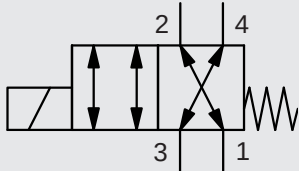


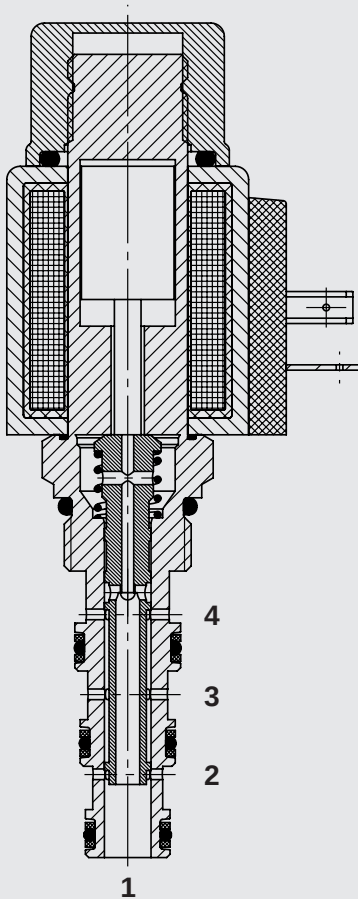
HYDAC

INTERNATIONAL



up to 19 l/min
up to 350 bar

FUNCTION



4/2 Directional Spool Valve WK08Y-01/-60

Solenoid Operated, direct-acting,
Screw-in Cartridge Valve UNF – 350 bar

PRODUCT ADVANTAGE

- Low pressure drop due to CFD-optimised flow path
- Hardened and ground valve components to ensure minimal wear and extended service life
- Coil seals protect the solenoid system
- Wide variety of connectors available
- Excellent switching performance by high-performance HYDAC solenoid
- External surfaces with advanced corrosion protection thanks to ZnNi coating (1,000 h salt spray test)

DESCRIPTION OF FUNCTIONS

The HYDAC WK08Y 4/2 directional spool valve is solenoid operated and direct-acting.

When the solenoid coil is not energised, the valve permits flow from port 3 to 4 and from port 2 to 1 and also in the corresponding opposite direction.

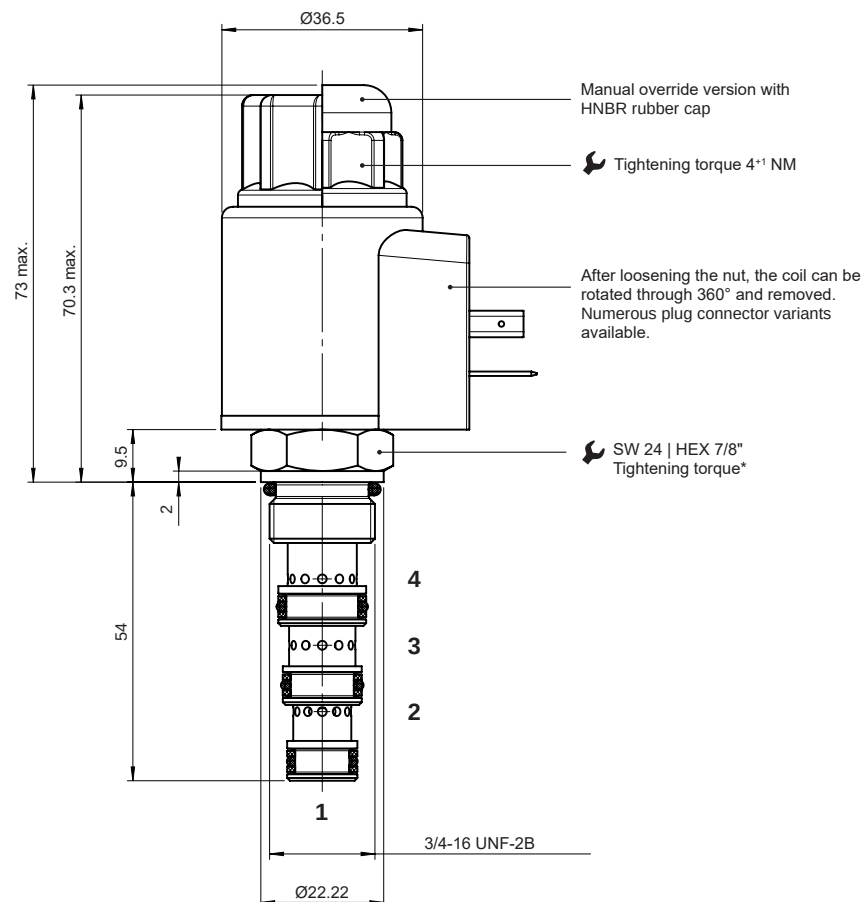
When the solenoid coil is energised, the valve permits flow from port 3 to 2 and from port 4 to 1 and also in the corresponding opposite direction.

