

**Characteristics**

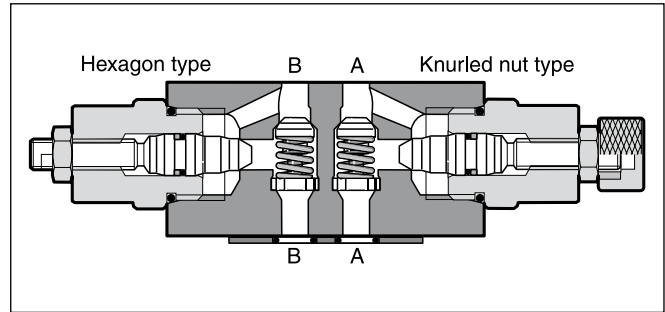
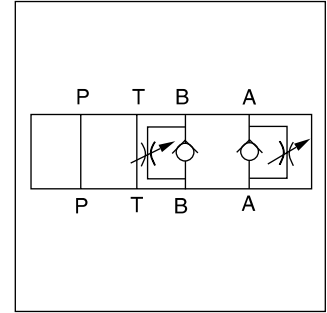
**Throttle Check Valve  
Series FM**

Double-throttle check valves from the Parker Manapak series FM are in sandwich design for easy configuration of stack systems. Throttle and check valves are located in ports A and B.

FM2 and FM3 can be used as meter-in or meter-out throttle by changing the mounting position.

FM4 can be selected by ordering code as meter-in or meter-out throttle. FM6 is only available as meter-out control.

The throttle check valve can also be used to influence the switching time of pilot operated directional valves. In this case, the valve is positioned between the pilot stage (CETOP03, NG06) and the main stage (CETOP05, NG10 up to CETOP10, NG32).



**Features**

- Three types of metering needle design can be selected when ordering FM2 and FM3 valves to achieve the throttle characteristics required to suit the application.
- Large bypass check valves allow high flow at low pressure drop.
- Sizes:
 

NG06 / CETOP 3	FM2
NG10 / CETOP 5	FM3
NG16 / CETOP 7	FM4
NG25 / CETOP 8	FM6

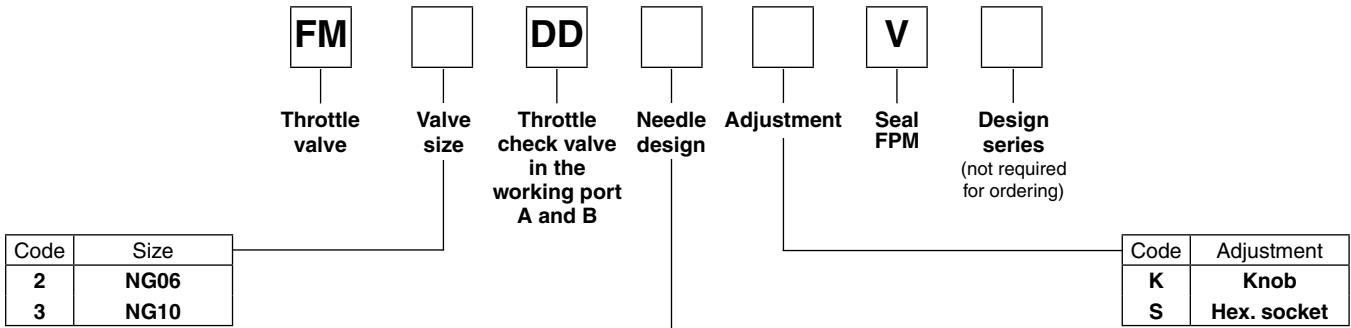
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**Technical data**

