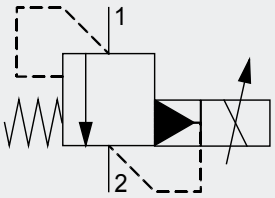
Proportional pressure relief valve EPDBS 10

pilot operated, solenoid operated
operating pressure max. 315 bar
volume flow max. 150 l/min
cavity T-3A



020220_EPDBS_10_e
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Characteristics

- proportional pressure relief valve in spool design
- screw-in valve for cavity T-3A
- low vibration
- maintenance-free
- degressive version available

Technical data

Hydraulic	Operating pressure max.:	315 bar (with free return flow in port 2) max. pressure at port 2: 35 bar
	Flow rate:	150 l/min
	Pressure setting range:	see type code
	Flow direction:	1 (P) to 2 (T) (2 to 1 not allowed)
	Hydraulic fluid:	mineral oil according to DIN 51524, others upon request
	Viscosity range:	10 - 350 cSt
	Filtration:	oil cleanliness according to ISO 4406 (1999) 18/16/13, filter with β 5(c) > 200
	Repeatability:	< 3 % with optimized PWM-signal*
	Hysteresis:	< 5 % with optimized PWM-signal*

* at 20 % to 100 % of the nominal valve current

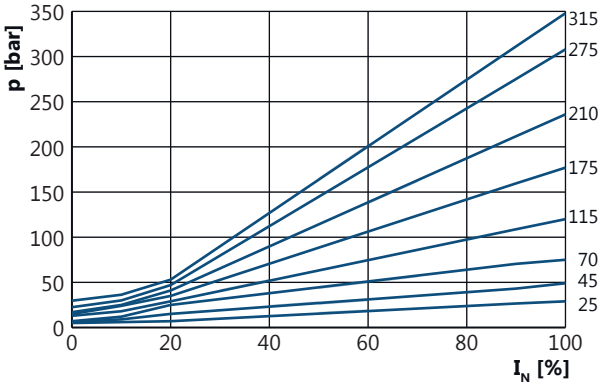
NOTE The pressure on port 2 (T) adds directly to the set pressure. The total pressure of ports 1 (P) and 2 (T) must not exceed the maximum operating pressure.

Mechanic	Design:	EEPDBS screw-in valve T-3A, EPDBSA screw-in valve in mounting plate NG 10, pilot operated
	Size:	10
	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:	EEPDBS 10: 0,84 kg, EPDSA 10: 1,78 kg
	Material:	valve parts: steel seals: NBR, Viton optional
	Surface protection:	exterior parts: zinc coated steel, partially burnished

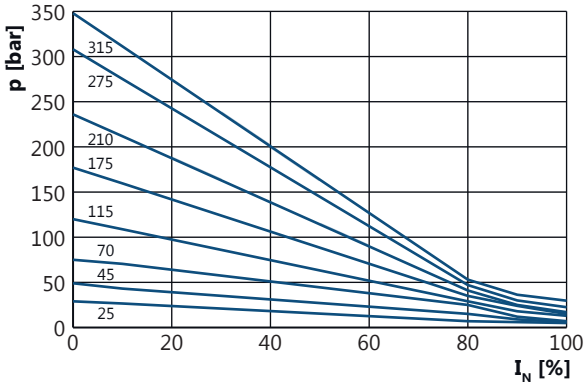
Electric	Nominal voltage:	12 V DC, 24 V DC
	Nominal valve current:	1,7 A (12 V), 0,7 A (24 V)
	Nominal resistance (R20):	4 Ω (12 V), 25 Ω (24 V)
	Power consumption:	16 W at nominal valve current
	Shifting time:	100 % ED
	Control command:	PWM-signal
	PWM-frequency:	typically 140 Hz (depending on application)
	Protection class:	IP65 with correctly mounted and locked mating connector
	Electric termination:	Electric plug according to DIN EN 175301-803 (formerly DIN 43650) shape A, AMP Junior Timer, unterminated wire
	Electronic controllers:	see chapter 6 *"electronics and sensors"* as well as our online catalogue at *www.weber-hydraulik.com*.

