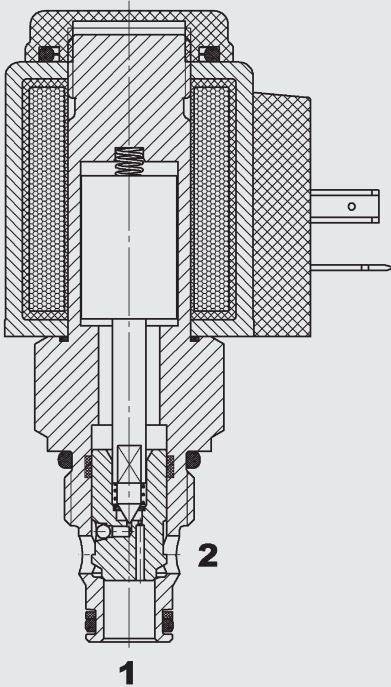


up to 40 l/min
up to 350 bar

FUNCTION



The directional poppet valve is a pilot operated, normally closed, spring-loaded valve.

When the solenoid is de-energized, the valve blocks flow from port 1 to 2 and acts as a check allowing flow from port 2 to 1. When energized the valve allows flow in both directions.

Please mind: In pilot operated solenoid valves, shift performance and response times depend i.a. very much on pressure drop and volume flow during actuation. This applies particularly to valves with piston seals and/or position sensors.

2/2 Solenoid Directional Valve Poppet Type, Pilot Operated Normally Closed UNF Cartridge – 350 bar WS08BR-31

FEATURES

- Excellent stability throughout the entire flow range
- Excellent dynamic performance
- Coil seals protect the solenoid system
- Wide variety of connections available
- Exposed surfaces zinc-nickel plated for increased corrosion protection (1.000 h Salt spray test)

SPECIFICATIONS*

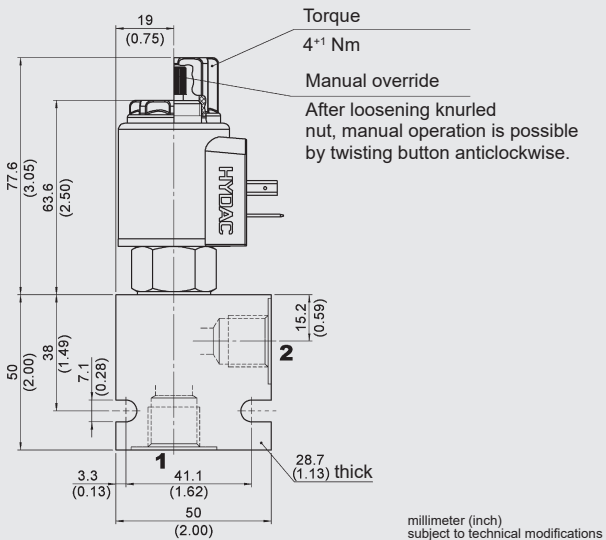
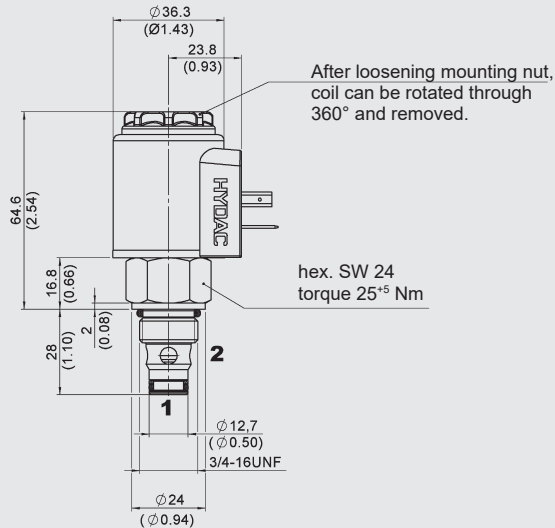
Operating pressure:	max. 350 bar
Nominal flow:	max. 40 l/min
Internal leakage:	Leakage-free max. 5 drops/min (0.25 cm ³ /min) at 350 bar
Media operating temperature range:	min. -20 °C to max. +100 °C
Ambient temperature range:	min. -20 °C to max. + 60 °C
Operating fluid:	Hydraulic oil to DIN 51524 Part 1, 2 and 3
Viscosity range:	min. 7.4 mm ² /s to max. 420 mm ² /s
Filtration:	Class 21/19/16 according to ISO 4406 or cleaner
MTTFd:	150 - 1200 years, according to DIN EN ISO 13849-1
Installation:	No orientation restrictions
Materials:	Valve body: high tensile steel Piston: hardened and ground steel Seals: NBR (standard) FKM (optional, media-temperature range -20 °C bis +120 °C) Back-up rings: PTFE
Cavity:	FC08-2
Weight:	Valve complete: 0.33 kg Coil only: 0.19 kg

