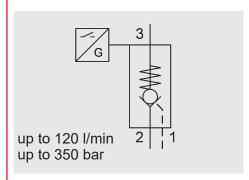
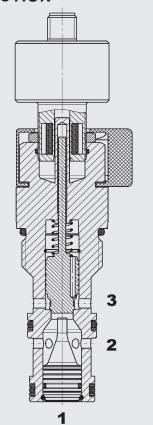
YDAC INTERNATIONAL



Check Valve pilot-to-open poppet type, direct-acting with electronic switch position monitoring UNF Cartridge- 350 bar RP16B-01E

FUNCTION



The pilot-to-open check valve is a direct-acting, spring-loaded poppet valve with electronic switch position monitoring. The compression spring holds the poppet in the closed position and therefore shuts off flow from port 3 to port 2, even if pressure has built up at port 3. The valve opens when the pressure at port 2 is higher than the pressure at port 3, including the pressure created by the spring force. If a control pressure is applied at port 1, the poppet is lifted from the valve seat and oil flows from port 1 to 2. The necessary pilot pressure at port 1 is dependent on the pressures across port 2 and 3.

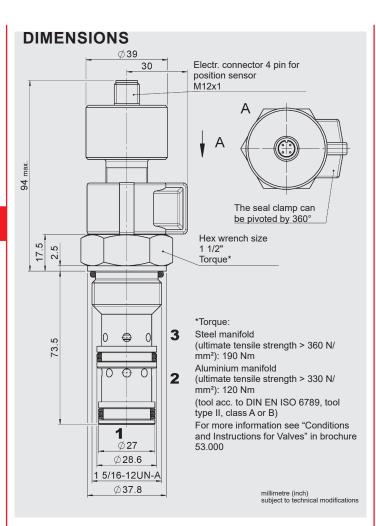
FEATURES

- With integrated, electronic switch position monitoring
- Direct connection of the sensor to the main spool ensures a direct signal
- Highly robust design
- Exposed surfaces zinc-nickel plated for increased corrosion protection (1000 h Salt spray test)

SPECIFICATIONS*

Operating pressure:	max. 350 bar		
Nominal flow:	max. 120 l/min		
Pilot ratio:	3:1		
	$p_{pilot} \pm 2 \text{ bar} = (p_2 \times 0.65) + (p_3 \times 0.35) + 0.7$		
Internal leakage:	leak-free, max. 5 drops/min (0.25 cm³/min)		
	at $P_3 = 350$ bar and $P_2 = 0$ bar, $v = 46$ mm ² /s		
Cracking pressure:	approx. 2 bar (30 PSI)		
	approx. 5 bar (70 PSI)		
Media operating temperature range:	min30 °C to max. +100 °C		
Ambient temperature range:	min30 °C to max. + 80 °C		
Operating fluid:	Hydraulic oil to DIN 51524 Part 1, 2 and 3		
Viscosity range:	min. 7.4 mm²/s to max. 420 mm²/s		
Filtration of operating fluid:	p ≤ 210 bar: min. class 20/18/15		
(to ISO 4406)	p > 210 bar: min. class 18/16/13		
MTTF _d :	150-1200 years,		
•	according to DIN EN ISO 13849-1		
Installation:	No orientation restrictions		
Materials:	Valve body:	steel	
	Piston:	hardened and	
		ground steel	
	Seals:	NBR (standard)	
		FKM (optional, media	
		temperature range	
		-20 °C to +120 °C)	
	Back-up rings:	PTFE	
Cavity:	FC16-3		
Weight:	0.64 kg		
Sensor data			
Supply voltage:	24 volt: 20 to 32 VDC		
117 3	12 volt: 10.5 to 16 VDC		
Reverse polarity protection of supply:	yes		
Outputs:	2 with change-over function PNP, positive		
	switching		
Output load:	≤ 400 mA, 100% continuous		
Short circuit protection:	Resistant to short circuits		
Connector:	Round connector M12x1 (4-pin)		
Protection class:	IP65 to DIN 40050		
EC conformity:	93/68/EEC 2014/30/EU		
EMC:	DIN EN 6100-6-1-2-3-4		
Humidity requirements:	0 – 95% rel. (to DIN 40040)		
Sensor connections:	0 – 95% fei. (to Din 40040)		
Consor connections.	1		
		(
	pnp 2	1 2	

EN 5.952.3.0/04.21



FC16-3 1 5/16-12 UN-2B ф Ø 0.05 A В PD Ø 28.6 +0.05 (IP) ф Ø 0.05 A В Α Fitting depth 20.05 ±1 VE 97 Rz 6.3 Х 77.5 ±0.5 ±0.5 Fitting depth 47.96 48.76 ±0.5 64.46 ±0.2 3 75.09 75.89 ±0.5 2 X4:1 В ACS ⊕ Ø 0.05 A B Ra 6.3 (Rz 6.3 Rz 10)

Part no.

MODEL CODE RP16B - 01E - C - N - 3 - 30 - 12**Basic model** Check valve, UNF 01E = with el. switch position monitoring **Body and ports*** = cartridge only Seals = NBR (standard) = FKM Pilot ratio = 3:1 Cracking pressure 30 = 30 PSI (2 bar) 70 = 70 PSI (5 bar)Sensor voltage

Standard models

Omission = 24 V

12 = 12 V

Code	Part no.
RP16B-01E-C-N-3-30	4032196
RP16B-01E-C-N-3-70	4032197
Other versions on request	

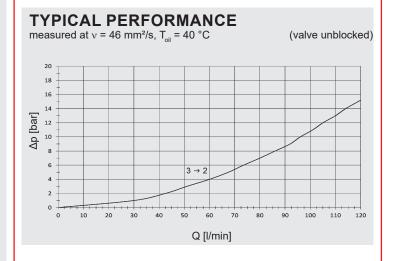
*Standard in-line bodies

Code	Part no.	Material	Ports	Pressure
FH163-SB8	3036257	Steel, zinc-plated	G1"	350 bar
FH163-AB8	3037208	Aluminium, anodized	G1"	210 bar

Other connection housings on request

Seal kits

Code	Material	Part no.
FS UNF 16/N	NBR	3651395
FS UNF 16/V	FKM	3651396



Note

millimetre (inch) subject to technical modifications

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

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on request

Tool

Form tools

VE =visual examination

Allowed drilling zone (for manifold design) Sharp edges should be avoided by rounding

to a radius of 0.1 mm to 0.2 mm Largest pre-drilling diameter

(nominal tool diameter)

CAVITY