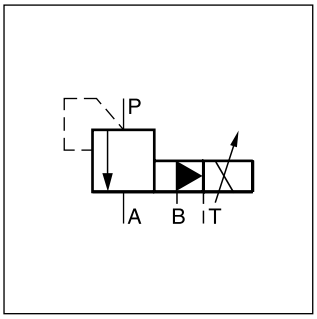
Pilot operated relief valve with proportional adjustment. Series VBY*K is a pilot operated pressure valve with external drain. Because of the high pressure capability of the outlet port the VBY*K NG10 can be used as sequence valve. In this case the external drain port Y has to be used.

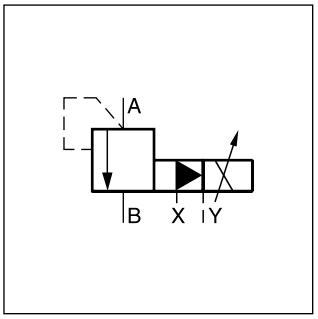
The optimum performance can be achieved in combination with the digital amplifier module PCD00A-400.

VBY*K06

VBY*K10



VBY*K06

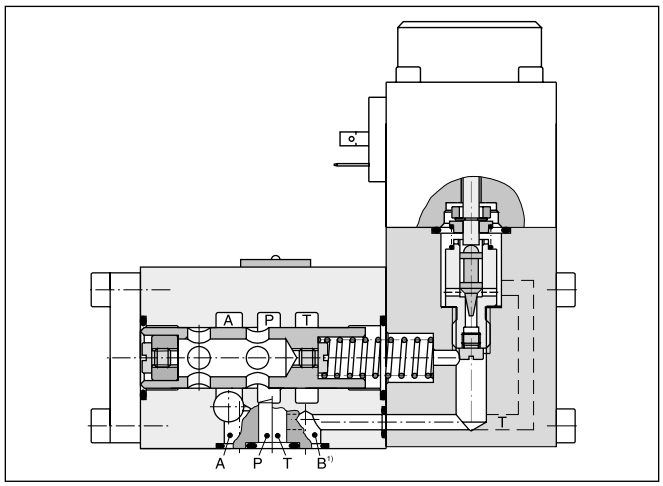


VBY*K10

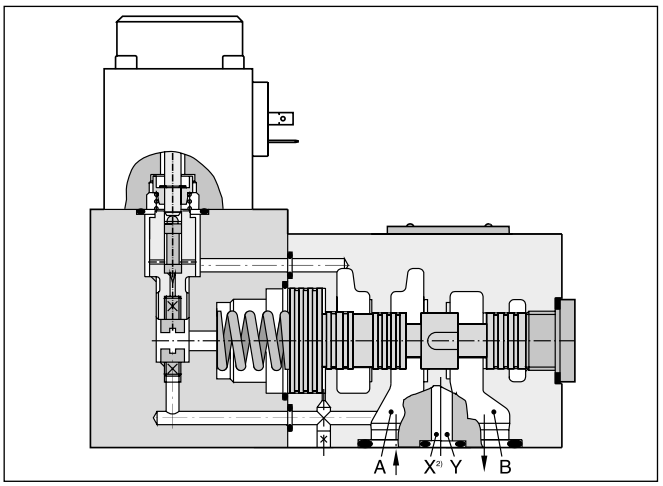
Features

- Proportional adjustment
- Subplate mounting acc. to ISO 5781
- External drain
- Main stage spool type valve
- Pilot stage seated type valve

VBY*K06



VBY*K10



Ordering code

VBY		**K**			
Pressure relief valve	**Max. setting range**	**Proportional solenoid 9 VDC / 2.5 A**	**Nominal size**	**Seals**	**Design series** (not required for ordering)

Code	Max. setting range
064	**64 bar**
100	100 bar
160	**160 bar**
210	210 bar
315	315 bar

