

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.

Features

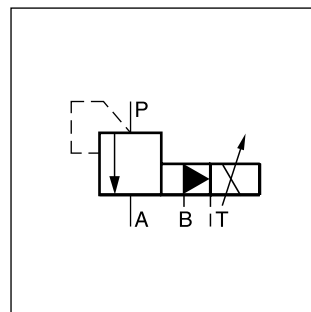
- Proportional adjustment
- Subplate mounting acc. to ISO 5781
- External drain
- Main stage spool type valve
- Pilot stage seated type valve



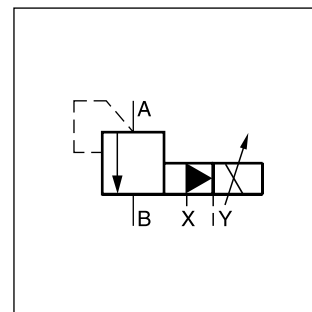
VBY*K06



VBY*K10

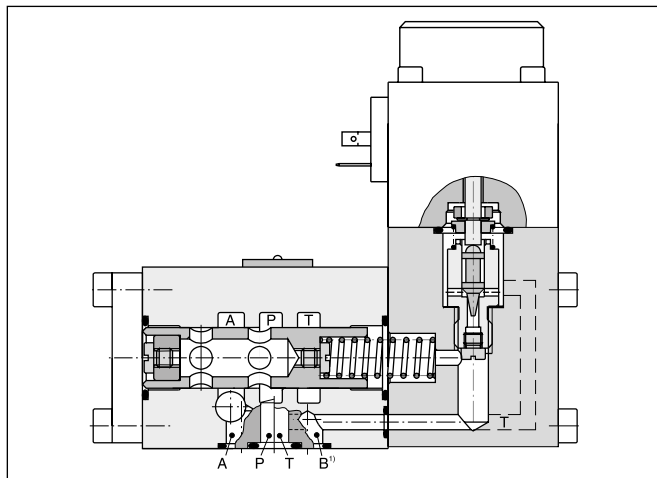


VBY*K06

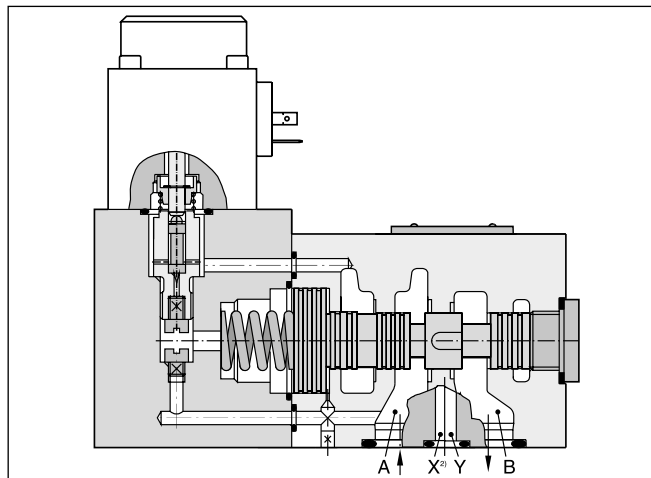


VBY*K10

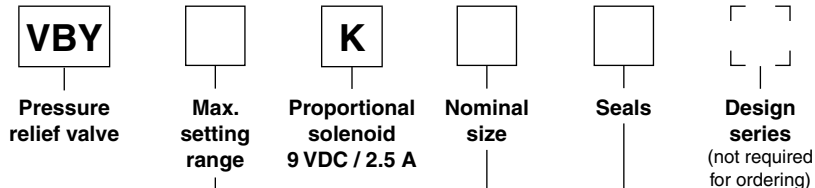
VBY*K06



VBY*K10



Ordering code



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**

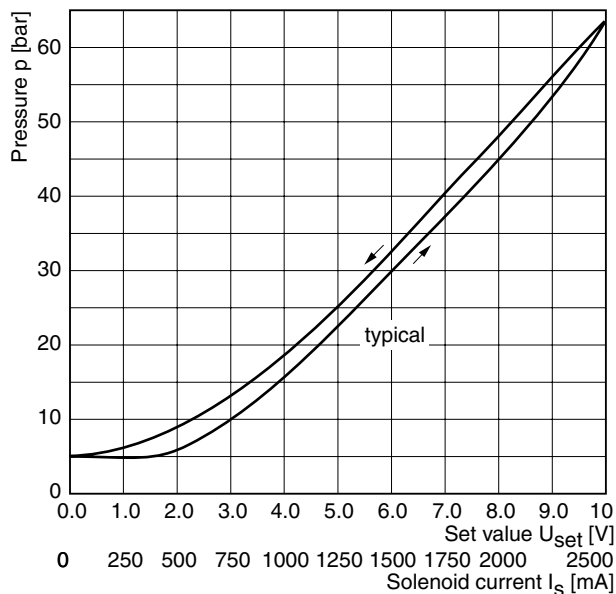
- 1) Port B for remote control, otherwise to be blocked.
2) Port X for remote control, otherwise to be blocked.

Technical data

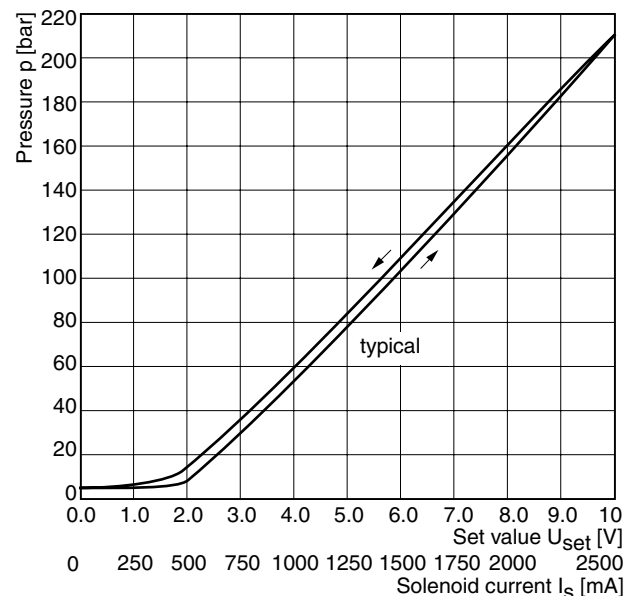
