

Parker Series VBY Pilot Operated Pressure Relief Valves Service Manual

Pilot operated relief valves of the series VBY consist of a pilot with manual adjustment and a spool type main stage. The valves need to be externally drained.

The series VBY NG10 can also be used as pressure sequence valve, because of the high pressure capability in the outlet port and the external drain port. In this case the external drain port Y has to be used.

Features

- Subplate mounting acc. to ISO 5781
- Main stage spool type
- Pilot stage seated type
- 4 pressure stages
- 2 adjustment modes:
 - screw with hexagon socket
 - cylinder lock

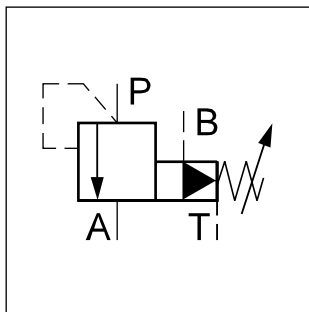
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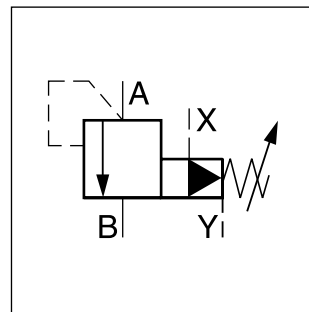
VBY*A06



