



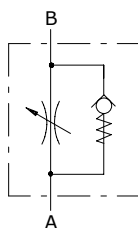
Type VSRU/C needle valves

- Poppet type
- With check valve

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

	VSRU/C 14	VSRU/C 38	VSRU/C 12	VSRU/C 34	VSRU/C 100	VSRU/C 114	VSRU/C 112	
Nominal flow from A to B	30 l/min (7.9 US gpm)	40 l/min (10.6 US gpm)	50 l/min (13.2 US gpm)	80 l/min (21.1 US gpm)	110 l/min (29 US gpm)	150 l/min (39.6 US gpm)	210 l/min (55.5 US gpm)	
Nominal flow C from B to A	30 l/min (7.9 US gpm)	50 l/min (13.2 US gpm)	80 l/min (21.1 US gpm)	110 l/min (29 US gpm)	160 l/min (42.27 US gpm)	210 l/min (55.5 US gpm)	280 l/min (74 US gpm)	
Nominal flow S from B to A	12 l/min (3.17 US gpm)	25 l/min (6.6 US gpm)	35 l/min (9.25 US gpm)	50 l/min (13.2 US gpm)	-	-	-	
Max. pressure	350 bar (5100 psi)	350 bar (5100 psi)	350 bar (5100 psi)	300 bar (4350 psi)	250 bar (3600 psi)	230 bar (3300 psi)	230 bar (3300 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	steel	0.30 kg (0.66 lb)	0.48 kg (1.06 lb)	0.59 kg (1.3 lb)	1.34 kg (2.95 lb)	2.15 kg (4.74 lb)	3.31 kg (7.3 lb)	4.76 kg (10.49 lb)

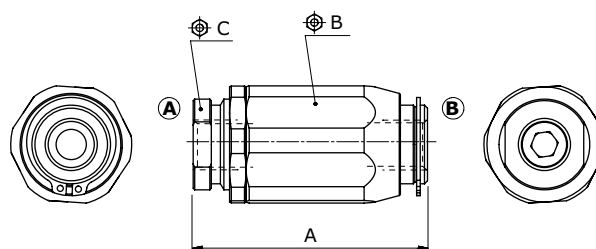
NOTE - For different conditions, please contact Walvoil Sales Dpt.



Dimensions

Dimensions are in mm-in

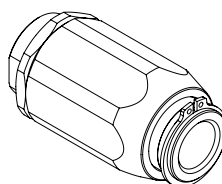
Valve type	All ports	A	⌀B	⌀c
VSRU/C 14	G 1/4	66-2.6	32	22
VSRU/C 38	G 3/8	77.5-3.05	38	26
VSRU/C 12	G 1/2	83-3.27	41	30
VSRU/C 34	G 3/4	104-4.09	55	38
VSRU/C 100	G 1"	118.5-4.66	65	46
VSRU/C 114	G 1" 1/4	135-5.31	80	55
VSRU/C 112	G 1" 1/2	149.5-5.88	90	62



Ordering codes and description composition

Port size ———— Opening pressure

VSRU / C 14 Pa0,5



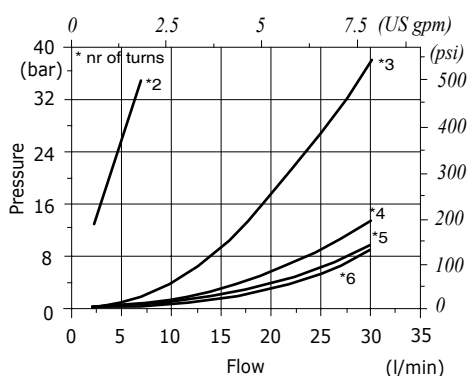
VSRU/C Complete valves

TYPE	CODE	DESCRIPTION
<u>Poppet type, opening pressure 0.5 bar (7.25 psi)</u>		
VSRU/C 14/Pa0,5	1603110100	Steel body, G1/4 ports
VSRU/C 38/Pa0,5	1603120100	Steel body, G3/8 ports
VSRU/C 12/Pa0,5	1603130100	Steel body, G1/2 ports
VSRU/C 34/Pa0,5	1603140100	Steel body, G3/4 ports
VSRU/C 100/Pa0,5	1603150100	Steel body, G1 ports
VSRU/C 114/Pa0,5	1603160100	Steel body, G 1" 1/4 ports
VSRU/C 112/Pa0,5	1603170100	Steel body, G 1" 1/2 ports

