

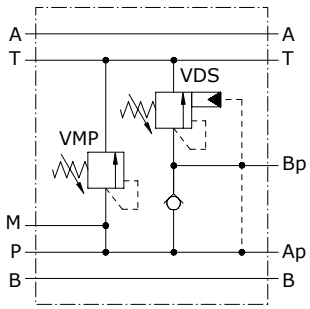
Type VEP/FL
two pump "high-low" unloading valves

- 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)	10 l/min *(2.6 US gpm)*	20 l/min *(5.3 US gpm)*	30 l/min *(7.9 US gpm)*	30 l/min *(7.9 US gpm)*
	Bp (low pressure inlet port)	25 l/min *(6.6 US gpm)*	45 l/min *(11.9 US gpm)*	80 l/min *(21.1 US gpm)*	80 l/min *(21.1 US gpm)*
	U (work port)	30 l/min *(7.9 US gpm)*	55 l/min *(14.5 US gpm)*	100 l/min *(26.4 US gpm)*	100 l/min *(26.4 US gpm)*
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	*aluminium*	1.56 kg *(3.44 lb)*	3.01 kg *(6.63 lb))*	7.05 kg *(15.54 lb)*	6.32 kg *(13.93 lb)*
	steel	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*

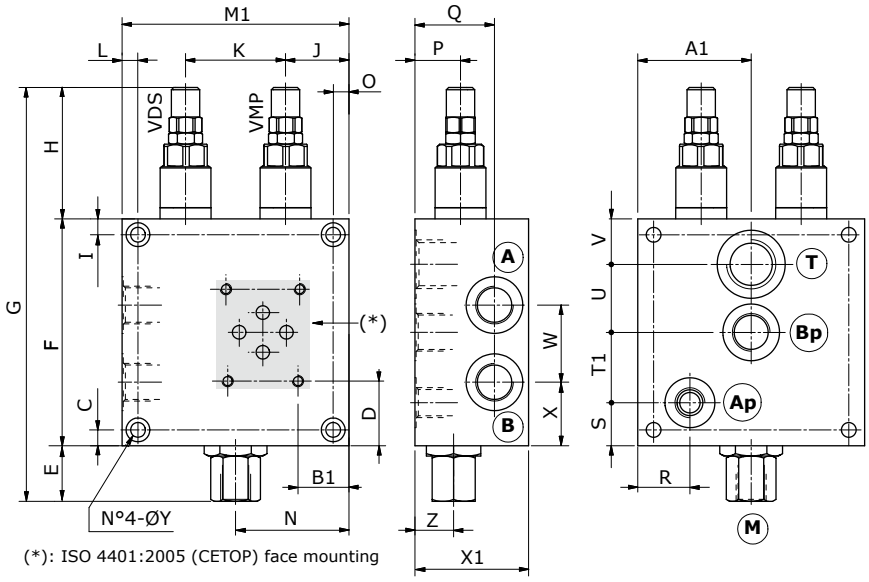
Valve type	A1	B1	ØY	C	D	E
VEP/FL 6-38	50 *1.97*	21.75 *0.86*	6,5 *0.25*	7 *0.27*	28.5 *1.12*	26.5 *1.04*
VEP/FL 10-12	60 *2.36*	37 *1.46*	6.5 *0.25*	7 *0.27*	30 *1.18*	33 *1.30*

