup>	17	22	20
<b>IS-80</b>	5	8	10	75	48	16	25	17	28	20.5	63	63	40	M10	24	22.5	1.5	3.5	210 <sup>±1.25</sup>	22	30	20
<b>IS-100</b>	5	6	10		53	16	25	21	30	22	71	75	50	M10	24	27.5	1.5	4	220 <sup>±1.25</sup>	22	30	25

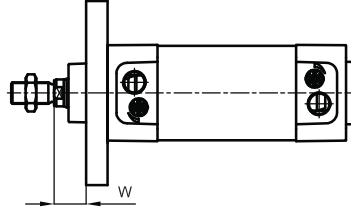
	TE JS14	TF JS14	TG	TK	TL h14	TM h14	TR JS14	UB h14	UF	UL	UR	UW	XA	XD	XN	XV min	XV max	VA -1	VD	W	WH	Z	ZF
<b>IS-32</b>	38	64	32.5 <sup>±0.5</sup>	18	12	50	32	45	80	51	31	60	144 <sup>±1.25</sup>	142 <sup>±1.25</sup>	142 <sup>±1.25</sup>	62	84	4	4	16 <sup>±1.6</sup>	26 <sup>±1.4</sup>	4	130 <sup>±1.25</sup>
<b>IS-40</b>	41	72	38 <sup>±0.5</sup>	22	16	63	36	52	90	54	35	70	163 <sup>±1.25</sup>	160 <sup>±1.25</sup>	160 <sup>±1.25</sup>	69	96	4	4	20 <sup>±1.25</sup>	30 <sup>±1.4</sup>	4	145 <sup>±1.25</sup>
<b>IS-50</b>	50	90	46.5 <sup>±0.6</sup>	22	16	75	45	60	110	65	45	84	175 <sup>±1.25</sup>	170 <sup>±1.25</sup>	170 <sup>±1.25</sup>	78	102	4	4	25 <sup>±1.6</sup>	37 <sup>±1.4</sup>	4	155 <sup>±1.25</sup>
<b>IS-63</b>	52	100	56.5 <sup>+0.7</sup>	28	20	90	50	70	120	67	50	98	90 <sup>±1.6</sup>	190 <sup>±1.25</sup>	190 <sup>±1.25</sup>	86	109	4	4	25 <sup>±2</sup>	37 <sup>±1.8</sup>	4	170 <sup>±1.6</sup>
<b>IS-80</b>	66	126	72 <sup>±0.7</sup>	30	20	110	63	90	150	86	60	120	215 <sup>±1.6</sup>	210 <sup>±1.6</sup>	210 <sup>±1.6</sup>	98.5	121.5	4	4	30 <sup>±2</sup>	46 <sup>±1.8</sup>	4	190 <sup>±1.6</sup>
<b>IS-100</b>	76	150	89 <sup>±0.7</sup>	40	25	132	75	110	175	96	70	138	230 <sup>±1.6</sup>	230 <sup>±1.65</sup>	230 <sup>±1.65</sup>	111	129	4	4	35 <sup>±2</sup>	51 <sup>±1.8</sup>	4	205 <sup>±1.6</sup>



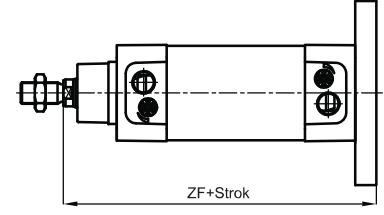
## Bağlantı şekilleri / Mountings types



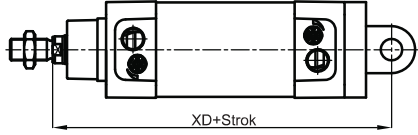
**Ayak bağlantı**  
Foot mounting



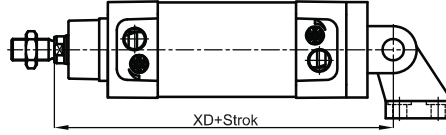
**Ön flaş bağlantı**  
Front flange mounting



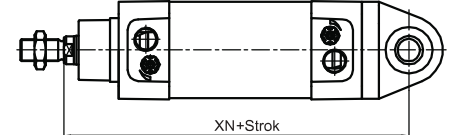
**Arka flaş bağlantı**  
Rear flange mounting



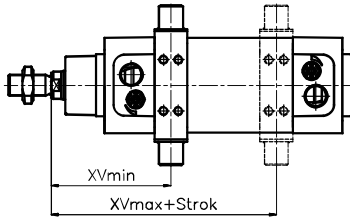
**Eklem bağlantı**  
Swivel flange mounting



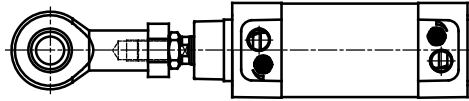
**Eklem yer bağlantı**  
Swivel flange mounting with clevis foot



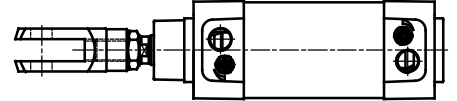
**Küresel Arka Eklem bağlantı**  
Rear swivel flange mounting with spherical bearing



**Orta eklem bağlantı**  
Trunnion mounting

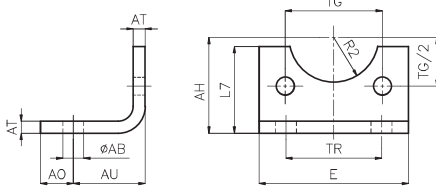


**Küresel ön eklem bağlantı**  
Piston rod swivel mounting with spherical bearing

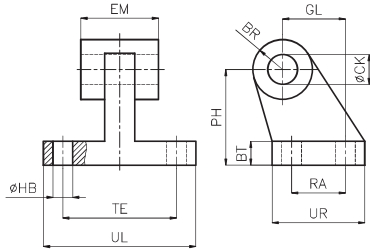


**Çatal bağlantı**  
Piston rod clevis mounting

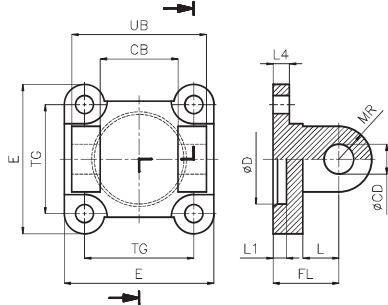
## Bağlantı parçaları / Mountings



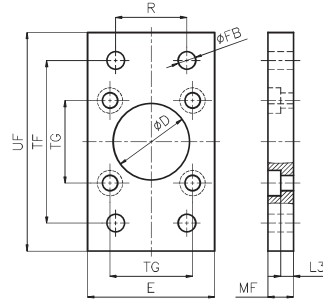
**IAB: Ayak bağlantı**  
Foot mounting



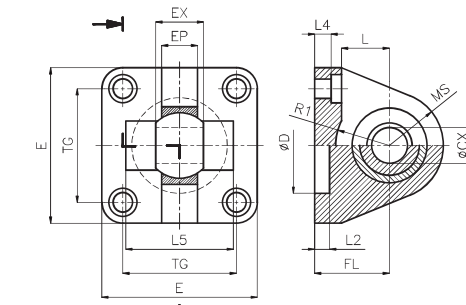
**IYB: Yer bağlantı**  
Clevis foot



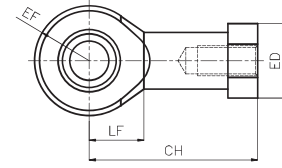
**IEB: Eklem bağlantı**  
Swivel flange mounting



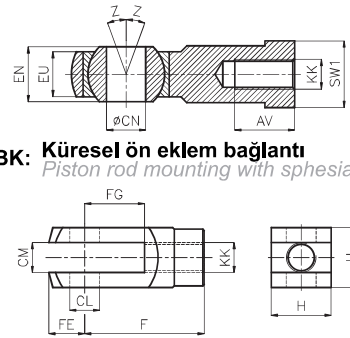
**IFB: Flaş bağlantı**  
Flange mounting



