



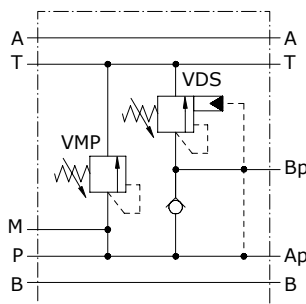
Type VEP/FL two pump "high-low" unloading valves

- Cetop 3 (6-38) - 5 (10-12) - 7 (16-34 and 16-100) flanging
- Flange assembling according to ISO 4401:2005 (CETOP)

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

Line	VEP/FL 6-38	VEP/FL 10-12	VEP/FL 16-34	VEP/FL 16-100	
Nominal flow	Ap (high pressure inlet port) <i>(2.6 US gpm)</i>	10 l/min <i>(5.3 US gpm)</i>	20 l/min <i>(7.9 US gpm)</i>	30 l/min <i>(7.9 US gpm)</i>	
	Bp (low pressure inlet port) <i>(6.6 US gpm)</i>	25 l/min <i>(11.9 US gpm)</i>	45 l/min <i>(21.1 US gpm)</i>	80 l/min <i>(21.1 US gpm)</i>	
	U (work port) <i>(7.9 US gpm)</i>	30 l/min <i>(14.5 US gpm)</i>	55 l/min <i>(26.4 US gpm)</i>	100 l/min <i>(26.4 US gpm)</i>	
Max. pressure	Aluminium body = 210 bar (3050 psi) Steel body = 350 bar (5100 psi)				
Fluid	mineral based oil				
Viscosity	from 10 to 200 cSt				
Max. level of contamination	18/16/13 ISO4406				
Fluid temperature	with NBR seals from -20°C (-4°F) to 80°C (176°F)				
Environmental temp. for working conditions	from -40°C (-40°F) to 100°C (212°F)				
Weight	<i>aluminium</i>	1.56 kg (3.44 lb)	3.01 kg (6.63 lb)	7.05 kg (15.54 lb)	6.32 kg (13.93 lb)
	<i>steel</i>	3.58 kg (7.89 lb)	6.65 kg (14.66 lb)	17.58 kg (38.76 lb)	14.97 kg (33.00 lb)

NOTE - For different conditions, please contact Walvoil Sales Dpt.



Dimensions

Dimensions are in mm-in

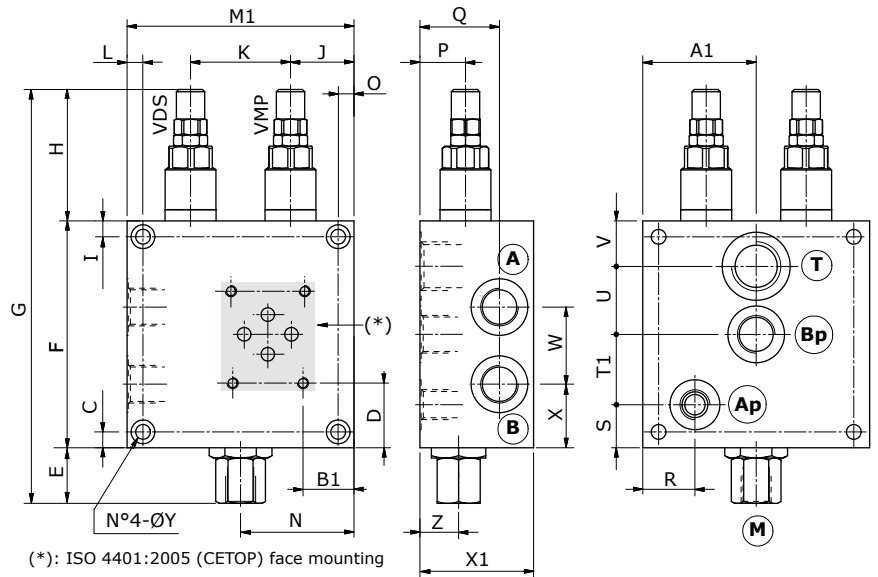
Valve type	A1	B1	ØY	C	D	E
VEP/FL 6-38	50	21.75	6,5	7	28.5	26.5
	1.97	0.86	0.25	0.27	1.12	1.04
VEP/FL 10-12	60	37	6.5	7	30	33
	2.36	1.46	0.25	0.27	1.18	1.30

Valve type	F	G	H	I	L	M1
VEP/FL 6-38	100	184.5	58	7	7	100
	3.94	7.26	2.28	0.27	0.27	3.94
VEP/FL 10-12	120	219	66	7	7	120
	4.72	8.62	2.60	0.27	0.27	4.72