Code	Seals
N	**NBR**
V	FPM

Code	Nominal size
06	**NG06**
10	**NG10**

Bold letters =
Short-term availability

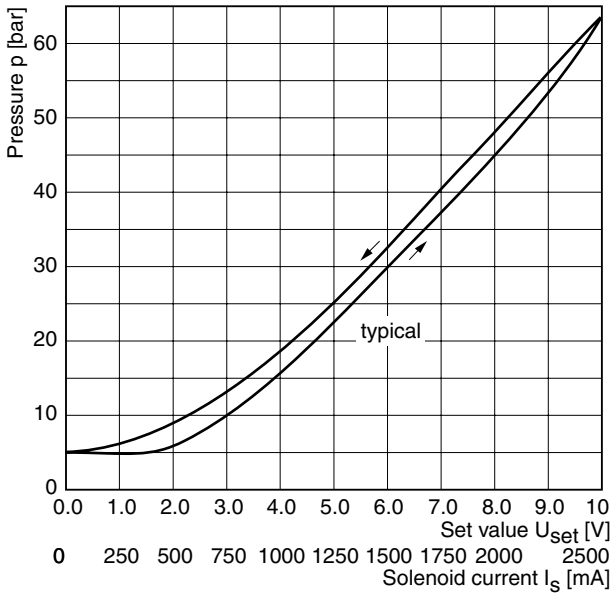
1) Port B for remote control, otherwise to be blocked.
2) Port X for remote control, otherwise to be blocked.

Technical data

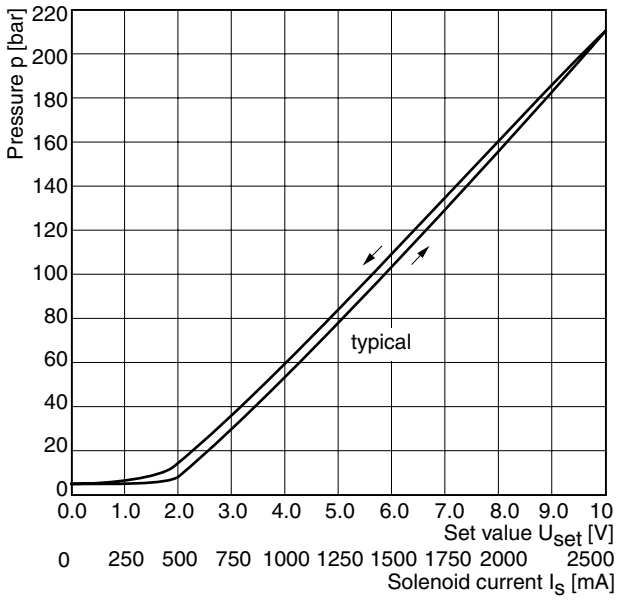
General				
Design			Proportional pressure relief valve	
Nominal size			**NG06**	**NG10**
Interface			Subplate mounting according to ISO 5781	
Actuation			Proportional solenoid	
Mounting position			unrestricted	
Ambient temperature		[°C]	-20 ... +60	
$MTTF_D$ value		[years]	75	
Weight		[kg]	2.4	4.5
Hydraulics				
Max. operating pressure		[bar]	P, A: 315, Port B blocked, Port T depressurized	A, B: 315, Port Y blocked, Port Y depressurized
Nominal flow		[l/min]	40	160
Adjustment range		[bar]	up to 64, 100, 160, 210, 315	
Fluid			Hydraulic oil according to DIN 51524	
Viscosity	permitted	[cSt] / [mm²/s]	20 ... 400	
	recommended	[cSt] / [mm²/s]	30 ... 80	
Fluid temperature		[°C]	-20...+70 (NBR: -25...+70)	
Filtration			ISO 4406 (1999); 18/16/13	
Linearity		[%]	±3.5 at > 15 % pnom.	
Repeatability		[%]	<±2	
Hysteresis		[%]	<3	
Response time		[ms]	<150	<200
Electrical				
Duty ratio		[%]	100 ED	
Protection class			IP65 at EN 60529 (with correctly mounted plug-in connector)	
Nominal voltage		[VDC]	9	
Max. current		[A]	2.7	
Nom. current		[A]	2.5	
Ambient temperature		[°C]	-20...+70	
Coil resistance		[Ohm]	2.1 at 20 °C	
Solenoid connection			Connector as per EN 175301-803	
Power amplifier			PCD00A-400	

Characteristic pressure curves for NG06 p = f (U_{set})

