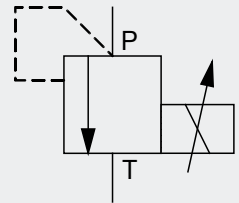


Proportional Pressure Relief Valve EPDBD 05



Directly operated, electrically actuated
 Max. operating pressure 315 bar
 Rated flow rate up to 12 l/min
 Cavity EPDBD 05 or
 Cavity T-10A or C-10-2



020140_EPDBD_05
 12.2025

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Characteristics

- Proportional pressure relief valve in spool design
- Slip-in valve for cavity EPDBD 05
- Or screw-in valve for cavity T-10A
- Or screw-in valve for cavity C-10-2
- Particularly suitable as a pilot valve to pre-control large flow rates
- Low vibration
- Maintenance-free
- Degressive versions available

Technical data

Hydraulic characteristics

Max operating pressure:	315 bar (with free return flow in port T) For aluminum casings: 210 bar max. Max. tank pressure: 35 bar
Rated flow rate:	pressure range 25-115 bar: 12 l/min pressure range 175-315 bar: 8 l/min at differential pressure control $\Delta p = 10$ bar
Pressure setting range:	See type code
Flow direction:	1 (P) to 2 (T) (2 to 1 or T to P not permitted)
Operating fluids:	Mineral oils according to DIN 51524, others on request
Viscosity range:	10 - 350 cSt
Filtration:	Oil purity according to ISO 4406 (1999) 18/16/13, filter with $\beta_{5(c)} > 200$
Repeatability:	< 3 % with optimized PMW-signal*
Hysteresis:	< 5 % with optimized PMW-signal*
* at 20 % to 100 % of the rated solenoid current	

NOTE

The pressure at connection 2 (T) is added directly to the set value. The total pressure of connection 1 (P) and 2 (T) must not exceed the permissible maximum operating pressure.

Mechanical characteristics

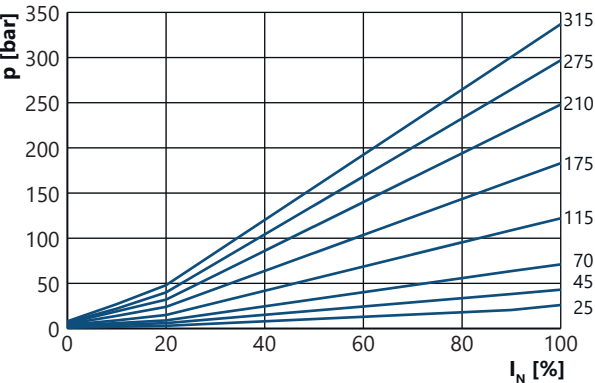
Design:	EEPDBD slip-in valve, EPDBDR in the piping casing, ZEPDBD in intermediate plate NG 6, EPDBDA in mounting plate NG 6, EEPBDBS screw-in version T-10A or EEPDBDM screw-in version C-10-2, direct operated
Size:	05
Fluid temperature:	-25 °C to +70 °C
Ambient temperature:	-25 °C to +50 °C
Storage temperature:	-30 °C to +60 °C (non-condensing)
Installation position:	Any
Weight:	EEPDBD 05: 0.7 kg, EPDBDR 05: 1.13 kg, ZEPDBD(05/06): 1.05 kg, EPDBDA (05/06): 0.99 kg EEPBDBS 05: 0.74 kg, EEPDBDM: 0.73 kg
Materials:	Valve parts: Steel, piping casing: Steel, intermediate plate and mounting plate: Aluminum Seals: NBR, optional Viton
Surface protection:	Exterior parts: Galvanized steel, partially burnished Piping casing: Galvanized steel, intermediate plate and mounting plate: Anodized aluminum

