



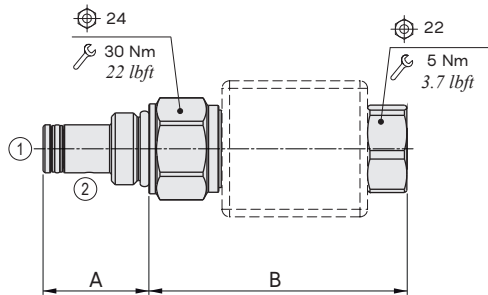
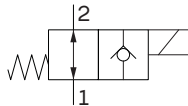
EB08M type
directional solenoid valves – 2 way/2 positions

- Poppet type
- Direct acting with on-off solenoid
- Different types of emergencies available
- Configuration normally open

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

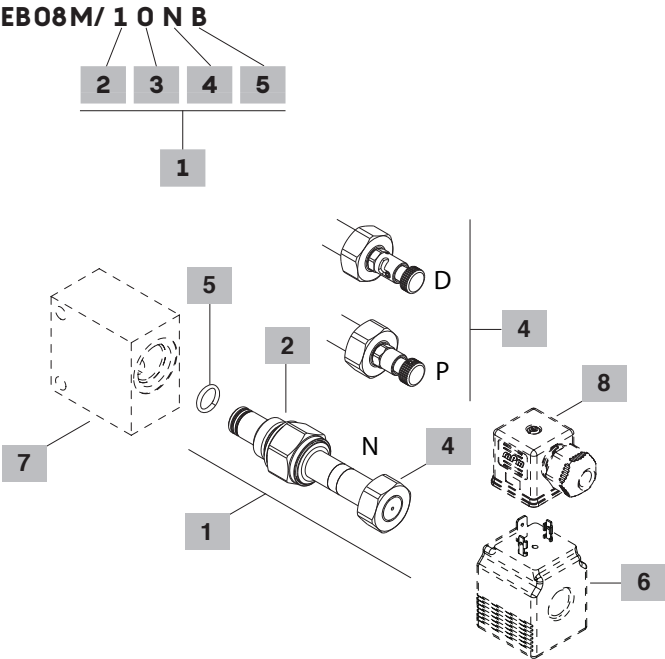
EB08M		
Nominal flow		2 l/min (0.53 US gpm)
Max. pressure		350 bar (5100 psi)
Oil leakage	at 210 bar (5100 psi)	0.25 cm³/min (0.015 in³/min)
Fluid		mineral based or synthetic hydraulic fluid with lubricating properties
Viscosity		10-200 cSt
Max level of contamination		18/16/13 ISO4406
Fluid temperature	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 8/2
Coil type*		BER
Nominal voltages		12VDC - 24VDC ± 10%
Power rating		19 W
Weight		0.399 kg (0.88 lb)

NOTE – For different conditions, please contact Walvoil Sales Dpt. – *For coils further features see from page 201.



Valve type	A		N without emergency		P push button		D push type with detent	
	mm	in	mm	in	mm	in	mm	in
EB08M	28	1.10	68.4	2.69	91.3	3.59	94	3.7

Ordering codes and description composition



1 Cartridges		
TYPE	CODE	DESCRIPTION
SAE cavity 08/2		
EB08M/10NB	0EB08002001	(N.O.) without emergency
EB08M/1HDB	0EB08002000	As previous one, push type with detent emergency
EB08M/10PB	0EB08002002	As previous one, push button emergency

2 Spool	
TYPE	DESCRIPTION
1	Normally open configuration

3 Anti tampering arrangement	
TYPE	DESCRIPTION
0	Without anti tampering arrangement
H	With anti tampering arrangement

4 Emergency	
TYPE	DESCRIPTION
N	Without emergency
P	Push button emergency
D	Push type with detent
Note: for configurations with different emergency types contact Sales Dept.	

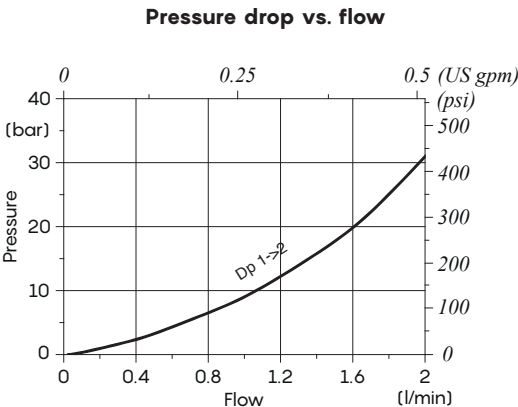
5 Seals	
TYPE	DESCRIPTION
B	NBR (Buna)+Polyurethane o-ring seals, std configuration
V	FPM (Viton) o-ring seals, contact Sales Dept

6 Coils		
TYPE	CODE	DESCRIPTION
BER12VDC	4SLE001200A	12VDC-ISO4400 coil
For complete coils list see page 201		

7 Valve body		
TYPE	CODE	DESCRIPTION
SAE08/2-G 1/4	3CC0820B11	Aluminium body for cavity 08 valve, G 1/4 std thread
Note: aluminium body can stand up to 210 bar (3050 psi)		
For steel bodies or different threading see from page 208		

8 Connector		
TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector
For complete connectors list see from page 201		

Rating diagrams





EE..M type directional solenoid valves – 2 way/2 positions

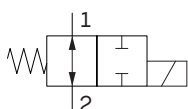
- Spool type
- Direct acting with on-off solenoid
- Different types of emergencies available
- Normally open and closed configurations
- From SAE08 to SAE10 cavities

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

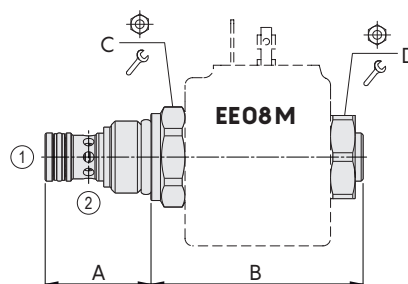
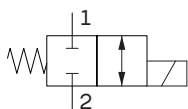
	EE08M	EE10M
Nominal flow	15 l/min (3.96 US gpm)	40 l/min (10.57 US gpm)
Max. pressure	250 bar (3600 psi)	
Oil leakage	at 210 bar (5100 psi)	20 cm ³ /min (1.22 in ³ /min)
Fluid	mineral based or synthetic hydraulic fluid with lubricating properties	
Viscosity	10-200 cSt	
Max level of contamination	18/16/13 ISO4406	
Fluid temperature	with NBR seals+PTFE 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 8/2	SAE 10/2
Coil type*	BER	BC
Nominal voltages	12VDC - 24VDC ± 10%	
Power rating	19 W	26 W
Weight	0.122 kg (0.27 lb)	0.19 kg (0.42 lb)

NOTE - For different conditions, please contact Walvoil Sales Dpt. - *For coils further features see from page 201.

Normally open configuration



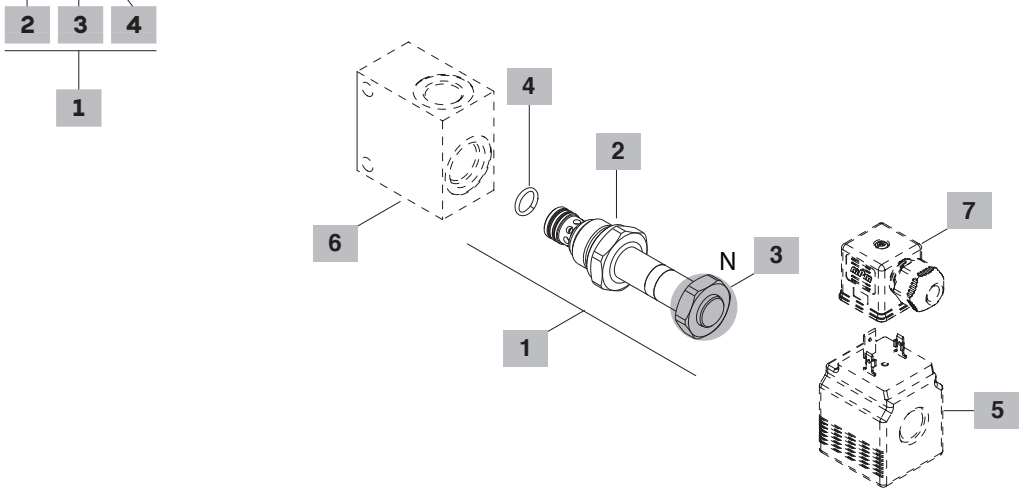
Normally closed configuration



Valve type	A		B N without emergency		C		D	
	mm	in	mm	in	Nm	lbft	Nm	lbft
EE08M	28	1.10	56.1	2.21	24	30	22	5±1 3.7
EE10M	32.3	1.27	68	2.68	27	50	37	23 5±1 3.7

Ordering codes and description composition

EE08M/ 1 0 N B



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 08/2		
EE08M/10NB	OEE08002006	Normally open configuration (N.O.) without emergency
EE08M/20NB	OEE08002007	Normally closed configuration (N.C.) without emergency
SAE cavity 10/2		
EE10M/10NB	OEE10002013	Normally open configuration (N.O.) without emergency
EE10M/20NB	OEE10002014	Normally closed configuration (N.C.) without emergency

2 Spool

TYPE	DESCRIPTION
1	Normally open configuration
2	Normally closed configuration

3 Emergency

TYPE	DESCRIPTION
N	Without emergency

4 Seals

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

5 Coils

TYPE	CODE	DESCRIPTION
BER12VDC	4SLE001200A	12VDC-ISO4400 coil
BC12VDC	4SL8000120	12VDC-ISO4400 coil

For complete coils list see page 201

6 Valve body

TYPE	CODE	DESCRIPTION
SAE08/2-G 3/8	3CC0820C11	Aluminium body for cavity 08 valve, G 3/8 std thread
SAE10/2-G 1/2	3CC1020D11	Aluminium body for cavity 10 valve, G 1/2 std thread

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

7 Connector

TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector

For complete connectors list see from page 201

Directional control valves

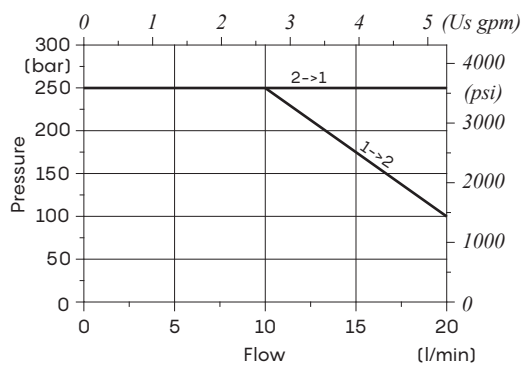
Directional solenoid valves - 2 way / 2 positions

EE..M type

Rating diagrams

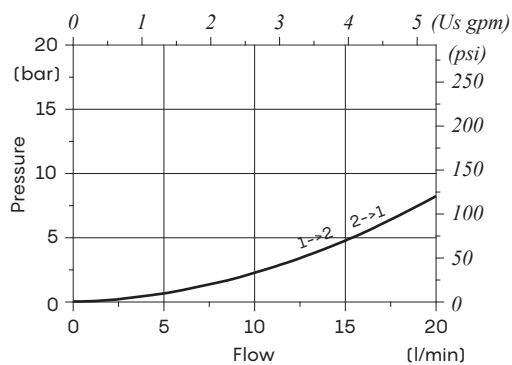
EE08M performance range

- Spool 1 / 2 -



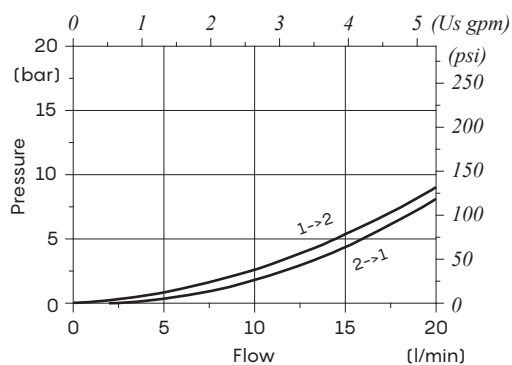
EE08M pressure drop vs. flow

- Spool 1 -



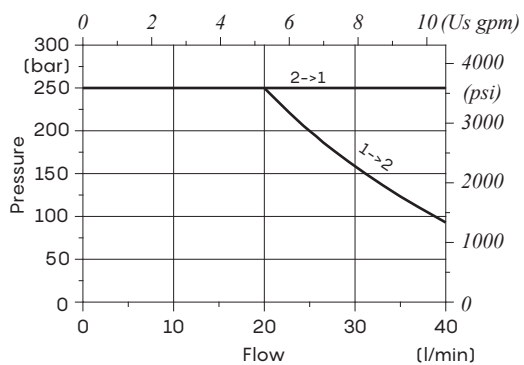
EE08M pressure drop vs. flow

- Spool 2 -



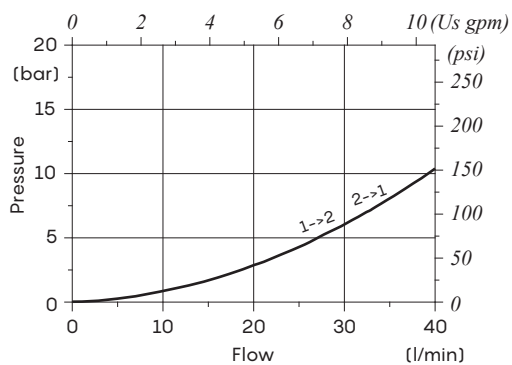
EE10M performance range

- Spool 1 / 2 -



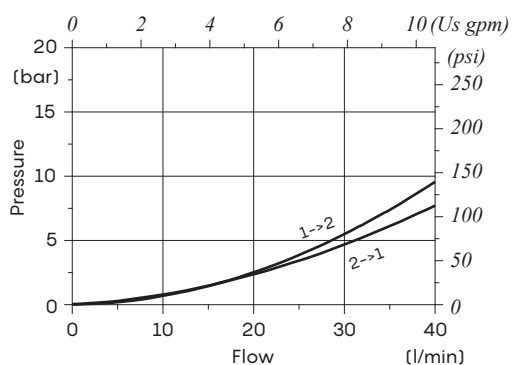
EE10M pressure drop vs. flow

- Spool 1 -



EE10M pressure drop vs. flow

- Spool 2 -





EC..M type directional solenoid valves – 2 way / 2 positions

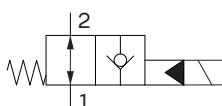
- Poppet type
- Piloted acting with on-off solenoid
- External zinc-plated and corrosion-proof components
- Normally open and closed configurations
- Different types of emergencies available
- From SAE08 to SAE16 cavities

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

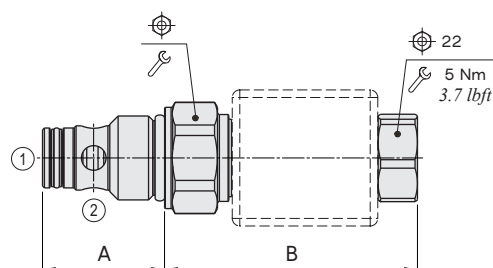
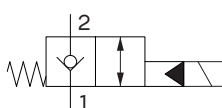
		EC08M	EC10M	EC12M	EC16M
Max. flow		40 l/min (10.5 US gpm)	70 l/min (18.5 US gpm)	150 l/min (40 US gpm)	150 l/min (40 US gpm)
Max. pressure		380 bar (5500 psi)			
Oil leakage	at 210 bar (3050 psi)	0.25 cm³/min (0.015 in³/min)			
Fluid		mineral based or synthetic hydraulic fluid with lubricating properties			
Viscosity		10–200 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 08/2	SAE 10/2	SAE 12/2	SAE 16/2
Coil type*		BER			
Nominal voltages		12VDC - 24VDC ±10%			
Power rating		19 W (12VDC - 24VDC)			
Weight		0.135 kg (0.30 lb)	0.170 kg (0.37 lb)	0.230 kg (0.51 lb)	0.315 kg (0.69 lb)

NOTE – For different conditions, please contact Walvoil Sales Dpt. – *For coils further features see from page 201.

Normally open configuration



Normally closed configuration

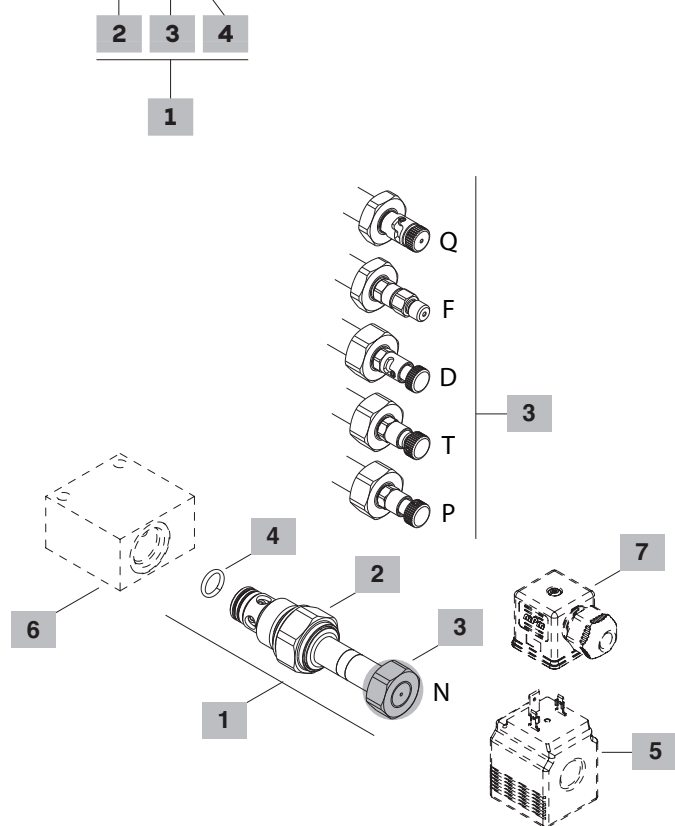


Valve type	A		B		 5 Nm 3.7 lbf	
	mm	in	mm	in		
EC10M/1	32.3	1.27	66.9	2.63	27	37

For dimensions with different type of emergency see list page 147

Ordering codes and description composition

EC08M/ 1 0 N B



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 08/2		
EC08M/10NB	OEC08002031	Normally open (N.O.) without emergency
EC08M/10PB	OEC08002033	(N.O.) push button emergency
EC08M/10TB	OEC08002034	(N.O.) screw type emergency
EC08M/10DB	OEC08002035	(N.O.) push type with detent emergency
EC08M/20NB	OEC08002032	Normally closed (N.C.) without emergency
EC08M/20FB	OEC08002036	(N.C.) pull button emergency
EC08M/20TB	OEC08002037	(N.C.) screw type emergency
EC08M/20QB	OEC08002038	(N.C.) pull type with detent emergency
SAE cavity 10/2		
EC10M/10NB	OEC10002012	Normally open (N.O.) without emergency
EC10M/10PB	OEC10002014	(N.O.) push button emergency
EC10M/10TB	OEC10002015	(N.O.) screw type emergency
EC10M/10DB	OEC10002016	(N.O.) push type with detent emergency
EC10M/20NB	OEC10002013	Normally closed (N.C.) without emergency
EC10M/20FB	OEC10002017	(N.C.) pull button emergency
EC10M/20TB	OEC10002018	(N.C.) screw type emergency
EC10M/20QB	OEC10002019	(N.C.) pull type with detent emergency
SAE cavity 12/2		
EC12M/10NB	OEC12002007	Normally open (N.O.) without emergency
EC12M/10PB	OEC12002009	(N.O.) push button emergency
EC12M/10TB	OEC12002010	(N.O.) screw type emergency
EC12M/10DB	OEC12002011	(N.O.) push type with detent emergency
EC12M/20NB	OEC12002008	Normally closed (N.C.) without emergency
EC12M/20FB	OEC12002012	(N.C.) pull button emergency
EC12M/20TB	OEC12002013	(N.C.) screw type emergency
EC12M/20QB	OEC12002014	(N.C.) pull type with detent emergency
SAE cavity 16/2		
EC16M/10NB	OEC16002020	Normally open (N.O.) without emergency
EC16M/10PB	OEC16002022	(N.O.) push button emergency
EC16M/10TB	OEC16002023	(N.O.) screw type emergency
EC16M/10DB	OEC16002024	(N.O.) push type with detent emergency
EC16M/20NB	OEC16002021	Normally closed (N.C.) without emergency
EC16M/20FB	OEC16002025	(N.C.) pull button emergency
EC16M/20TB	OEC16002026	(N.C.) screw type emergency
EC16M/20QB	OEC16002027	(N.C.) pull type with detent emergency

2 Spool

TYPE	DESCRIPTION
1	Normally open configuration
2	Normally closed configuration

3 Emergency

TYPE	DESCRIPTION
N	Without emergency
P	Push button type (N.O.)
T	Screw type
D	Push type with detent (N.O.)
F	Pull button type (N.C.)
Q	Pull type with detent (N.C.)