Setting range max. 64 bar



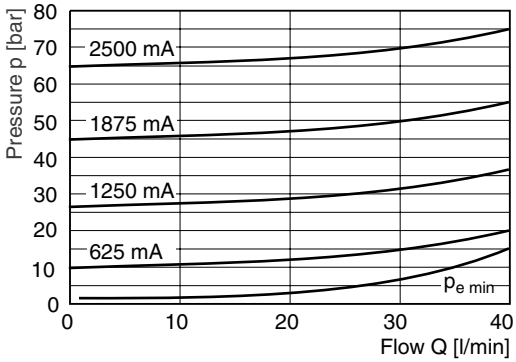
Setting range max. 210 bar



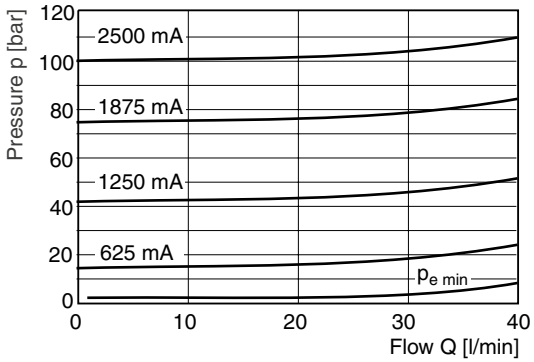
All characteristic curves measured with HLP46 at 50 °C.