Electrical characteristics

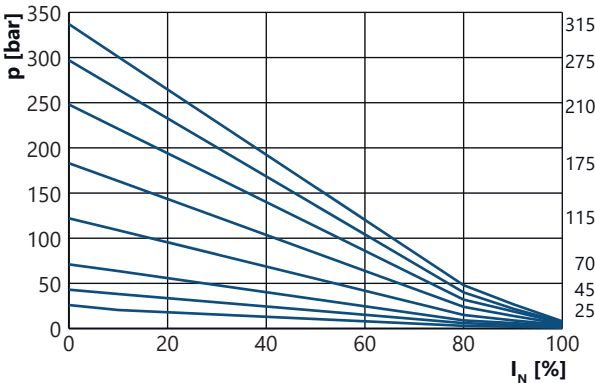
Rated voltage:	12 V DC, 24 V DC
Rated solenoid current:	1.7 A (12 V), 0.7 A (24 V)
Rated resistance (R20):	4 Ω (12 V), 25 Ω (24 V)
Power consumption:	16 W at rated solenoid current
Power-on time:	100 % PO
Control command:	PWM signal
PWM frequency:	Typically 140 Hz (depending on the application)
Protection class:	IP65 with a correctly installed wiring box
Electrical connection:	Device plug in accordance with DIN EN 175301-803 (formerly DIN 43650) shape A, AMP Junior Timer, unterminated wire
Control units:	Can be found at www.weber-hydraulik.com .

Characteristic curves

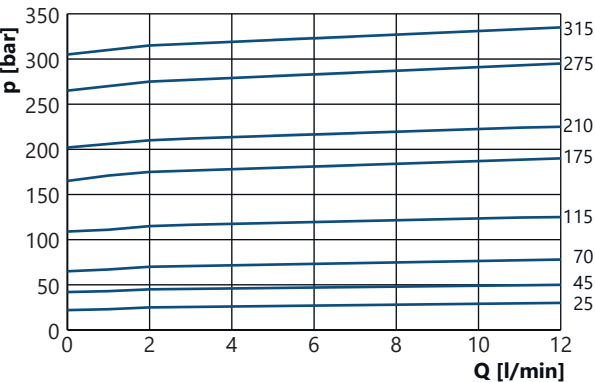
Pressure characteristic curve (p/I) EPDBD 05 at Q = 0.8 l/min



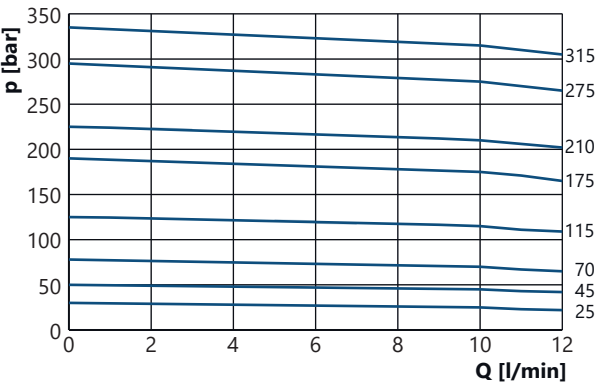
Pressure characteristic curve (p/I) EPDBD 05 depressive version at Q = 0.8 l/min



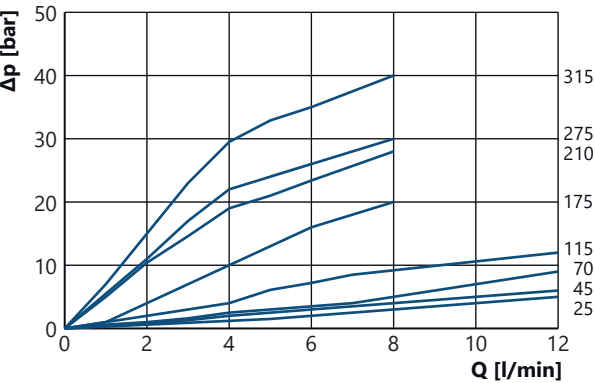
Pressure characteristic curve (p/Q) EPDBD 05 at I_N



