



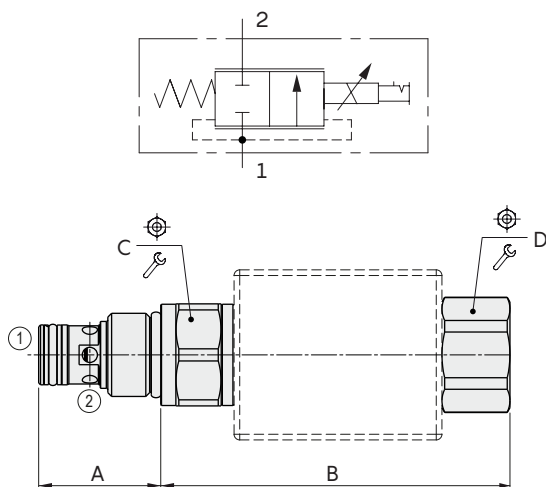
EE..X type needle valves - 2 way

- Spool type
- Direct acting through proportional solenoid
- Excellent low flow metering capability
- System of purging of air
- To be combined with an external compensator
- SAE10 and SAE12 cavities

Technical specifications and diagrams are measured with mineral oil of 46 cSt viscosity at 40°C (104°F) temperature.

		EE10X	EE12X
Nominal flow ⁽¹⁾	with 10 bar (145 psi) stand-by	40 l/min (10.6 US gpm)	60 l/min (15.8 US gpm)
Max. pressure		300 bar (4350 psi)	315 bar (4600 psi)
Oil leakage	at 150 bar (2175 psi)	150 cm ³ /min (9.1 in ³ /min)	200 cm ³ /min (12.2 in ³ /min)
Fluid		mineral based or synthetic hydraulic fluid with lubricating properties	
Viscosity		12-200 cSt	
Max level of contamination		18/16/13 ISO4406	
Fluid temperature	with NBR seals+Polyurethane with FPM seals	from -25°C (-13°F) to 90°C (194°F) from -20°C (-4°F) to 110°C (230°F)	
Environmental temp. for working conditions		from -20°C (-4°F) to 60°C (140°F)	
Cavity		SAE 10/2	SAE 12/2
Coil type ⁽²⁾		BQP19 or BH	
Nominal voltages		12VDC - 24VDC ± 10%	
Power rating		15 W (BQP19) - 33 W (BH)	
Max. control current		12V -> 1.25A - 24V -> 0.63A (BQP19) 12V -> 1.70A - 24V -> 0.85A (BH)	
Dither frequency		150 Hz	
Weight		0.30 kg (0.66 lb)	0.426 kg (0.94 lb)

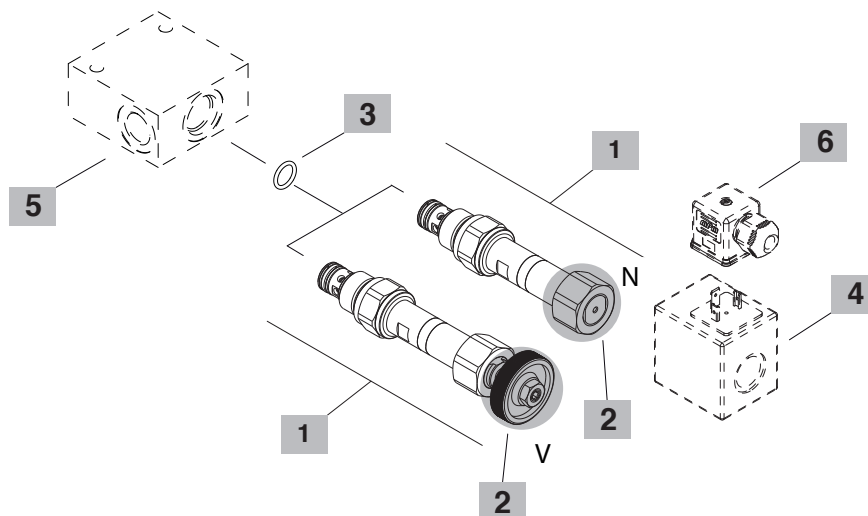
NOTE - For different conditions, please contact Walvoil Sales Dpt. - ⁽¹⁾ Values are checked with cartridge in parallel with compensator
- ⁽²⁾ For coils further features see from page 201.