Series	FM2	FM3	FM4	FM6
Size	NG06	NG10	NG16	NG25
Mounting pattern	NFPA D03 CETOP 03	NFPA D05 CETOP 05	NFPA D07 CETOP07	NFPA D08 CETOP 08
Max. operating pressure [bar]	350	350	350	210
Max. flow	53 LPM	76 LPM	200 LPM	341 LPM
Opening pressure [bar]	0.3	0.3	0.3	0.3
Meter-in throttle	•	•	•	—
Meter-out throttle	•	•	•	•
Mounting position	unrestricted	unrestricted	unrestricted	unrestricted
Ambient temperature [°C]	max. +50	max. +50	max. +50	max. +50
Fluid temperature [°C]	max. +70	max. +70	max. +70	max. +70
Weight [kg]	1.3	2.4	5.4	7.9

# Throttle Check Valve Series FM

## Ordering Code

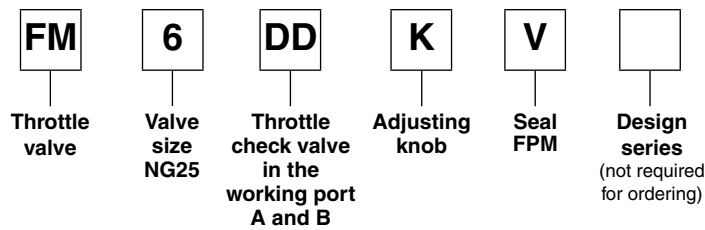
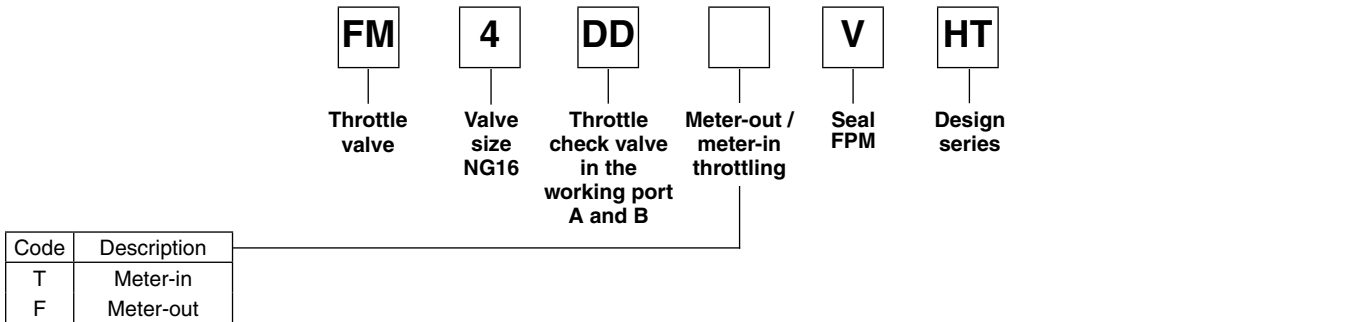


Code	Needle
omit	Standard conical
D	Fine, cylindrical Hollow bored with V notch

A two-stage needle provides fine adjustment in the lower flow range with 3 adjustment rotations. After 3 more rotations, the valve is completely open.

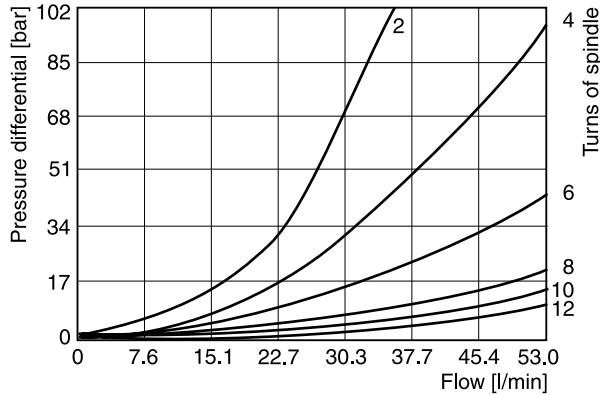
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Design "D"  
A cylindrical needle with a V notch allows the fine adjustment over the entire setting range.