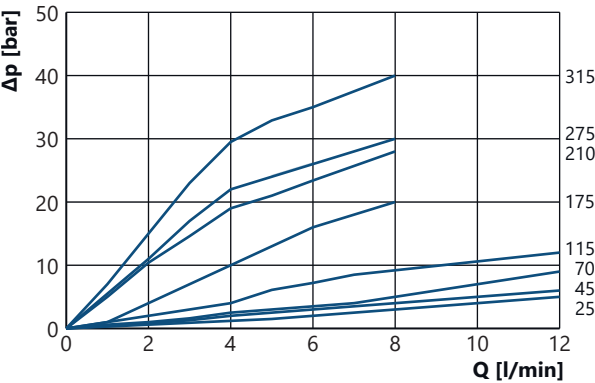
Pressure characteristic curve (p/Q) EPDBD 05 depressive version at I_N



Pressure loss characteristic curve ($\Delta p/Q$) EPDBD 05 at I = 0 mA (deenergized)



Pressure loss characteristic curve ($\Delta p/Q$) EPDBD 05 depressive version at I = 100 % (full current)

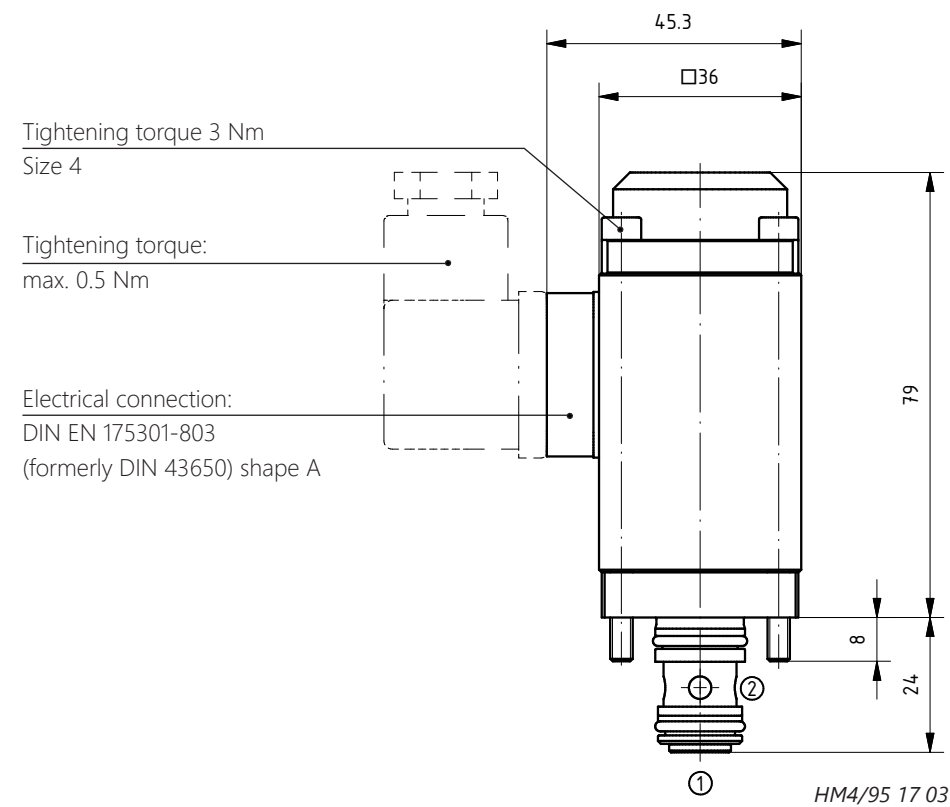


Measurement conditions