General			
Design		Proportional pressure relief valve	
Nominal size		NG06	NG10
Interface		Subplate mounting according to ISO 5781	
Actuation		Proportional solenoid	
Mounting position		unrestricted	
Ambient temperature		[°C] -20 ... +60	
MTTF _D value		[years] 75	
Weight		2.4	4.5
Hydraulics			
Max. operating pressure		P, A: 315, Port B blocked, Port T depressurized	A, B: 315, Port Y blocked, Port Y depressurized
Nominal flow		40	160
Adjustment range		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		<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



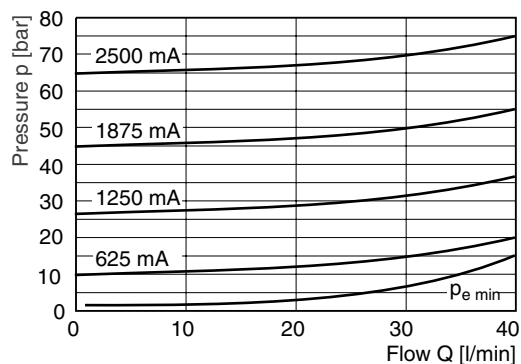
Setting range max. 210 bar



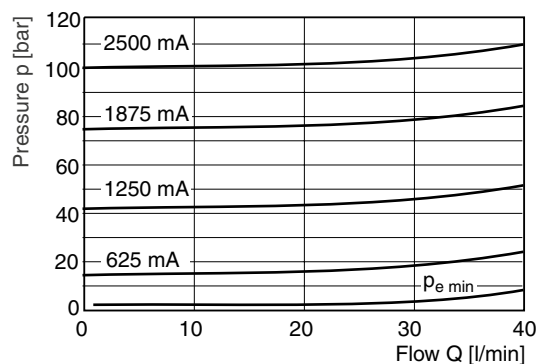
All characteristic curves measured with HLP46 at 50 °C.