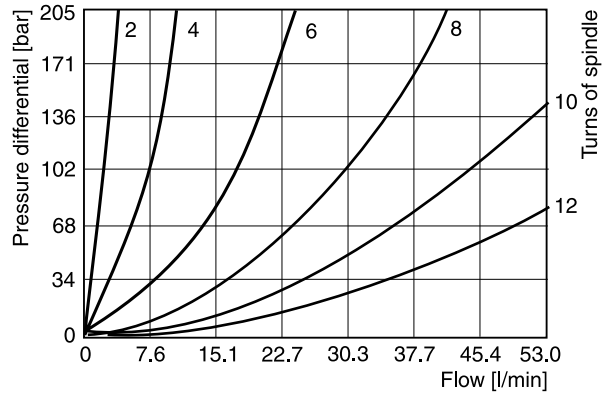


**Bold letters =  
Short-term availability**

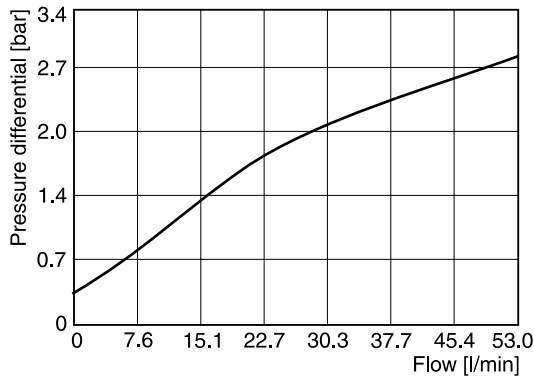
**FM2 standard needle**



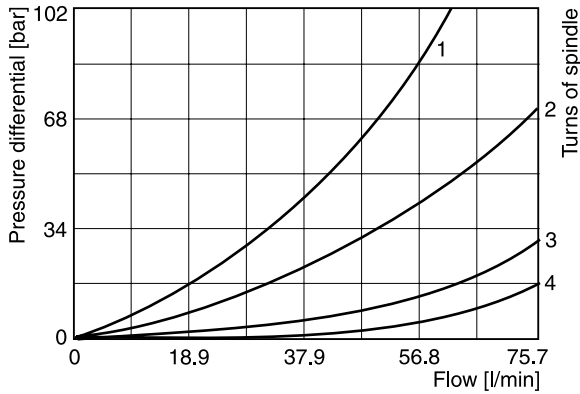
**FM2D needle with V notch**



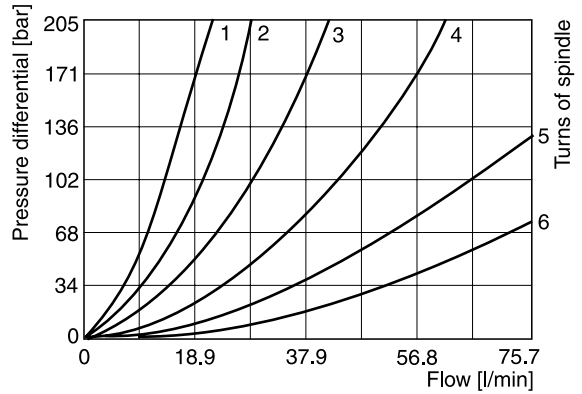
**FM2 flow, check valve**



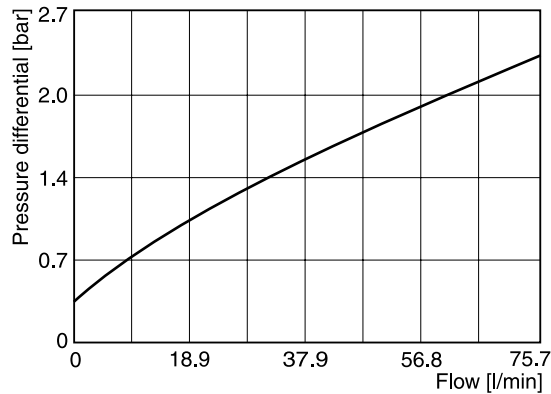
