



Type VOSLP/N1116 - VOSLP/R1116 counterbalance valves

- Single acting
- External pilot
- Load Sensitive (type N)
- Relief Compensated (type R)

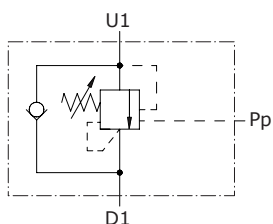
Technical specifications and diagrams are measured with mineral oil of 46 cSt viscosity at 40°C (104°F) temperature.

VOSLP/N1116 (38-12) - VOSLP/R1116 (38-12)

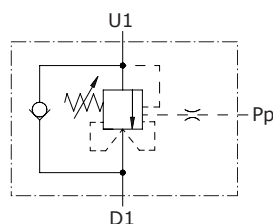
Nominal flow	60 l/min (15.9 US gpm)	
Max. pressure	Aluminium body = 210 bar (3050 psi) Steel body = 350 bar (5100 psi)	
Oil leakage	0.25 cm ³ /min - 0.015 in ³ /min. (5 drops) at 210 bar - 3050 psi	
Fluid	mineral based oil	
Viscosity	from 10 to 200 cSt	
Max. level of contamination	18/16/13 ISO4406	
Fluid 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	VOSLP/N1116/38: 0.51kg (1.12 lb) - VOSLP/N1116/12: 0.65 kg (1.43 lb)
	steel	VOSLP/N1116/38: 1.13 kg (2.49 lb) - VOSLP/N1116/12: 1.51 kg (3.33 lb) VOSLP/R1116/38: 1.20 kg (2.64 lb) - VOSLP/R1116/12: 1.58 kg (3.48 lb)

