

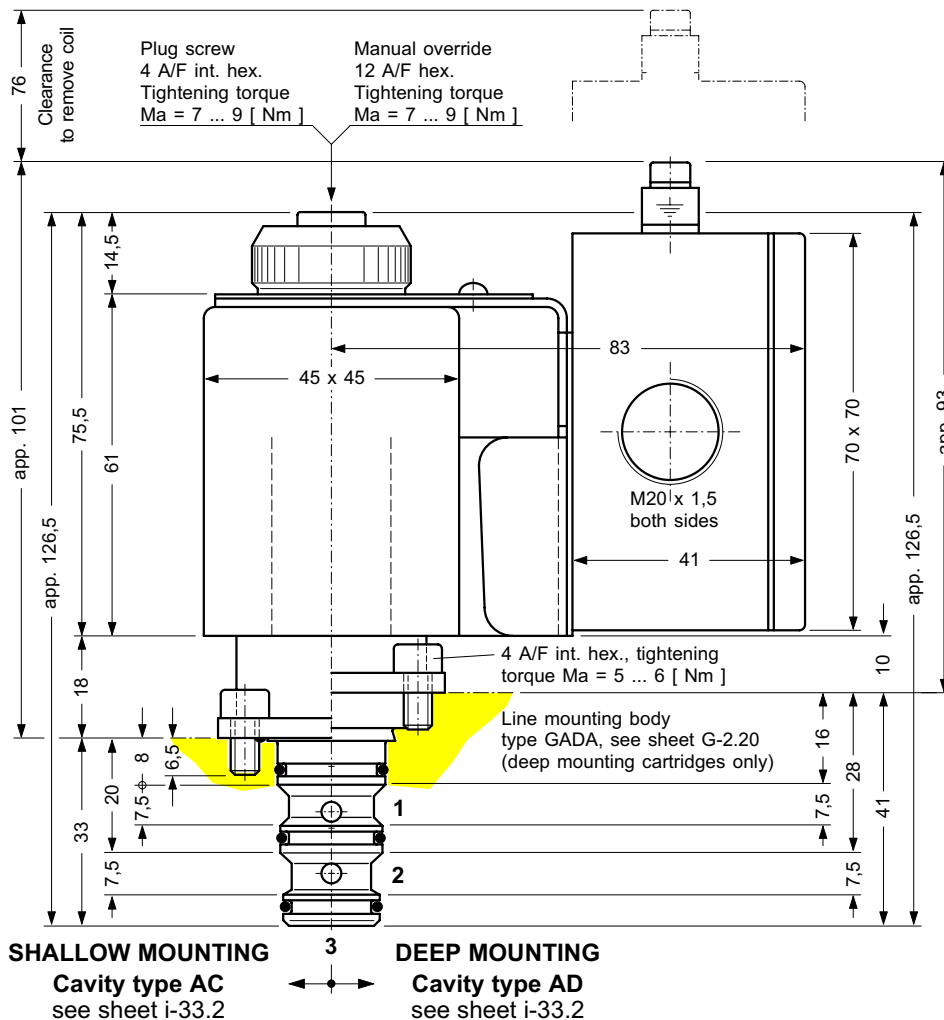
W-2.22

3/2 Seat Valves, 6 mm Push-in Cartridge Design Direct Acting for Explosion-hazard Areas Series EEx-W1D ... / EEx-W1F ... 20 l/min, 315 bar

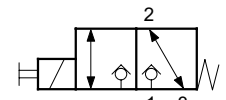
- Bidirectional seat-valve closure
- Guided valve stem and cone
- Corner power: 20 l/min at 315 bar
- **EEx- classification: EEx me II T4**
- Coils can be changed without opening the hydraulic envelope
- Optional shallow or deep mounting
- **Option:** with closed crossover characteristic for accumulator and clamping systems (Q max. 10 l/min)



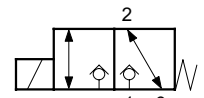
DIMENSIONS



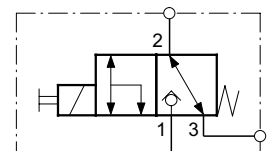
SYMBOL



EEx-W1D ...
EEx-W1F ...
(with manual override)



EEx-W1D ...
EEx-W1F ...
(without manual override)



GADA + W1C ...

Function with 2/2 seat valve per sheet W-2.21 and line mounting body type GADA (sheet G-2.20)

DESCRIPTION

Series EEx-W1D ... / EEx-W1F ... 3/2 seat valves are push-in cartridge units with square retaining flanges.

The solenoid coil slips over the core tube and can be secured at any angle through 360°.