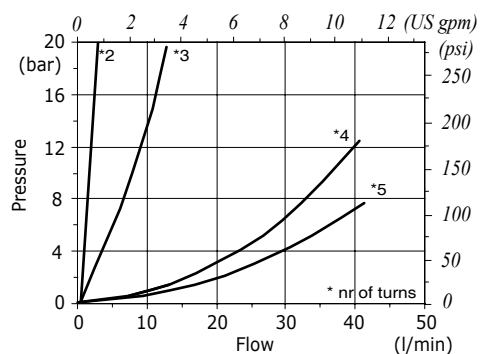
For different configurations or SAE thread please contact our Sales Dpt.

Rating diagrams

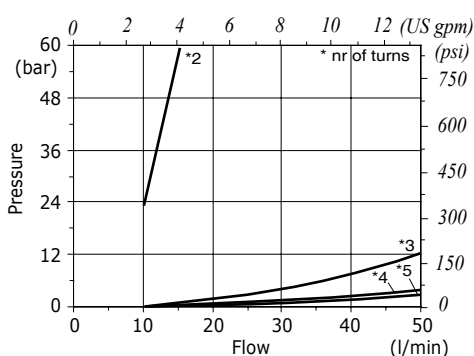
VSRU/C 14 pressure drop vs. flow
(A→B)



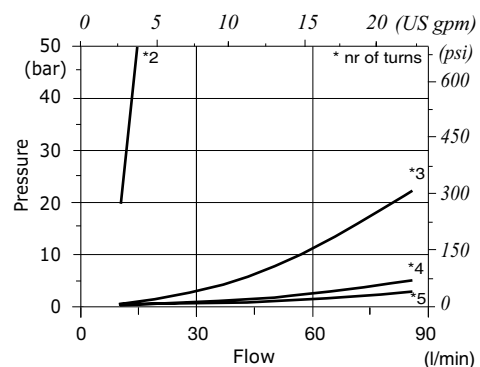
VSRU/C 38 pressure drop vs. flow
(A→B)



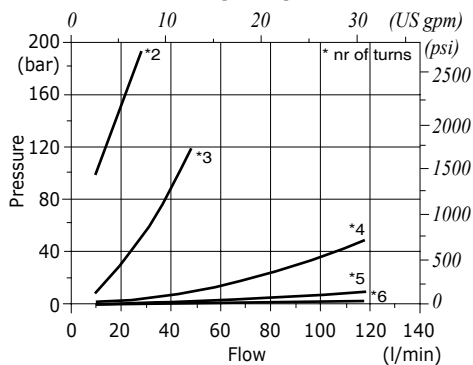
VSRU/C 12 pressure drop vs. flow
(A→B)



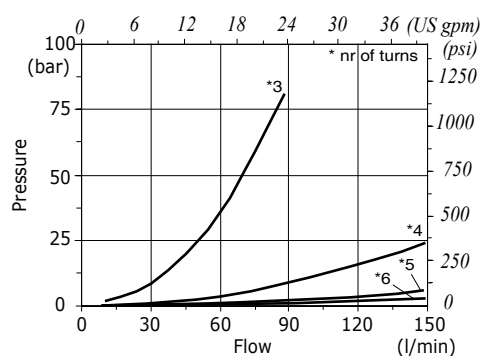
VSRU/C 34 pressure drop vs. flow
(A→B)



