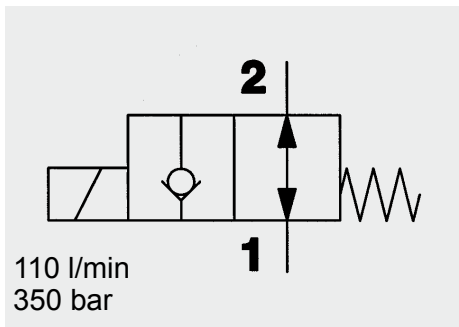
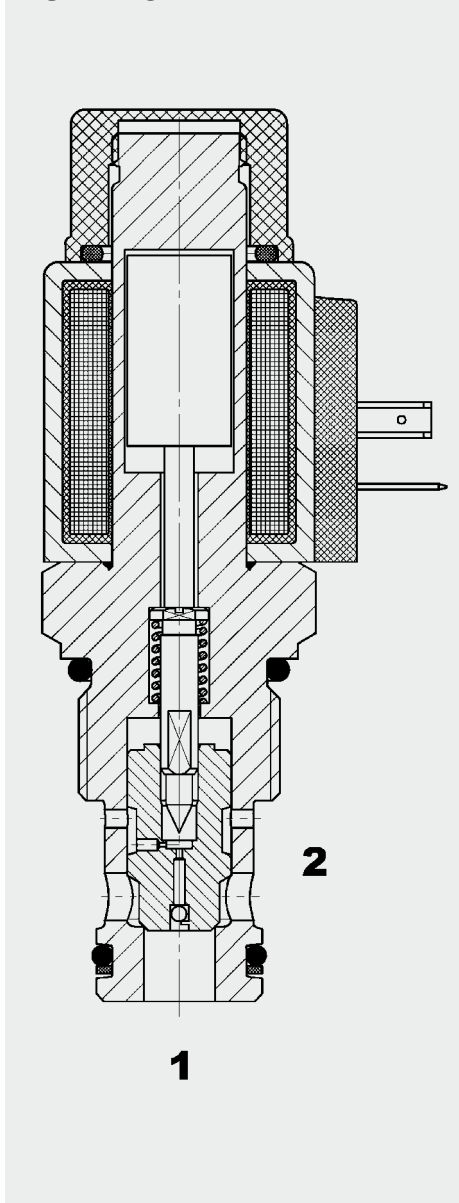


## 2/2 Solenoid Directional Valve **UNF** **Poppet Type, Pilot-Operated** **Normally Open (Reverse Flow)** **SAE-12 Cartridge – 350 bar** WS12YR-01



### FUNCTION



When the solenoid coil is de-energized, there is free flow through the valve in both directions.

When the solenoid coil is energized, the valve is closed from port 2 to port 1. In the reverse direction the valve will allow flow from port 1 to 2 when the hydraulic force on the poppet overcomes the solenoid force (approx. 1.5 to 6.5 bar).

### FEATURES

- Excellent switching performance by high power HYDAC solenoid
- Hardened and ground internal valve components to ensure minimal wear and extended service life
- Wide variety of connectors available
- External surfaces zinc-plated and corrosion-proof
- Coil seals protect the solenoid system
- Low pressure drop due to CFD optimized flow path

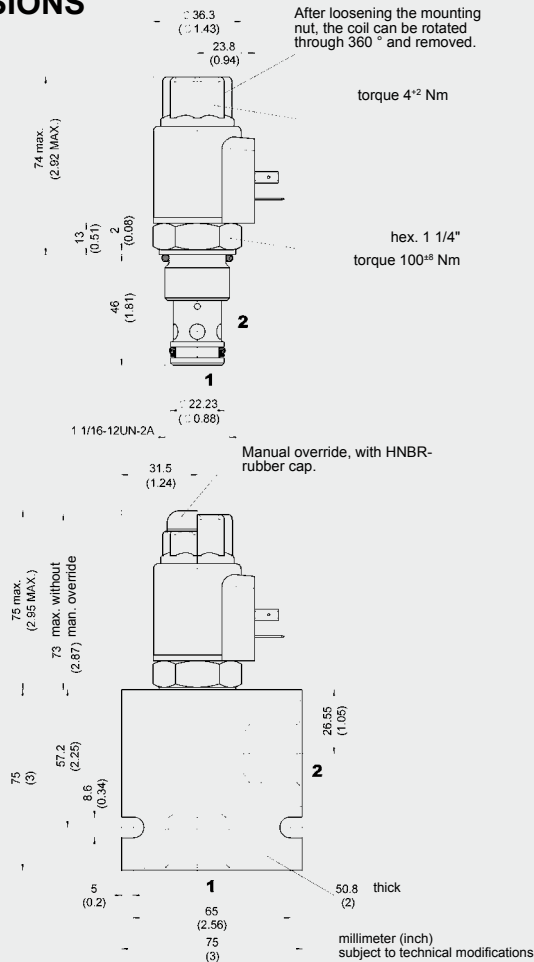
### SPECIFICATIONS

Operating pressure:	max. 350 bar	
Nominal flow:	max. 110 l/min	
Leakage:	Leak-free (max. 5 drops $\approx$ 0,25 cm <sup>3</sup> /min at 350 bar)	
Media operating temperature range:	min. -20 °C to max. +100 °C	
Ambient temperature range:	min. -20 °C to max. +60 °C	
Operating fluid:	Hydraulic oil to DIN 51524 Part 1 and 2	
Viscosity range:	min. 7.4 mm <sup>2</sup> /s to max. 420 mm <sup>2</sup> /s	
Filtration:	Class 21/19/16 according to ISO 4406 or cleaner	
MTTF <sub>d</sub> :	150 years (see "Conditions and instructions for valves" in brochure 5.300)	
Installation:	No orientation restrictions	
Materials:	Valve body:	free-cutting steel
	Poppet:	hardened and ground steel
	Seals:	NBR (standard) FKM (optional, media temperature range -20 °C to +120 °C)
	Back-up rings:	PTFE
	Coil:	steel / polyamide
Cavity:	FC12-2	
Weight:	Valve complete	0.48 kg
	Coil only	0.19 kg

