ARGO HYTOS

2 Way
Cartridge Flow Control Valves

SF22A-A2/H

3/4-16 UNF • 350 bar (5076 PSI) • 16 l/min (4.23 GPM)

HA 5060
7/2012

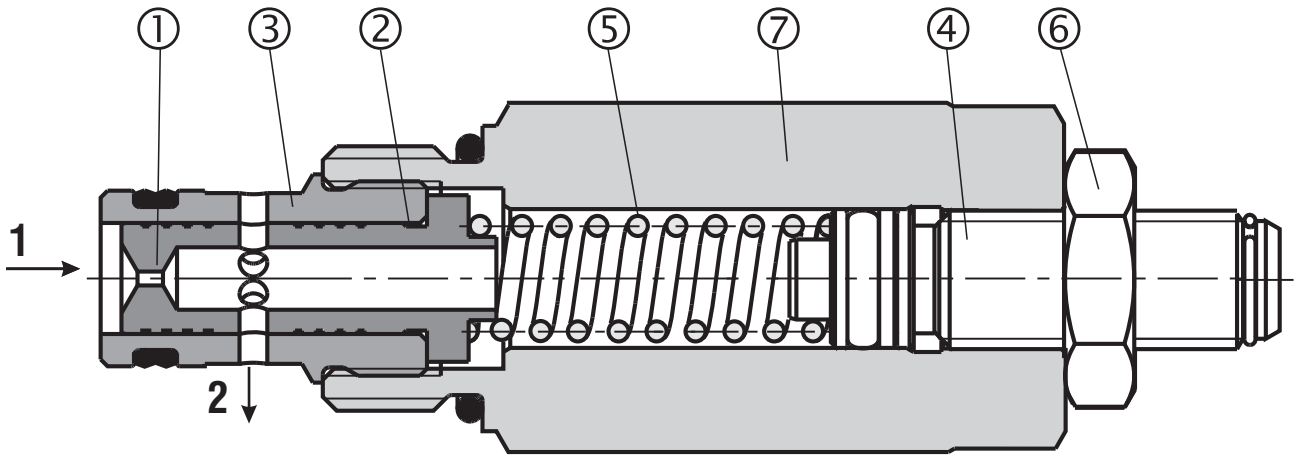
Replaces
HA 5060 11/2007

- ❑ **Cartridge design**
- ❑ **Flow rate setting with adjustment screw**
- ❑ **For use in meter-in, meter-out and bleed-off applications**

Functional Description

Pressure compensated flow control valves are installed in hydraulic systems where only small speed or revolution variation due to load changing are required. The valve consists of throttling orifice (1), pressure compensator (2), bushing (3), adjustment screw (4) and spring (5).
Throttling in direction 1 → 2 is realised on the throttling orifice. The flow rate depends on the orifice diameter and on the pressure difference at the orifice. The pressure difference can be adjusted in a certain range through preloading the spring (5), which results in the respective flow change. The allocation of the orifice diameters and the corresponding flow rates is apparent from the characteristics. The flow rate adjustment can be accomplished by adjustment screw (4). The clockwise rotation increases the flow rate, the anticlockwise rotation decreases the flow rate.

The flow rate stabilization is provided by pressure compensator (2), which is situated behind the throttling orifice and mounted into bushing (3). The pressure compensator continuously compares the pressure difference at the throttling orifice (1) with the value given by the spring preload.
In flow direction 2 → 1, the valve works as an ordinary throttle valve withouth pressure compensation feature. The pressure losses depend on the orifice diameter – see the respective characteristics.
The valve housing (7), the nut (6) and the adjustment screw (4) are zinc coated.



Ordering Code

SF22A-A2 / □ □ □

2 Way Cartridge Flow Control Valve 3/4-16UNF

High performance — **H**

Nominal flow rates
- **2** — Flow 2 L/min (0.53 GPM)
- **6** — Flow 6 L/min (1.59 GPM)
- **12** — Flow 12 L/min (3.17 GPM)

Seals
- **no designation** — Standard (NBR)
- **V** — Viton (FPM)