**FM3 standard needle**



**FM3D needle with V notch**

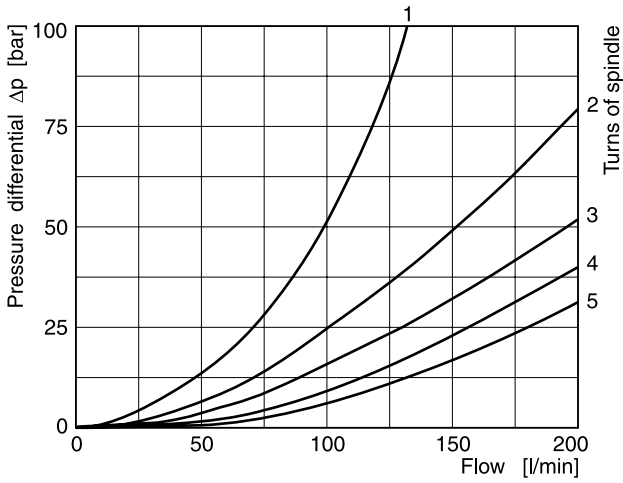


**FM3 flow, check valve**

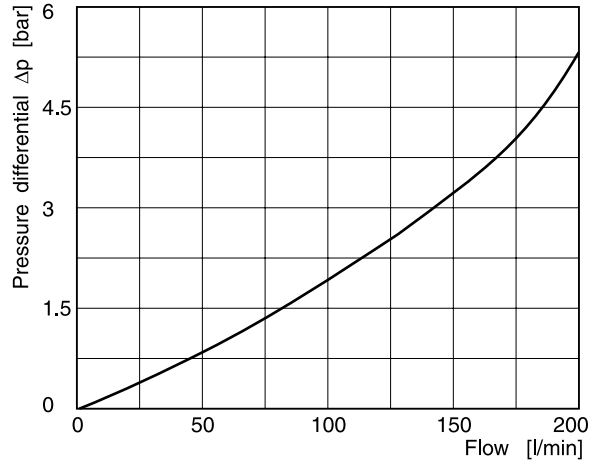


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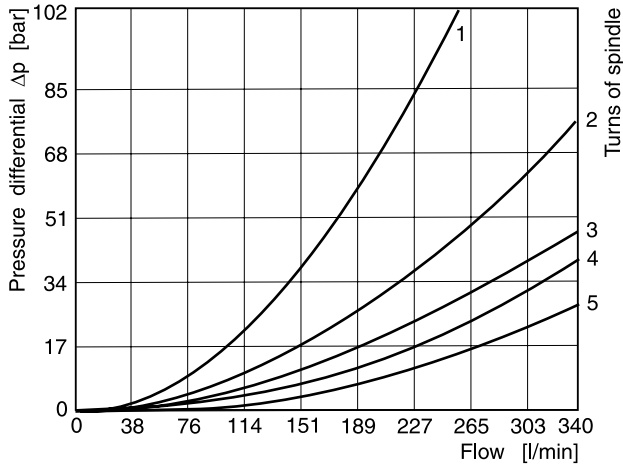
**FM4 with standard needle**  
 1 to 5 number of needle rotations