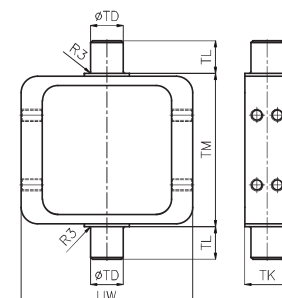
**IAEBK: Küresel arka eklem bağlantı**  
Rear swivel flange mounting with spherical bearing



**IÖEBK: Küresel ön eklem bağlantı**  
Piston rod mounting with spherical bearing

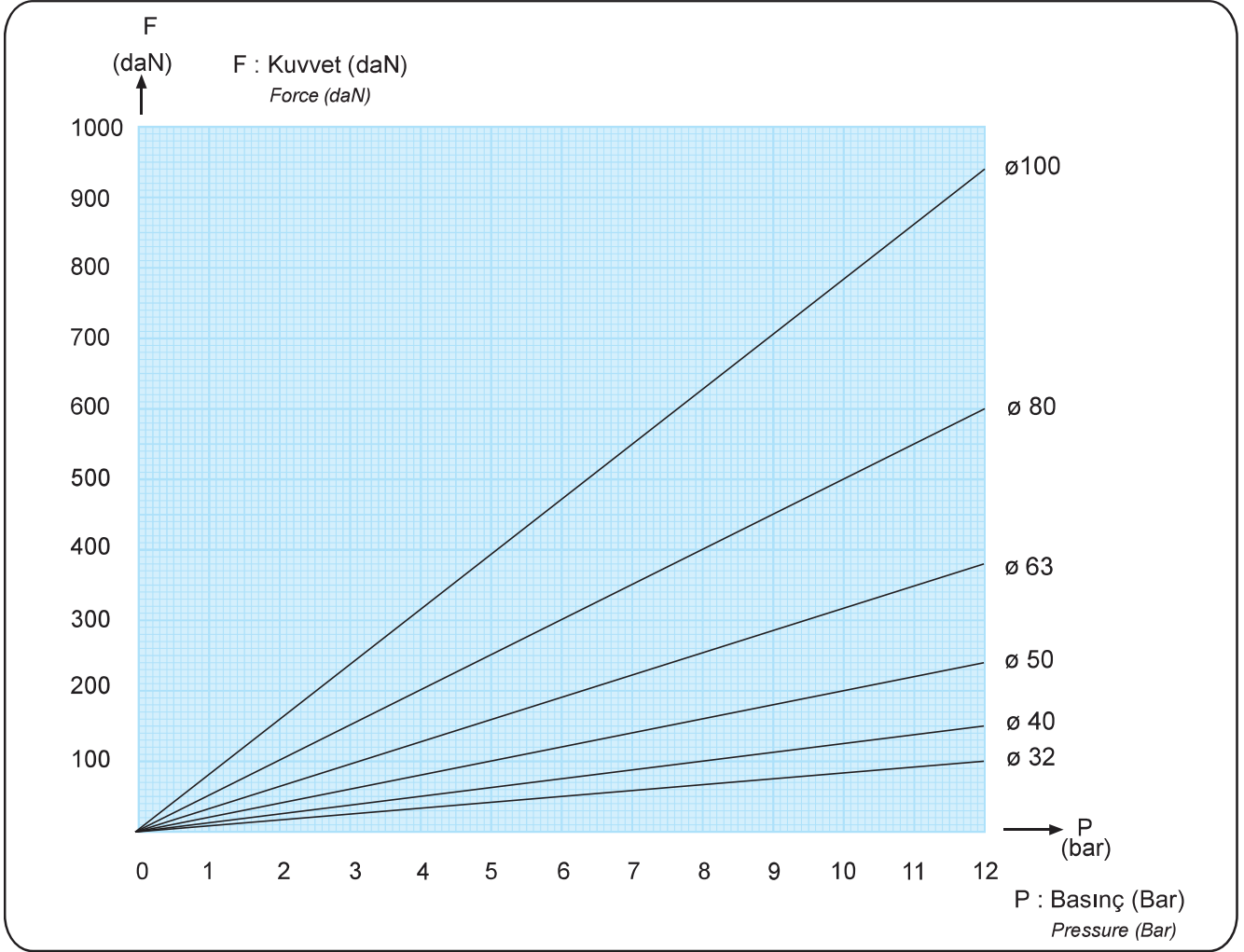


**IÇB: Çatal Bağlantı**  
Piston rod clevis mounting



**IOEB: Orta eklem bağlantı**  
Trunnion mounting

## İtme kuvveti / Compression force : (daN)



$$F = p \times A - R$$

F : itme kuvveti / *compression force* (daN)  
 p : basınç / *pressure* (bar)  
 A : alan / *area* (cm)<sup>2</sup>  
 R : sürtünme kuvveti / *friction force* (daN)

## Ağırlık / Weight : (kg)

Silindir çapı	Strok=0 da	Her10mm. strok için	IAB	IFB	IEB	IYB	IAEBK	IOEB	İÇB	İÖEBK
32	0.550	0.030	0.065	0.060	0.075	0.060	0.070	0.154	0.088	0.077
40	0.900	0.040	0.075	0.085	0.135	0.085	0.106	0.296	0.144	0.100
50	1.366	0.054	0.165	0.160	0.165	0.145	0.191	0.403	0.296	0.220
63	1.750	0.065	0.190	0.210	0.285	0.210	0.238	0.748	0.296	0.220
80	2.902	0.093	0.370	0.470	0.460	0.340	0.439	1.089	0.690	0.420
100	3.740	0.098	0.480	0.660	0.785	0.515	0.585	2.013	0.690	0.420



(ISO 1552 STANDARDI)  
(ISO 1552 Standard)