NG06 p/Q characteristics

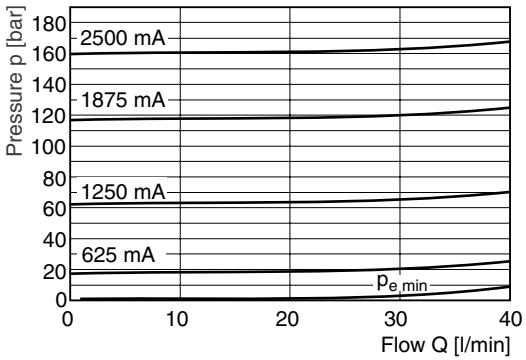
Setting range max. 64 bar



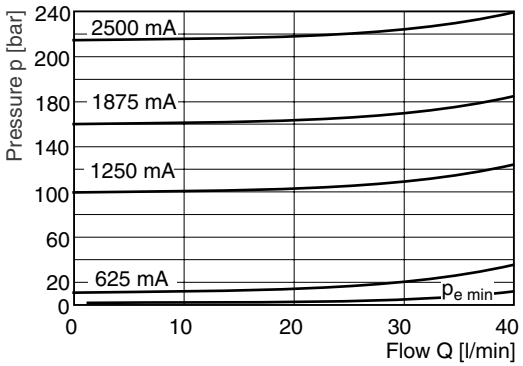
Setting range max. 100 bar



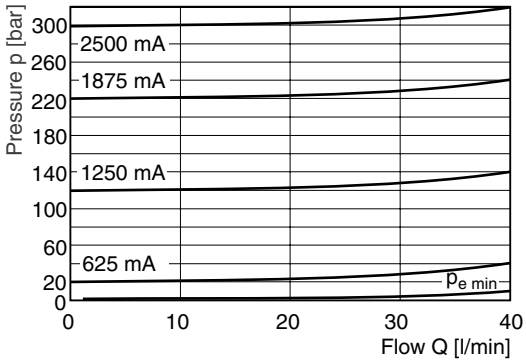
Setting range max. 160 bar



Setting range max. 210 bar



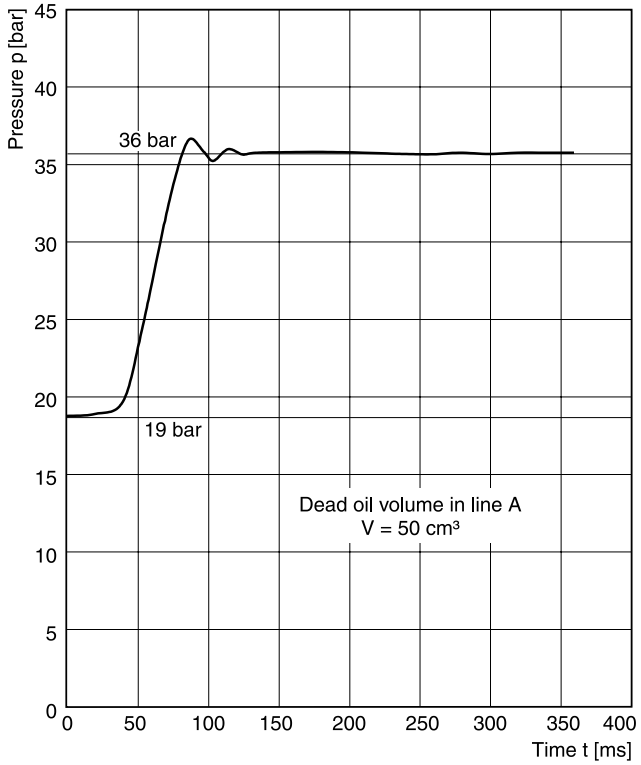
Setting range max. 315 bar

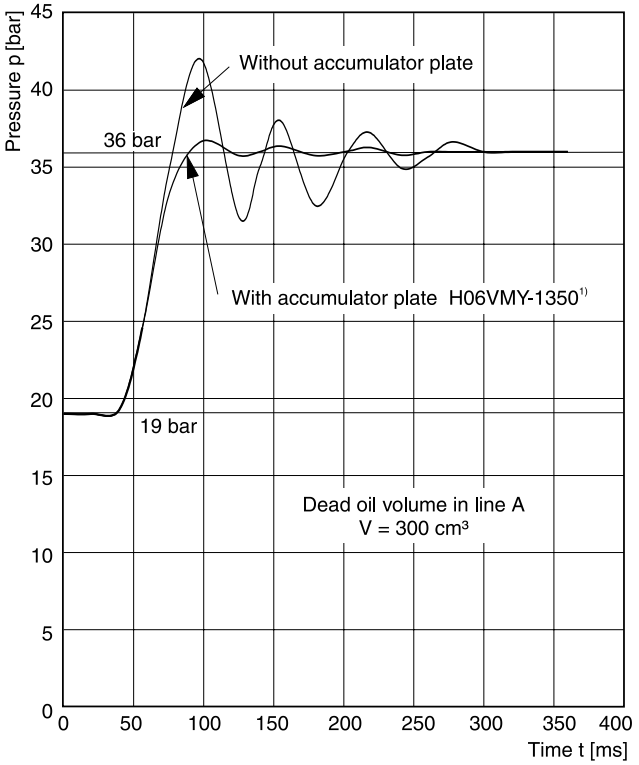


All characteristic curves measured with HLP46 at 50 °C.

4

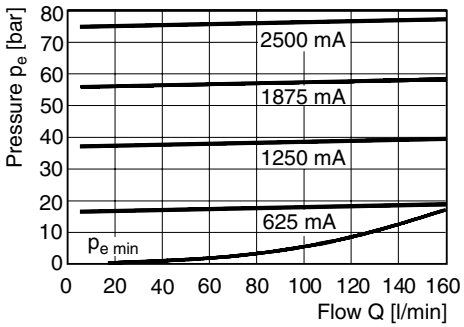
NG06 step response signal, setting range max. 210 bar