Technical Data

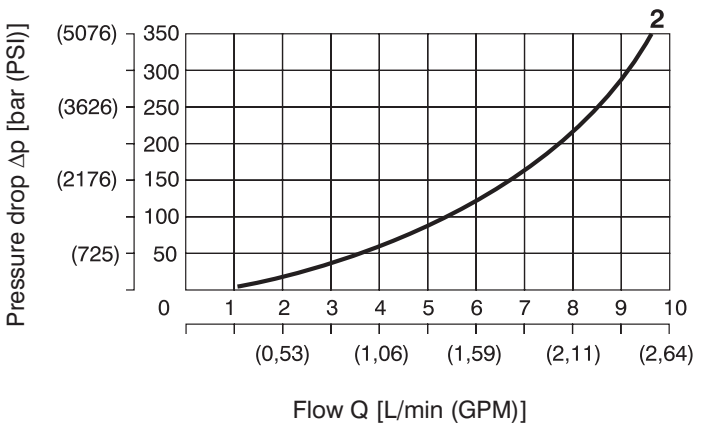
Valve size		A2		
Cartridge cavity		3/4-16 UNF-2A		
Nominal flow rates	L/min (GPM)	2 (0.53)	6 (1.59)	12 (3.17)
Flow range		see Q-Δp characteristic		
Maximum working pressure	bar (PSI)	350 (5076)		
Hydraulic fluid		Hydraulic oils of power classes (HL, HLP) to DIN 51524		
Fluid temperature range (NBR)	°C (°F)	-30... + 100 (-22 ... +212)		
Fluid temperature range (Viton)	°C (°F)	-20 ... +120 (-4 ... +248)		
Viscosity range	mm^2/s (SUS)	10 ... 500 (49 ... 2450)		
Maximum degree of fluid contamination		Class 21/18/15 to ISO 4406		
Weight	kg (lbs)	0,186 (0.410)		
Mounting position		unrestricted		
Valve body (data sheet HA 0018)		SB-A2		

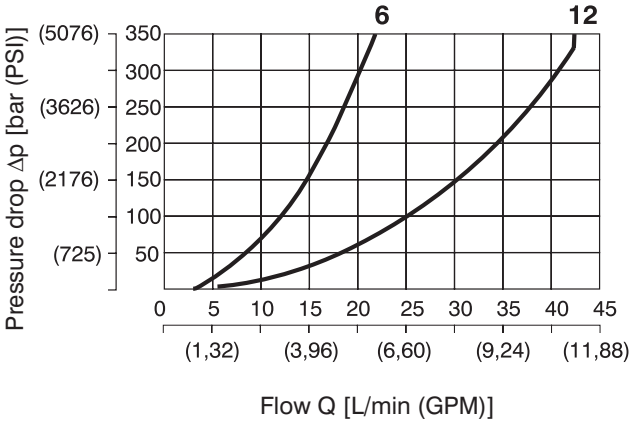
Δp-Q Characteristics

Measured at ν = 32 mm^2/s (156 SUS)

Flow directional 2 → 1 (Throttling without compensator)