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

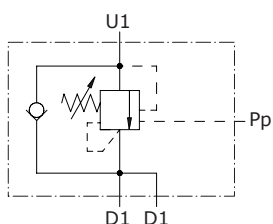
VOSLP/N1116



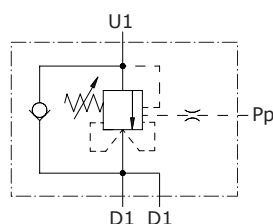
VOSLP/R1116



VOSLP/N1116/F1

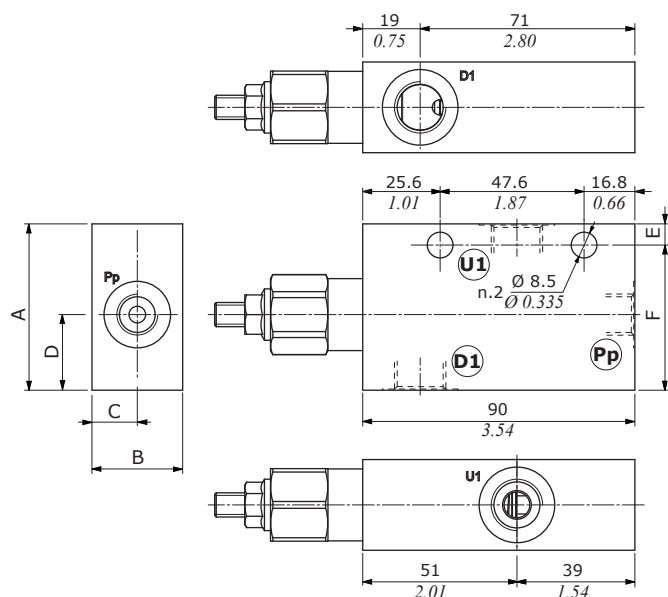


VOSLP/R1116/F1

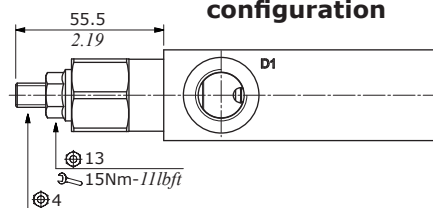


Dimensions

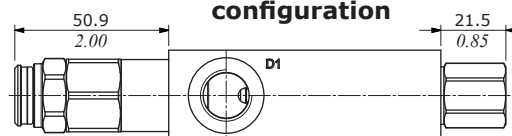
VOSLP/...1116/38 - VOSLP/...1116/12



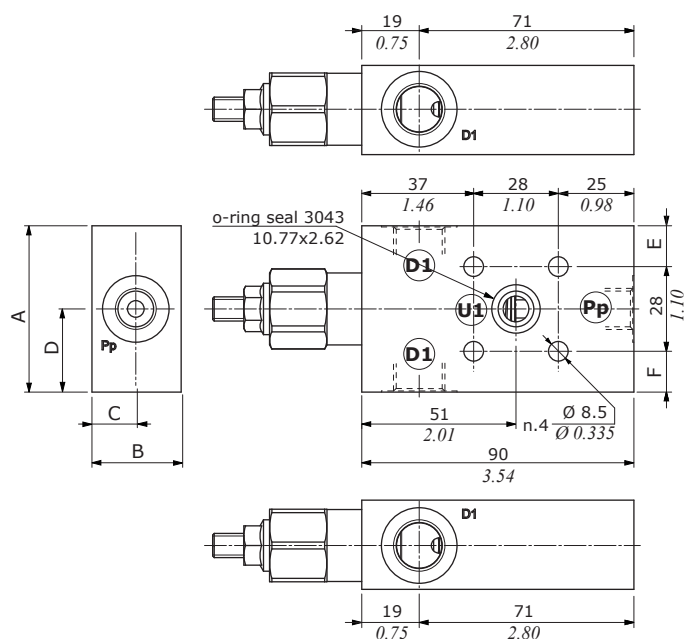
VOSLP/N configuration



VOSLP/R configuration



VOSLP/...1116/38F1 - VOSLP/...1116/12F1



Valve type	D1	U1	Pp
VOSLP/...1116/38	G3/8	G3/8	G1/4
VOSLP/...1116/12	G1/2	G1/2	G1/4
VOSLP/...1116/38F1	G3/8	Ø8.5 Ø0.335	G1/4
VOSLP/...1116/12F1	G1/2	Ø8.5 Ø0.335	G1/4

Valve type	D1	U1	Pp
VOSLP/...1116/S8	SAE8	SAE8	SAE6
VOSLP/...1116/S10	SAE10	SAE10	SAE6
VOSLP/...1116/S8F1	SAE8	Ø8.5 Ø0.335	SAE6
VOSLP/...1116/S10F1	SAE10	Ø8.5 Ø0.335	SAE6

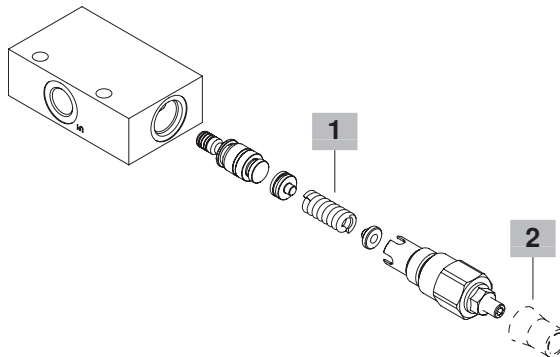
Dimensions are in mm-in

Valve type	A	B	C	D	E	F
VOSLP/...1116/38	55	30	15	25	48	7
VOSLP/...1116/S8	2.17	1.18	0.59	0.98	1.89	0.276
VOSLP/...1116/12	65	35	17.5	32.5	54	11
VOSLP/...1116/S10	2.26	1.38	0.69	1.28	2.13	0.433
VOSLP/...1116/38F1	55	29.5	14.5	27.5	13.5	13.5
VOSLP/...1116/S8F1	2.17	1.16	0.57	1.08	0.53	0.53
VOSLP/...1116/12F1	65	34.5	17	32.5	18.5	18.5
VOSLP/...1116/S10F1	2.26	1.36	0.67	1.28	0.73	0.73

Ordering codes and description composition

Port size
VOSLP/N1116/38/G3.p4/ac

2 1



VOSLP/N1116 complete valves

Load sensitive (N) configuration with G3/8 thread

Pilot ratio 1:4

TYPE: **VOSLP/N1116/38/G3.p4/ac** CODE: 1534322101
DESCRIPTION: Steel body, range 5-210 bar (72.5-3050 psi), std setting 150 bar (2175 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/38/G5.p4/ac** CODE: 1534322100
DESCRIPTION: Steel body, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/38/G5.p4** CODE: 1534321100
DESCRIPTION: Aluminium body, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Pilot ratio 1:8

TYPE: **VOSLP/N1116/38/G5.p8/ac** CODE: 1534322104
DESCRIPTION: Steel body, range 5-350 bar (72.5-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Zero differential pilot ratio

TYPE: **VOSLP/N1116/38/G3.p0/ac** CODE: 1534322106
DESCRIPTION: Steel body, range 5-210 bar (72.5-3050 psi), std setting 150 bar (2175 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/38/G5.p0/ac** CODE: 1534322107
DESCRIPTION: Steel body, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Load sensitive (N) configuration with G3/8 thread and F1 flange