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

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

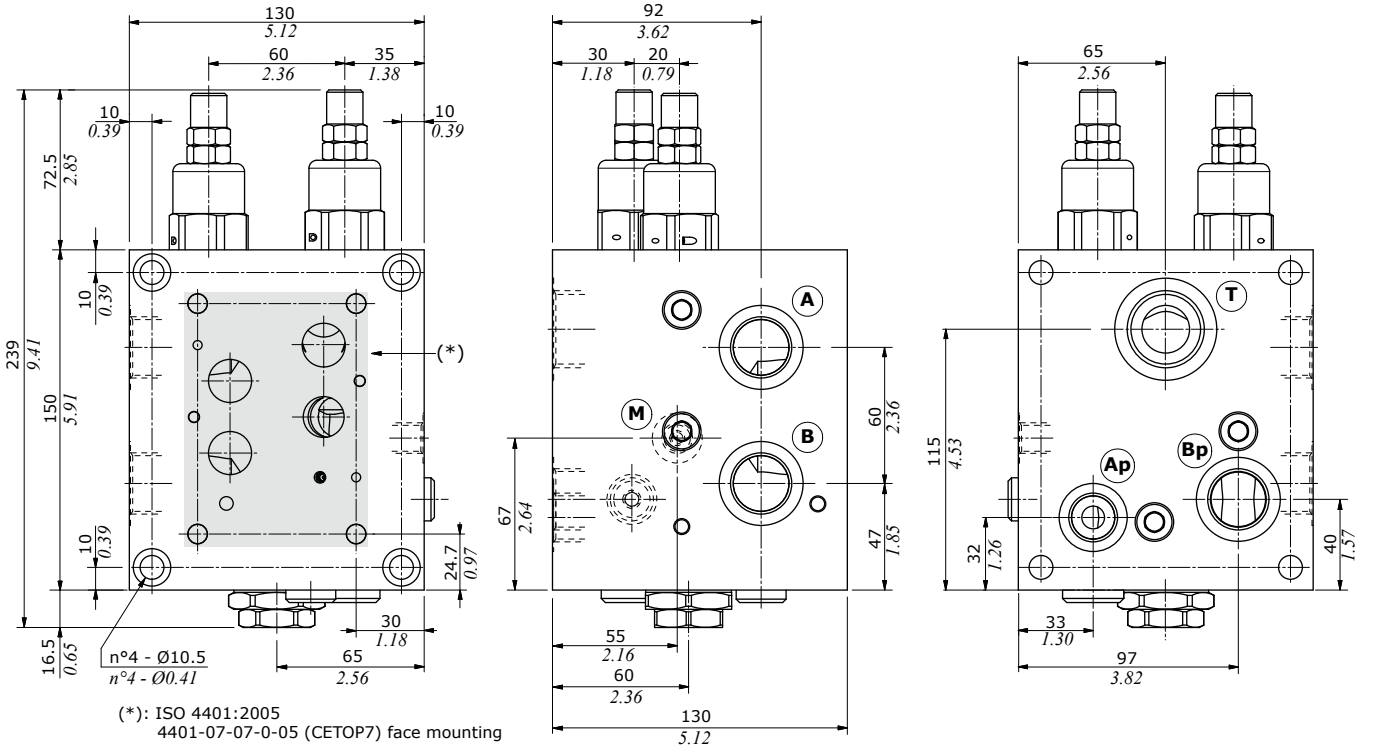
Valve type	T1	U	V	W	X	X1	Z
VEP/FL 6-38	31 *1.22*	30 *1.18*	20 *0.79*	34 *1.34*	28 *1.10*	50 *1.97*	17 *0.67*
VEP/FL 10-12	27 *1.06*	44 *1.73*	27 *1.06*	38 *1.50*	35 *1.38*	69 *2.71*	69 *2.71*