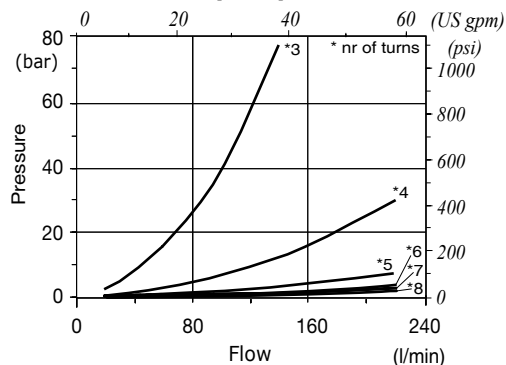
VSRU/C 100 pressure drop vs. flow
(A→B)



VSRU/C 114 pressure drop vs. flow
(A→B)

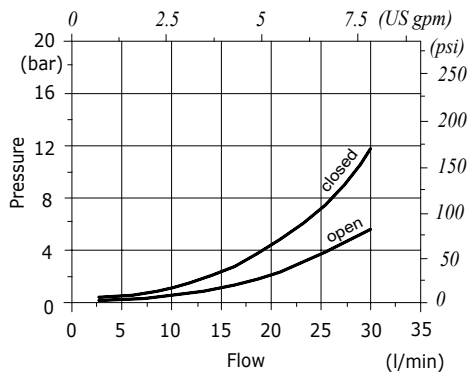


VSRU/C 112 pressure drop vs. flow
(A→B)

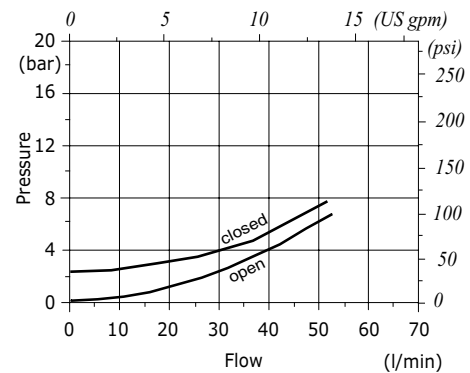


Rating diagrams

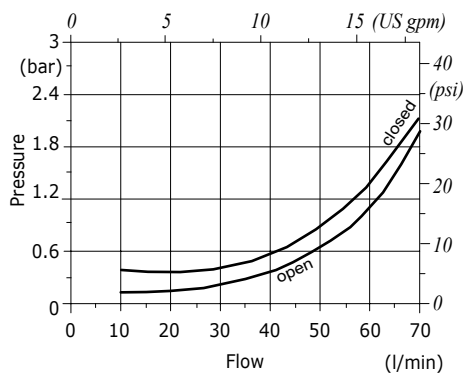
**VSRU/C 14 pressure drop vs. flow
(B→A)**



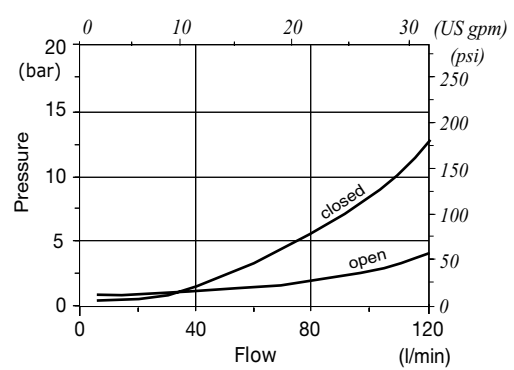
**VSRU/C 38 pressure drop vs. flow
(B→A)**



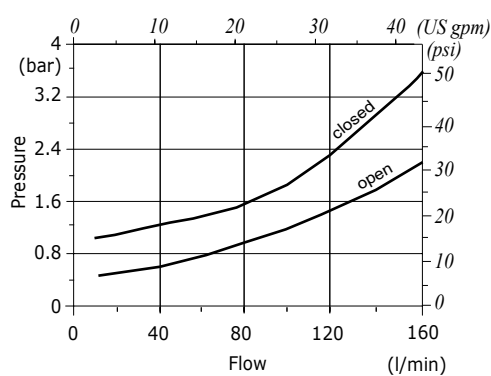
**VSRU/C 12 pressure drop vs. flow
(B→A)**



