



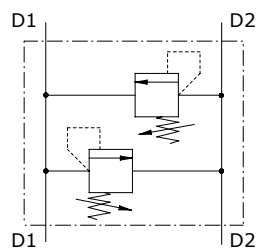
## Type VAIL pressure relief valves

- Double antishock direct acting relief valve

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

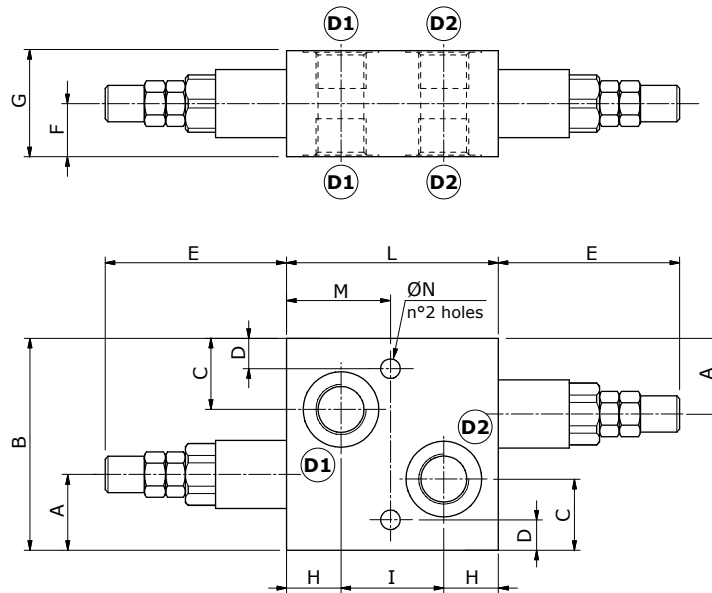
	<b>VAIL 5-38</b>	<b>VAIL 5-12</b>	<b>VAIL 10-12</b>	<b>VAIL 10-34</b>	<b>VAIL 20-34</b>	<b>VAIL 20-100</b>	
Nominal flow	25 l/min (6.6 US gpm)	35 l/min (9.2 US gpm)	70 l/min (18.4 US gpm)	70 l/min (18.4 US gpm)	100 l/min (26.4 US gpm)	120 l/min (31.7 US gpm)	
Max. pressure	Aluminium body = 210 bar (3050 psi) Steel body = 350 bar (5100 psi)						
Oil leakage at 80% of max. setting	3 cm <sup>3</sup> /min (0.18 in <sup>3</sup> /min)						
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>	0.67 kg (1.48 lb)	0.69 kg (1.52 lb)	1.12 kg (2.47 lb)	1.10 kg (2.43 lb)	1.87 kg (4.12 lb)	1.85 kg (4.08 lb)
	<i>steel</i>	1.31 kg (2.89 lb)	1.35 kg (2.98 lb)	2.20 kg (4.85 lb)	2.11 kg (4.65 lb)	3.55 kg (7.83 lb)	3.93 kg (8.66 lb)

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



### Dimensions

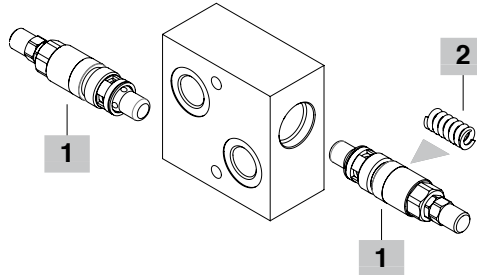
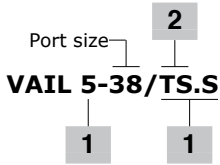
Valve type	All ports
VAIL 5-38	G3/8
VAIL 5-12	G1/2
VAIL 10-12	G1/2
VAIL 10-34	G3/4
VAIL 20-34	G3/4
VAIL 20-100	G1
Valve type	All ports
VAIL 5-38/SAE	SAE8
VAIL 5-12/SAE	SAE10
VAIL 10-12/SAE	SAE10
VAIL 10-34/SAE	SAE12
VAIL 20-34/SAE	SAE12
VAIL 20-100/SAE	SAE16



Dimensions are in mm-in

Valve type	A	B	C	D	E	F	G	H	I	L	M	ØN
VAIL 5-38 VAIL 5-38/SAE	25-0.98	70-2.75	23.5-0.92	10-0.39	60-4.92	17.5-0.69	35-1.38	18-0.70	34-1.34	70-2.75	35-1.38	6.5-0.25
VAIL 5-12 VAIL 5-12/SAE	25-0.98	70-2.75	23.5-0.92	10-0.39	60-4.92	17.5-0.69	35-1.38	18-0.70	39-1.53	75-2.95	37.5-1.48	6.5-0.25
VAIL 10-12 VAIL 10-12/SAE	29-1.41	82-3.23	25-0.98	8.5-0.33	67-2.64	20-0.79	40-1.57	20-0.79	50-1.97	90-3.54	45-1.77	8.5-0.33
VAIL 10-34 VAIL 10-34/SAE	29-1.41	82-3.23	25-0.98	8.5-0.33	67-2.64	20-0.79	40-1.57	20-0.79	50-1.97	90-3.54	45-1.77	8.5-0.33
VAIL 20-34 VAIL 20-34/SAE	31.5-1.84	95-3.74	30.5-1.2	10-0.39	76.5-3.01	25-0.98	50-1.97	22-0.87	56-2.20	100-3.93	50-1.97	8.5-0.33
VAIL 20-100 VAIL 20-100/SAE	31.5-1.84	95-3.74	30.5-1.2	10-0.39	76.5-3.01	25-0.98	50-1.97	32-1.26	56-2.20	120-4.72	60-2.36	8.5-0.33

