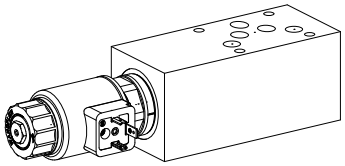
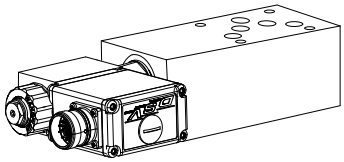
Proportional 2-way flow control valve
Flange- and sandwich construction
- **Direct operated, pressure compensated**
- **p_{max} = 350 bar**

NG10
ISO 4401-05





DESCRIPTION
Direct operated, pressure compensated proportional flow control valve in flange- and sandwich construction. Proportional flow control screw-in cartridges M33x2 acc. to ISO 7789 are installed. In the sandwich plates for A, B and AB line, a bypass check valve for reversed free flow is installed. A bypass non-return valve plate for the flange valve, for free flow from B to A, can be ordered separately. Two flow ranges are available. The flange body is painted and the sandwich plates are phosphatized.

FUNCTION
The 2-way flow control valve with series connected pressure balance (primary controller) serves to maintain the speed of a consumer constant independent of the load.

APPLICATION
Proportional flow control valves in flange- and sandwich construction are suitable for precice feed control systems, where the supply flow has to be maintained constant with a changing load. used where the supply volume flow has to be kept constant even when the load fluctuates. Depending on the application, a distinction is made between controlling the forward flow or the return flow.

TYPE CODE

Q N P ☐ A10 - ☐ - ☐ # ☐

Flow control valve

Normally closed

Proporional

Flange construction F
Sandwich construction S

International standard interface ISO, NG10

Type list / Function:

Flange construction		Sandwich construction		Sandwich construction meter-out flow control		Sandwich construction meter-in flow control	
A → B	A/B	in P	P	in A	A	in A	AV
		in T	T	in B	B	in B	BV
				in A and B	AB	in A and B	ABV

Nominal volume flow level, nominal voltage, etc. of the built-in screw-in cartridge

Examples: QNPFA10 - A/B - 32 - G24/WD - D1
QNPSA10 - A - 63 - G12/ME - A1

Design-Index (Subject to change)

GENERAL SPECIFICATIONS

Description	Direct operated proportional 2-way flow control valve	
Nominal size	NG10 acc. to ISO 4401-05	
Construction	Flange- and sandwich construction	
Operation	Proportional solenoid	
Mounting	4 holes for socket cap screws M6 or studs screws M6	
Connection	Threaded connection plates Multi-flange subplates Longitudinal stacking system	
Weight (without screw-in cartridge)	• Flange type	m = 2,20 kg
	• Sandwich type P,T,A,B	m = 3,10 kg
	• Sandwich type AB	m = 3,75 kg

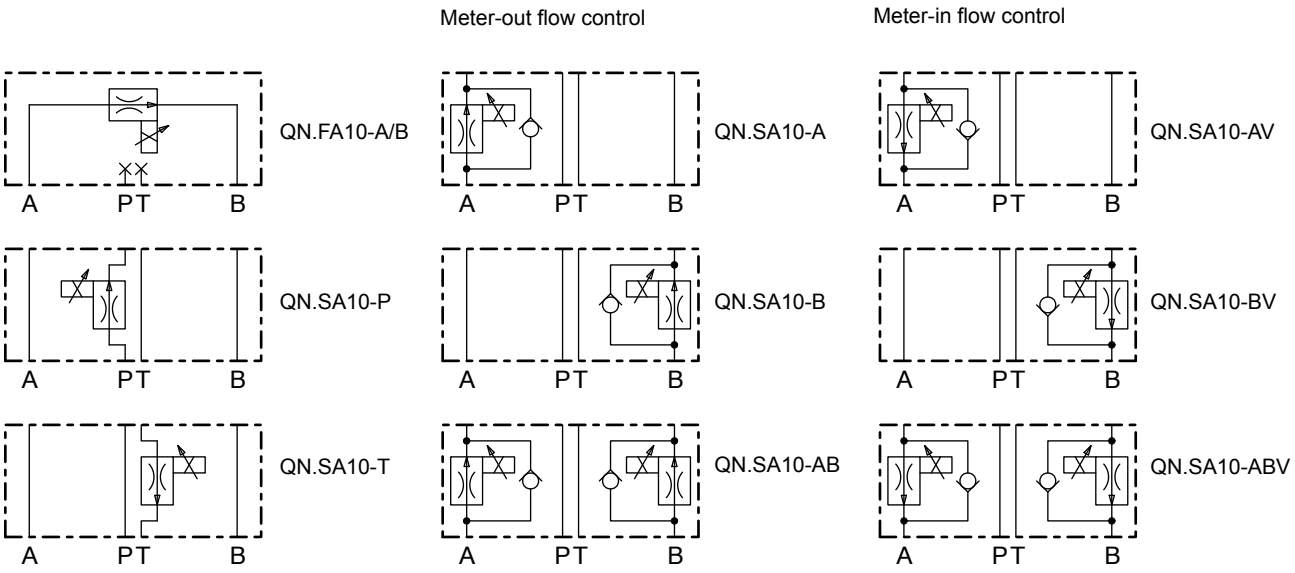
SCREW-IN CARTRIDGES INSTALLED

The following screw-in cartridges are used in either the flange body or the sandwich body:

Type	*Designation*	*Data sheet no.*	Qmax*
QNPPM33	normally closed	2.6-651	80 l/min
QNPPM33-./ME	normally closed, with integrated electronics	2.6-659	63 l/min

* Can deviate from the values on the data sheets of the screw-in cartridges.
** Do not use anymore for new applications.