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



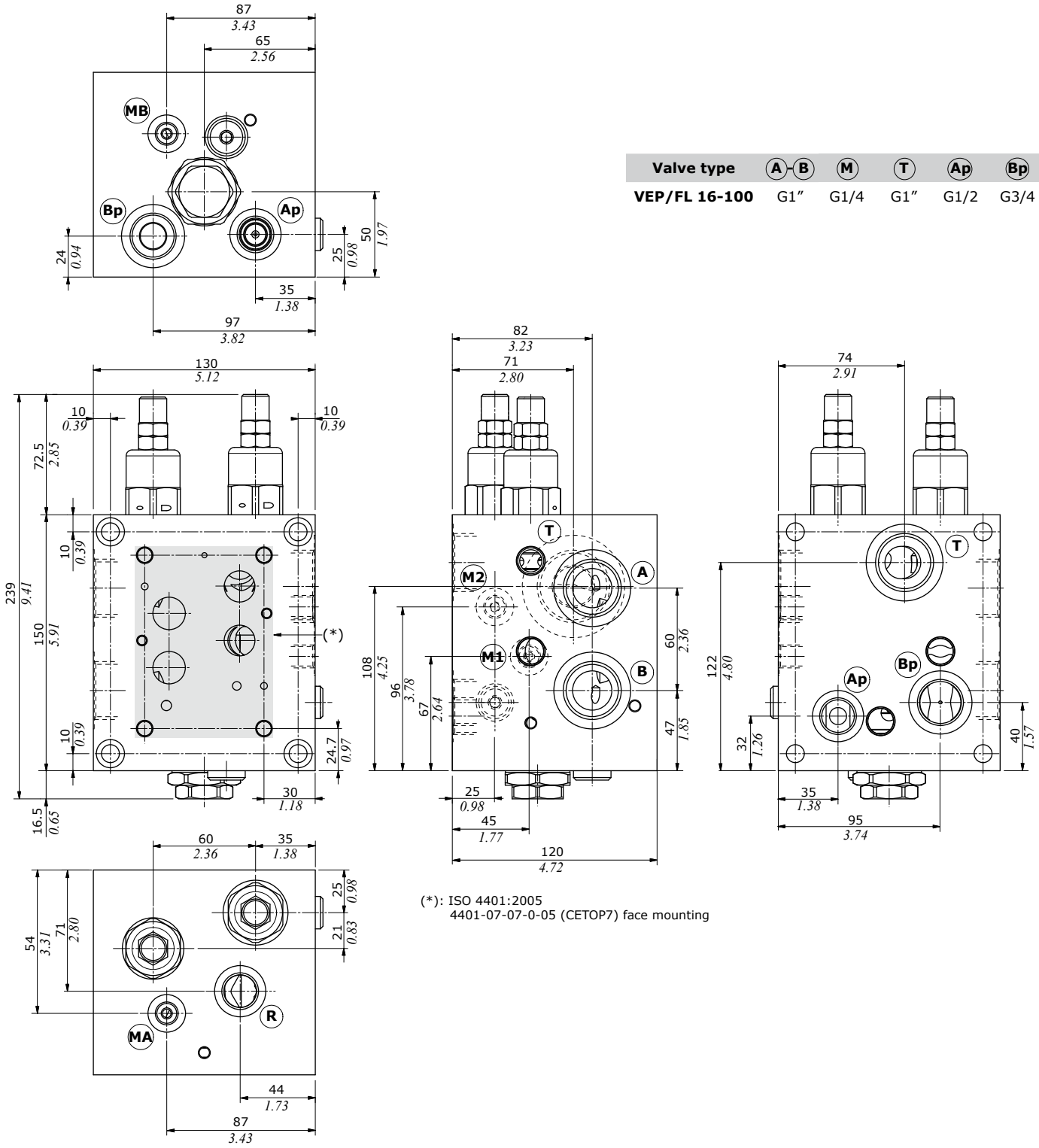
(*): ISO 4401:2005 (CETOP) face mounting

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



(*): ISO 4401:2005
4401-07-07-0-05 (CETOP7) face mounting

Dimensions



Valve type	A-B	M	T	Ap	Bp
VEP/FL 16-100	G1"	G1/4	G1"	G1/2	G3/4

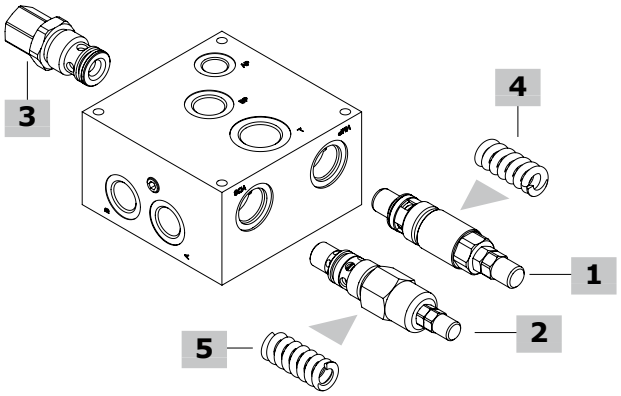
(*): ISO 4401:2005
4401-07-07-0-05 (CETOP7) face mounting