4 Seals

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

5 Coil

TYPE	CODE	DESCRIPTION
BER12VDC	4SLE001200A	12VDC-ISO4400 coil

For complete coils list see page 201

6 Valve body

TYPE	CODE	DESCRIPTION
SAE08/2-G 3/8	3CC0820C11	Aluminium body for cavity 08 valve, G 3/8 std thread
SAE10/2-G 3/8	3CC1020C11	Aluminium body for cavity 10 valve, G 3/8 std thread
SAE12/2-G 1/2	3CC1220D11	Aluminium body for cavity 12 valve, G 1/2 std thread
SAE16/2-G 3/4	3CC1620E11	Aluminium body for cavity 16 valve, G 3/4 std thread

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

7 Connector

TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector

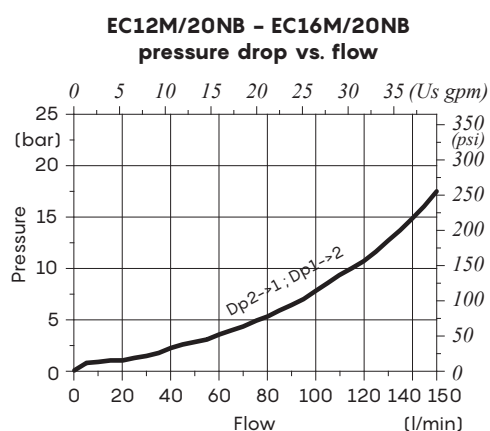
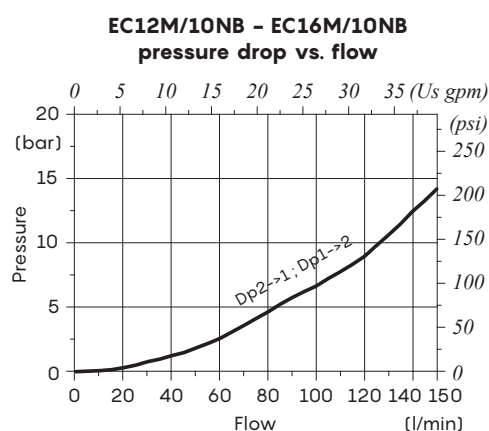
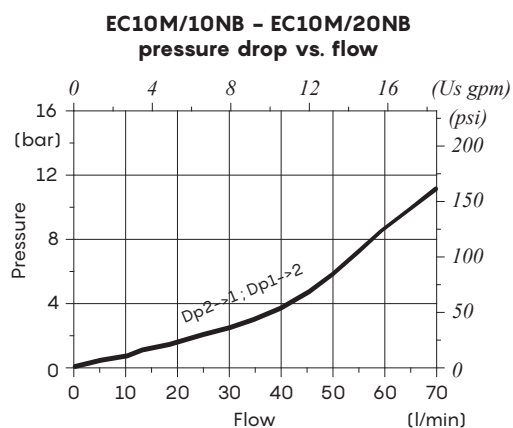
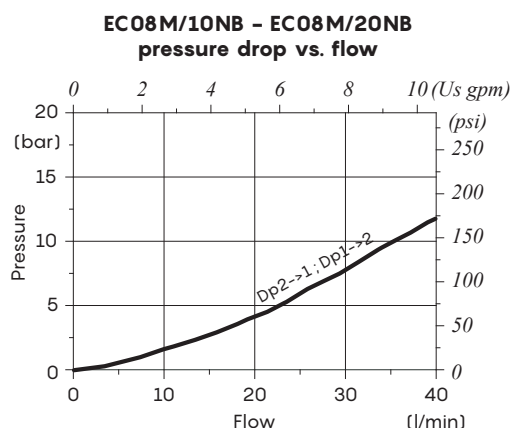
For complete connectors list see from page 201

Directional control valves

Directional solenoid valves - 2 way / 2 positions

EC..M type

Rating diagrams



Types and dimensions

Valve type	A		B														
	mm	in	N without emergency		T screw		P push button		D push type with detent		F pull button		Q pull type with detent				
			mm	in	mm	in	mm	in	mm	in	mm	in	mm	in			Nm lbft
EC08M/1	28	1.10	67.2	2.64	90.1	3.55	90.1	3.55	92.8	3.65	-	-	-	-	24	30	22
EC08M/2	28	1.10	63.3	2.49	77.8	3.06	-	-	-	-	91.3	3.59	84.4	3.32	24	30	22
EC10M/1	32.3	1.27	66.9	2.63	89.8	3.54	89.8	3.54	92.5	3.64	-	-	-	-	27	50	37
EC10M/2	32.3	1.27	63	2.48	77.5	3.05	-	-	-	-	91	3.58	84.1	3.31	27	50	37
EC12M/1	45	1.77	61.2	2.40	84.2	3.31	84	3.31	86.8	3.42	-	-	-	-	32	80	59
EC12M/2	45	1.77	57.1	2.25	73.7	2.9	-	-	-	-	85.1	3.35	78	3.07	32	80	59
EC16M/1	46	1.81	61.2	2.40	84	3.31	84.1	3.31	86	3.39	-	-	-	-	38	80	59
EC16M/2	46	1.81	57	2.24	71.6	2.82	-	-	-	-	85	3.35	78.3	3.08	38	80	59



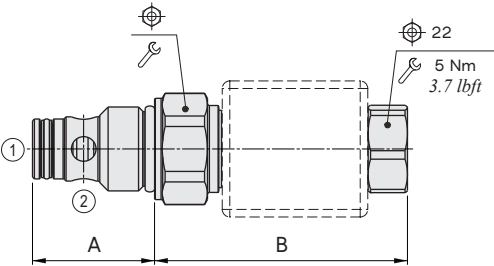
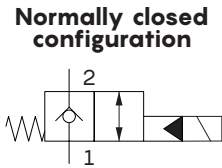
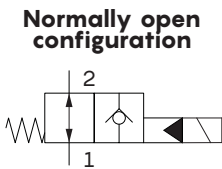
EF..M type
directional solenoid valves – 2 way / 2 positions

- Poppet type
- Piloted acting with on-off solenoid
- External zinc-plated and corrosion-proof components
- Normally open and closed configurations
- Different types of emergencies available
- From SAE08 to SAE16 cavities

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

	EF08M	EF10M	EF12M	EF16M
Max. flow	40 l/min (10.5 US gpm)	70 l/min (18.5 US gpm)	150 l/min (40 US gpm)	150 l/min (40 US gpm)
Max. pressure	380 bar (5500 psi)			
Oil leakage	at 210 bar (3050 psi)	0.50 cm³/min (0.030 in³/min)		
Fluid	mineral based or synthetic hydraulic fluid with lubricating properties			
Viscosity	10-200 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 08/2	SAE 10/2	SAE 12/2	SAE 16/2
Coil type*	BER			
Nominal voltages	12VDC - 24VDC ±10%			
Power rating	19 W (12VDC - 24VDC)			
Weight	0.135 kg (0.30 lb)	0.170 kg (0.37 lb)	0.230 kg (0.51 lb)	0.315 kg (0.69 lb)

NOTE – For different conditions, please contact Walvoil Sales Dpt. – *For coils further features see from page 201.

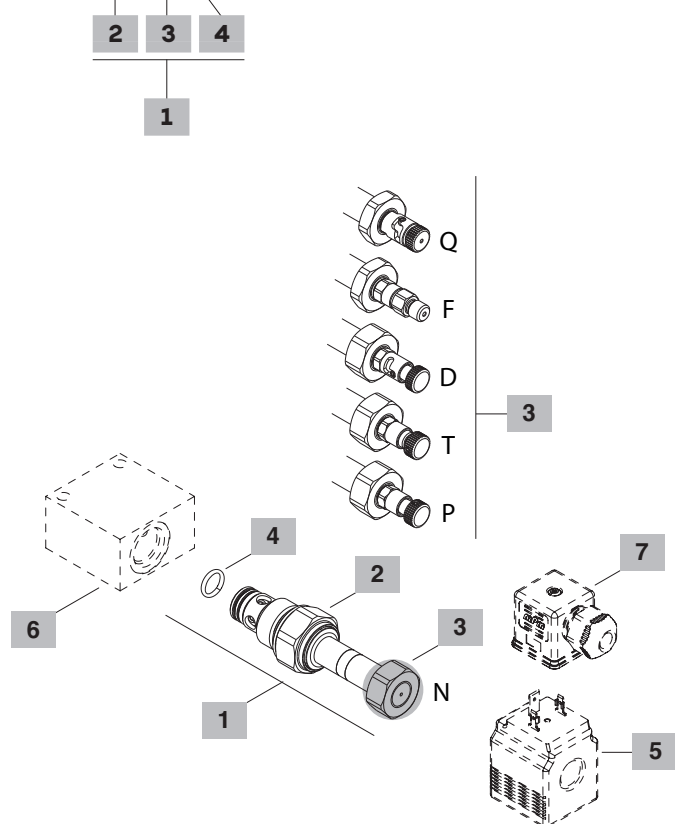


Valve type	A		B		N without emergency			
	mm	in	mm	in	Nm	lbf·ft		
EF10M/1	32.3	1.27	66.9	2.63	27	50	37	

For dimensions with different type of emergency see list page 151

Ordering codes and description composition

EF08M/ 1 0 N B



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 08/2		
EF08M/10NB	0EF08002000	Normally open (N.O.) without emergency
EF08M/10PB	0EF08002002	(N.O.) push button emergency
EF08M/10TB	0EF08002003	(N.O.) screw type emergency
EF08M/10DB	0EF08002004	(N.O.) push type with detent emergency
EF08M/20NB	0EF08002001	Normally closed (N.C.) without emergency
EF08M/20FB	0EF08002005	(N.C.) pull button emergency
EF08M/20TB	0EF08002006	(N.C.) screw type emergency
EF08M/20QB	0EF08002007	(N.C.) pull type with detent emergency
SAE cavity 10/2		
EF10M/10NB	0EF10002000	Normally open (N.O.) without emergency
EF10M/10PB	0EF10002002	(N.O.) push button emergency
EF10M/10TB	0EF10002003	(N.O.) screw type emergency
EF10M/10DB	0EF10002004	(N.O.) push type with detent emergency
EF10M/20NB	0EF10002001	Normally closed (N.C.) without emergency
EF10M/20FB	0EF10002005	(N.C.) pull button emergency
EF10M/20TB	0EF10002006	(N.C.) screw type emergency
EF10M/20QB	0EF10002007	(N.C.) pull type with detent emergency
SAE cavity 12/2		
EF12M/10NB	0EF12002000	Normally open (N.O.) without emergency
EF12M/10PB	0EF12002002	(N.O.) push button emergency
EF12M/10TB	0EF12002003	(N.O.) screw type emergency
EF12M/10DB	0EF12002004	(N.O.) push type with detent emergency
EF12M/20NB	0EF12002001	Normally closed (N.C.) without emergency
EF12M/20FB	0EF12002005	(N.C.) pull button emergency
EF12M/20TB	0EF12002006	(N.C.) screw type emergency
EF12M/20QB	0EF12002007	(N.C.) pull type with detent emergency
SAE cavity 16/2		
EF16M/10NB	0EF16002000	Normally open (N.O.) without emergency
EF16M/10PB	0EF16002002	(N.O.) push button emergency
EF16M/10TB	0EF16002003	(N.O.) screw type emergency
EF16M/10DB	0EF16002004	(N.O.) push type with detent emergency
EF16M/20NB	0EF16002001	Normally closed (N.C.) without emergency
EF16M/20FB	0EF16002005	(N.C.) pull button emergency
EF16M/20TB	0EF16002006	(N.C.) screw type emergency
EF16M/20QB	0EF16002007	(N.C.) pull type with detent emergency

2 Spool

TYPE	DESCRIPTION
1	Normally open configuration
2	Normally closed configuration

3 Emergency

TYPE	DESCRIPTION
N	Without emergency
P	Push button type (N.O.)
T	Screw type
D	Push type with detent (N.O.)
F	Pull button type (N.C.)
Q	Pull type with detent (N.C.)

4 Seals

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

5 Coil

TYPE	CODE	DESCRIPTION
BER12VDC	4SLE001200A	12VDC-ISO4400 coil

For complete coils list see page 201

6 Valve body

TYPE	CODE	DESCRIPTION
SAE08/2-G 3/8	3CC0820C11	Aluminium body for cavity 08 valve, G 3/8 std thread
SAE10/2-G 3/8	3CC1020C11	Aluminium body for cavity 10 valve, G 3/8 std thread
SAE12/2-G 1/2	3CC1220D11	Aluminium body for cavity 12 valve, G 1/2 std thread
SAE16/2-G 3/4	3CC1620E11	Aluminium body for cavity 16 valve, G 3/4 std thread

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

7 Connector

TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector

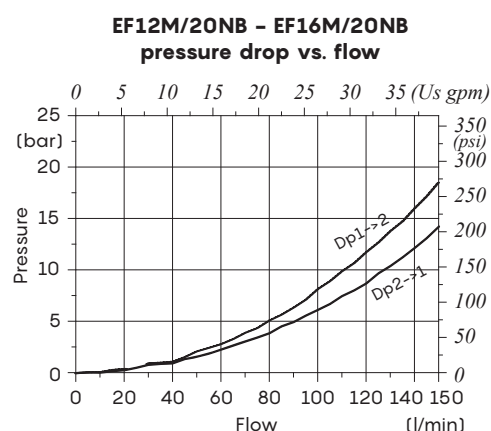
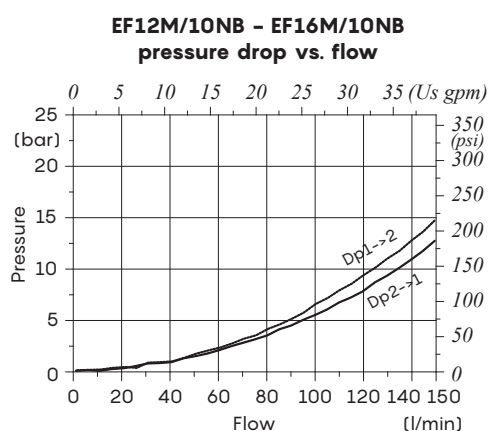
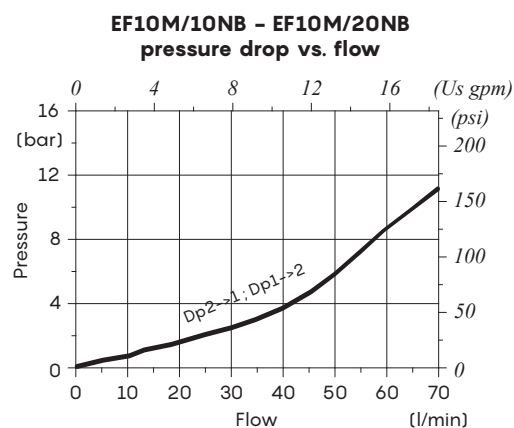
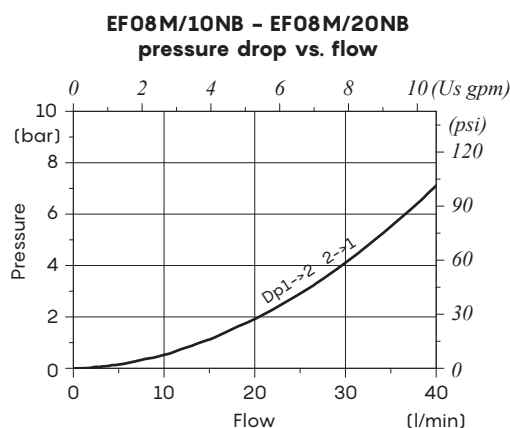
For complete connectors list see from page 201

Directional control valves

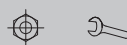
Directional solenoid valves - 2 way / 2 positions

EF..M type

Rating diagrams



Types and dimensions

Valve type	A		B														
			N without emergency		T screw		P push button		D push type with detent		F pull button		Q pull type with detent				
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	Nm	lbf	
EF08M/1	28	1.10	67.2	2.64	90.1	3.55	90.1	3.55	92.8	3.65	-	-	-	-	24	30	22
EF08M/2	28	1.10	63.3	2.49	77.8	3.06	-	-	-	-	91.3	3.59	84.4	3.32	24	30	22
EF10M/1	32.3	1.27	66.9	2.63	89.8	3.54	89.8	3.54	92.5	3.64	-	-	-	-	27	50	37
EF10M/2	32.3	1.27	63	2.48	77.5	3.05	-	-	-	-	91	3.58	84.1	3.31	27	50	37
EF12M/1	45	1.77	61.1	2.40	84	3.31	84	3.31	86.7	3.41	-	-	-	-	32	80	59
EF12M/2	45	1.77	57.1	2.25	71.6	2.82	-	-	-	-	85.1	3.35	78.2	3.08	32	80	59
EF16M/1	46	1.81	61.2	2.40	84	3.31	84.1	3.31	86	3.39	-	-	-	-	38	80	59
EF16M/2	46	1.81	57.2	2.25	71.6	2.82	-	-	-	-	85	3.35	78.3	3.08	38	80	59



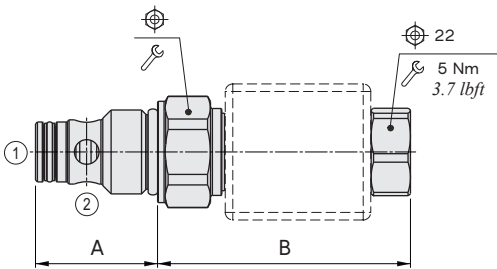
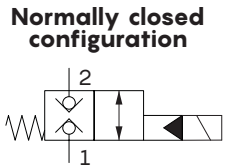
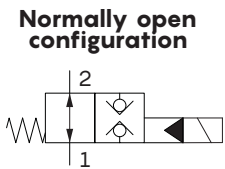
EH..M type
directional solenoid valves – 2 way / 2 positions

- Poppet type
- Piloted acting with on-off solenoid
- With check in both directions
- Normally open and closed configurations
- Different types of emergencies available
- From SAE08 to SAE16 cavities

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

		EH08M	EH10M	EH12M	EH16M
Max. flow		40 l/min (10.5 US gpm)	70 l/min (18.5 US gpm)	150 l/min (40 US gpm)	150 l/min (40 US gpm)
Max. pressure		380 bar (5500 psi)			
Oil leakage	at 210 bar (3050 psi)	0.50 cm³/min (0.030 in³/min)		1 cm³/min (0.061 in³/min)	
Fluid		mineral based or synthetic hydraulic fluid with lubricating properties			
Viscosity		10-200 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 08/2	SAE 10/2	SAE 12/2	SAE 16/2
Coil type*		BER			
Nominal voltages		12VDC - 24VDC ±10%			
Power rating		19 W (12VDC - 24VDC)			
Weight		0.135 kg (0.30 lb)	0.170 kg (0.37 lb)	0.230 kg (0.51 lb)	0.315 kg (0.69 lb)

NOTE – For different conditions, please contact Walvoil Sales Dpt. – *For coils further features see from page 201.

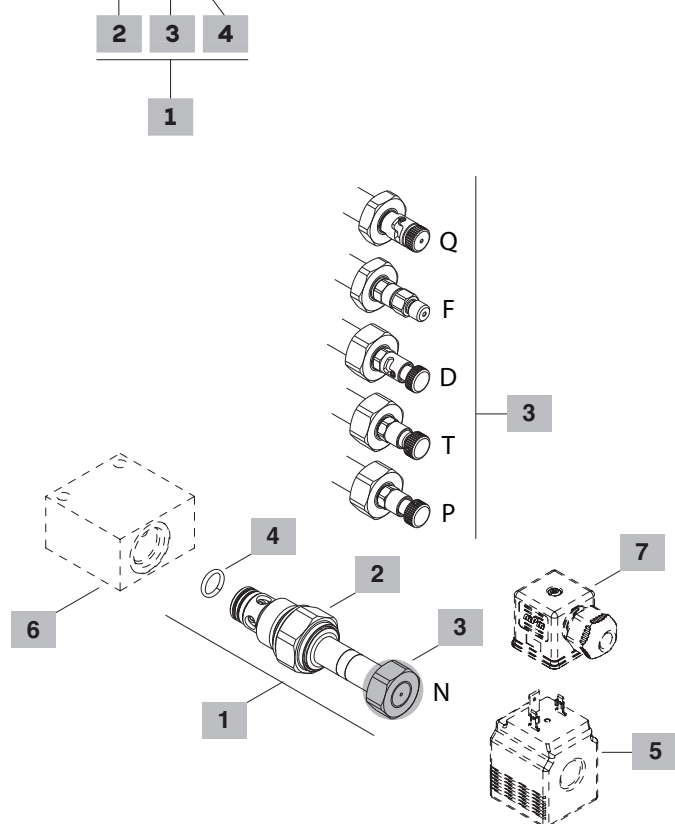


Valve type	A		B		N without emergency			
	mm	in	mm	in	mm	in	Nm	lbf·ft
EH10M/1	32.3	1.27	66.9	2.63	27	50	37	

For dimensions with different type of emergency see list page 155

Ordering codes and description composition

EH08M/ 1 0 N B



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 08/2		
EH08M/10NB	0EH08002000	Normally open (N.O.) without emergency
EH08M/10PB	0EH08002002	(N.O.) push button emergency
EH08M/10TB	0EH08002003	(N.O.) screw type emergency
EH08M/10DB	0EH08002004	(N.O.) push type with detent emergency
EH08M/20NB	0EH08002001	Normally closed (N.C.) without emergency
EH08M/20FB	0EH08002005	(N.C.) pull button emergency
EH08M/20TB	0EH08002006	(N.C.) screw type emergency
EH08M/20QB	0EH08002007	(N.C.) pull type with detent emergency
SAE cavity 10/2		
EH10M/10NB	0EH10002000	Normally open (N.O.) without emergency
EH10M/10PB	0EH10002002	(N.O.) push button emergency
EH10M/10TB	0EH10002003	(N.O.) screw type emergency
EH10M/10DB	0EH10002004	(N.O.) push type with detent emergency
EH10M/20NB	0EH10002001	Normally closed (N.C.) without emergency
EH10M/20FB	0EH10002005	(N.C.) pull button emergency
EH10M/20TB	0EH10002006	(N.C.) screw type emergency
EH10M/20QB	0EH10002007	(N.C.) pull type with detent emergency
SAE cavity 12/2		
EH12M/10NB	0EH12002000	Normally open (N.O.) without emergency
EH12M/10PB	0EH12002002	(N.O.) push button emergency
EH12M/10TB	0EH12002003	(N.O.) screw type emergency
EH12M/10DB	0EH12002004	(N.O.) push type with detent emergency
EH12M/20NB	0EH12002001	Normally closed (N.C.) without emergency
EH12M/20FB	0EH12002005	(N.C.) pull button emergency
EH12M/20TB	0EH12002006	(N.C.) screw type emergency
EH12M/20QB	0EH12002007	(N.C.) pull type with detent emergency
SAE cavity 16/2		
EH16M/10NB	0EH16002000	Normally open (N.O.) without emergency
EH16M/10PB	0EH16002002	(N.O.) push button emergency
EH16M/10TB	0EH16002003	(N.O.) screw type emergency
EH16M/10DB	0EH16002004	(N.O.) push type with detent emergency
EH16M/20NB	0EH16002001	Normally closed (N.C.) without emergency
EH16M/20FB	0EH16002005	(N.C.) pull button emergency
EH16M/20TB	0EH16002006	(N.C.) screw type emergency
EH16M/20QB	0EH16002007	(N.C.) pull type with detent emergency

2 Spool

TYPE	DESCRIPTION
1	Normally open configuration
2	Normally closed configuration

3 Emergency

TYPE	DESCRIPTION
N	Without emergency
P	Push button type (N.O.)
T	Screw type
D	Push type with detent (N.O.)
F	Pull button type (N.C.)
Q	Pull type with detent (N.C.)