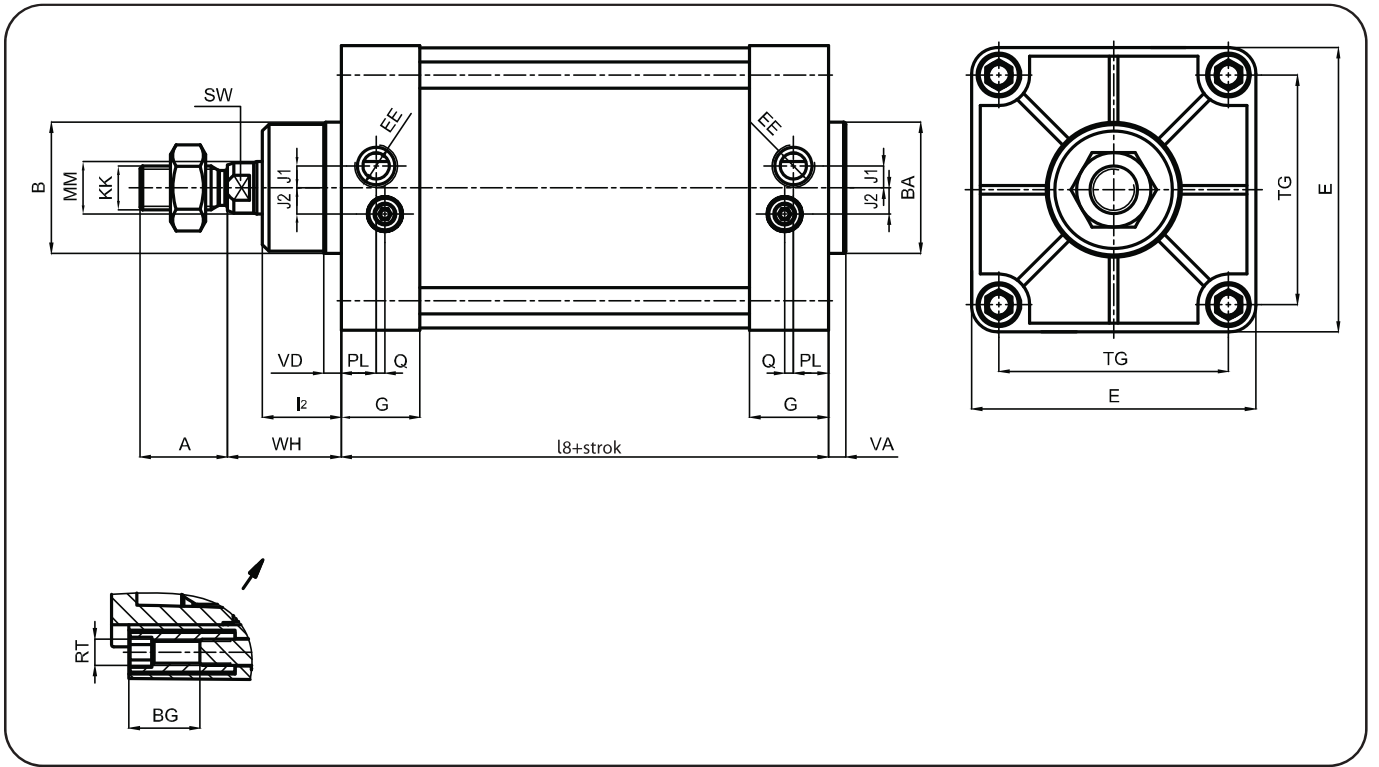
IS

- . . . - . . . - . . . - . . . - . . .

Silindir Kodu Cylinder Code	Piston Çapı Piston Diameter	Standart Strok Standard Strokes	Bağlantı Şekli / Mountings	Piston Kolu Malzemesi Piston Rod Material
Çift Etkili / Double acting	125	50, 100, 160, 200, 300, 400, 500	IAB Ayak Bağlantı / Foot mounting	Çk 45 Krom kaplı Ck 45 chrome plated piston rod
Yastıklı Double acting with cushioning	160		IFB Flanş Bağlantı / Flange mounting	S X20Cr13 Krom kaplı X20Cr13 chrome plated piston rod
Manyetik / Magnet	200		IEB Eklem Bağlantı / Swivel flange mounting	NBR + PU sızdırmazlık elemanı NBR + PU Seal
	250		IEYB Eklem Yer Bağlantı Swivel flange mounting with clevis foot	
			İÇB Çatal Bağlantı / Piston rod clevis mounting	V Viton sızdırmazlık elemanı Viton Seal
			IOEB Orta eklem bağlantı Trunnion mounting	

Not: Manyetik sensörler için 119-120 nolu sayfalara bakınız.  
See pages 119-120 for magnetic sensors.

# Ölçüler / Dimensions



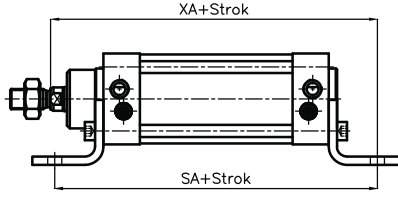
	A	AB H14	AH JS16	AO	AT ±1	AU ±0.2	B/BA d11	BG	BR	BT	CB H14	CD H9	CK H9	CL +0.20 +0.05	CM +0.30	D H11	E	EB	EE	EM -0.5 -1.5
IS - 125-...	54	16.5	90	22	8	45	60	20	22.5	20	70	25	25	25	25	60	140	20	G1/2"	70
IS - 160-...	72	18.5	115	27	9	60	65	24	31.5	25	90	30	30	35	35	65	180	20	G3/4"	90
IS - 200-...	72	24	135	30	12	70	75	24	31.5	30	90	30	30	35	35	75	220	26	G3/4"	90
IS - 250-...	84	28	165	40	20	75	90	25	40	35	110	40	40	40	45	90	270	33	G1"	110

	F	FB H13	FE	FG	FL ±0.2	G	GL JS14	H	HB H13	I2	I8	J1	J2	KK	L	L1	L2	L3 -0.5
IS - 125-...	100	16	32	50	50	45	70	50	14	40	160 <sup>±1</sup>	10	20	M27x2	30	7	3.2	10.5
IS - 160-...	144	18	44	72	55	50	97	70	14	55	180 <sup>±1.1</sup>	15	15	M36x2	35	7	4	9.5
IS - 200-...	144	22	44	72	60	50	105	70	18	65	180 <sup>±1.6</sup>	15	15	M36x2	35	7	4	12.5
IS - 250-...	160	26	50	70	70	60	128	80	22	75	200 <sup>±1.6</sup>	25	25	M42x2	45	11	4.5	10.5

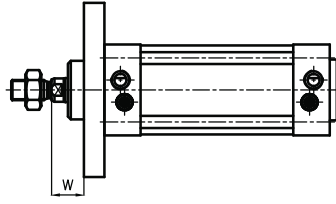
	L4 ±0.5	L7	MF JS14	MM	MR max.	PL	PH JS15	R JS14	RA JS14	RT	R2 H15	Q	SA	SW	TD e9	TE JS14	TF JS14	TG
IS - 125-...	10	80 <sup>-21</sup>	20	32	26	26.5	90	90	60	M12	31.5	5	250 <sup>±2</sup>	27	25	94	180	110 <sup>±1.1</sup>
IS - 160-...	10	115 <sup>-23</sup>	20	40	31	25	115	115	88	M16	32.5	7.5	300 <sup>±2</sup>	36	32	118	230	140 <sup>±1.1</sup>
IS - 200-...	11	135 <sup>-26</sup>	25	40	31	25	135	135	90	M16	37.5	9	320 <sup>±2</sup>	36	32	122	270	175 <sup>±1.1</sup>
IS - 250-...	11	165 <sup>-31</sup>	25	50	41	30	165	165	110	M20	45	10	350 <sup>±2</sup>	46	40	150	330	220 <sup>±1.5</sup>

	TK	TL h14	TM h14	TR JS14	UB h14	UF	UL	UR	UW	X	XA	XD	XV min.	XV max.	VA -1	VD	W ±2.5	WH	ZF ±2
IS - 125-...	40	25	160	90	130	210	124	90	145	333	270 <sup>±2</sup>	275 <sup>±2</sup>	130	160	6	10	45	65	245
IS - 160-...	48	32	200	115	170	280	156	126	185	417	320 <sup>±2</sup>	315 <sup>±2</sup>	154	186	6	10	60	80	280
IS - 200-...	48	32	250	135	170	320	162	130	225	432	345 <sup>±2</sup>	335 <sup>±2</sup>	169	201	6	25	70	95	300
IS - 250-...	65	40	320	165	200	395	200	160	280	486	380 <sup>±2</sup>	375 <sup>±2</sup>	197.5	212.5	10	25	80	105	330

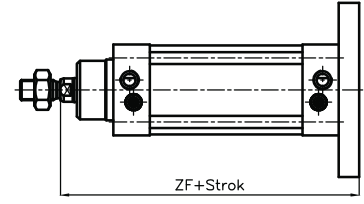
## Bağlantı şekilleri / Mountings types



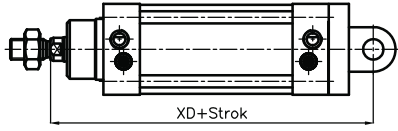
**Ayak bağlantı**  
Foot mounting



**Ön flaş bağlantı**  
Front flange mounting



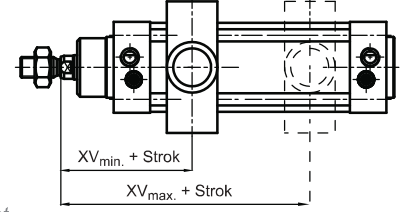
**Arka flaş bağlantı**  
Rear flange mounting



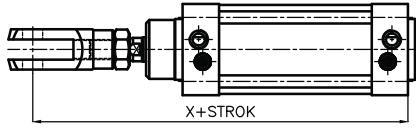
**Eklem bağlantı**  
Swivel flange mounting