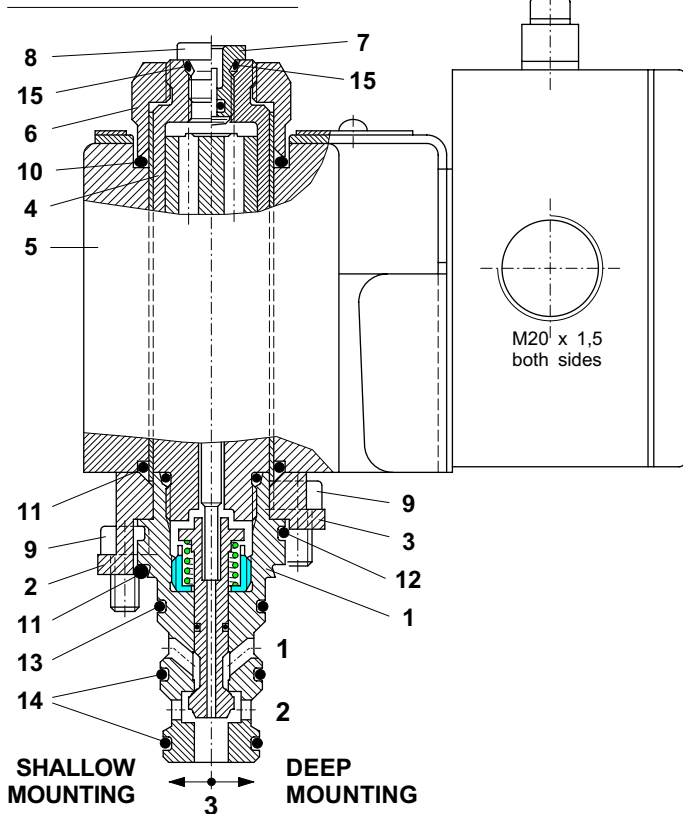
For block designers, we offer the advantage of alternative

shallow or deep mountings.

Depending on the mounting depth, the valves are equipped with **18 mm** or **10 mm** wide flanges respectively.

Form tools for cavity types AC and AD are available for sale or hire.

SCHEMATIC SECTION



COMPONENTS / SERVICE PARTS

*) = part of seal kit no. DS-263
 ▲ = available as service part

It.	Qty.	Description	
1	1	Cartridge body	∅ 26 x 51
2	1	Flange (shallow mtg.)	40 x 40 x 18
3	--	Flange (deep mtg.)	40 x 40 x 10
4	1	HTF core tube, complete	∅ 21 x 81
5	1	Coil EEx-me II T4, type K14 (AC)	
		Coil EEx-me II T4, type D14 (DC)	
6	1	Knurled nut EEx-W1	∅ 29 x 16
7	1	Manual override HN-H, complete	12 A/F x 14
8	1	Plug screw	M 8 x 1 DIN 908
9	4	Hex. skt. screw M 5 x 10 8.8	DIN 912
10	1	Seal kit no. DS-263, comprising *):	
10	1	O-ring no. 118	∅ 21,89 x 2,62 N90
11	2*)	O-ring no. 116	∅ 18,72 x 2,62 N70
12	--	O-ring no. 021	∅ 23,52 x 1,78 N90
13	1	O-ring no. 016	∅ 15,60 x 1,78 N90
14	2	O-ring no. 015	∅ 14,00 x 1,78 N90
15	1	O-ring no. 010	∅ 6,07 x 1,78 V75

EEEx-W1D ... / EEEx-W1F ... (DEEP MOUNTING)
 EEEx-W1D ... / EEEx-W1F ... (SHALLOW MOUNTING)

TO ORDER SERVICE PARTS, STATE:

- complete unit model code from the nameplate, including the design number
- data sheet number, including issue date
- part item number from above list
- part description from above list
- quantity required

INSTALLATION AND SERVICING

MUST BE CARRIED OUT WITH CARE, AND BY QUALIFIED PERSONNEL ONLY

When changing seals, the new seals should be thoroughly oiled or greased before fitting them to the valve.

Use the correct tightening torque for the retaining screws

MAIN CHARACTERISTICS

Type	3/2 directional seat valve for explosion-hazard areas
Design	direct acting seat type
Mounting method	push-in cartridge with retaining flange
Size	nominal 6 mm HTF cavity type AC / AD
Mass	1,06 kg
Mounting attitude	unrestricted
Flow direction	see symbol
Operating pressure v. Switching frequency	... 315 bar at ... 1,200 cycles/hr. ... 210 bar at 1,000 ... 10,000 cycles/hr.
Switching power limits	to Q max. = 20 l/min and p = 315 bar with closed crossover: Q max. = 10 l/min
Fluids	hydraulic oils HL and HLP to DIN 51 524 other fluids - contact HTF
Min. fluid cleanliness	18/14 to ISO 4406 / CETOP RP70H 8 ... 9 to NAS 1638
Fluid temperature range	see "Apparatus Cert. No. Ex 89Y5111X"
Viscosity range	3 ... 300 cSt
Flow rate Q max.	20 l/min with open crossover (standard) 10 l/min with closed crossover

when fitting the cartridge.

Use the correct tightening torque when fitting the manual override assembly, item 7, or the plug screw, item 8.

Electrical data for **EEEx-W1D ... -6 / EEEx-W1F ... -6** :

Solenoid type	EEEx-classification	Voltage	Power rating	Standards
D 14	EEEx me II T4	24 VDC	40 W	EN 50014 EN 50019
K 14 *)	EEEx me II T4	230 VAC		EN 50028

Valves (and solenoids) are supplied **without** cable and **without** M20 x 1,5 cable gland.