VBY*A10

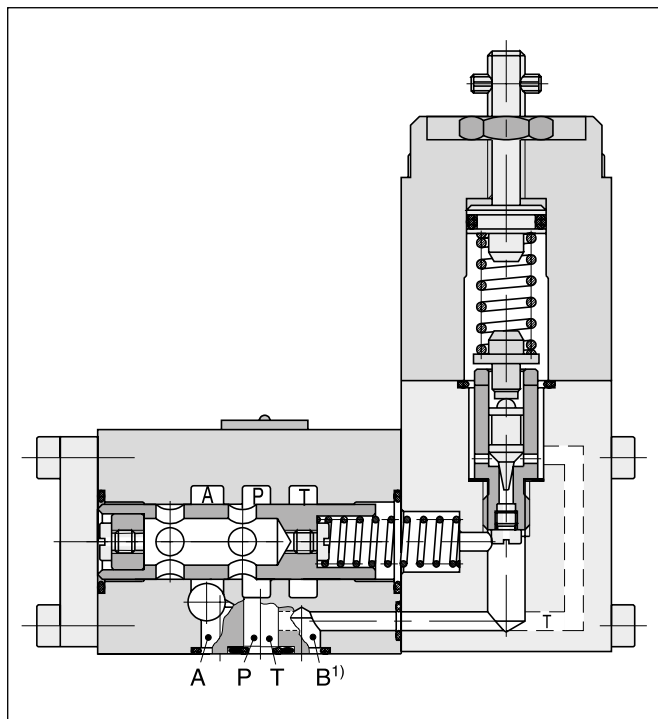


VBY*A06

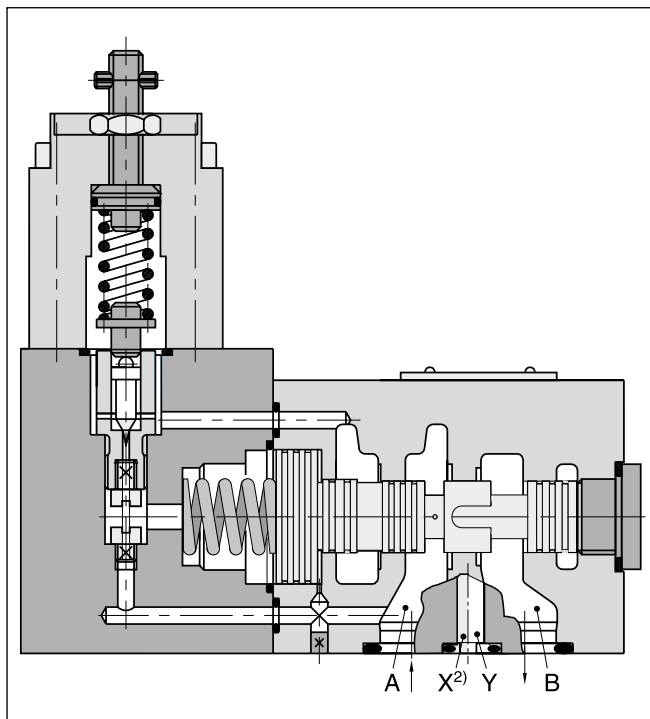


VBY*A10

VBY*A06



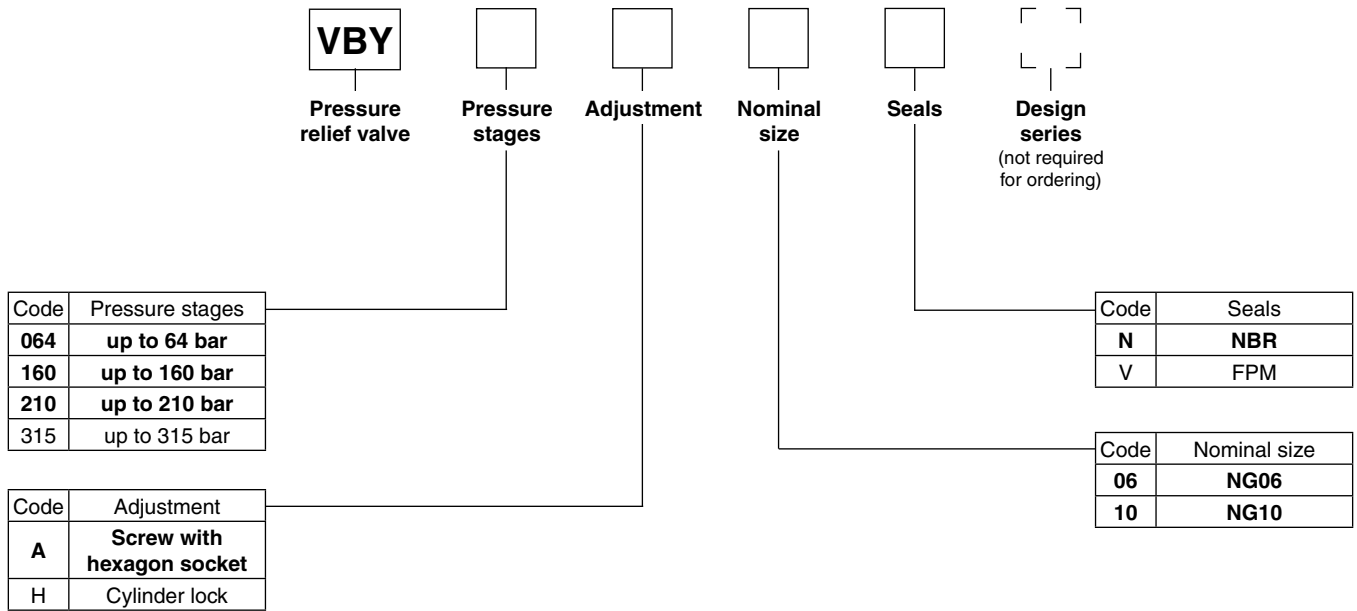
VBY*A10



¹⁾ Port B for remote control, otherwise to be blocked.

²⁾ Port X for remote control, otherwise to be blocked.