NG06 p/Q characteristics

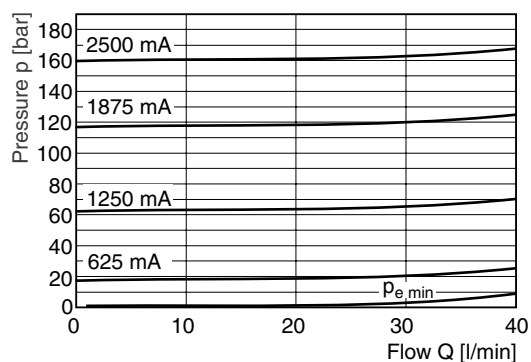
Setting range max. 64 bar



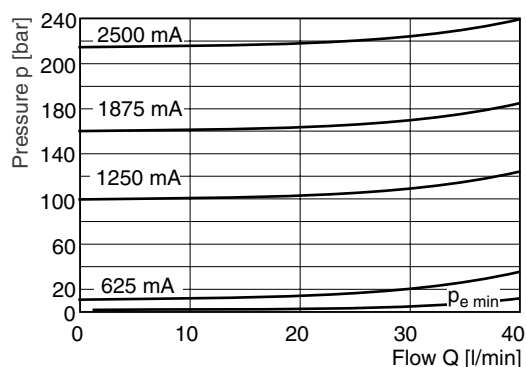
Setting range max. 100 bar



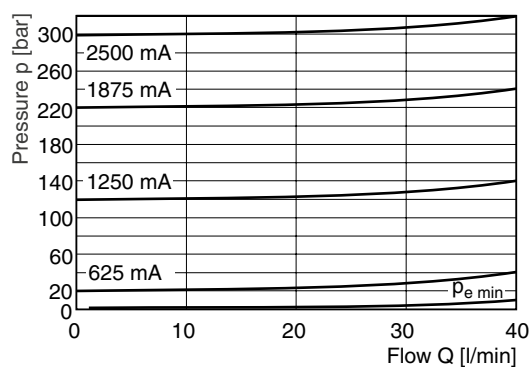
Setting range max. 160 bar



Setting range max. 210 bar

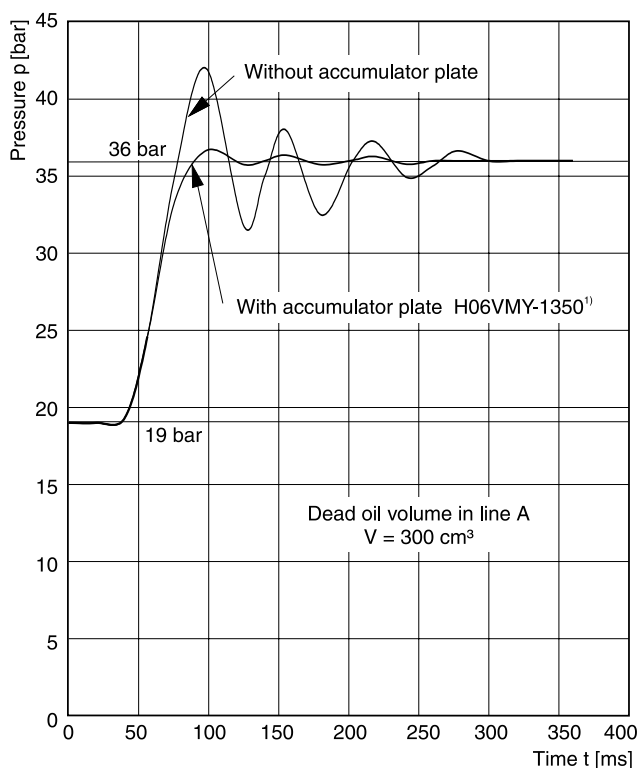
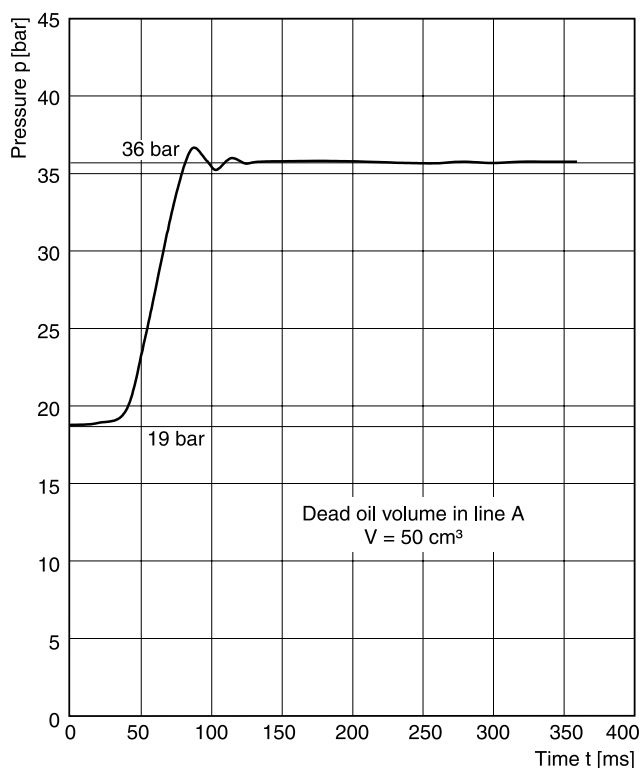