4 Seals

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

5 Coil

TYPE	CODE	DESCRIPTION
BER12VDC	4SLE001200A	12VDC-ISO4400 coil

For complete coils list see page 201

6 Valve body

TYPE	CODE	DESCRIPTION
SAE08/2-G 3/8	3CC0820C11	Aluminium body for cavity 08 valve, G 3/8 std thread
SAE10/2-G 3/8	3CC1020C11	Aluminium body for cavity 10 valve, G 3/8 std thread
SAE12/2-G 1/2	3CC1220D11	Aluminium body for cavity 12 valve, G 1/2 std thread
SAE16/2-G 3/4	3CC1620E11	Aluminium body for cavity 16 valve, G 3/4 std thread

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

7 Connector

TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector

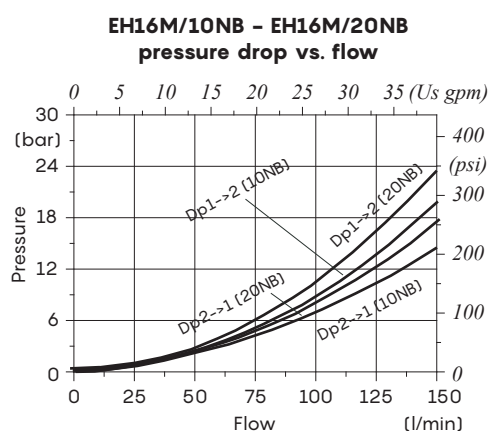
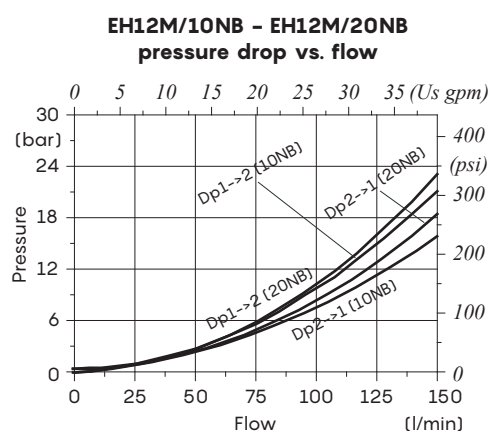
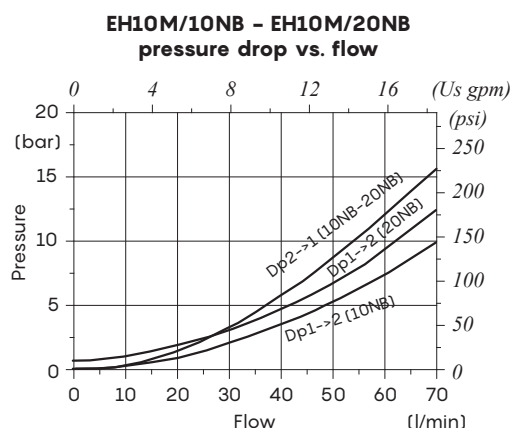
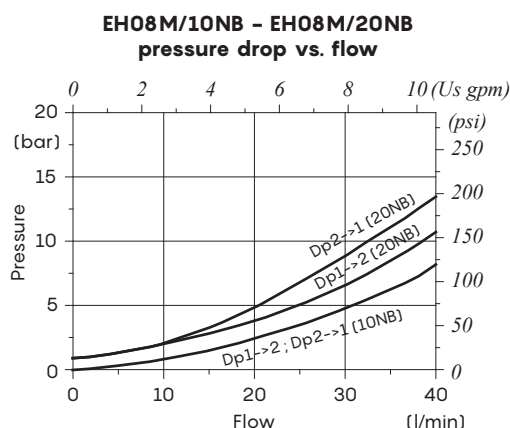
For complete connectors list see from page 201

Directional control valves

Directional solenoid valves - 2 way / 2 positions

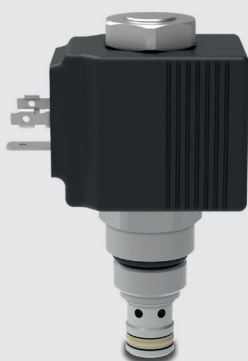
EH..M type

Rating diagrams



Types and dimensions

Valve type	A		B														
			N without emergency		T screw		P push button		D push type with detent		F pull button		Q pull type with detent				
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in		Nm	lbf
EH08M/1	28	1.10	67.2	2.64	90.1	3.55	90.1	3.55	92.8	3.65	-	-	-	-	24	30	22
EH08M/2	28	1.10	63.1	2.48	77.8	3.06	-	-	-	-	91.3	3.59	84.4	3.32	24	30	22
EH10M/1	32.3	1.27	66.9	2.63	89.8	3.54	89.8	3.54	92.5	3.64	-	-	-	-	27	50	37
EH10M/2	32.3	1.27	63	2.48	77.5	3.05	-	-	-	-	90.8	3.57	84.1	3.31	27	50	37
EH12M/1	45	1.77	61.3	2.41	84.2	3.31	83.9	3.30	86.8	3.42	-	-	-	-	32	80	59
EH12M/2	45	1.77	57.1	2.25	73.7	2.9	-	-	-	-	85.1	3.35	78	3.07	32	80	59
EH16M/1	46	1.81	61.3	2.41	84	3.31	84.2	3.31	86	3.39	-	-	-	-	38	80	59
EH16M/2	46	1.81	57.1	2.25	71.6	2.82	-	-	-	-	85.3	3.36	78.3	3.08	38	80	59



EW..M type directional solenoid valves – 2 way/2 positions

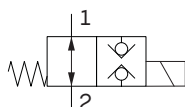
- Poppet type
- Direct acting with on-off solenoid
- With check in both directions
- Normally open and closed configurations
- Different types of emergencies available
- From SAE08 to SAE10 cavities

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

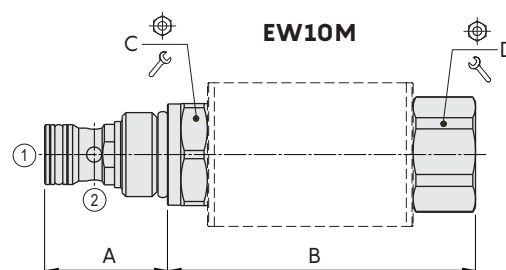
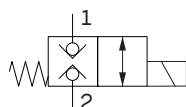
	EW08M	EW10M
Nominal flow	20 l/min (5.28 US gpm)	40 l/min (10.57 US gpm)
Max. pressure	250 bar (3600 psi)	350 bar (5100 psi)
Oil leakage	at 210 bar (5100 psi) 0.25 cm³/min (0.015 in³/min)	
Fluid	mineral based or synthetic hydraulic fluid with lubricating properties	
Viscosity	10-200 cSt	
Max level of 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 8/2	SAE 10/2
Coil type*	BER	BH
Nominal voltages	12VDC - 24VDC ± 10%	
Power rating	19 W (12VDC - 24VDC)	33 W
Weight	0.15 kg (0.33 lb)	0.30 kg (0.66 lb)

NOTE - For different conditions, please contact Walvoil Sales Dpt. - *For coils further features see from page 201.

Normally open configuration

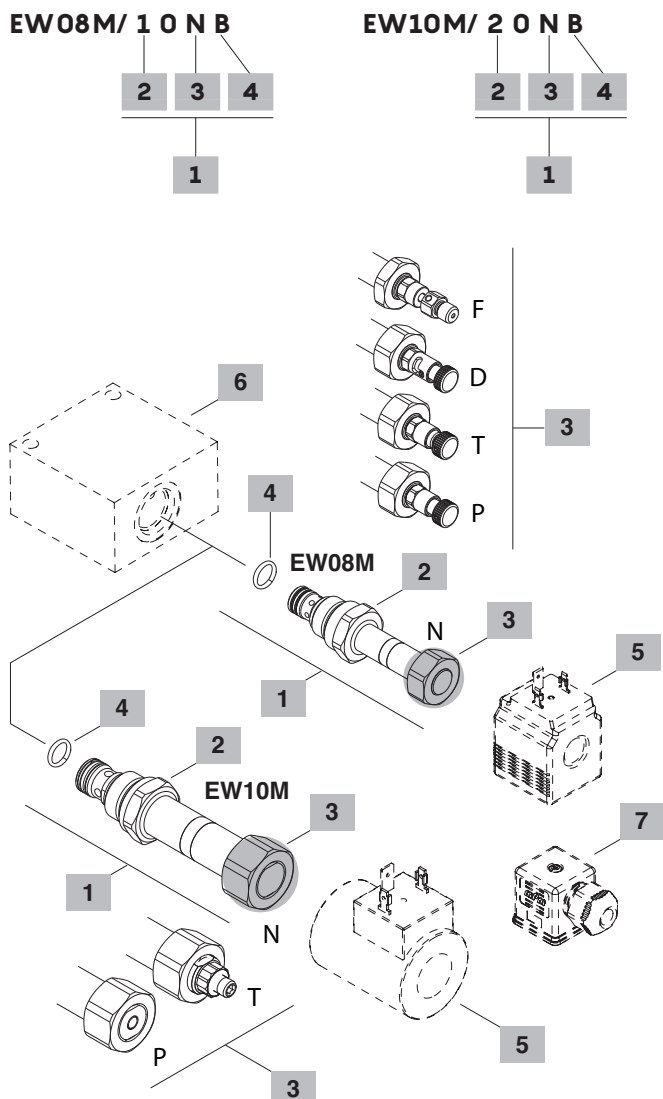


Normally closed configuration



Valve type	A		B										C		D			
			N without emergency		T screw		P push button		D push type with detent		F pull button							
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	Nm	lbft	Nm	lbft		
EW08M/1	28	1.10	60.2	2.41	74.7	2.94	-	-	-	-	88.2	3.47	24	30	22	22	5	3.7
EW08M/2	28	1.10	62.5	2.46	85.4	3.36	85.4	3.36	88.1	3.47	-	-	24	30	22	22	5	3.7
EW10M	32.5	1.28	81.5	3.21	95.3	3.75	81.5	3.21	-	-	-	-	27	50	37	28	5	3.7

Ordering codes and description composition



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 08/2		
EW08M/10NB	0EW08002014	Normally open (N.O.) without emergency
EW08M/10FB	0EW08002015	(N.O.) pull button emergency
EW08M/10TB	0EW08002016	(N.O.) screw type emergency
EW08M/20NB	0EW08002018	Normally closed (N.C.) without emergency
EW08M/20PB	0EW08002019	(N.C.) push button emergency
EW08M/20TB	0EW08002020	(N.C.) screw type emergency
EW08M/20DB	0EW08002021	(N.C.) push type with detent emergency
SAE cavity 10/2		
EW10M/20NB	0EW10002008	Normally closed (N.C.) without emergency
EW10M/20TB	0EW10002009	(N.C.) screw type emergency
EW10M/20PB	0EW10002010	(N.C.) push button emergency

2 Spool

TYPE	DESCRIPTION
1	Normally open configuration
2	Normally closed configuration

3 Emergency

TYPE	DESCRIPTION
N	Without emergency
P	Push button type (N.C.)
T	Screw type (N.C. - N.O. for EW08M / N.C. for EW10M)
D	Push type with detent (N.C.)
F	Pull button type (N.O.)

4 Seals

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

5 Coils

TYPE	CODE	DESCRIPTION
BER12VDC	4SLE001200A	12VDC-ISO4400 coil for EW08M
BH12VDC	4SLD001200A	12VDC-ISO4400 coil for EW10M

For complete coils list see page 201

6 Valve body

TYPE	CODE	DESCRIPTION
SAE08/2-G 3/8	3CC0820C11	Aluminium body for cavity 08 valve, G 3/8 std thread
SAE10/2-G 3/8	3CC1020C11	Aluminium body for cavity 10 valve, G 3/8 std thread

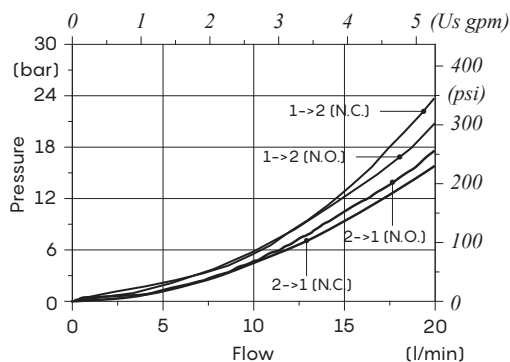
Note: aluminium body can stand up to 210 bar (3050 psi)
For steel bodies or different threading see from page 208

7 Connector

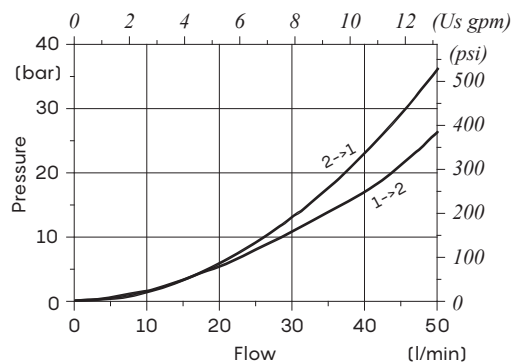
TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector

For complete connectors list see from page 201

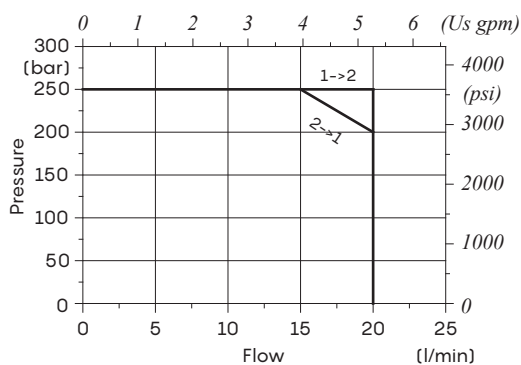
EW08M pressure drop vs. flow



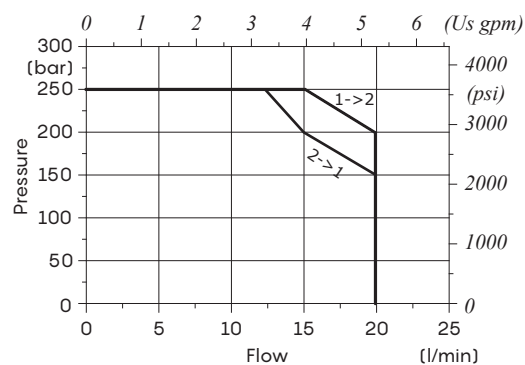
EW10M pressure drop vs. flow (N.C.)



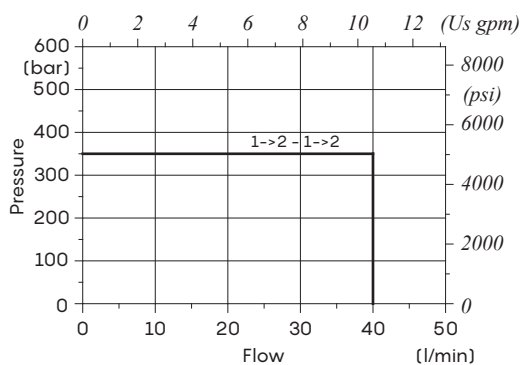
EW08M performance limit (N.O.)



EW08M performance limit (N.C.)



EW10M performance limit (N.C.)





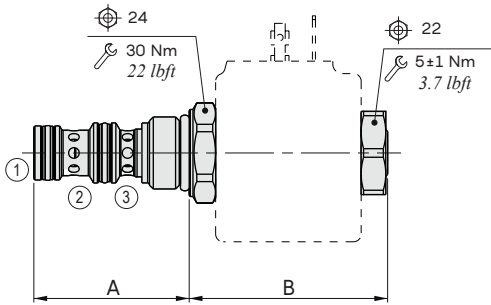
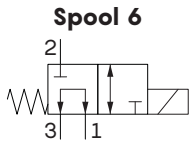
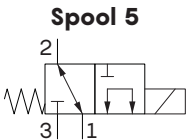
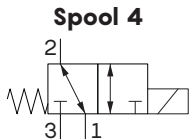
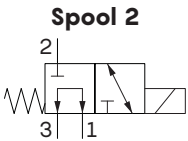
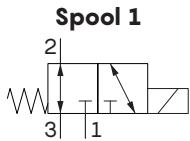
EJ08MF type
directional solenoid valves – 3 way / 2 positions

- Spool type
- Direct acting with on-off solenoid
- Suitable for low pressure: 70 bar (1015 psi)
- Different types of emergencies available
- Different spool options and related schemes available

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

EJ08MF		
Nominal flow		10 l/min (2.64 US gpm)
Max. pressure		70 bar (1015 psi)
Oil leakage	at 70 bar (1015 psi)	20 cm³/min (1.22 in³/min)
Fluid		mineral based or synthetic hydraulic fluid with lubricating properties
Viscosity		10-200 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 8/3
Coil type*		BER
Nominal voltages		12VDC - 24VDC ± 10%
Power rating		19 W
Weight		0.358 kg (0.79 lb)

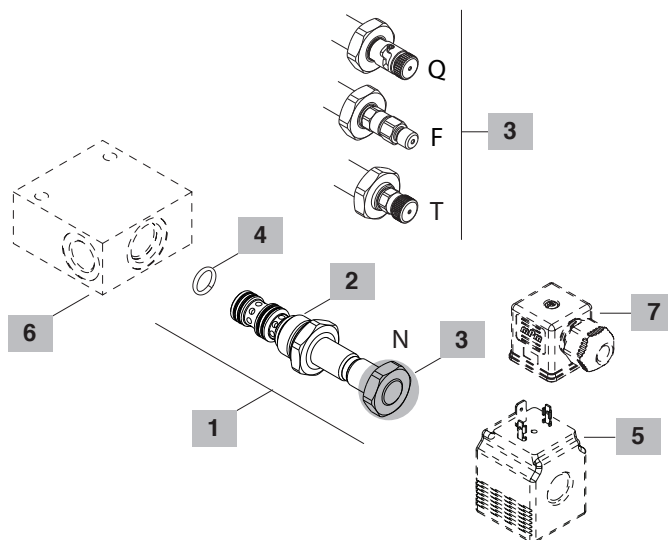
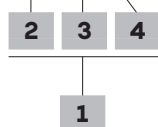
NOTE - For different conditions, please contact Walvoil Sales Dpt. - *For coils further features see from page 201.



Valve type	A		B			
			N without emergency		T screw type	
	mm	in	mm	in	mm	in
EJ08MF	41.1	1.62	52.5	2.07	67.5	2.66

Ordering codes and description composition

EJ08MF/ 1 0 N B



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 08/3		
EJ08MF/10NB	0EJ08002070	Without emergency, spool 1
EJ08MF/20NB	0EJ08002072	Without emergency, spool 2
EJ08MF/40NB	0EJ08002074	Without emergency, spool 4
EJ08MF/50NB	0EJ08002075	Without emergency, spool 5
EJ08MF/60NB	0EJ08002076	Without emergency, spool 6
EJ08MF/20TB	0EJ08002079	Screw type emergency, spool 2

2 Spool

TYPE	DESCRIPTION
1	Spool 1
2	Spool 2
4	Spool 4
5	Spool 5
6	Spool 6

3 Emergency

TYPE	DESCRIPTION
N	Without emergency
T	Screw type
F	Pull button type (N.C.)
Q	Pull type with detent (N.C.)