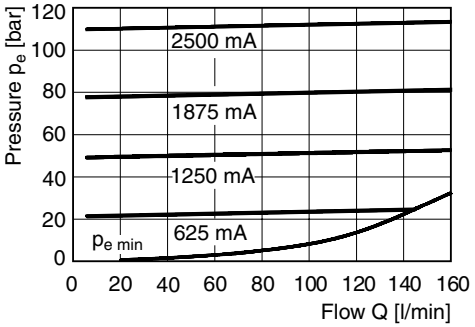


NG10 p/Q characteristics

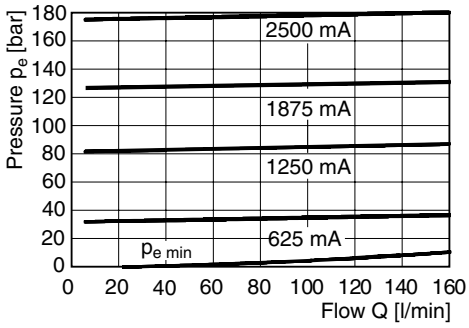
Setting range max. 64 bar



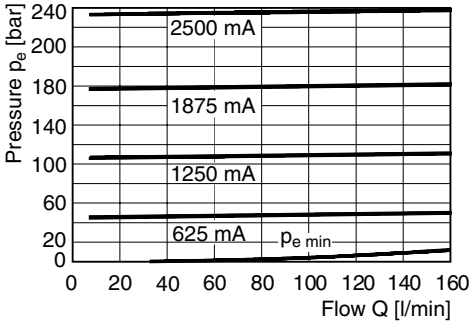
Setting range max. 100 bar



Setting range max. 160 bar



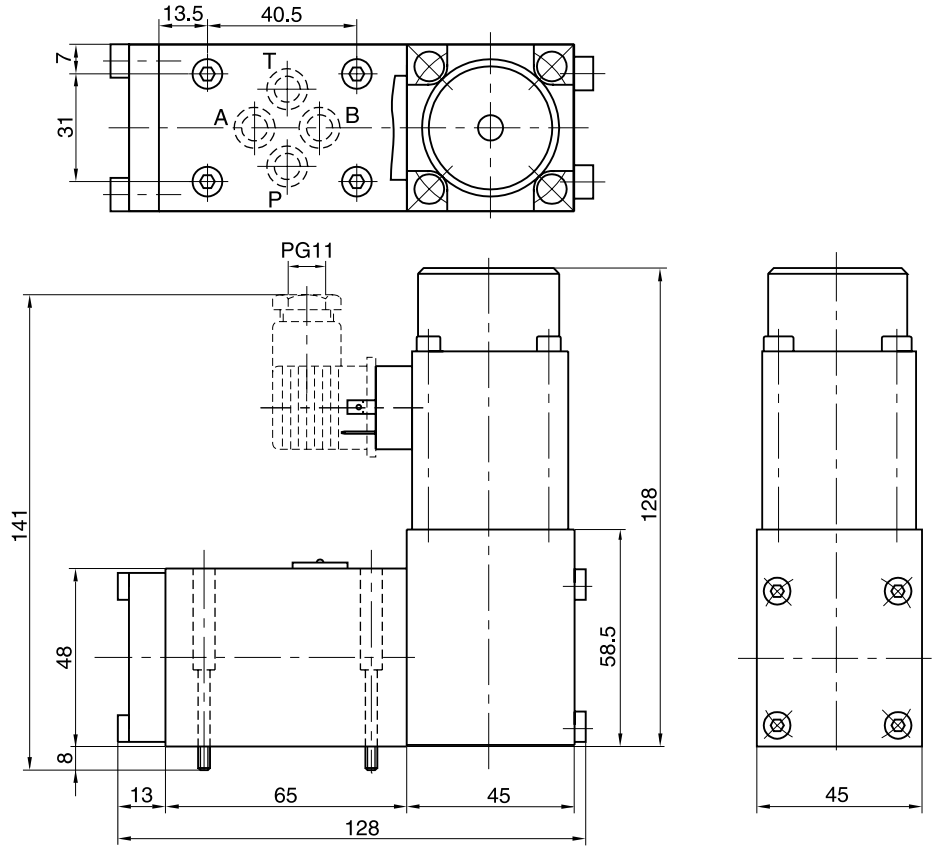
Setting range max. 210 bar

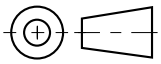


All characteristic curves measured with HLP46 at 50 °C.

[1)] See series VMY for details.