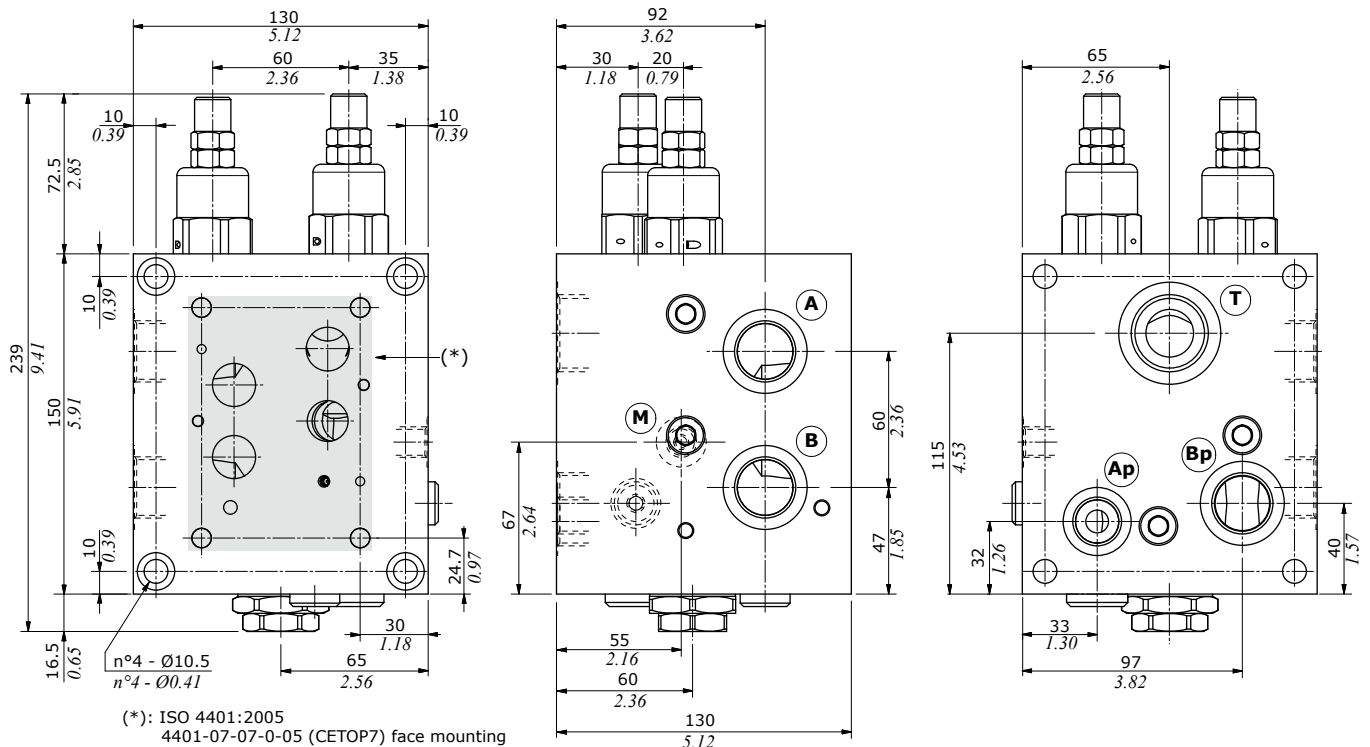
Valve type	N	O	P	Q	R	S
VEP/FL 6-38	50	7	20	35	23	19
	1.97	0.27	0.79	1.38	0.91	0.75
VEP/FL 10-12	60	7	25	46	28	22
	2.36	0.27	0.98	1.81	1.10	0.87