4 Seals

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

5 Coils

TYPE	CODE	DESCRIPTION
BER12VDC	4SLE001200A	12VDC-ISO4400 coil

For complete coils list see page 201

6 Valve body

TYPE	CODE	DESCRIPTION
SAE08/3-G 3/8	3CC0830C11	Aluminium body for cavity 08 valve, G 3/8 std thread

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

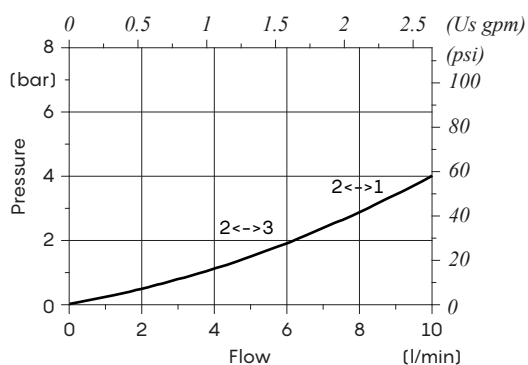
7 Connector

TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector

For complete connectors list see from page 201

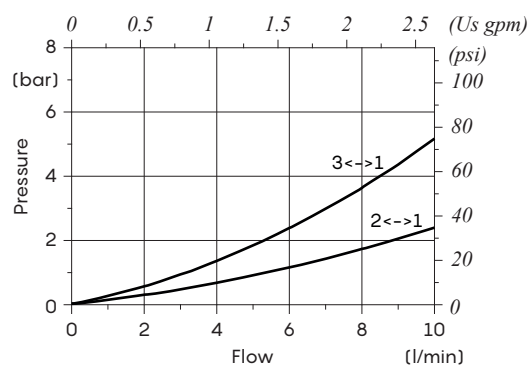
Pressure drop vs. flow

Spool 1



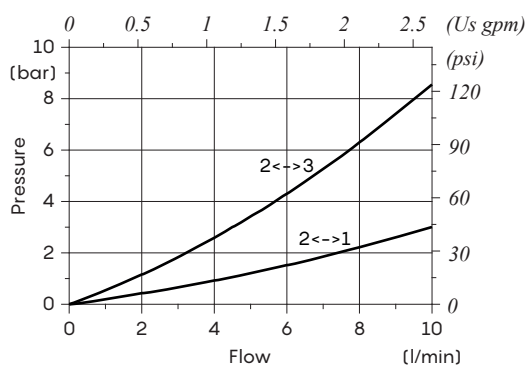
Pressure drop vs. flow

Spool 2



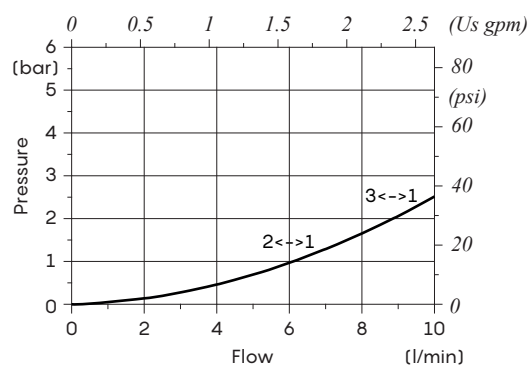
Pressure drop vs. flow

Spool 4



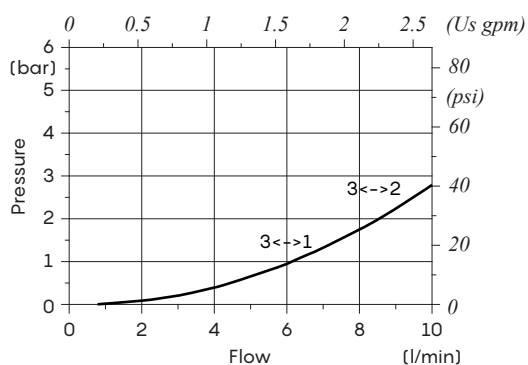
Pressure drop vs. flow

Spool 5



Pressure drop vs. flow

Spool 6





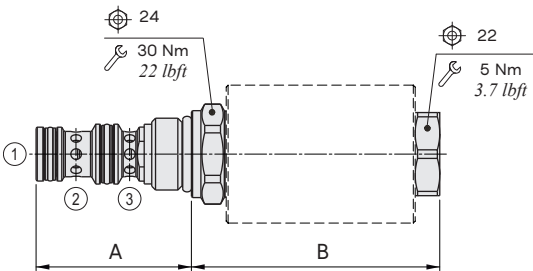
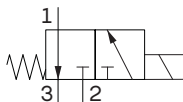
EJ08G type
directional solenoid valves – 3 way / 2 positions

- Spool type
- Direct acting with on-off solenoid
- Suitable for high pressure: 350 bar (5100 psi)
- Different types of emergencies available

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

EJ08G		
Nominal flow		3 l/min (0.80 US gpm)
Max. pressure		350 bar (5100 psi)
Oil leakage	at 210 bar (3050 psi)	10 cm³/min (0.61 in³/min)
Fluid	mineral based or synthetic hydraulic fluid with lubricating properties	
Viscosity		10-200 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 8/3
Coil type*		BT
Nominal voltages		12VDC - 24VDC ± 10%
Power rating		21 W
Weight		0.134 kg (0.29 lb)

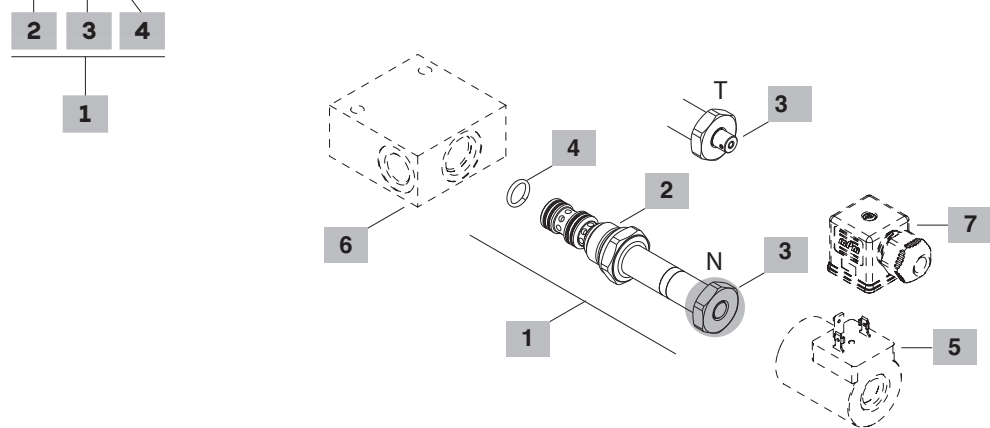
NOTE - For different conditions, please contact Walvoil Sales Dpt. - *For coils further features see from page 201.



Valve type	A		B			
			N without emergency		T screw type	
	mm	in	mm	in	mm	in
EJ08G	41.1	1.62	66	2.6	73.5	2.89

Ordering codes and description composition

EJ08G/ 2 0 N B



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 08/3		
EJ08G/20NB	0EJ08002035	Without emergency
EJ08G/20TB	0EJ08002042	Screw type emergency

2 Spool

TYPE	DESCRIPTION
2	Spool 2

3 Emergency

TYPE	DESCRIPTION
N	Without emergency
T	Screw type

4 Seals

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

5 Coils

TYPE	CODE	DESCRIPTION
BT12VDC	4SL3000120	12VDC-ISO4400 coil
For complete coils list see page 201		

6 Valve body

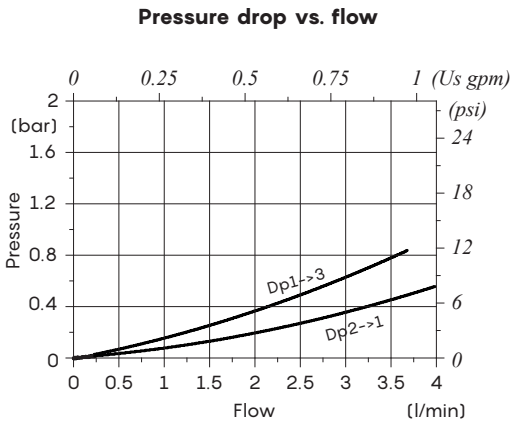
TYPE	CODE	DESCRIPTION
SAE08/3-G 1/4	3CC0830B11	Aluminium body for cavity 08 valve, G 1/4 std thread

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

7 Connector

TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector
For complete connectors list see from page 201		

Rating diagrams





EJ..M type directional solenoid valves – 3 way / 2 positions

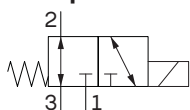
- Spool type
- Direct acting with on-off solenoid
- Different types of emergencies available
- From SAE08 to SAE12 cavities

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

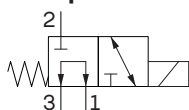
		EJ08M	EJ10M	EJ12M
Max. flow		25 l/min (6.6 US gpm)	40 l/min (10.5 US gpm)	60 l/min (15.8 US gpm)
Max. pressure		250 bar (3600 psi)		
Oil leakage	at 210 bar (3050 psi)	40 cm³/min (2.44 in³/min)	80 cm³/min (4.88 in³/min)	400 cm³/min (24.4 in³/min)
Fluid		mineral based or synthetic hydraulic fluid with lubricating properties		
Viscosity		10-200 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 08/3	SAE 10/3	SAE 12/3
Coil type*		BER	BC	BH
Nominal voltages			12VDC - 24VDC ±10%	
Power rating		19 W (12VDC - 24VDC)	26 W (12VDC - 24VDC)	33 W
Weight		0.125 kg (0.27 lb)	0.300 kg (0.661 lb)	0.434 kg (0.956 lb)

NOTE – For different conditions, please contact Walvoil Sales Dpt. – *For coils further features see from page 201.

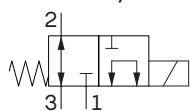
Spool 1



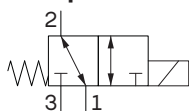
Spool 2



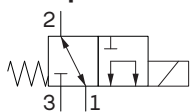
Spool 3 (only EJ08M)



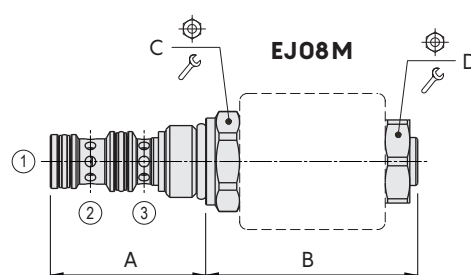
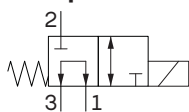
Spool 4



Spool 5



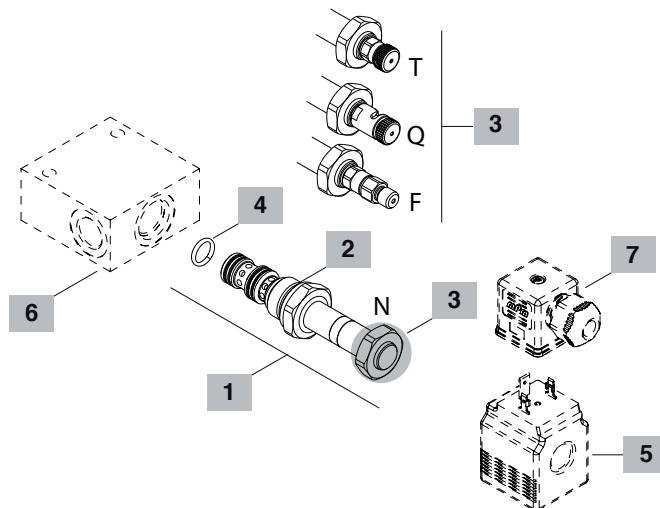
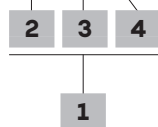
Spool 6



Valve type	A		B N without emergency		C		D	
	mm	in	mm	in	Nm	lbft	Nm	lbft
EJ08M	41.1	1.62	56.1	2.21	24	30	22	5
EJ10M	47	1.85	68	2.68	27	50	37	5
EJ12M	73.5	2.89	85.5	3.37	32	85	63	5

Ordering codes and description composition

EJ08M/ 1 0 N B



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 08/3		
EJ08M/10NB	0EJ08002030	Without emergency, spool 1
EJ08M/20NB	0EJ08002031	Without emergency, spool 2
EJ08M/30NB	0EJ08002032	Without emergency, spool 3
EJ08M/40NB	0EJ08002033	Without emergency, spool 4
EJ08M/50NB	0EJ08002034	Without emergency, spool 5
SAE cavity 10/3		
EJ10M/10NB	0EJ10002018	Without emergency, spool 1
EJ10M/20NB	0EJ10002019	Without emergency, spool 2
EJ10M/40NB	0EJ10002021	Without emergency, spool 4
EJ10M/50NB	0EJ10002022	Without emergency, spool 5
EJ10M/60NB	0EJ10002023	Without emergency, spool 6
SAE cavity 12/3		
EJ12M/10NB	0EJ12002011	Without emergency, spool 1
EJ12M/20NB	0EJ12002012	Without emergency, spool 2
EJ12M/40NB	0EJ12002013	Without emergency, spool 4
EJ12M/50NB	0EJ12002014	Without emergency, spool 5

2 Spool

TYPE	DESCRIPTION
1	Spool 1
2	Spool 2
3	Spool 3
4	Spool 4
5	Spool 5
6	Spool 6

3 Emergency

TYPE	DESCRIPTION
N	Without emergency
F	Pull button type
Q	Pull type with detent
T	Screw type

4 Seals

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

5 Coils

TYPE	CODE	DESCRIPTION
BER12VDC	4SLE001200A	12VDC-ISO4400 coil for EJ08M
BC12VDC	4SL8000120	12VDC-ISO4400 coil for EJ10M
BH12VDC	4SLD001200A	12VDC-ISO4400 coil for EJ12M

For complete coils list see page 201

6 Valve body

TYPE	CODE	DESCRIPTION
SAE08/3-G 3/8	3CC0830C11	Aluminium body for cavity 08 valve, G 3/8 std thread
SAE10/3-G 3/8	3CC1030C11	Aluminium body for cavity 10 valve, G 3/8 std thread
SAE12/3-G 1/2	3CC1230D11	Aluminium body for cavity 12 valve, G 1/2 std thread

Note: aluminium body can stand up to 210 bar (3050 psi)

For steel bodies or different threading see from page 210

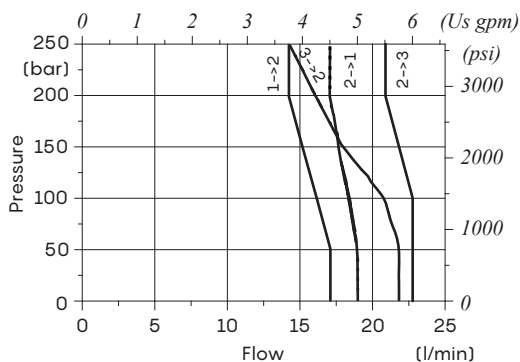
7 Connector

TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector

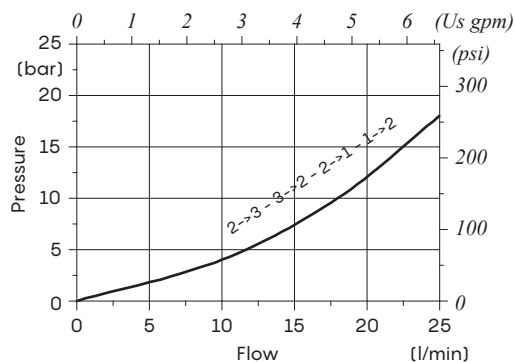
For complete connectors list see from page 201

Rating diagrams

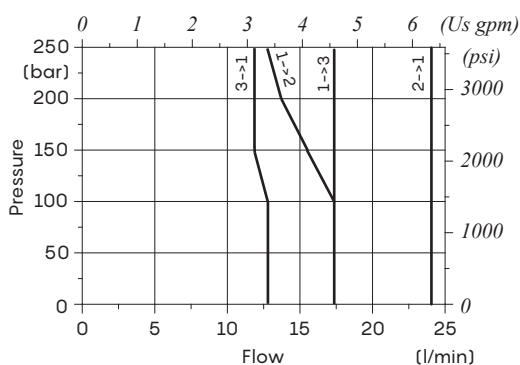
**EJ08M performance limit
spool 1**



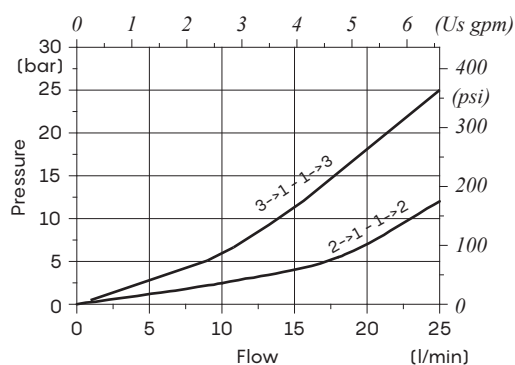
**EJ08M pressure drop vs. flow
spool 1**



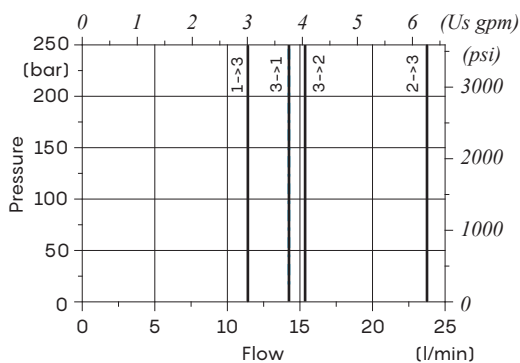
**EJ08M performance limit
spool 2**



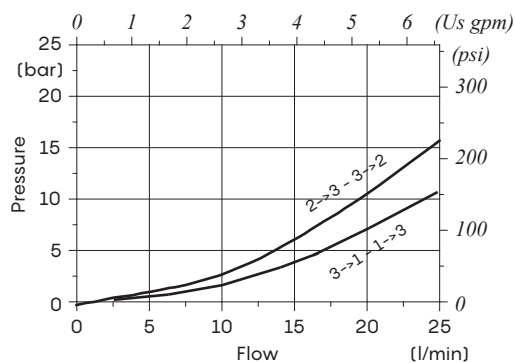
**EJ08M pressure drop vs. flow
spool 2**



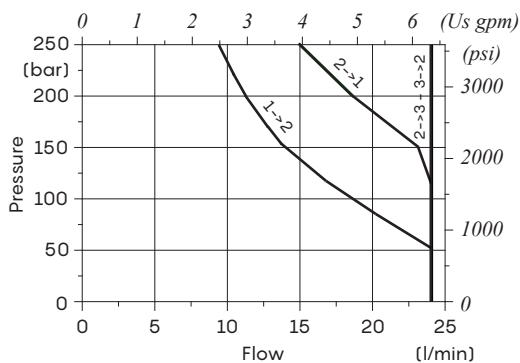
**EJ08M performance limit
spool 3**



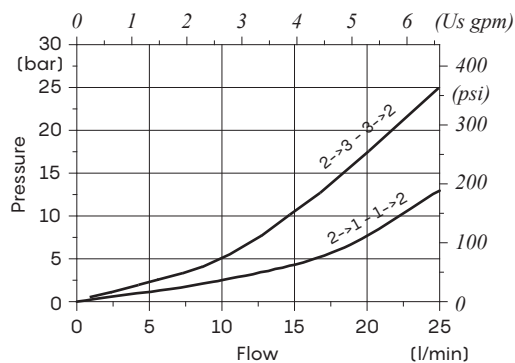
**EJ08M pressure drop vs. flow
spool 3**



**EJ08M performance limit
spool 4**

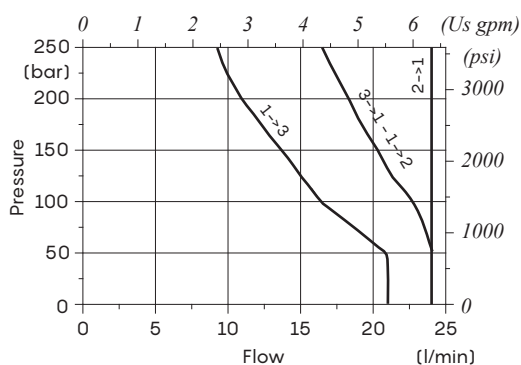


**EJ08M pressure drop vs. flow
spool 4**

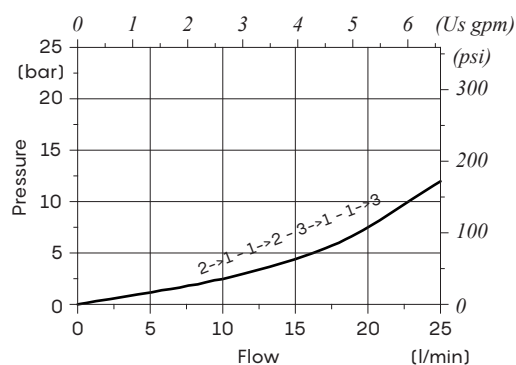


Rating diagrams

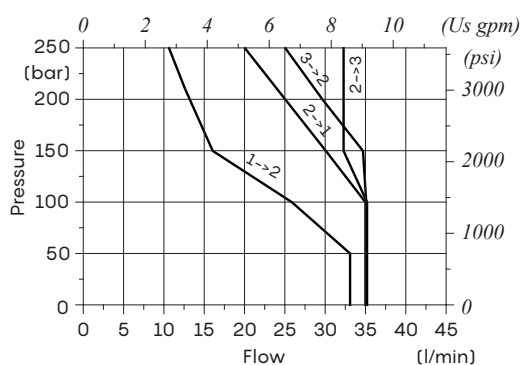
EJ08M performance limit
spool 5



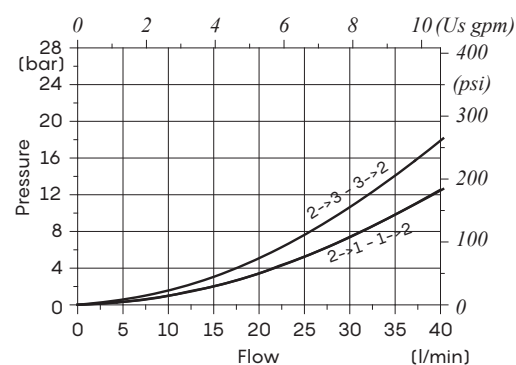
EJ08M pressure drop vs. flow
spool 5



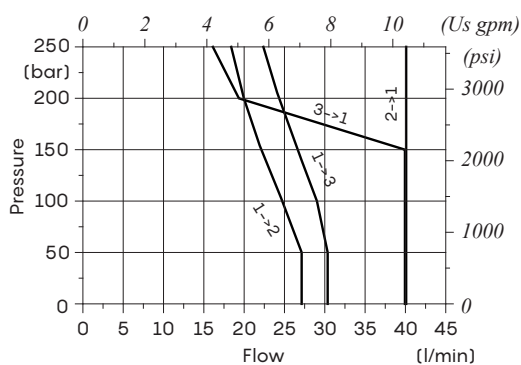
EJ10M performance limit
spool 1



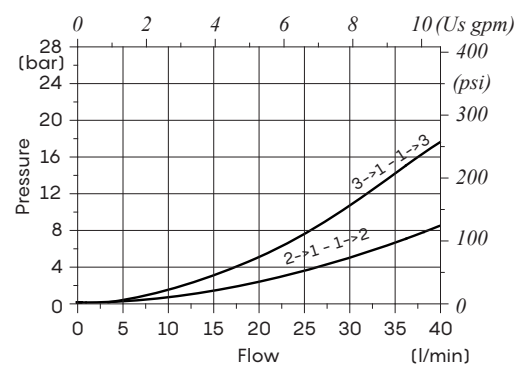
EJ10M pressure drop vs. flow
spool 1



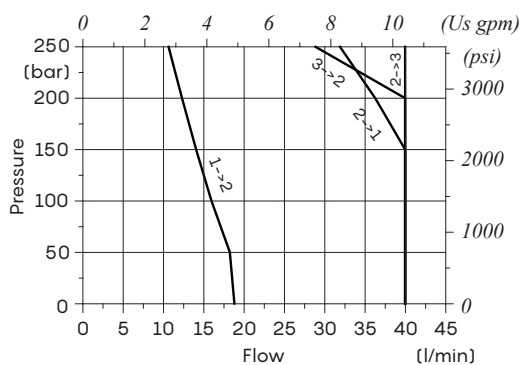
EJ10M performance limit
spool 2



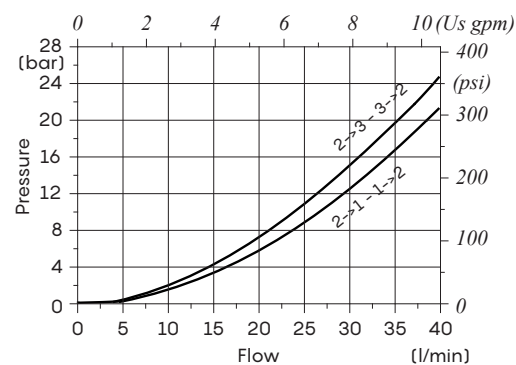
EJ10M pressure drop vs. flow
spool 2



EJ10M performance limit
spool 4

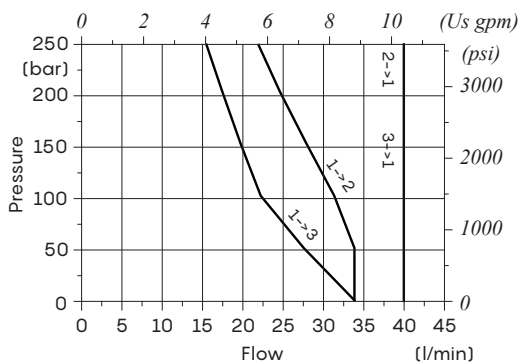


EJ10M pressure drop vs. flow
spool 4

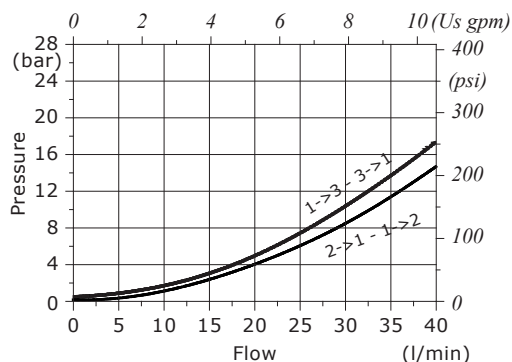


Rating diagrams

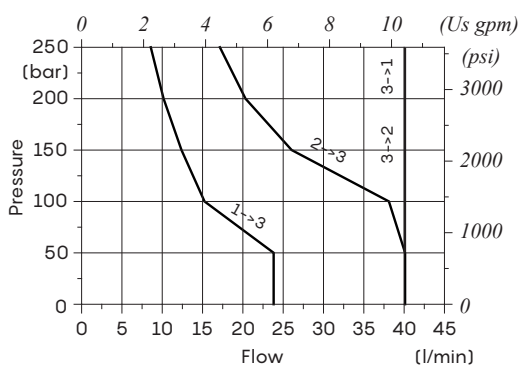
**EJ10M performance limit
spool 5**



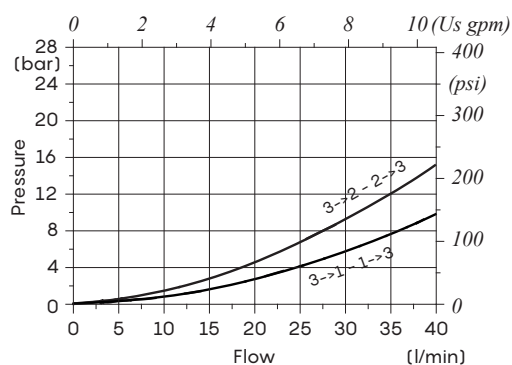
**EJ10M pressure drop vs. flow
spool 5**



