Reducing valve model **VRG**   JP PAT.

Pressure adjustment screw / Rod / Internal filter / Special check valve / Internal filter

CYL. hydraulic port / P(R) hydraulic port

Secondary side hydraulic pressure / Primary side hydraulic pressure

CYL. (Secondary side) / P(R) (Primary side)
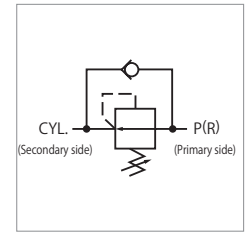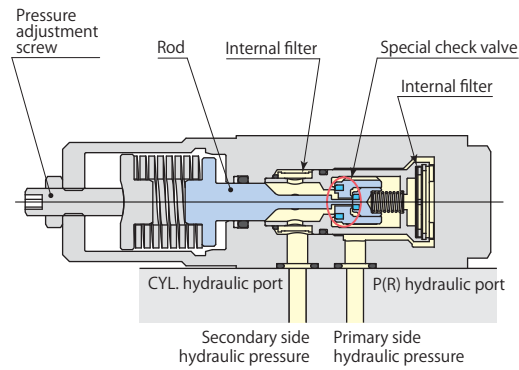
Internal hydraulic pressure of circuit can be partially reduced.
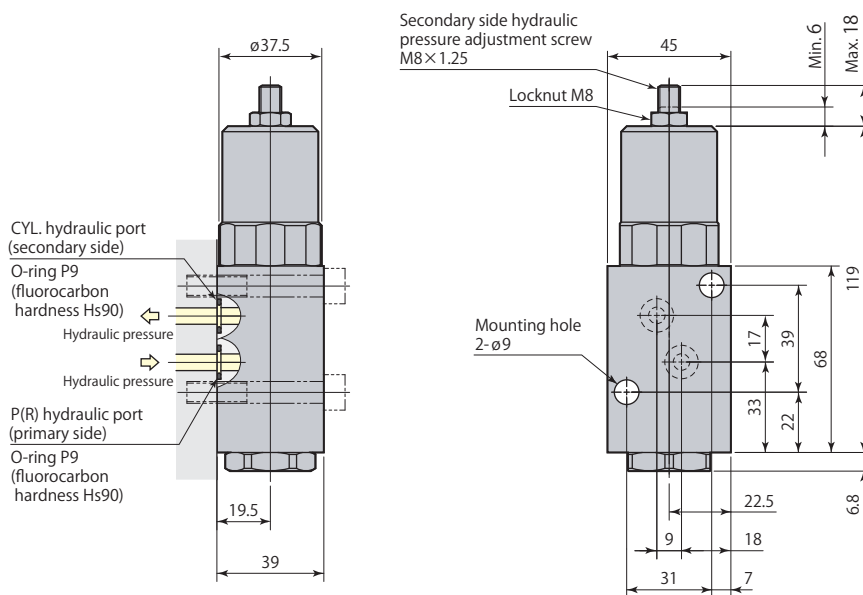This is a non-leak type that requires no drain.

Specifications

Model		VRG-LG	VRG-LT	VRG-LS
Mounting, piping methods		Manifold mounting	Piping mounting	VHD linking
Primary side hydraulic pressure range	MPa	2–7		
Secondary side hydraulic pressure range	MPa	1–6		
Allowable min. differential pressure*	MPa	1		
Proof pressure	MPa	10.5		
Pressure change per revolution	MPa/rev	0.5		
Orifice area	mm²	28.1		
Operating temperature	℃	0–70		
Fluid used		General mineral based hydraulic oil (ISO-VG32 equivalent)		
Mass	kg	0.9	1.0	1.0

● Fluorocarbon has been adopted for seal sections where cutting fluid is applied, as a measure for the use of chlorine-based cutting fluid (this is not thermal resistant specification).

● Avoid overpressure to CYL. hydraulic port of the valve if there is a risk of back pressure in secondary circuit.

＊：The setting should be performed so that the differential pressure between primary side hydraulic pressure and secondary side hydraulic pressure may exceed 1 MPa. (Example：If primary side hydraulic pressure is 5 MPa, secondary side hydraulic pressure should be from 1 to 4 MPa.)
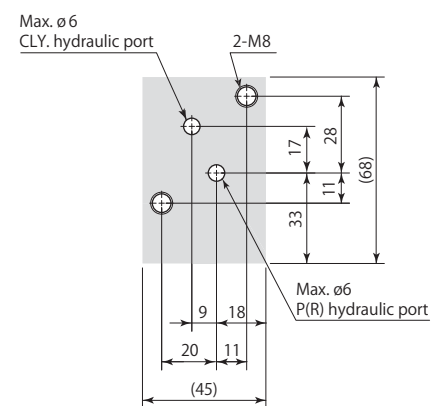
indicates made to order.