**Eklem yer bağlantı**  
Swivel flange mounting with clevis foot

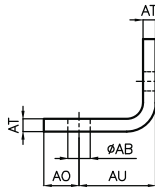


**Orta eklem bağlantı**  
Trunnion mounting

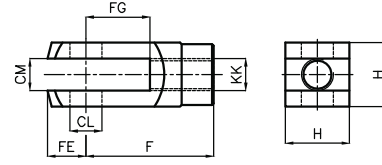
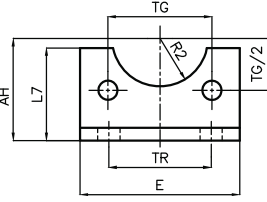


**Çatal Bağlantı / Piston rod clevis mounting**

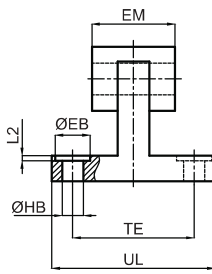
## Bağlantı parçaları / Mountings



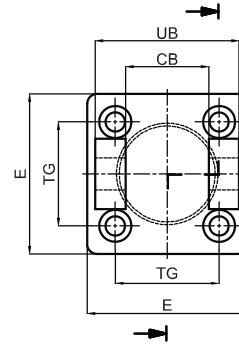
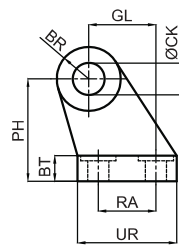
**IAB: Ayak bağlantı**  
Foot mounting



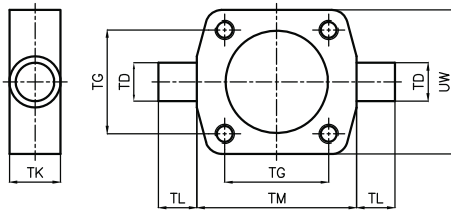
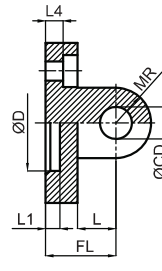
**IÇB: Çatal Bağlantı**  
Piston rod clevis mounting



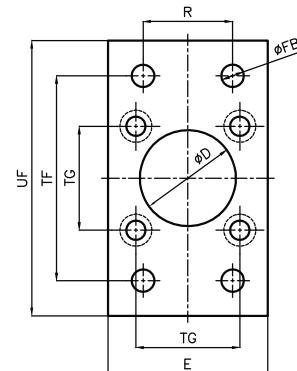
**IYB: Yer bağlantı**  
Clevis foot



**IEB: Eklem bağlantı**  
Swivel flange mounting

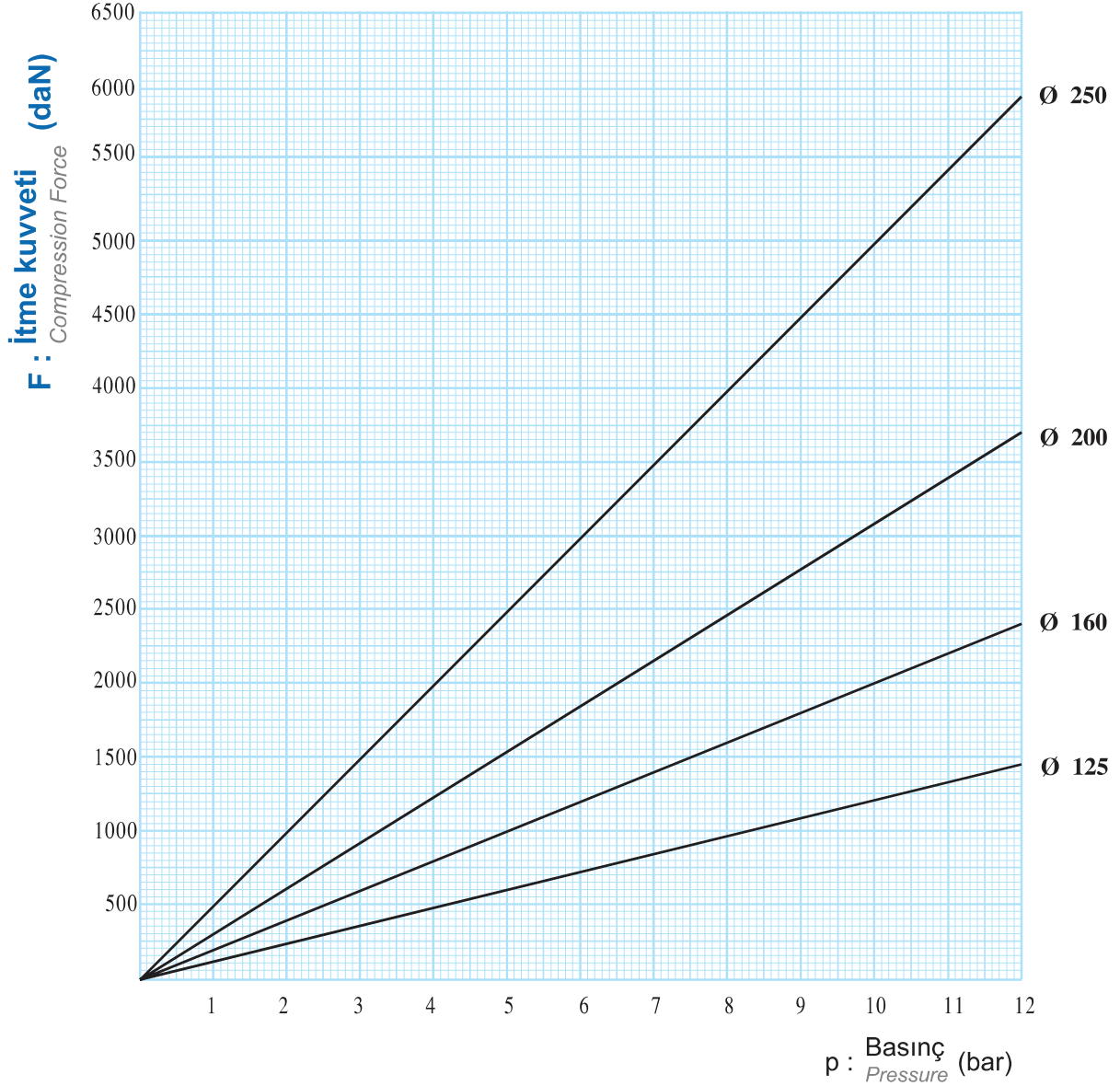


**IOEB: Orta eklem bağlantı**  
Trunnion mounting



**IFB: Flaş bağlantı**  
Flange mounting

## İtme kuvveti / Compression force : (daN)



## Ağırlık / Weight : (kg)

Silindir çapı	Strok=0 da	Her10mm. strok için	IAB	IFB	IEB	IYB	IOEB	IÇB
125	6.000	0.143	2.26	1.38	1.57	1.05	2.72	1.42
160	10.800	0.220	4.90	2.73	2.83	3.00	5.48	3.78
200	14.220	0.250	8.10	4.33	3.72	3.25	7.93	3.78
250	25.828	0.362	13.32	6.50	5.83	5.31	17.86	5.77



LN - . . . - . . .