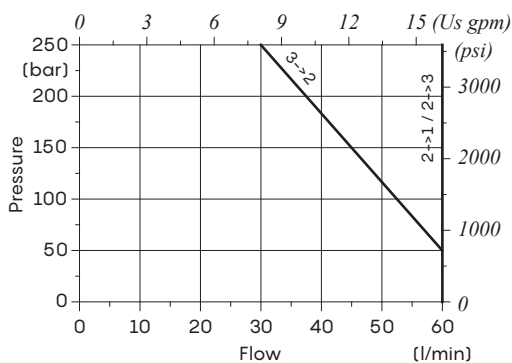
**EJ10M performance limit
spool 6**



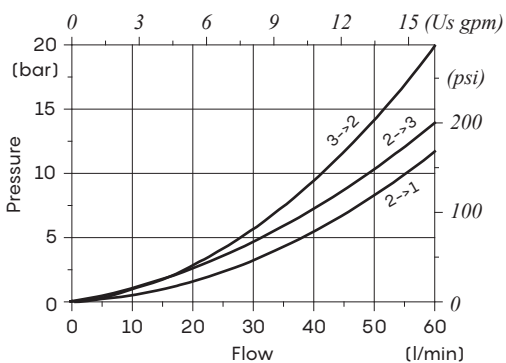
**EJ10M pressure drop vs. flow
spool 6**



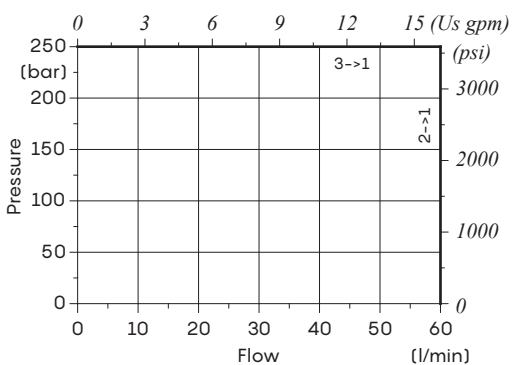
**EJ12M performance limit
spool 1**



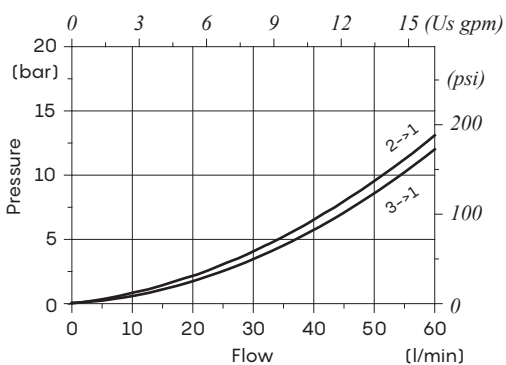
**EJ12M pressure drop vs. flow
spool 1**



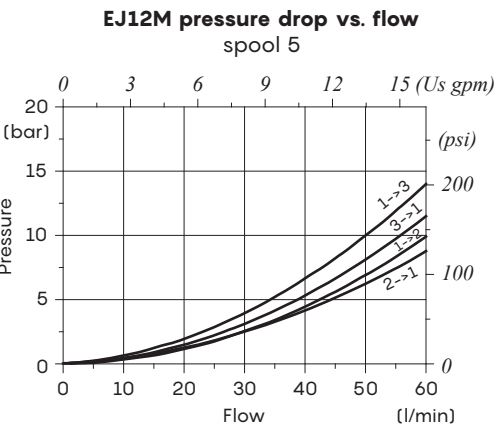
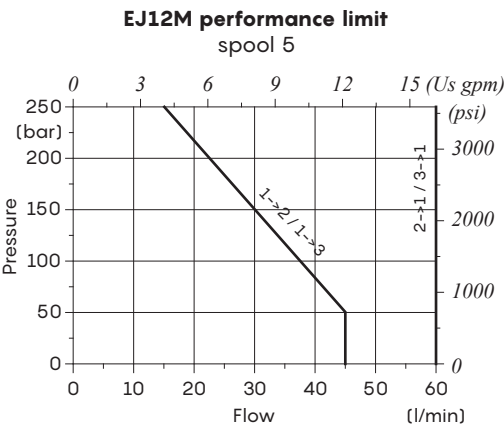
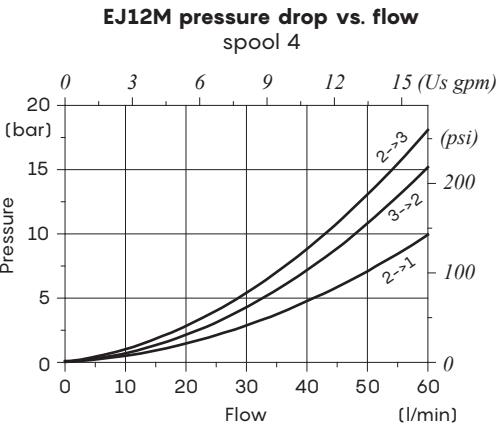
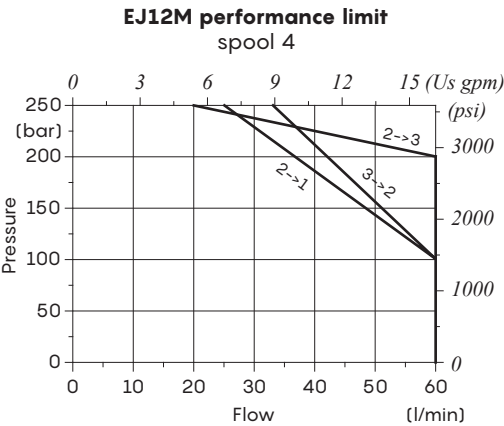
**EJ12M performance limit
spool 2**



**EJ12M pressure drop vs. flow
spool 2**



Rating diagrams





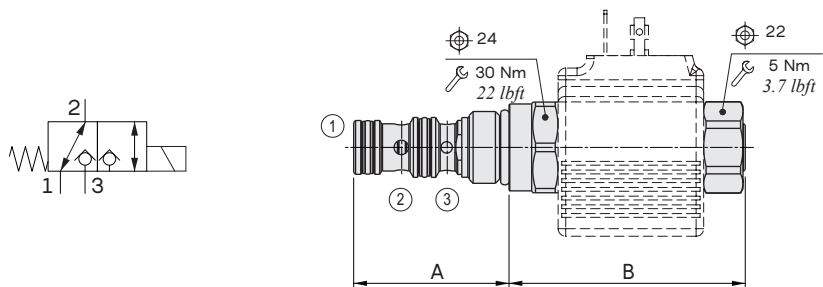
EL08B type
directional solenoid valves – 3 way / 2 positions

- Poppet type
- Direct acting with on-off solenoid
- Different types of emergencies available
- Suitable for low pressure: 100 bar (1450 psi)

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

EL08B		
Nominal flow		10 l/min (2.64 US gpm)
Max. pressure		250 bar (3600 psi)
Oil leakage	at 210 bar (3050 psi)	0.25 cm³/min (0.015 in³/min)
Fluid		mineral based or synthetic hydraulic fluid with lubricating properties
Viscosity		10-200 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 08/3
Coil type*		BER
Nominal voltages		12VDC - 24VDC ± 10%
Power rating		19 W
Weight		0.16 kg (0.35 lb)

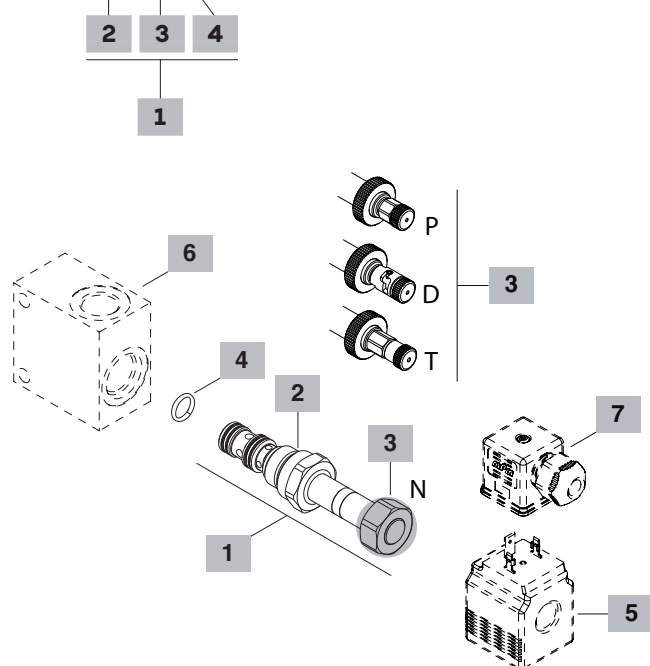
NOTE - For different conditions, please contact Walvoil Sales Dpt. - *For coils further features see from page 201.



Valve type	A		B							
			N without emergency		T screw		P push button		D push type with detent	
	mm	in	mm	in	mm	in	mm	in	mm	in
EL08B	41.1	1.62	62.5	2.46	85.4	3.36	85.4	3.36	88.1	3.47

Ordering codes and description composition

EL08B/ 1 0 N B



1 Cartridges

TYPE	CODE	DESCRIPTION
EL08B/10NB	OEL08002009	Without emergency
EL08B/10PB	OEL08002006	With push-button emergency
EL08B/10TB	OEL08002007	Screw type emergency
EL08B/10DB	OEL08002008	Push type with detent emergency

2 Spool

TYPE	DESCRIPTION
1	Spool 1

3 Emergency

TYPE	DESCRIPTION
N	Without emergency
P	Push-button emergency
T	Screw type emergency
D	Push type with detent emergency

4 Seals

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

5 Coil

TYPE	CODE	DESCRIPTION
BER12VDC	4SLE001200A	12VDC-ISO4400 coil

For complete coils list see page 201

6 Valve body

TYPE	CODE	DESCRIPTION
SAE08/3-G 1/4	3CC0830B11	Aluminium body for cavity 08 valve, G 1/4 std thread

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

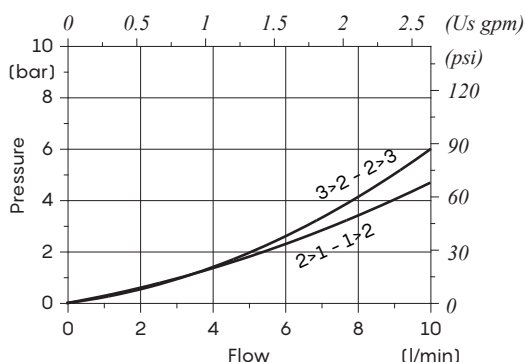
7 Connector

TYPE	CODE	DESCRIPTION
ISO4400	4CNI009995B	Connector

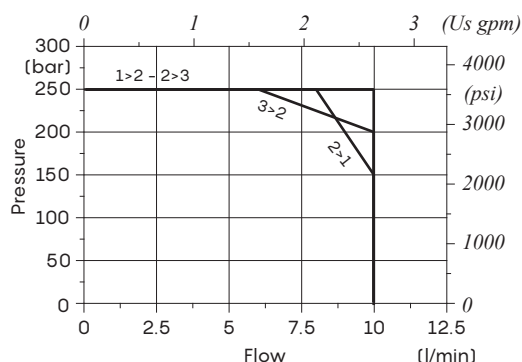
For complete connectors list see from page 201

Rating diagrams

Pressure drop vs. flow



Performance limit





EL10C type directional solenoid valves – 3 way / 2 positions

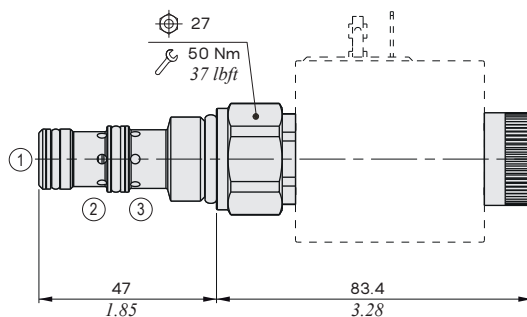
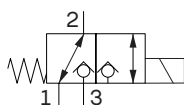
- Poppet type
- Direct acting with on-off solenoid

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

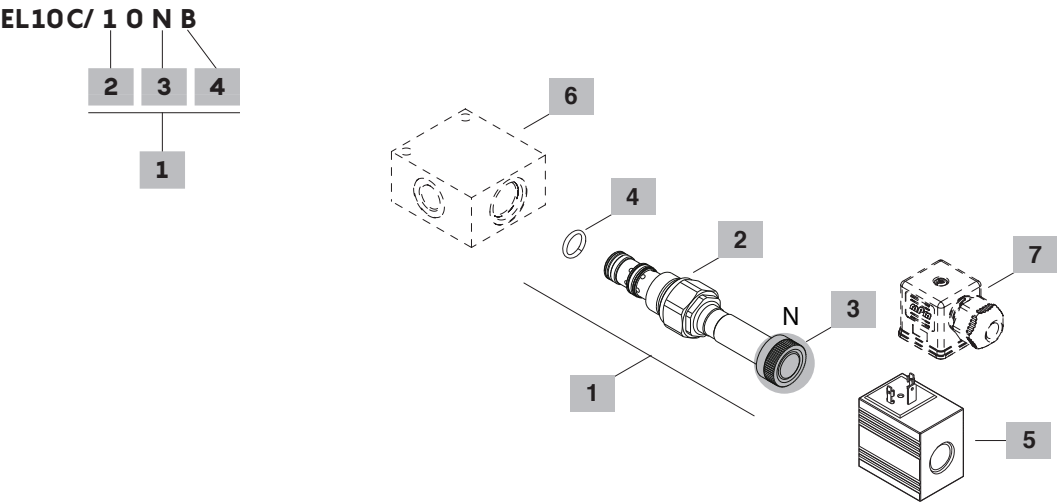
EL10C

Nominal flow		20 l/min (5.28 US gpm)
Max. pressure		210 bar (3050 psi)
Oil leakage	at 210 bar (3050 psi)	0.25 cm³/min (0.015 in³/min)
Fluid		mineral based or synthetic hydraulic fluid with lubricating properties
Viscosity		10-200 cSt
Max level of contamination		18/16/13 ISO4406
Fluid temperature	with NBR seals+PTFE 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 10/3
Coil type*		BQ16
Nominal voltages		12VDC ± 10%
Power rating		30 W
Weight		0.27 kg (0.59 lb)

NOTE – For different conditions, please contact Walvoil Sales Dpt. – *For coils further features see from page 201.



Ordering codes and description composition



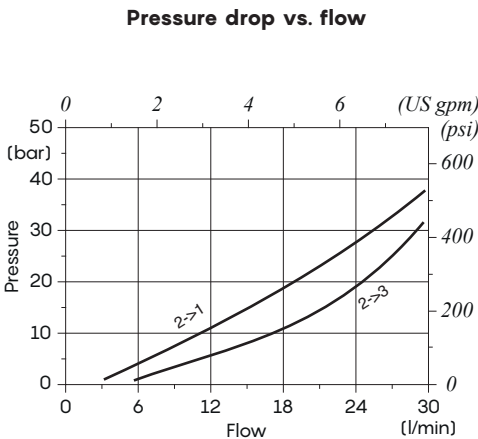
1 Cartridges			5 Coils		
TYPE	CODE	DESCRIPTION	TYPE	CODE	DESCRIPTION
SAE cavity 10/3			BQ16 12VDC		
EL10C/10NB	OEL10002008	Without emergency	For complete coils list see page 201		

2 Spool		6 Valve body		
TYPE	DESCRIPTION	TYPE	CODE	DESCRIPTION
1	Spool 1	SAE10/3-G 3/8		
		3CC1030C11 Aluminium body for cavity 10 valve, G 3/8 std thread		
		Note: aluminium body can stand up to 210 bar (3050 psi)		
		For steel bodies or different threading see from page 210		

3 Emergency		7 Connector		
TYPE	DESCRIPTION	TYPE	CODE	DESCRIPTION
N	Without emergency	ISO4400		
		4CN1009995B Connector		
		For complete connectors list see from page 201		

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

Rating diagrams





ER..L type directional solenoid valves – 4 way/2 positions

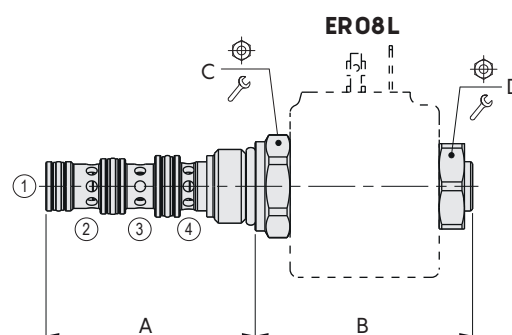
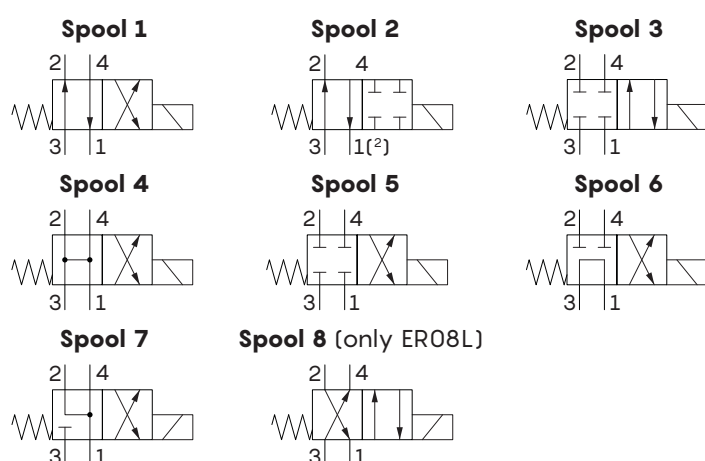
- Spool type
- Direct acting with on-off solenoid
- Different types of emergencies available
- External zinc-plated and corrosion-proof components
- Low pressure drop
- From SAE08 to SAE10 cavities

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

	ER08L	ER10L
Nominal flow	20 l/min (5.3 US gpm)	40 l/min (10.6 US gpm)
Max. pressure	250 bar (3600 psi)	
Oil leakage	at 210 bar (5100 psi) 40 cm ³ /min (2.44 in ³ /min)	80 cm ³ /min (4.88 in ³ /min)
Fluid	mineral based or synthetic hydraulic fluid with lubricating properties	
Viscosity	10-200 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 08/4	SAE 10/4
Coil type*	BER	BC
Nominal voltages	12VDC - 24VDC ± 10%	
Power rating	19 W (12VDC - 24VDC)	26 W (12VDC - 24VDC)
Weight	0.372 kg (0.82 lb)	0.432 kg (0.95 lb)

NOTE - For different conditions, please contact Walvoil Sales Dpt. - *For coils further features see from page 201.