Performance

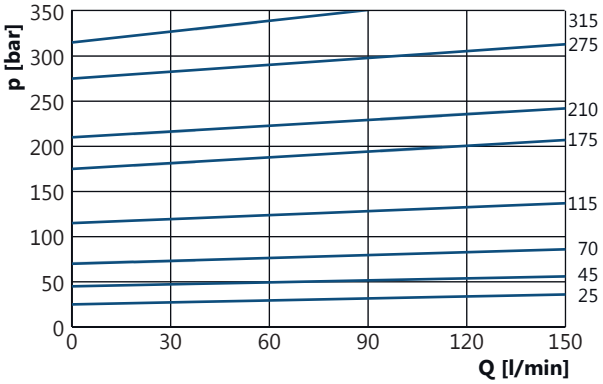
Pressure drop diagram (p/I) EPDBS 10 at Q = 35 l/min



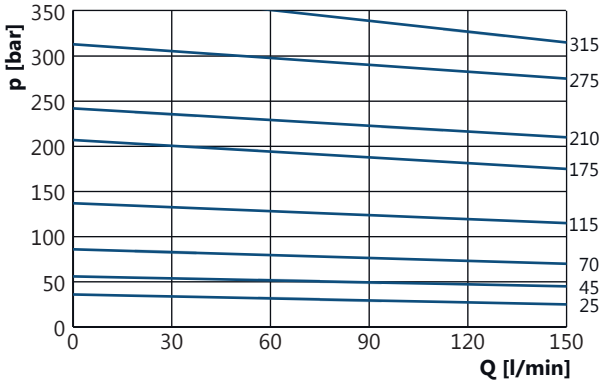
Pressure drop diagram (p/I) EPDBS 10 degressive version at Q = 35 l/min



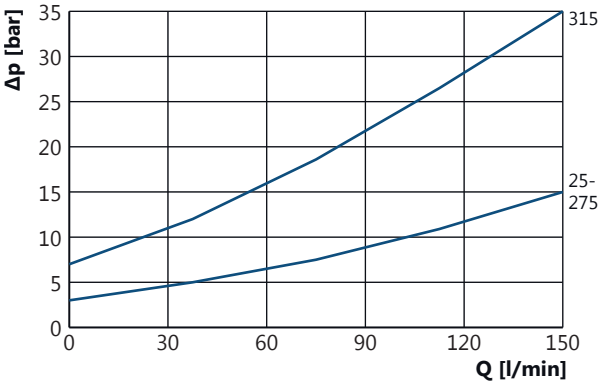
Pressure drop diagram (p/Q) EPDBS 10 at I_N



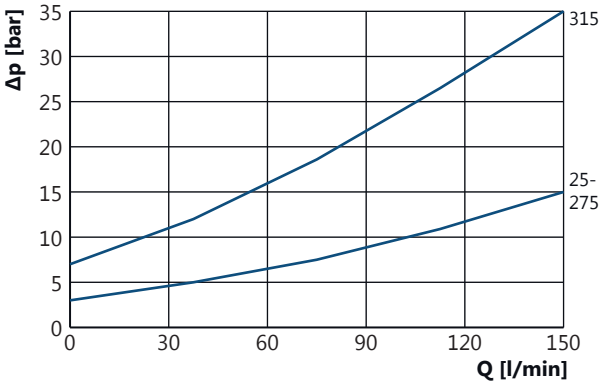
Pressure drop diagram (p/Q) EPDBS 10 degressive version at I_N



Pressure drop diagram (Δp/Q) EPDBS 10 at I = 0 mA (currentless)