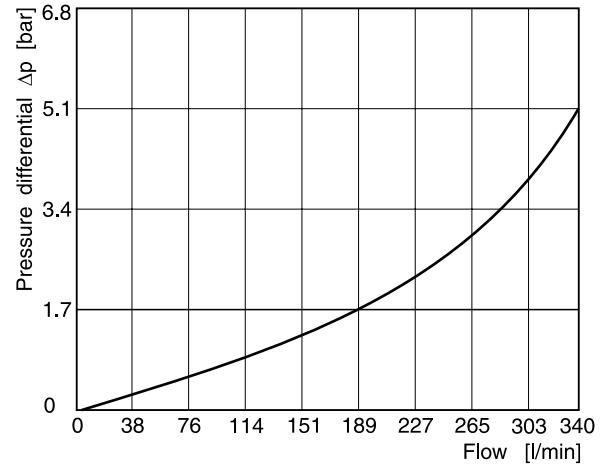
**FM4 flow, check valve**



**FM6 with standard needle**  
 1 to 5 number of needle rotations



**FM6 flow, check valve**

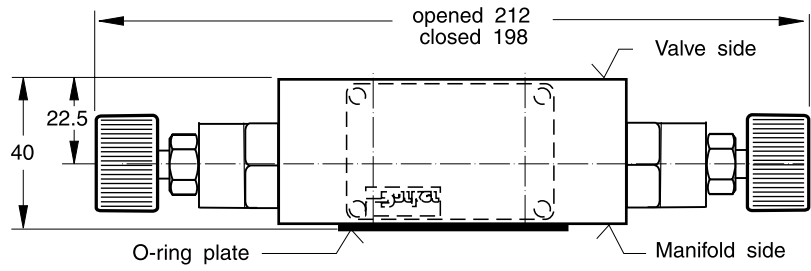
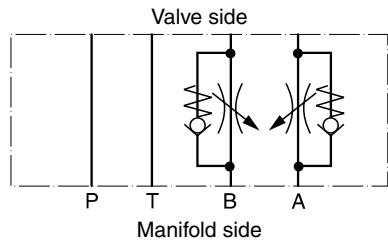


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**Dimensions**

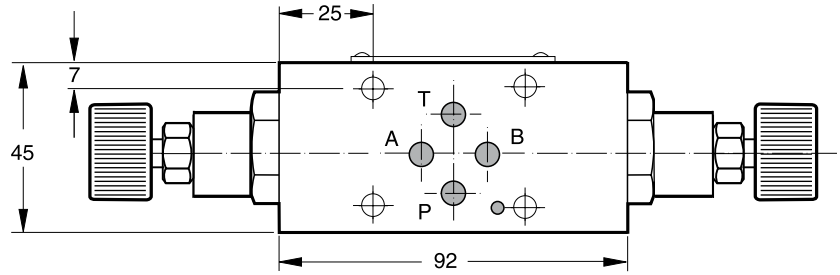
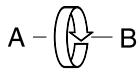
**FM2**

**Meter-in**

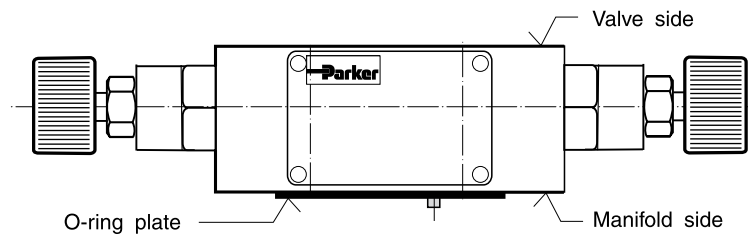
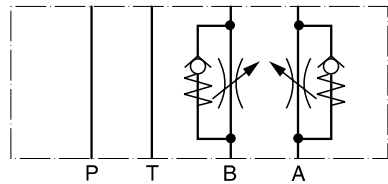


**Meter-in or meter-out**

A functional change is achieved by rotating the mounting position of the valve 180° about the longitudinal axis (A-B).