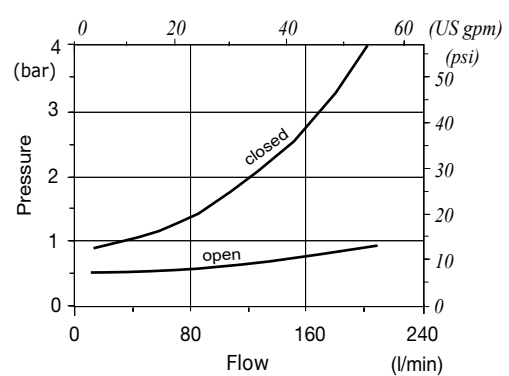
**VSRU/C 34 pressure drop vs. flow
(B→A)**



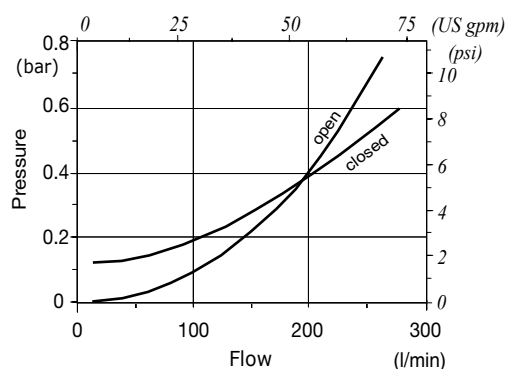
**VSRU/C 100 pressure drop vs. flow
(B→A)**



**VSRU/C 114 pressure drop vs. flow
(B→A)**



**VSRU/C 112 pressure drop vs. flow
(B→A)**





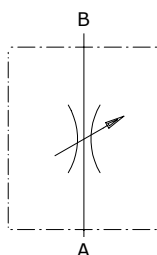
Type VSRB needle valves

- Bidirectional

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

	VSRB 14	VSRB 38	VSRB 12	VSRB 34	VSRB 100	
Nominal flow from A to B	30 l/min (7.9 US gpm)	45 l/min (11.9 US gpm)	70 l/min (18.5 US gpm)	100 l/min (26.4 US gpm)	150 l/min (39.6 US gpm)	
Max. pressure	350 bar (5100 psi)	350 bar (5100 psi)	350 bar (5100 psi)	300 bar (4350 psi)	250 bar (3600 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 temperature for working conditions	from -40°C (-40°F) to 100°C (212°F)					
Weight	steel	0.30 kg (0.66 lb)	0.48 kg (1.06 lb)	0.59 kg (1.3 lb)	1.34 kg (2.95 lb)	2.15 kg (4.74 lb)

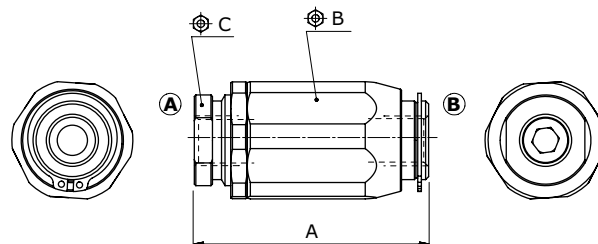
NOTE - For different conditions, please contact Walvoil Sales Dpt.



Dimensions

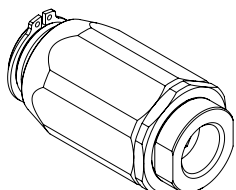
Dimensions are in mm-in

Valve type	All ports	A	B	c
VSRB 14	G 1/4	66-2.6	32	22
VSRB 38	G 3/8	77.5-3.05	38	26
VSRB 12	G 1/2	83-3.27	41	30
VSRB 34	G 3/4	104-4.09	55	38
VSRB 100	G 1"	118.5-4.66	65	46