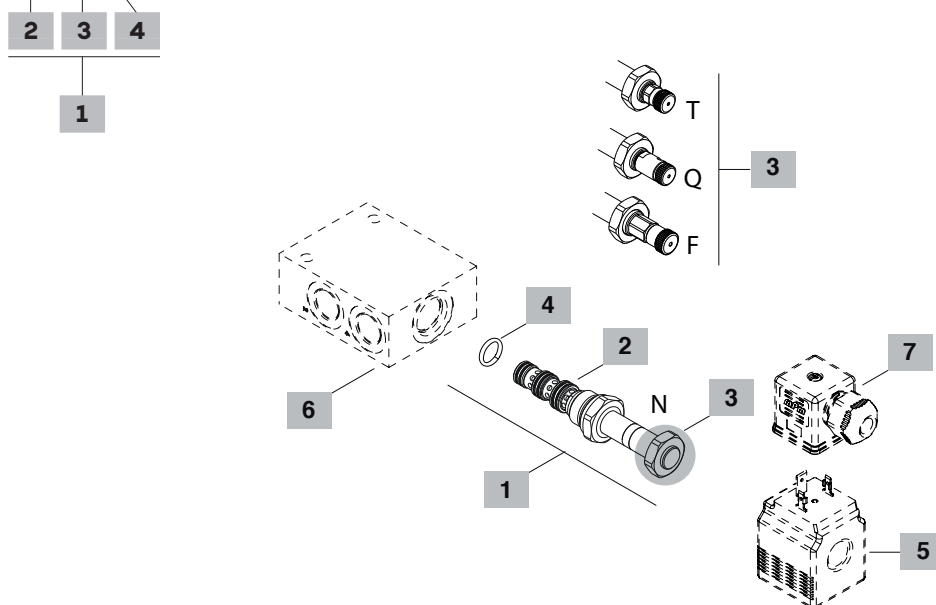
- (²) Port 1 may be fully pressurized, it's not intended for use as the valve's inlet.



Valve type	A		N		T		F		Q		C		D	
			without emergency		screw type		pull button		pull type with detent					
	mm	in	mm	in	mm	in	mm	in	mm	in	Nm	lbf·ft	Nm	lbf·ft
ER08L	54	2.13	56.1	2.21	71.1	2.8	84	3.31	77.2	3.04	24	30	22	5±1 3.7
ER10L	62.4	2.46	68	2.68	82.5	3.25	95.2	3.75	88.5	3.48	27	50	37	23 5±1 3.7

Ordering codes and description composition

ER08L/ 1 0 N B

**1 Cartridges**

TYPE	CODE	DESCRIPTION
SAE cavity 08/4		
ER08L/10NB	OER08002036	Without emergency, spool 1
ER08L/20NB	OER08002042	Without emergency, spool 2
ER08L/30NB	OER08002043	Without emergency, spool 3
ER08L/40NB	OER08002044	Without emergency, spool 4
ER08L/50NB	OER08002039	Without emergency, spool 5
ER08L/60NB	OER08002045	Without emergency, spool 6
ER08L/70NB	OER08002046	Without emergency, spool 7
ER08L/80NB	OER08002047	Without emergency, spool 8
ER08L/70QB	OER08002041	Pull type with detent, spool 7
SAE cavity 10/4		
ER10L/10NB	OER10002040	Without emergency, spool 1
ER10L/20NB	OER10002047	Without emergency, spool 2
ER10L/30NB	OER10002048	Without emergency, spool 3
ER10L/40NB	OER10002044	Without emergency, spool 4
ER10L/50NB	OER10002045	Without emergency, spool 5
ER10L/60NB	OER10002042	Without emergency, spool 6
ER10L/70NB	OER10002046	Without emergency, spool 7

2 Spool

TYPE	DESCRIPTION
1	Spool 1
2	Spool 2
3	Spool 3
4	Spool 4
5	Spool 5
6	Spool 6
7	Spool 7
8	Spool 8

3 Emergency

TYPE	DESCRIPTION
N	Without emergency
F	Pull screw button
Q	Pull type with detent
T	Screw type

4 Seals

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

5 Coils

TYPE	CODE	DESCRIPTION
BER12VDC	4SLE001200A	12VDC-ISO4400 coil for ER08L
BC12VDC	4SL8000120	12VDC-ISO4400 coil for ER10L

For complete coils list see page 201

6 Valve body

TYPE	CODE	DESCRIPTION
SAE08/4-G 3/8	3CC0840C11	Aluminium body for cavity 08 valve, G 3/8 std thread
SAE10/4-G 1/2	3CC1040D11	Aluminium body for cavity 10 valve, G 3/8 std thread

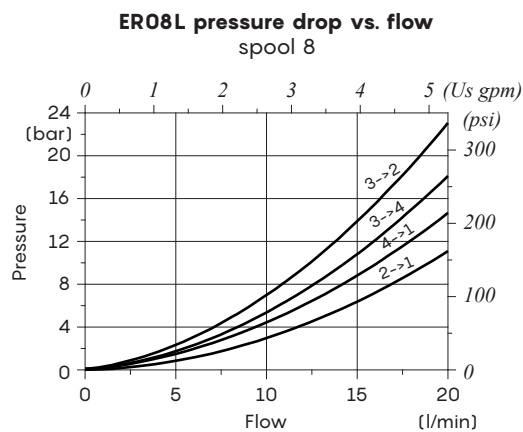
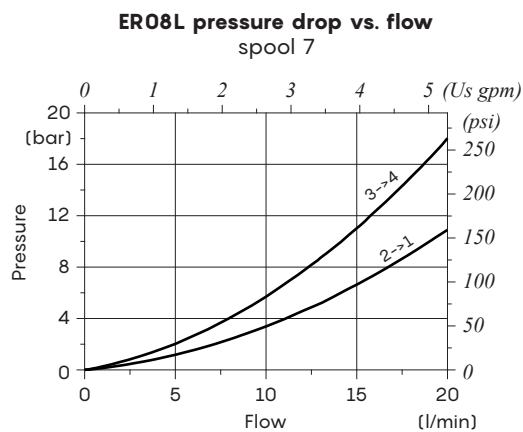
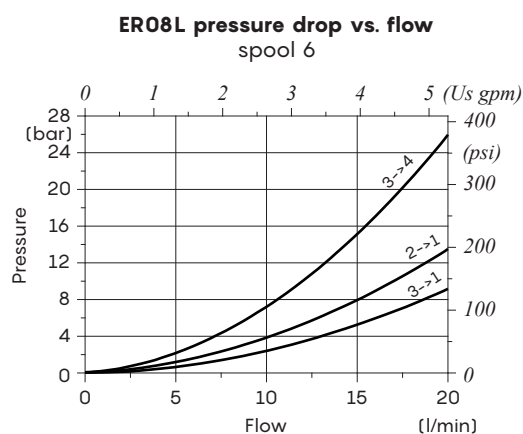
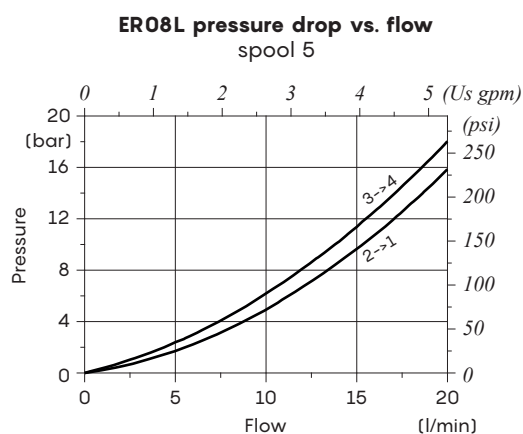
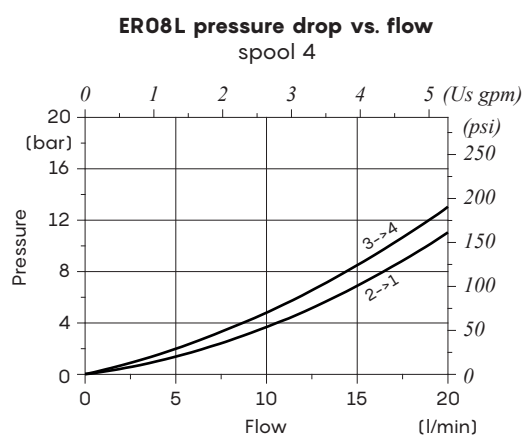
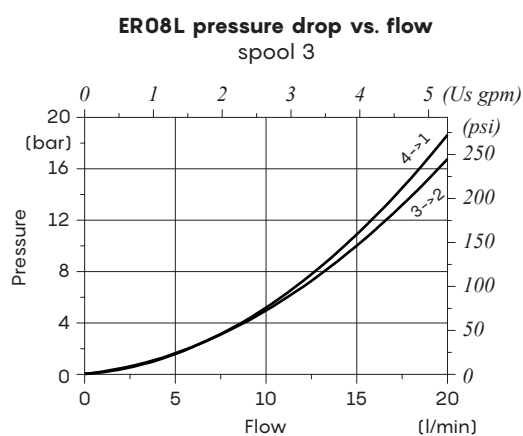
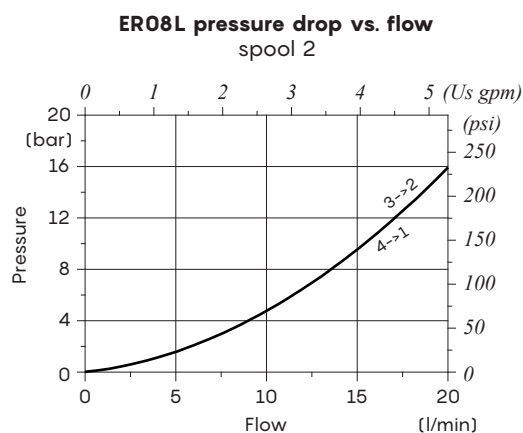
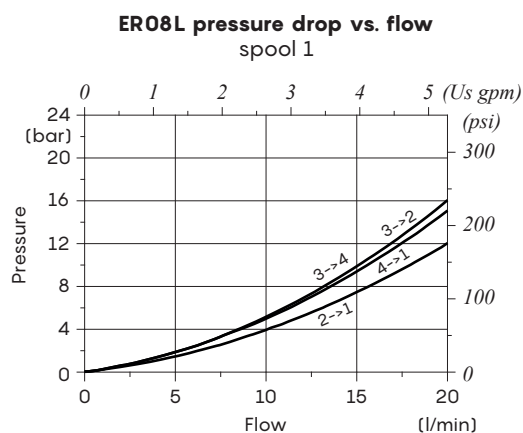
Note: aluminium body can stand up to 210 bar (3050 psi)
For steel bodies or different threading see from page 212

7 Connector

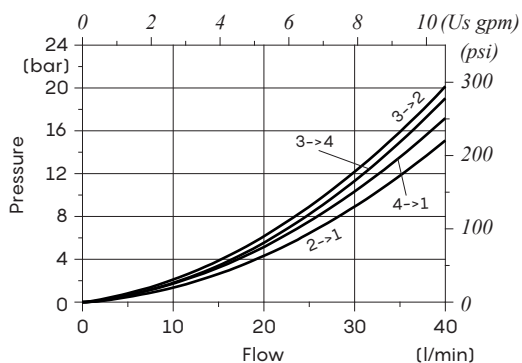
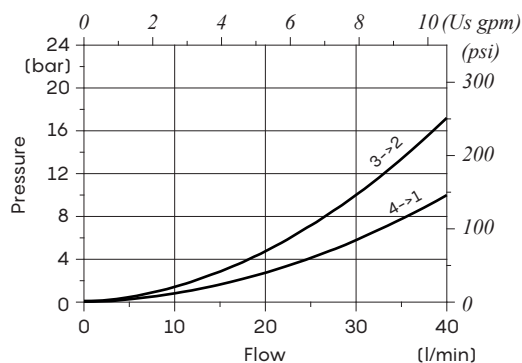
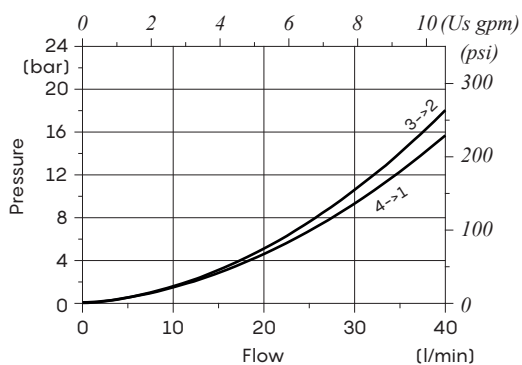
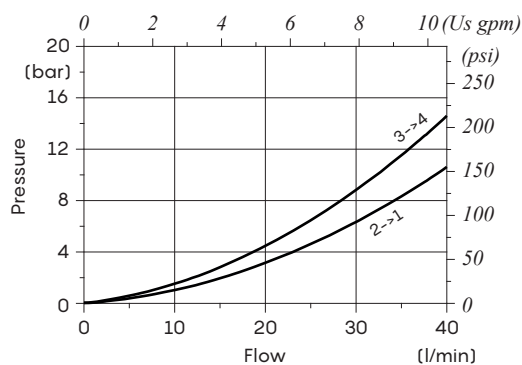
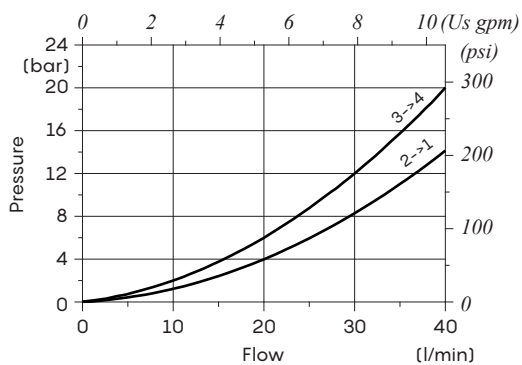
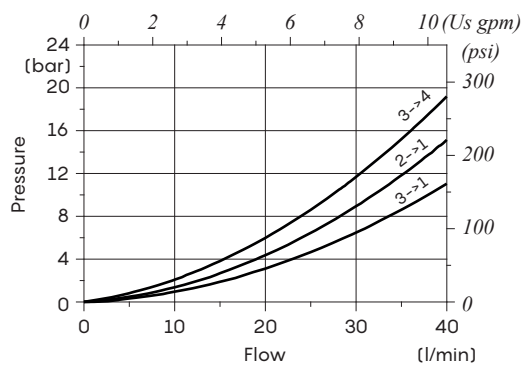
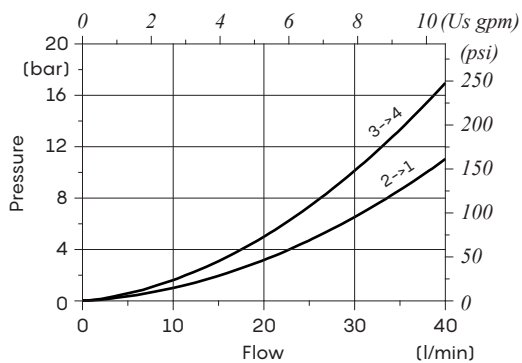
TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector

For complete connectors list see from page 201

Rating diagrams



Rating diagrams

ER10L pressure drop vs. flow
spool 1ER10L pressure drop vs. flow
spool 2ER10L pressure drop vs. flow
spool 3ER10L pressure drop vs. flow
spool 4ER10L pressure drop vs. flow
spool 5ER10L pressure drop vs. flow
spool 6ER10L pressure drop vs. flow
spool 7



ER12M type directional solenoid valves – 4 way / 2 positions

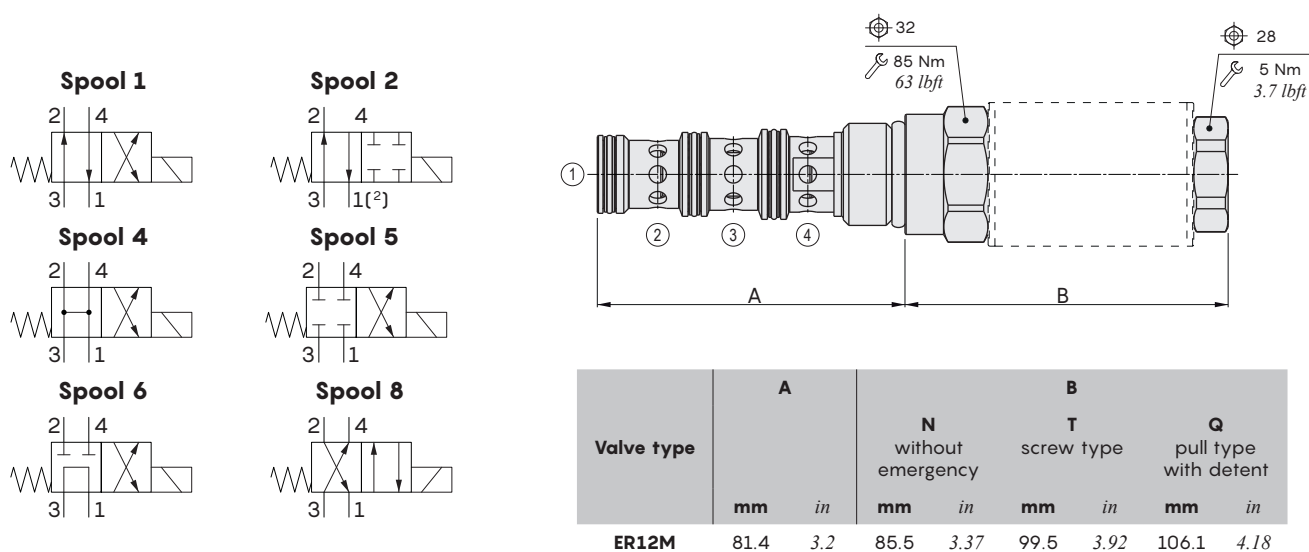
- Spool type
- Direct acting with on-off solenoid
- Different types of emergencies available

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

ER12M

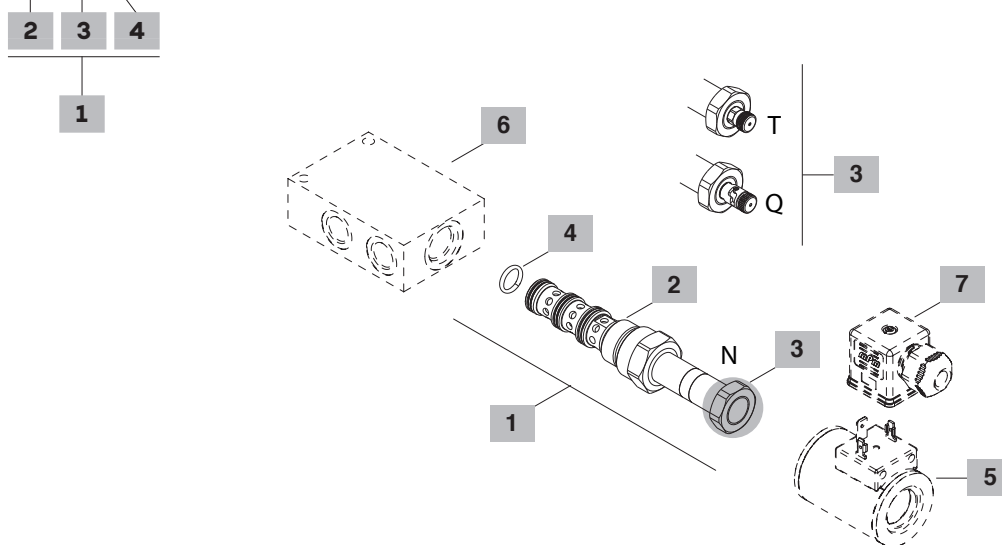
Nominal flow		60 l/min (15.8 US gpm)
Max. pressure	port 1 port 2, 3, 4	250 bar (3600 psi) 320 bar (4600 psi)
Oil leakage	at 210 bar (3050 psi)	200 cm ³ /min (12.20 in ³ /min)
Fluid		mineral based or synthetic hydraulic fluid with lubricating properties
Viscosity		10–200 cSt
Max level of contamination		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 12/4
Coil type*		BH
Nominal voltages		12VDC – 24 VDC ± 10%
Power rating		33 W (12/24 VDC)
Weight		0.73 kg (1.61 lb)

NOTE – For different conditions, please contact Walvoil Sales Dpt. – *For coils further features see from page 201.