**Montaj Yapılacak  
Piston Çapı**

*Diameter Of The  
Cylinder To Be Mounted*

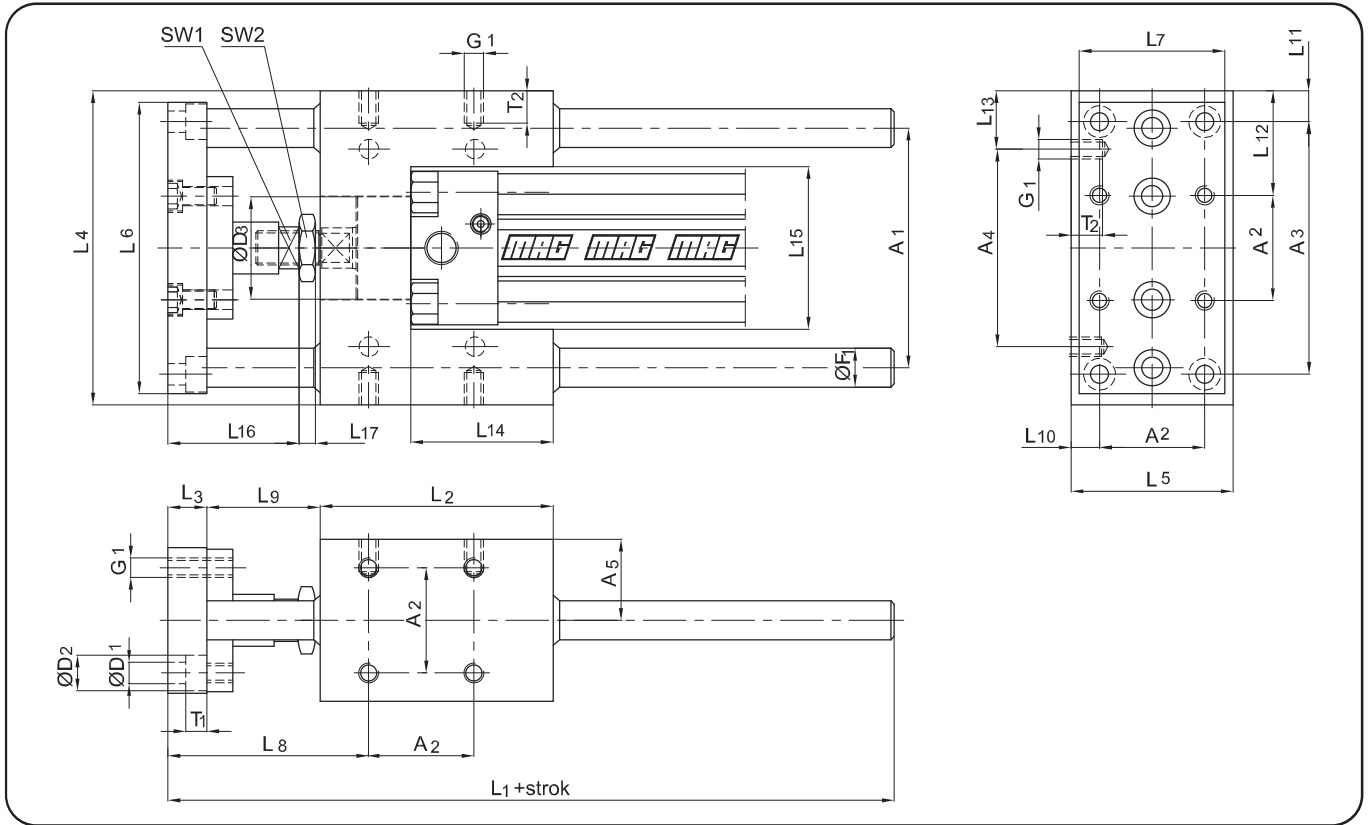
32, 40, 50, 63, 80, 100

**Standart Stoklar**

*Standard Strokes*

50, 100, 160, 200,  
300, 400, 500

# Ölçüler / Dimensions



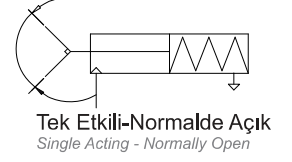
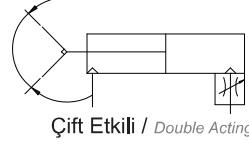
	A1	A2	A3	A4	A5	D1	D2	D3	F1	G1	L1	L2	L3	L4	L5	L6
LN - 32	74	32,5	78	61	25	6,6	11	31	12	M6	132	72	12	97	50	90
LN - 40	87	38	84	69	29	6,6	11	36	16	M6	149	84	12	115	58	110
LN - 50	104	46,5	100	85	35	9	15	41	20	M8	175	100	15	137	70	130
LN - 63	119	56,5	105	100	42,5	9	15	40	20	M8	190	115	15	152	85	145
LN - 80	148	72	130	130	52,5	11	18	48	25	M10	250	150	20	189	105	180
LN - 100	172	89	150	150	65	11	18	50	25	M10	270	165	20	215	130	200

	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	SW1	SW2	T1	T2
LN - 32	45	57	30	8,75	9,5	32,25	18	44	50,2	38	6	13	17	6,5	10
LN - 40	54	66	39	10	15,5	38,5	23	51	58,2	45	6	15	19	6,5	10
LN - 50	63	75	45	11,75	18,5	45,25	26	60	70	53	7	22	24	9	13
LN - 63	80	75	45	14,25	23,5	47,75	26	75	85,2	53	7	22	24	9	13
LN - 80	100	109	69	16,5	29,5	58,5	29,5	114	102	68	9	27	30	11	16
LN - 100	120	118	73	20,5	32,5	63	32,5	128	132	68	9	27	30	11	16



# PNÖMATİK TUTUCU-AÇILI PNEUMATIC AIR GRIPPER-ANGULAR (Y TYPE)

CYLINDERS SİLİNDİRLER

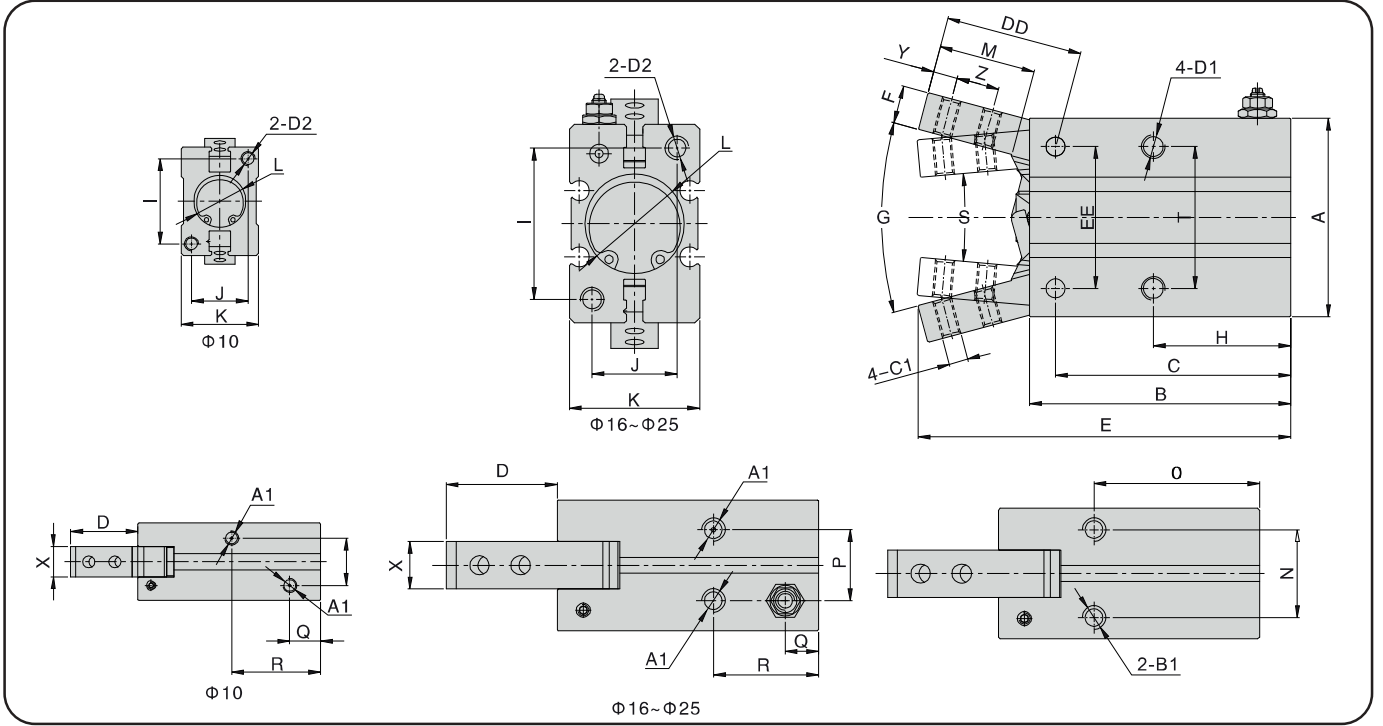


PTA -

Çap Diameter
10, 16, 20, 25

Tip / Type	
CE	Çift Etkili / Double Acting
TE-NA	Tek Etkili-Normalde Açık Single Acting - Normally Open