Valve type	A		B				C		D			
	mm	in	N / O without emergency		V handknob		Nm		Nm		lbft	
EE10X	32.3	1.27	92.4	3.64	121.9	4.80	27	50	37	28	5	3.7
EE12X	45	1.77	94.9	3.74	124.3	4.89	32	80	59	28	5	3.7

Ordering codes and description composition

EE10X/22NB

**1 Cartridges**

TYPE	CODE	DESCRIPTION
SAE cavity 10/2		
EE10X/22NB	OEE10002009	Without emergency
EE10X/22VB	OEE10002008	Handwheel emergency
SAE cavity 12/2		
EE12X/20NB	OEE12002007	Without emergency
EE12X/20VB	OEE12002009	Handwheel emergency

2 Emergency

TYPE	DESCRIPTION
N	Without emergency
V	Handknob emergency

3 Seals

TYPE	DESCRIPTION
B	NBR (Buna)+Polyurethane o-ring seals, std configuration
V	FPM (Viton) o-ring seals, contact Sales Dept

4 Coils

TYPE	CODE	DESCRIPTION
BQP19 12VDC	4SL5000126A	12VDC-ISO4400 coil

For complete coils list see from page 201
It is possible also combine coils BH

5 Valve body

TYPE	CODE	DESCRIPTION
SAE10/2-SAE8	3CC1020K11	Aluminium body for cavity 10 valve, SAE8 std thread
SAE12/2-SAE10	3CC1220L11	Aluminium body for cavity 12 valve, SAE10 std thread

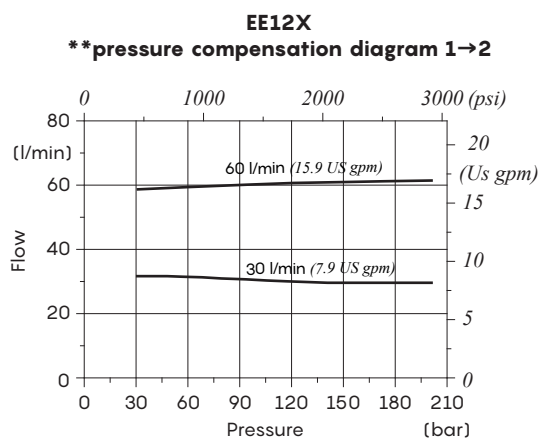
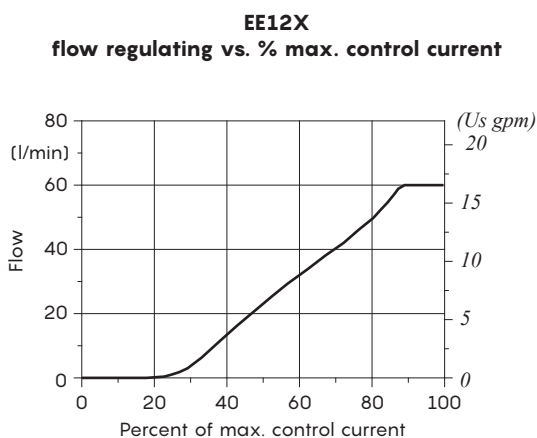
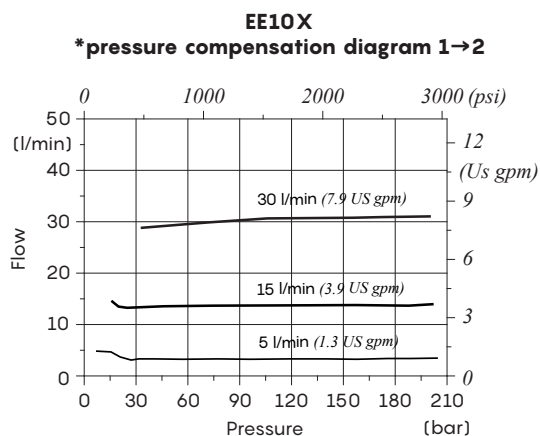
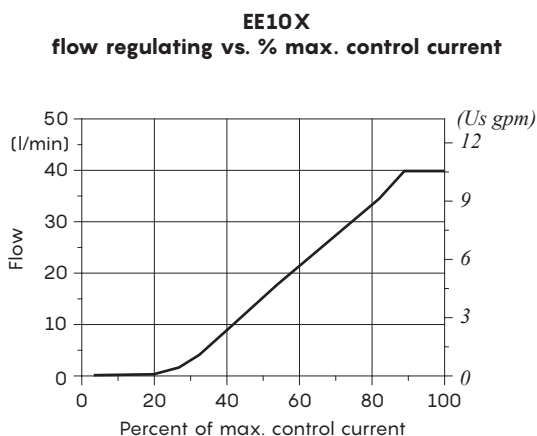
Note: aluminium body can stand up to 210 bar (3050 psi)
For steel bodies or different threading see from page 208

6 Connector

TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector

For complete connectors list see from page 201

Rating diagrams



*Compensation diagram were detected with the cartridge combined with a VPR/3/ET 38-12 compensator with 10 bar (145 psi) stand by

**Compensation diagram were detected with the cartridge combined with a VPR/3/ET 38-12 compensator with 7 bar (102 psi) stand by