### Electrical data:

Coil duty rating:	Continuous up to max. 115% of the nominal voltage at 60 °C ambient temperature	
Current draw at 20 °C:	1.5 A at 12 V DC 0.8 A at 24 V DC	
Voltage tolerance:	$\pm$ 15% of the nominal voltage	
Response time:	Energized:	approx. 90 ms
	De-energized:	approx. 35 ms
Coil type:	Coil...-40-1836	

## DIMENSIONS



## MODEL CODE

**WS12YR - 01 M - C - N - 24 DG**

**Basic model** \_\_\_\_\_  
Directional poppet valve, UNF

**Type** \_\_\_\_\_  
01 = standard

**Manual override** \_\_\_\_\_  
No details = without manual override  
M = manual override

**Body and ports\*** \_\_\_\_\_  
C = cartridge only  
SB6 = G3/4 ports, steel body  
AB6 = G3/4 ports, aluminium body

**Seals** \_\_\_\_\_  
N = NBR (standard)  
V = FKM

**Coil voltage** \_\_\_\_\_  
**DC voltages**  
12 = 12 V DC  
24 = 24 V DC  
**AC voltages** (bridge rectifier built into the coil)  
115 = 115 V AC  
230 = 230 V AC

Other voltages on request

**Coil connectors (type 40-1836)** \_\_\_\_\_  
DC: DG = DIN connector to EN 175301-803  
DK = KOSTAL threaded connection M27x1  
DL = 2 flying leads, 457 mm long, 0.75 mm<sup>2</sup>  
DN = Deutsch connector, 2-pole, axial  
DT = AMP Junior Timer, 2-pole, radial  
AC: AG = DIN connector to EN 175301-803  
Other connectors on request

## Standard models

Model code	Part No.
WS12YR-01-C-N-24DG	3157876
WS12YR-01-C-N-230AG	3157875

## \*Standard in-line bodies

Code	Part No.	Material	Ports	Pressure
FH122-SB6	3053782	Steel, zinc-plated	G3/4	420 bar
FH122-AB6	3053843	Aluminium, anodized	G3/4	210 bar

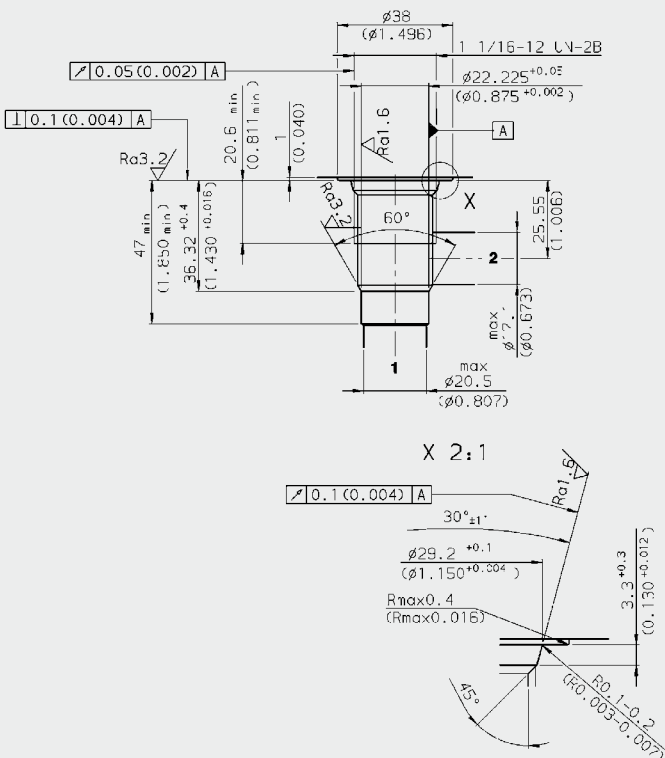
Other line bodies on request

## Seal kits

Code	Material	Part No.
FS122-N SEAL KIT	NBR	3071298
FS122-V SEAL KIT	FKM	3071299

## CAVITY

FC12-2



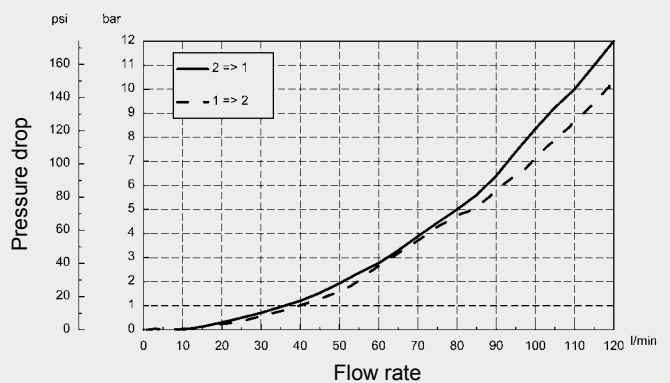
## Form tools

Tool	Part No.
Countersink FC12-2	176951
Reamer FC12-2	176952

millimeter (inch) subject to technical modifications

## PERFORMANCE

Measured at  $v = 33 \text{ mm}^2/\text{s}$ ,  $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



## NOTE

The information in this brochure relates to the operating conditions and applications described. For applications or operating conditions not described, please contact the relevant technical department.  
Subject to technical modifications.

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