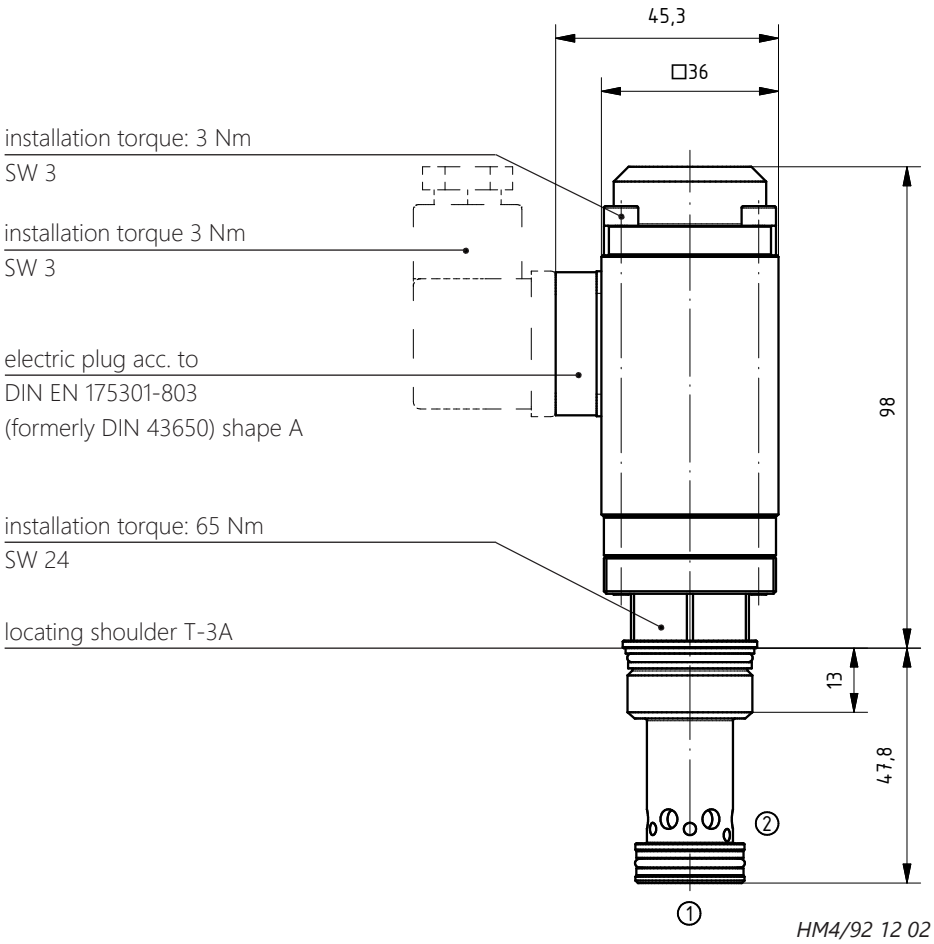
Pressure drop diagram (Δp/Q) EPDBS 10 degressive version at I = 100 % (full current)



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

Dimensions

Screw-in valve EEPDBS 10



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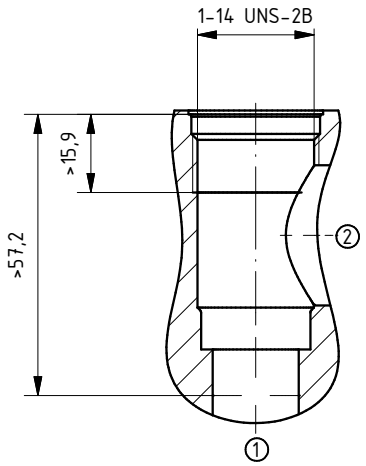
Cavity T-3A