Dimensions

VRG-LG   Manifold mounting   ＊With internal filter (P & CYL. hydraulic ports)

ø37.5

CYL. hydraulic port (secondary side)
O-ring P9 (fluorocarbon hardness Hs90)
Hydraulic pressure
Hydraulic pressure
P(R) hydraulic port (primary side)
O-ring P9 (fluorocarbon hardness Hs90)

19.5
39

Secondary side hydraulic pressure adjustment screw M8×1.25
Locknut M8
45
Min. 6
Max. 18
Mounting hole 2-ø9
119
17
39
68
33
22
22.5
9
18
6.8
31
7

Mounting details

Max. ø6 CLY. hydraulic port
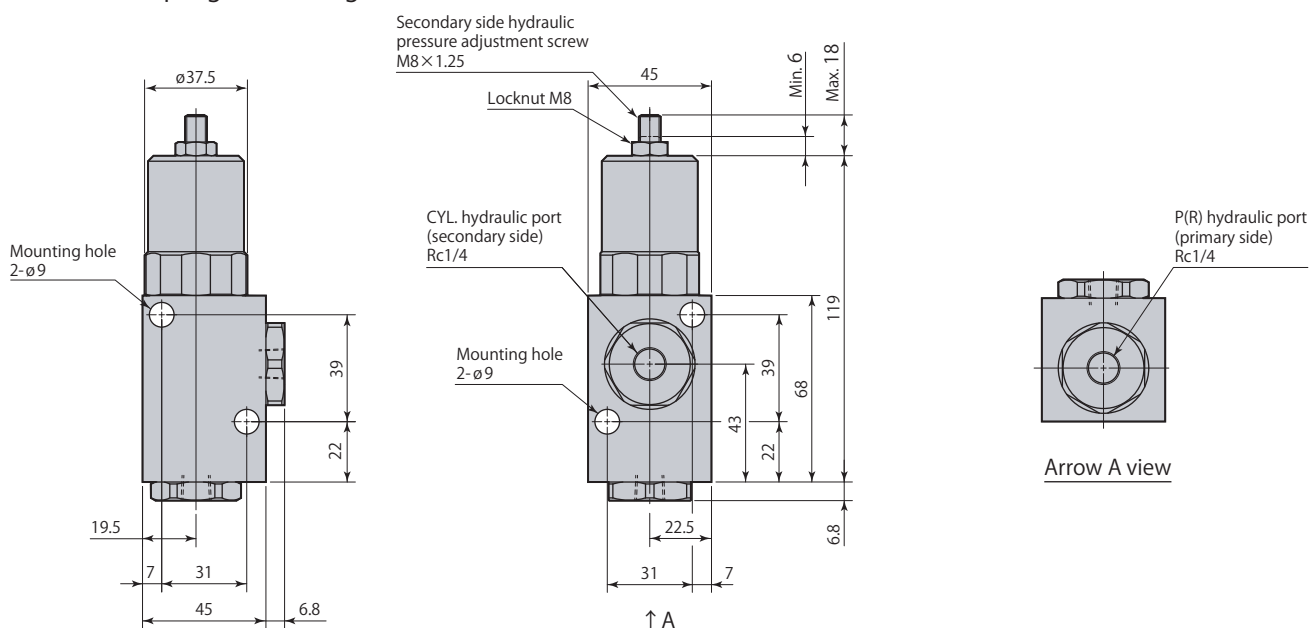2-M8
17
28
11
(68)
33
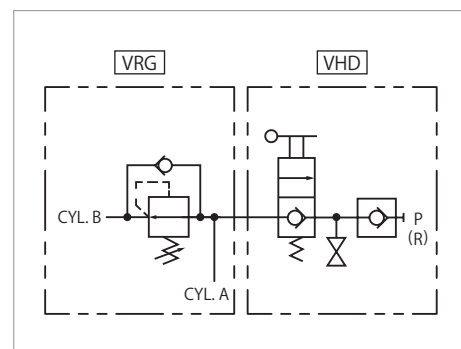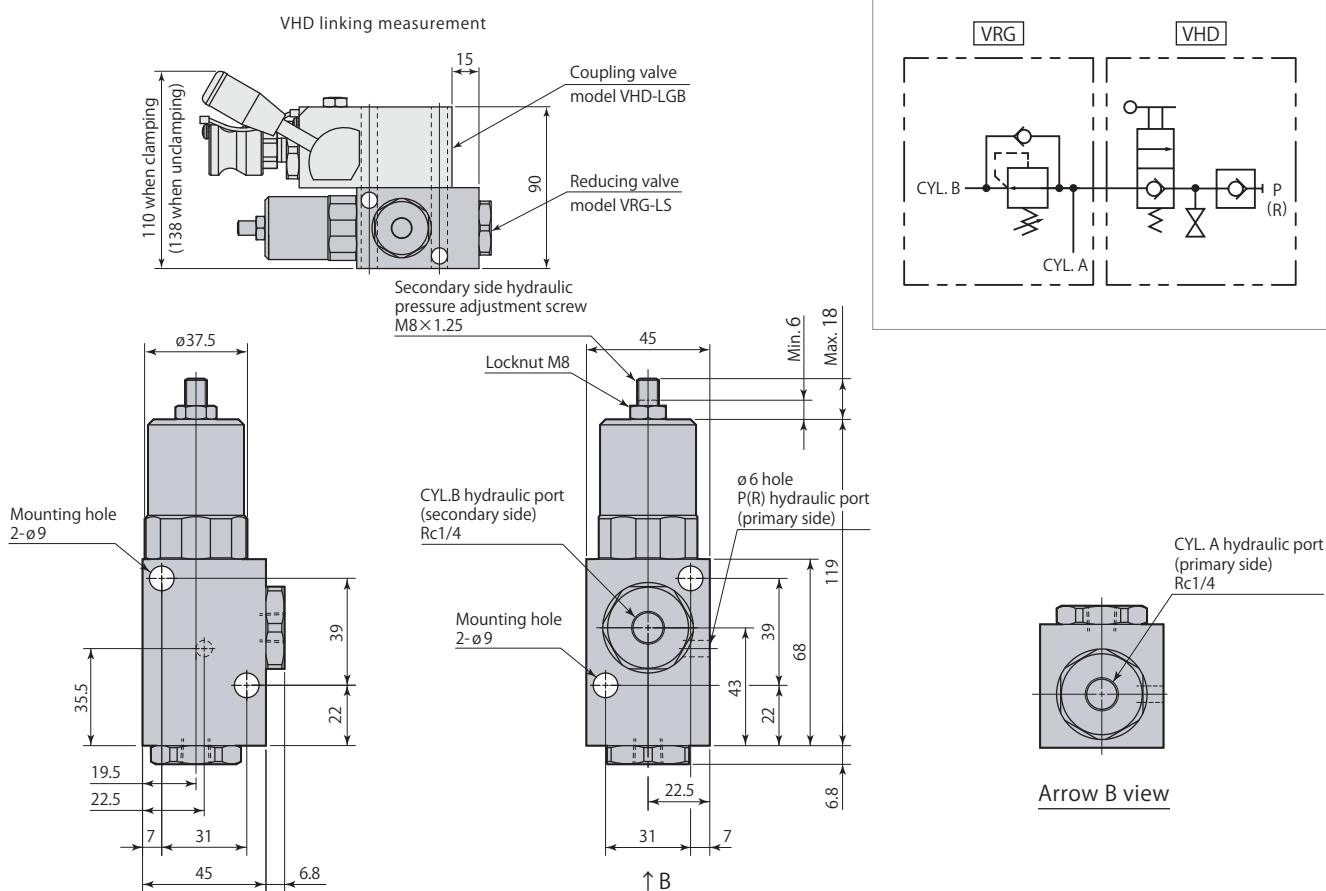Max. ø6 P(R) hydraulic port
9
18
20
11
(45)