Ordering codes and description composition

ER12M/ 1 0 N B

**1 Cartridges**

TYPE	CODE	DESCRIPTION
SAE cavity 12/4		
ER12M/10NB	OER12002021	Without emergency, spool 1
ER12M/20NB	OER12002023	Without emergency, spool 2
ER12M/40NB	OER12002031	Without emergency, spool 4
ER12M/50NB	OER12002024	Without emergency, spool 5
ER12M/60NB	OER12002028	Without emergency, spool 6
ER12M/80NB	OER12002022	Without emergency, spool 8
ER12M/10QB	OER12002033	Pull type emergency with detent, spool 1
ER12M/60TB	OER12002030	Screw type, spool 6

2 Spool

TYPE	DESCRIPTION
1	Spool 1
2	Spool 2
4	Spool 4
5	Spool 5
6	Spool 6
8	Spool 8

3 Emergency

TYPE	DESCRIPTION
N	Without emergency
Q	Pull type with detent
T	Screw type

4 Seals

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

5 Coils

TYPE	CODE	DESCRIPTION
BH12VDC-ISO4400	4SLD001200A	12VDC-ISO4400 coil

For complete coils list see page 201

6 Valve body

TYPE	CODE	DESCRIPTION
SAE12/4-G 1/2	3CC1240D11	Aluminium body for cavity 12 valve, G 1/2 std thread

Note: aluminium body can stand up to 210 bar (3050 psi)
For steel bodies or different threading see from page 212

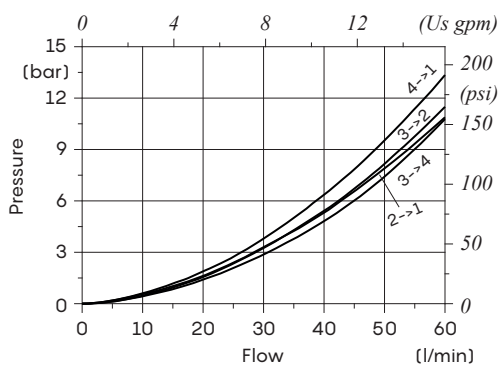
7 Connector

TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector

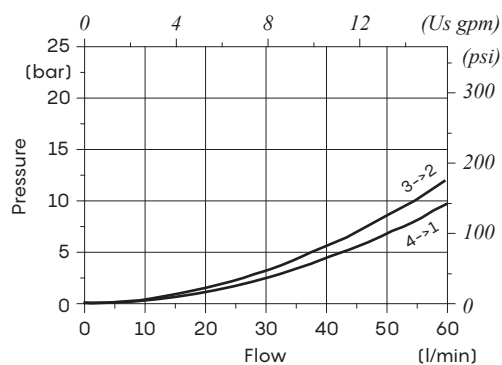
For complete connectors list see from page 201

Rating diagrams

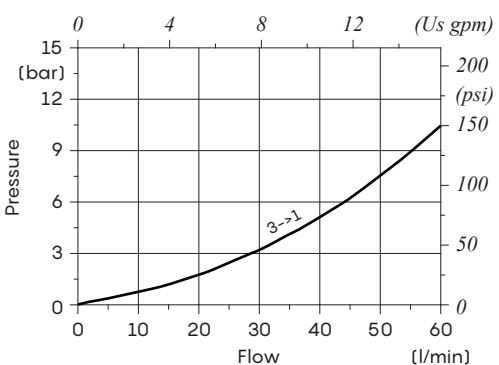
ER12M pressure drop vs. flow
spool 1



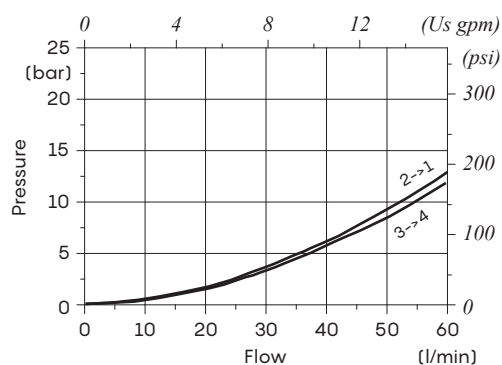
ER12M pressure drop vs. flow
spool 2



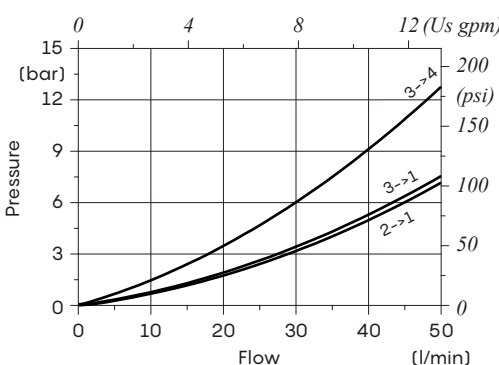
ER12M pressure drop vs. flow
spool 4



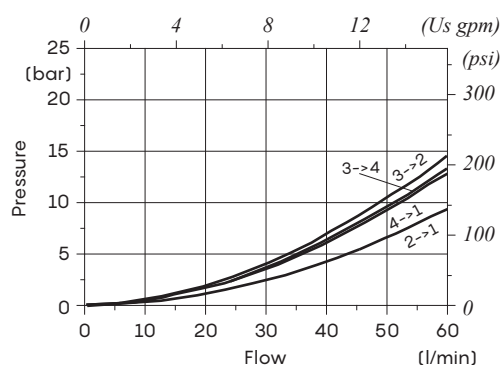
ER12M pressure drop vs. flow
spool 5



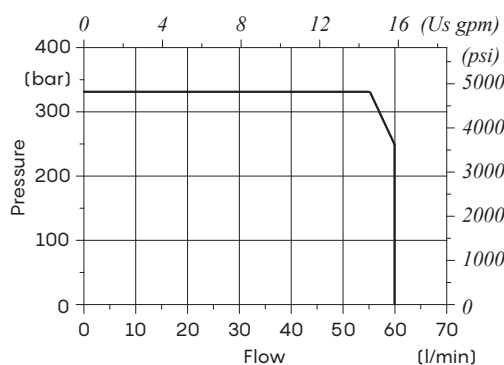
ER12M pressure drop vs. flow
spool 6



ER12M pressure drop vs. flow
spool 8



ER12M performance limit





ET..L type directional solenoid valves – 4 way/3 positions

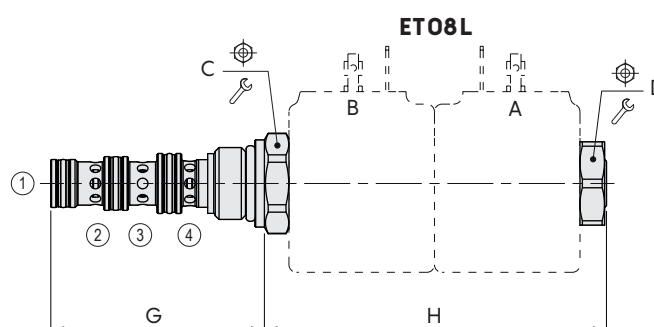
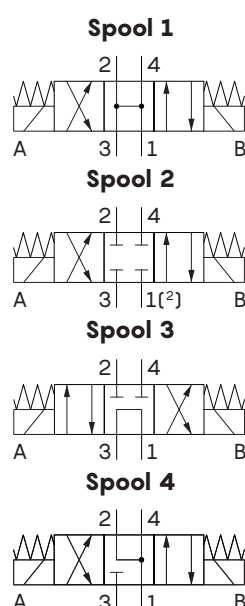
- Spool type
- Direct acting with on-off solenoid
- Different types of emergencies available
- External zinc-plated and corrosion-proof components
- From SAE08 to SAE10 cavities

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

	ET08L	ET10L
Nominal flow	20 l/min (5.3 US gpm)	40 l/min (10.6 US gpm)
Max. pressure	250 bar (3600 psi)	
Oil leakage	at 210 bar (5100 psi) 40 cm ³ /min (2.44 in ³ /min)	80 cm ³ /min (4.88 in ³ /min)
Fluid	mineral based or synthetic hydraulic fluid with lubricating properties	
Viscosity	10-200 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 08/4	SAE 10/4
Coil type*	BER	BC
Nominal voltages	12VDC - 24VDC ± 10%	
Power rating	19 W (12VDC - 24VDC)	26 W (12VDC - 24VDC)
Weight	0.635 kg (1.4 lb)	0.702 kg (1.55 lb)

NOTE - For different conditions, please contact Walvoil Sales Dpt. - *For coils further features see from page 201.

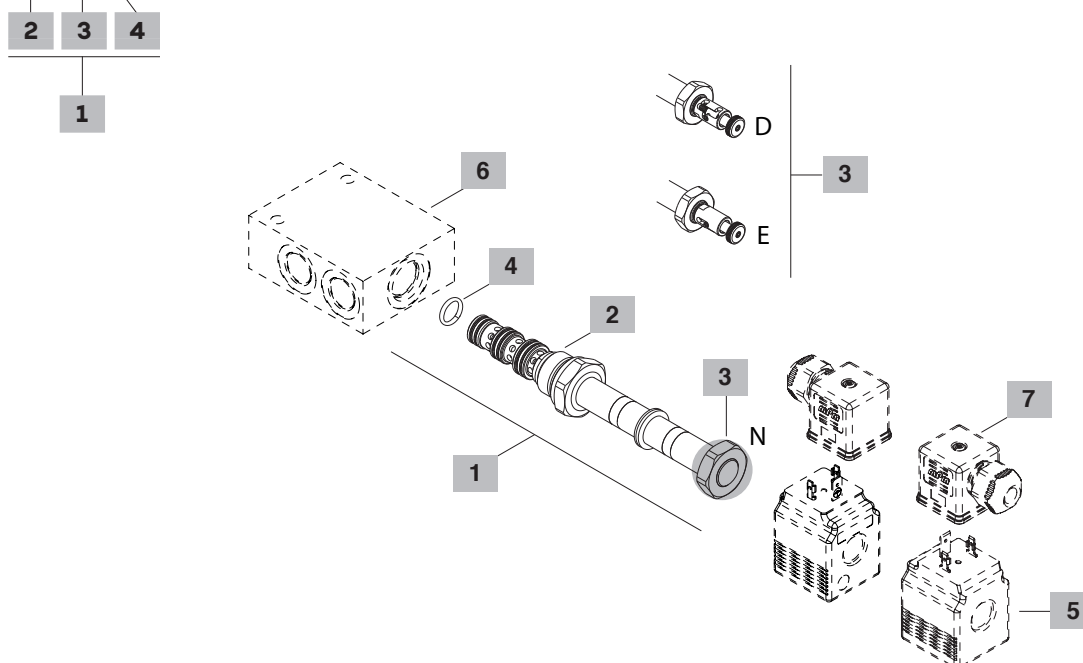
- (²) Port 1 may be fully pressurized, it's not intended for use as the valve's inlet.



Valve type	G		N without emergency		H D push type with detent		E with pull/ push button		C		D	
	mm	in	mm	in	mm	in	mm	in	Nm	lbft	Nm	lbft
ET08L	54	2.13	93	3.66	122	4.8	122	4.8	24	30	22	5±1 3.7
ET10L	62.4	2.46	114	4.49	142.8	5.62	142.8	5.62	27	50	37	23 5±1 3.7

Ordering codes and description composition

ET08L/ 1 0 N B



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 08/4		
ET08L/10NB	OET08002026	Without emergency, spool 1
ET08L/20NB	OET08002027	Without emergency, spool 2
ET08L/30NB	OET08002025	Without emergency, spool 3
ET08L/40NB	OET08002028	Without emergency, spool 4
SAE cavity 10/4		
ET10L/10NB	OET10002041	Without emergency, spool 1
ET10L/20NB	OET10002043	Without emergency, spool 2
ET10L/30NB	OET10002040	Without emergency, spool 3
ET10L/40NB	OET10002042	Without emergency, spool 4

2 Spool

TYPE	DESCRIPTION
1	Spool 1
2	Spool 2
3	Spool 3
4	Spool 4

3 Emergency

TYPE	DESCRIPTION
N	Without emergency
D	Push/pull type with detent
E	Push/pull type without detent

4 Seals

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

5 Coils

TYPE	CODE	DESCRIPTION
BER12VDC	4SLE001200A	12VDC-ISO4400 coil for ET08L
BC12VDC	4SL8000120	12VDC-ISO4400 coil for ET10L

For complete coils list see page 201

6 Valve body

TYPE	CODE	DESCRIPTION
SAE08/4-G 3/8	3CC0840C11	Aluminium body for cavity 08 valve, G 3/8 std thread
SAE10/4-G 1/2	3CC1040D11	Aluminium body for cavity 10 valve, G 3/8 std thread

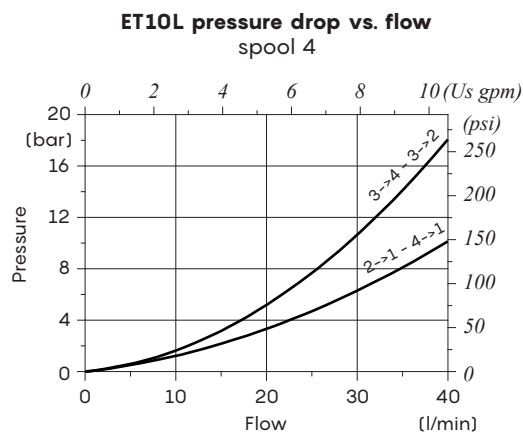
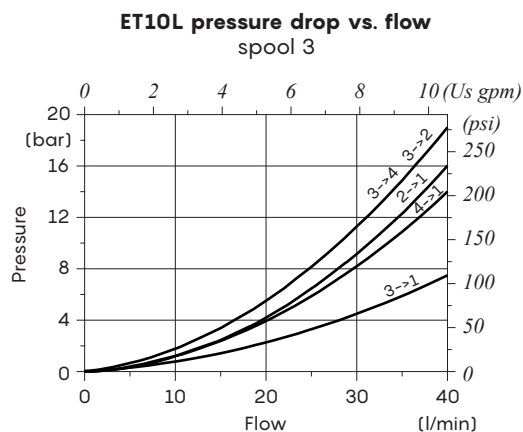
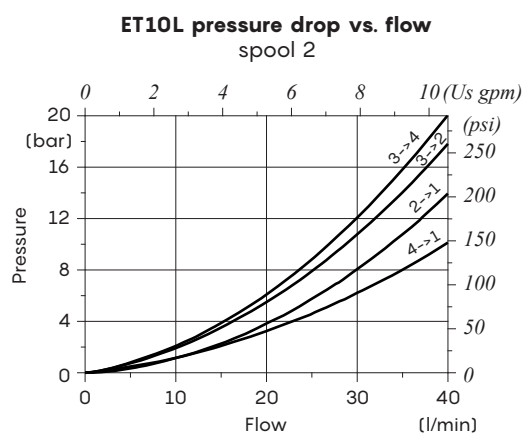
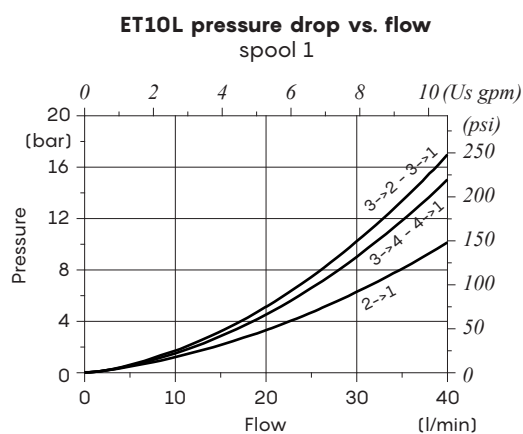
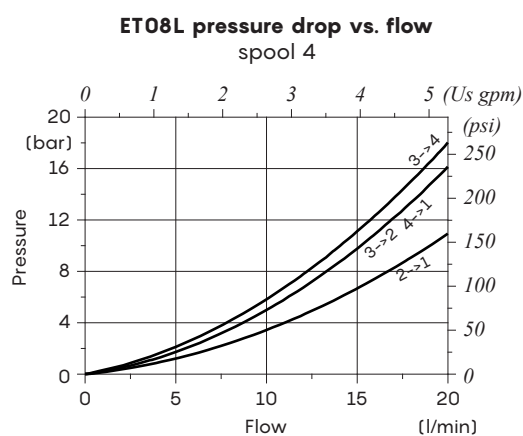
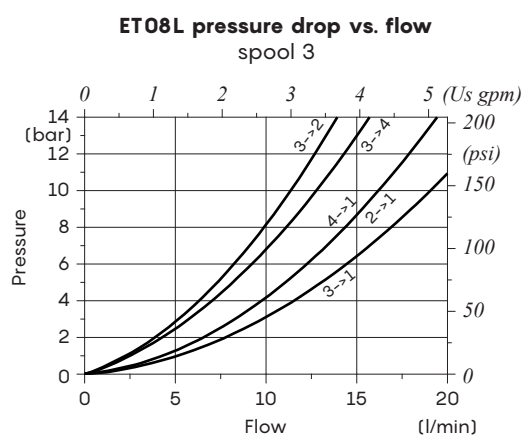
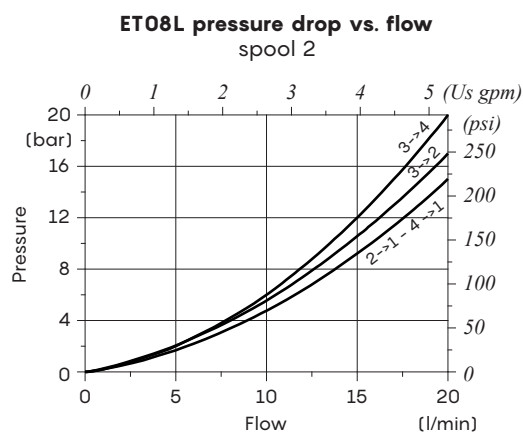
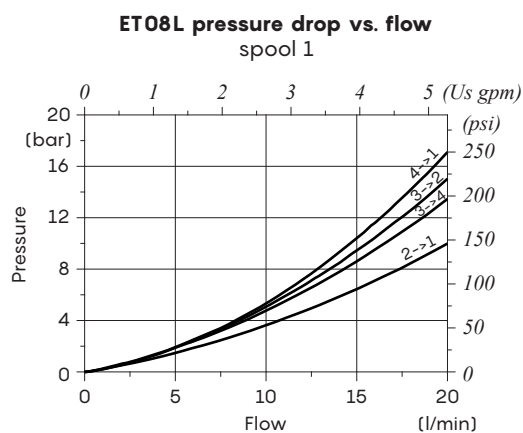
Note: aluminium body can stand up to 210 bar (3050 psi)
For steel bodies or different threading see from page 212

7 Connector

TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector

For complete connectors list see from page 201

Rating diagrams





ET..X type directional solenoid valves – 4 way/3 positions

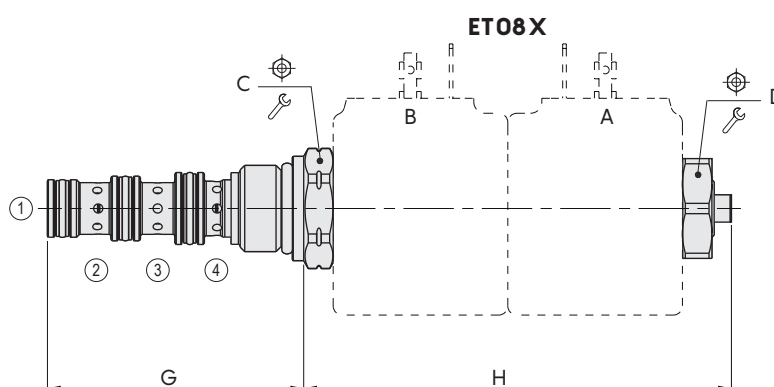
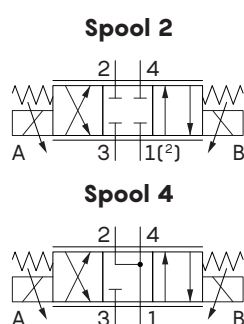
- Spool type
- Direct acting with proportional solenoid
- Different types of emergencies available
- Optimized linearity and hysteresis
- External zinc-plated and corrosion-proof components
- From SAE08 to SAE10 cavities

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

	ET08X	ET10X
Nominal flow	12 l/min (3.17 US gpm)	23 l/min (6.1 US gpm)
Max. pressure	250 bar (3600 psi)	
Oil leakage	at 210 bar (5100 psi) 80 cm ³ /min (4.88 in ³ /min)	200 cm ³ /min (12.20 in ³ /min)
Fluid	mineral based or synthetic hydraulic fluid with lubricating properties	
Viscosity	10-200 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 08/4	SAE 10/4
Coil type*	BER	BC
Nominal voltages	12VDC - 24VDC ± 10%	
Power rating	19 W (12VDC - 24VDC)	26 W (12VDC - 24VDC)
Weight	0.638 kg (1.41 lb)	0.720 kg (1.59 lb)

NOTE - For different conditions, please contact Walvoil Sales Dpt. - *For coils further features see from page 201.

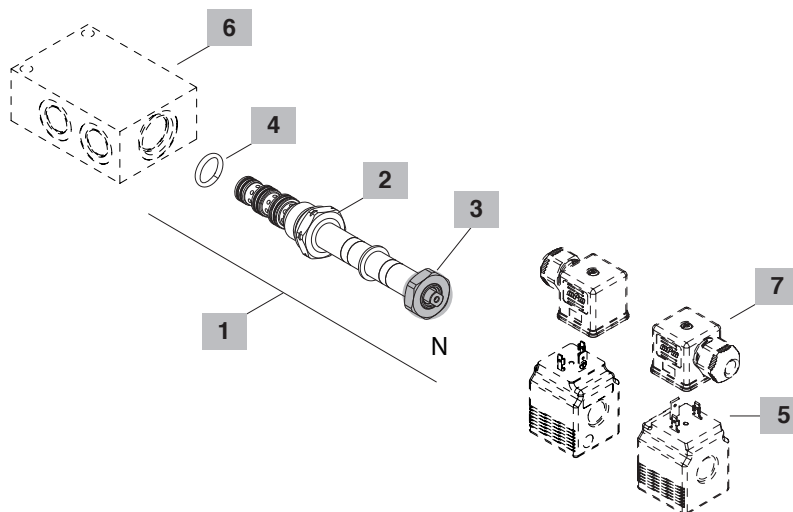
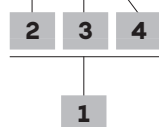
- (²) Port 1 may be fully pressurized, it's not intended for use as the valve's inlet.