# Ölçüler / Dimensions



	A	A1	B	B1	C	C1	D	DD	D1	D2	E	EE	F	G	H
PTA-10	23	M3x0.5	38.6	M3x0.5	35.8	M2.5x0.45	14.2	17.2	M3x0.5	M3x0.5	52.8	14	4	30°	23
PTA-16	30.6	M5x0.8	44.6	M4x0.7	39.7	M3x0.5	18.9	23.6	M4x0.7	M4x0.7	63.5	24	7	30°	24.5
PTA-20	42	M5x0.8	55.2	M5x0.8	49.7	M4x0.7	23.5	29	M5x0.8	M5x0.8	78.7	30	8	30°	29
PTA-25	52	M5x0.8	60.4	M6x1.0	54.8	M5x0.8	32.8	38.5	M6x1.0	M6x1.0	93.2	36	10	30°	30

	I	J	K	L	M	N	O	P	Q	R	S	T	X	Y	H
PTA-10	18	12	16.4	Ø11	12.5	11.4	27	10	6.5	18.8	10°	16	6.4	3	5.7
PTA-16	22	15	23.6	Ø17	16.5	16	30	13	6.5	18.3	10°	24	8	4	7
PTA-20	32	18	27.6	Ø21	20.5	18.6	35	15	7	22.2	10°	30	10	5.2	9
PTA-25	40	22	33.6	Ø26	27.5	22	36.5	19.5	7.4	23.5	10°	36	12	8	12

## Teorik Tutma Kuvveti

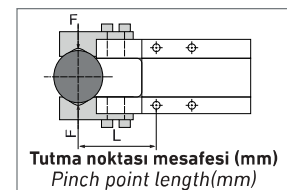
Theoretical Clamping Torque

Tip Type	* Teorik Tutma Momenti (N.cm) Theoretical clamping moment(N.cm)		Tutma Noktası Mesafesi Pinch point length	Açma Açısı Open angle	Kapama Açısı Closure angle
	Kapama Tutma Kuvveti Closure clamping torque	Açma Tutma Kuvveti Open clamping torque			
PTA-10-CE	8.8	14.7	30	30 <sup>+3</sup> <sub>0</sub>	-10 <sup>0</sup> <sub>-3</sub>
PTA-16-CE	45	64.5	40		
PTA-20-CE	76	126	60		
PTA-25-CE	152	236.5	70		
PTA-10-TE-NA	5.9		30		
PTA-16-TE-NA	35.6		40		
PTA-20-TE-NA	61.2		60		
PTA-25-TE-NA	126		70		

\* 5 bar çalışma basıncındaki değerler esas alınmıştır.

## Özellikler / Specifications

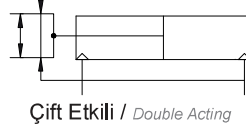
Çap (Diameter)	10	16	20	25
Uygulama Basıncı Aralığı Applicable pressure range	Çift Etkili Double acting	1.5~7 bar	1~7 bar	
	Tek Etkili Single acting	3~7 bar	2.5~7 bar	
Çalışma Sıcaklığı Working temperature	-20~80°			
Port Ölçüsü Port size	M3x0.5	M5x0.8		
Ağırlık(g) Weight(g)	42	94	174	303



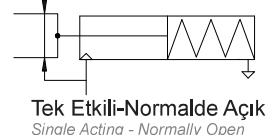
Tutma noktası mesafesi (mm)  
Pinch point length(mm)

# PNÖMATİK TUTUCU-PARALEL PNEUMATIC AIR GRIPPER-PARALLEL

CYLINDERS SİLİNDİRLER



Çift Etkili / Double Acting



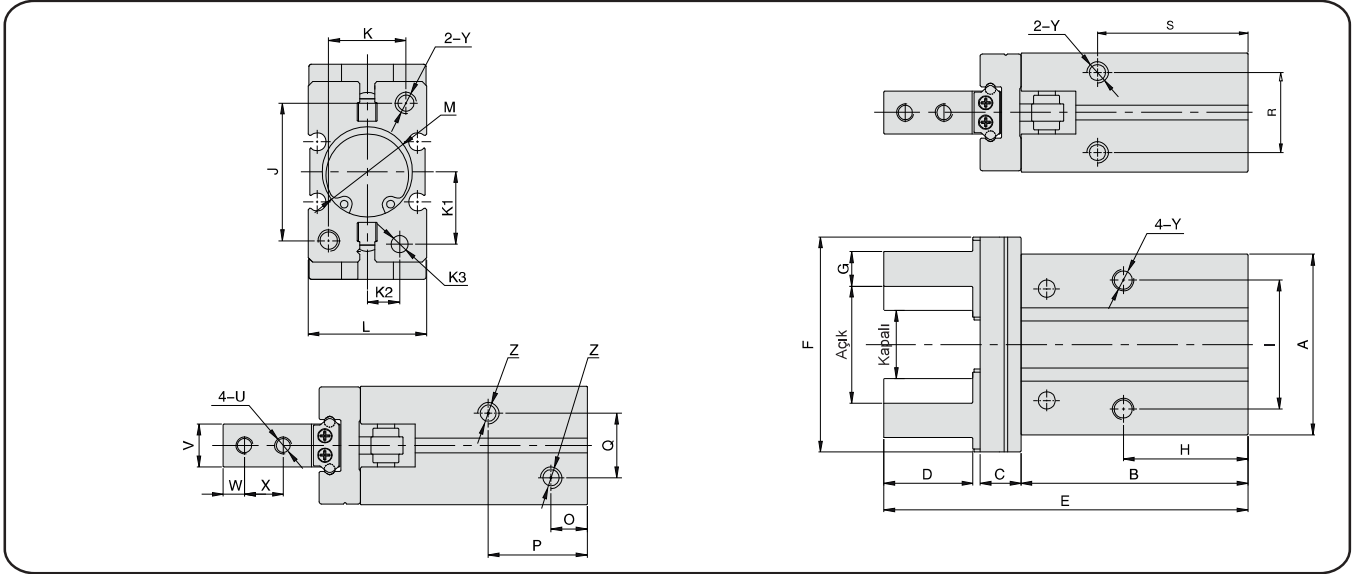
Tek Etkili-Normalde Açık  
Single Acting - Normally Open



**PTP -**

Çap Diameter	Tip / Type
10, 16, 20, 25	CE Çift Etkili / Double Acting
	TE-NA Tek Etkili-Normalde Açık Single Acting - Normally Open

# Ölçüler / Dimensions



	A	B	C	D	E	F	G	H	I	J	K	L	M	O	P
PTP-10	23	37.6	6	12.3	57	29	4 <sup>0</sup> <sub>-0.05</sub>	23	16	18	12	16.4	11 <sup>+0.05</sup> <sub>0</sub>	7	18.8
PTP-16	30.6	42.5	7.5	15.5	67.3	38	5 <sup>0</sup> <sub>-0.05</sub>	24.5	24	22	15	23.6	17 <sup>+0.05</sup> <sub>0</sub>	7.1	18.5
PTP-20	42	52.8	9.5	20.7	84.7	50	8 <sup>0</sup> <sub>-0.05</sub>	29	30	32	18	27.6	21 <sup>+0.05</sup> <sub>0</sub>	8.4	23
PTP-25	52	63.6	11	25.5	102.7	63	10 <sup>0</sup> <sub>-0.05</sub>	30	36	40	22	33.6	26 <sup>+0.05</sup> <sub>0</sub>	9.5	23.5