TECHNICAL DETAILS¹⁾

Operating pressure	max. 350 bar	max. 5,000 psi
Flow rate	max. 19 l/min	max. 5 gpm
Internal leakage	max. 230 ml/min at p = 210 bar and v = 34 mm²/s Port 3 → 4	
Operating fluid	Hydraulic oil to DIN 51524 Part 1, 2 and 3	
Ambient temperature range	min. -20 °C up to max. +60 °C	
Temperature range of operating fluid	NBR: min. -20 °C up to max. +100 °C FKM: min. -20 °C up to max. +120 °C	
Viscosity range	min. 7.4 mm²/s up to max. 420 mm²/s	
Filtration	Permitted contamination level of the operating fluid as defined by ISO 4406 class p ≤ 210 bar: min. class 20/18/15 p > 210 bar: min. class 19/17/14	
MTTF _o	150 - 1200 years, assessment according to DIN EN ISO 13849-1:2016, Table C.1, confirmation of ISO 13849-2:2013, Tables C.1 and C.2	
Installation position	User-definable	
Material	Valve body: Steel Spool: Steel, hardened and ground Seals: NBR (standard) FKM Support rings: PTFE	
Cavity	FC08-4	
Weight	0.30 kg 0.49 kg with coil	
Electric system		
Nominal current at 20 °C	1.5 A 8 Ω 12 V DC 0.8 A 30 Ω 24 V DC	
Voltage tolerance	±15% of nominal voltage	
Duty cycle	100% duty cycle (continuous operation) up to max. 115% of the nominal voltage at 60 °C ambient temperature	
Solenoid coil design	40-1836	

¹⁾ See "Conditions and Instructions for Valves" in brochure 53.000

DIMENSIONS

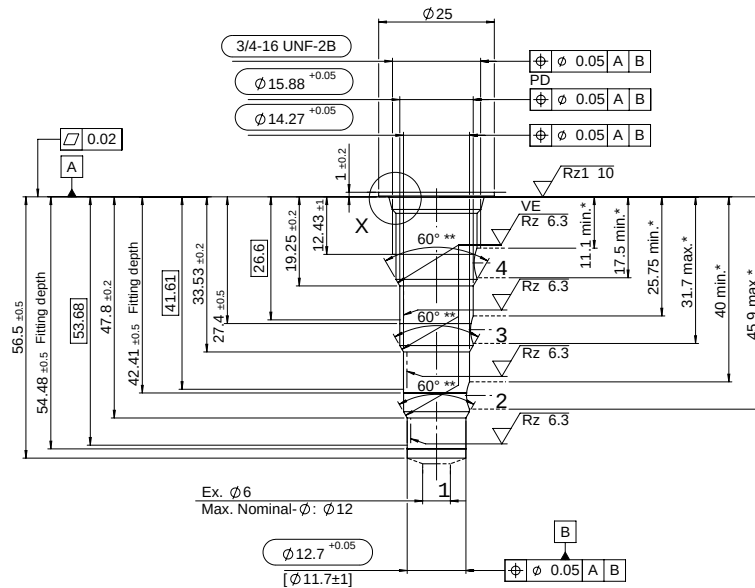


*Tightening torque:
Steel housing burst strength >360 N/mm²: 33 Nm | Aluminium housing burst strength >330 N/mm²: 30 Nm
Torque tool acc. to DIN EN ISO 6789, tool type II class A or B.

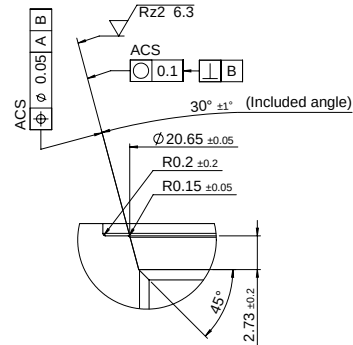
Millimetre
Subject to technical modifications.