Electrical data

Type of voltage:	DC: direct current solenoid AC: alternating current solenoid with a bridge rectifier built into the coil
Current draw at 20 °C:	1.5 A at 12 V DC; 0.8 A at 24 V DC
Voltage tolerance:	± 15 % of nominal
Coil duty rating:	Continuous up to max. 115 % of nominal voltage at max. 60 °C ambient temperature
Response time: (at p _{max} , Q _{max} , v = 33 mm ² /s)	energized: approx. 20 ms de-energized: approx. 80 ms substantially extended response times possible at other operating conditions
Coil type:	Coil... –40-1836

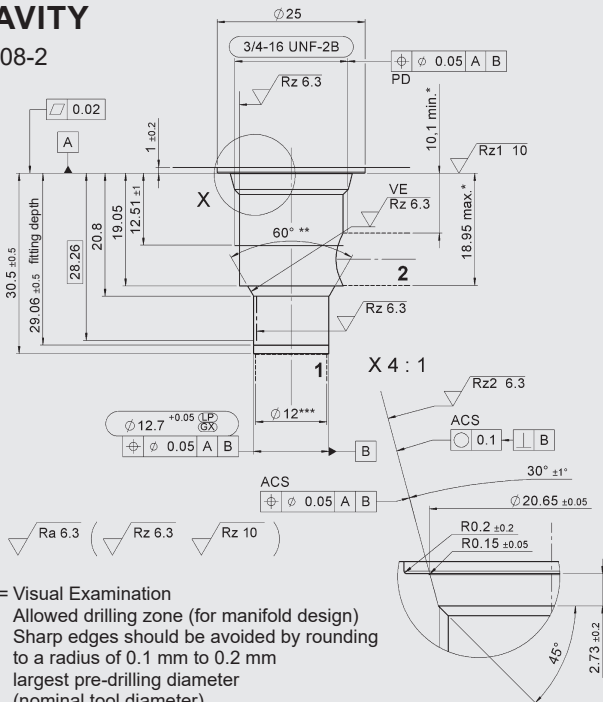
* see "Conditions and instructions for valves" in brochure 53.000

DIMENSIONS



CAVITY

FC08-2



Form tools

Tool	Part No.
Countersink MK3	175473
Reamer	175474

millimeter (inch) subject to technical modifications

MODEL CODE

WS08BR - 31 M - C - N - 24 DG

Basic model

Directional poppet valve, metric

Type

31 = standard (spanner width 24 metric)

Manual override

No details = without manual override
M = manual override

Body and ports

C = cartridge only
Combinations with body on request

Seals

N = NBR (standard)
V = FKM

Coil voltage

DC voltages

12 = 12V DC
24 = 24V DC

AC voltages (bridge rectifier built into the coil)

115 = 115 AC
230 = 230 V AC

Other voltages on request

Coil connections 40-1836

DC: DG = DIN connection type A to EN175301-803

DT = AMP Junior Timer, 2 pole, radial

DK = Kostal threaded connection M27 x 1

DL = leadwires (2), 475mm long

DN = Deutsch connection, axial

AC: AG = DIN connection type A to EN175301-803

Other connections on request

Standard models

Model code	Part No.
WS08BR-31-C-N-24DG	3554847
WS08BR-31-C-N-230AG	3554848

Other models on request

Standard in-line bodies

Code	Part No.	Material	Ports	Pressure
FH082-SB3	560919	Steel, zinc-plated	3/8 BSP	350 bar
FH082-AB3	3011423	Aluminium, clear anodized	3/8 BSP	210 bar

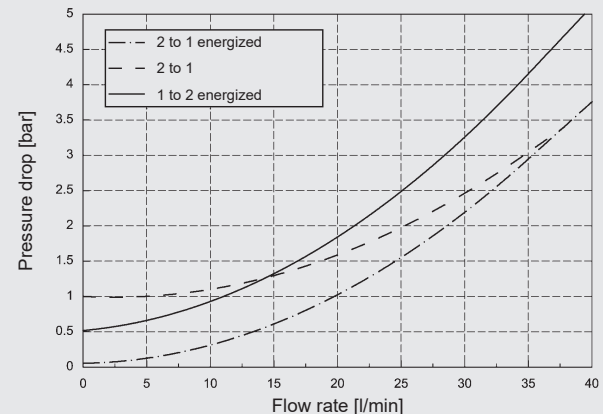
Other bodies on request

Seal kits

Model code	Material	Part No.
FS UNF 08/N	NBR	3651385
FS UNF 08/V	FKM	3651356

TYPICAL 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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