TYPE: **VOSLP/N1116/38F1/G5.p4/ac** CODE: 1535522100
DESCRIPTION: Steel body, pilot ratio 1:4, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/38F1/G5.p8/ac** CODE: 1535522101
DESCRIPTION: Steel body, pilot ratio 1:8, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/38F1/G5.p0/ac** CODE: 1535522102
DESCRIPTION: Steel body, zero differential pilot ratio, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

VOSLP/N1116 complete valves

Load sensitive (N) configuration with SAE8 thread

Pilot ratio 1:4

TYPE: **VOSLP/N1116/S8/G3.p4/ac** CODE: 1534322200
DESCRIPTION: Steel body, range 5-210 bar (72.5-3050 psi), std setting 150 bar (2175 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/S8/G5.p4/ac** CODE: 1534322201
DESCRIPTION: Steel body, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/S8/G5.p4** CODE: 1534321200
DESCRIPTION: Aluminium body, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Pilot ratio 1:8

TYPE: **VOSLP/N1116/S8/G5.p8/ac** CODE: 1534322204
DESCRIPTION: Steel body, range 5-350 bar (72.5-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Zero differential pilot ratio

TYPE: **VOSLP/N1116/S8/G3.p0/ac** CODE: 1534322206
DESCRIPTION: Steel body, range 5-210 bar (72.5-3050 psi), std setting 150 bar (2175 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/S8/G5.p0/ac** CODE: 1534322207
DESCRIPTION: Steel body, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Load sensitive (N) configuration with SAE8 thread and F1 flange

TYPE: **VOSLP/N1116/S8F1/G5.p4/ac** CODE: 1535522200
DESCRIPTION: Steel body, pilot ratio 1:4, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/S8F1/G5.p8/ac** CODE: 1535522201
DESCRIPTION: Steel body, pilot ratio 1:8, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/S8F1/G5.p0/ac** CODE: 1535222202
DESCRIPTION: Steel body, zero differential pilot ratio, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

1 Pressure setting spring

TYPE	CODE	DESCRIPTION
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For 1:4 and zero differential pilot ratio

3	3ML1133201	For range 5-210 bar (72.5-3050 psi)
5	3ML1133200	For range 50-350 bar (725-5075 psi)

For 1:8 pilot ratio

5	3ML1133201	For range 5-350 bar (72.5-5075 psi)
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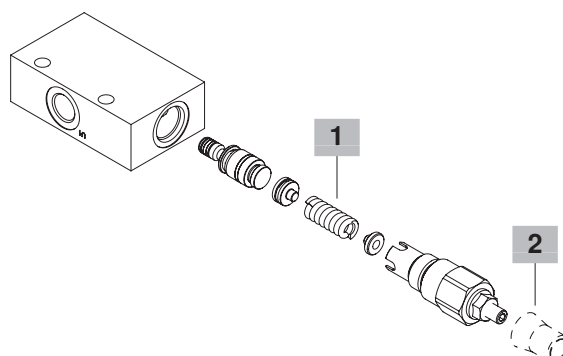
2 Setting type

TYPE	CODE	DESCRIPTION
G	-	Screw setting
Z	4COP120420	Antitampering cap

Dimensions

Port size
VOSLP/N1116/12/G3.p4/ac

2 1



VOSLP/N1116 complete valves

Load sensitive (N) configuration with G1/2 thread

TYPE: **VOSLP/N1116/12/G5.p4/ac** CODE: 1534332100
DESCRIPTION: Steel body, pilot ratio 1:4, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/12/G5.p8/ac** CODE: 1534332101
DESCRIPTION: Steel body, pilot ratio 1:8, range 5-350 bar (72.5-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/12/G5.p0/ac** CODE: 1534332102
DESCRIPTION: Steel body, zero differential pilot ratio, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/12/G5.p4** CODE: 1534331100
DESCRIPTION: Aluminium body, pilot ratio 1:4, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Load sensitive (N) configuration with G1/2 thread and F1 flange

TYPE: **VOSLP/N1116/12F1/G5.p4/ac** CODE: 1535532100
DESCRIPTION: Steel body, pilot ratio 1:4, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/12F1/G5.p8/ac** CODE: 1535532101
DESCRIPTION: Steel body, pilot ratio 1:8, range 5-350 bar (72.5-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/12F1/G5.p0/ac** CODE: 1535532102
DESCRIPTION: Steel body, zero differential pilot ratio, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

For other configurations please contact our Sales Dpt.