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

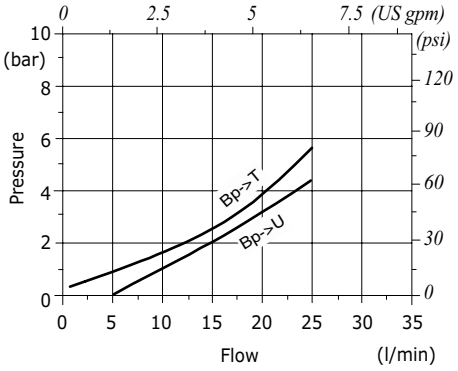
TYPE	CODE	DESCRIPTION
For VMP 5 valve on VEP/FL 6-38 complete valve (Ap)		
TS	3MOL315330	Setting range 50-220 bar *(725-3200 psi)*
TR	3ML1143600	Setting range 180-350 bar *(2600-5100 psi)*
For VMP 10 valve on VEP/FL 10-12 complete valve (Ap)		
TS	3MOL317420	Setting range 50-220 bar *(725-3200 psi)*
TR	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

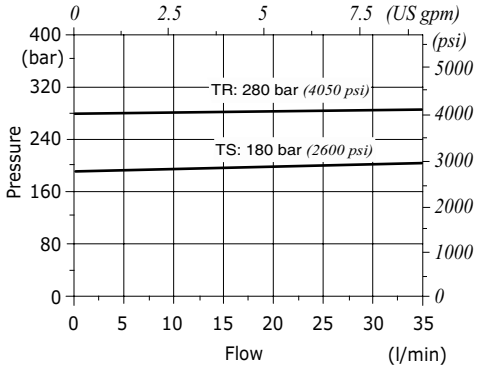
TYPE	CODE	DESCRIPTION
For VDS/VEP 38 valve on VEP/FL 6-38 complete valve (Bp)		
TB	3MOL314311	Setting range 5-40 bar *(72.5-580 psi)*
TV	3MOL314330	Setting range 20-80 bar *(290-1150 psi)*
For VDS/VEP 12 valve on VEP/FL 10-12 completevalve (Bp)		
TV	3MOL317420	Setting range 5-80 bar *(72.5-1150 psi)*
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)*

Rating diagrams

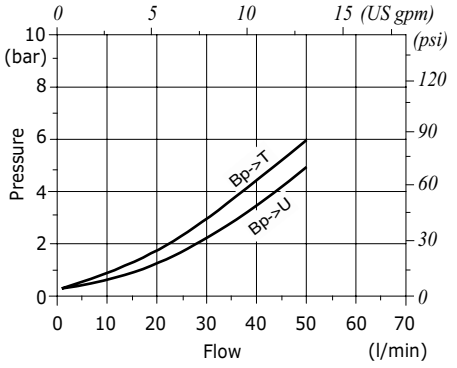
VEP/FL 6-38 pressure drop vs. flow from Bp→T and Bp→U



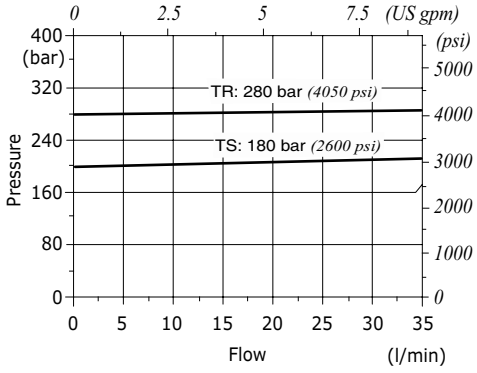
VEP/FL 6-38: VMP setting example
at 5 l/min *(1.32 US gpm)*



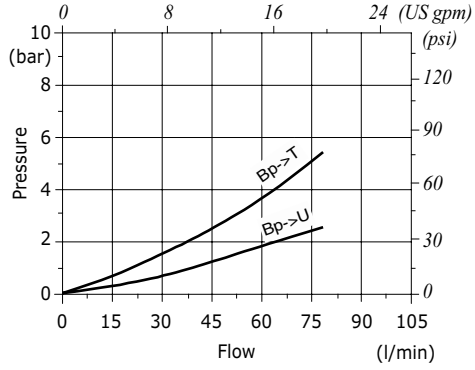
VEP/FL 10-12 pressure drop vs. flow from Bp→T and Bp→U



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