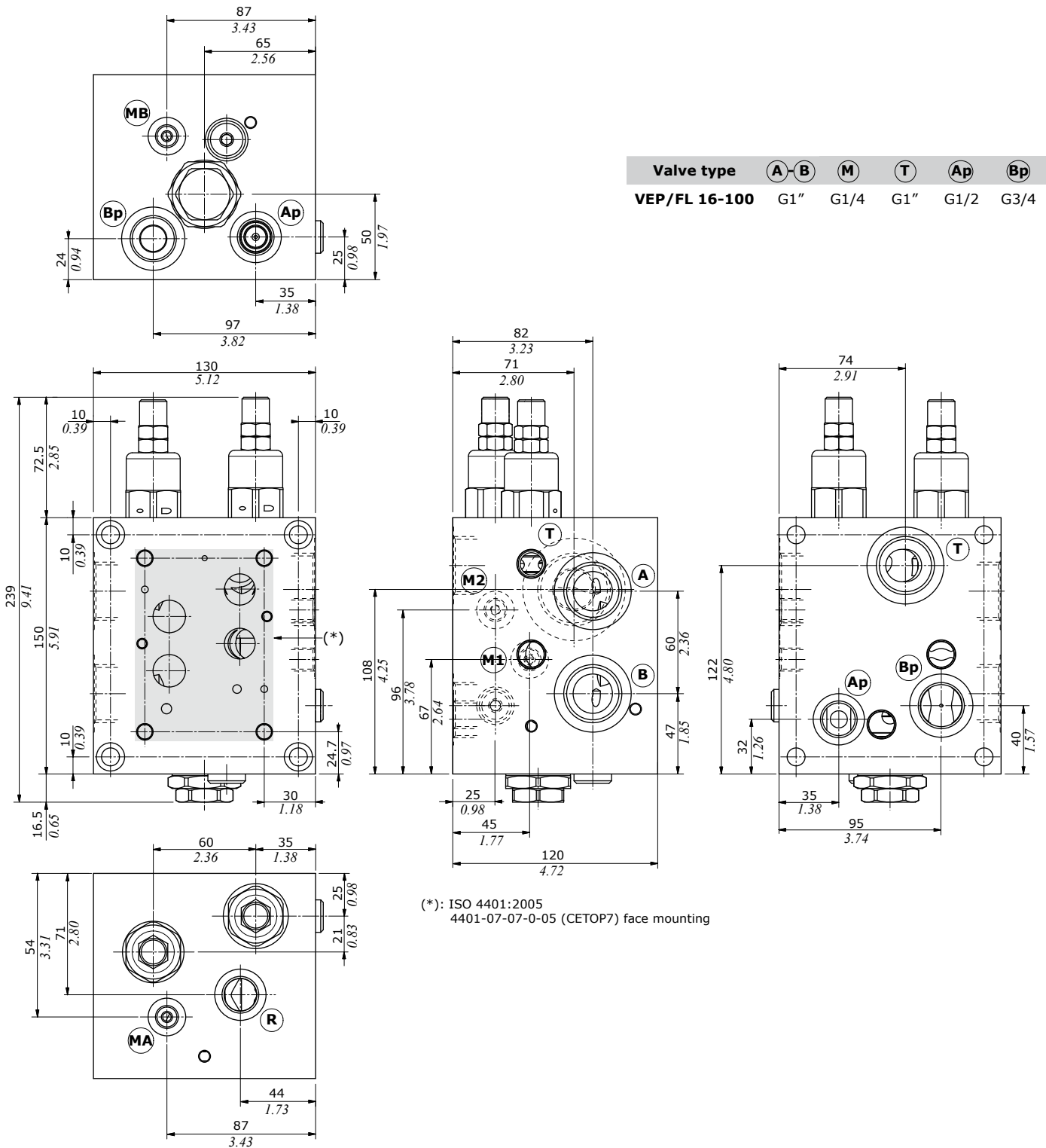
Valve type	T1	U	V	W	X	X1	Z
VEP/FL 6-38	31	30	20	34	28	50	17
	1.22	1.18	0.79	1.34	1.10	1.97	0.67
VEP/FL 10-12	27	44	27	38	35	69	69
	1.06	1.73	1.06	1.50	1.38	2.71	2.71

Valve type	A-B	M	T	Ap	Bp
VEP/FL 6-38	G3/8	G1/4	G1/2	G1/4	G3/8
VEP/FL 10-12	G1/2	G1/4	G3/4	G3/8	G1/2



Valve type	A-B	M	T	Ap	Bp
VEP/FL 16-34	G3/4	G1/4	G1"	G1/2	G3/4

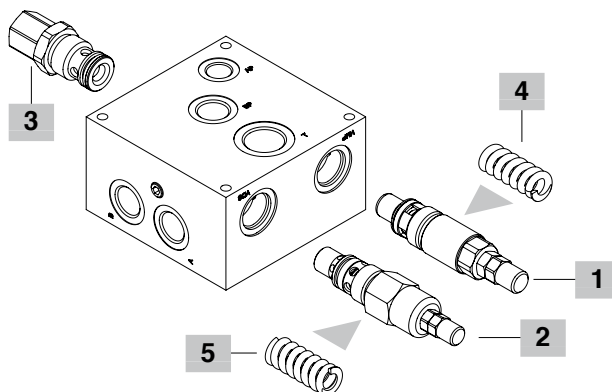




Ordering codes and description composition

Port size
VEP/FL 6-38/TR-TV.S

4 5



VEP/FL complete valves

Single type valve configuration

High pressure (Ap): range 180-350 bar (2600-5075 psi) and standard setting 280 bar (4060 psi) at 5 l/min (1.32 US gpm); Low Pressure (Bp): see below