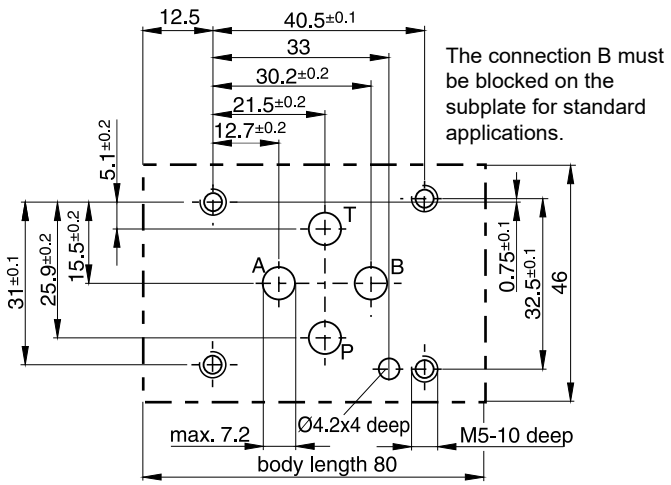
NG06





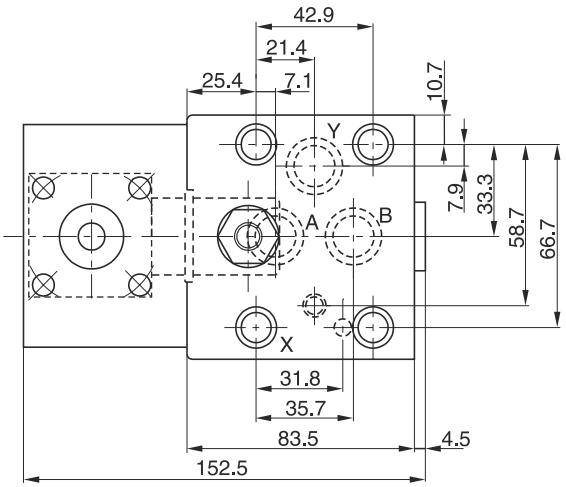
Surface finish	Bolt kit			Kit NBR	Kit FPM
$R_{max}6.3$ 0.01/100	BK375	4x M5x30 ISO 4762-12.9	7.6 Nm ±15 %	SK-VMY-L06-N	SK-VMY-L06-V

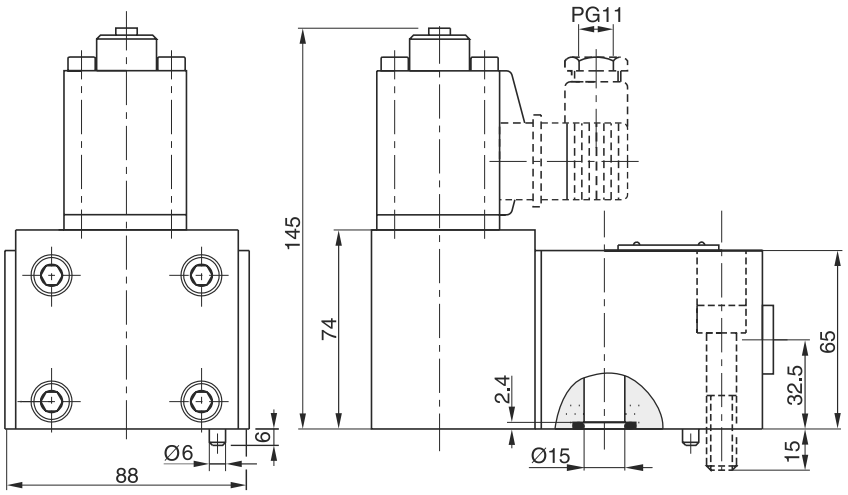
Mounting pattern ISO 5781-03-04-0-00

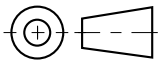


The connection B must be blocked on the subplate for standard applications.

NG10

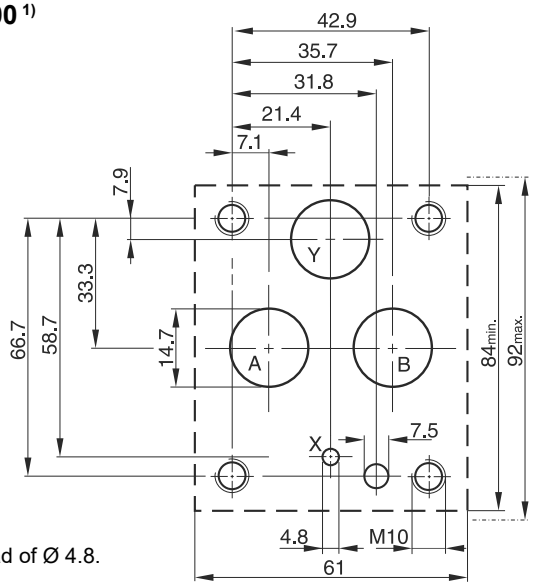






Surface finish	Bolt kit			Kit FPM
R_{max}6.3 ⏥ 0.01/100	BK389	4x M10x50 ISO 4762-12.9	63 Nm ±15 %	SK-VB/VM-A10V

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.