Valve type	G		H N without emergency		C		D	
	mm	in	mm	in	Nm	lbf·ft	Nm	lbf·ft
ET08X	54	2.13	96.8	3.81	24	30	22	5±1 3.7
ET10X	62.4	2.46	117.8	4.64	27	50	37	23 5±1 3.7

Ordering codes and description composition

ET08X/ 2 0 N B



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 08/4		
ET08X/20NB	OET08002035	Without emergency, spool 2
ET08X/40NB	OET08002036	Without emergency, spool 4
SAE cavity 10/4		
ET10X/20NB	OET10002058	Without emergency, spool 2
ET10X/40NB	OET10002059	Without emergency, spool 4

2 Spool

TYPE	DESCRIPTION
2	Spool 2
4	Spool 4

3 Emergency

TYPE	DESCRIPTION
N	Without emergency

4 Seals

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

5 Coils

TYPE	CODE	DESCRIPTION
BER12VDC	4SLE001200A	12VDC-ISO4400 coil for ET08X
BC12VDC	4SL8000120	12VDC-ISO4400 coil for ET10X

For complete coils list see page 201

6 Valve body

TYPE	CODE	DESCRIPTION
SAE08/4-G 3/8	3CC0840C11	Aluminium body for cavity 08 valve, G 3/8 std thread
SAE10/4-G 3/8	3CC1040C11	Aluminium body for cavity 10 valve, G 3/8 std thread

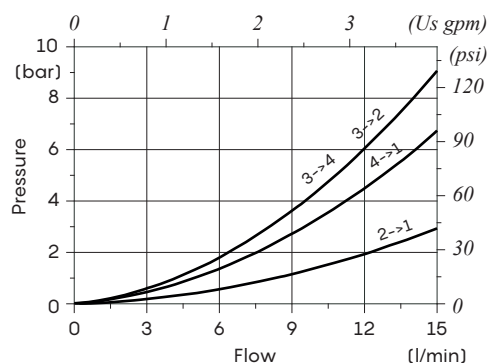
Note: aluminium body can stand up to 210 bar (3050 psi)
For steel bodies or different threading see from page 212

7 Connector

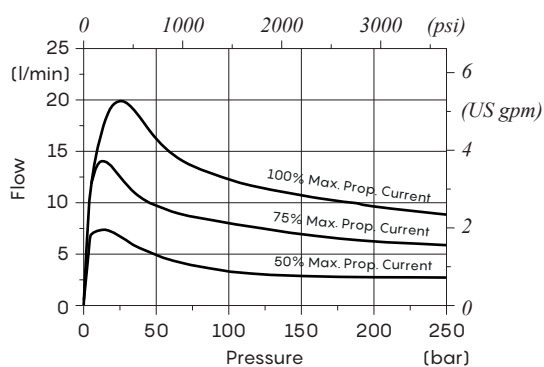
TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector

For complete connectors list see from page 201

ET08X pressure drop vs. flow
spool 2

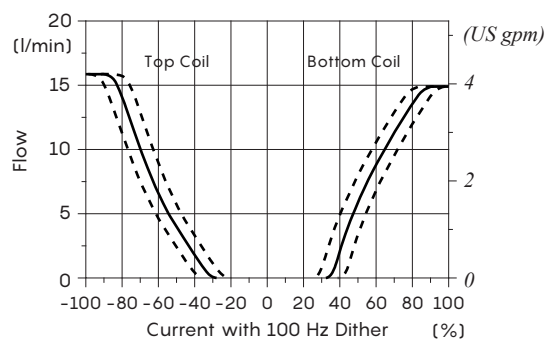


Pressure compensation
(inlet to work port - spool 2)

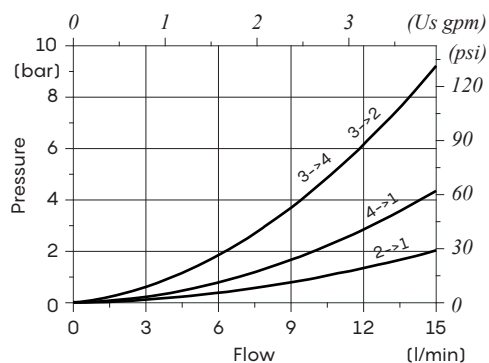


Flow vs. current

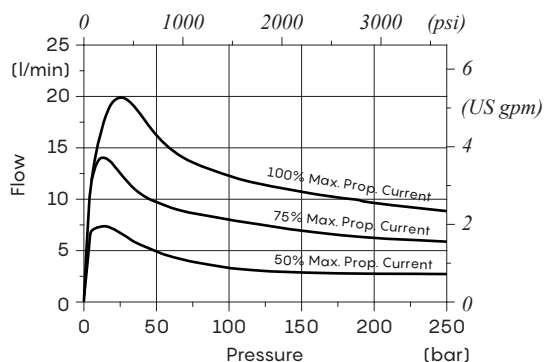
(with 10.5 bar/152 psi inline compensator- spool 2)



ET08X pressure drop vs. flow
spool 4

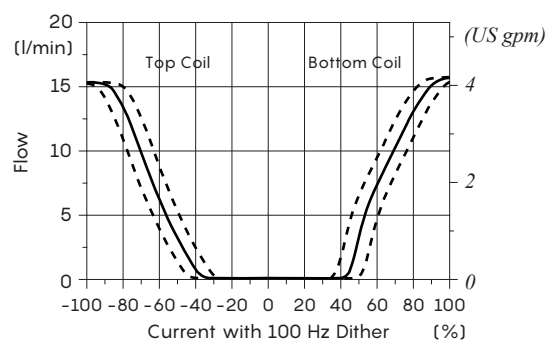


Pressure compensation
(inlet to work port - spool 4)



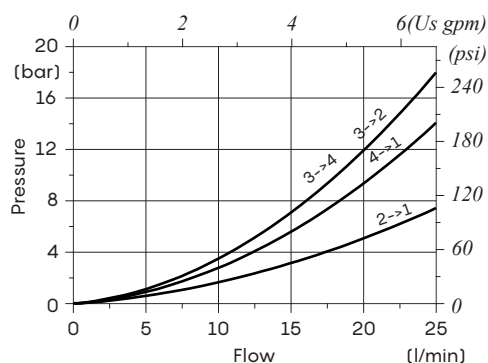
Flow vs. current

(with 10.5 bar/152 psi inline compensator- spool 4)

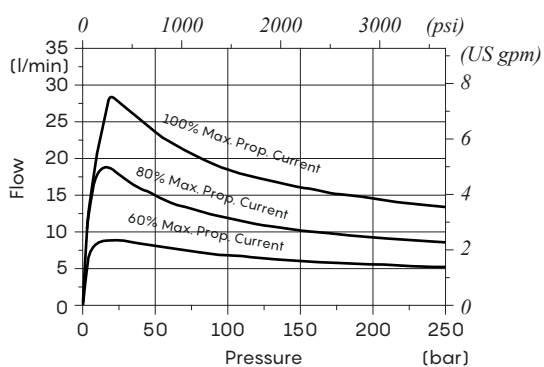


Rating diagrams

ET10X pressure drop vs. flow
spool 2/4 type

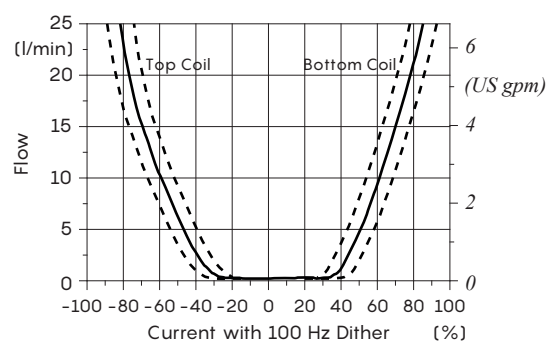


Pressure compensation
(inlet to work port - spool 2/4 type)



Flow vs. current

(with 10.5 bar/152 psi inline compensator- spool 2/4 type)





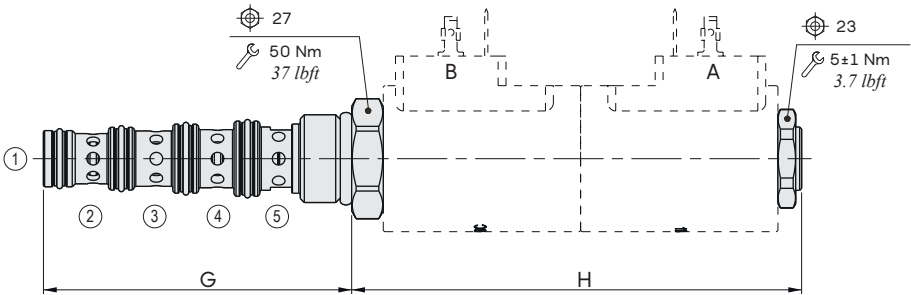
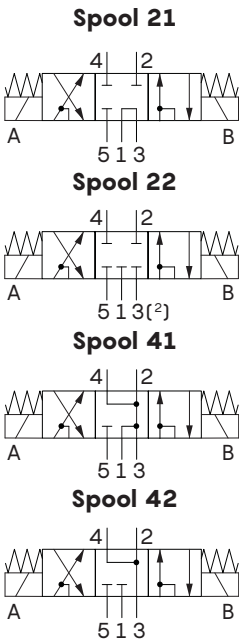
EK10L type directional solenoid valves – 5 way / 3 positions

- Spool type
- Direct acting with proportional solenoid
- Different types of emergencies available
- External zinc-plated and corrosion-proof components

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

EK10L		
Nominal flow		20 l/min (5.3 US gpm)
Max. pressure		250 bar (3600 psi)
Oil leakage	at 210 bar (3050 psi)	80 cm³/min (4.88 in³/min)
Fluid	mineral based or synthetic hydraulic fluid with lubricating properties	
Viscosity		10-200 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 10/5
Coil type*		BC
Nominal voltages		12VDC - 24 VDC ± 10%
Power rating		26 W (12VDC - 24VDC)
Weight		0.720 kg (1.59 lb)

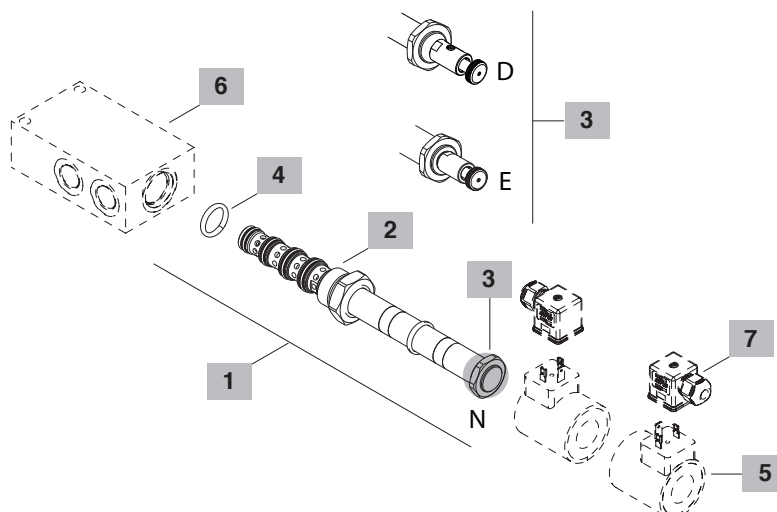
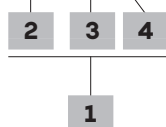
NOTE - For different conditions, please contact Walvoil Sales Dpt. - *For coils further features see from page 201.
- (²) Port 1 may be fully pressurized, it's not intended for use as the valve's inlet.



Valve type	G		N without emergency		H D push type with detent		E with pull/push button	
	mm	in	mm	in	mm	in	mm	in
EK10L	78.1	3.07	114	4.49	142	5.59	142	5.59

Ordering codes and description composition

EK10L/22 0 N B



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 10/5		
EK10L/210NB	OEK10002003	Without emergency, spool 21
EK10L/220NB	OEK10002000	Without emergency, spool 22
EK10L/410NB	OEK10002001	Without emergency, spool 41
EK10L/420NB	OEK10002004	Without emergency, spool 42

2 Spool

TYPE	DESCRIPTION
21	Spool 21
22	Spool 22
41	Spool 41
42	Spool 42

3 Emergency

TYPE	DESCRIPTION
N	Without emergency
D	Push/pull type with detent
E	Push/pull type without detent

4 Seals

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

5 Coils

TYPE	CODE	DESCRIPTION
BC12VDC	4SL8000120	12VDC-ISO4400 coil

For complete coils list see page 201

6 Valve body

TYPE	CODE	DESCRIPTION
SAE10/5-G 3/8	3CC1050C11	Aluminium body for cavity 10 valve, G 3/8 std thread

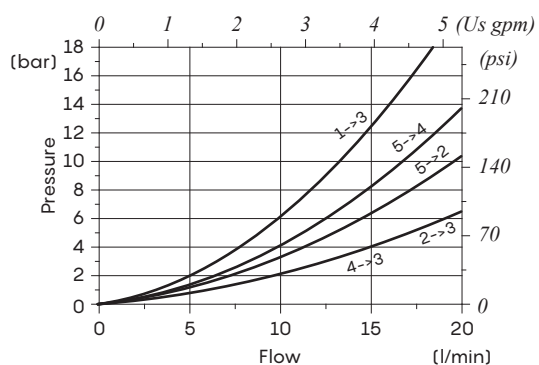
Note: aluminium body can stand up to 210 bar (3050 psi)
For steel bodies or different threading see from page 214

7 Connector

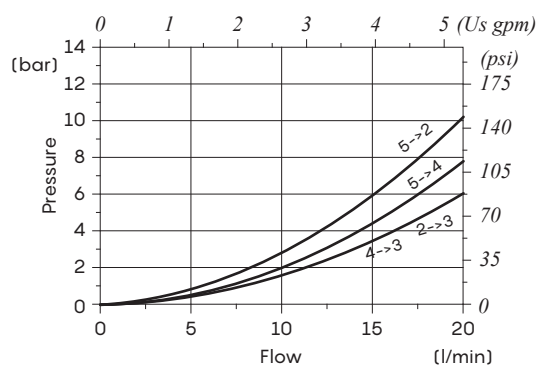
TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector

For complete connectors list see from page 201

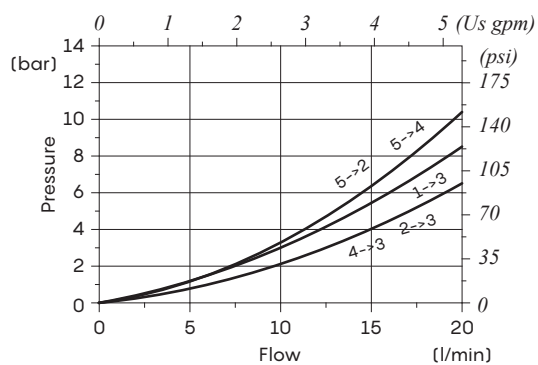
EK10L pressure drop vs. flow
spool 21



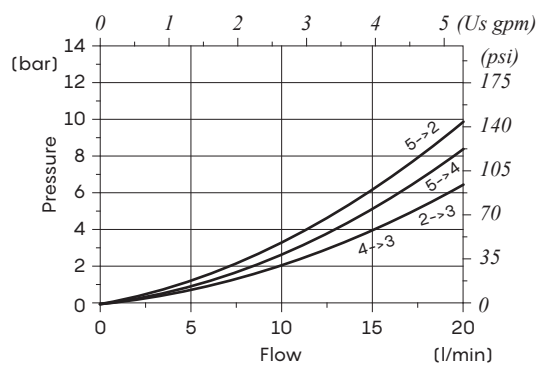
EK10L pressure drop vs. flow
spool 22



EK10L pressure drop vs. flow
spool 41



EK10L pressure drop vs. flow
spool 42





EK10X type directional solenoid valves – 5 way / 3 positions

- Spool type
- Direct acting with proportional solenoid
- Different types of emergencies available
- Optimized linearity and hysteresis
- External zinc-plated and corrosion-proof components

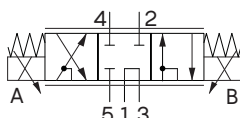
Technical specifications and diagrams are measured with mineral oil of 46 cSt viscosity at 40°C (104°F) temperature.

EK10X

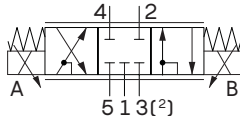
Nominal flow		23 l/min (6.1 US gpm)
Max. pressure		250 bar (3600 psi)
Oil leakage	at 210 bar (3050 psi)	200 cm ³ /min (12.2 in ³ /min)
Fluid		mineral based or synthetic hydraulic fluid with lubricating properties
Viscosity		10-200 cSt
Max level of contamination		18/16/13 ISO4406
Fluid temperature	with 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 10/5
Coil type*		BC
Nominal voltages		12VDC - 24 VDC ± 10%
Power rating		26 W (12VDC - 24VDC)
Weight		0.736 kg (1.62 lb)

NOTE - For different conditions, please contact Walvoil Sales Dpt. - *For coils further features see from page 201.

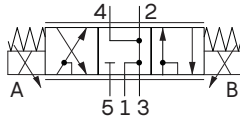
Spool 21



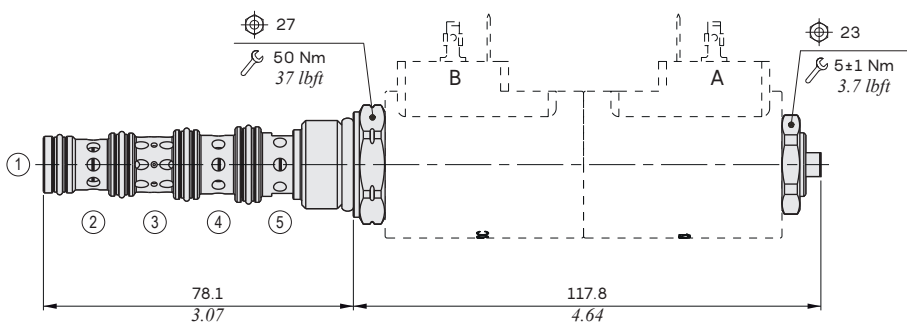
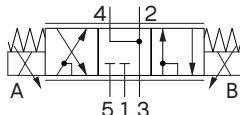
Spool 22



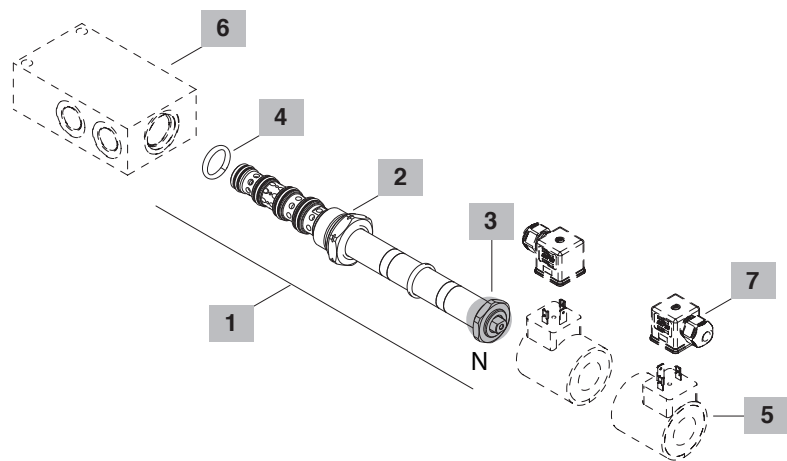
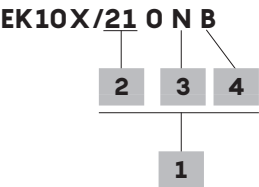
Spool 41



Spool 42



Ordering codes and description composition



1 Cartridges		
TYPE	CODE	DESCRIPTION
SAE cavity 10/5		
EK10X/210NB	OEK10002017	Without emergency, spool 21
EK10X/220NB	OEK10002015	Without emergency, spool 22
EK10X/410NB	OEK10002014	Without emergency, spool 41
EK10X/420NB	OEK10002002	Without emergency, spool 42

2 Spool	
TYPE	DESCRIPTION
21	Spool 21
22	Spool 22
41	Spool 41
42	Spool 42

3 Emergency	
TYPE	DESCRIPTION
N	Without emergency

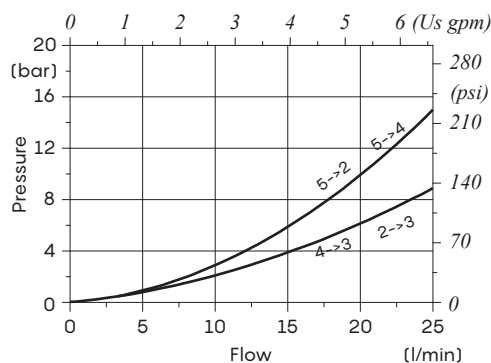
4 Seals	
TYPE	DESCRIPTION
B	NBR (Buna)+Polyurethane o-ring seals, std configuration
V	FPM (Viton) o-ring seals, contact Sales Dept

5 Coils		
TYPE	CODE	DESCRIPTION
BC12VDC	4SL8000120	12VDC-ISO4400 coil
For complete coils list see page 201		

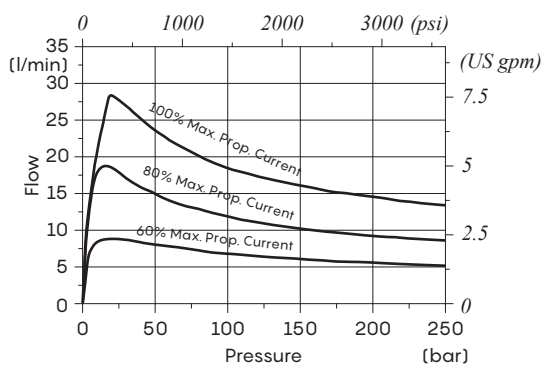
6 Valve body		
TYPE	CODE	DESCRIPTION
SAE10/5-G 3/8	3CC1050C11	Aluminium body for cavity 10 valve, G 3/8 std thread
Note: aluminium body can stand up to 210 bar (3050 psi)		
For steel bodies or different threading see from page 214		

7 Connector		
TYPE	CODE	DESCRIPTION
ISO4400	4CN1009995B	Connector
For complete connectors list see from page 201		

EK10X pressure drop vs. flow
spool 22

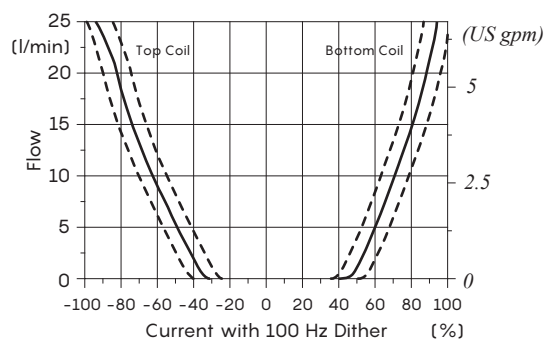


Pressure compensation
(inlet to work port - spool 22)

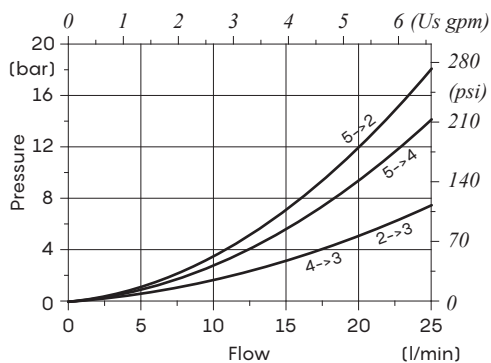


Flow vs. current

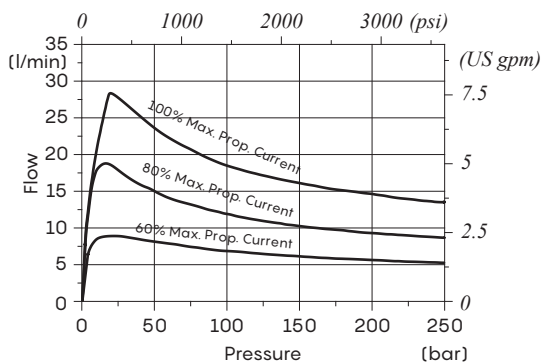
(with 10.5 bar/152 psi inline compensator- spool 22)



EK10X pressure drop vs. flow
spool 21-41-42



Pressure compensation
(inlet to work port - spool 21-41-42)



Flow vs. current

(with 10.5 bar/152 psi inline compensator- spool 21-41-42)