Ordering code



**Bold letters =
Short-term availability**

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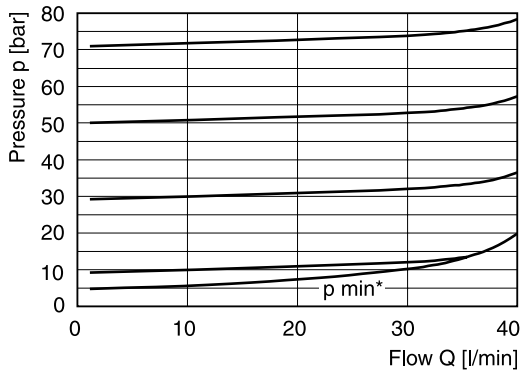
Technical data

General			
Design	Pilot operated pressure relief valve, spool type		
Nominal size	NG06		NG10
Interface	Subplate mounting according to ISO 5781		
Mounting position	unrestricted		
Ambient temperature	[°C]	-20...+60	
MTTF _D value	[years]	75	
Weight	[kg]	2.4	4.5
Hydraulic			
Max. operating pressure	[bar]	P, A 315, B blocked	A, B 350, X blocked
External drain port pressure	[bar]	T 100	Y 100
Pressure stages	[bar]	64, 160, 210, 315	
Fluid	Hydraulic oil according to DIN 51524		
Fluid temperature	[°C]	-20...+70 (NBR: -25...+70)	
Viscosity, permitted	[cSt] / [mm ² /s]	20...400	
Viscosity, recommended	[cSt] / [mm ² /s]	30...80	
Filtration	ISO 4406 (1999); 18/16/13		
Nominal flow	[l/min]	See p/Q curves	
Pilot oil flow	[cm ³ /min]	approx. 500	approx. 1000