Ordering codes and description composition

Port size
VSRB 14



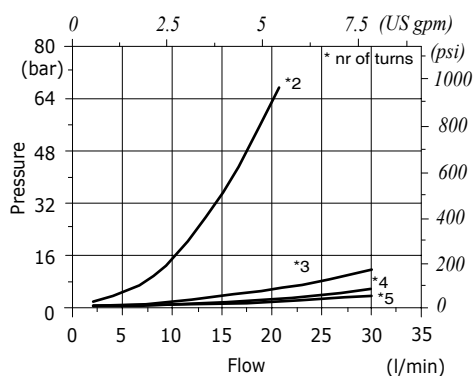
VSRB complete valves

TYPE	CODE	DESCRIPTION
VSRB 14	1603210100	Steel body, G1/4 ports
VSRB 38	1603220100	Steel body, G3/8 ports
VSRB 12	1603230100	Steel body, G1/2 ports
VSRB 34	1603240100	Steel body, G3/4 ports
VSRB 100	1603250100	Steel body, G1 ports

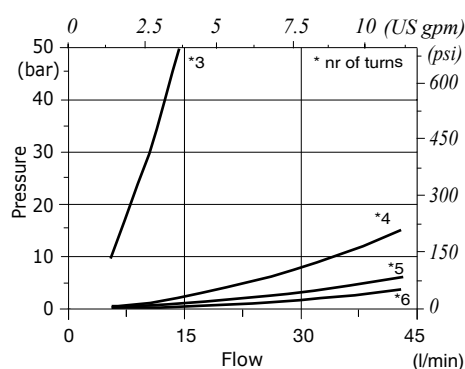
For different configurations or SAE thread please contact our Sales Dpt.

Rating diagram

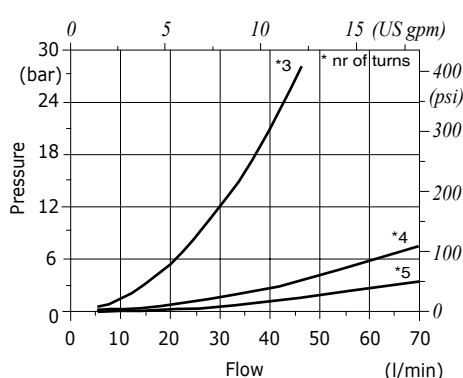
VSRB 14 pressure drop vs. flow



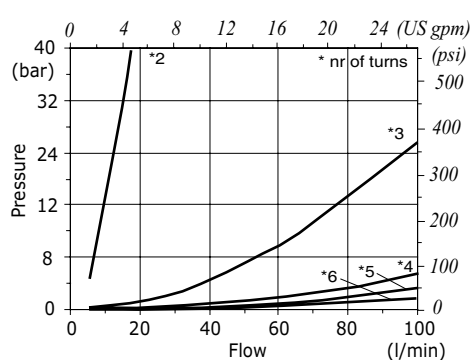
VSRB 38 pressure drop vs. flow



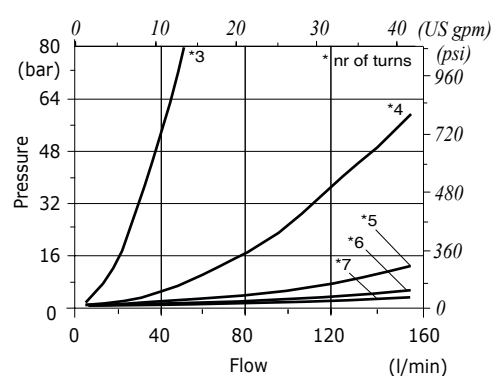
VSRB 12 pressure drop vs. flow



VSRB 34 pressure drop vs. flow



VSRB 100 pressure drop vs. flow





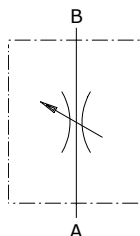
Type VRFB90 needle valves

- Bidirectional

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

	VRFB9001	VRFB9002	VRFB9003	VRFB9004	VRFB9005
Nominal flow	30 l/min (7.9 US gpm)	40 l/min (10.6 US gpm)	50 l/min (23.8 US gpm)	80 l/min (21.1 US gpm)	110 l/min (29.1 US gpm)
Max. pressure	350 bar (5100 psi)	350 bar (5100 psi)	350 bar (5100 psi)	320 bar (4600 psi)	300 bar (4350 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 -30°C (-22°F) to 80°C (176°F)				
Environmental temperature for working conditions	from -40°C (-40°F) to 100°C (212°F)				
Weight	steel 0.34 kg (0.75 lb)	0.34 kg (0.75 lb)	0.43 kg (0.95 lb)	1.13 kg (2.49 lb)	1 kg (2.2 lb)