**Meter-out**



Seal kit FM2	
Seal	Order code
V	SK-FM2-V-20

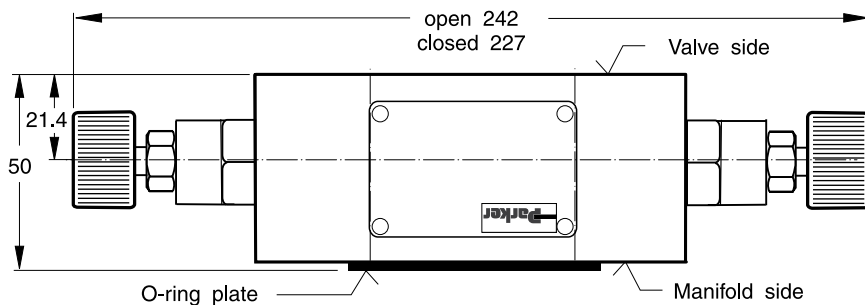
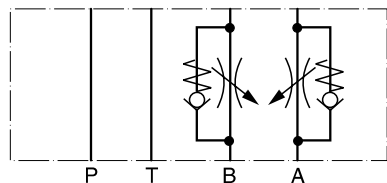
**Note:**

The O-ring plate (with O-rings) for sealing the connecting surface of the manifold side is included. The O-ring and positioning pin are always mounted on the manifold side.

**Dimensions**

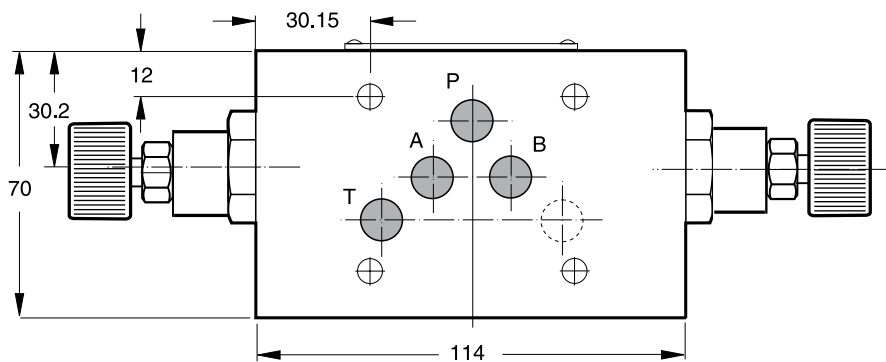
**FM3**

**Meter-in**

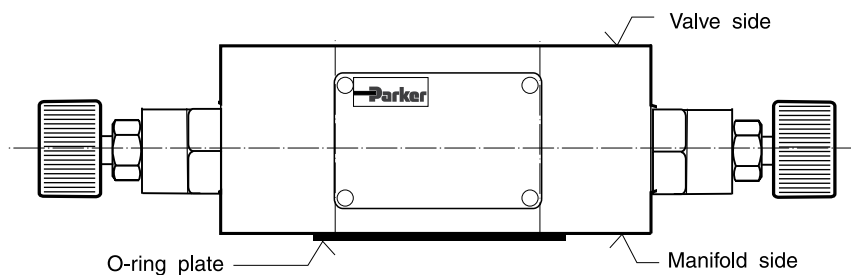
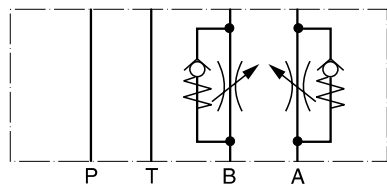


**Meter-in or meter-out**

A functional change is achieved by rotating the mounting position of the valve 180° about the transverse axis (P).