VOSLP/N1116 complete valves

Load sensitive (N) configuration with SAE10 thread

TYPE: **VOSLP/N1116/S10/G5.p4/ac** CODE: 1534332200
DESCRIPTION: Steel body, pilot ratio 1:4, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/S10/G5.p8/ac** CODE: 1534332201
DESCRIPTION: Steel body, pilot ratio 1:8, range 5-350 bar (72.5-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/S10/G5.p0/ac** CODE: 1534332202
DESCRIPTION: Steel body, zero differential pilot ratio, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/S10/G5.p4** CODE: 1534331200
DESCRIPTION: Aluminium body, pilot ratio 1:4, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Load sensitive (N) configuration with SAE10 thread and F1 flange

TYPE: **VOSLP/N1116/S10F1/G5.p4/ac** CODE: 1535532200
DESCRIPTION: Steel body, pilot ratio 1:4, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/S10F1/G5.p8/ac** CODE: 1535532201
DESCRIPTION: Steel body, pilot ratio 1:8, range 5-350 bar (72.5-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/N1116/S10F1/G5.p0/ac** CODE: 1535532202
DESCRIPTION: Steel body, zero differential pilot ratio, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

For other configurations please contact our Sales Dpt.

1 Pressure setting spring

TYPE	CODE	DESCRIPTION
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For 1:4 and zero differential pilot ratio

3	3ML1133201	For range 5-210 bar (72.5-3050 psi)
5	3ML1133200	For range 50-350 bar (725-5075 psi)

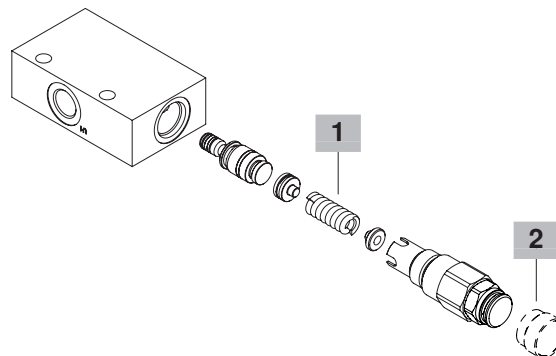
For 1:8 pilot ratio

5	3ML1133201	For range 5-350 bar (72.5-5075 psi)
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2 Setting type

TYPE	CODE	DESCRIPTION
G	-	Screw setting
Z	4COP120420	Antitampering cap

Port size
VOSLP/R1116/38/G3.p4/ac
2 1



VOSLP/R1116 complete valves

Relief compensated (R) configuration with G3/8 thread

Pilot ratio 1:4

TYPE: **VOSLP/R1116/38/G3.p4/ac** CODE: 1534422101
DESCRIPTION: Steel body, range 5-210 bar (72.5-3050 psi), std setting 150 bar (2175 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/38/G5.p4/ac** CODE: 1534422100
DESCRIPTION: Steel body, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Pilot ratio 1:8

TYPE: **VOSLP/R1116/38/G5.p8/ac** CODE: 1534422104
DESCRIPTION: Steel body, range 5-350 bar (72.5-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Zero differential pilot ratio

TYPE: **VOSLP/R1116/38/G3.p0/ac** CODE: 1534422106
DESCRIPTION: Steel body, range 5-210 bar (72.5-3050 psi), std setting 150 bar (2175 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/38/G5.p0/ac** CODE: 1534422107
DESCRIPTION: Steel body, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Relief compensated (R) configuration with G3/8 thread and F1 flange

TYPE: **VOSLP/R1116/38F1/G5.p4/ac** CODE: 1535622100
DESCRIPTION: Steel body, pilot ratio 1:4, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/38F1/G5.p8/ac** CODE: 1535622101
DESCRIPTION: Steel body, pilot ratio 1:8, range 5-350 bar (72.5-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/38F1/G5.p0/ac** CODE: 1535622102
DESCRIPTION: Steel body, zero differential pilot ratio, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

VOSLP/R1116 complete valves

Relief compensated (R) configuration with SAE8 thread

Pilot ratio 1:4

TYPE: **VOSLP/R1116/S8/G3.p4/ac** CODE: 1534422200
DESCRIPTION: Steel body, range 5-210 bar (72.5-3050 psi), std setting 150 bar (2175 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/S8/G5.p4/ac** CODE: 1534422201
DESCRIPTION: Steel body, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Pilot ratio 1:8

TYPE: **VOSLP/R1116/S8/G5.p8/ac** CODE: 1534422204
DESCRIPTION: Steel body, range 5-350 bar (72.5-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Zero differential pilot ratio

TYPE: **VOSLP/R1116/S8/G3.p0/ac** CODE: 1534422206
DESCRIPTION: Steel body, range 5-210 bar (72.5-3050 psi), std setting 150 bar (2175 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/S8/G5.p0/ac** CODE: 1534422207
DESCRIPTION: Steel body, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Relief compensated (R) configuration with SAE8 thread and F1 flange