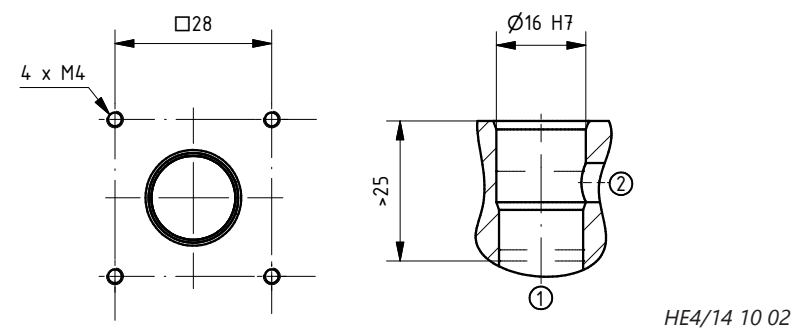
Oil: HLP 32, temperature: 40 °C (~32 cSt).
Higher viscosities change the characteristic curves.

Dimensions

Slip-in valve
EEPDBD 05



Cavity
EEPDBD 05

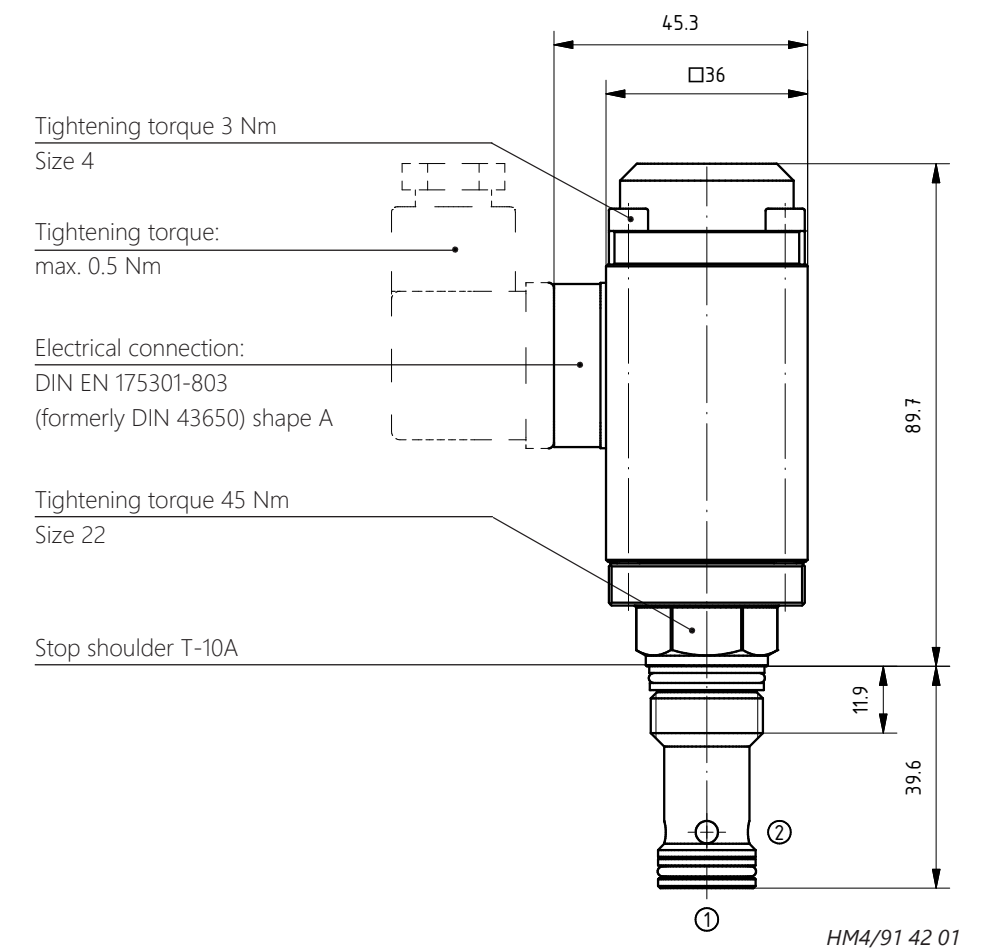


NOTE A detailed drawing of the cavity is provided at "**General information**" on our website at www.weber-hydraulik.com.