HE4/14 09 12

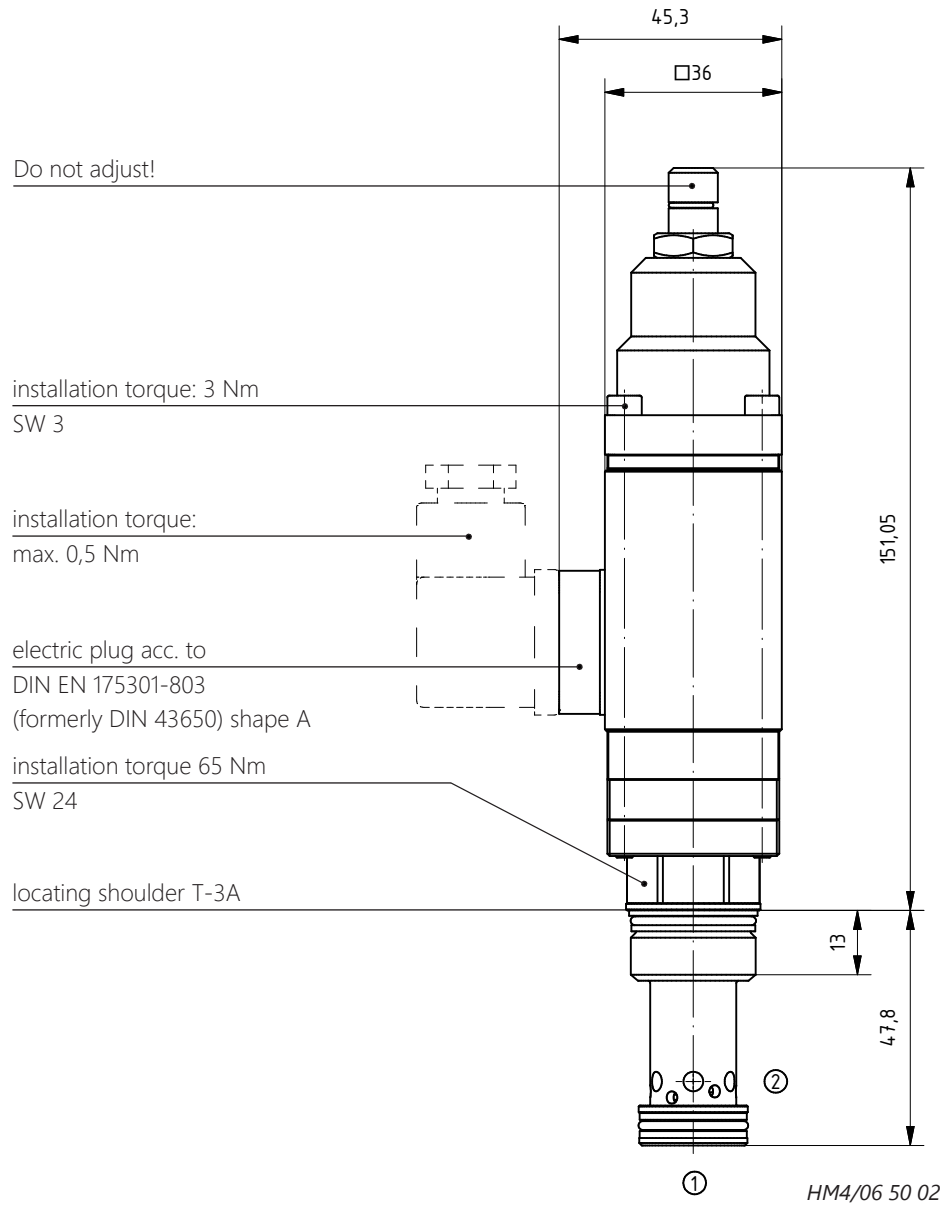
NOTE For a detailled drawing of the cavity please see chapter 11 *„general information"* or our online catalogue at *www.weber-hydraulik.com.*

NOTE For appropriate manifolds see chapter 10 *„connecting plates and manifolds"* as well as our online catalogue at *www.weber-hydraulik.com.*

NOTE The valve is also available as EPDBSA 10 in a mounting plate NG 10. Dimension sheets are available upon request.

Dimensions

Screw-in valve EEPDBS 10 degressive version



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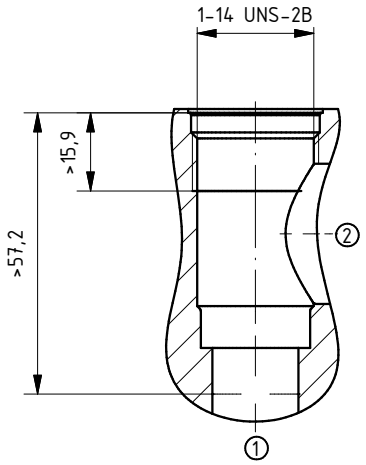
Cavity T-3A