	Q	K1	K2	K3	R	S	U	W	V	X	Y	Z	Açık	Kapalı
PTP-10	10	7.6	5.2	2 <sup>+0.05</sup> <sub>0</sub>	11.4	27	M2.5x0.45	3	5 <sup>0</sup> <sub>-0.05</sub>	5.7	M3x0.5	M3x0.5	14.8 <sup>+2</sup> <sub>0</sub>	11.4 <sup>0</sup> <sub>-0.7</sub>
PTP-16	13	11	6.5	3 <sup>+0.05</sup> <sub>0</sub>	16	30	M3x0.5	4	8 <sup>0</sup> <sub>-0.05</sub>	7	M4x0.7	M5x0.8	20.8 <sup>+2</sup> <sub>0</sub>	14.8 <sup>0</sup> <sub>-0.7</sub>
PTP-20	15	16.8	7.5	4 <sup>+0.05</sup> <sub>0</sub>	18.6	35	M4x0.7	5	10 <sup>0</sup> <sub>-0.05</sub>	9	M5x0.8	M5x0.8	26 <sup>+2</sup> <sub>0</sub>	16.2 <sup>0</sup> <sub>-0.7</sub>
PTP-25	19.5	21.8	10	4 <sup>+0.05</sup> <sub>0</sub>	22	36.5	M5x0.8	6	12 <sup>0</sup> <sub>-0.05</sub>	12	M6x1.0	M5x0.8	33.5 <sup>+2</sup> <sub>0</sub>	19.2 <sup>0</sup> <sub>-0.7</sub>

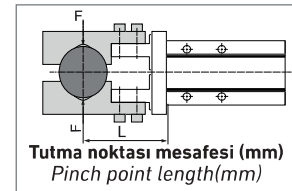
## Tutma Kuvveti ve Hareket

Clamping Force and Stroke

Tip Type	Tek Hava Parmağının Sıkma Kuvveti (N) Clamping force effective value of single air finger(N)		Hareket (iki Taraflı) Stroke (two side) (L) (mm)
	Kapatma Sıkma Torku Closure clamping torque	Açık Sıkma Torku Open clamping torque	
PTP-10-CE	11	17	4
PTP-16-CE	34	45	6
PTP-20-CE	45	68	10
PTP-25-CE	69	102	14
PTP-10-TE-NA	7	-	4
PTP-16-TE-NA	27	-	6
PTP-20-TE-NA	35	-	10
PTP-25-TE-NA	55	-	14

## Özellikler / Specifications

Çap (Diameter)		10	16	20	25
Uygulama Basınç Aralığı Applicable pressure range	Çift Etkili Double acting	1.5~7 bar		1~7 bar	
	Tek Etkili Single acting	3~7 bar		2.5~7 bar	
Çalışma Sıcaklığı Working temperature		-20~80°			
Port Ölçüsü Port size		M3x0.5		M5x0.8	
Ağırlık(g) Weight(g)		52	120	236	430





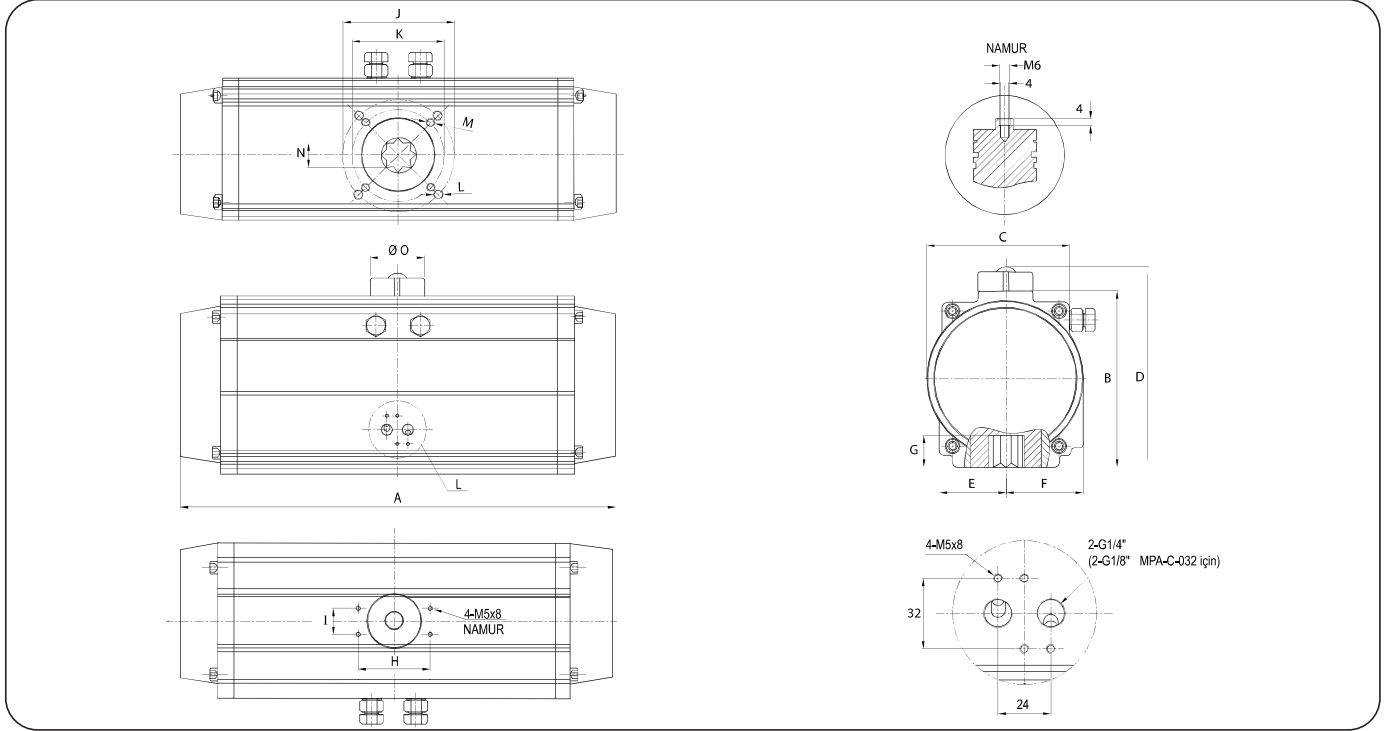
### MPA

C	Çift Etkili Double Acting	● ● ●	Aktüatör Çapı Actuator Diameter	● ● ●	Dönme Açısı Rotation Angle
			032		090 90°
			040		
			052		
			063		
			075		
			083		
			105		

### TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

Çalışma Basıncı / Working Pressure : 3 - 8 bar  
Çalışma Sıcaklığı / Working Temperature : -20°C.....+80°C

# Ölçüler / Dimensions



	A	B	C	D	E	F	G	H	I	Vana Bağlantı ISO5211		L	M	N	O	P	Ağırlık / Weight (kg)
										J	K						
MPA-C-032	112	45	51	71	22.5	28.5	12	50	25		F03/Ø36		M5x8	9	Ø40	G 1/8"	0.65
MPA-C-040	124	59.5	65	86	36.4	24	14	80	30	F05/Ø50	F03/Ø36	M6x9	M5x8	11	Ø40	G 1/4"	1
MPA-C-052	163.5	72	65	98	26	42	14	80	30	F05/Ø50	F03/Ø36	M6x9	M5x8	11	Ø40	G 1/4"	1.52
MPA-C-063	181	87.6	71	113	33	47	18	80	30	F07/Ø70	F05/Ø50	M8x10	M6x9	14	Ø40	G 1/4"	2.28
MPA-C-075	207	99.4	80.2	125	38.7	52.5	20	80	30	F07/Ø70	F05/Ø50	M8x12	M6x9	14	Ø40	G 1/4"	3.12
MPA-C-083	213	108.9	91.6	134.5	40	56.5	21	80	30	F07/Ø70	F05/Ø50	M8x12	M6x9	17	Ø40	G 1/4"	3.48
MPA-C-105	287	133	109.5	158.5	52	64	24.5	80	30	F10/Ø102	F07/Ø70	M10x15	M8x12	22	Ø40	G 1/4"	6.52