Nominal flow rates 2, 6, 12



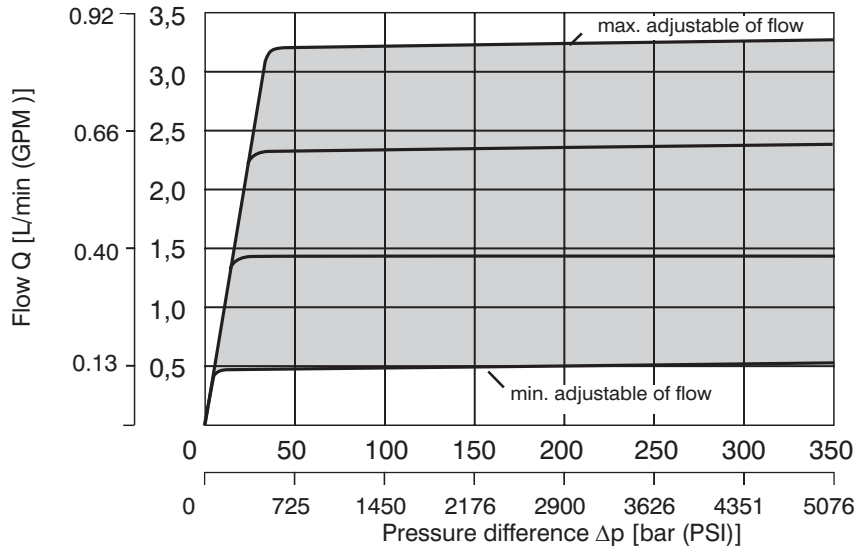


Δp-Q Characteristics

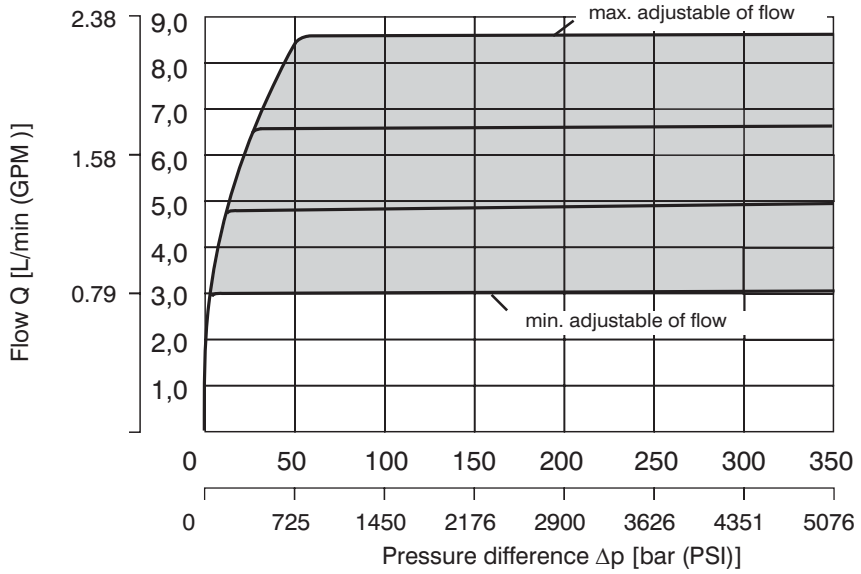
Measured at ν = 32 mm²/s (156 SUS)

Flow direction 1 → 2 (Controlled flow)

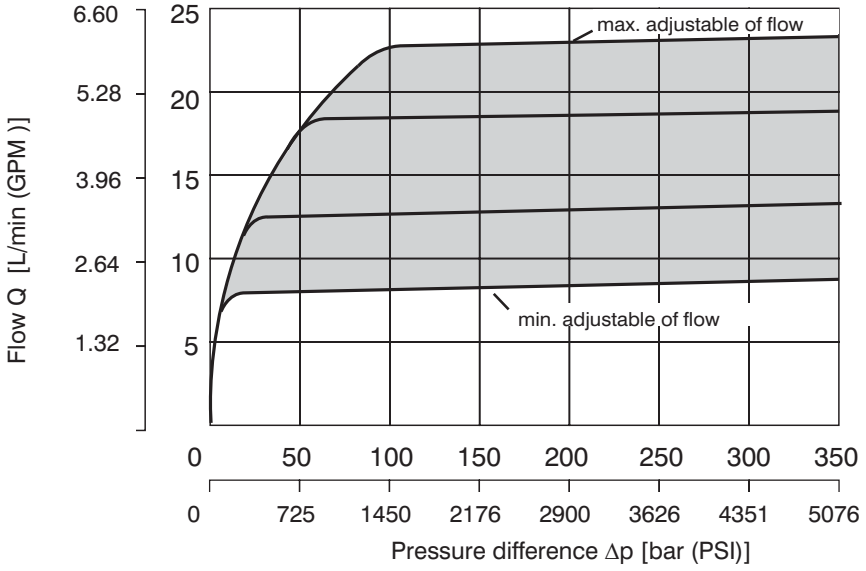
Nominal flow rate 2 L/min (0.53GPM)



Nominal flow rate 6 L/min (1.59 GPM)