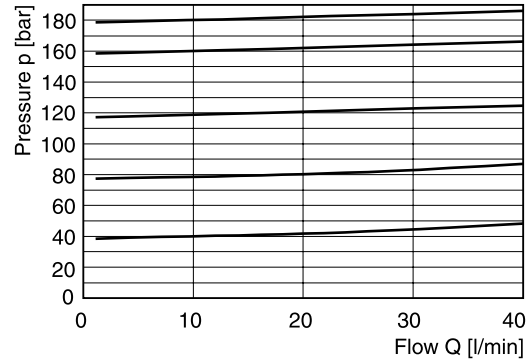
Characteristic Curves

p/Q performance curves NG06

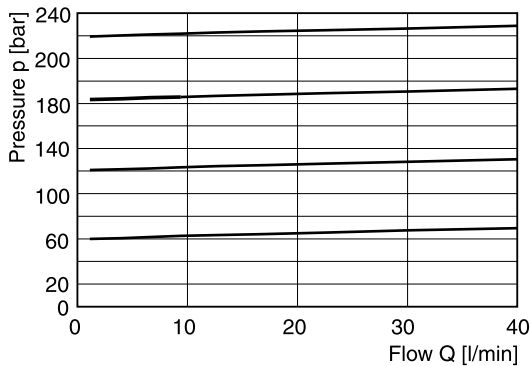
Max. 64 bar



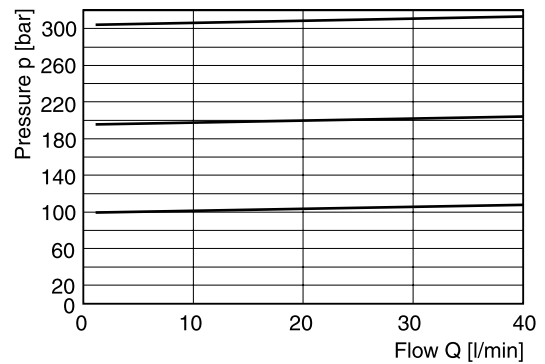
Max. 160 bar



Max. 210 bar

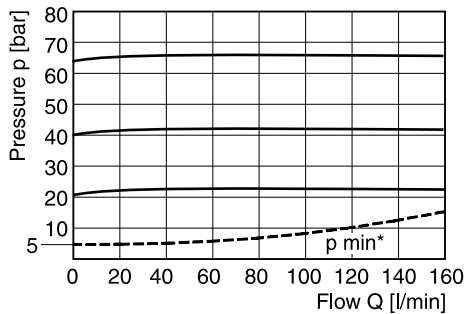


Max. 315 bar

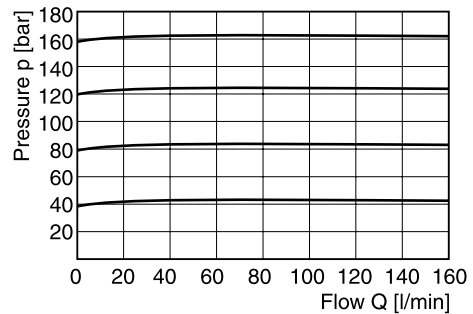


p/Q performance curves NG10

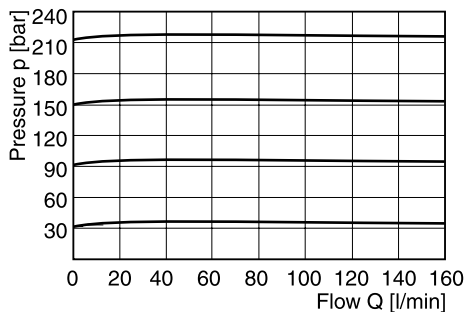
Max. 64 bar



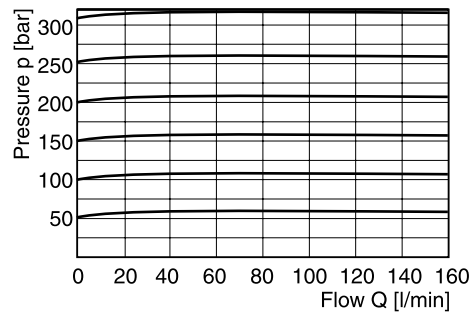