CAVITY

FC08-4



X 4 : 1



VE = Visual Examination

 $\sqrt{Ra\ 6.3}$ ($\sqrt{Rz\ 6.3}$ $\sqrt{Rz\ 10}$)

* Permitted boring zone (for block design).

** Sharp edges should be avoided by using a radius of 0.1 mm to 0.2 mm.

*** Largest pre-drilling diameter (nominal tool diameter).

Millimetre

Subject to technical modifications.

MODEL CODE

WK08Y - 01 M - C - N - 24 DN

Name

4/2 directional spool valve, UNF

Design

01 = Standard

60 = Compatible with Bosch cavity

Manual override

n.a. = No manual override

M = With manual override

Body and Ports

C = Screw-in cartridge valve

Sealing material

N = NBR (standard)

V = FKM

Nominal voltage*

0 = Without coil, with fastening nut and seal

12 = 12 V DC

24 = 24 V AC/DC

230 = 230 V AC (DC coil, rectifier integrated in coil)

Solenoid coil design* Type 40-1836**

DC:

DG = Plug A acc. to DIN EN 175301-803

DK = KOSTAL plug connector M27x1

DL = 2 flying leads 0.75 mm² x 457 mm (18")

DN = DEUTSCH plug connector DT04-2P

DO = M12 plug connector

DT = AMP Junior Timer

DU = AMP Junior Timer

AC:

AG = Plug A acc. to DIN EN 175301-803

Poles

Connection

Protection class

3-pole radial IP65

2-pole radial IP65 / IP67

2-pole radial IP65 / IP67

2-pole axial IP67 / IP69

4-pole Radial IP65

2-pole radial IP65 / IP67

2-pole axial IP65 / IP67

3-pole radial IP65

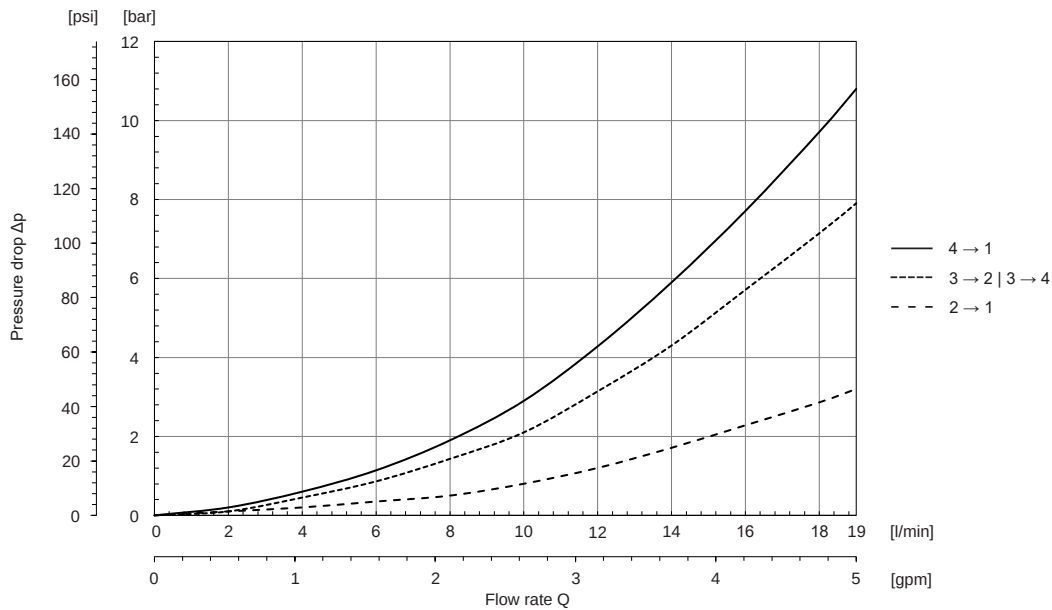
* Further versions on request.