Configuration with G3/8 standard thread

TYPE: **VEP/FL 6-38/TR-TV.S** CODE: 1224021101

DESCRIPTION: Aluminium body, Bp: range 20-80 bar (290-1160 psi), Standard setting 60 bar (870 psi) at 5l/min (1.32 US gpm)

TYPE: **VEP/FL 6-38/TR-TV.S/ac** CODE: 1224022100

DESCRIPTION: Steel body, as previous one

Configuration with G1/2 standard thread

TYPE: **VEP/FL 10-12/TR-TV.S** CODE: 1224031101

DESCRIPTION: Aluminium body, Bp: range 5-80 bar (72.5-1160 psi), standard setting 40 bar (870 psi) at 5l/min (1.32 US gpm)

TYPE: **VEP/FL 10-12/TR-TV.S/ac** CODE: 1224032100

DESCRIPTION: Steel body, as previous one

Configuration with G3/4 standard thread

TYPE: **VEP/FL 16-34/TR-TV.S** CODE: 1224041101

DESCRIPTION: Aluminium body, Bp: range 10-80 bar (145-1160 psi), standard setting 50 bar (725 psi) at 5 l/min (1.32 US gpm)

TYPE: **VEP/FL 16-34/TR-TV.S/ac** CODE: 1224042101

DESCRIPTION: Steel body, as previous one

Configuration with G1" standard thread

TYPE: **VEP/FL 16-100/TR-TB.S** CODE: 1224041151

DESCRIPTION: Aluminium body, Bp: range 10-50 bar (290-1160 psi), standard setting 30 bar (870 psi) at 5l/min (1.32 US gpm)

TYPE: **VEP/FL 16-100/TR-TB.S/ac** CODE: 1224042150

DESCRIPTION: Steel body, as previous one

For other steel body configurations, SAE threads and configurations with FPM (Viton) seals, please contact our Sales Dpt.

1 Direct acting pressure relief valve

Standard setting 160 bar at 5 l/min (2320 psi at 1.32 US gpm)

TYPE	CODE	DESCRIPTION
------	------	-------------

For G3/8 port configuration valve

VMP 5/TR.S 1100520401 Setting range 50-220 bar (725-3200 psi) (Ap)

For VEP 10-12 and VEP 16-34 valves

VMP 10/TR.S 1100530401 Setting range 50-220 bar (725-3200 psi) (Ap)

For VEP 16-100 valve

VMP 20/TR.S 1100540403 Setting range 50-220 bar (725-3200 psi) (Ap)

2 Sequence valve

Sequence cartridge setting range 20-80 bar (290-1150 psi) (Lp)

Standard setting 160 bar at 5 l/min (2320 psi at 1.32 US gpm)

TYPE	CODE	DESCRIPTION
------	------	-------------

VDS/VEP 38/TV.S 1205020400 For G3/8 port configuration

VDS/VEP 12/TV.S 1205030400 For G1/2 port configuration

VDS/VEP 34/TV.S 1205040405 For G3/4 port configuration

VDS/VEP 34/TB.S 1205040401 For G1" port configuration

3 Check valves

Opening pressure 0.5 bar

TYPE	CODE	DESCRIPTION
VUI 38/Pa0,5.man	1300020413	For G3/8 port configuration
VUI 12/Pa0,5 pass.magg.man	1300030402	For G1/2 port configuration
VUI 34/Pa0,5 pass.magg	1300040401	For G3/4 and G1" port configuration

4 Pressure relief valve setting springs

TYPE	CODE	DESCRIPTION
------	------	-------------

For VMP 5 valve on VEP/FL 6-38 complete valve (Ap)

TS 3MOL315330 Setting range 50-220 bar (725-3200 psi)

TR 3ML1143600 Setting range 180-350 bar (2600-5100 psi)

For VMP 10 valve on VEP/FL 10-12 complete valve (Ap)

TS 3MOL317420 Setting range 50-220 bar (725-3200 psi)

TR 3MOL317440 Setting range 180-350 bar (2600-5100 psi)

For VMP 20 valve on VEP/FL 16-34 and 16-100 complete valves (Ap)