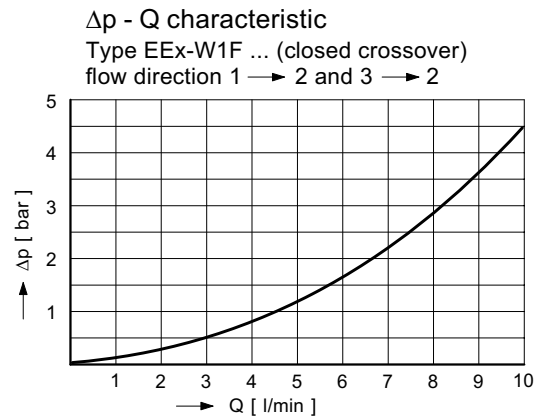
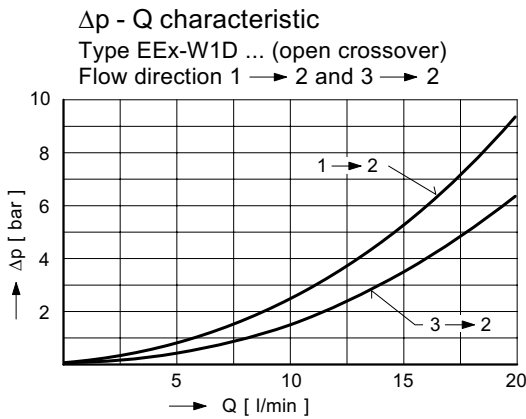
Suitable cable: min. ∅ 6 / max. ∅ 12, 3-core x 1,5 mm²

EEEx- classification	EEEx me II T4
Enclosure protection	IP 66
Standards	EN 50014 / 50019 / 50028
Solenoid	wet-armature type with core tube and slip-on coil
Nominal voltages	24 VDC 230 VAC 50 ... 60 Hz
Voltage tolerance	± 5 %
Max. core tube pressure	315 bar (static)
Duty cycle	100 %

The solenoid coils must be protected by a semi-delay fuse to DIN 41 571.

*) = with integral rectifier/varistor

PERFORMANCE DATA Oil viscosity 33 cSt



Switching times

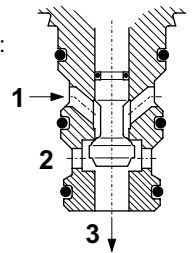
Flow direction	1 → 2	3 → 2
Solenoid ON	80 ... 220 ms	60 ... 250 ms
Solenoid OFF	10 ... 160 ms	30 ... 100 ms

These times are strongly influenced by flow rate, pressure and viscosity, as well as by the dwell time under pressure

Note on operational reliability

In accumulator systems, the user must ensure that the maximum permitted flow rate of 20 l/min for EEx-W1D ... models,

We recommend the following connections:
Port 1: pressure inlet
Port 2: to actuator
Port 3: to tank



and 10 l/min for EEx-W1F ... models, is not exceeded in either flow direction. See also orifice flow chart on data sheet i-01.

For all applications involving long dwell periods under pressure, please contact HTF.

MODEL CODE KEY (see also the separate Quick-selection tables) Ex. **EEx - W1 D B A 1** **24 VDC**

EEx = EEx- classification EEx me II T4 (for explosion-hazard areas)

W1 = directional seat valve, 3/2 function
deenergised: 1-to-2 closed

D = 3/2 solenoid valve with standard open crossover
F = 3/2 solenoid valve with closed crossover

*** specify special seal requirements on order

Seals			Shallow / deep mounting
Nitrile 90 Shore	Viton 85 Shore	Special ***	
B	G	M	shall.
C	H	N	deep
D	I	O	shall.
E	K	P	deep

B G M shall. solenoid operated with manual override (not suitable for line mounting body)

C H N deep solenoid operated with manual override (suitable for line mounting body)

D I O shall. solenoid operated without manual override (not suitable for line mounting body)

E K P deep solenoid operated without manual override (suitable for line mounting body)

A ... Q = **standard** model per relevant data sheet

Z ... R = special features by arrangement

1 ... 9 = design number (omit when ordering new units)

Voltage and current plainly specified

RELATED DATA SHEETS

i - 01 Orifice flow chart

i - 32 Form tool hire programme for HTF cartridge cavities

i - 33.2 Cavity types AC and AD for 3/2 seat valves

--- Quick-selection table

--- Apparatus Certificate No. Ex 89Y5111X

W - 2.21 2/2 seat valves for explosion-hazard areas, solenoid actuated

W - 2.23 2/2 ... 4/4 seat valves for explosion-hazard areas, in size 03 manifold mounting body, solenoid actuated

W - 2.55 2/2 seat valves for explosion-hazard areas, in size 03 stack mounting body, solenoid actuated

G - 2.20 Line mounting body GADA1 (G 3/8") for 3/2 seat valves (deep mounting)

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