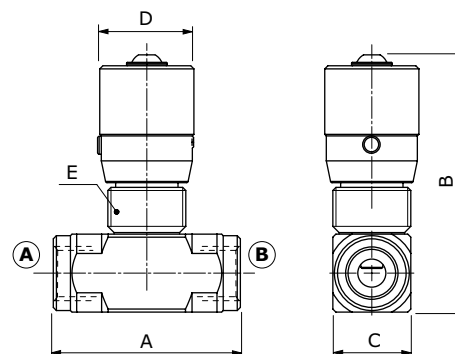
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Dimensions

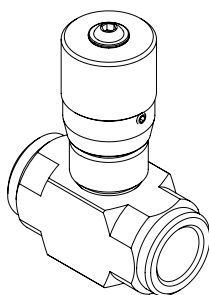
Dimensions are in mm-in

Valve type	All ports	A	B	C	D	E
VRFB9001	G1/4	58 - 2.28	82 - 3.23	25 - 0.98	30 - 1.18	M25X1.5
VRFB9002	G3/8	60 - 2.36	82 - 3.23	25 - 0.98	30 - 1.18	M25X1.5
VRFB9003	G1/2	64 - 2.52	88 - 3.46	30 - 1.18	30 - 1.18	M25X1.5
VRFB9004	G3/4	89 - 3.50	116 - 4.57	40 - 1.57	42 - 1.65	M35X1.5
VRFB9005	G1	89 - 3.50	116 - 4.57	40 - 1.57	42 - 1.65	M35X1.5



Ordering codes and description composition

VRBF90 01



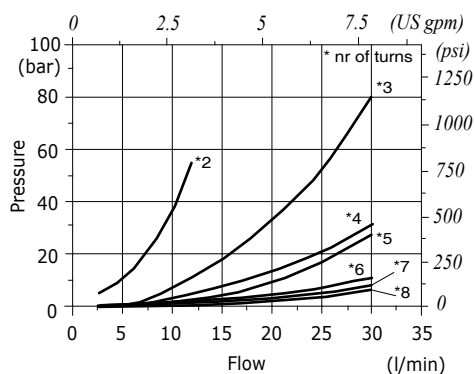
VRFB90 complete valves

TYPE	CODE	DESCRIPTION
VRFB9001	1605210100	Steel body, G1/4 ports
VRFB9002	1605220100	Steel body, G3/8 ports
VRFB9003	1605230100	Steel body, G1/2 ports
VRFB9004	1605240100	Steel body, G3/4 ports
VRFB9005	1605250100	Steel body, G1 ports

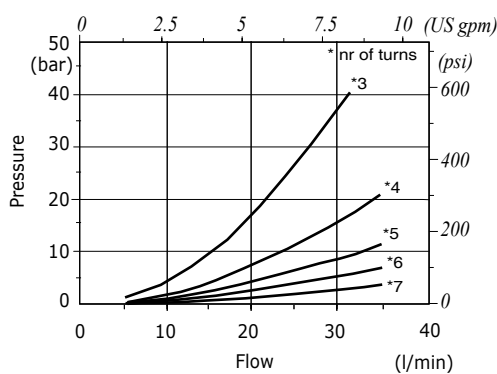
For different configurations or SAE thread please contact our Sales Dpt.