**Meter-out**



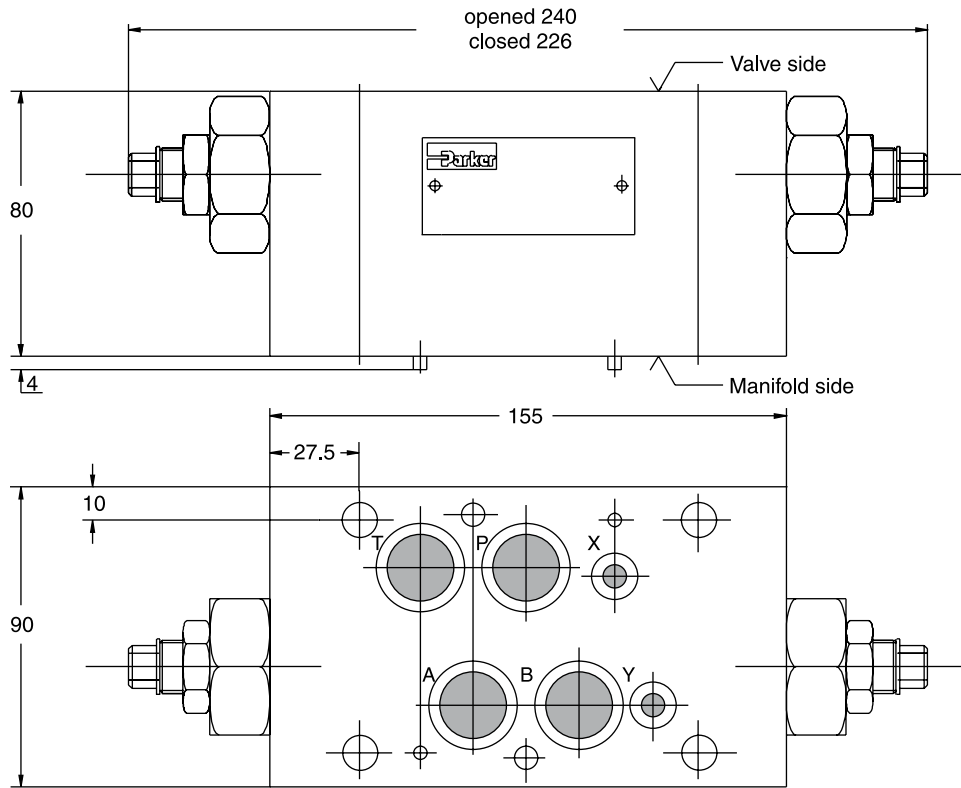
Seal kit FM3	
Seal	Order code
V	SK-FM3-V-20

**Note:**

The O-ring plate (with O-rings) for sealing the connecting surface of the manifold side is included. The O-ring and positioning pin are always mounted on the manifold side.

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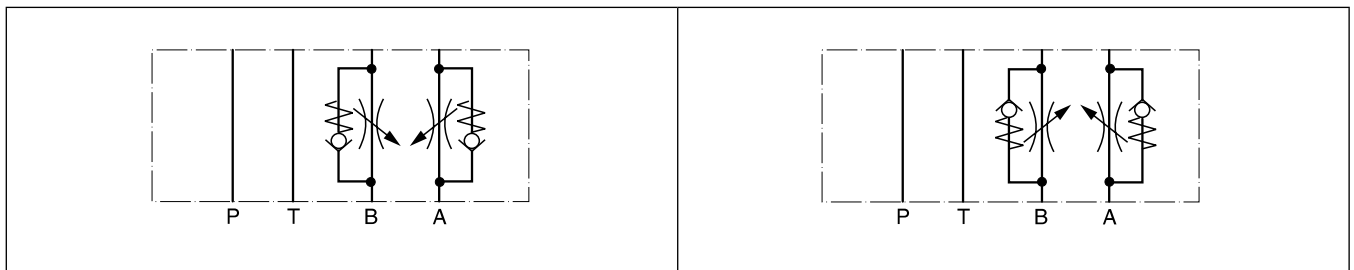
**FM4**