** Detailed information is available in brochure 5.207 — Solenoid coils for switching valves.

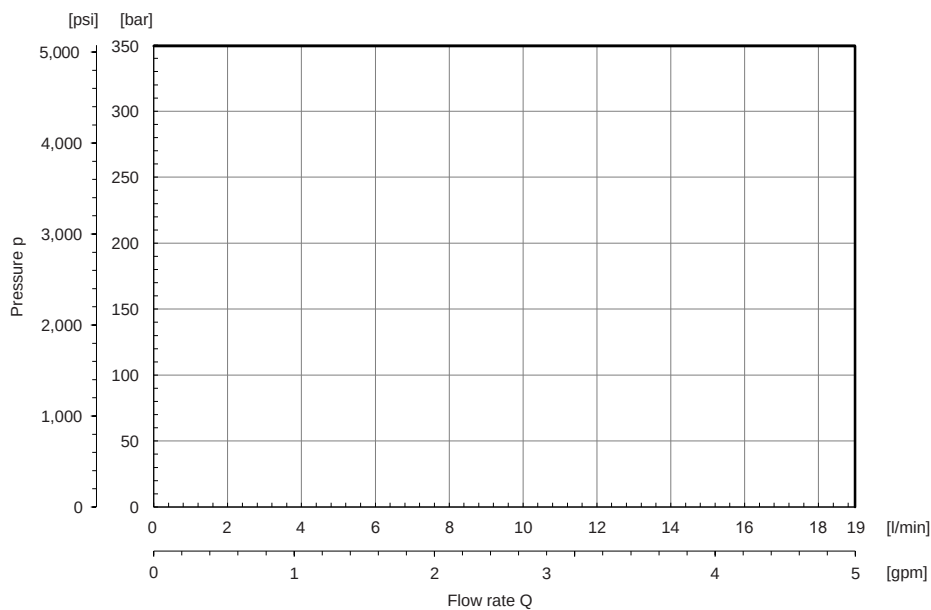


TYPICAL PERFORMANCE CURVES

$\Delta p/Q$ characteristics measured at $v = 32 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 38^\circ\text{C}$



Operation limits measured at $v = 32 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 38^\circ\text{C}$





MATERIAL OVERVIEW

Standard models

Designation	Part no.
WK08Y-01-C-N-0	3009707
WK08Y-01-C-N-12DG	3020611
WK08Y-01-C-N-12DU	3020625
WK08Y-01-C-N-230AG	3044084
WK08Y-01-C-N-24AG	3044082
WK08Y-01-C-N-24DG	3020645
WK08Y-01-C-N-24DT	3020648
WK08Y-01-C-N-24DU	3020649
WK08Y-01-C-V-0	3009709
WK08Y-01-C-V-12DG	3020628
WK08Y-01-C-V-12DT	3020631
WK08Y-01-C-V-12DU	3020632
WK08Y-01-C-V-230AG	3044087
WK08Y-01-C-V-24AG	3044085
WK08Y-01-C-V-24DT	3020655
WK08Y-01-C-V-24DU	3020656
WK08Y-01M-C-N-0	3009708
WK08Y-01M-C-N-12DG	3020660
WK08Y-01M-C-N-12DU	3020673
WK08Y-01M-C-N-230AG	3044090
WK08Y-01M-C-N-24AG	3044088
WK08Y-01M-C-N-24DG	561825
WK08Y-01M-C-N-24DT	3020699
WK08Y-01M-C-N-24DU	3020700
WK08Y-01M-C-V-0	3009710
WK08Y-01M-C-V-12DG	3020681
WK08Y-01M-C-V-12DT	3020694
WK08Y-01M-C-V-12DU	3020695
WK08Y-01M-C-V-230AG	3044094
WK08Y-01M-C-V-24AG	3044091
WK08Y-01M-C-V-24DG	3020703
WK08Y-01M-C-V-24DT	3020706
WK08Y-01M-C-V-24DU	3020707
WK08Y-60-C-N-0	3063426
WK08Y-60-C-N-12DT	3062613
WK08Y-60-C-N-24DT	3062614
WK08Y-60M-C-N-0	3064082
WK08Y-60M-C-N-24DG	3145189

Further versions on request.

Spare parts

Designation	Material	Code	Part no.
Seal kit	NBR	FS UNF 08/N	3651385
Seal kit	FKM	FS UNF 08/V	3651356

Housing

Designation	Material	Code	Pressure	Ports	Weight	Part no.
Pipe connection housing	Steel, zinc-plated	H-R084-SB3	350 bar	G3/8	0.94 kg	563383
Pipe connection housing	Aluminium, anodised	H-R084-AB3	210 bar	G3/8	0.31 kg	3011407

Tools

Designation	Part no.
Rougher (Countersink)	175646
Finisher (Reamer)	175647

NOTE

The information given in this brochure refers to the described operating conditions and applications. For applications and operating conditions not described, please contact the relevant technical departments.

Subject to technical modifications.

Documents are only valid if they have been obtained via the website and are up-to-date.

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