TYPE: **VOSLP/R1116/S8F1/G5.p4/ac** CODE: 1535622200
DESCRIPTION: Steel body, pilot ratio 1:4, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/S8F1/G5.p8/ac** CODE: 1535622201
DESCRIPTION: Steel body, pilot ratio 1:8, range 5-350 bar (72.5-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/S8F1/G5.p0/ac** CODE: 1535522202
DESCRIPTION: Steel body, zero differential pilot ratio, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

1 Pressure setting spring

TYPE	CODE	DESCRIPTION
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For 1:4 and zero differential pilot ratio

3	3ML1133201	For range 5-210 bar (72.5-3050 psi)
5	3ML1133200	For range 50-350 bar (725-5075 psi)

For 1:8 pilot ratio

5	3ML1133201	For range 5-350 bar (72.5-5075 psi)
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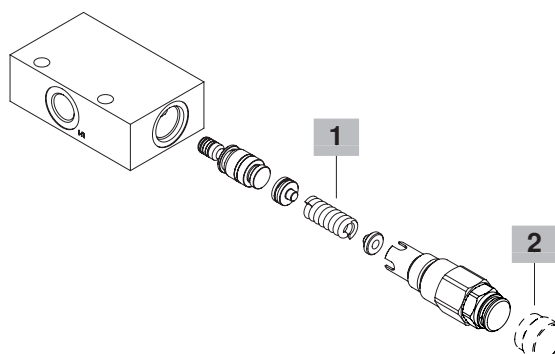
2 Setting type

TYPE	CODE	DESCRIPTION
G	-	Screw setting
Z	4COP130200	Antitampering cap

Ordering codes and description composition

Port size
VOSLP/R1116/12/G3.p4/ac

2 1



VOSLP/R1116 complete valves

Relief compensated (R) configuration with G1/2 thread

TYPE: **VOSLP/R1116/12/G5.p4/ac** CODE: 1534432100
DESCRIPTION: Steel body, pilot ratio 1:4, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/12/G5.p8/ac** CODE: 1534432101
DESCRIPTION: Steel body, pilot ratio 1:8, range 5-350 bar (72.5-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/12/G5.p0/ac** CODE: 1534432102
DESCRIPTION: Steel body, zero differential pilot ratio, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Relief compensated (R) configuration with G1/2 thread and F1 flange

TYPE: **VOSLP/R1116/12F1/G5.p4/ac** CODE: 1535632100
DESCRIPTION: Steel body, pilot ratio 1:4, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/12F1/G5.p8/ac** CODE: 1535632101
DESCRIPTION: Steel body, pilot ratio 1:8, range 5-350 bar (72.5-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/12F1/G5.p0/ac** CODE: 1535632102
DESCRIPTION: Steel body, zero differential pilot ratio, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)
For other configurations please contact our Sales Dpt.

VOSLP/R1116 complete valves

Relief compensated (R) configuration with SAE10 thread

TYPE: **VOSLP/R1116/S10/G5.p4/ac** CODE: 1534432200
DESCRIPTION: Steel body, pilot ratio 1:4, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/S10/G5.p8/ac** CODE: 1534432201
DESCRIPTION: Steel body, pilot ratio 1:8, range 5-350 bar (72.5-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/S10/G5.p0/ac** CODE: 1534432202
DESCRIPTION: Steel body, zero differential pilot ratio, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

Relief compensated (R) configuration with SAE10 thread and F1 flange

TYPE: **VOSLP/R1116/S10F1/G5.p4/ac** CODE: 1535632200
DESCRIPTION: Steel body, pilot ratio 1:4, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/S10F1/G5.p8/ac** CODE: 1535632201
DESCRIPTION: Steel body, pilot ratio 1:8, range 5-350 bar (72.5-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VOSLP/R1116/S10F1/G5.p0/ac** CODE: 1535632202
DESCRIPTION: Steel body, zero differential pilot ratio, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)
For other configurations please contact our Sales Dpt.

1 Pressure setting spring

TYPE	CODE	DESCRIPTION
For 1:4 and zero differential pilot ratio		
3	3ML1133201	For range 5-210 bar (72.5-3050 psi)
5	3ML1133200	For range 50-350 bar (725-5075 psi)
For 1:8 pilot ratio		
5	3ML1133201	For range 5-350 bar (72.5-5075 psi)

2 Setting type

TYPE	CODE	DESCRIPTION
G	-	Screw setting
Z	4COP130200	Antitampering cap

**VOSLP/(N-R) 1116 (38-12) pressure drop vs. flow
from D1->U1 and U1->D1**