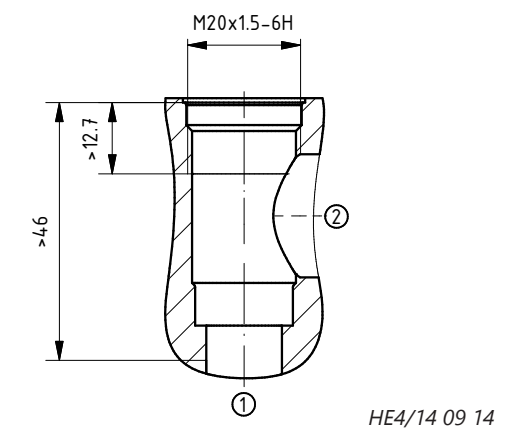
NOTE The valve is also available as EPDBDR 05 in a piping casing, as ZEPDBD (05/06) in an intermediate plate NG 6, and as EPDBDA (05/06) in a mounting plate NG 6. Dimension sheets are available upon request.

Dimensions

Screw-in valve
EEPDBS 05



Cavity
T-10A



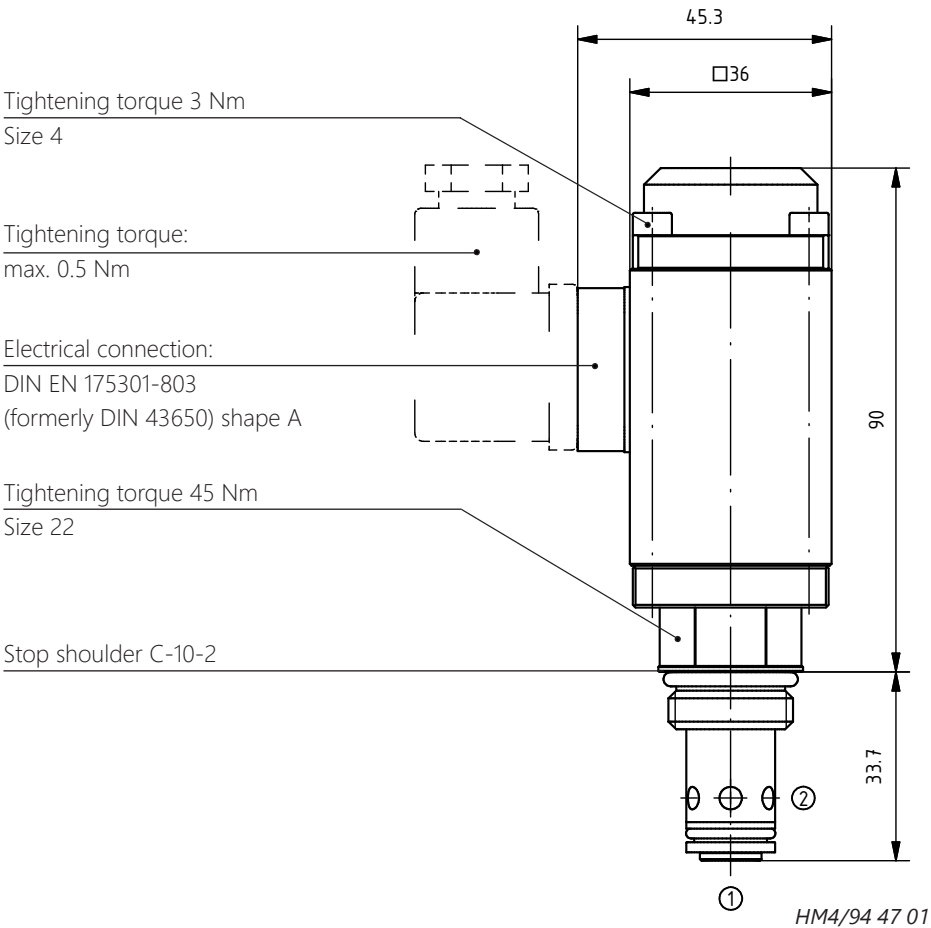
NOTE A detailed drawing of the cavity is provided at "**General information**" on our website at www.weber-hydraulik.com.