Max. 160 bar



Max. 210 bar



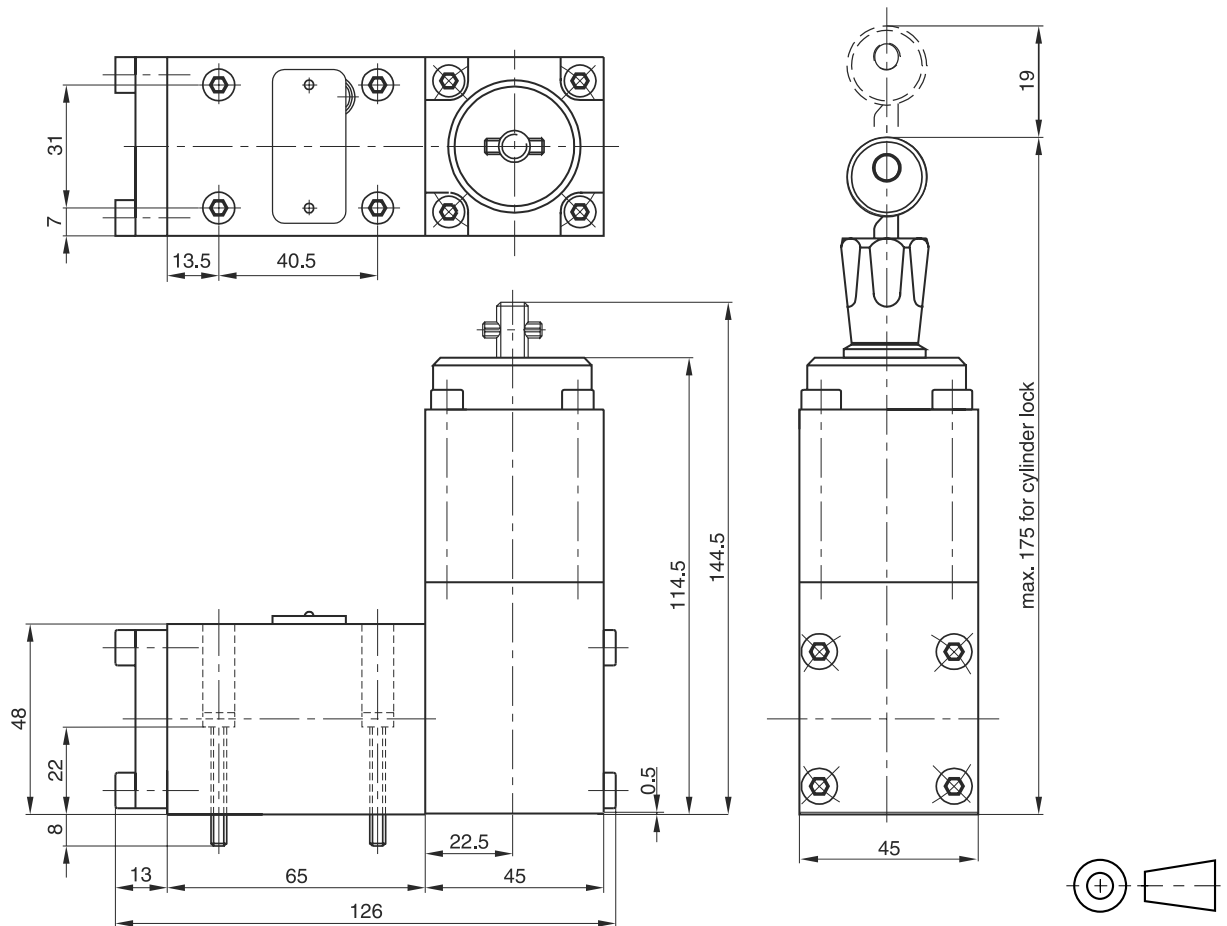
Max. 315 bar






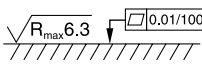
All characteristic curves measured with HLP46 at 50 °C.

* For all pressure stages.

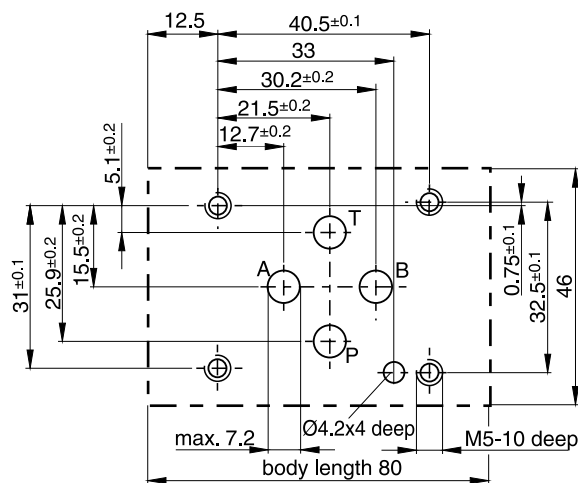
NG06



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Surface finish	Bolt kit			 Kit FPM
	BK375	4x M5x30 ISO 4762-12.9	7.6 Nm ±15 %	SK-VBY-A06V