Setting range max. 315 bar



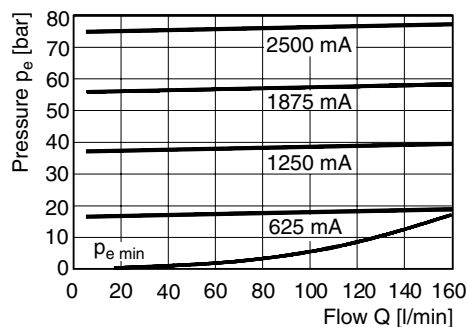
All characteristic curves measured with HLP46 at 50 °C.

NG06 step response signal, setting range max. 210 bar

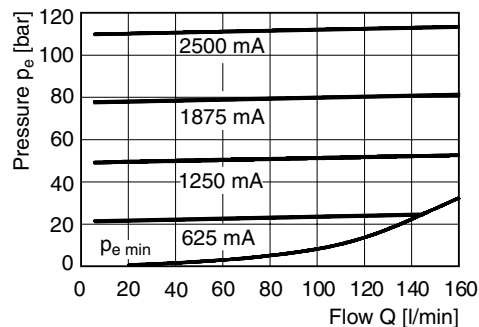


NG10 p/Q characteristics

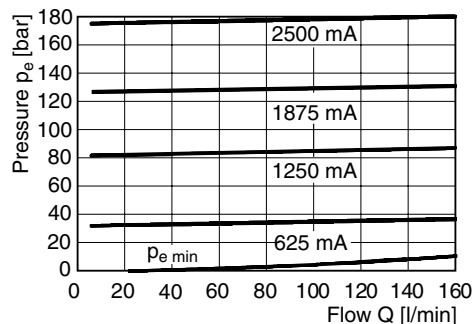
Setting range max. 64 bar



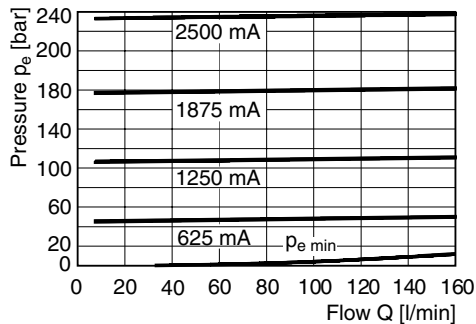