For manifold piping, the mounting surface finish must be no rougher than Rz6.3 (ISO4287:1997).

Dimensions

VRG-LT Piping mounting ∗With internal filter (P & CYL. hydraulic ports)

Secondary side hydraulic pressure adjustment screw M8×1.25

Locknut M8

Min. 6 Max. 18

45

ø37.5

Mounting hole 2-ø9

39

22

19.5

7 31

45 6.8

CYL. hydraulic port (secondary side) Rc1/4

Mounting hole 2-ø9

119

68

39

43

22

31 7

22.5

6.8

↑ A

P(R) hydraulic port (primary side) Rc1/4

Arrow A view

VRG-LS VHD linking ∗With internal filter (P & CYL. hydraulic ports)

VHD linking measurement

15

110 when clamping (138 when unclamping)

90

Coupling valve model VHD-LGB

Reducing valve model VRG-LS

Secondary side hydraulic pressure adjustment screw M8×1.25

VRG		VHD

CYL. B

CYL. A

P (R)

Locknut M8

Min. 6 Max. 18

45

ø37.5

Mounting hole 2-ø9

39

35.5

22

19.5

22.5

7 31

45 6.8

CYL.B hydraulic port (secondary side) Rc1/4

Mounting hole 2-ø9

ø6 hole P(R) hydraulic port (primary side)

119

68

39

43

22

31 7

22.5

6.8

↑ B

CYL. A hydraulic port (primary side) Rc1/4

Arrow B view

● Structure is such that when pressure on secondary side (low pressure side) drops due to temperature change or oil leak, flow channel to primary side (high pressure side) is opened to replenish oil until pressure reaches set pressure.

● Pressure is not supplemented when primary side is separated from hydraulic pressure source.

● Mounting screws are not included.

Reducing valve

VRG