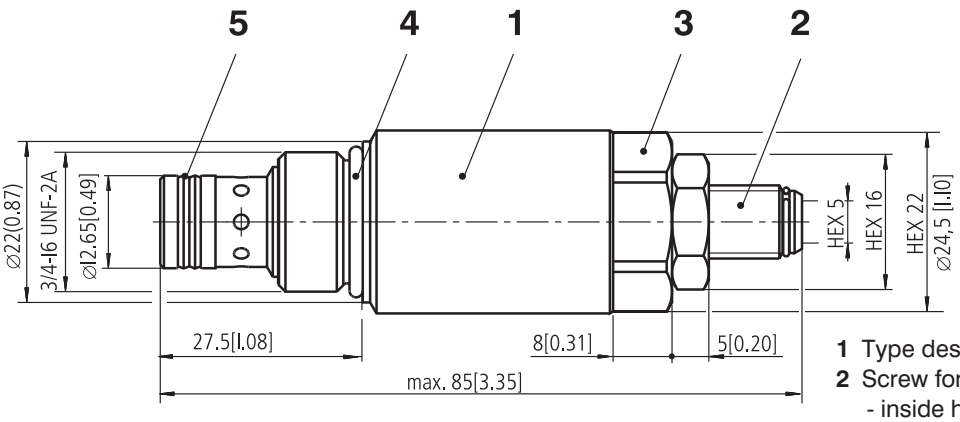


Nominal flow rate 12 L/min (3.17 GPM)



Valve Dimensions

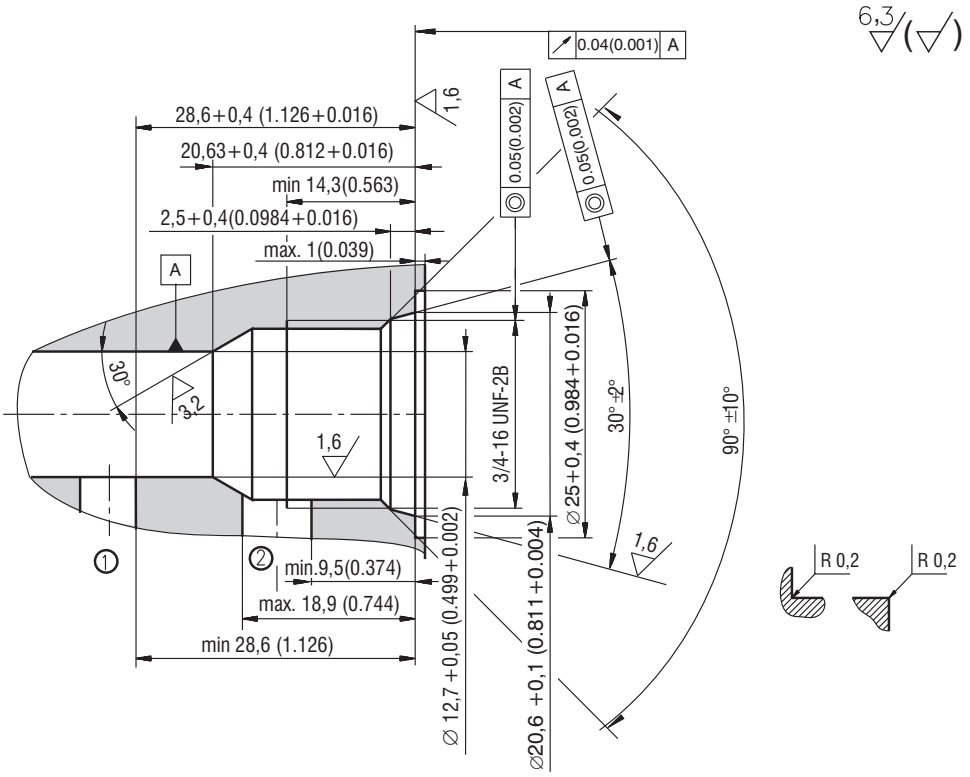
Dimensions in millimeters and inches



1 Type designation (stamped)
2 Screw for fine flow adjustment
- inside hexagon 5 mm (0.20 inch)
- anticlockwise rotation = flow decrease
- clockwise rotation = flow increase

3 Wrench flats size 22 mm (0.87 inch), tightening torque 30 Nm (22.1 lbs)
4 Sealing: O-ring 17 x 1,8 supplied with valve
5 Sealing: Dualseal 10,3 x 12,7 x 3,1 supplied with valve

Cavity



Spare Parts

Dimensions in millimeters

Seal kit

Type	Dimensions, quantity		Ordering number
	O-ring	Dualseal - PU	
Standard - NBR		10,3 x 12,7 x 3,1 (1 pc.)	20157700
Viton	17 x 1,8 (1pc.)		15606500

Caution!

- The plastic packaging is recyclable.
- Certified documentation is available per request.

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