TS 3ML1204200 Setting range 50-220 bar (725-3200 psi)

TR 3ML1214500 Setting range 180-350 bar (2600-5100 psi)

5 Sequence valve setting springs

TYPE	CODE	DESCRIPTION
------	------	-------------

For VDS/VEP 38 valve on VEP/FL 6-38 complete valve (Bp)

TB 3MOL314311 Setting range 5-40 bar (72.5-580 psi)

TV 3MOL314330 Setting range 20-80 bar (290-1150 psi)

For VDS/VEP 12 valve on VEP/FL 10-12 complete valve (Bp)

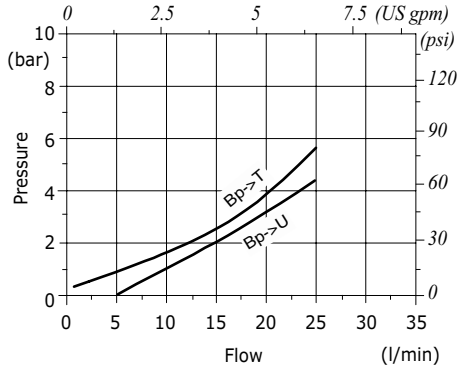
TV 3MOL317420 Setting range 5-80 bar (72.5-1150 psi)

For VDS/VEP 34 valve on VEP/FL 16-34 and 16-100 complete valves (Bp)

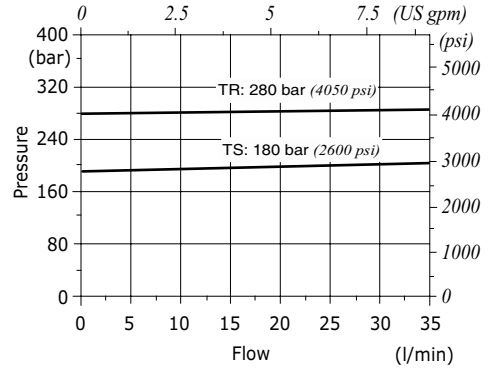
TB 3ML1174500 Setting range 10-50 bar (145-725 psi)

TV 3ML1204200 Setting range 10-80 bar (145-1150 psi)

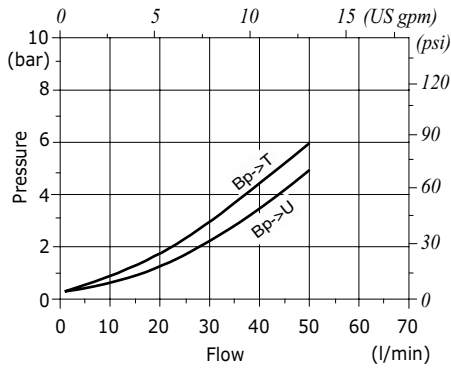
VEP/FL 6-38 pressure drop vs. flow from Bp→T and Bp→U



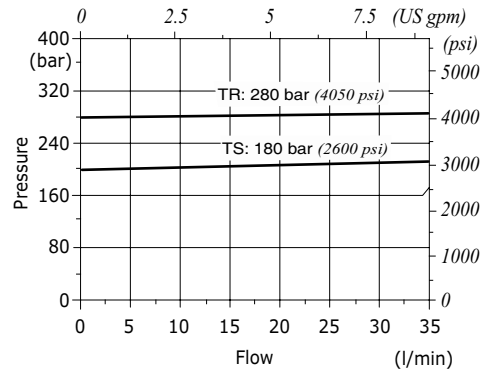
VEP/FL 6-38: VMP setting example at 5 l/min (1.32 US gpm)



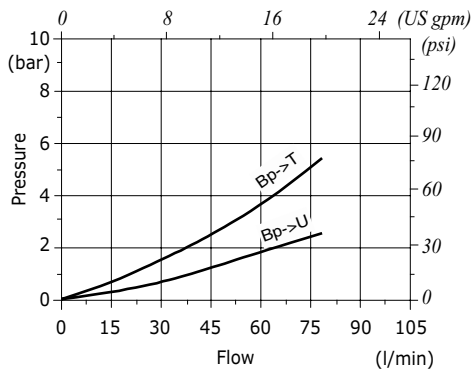
VEP/FL 10-12 pressure drop vs. flow from Bp→T and Bp→U



VEP/FL 10-12: VMP setting example at 5 l/min (1.32 US gpm)



VEP/FL 16-34 pressure drop vs. flow from Bp→T and Bp→U



VEP/FL 100 pressure drop vs. flow from Bp→T and Bp→U