TYPE CHARTS



By turning around valves with meter-out function, meter-in function can be achieved:

A turns into BV
B turns into AV
AB turns into ABV

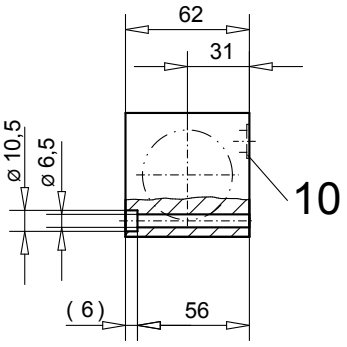
Valves for flow control are supplied respectively with a sealing plate and an intermediate plate.

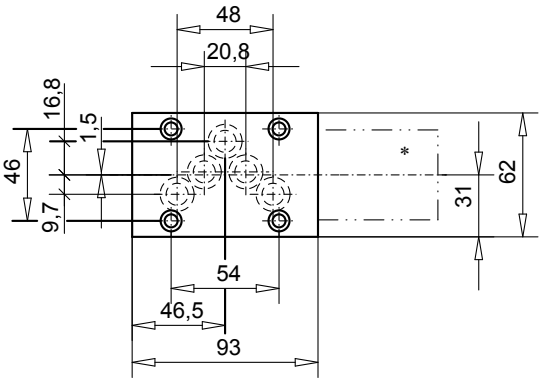
REMARK!
Detailed performance data and additional hydraulic and electric specifications may by drawn from the data sheets of the corresponding installed screw-in cartridge.

CAUTION!
The performace data, especially the **„pressure-flow-characteristic„** on the data sheets of the screw-in cartridges, refer to the screw-in cartridges only. The additional pressure drop of the flange body, resp. sandwich body must be taken into consideration.

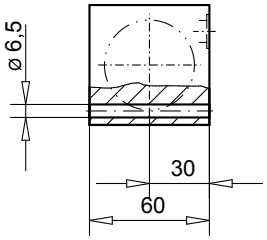
DIMENSIONS

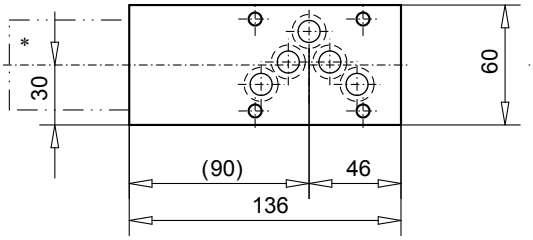
Flange construction QN.FA10 - A/B



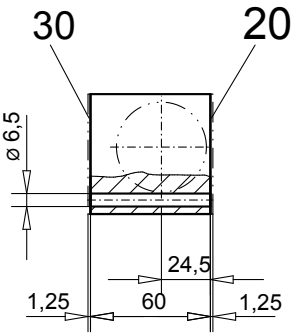


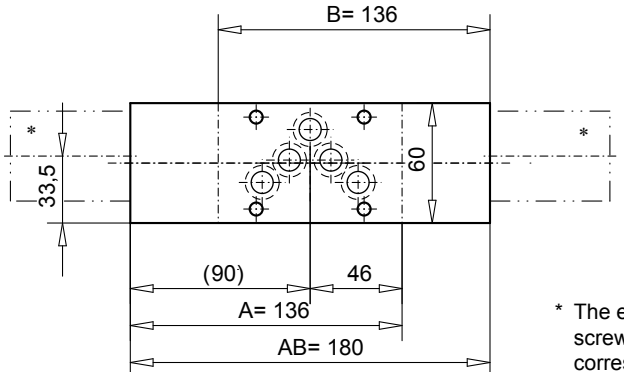
Sandwich construction QN.SA10 - P, T





Sandwich construction QN.SA10 - A, B, AB, AV, BV, ABV





* The envelop dimensions of the screw-in cartridge are shown on their corresponding data sheets.

PARTS LIST

Position	Article	Description
10	160.2140	O-ring ID 14,00x1,78 for flange and sandwich construction
	160.2120	O-Ring ID 12,42x1,78 for sandwich construction A, B, AB, VA, VB, VAB
	160.2132	O-Ring ID 13,10x2,62 in line with RV
20	173.4700	Intermediate plate AZB10
30	173.4650	Sealing plate ADB10

ACCESSORIES

Proportional amplifier register 1.13

Technical explanation see data sheet 1.0-100