Setting range max. 100 bar



Setting range max. 160 bar



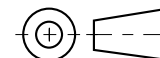
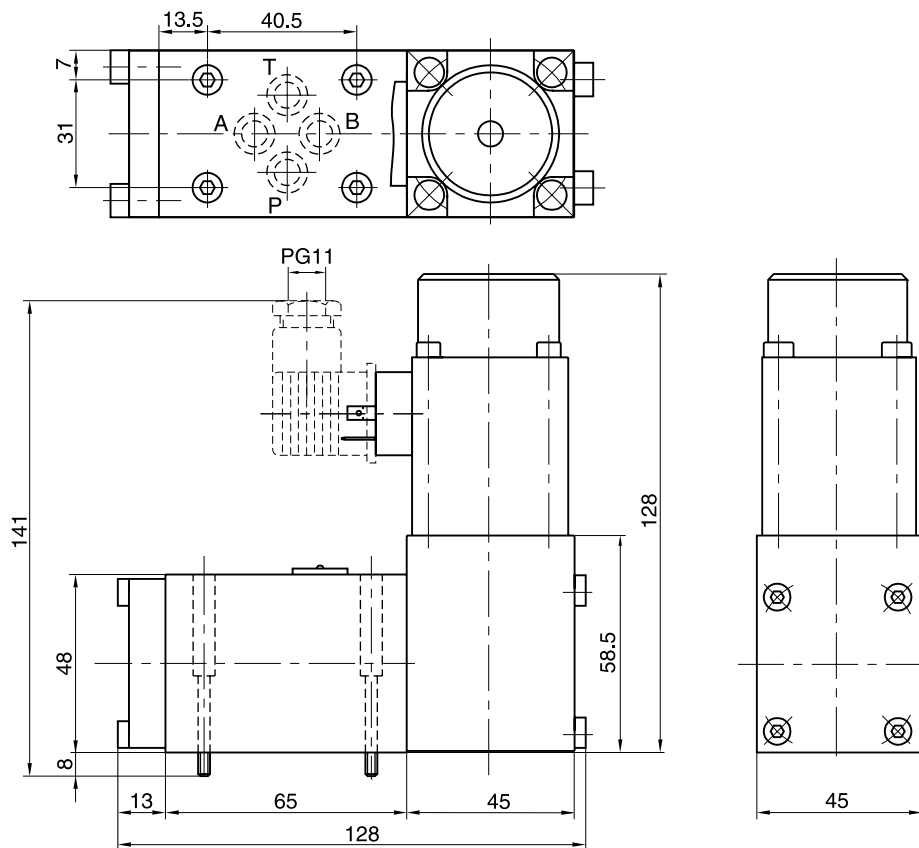
Setting range max. 210 bar

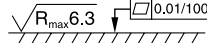


All characteristic curves measured with HLP46 at 50 °C.

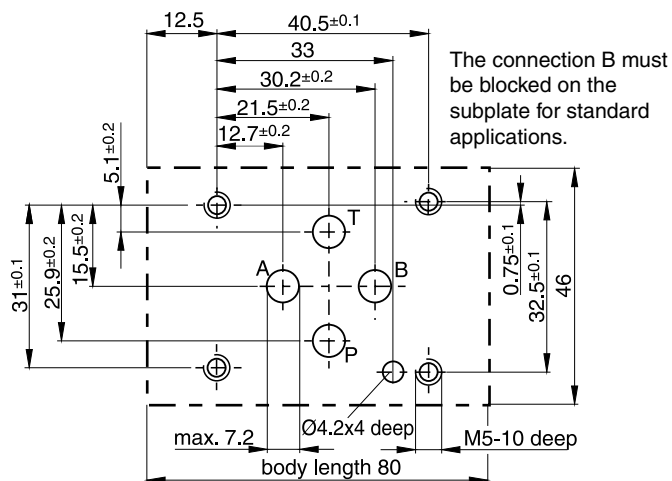
¹¹ See series VMY for details.