Rating diagram

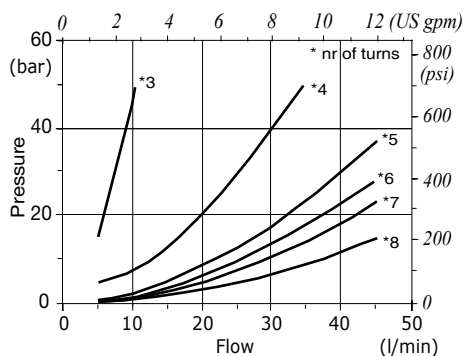
VRFB9001
pressure drop vs. flow



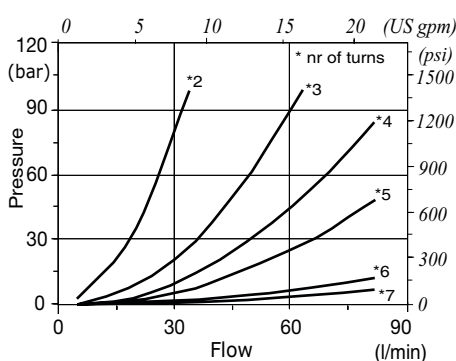
VRFB9002
pressure drop vs. flow



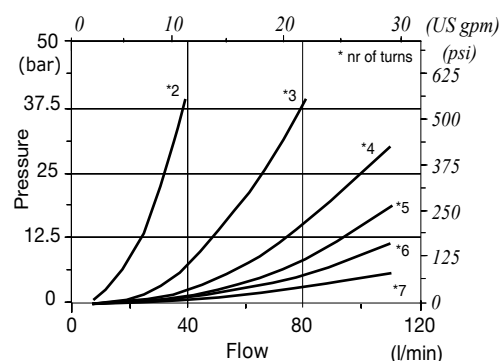
VRFB9003
pressure drop vs. flow



VRFB9004
pressure drop vs. flow



VRFB9005
pressure drop vs. flow





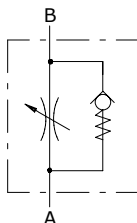
Type VRFU90 needle valves

- With check valve

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

	VRFU9001	VRFU9002	VRFU9003	VRFU9004	VRFU9005
Nominal flow from A to B	30 l/min (7.9 US gpm)	40 l/min (10.6 US gpm)	50 l/min (23.8 US gpm)	80 l/min (21.1 US gpm)	110 l/min (29.1 US gpm)
Nominal flow from B to A	35 l/min (9.2 US gpm)	50 l/min (23.8 US gpm)	90 l/min (23.8 US gpm)	140 l/min (37 US gpm)	180 l/min (47.6 US gpm)
Max. pressure	350 bar (5100 psi)	350 bar (5100 psi)	350 bar (5100 psi)	320 bar (4600 psi)	300 bar (4350 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 -30°C (-22°F) to 80°C (176°F)				
Environmental temperature for working conditions	from -40°C (-40°F) to 100°C (212°F)				
Weight	steel 0.40 kg (0.88 lb)	0.41 kg (0.9 lb)	0.58 kg (1.28 lb)	1.39 kg (3.06 lb)	1.36 kg (3 lb)

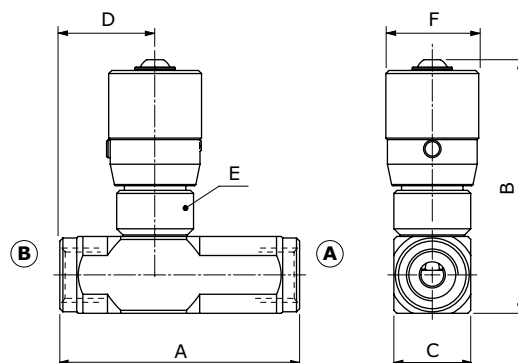
NOTE - For different conditions, please contact Walvoil Sales Dpt.



Dimensions

Dimensions are in mm-in

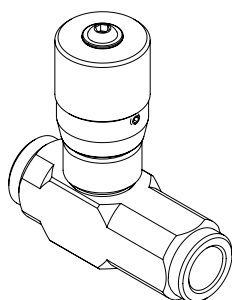
Valve type	All ports	A	B	C	D	E	F
VRFU9001	G1/4	75 - 2.95	82 - 3.23	25 - 0.98	29 - 1.14	M25X1.5	30 - 1.18
VRFU9002	G3/8	78 - 3.07	82 - 3.23	25 - 0.98	31 - 1.22	M25X1.5	30 - 1.18
VRFU9003	G1/2	93 - 3.66	88 - 3.46	30 - 1.18	33.5 - 1.32	M25X1.5	30 - 1.18
VRFU9004	G3/4	110 - 4.33	116 - 4.57	40 - 1.57	41.5 - 1.63	M35X1.5	42 - 1.65
VRFU9005	G1	135 - 5.31	116 - 4.57	40 - 1.57	44.5 - 1.75	M35X1.5	42 - 1.65