NOTE Suitable casings and connection plates are available at "**Connecting Plates and Manifolds**" on our website www.weber-hydraulik.com.

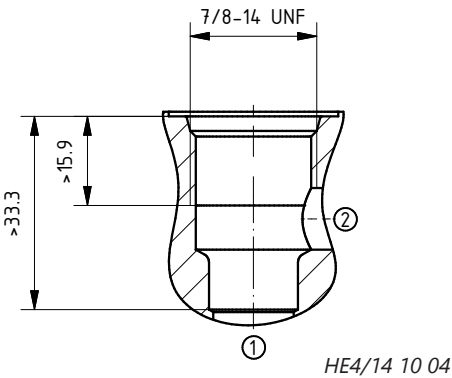
NOTE The valve is also available as a degressive version.

Dimensions

Screw-in valve
EEPDBDM 05



Cavity
C-10-2



- NOTE** A detailed drawing of the cavity is provided at "General information" on our website at www.weber-hydraulik.com.
- NOTE** Suitable casings for C-10-2 are available on request.
- NOTE** The valve is also available as a degressive version.

Dimensions

Slip-in valve
EEPDBD 05
degressive

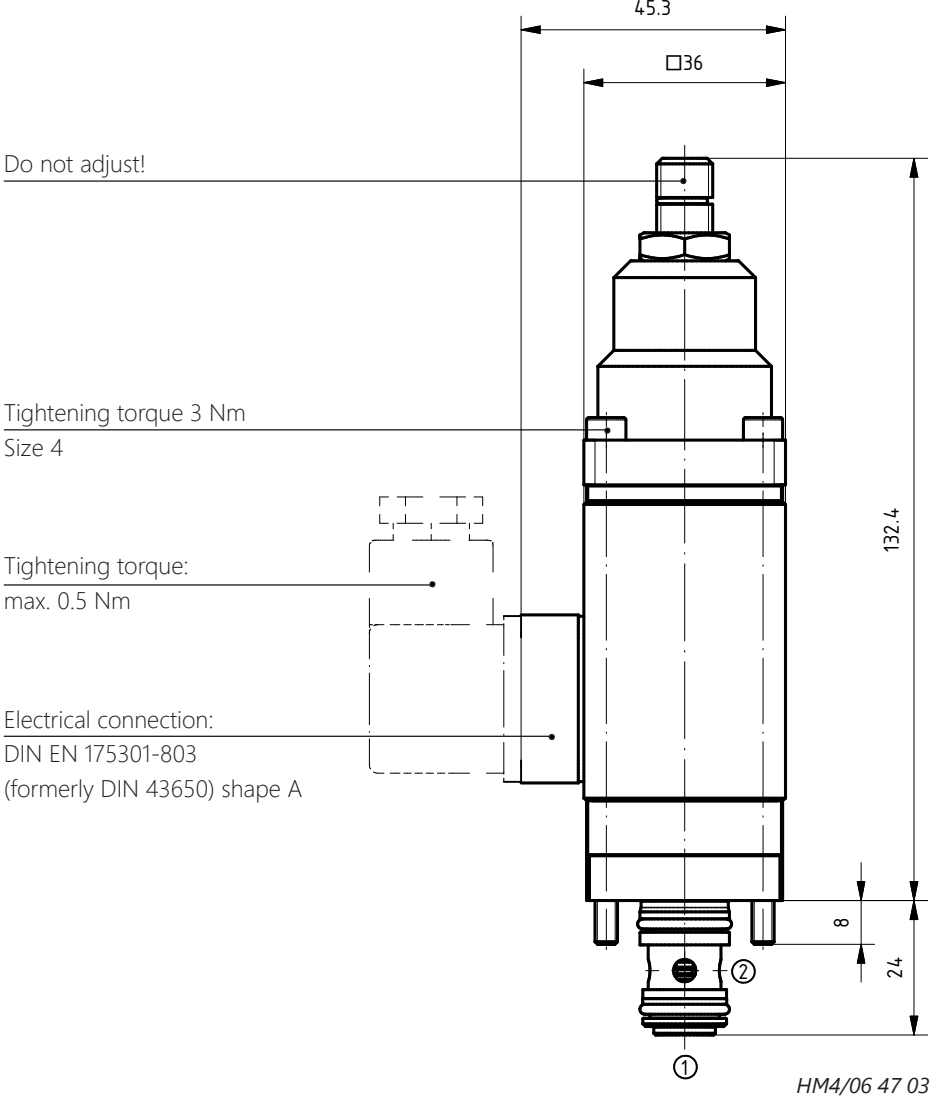


Do not adjust!