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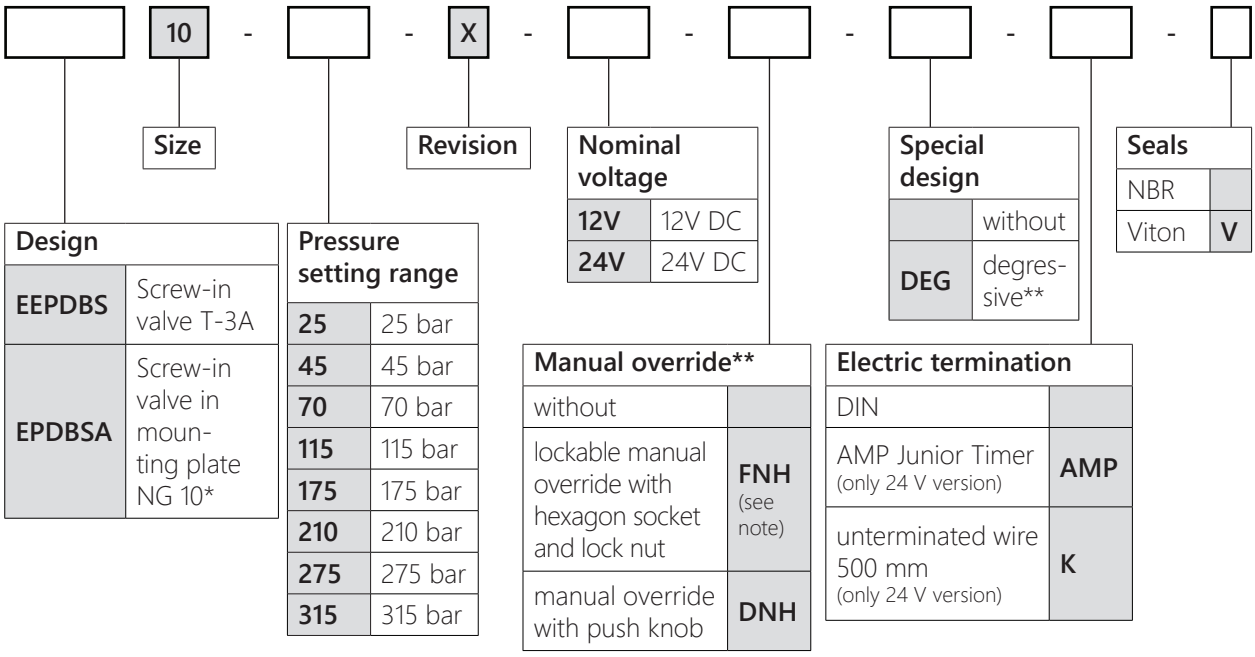
NOTE For a detailled drawing of the cavity please see chapter 11 *„general information"* or our online catalogue at *www.weber-hydraulik.com.*

NOTE For appropriate manifolds see chapter 10 *„connecting plates and manifolds"* as well as our online catalogue at *www.weber-hydraulik.com.*

Type code



* aluminium manifolds are only approved for max. operating pressure of 210 bar
** for degressive version no additional manual override selectable

NOTE FOR FNH

The lockable manual override with hexagon socket and lock nut (FNH) could be used to override the pressure relief function of the valve. Be aware that the valve can not fulfil 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 and locked when used in conjunction with a running system! The application as a pressure relief valve with extended throttle function is dangerous and not suggested. All liability for doing so lies with the operator! In case the manual override FNH is screwed in to achieve a throttle function (even though this is not suggested), the reduction of the nominal valve current has to be taken into consideration.

Accessories and additional information

Accessories/ spare parts

Part:	Article number:
Socket connector DIN EN 175301-803*, shape A, black	149.0007
Seal kit T-3A (NBR)	405.0040
Seal kit T-3A (Viton)	405.0041

* formerly DIN 43650

NOTE

For the appropriate electronic controllers, see chapter 6 *„electronics and sensors"* as well as our online catalogue at *www.weber-hydraulik.com*.

Manual

Information regarding installation, set-up and maintenance can be found in our product catalogue in chapter 11 *„general information"* under the category *„general operating manual"* or will be provided upon request.

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