Ordering codes and description composition

VRFU90 01

Port size

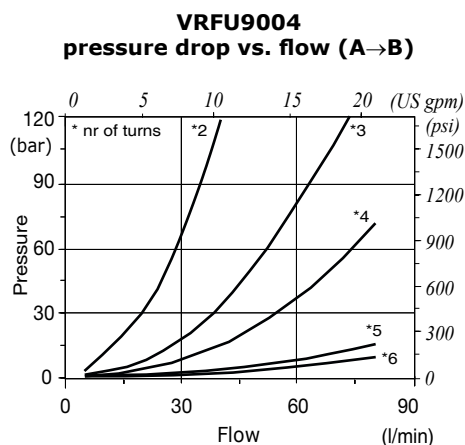
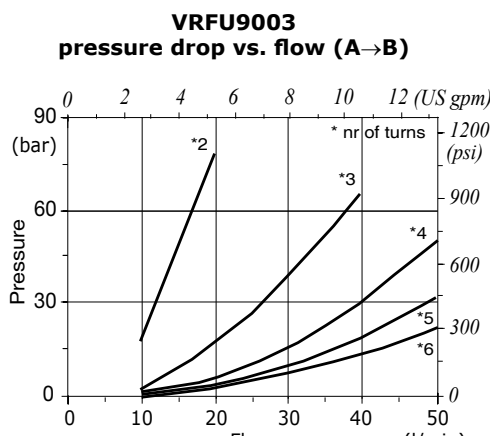
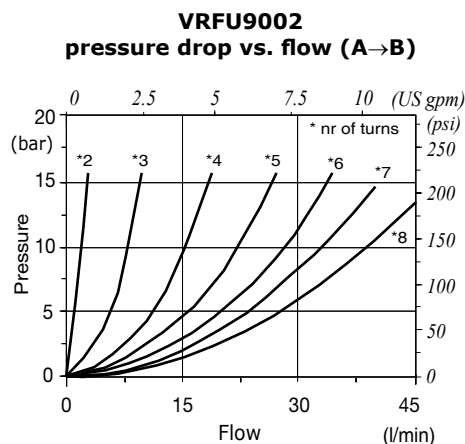
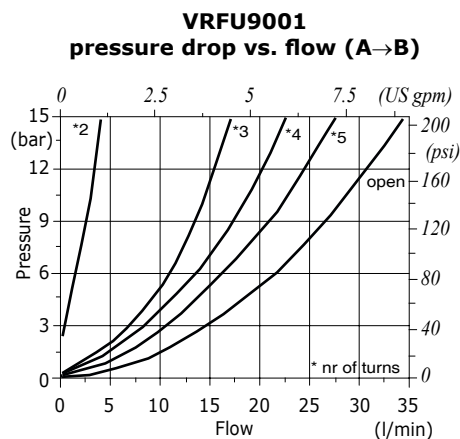


VRFU90 complete valves

TYPE	CODE	DESCRIPTION
VRFU9001	1605110100	Steel body, G1/4 ports, opening pressure 0.5 bar (7.25 psi)
VRFU9002	1605120100	Steel body, G3/8 ports, opening pressure 0.5 bar (7.25 psi)
VRFU9003	1605130100	Steel body, G1/2 ports, opening pressure 0.5 bar (7.25 psi)
VRFU9004	1605140100	Steel body, G3/4 ports, opening pressure 0.5 bar (7.25 psi)
VRFU9005	1605150100	Steel body, G1 ports, opening pressure 0.5 bar (7.25 psi)

For different configurations or SAE thread please contact our Sales Dpt.

Rating diagram



Rating diagram