## Çıkış Tork Değeri (Nm)

Output Torques (Nm)

	Hava Basıncı / Air Pressure (bar)						
	2	3	4	5	6	7	8
MPA-C-032	2.78	4.20	6.00	7.50	9.00	10.00	11.50
MPA-C-040	4.44	6.56	9.83	11.72	14.06	15.63	17.97
MPA-C-052	8.32	12.48	16.64	20.80	24.96	29.12	33.28
MPA-C-063	14.64	21.96	29.28	36.60	43.92	51.24	58.56
MPA-C-075	23.50	35.30	47.00	58.80	70.50	82.30	94.00
MPA-C-083	29.70	44.50	59.40	74.20	89.10	103.90	118.80
MPA-C-105	67.88	101.82	136.76	169.70	203.64	237.58	271.52

## Hava Tüketim Miktarı (L)

Air Consumption (L)

	Açma	Kapama
MPA-C-032	0.035	0.045
MPA-C-040	0.062	0.082
MPA-C-052	0.09	0.12
MPA-C-063	0.14	0.20
MPA-C-075	0.21	0.30
MPA-C-083	0.29	0.41
MPA-C-105	0.70	0.99

# PNÖMATİK SİLİNDİR SENSÖRLERİ

## PNEUMATIC CYLINDER SENSORS

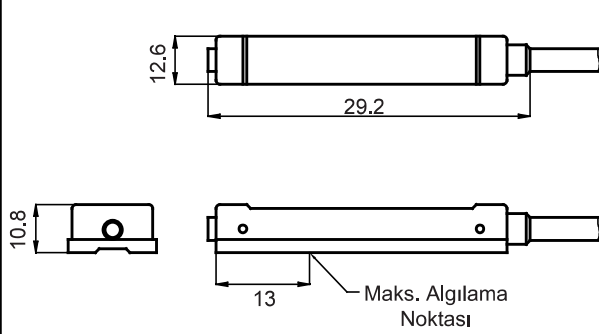
SENSORS SENSÖRLER



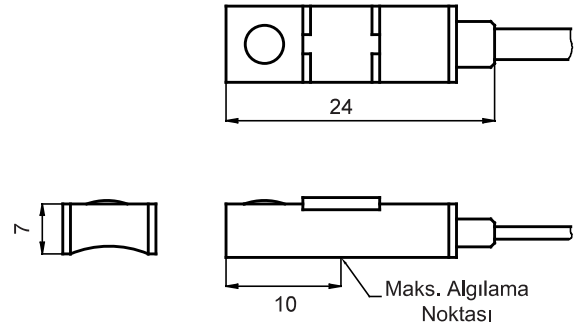
### TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

Sensör	Çalışma Voltaj Aralığı	Çalışma Akım Aralığı	Tepki Süresi	Darbe Direnci	Titreşim Direnci	Çalışma Sıcaklığı Aralığı	Koruma Sınıfı	Gösterge Lambası	Devir Ömrü
<b>MCS1-F</b> (IS Büyük Seri)	DC:5V~240V AC:5V~380V	DC:5~60mA AC:5~50mA	1ms (Max.)	300m/S <sup>2</sup> (30g)	10~55 (Hz)	0~60 °C	IP-67	LED	≥ 5 x 10 <sup>6</sup>
<b>MCS1-Z</b> (KNSM-MNS(Y))	DC:5V~240V AC:5V~240V	DC:5~50mA AC:5~40mA	0.3ms (Max.)	300m/S <sup>2</sup> (30g)	10~55 (Hz)	0~60 °C	IP-67	LED	≥ 5 x 10 <sup>6</sup>
<b>MCS1-S</b> (YS-YSY-Mini Silindirler)	DC:5V~240V AC:5V~240V	DC:5~50mA AC:5~40mA	1ms (Max.)	300m/S <sup>2</sup> (30g)	10~55 (Hz)	0~60 °C	IP-67	LED	≥ 5 x 10 <sup>6</sup>
<b>MCS1-D</b> (IS KüçükSeri)	DC:5V~240V AC:5V~240V	DC:5~50mA AC:5~40mA	1ms (Max.)	300m/S <sup>2</sup> (30g)	10~55 (Hz)	0~60 °C	IP-67	LED	≥ 5 x 10 <sup>6</sup>
<b>MCS1-M</b> (KS Silindirler)	DC:5V~240V AC:5V~240V	DC:5~50mA AC:5~40mA	1ms (Max.)	300m/S <sup>2</sup> (30g)	10~55 (Hz)	0~60 °C	IP-67	LED	≥ 5 x 10 <sup>6</sup>
<b>MCS1-9B</b> (MYS Silindirler)	DC:5V~240V AC:5V~240V	DC:5~50mA AC:5~40mA	0.3ms (Max.)	300m/S <sup>2</sup> (30g)	10~55 (Hz)	0~60 °C	IP-67	LED	≥ 5 x 10 <sup>6</sup>

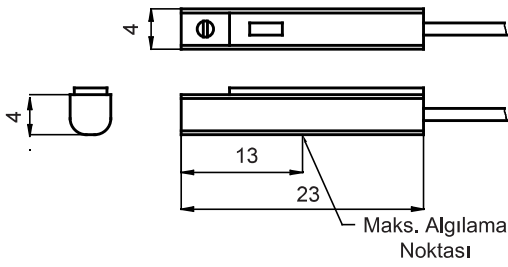
# Ölçüler / Dimensions



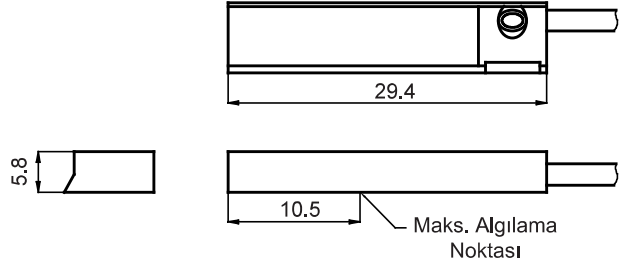
**MCS1-F**



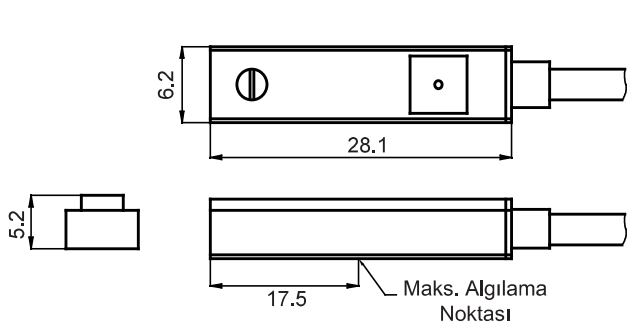
**MCS1-S**



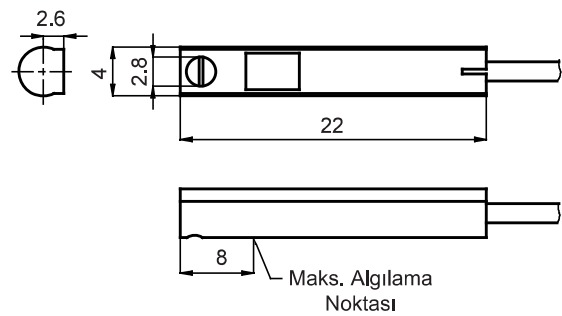
**MCS1-D**



**MCS1-Z**



**MCS1-M**



**MCS1-9B**