NG06



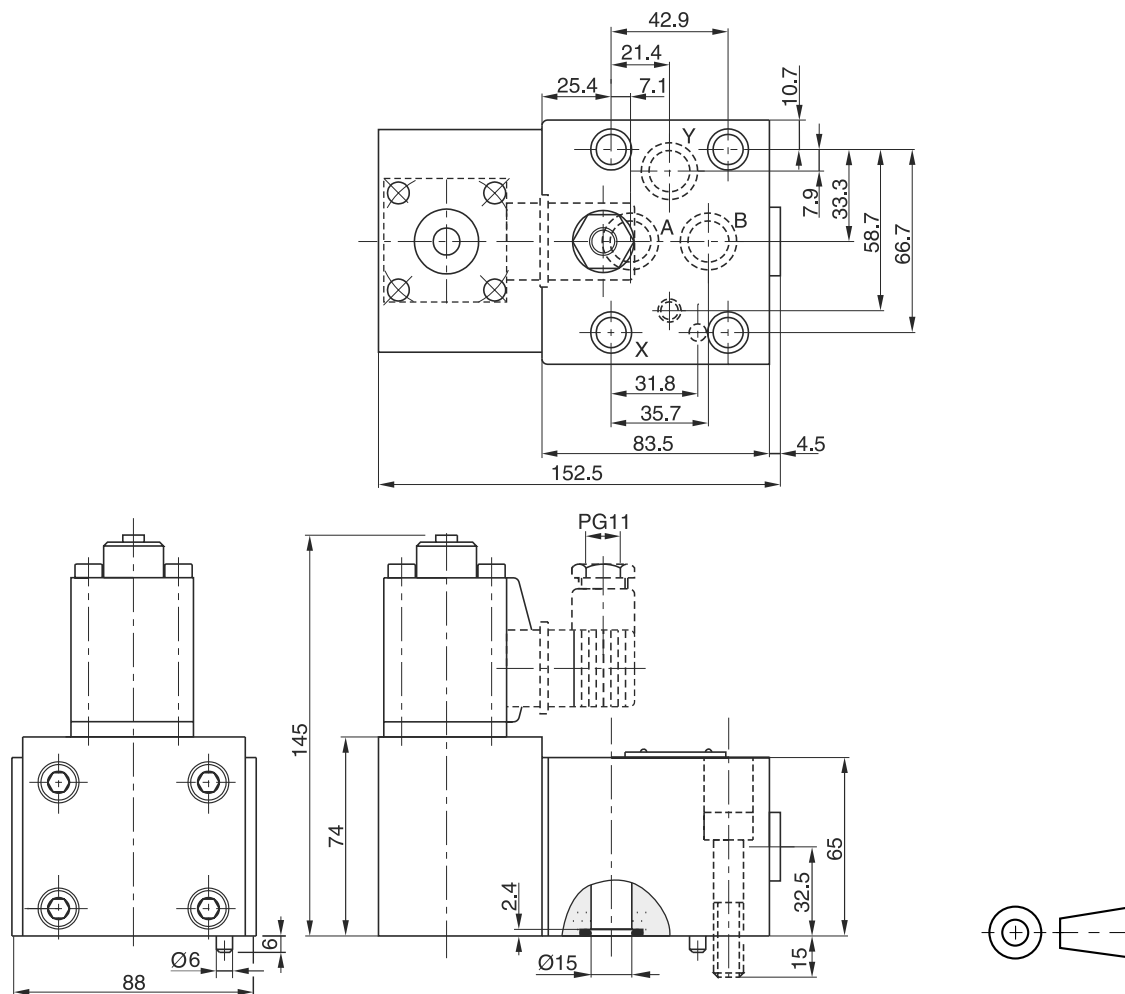
Surface finish	Bolt kit			Kit
NBR	FPM			
	BK375	4x M5x30 ISO 4762-12.9	7.6 Nm ±15 %	SK-VMY-L06-N
				SK-VMY-L06-V

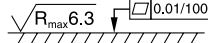
Mounting pattern ISO 5781-03-04-0-00

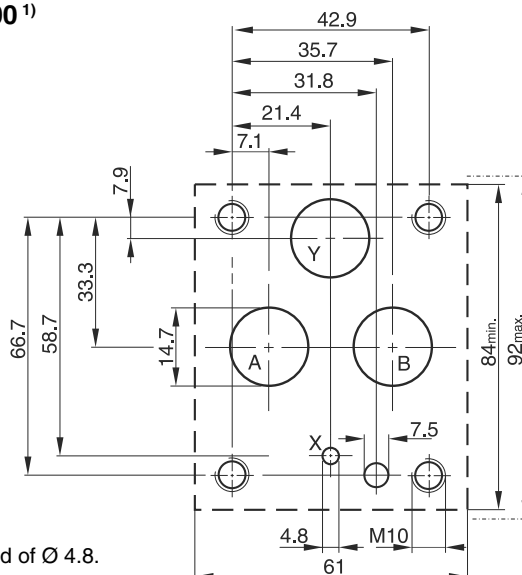


NG10

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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 5781-06-07-0-00¹⁾¹⁾ Deviating from ISO the Y port has Ø 14.7 instead of Ø 4.8.