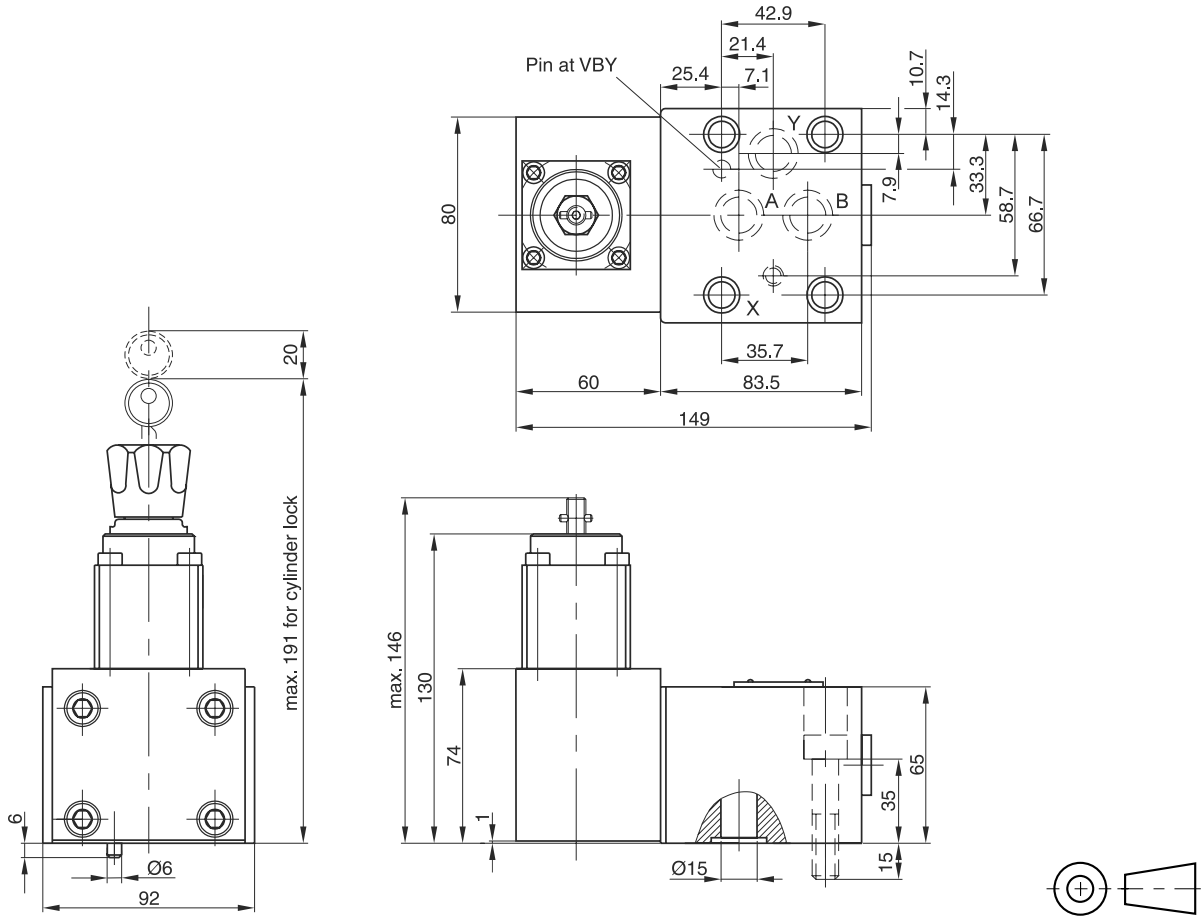
Mounting pattern ISO 5781-03-04-0-00

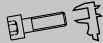


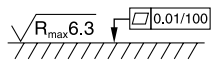


Dimensions

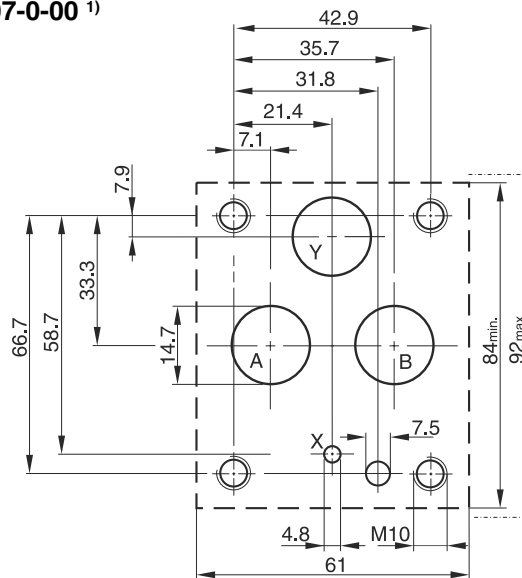
NG10

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Surface finish	Bolt kit			 Kit FPM
	BK389	4x M10x50 ISO 4762-12.9	63 Nm ±15 %	SK-VB/VM-A10V

Mounting pattern ISO 5781-06-07-0-00 ¹⁾



¹⁾ Deviating from ISO the Y port has Ø 14.7 instead of Ø 4.8.