**Ordering codes and description composition**



**VAIL complete valves**

*With direct acting valves: standard setting 160 bar @ 5 l/min (2300 psi at 1.32 US gpm)*

TYPE	CODE	DESCRIPTION
<b>Configuration with G3/8 standard thread</b>		
<b>VAIL 5-38/TS.S</b>	1140021102	Aluminium body, range 50-220 bar (725-3200 psi)
<b>VAIL 5-38/TS.S/ac</b>	1140022100	Steel body, as previous one
<b>Configuration with G1/2 standard thread</b>		
<b>VAIL 5-12/TS.S</b>	1140021152	Aluminium body, setting range 50-220 bar (725-3200 psi)
<b>VAIL 5-12/TS.S/ac</b>	1140022150	Steel body, as previous one
<b>VAIL 10-12/TS.S</b>	1140031102	Aluminium body, setting range 50-220 bar (725-3200 psi)
<b>VAIL 10-12/TS.S/ac</b>	1140032101	Steel body, as previous one
<b>Configuration with G3/4 standard thread</b>		
<b>VAIL 10-34/TS.S</b>	1140031152	Aluminium body, setting range 50-220 bar (725-3200 psi)
<b>VAIL 10-34/TS.S/ac</b>	1140032150	Steel body, as previous one
<b>VAIL 20-34/TS.S</b>	1140041102	Aluminium body, setting range 50-220 bar (725-3200 psi)
<b>VAIL 20-34/TS.S/ac</b>	1140042101	Steel body, as previous one
<b>Configuration with G1" standard thread</b>		
<b>VAIL 20-100/TS.S</b>	1140041152	Aluminium body, setting range 50-220 bar (725-3200 psi)
<b>VAIL 20-100/TS.S/ac</b>	1140042151	Steel body, as previous one
<b>Configuration with SAE8 standard thread</b>		
<b>VAIL 5-38/TS.S/SAE</b>	1140021200	Aluminium body, range 50-220 bar (725-3200 psi)
<b>Configuration with SAE10 standard thread</b>		
<b>VAIL 5-12/TS.S/SAE</b>	1140021250	Aluminium body, setting range 50-220 bar (725-3200 psi)
<b>VAIL 10-12/TS.S</b>	1140031200	Aluminium body, setting range 50-220 bar (725-3200 psi)
<b>Configuration with SAE12 standard thread</b>		
<b>VAIL 10-34/TS.S/SAE</b>	1140031250	Aluminium body, setting range 50-220 bar (725-3200 psi)
<b>VAIL 20-34/TS.S/SAE</b>	1140041200	Aluminium body, setting range 50-220 bar (725-3200 psi)
<b>Configuration with SAE16 standard thread</b>		
<b>VAIL 20-100/TS.S/SAE</b>	1140041250	Aluminium body, setting range 50-220 bar (725-3200 psi)

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

**1 Direct acting pressure relief valves**

*Standard setting 160 bar @ 5 l/min (2300 psi at 1.32 US gpm)*

TYPE	CODE	DESCRIPTION
<b>For G1/2 and G3/4 ports configuration</b>		
<b>VMP 5/TS.S</b>	1100520400	Setting range 50-220 bar (725-3200 psi)
<b>VMP 10/TS.S</b>	1100530400	Setting range 50-220 bar (725-3200 psi)
<b>For G3/4 and G1" ports configuration</b>		
<b>VMP 20/TS.S</b>	1100540400	Setting range 50-220 bar (725-3200 psi)

**2 Pressure setting spring**

CODE	TYPE	DESCRIPTION
<b>For VMP 5 valve</b>		
<b>TB</b>	3MOL314311	Setting range 5-40 bar (72.5-580 psi)
<b>TV</b>	3MOL314330	Setting range 20-80 bar (290-1160 psi)
<b>TS</b>	3MOL315330	Setting range 50-220 bar (725-3200 psi)
<b>TR</b>	3ML1143600	Setting range 180-350 bar (2600-5100 psi)
<b>For VMP 10 valve</b>		
<b>TB</b>	3ML1154100	Setting range 5-40 bar (72.5-580 psi)
<b>TV</b>	3ML1154300	Setting range 20-80 bar (290-1160 psi)
<b>TS</b>	3ML1164200	Setting range 50-220 bar (725-3200 psi)
<b>TR</b>	3ML1164400	Setting range 180-350 bar (2600-5100 psi)
<b>For VMP 20 valve</b>		
<b>TB</b>	3MOL316410	Setting range 5-40 bar (72.5-580 psi)
<b>TV</b>	3ML1154300	Setting range 20-80 bar (290-1160 psi)
<b>TS</b>	3MOL317420	Setting range 50-220 bar (725-3200 psi)
<b>TR</b>	3MOL317440	Setting range 180-350 bar (2600-5100 psi)

**Rating diagrams**