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**Meter-in**

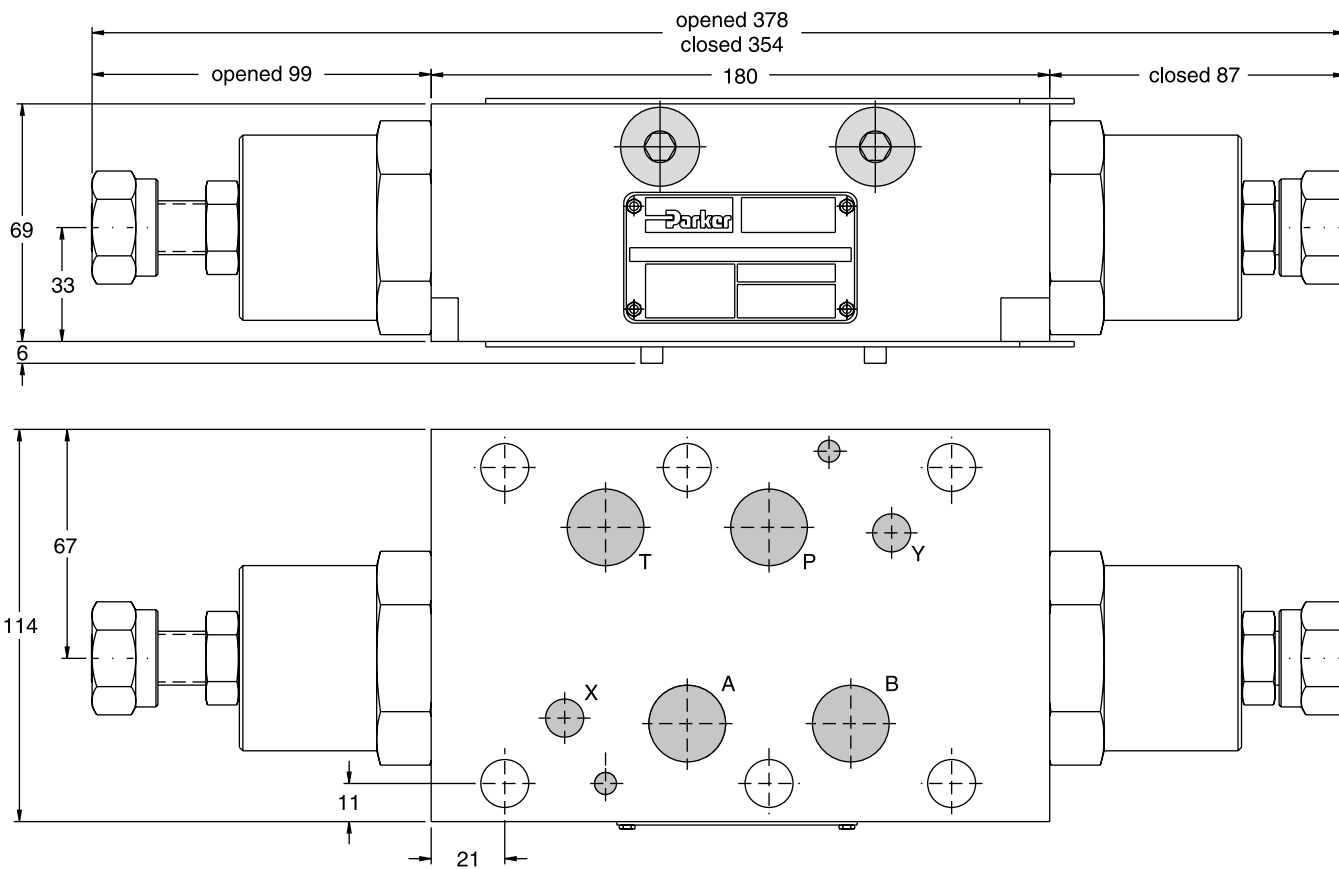
**Meter-out**



Seal kit FM4	
Seal	Order code
V	SK-FM4VHT

**Dimensions**

**FM6**

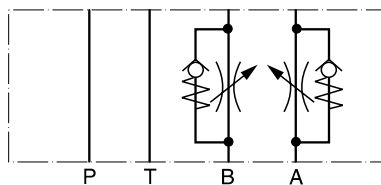


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**Meter-out**

Adjustment: knob

Meter-in is not available for FM6



Seal kit FM6	
Seal	Order code
V	SK-FM6-V-12