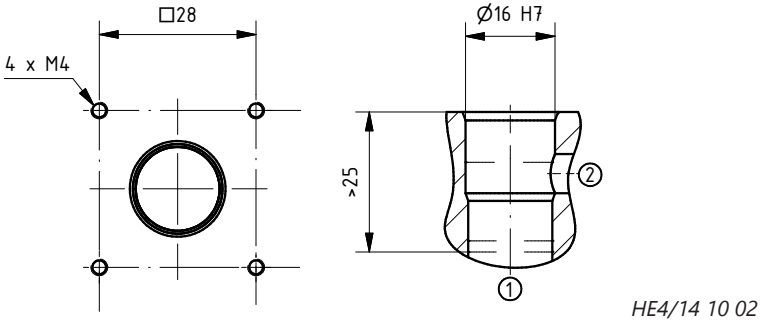
Tightening torque 3 Nm
Size 4

Tightening torque:
max. 0.5 Nm

Electrical connection:
DIN EN 175301-803
(formerly DIN 43650) shape A

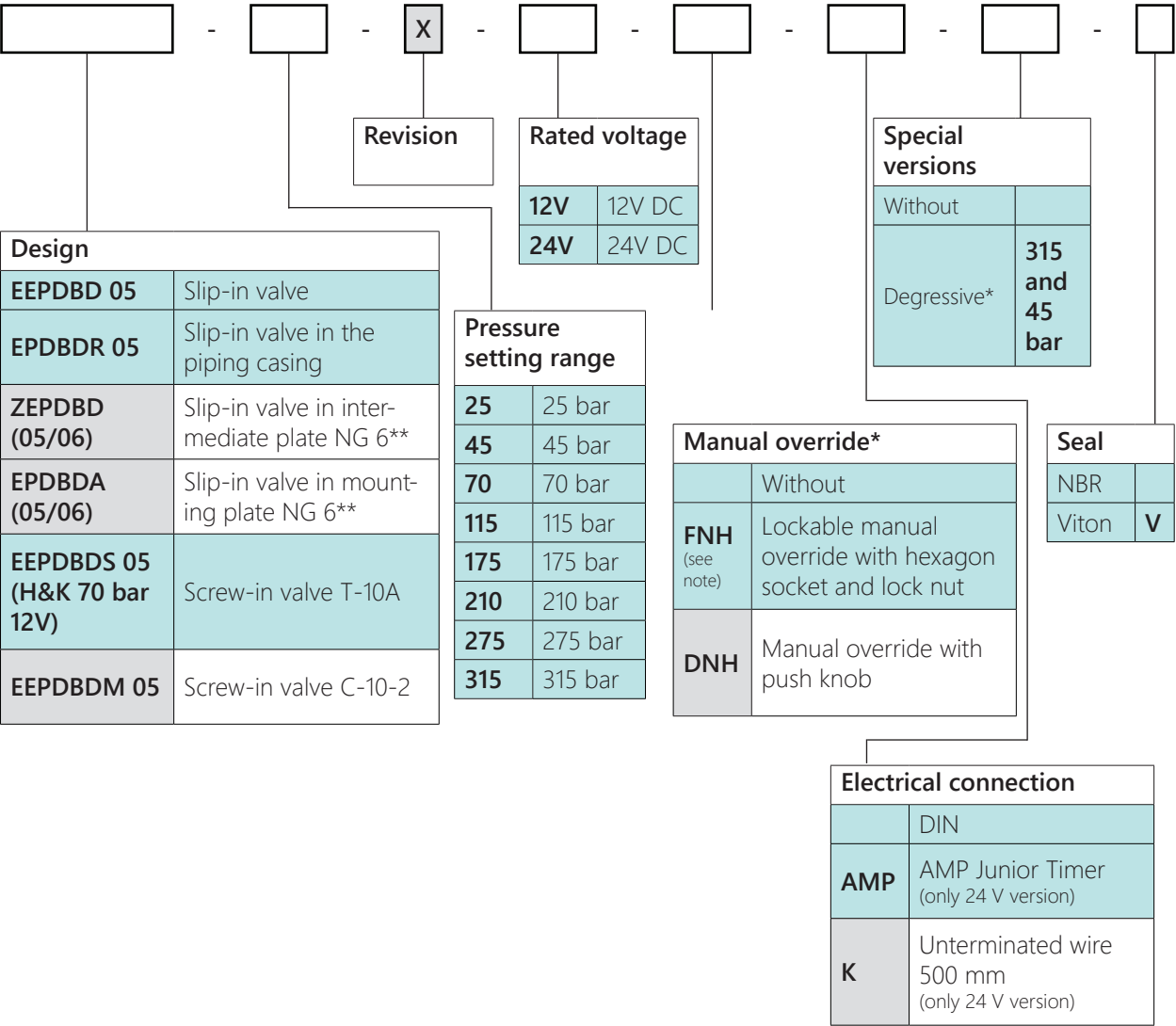


Cavity
EPDBD 05



- NOTE** A detailed drawing of the cavity is provided at "General information" on our website at www.weber-hydraulik.com.
- NOTE** The degressive version of the valve is also available as EEPDBDS 05 or EEPDBDM 05.

Type code



* no additional manual override selectable for degressive versions
** aluminum casings are approved for a max. operating pressure of 210 bar

NOTE FOR FNH



The FNH lockable manual override can be used to override the pressure relief function of the valve. Be aware that the valve can not fulfill its pressure relief function if the FNH is screwed in and locked. This can lead to excessive pressure and cause breakage or failure of the components if no parallel pressure relief protection is present.

The FNH should never be screwed in when used in conjunction with a running system! The application as a pressure relief valve with extended throttle function is solely at the operator's discretion and responsibility! If the FNH lockable manual override is screwed in to achieve a throttle function, the reduction in the valve's rated flow rate must be noted.

Accessories and further information

Accessories/spare parts	Article:	Article number:
	Socket DIN EN 175301-803 (formerly DIN 43650), shape A, black	149.0007
	Seal kit EEPDBD 05 (NBR)	405.0050
	Seal kit EEPDBD 05 (Viton)	405.0051
	Seal kit T-10A (NBR)	405.0013
	Seal kit T-10A (Viton)	405.0037
	Seal kit C-10-2 (NBR)	405.0079
	Seal kit C-10-2 (Viton)	405.0080

NOTE For appropriate electronic controllers, see “*Electronics and Sensors*” on our website at www.weber-hydraulik.com.

Operating manual Information regarding assembly, commissioning and maintenance is available in “*General information*” in the “*General Operating Manual*” category on our website or on request.



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Subject to changes