

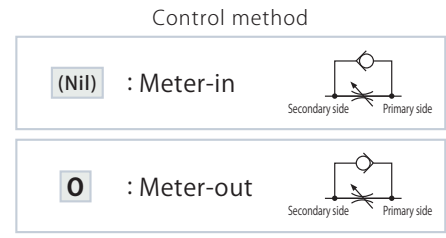
VCF □ - □	Flow control valve	Option
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Specifications



VCF

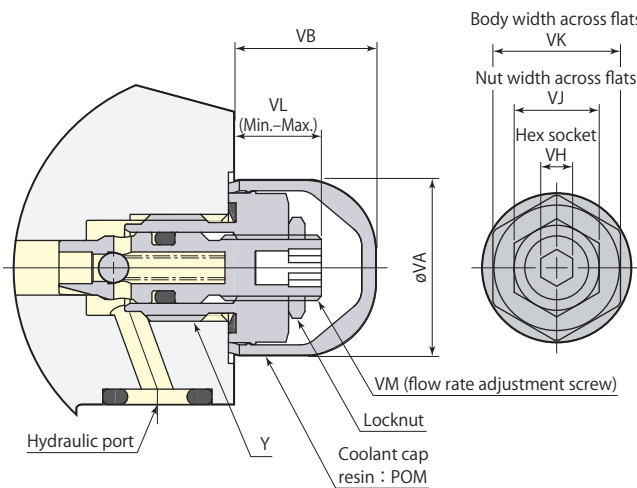
01S	: G1/8
01	: G1/8
02	: G1/4
03	: G3/8



Model	Meter-in				Meter-out				
	VCF01S	VCF01	VCF02	VCF03	VCF01S-O	VCF01-O	VCF02-O	VCF03-O	
G port size	G1/8	G1/8	G1/4	G3/8	G1/8	G1/8	G1/4	G3/8	
Cracking pressure	MPa	0.04	0.04	0.04	0.04	0.1	0.1	0.1	0.1
Orifice area	mm ²	4.9	4.9	9.6	19.6	3.1	3.1	6.2	12.6
Recommended tightening torque	N·m	10	10	30	35	10	10	30	35
Mass	kg	0.011	0.013	0.024	0.038	0.011	0.013	0.024	0.038

- Pressure range : 0.5–7 MPa
- Proof pressure : 10.5 MPa
- Operating temperature : 0–70 °C
- Fluid used : General mineral based hydraulic oil (ISO-VG32 equivalent)

Dimensions



Model	VCF01S VCF01S-O	VCF01 VCF01-O	VCF02 VCF02-O	VCF03 VCF03-O
Y	G1/8	G1/8	G1/4	G3/8
øVA	16	16	21	24
VB	13	13	13	14
VH	3	3	5	6
VJ	8	8	10	14
VK	12	12	17	19
VL	8–11	7–11	7.5–11.5	8.5–12.5
Adjustment screw number of turns	4 rotations	5.3 rotations	5.3 rotations	5.3 rotations
VM	M6×0.75	M6×0.75	M8×0.75	M10×0.75

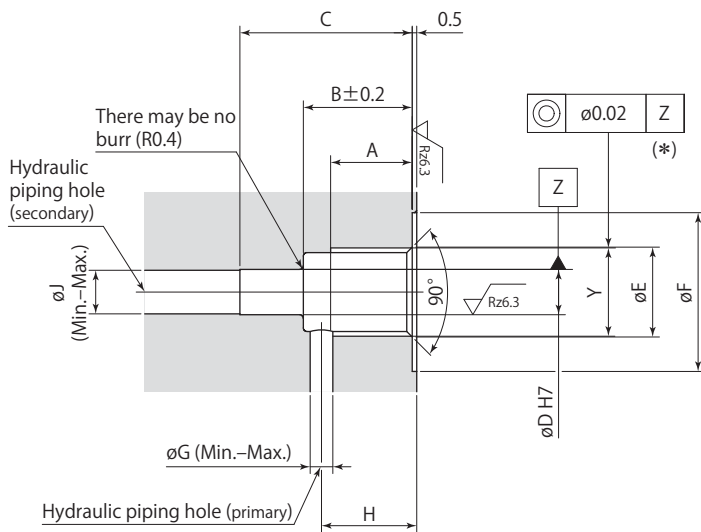
- Use a closed wrench or socket wrench for mounting and dismounting.
- Flow control valve can be mounted on hydraulic port (G port) when manifold piping.
- Adjust flow rate without hydraulic pressure. Conducting adjustments with hydraulic pressure may result in damaging seal.
- Diagram above indicates mounting for meter-in (VCF□).
- VCF is shipped with the valve fully open. Adjust the flow rate by loosening the screws after it is screwed in to close totally. Tighten the locknut after adjustment is completed.

Applicable clamp and work support

Model	VCF01S	VCF01	VCF02	VCF03
Swing clamp (double acting)	CTM03, 04, 05, 06 CTP04, 05, 06	CTM10 CTU01, 02, 04, 06	CTM16 CTU10, 16	CTU25
Swing clamp (single acting)*	CTN02, 04, 05, 06	CTT01, 02, 04, 06	CTN10, 16 CTT10, 16	CTT25
Swivel clamp (double acting)*	CTS04	CTS06	CTS10, 16	–
Link clamp (double acting)	CLM03, 04 CLP04, 05, 06	CLM05, 06, 10 CLU02, 04, 06	CLM16 CLU10, 16	CLU25
Link clamp (single acting)*	CLN04	CLN05, 06 CLT02, 04, 06	CLN10, 16 CLT10, 16	CLT25
Work lift cylinder	CNB01	CNB02, 04	–	–
Push, pull cylinder	–	CNA02, 04, 06	CNA10, 16	CNA25
Work support*	CSU CSP-D(CSN, CSY)	–	–	–

* : Single acting swing clamp, swivel clamp, single acting link clamp and work support are meter-in only.

Mounting details



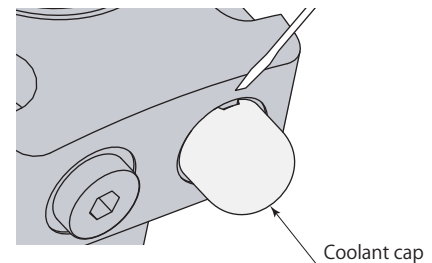
Rz: ISO4287(1997)

Model	mm			
	VCF01S VCF01S-O	VCF01 VCF01-O	VCF02 VCF02-O	VCF03 VCF03-O
A	9	9	13	13
B	11	13	18	19
C	15.5	17.5	22.5	23.5
ϕD	$5^{+0.012}_0$	$5^{+0.012}_0$	$6^{+0.012}_0$	$8^{+0.015}_0$
ϕE	9.9	9.9	13.3	16.8
ϕF	17.5	17.5	21.5	24.5
ϕG	1.5-2	2.5-3	3.5-5	5-6
H	9-10	9.5-11.5	14.5-15.5	15-16
ϕJ	2.5-5	2.5-5	3.5-6	5-8
Y	G1/8	G1/8	G1/4	G3/8

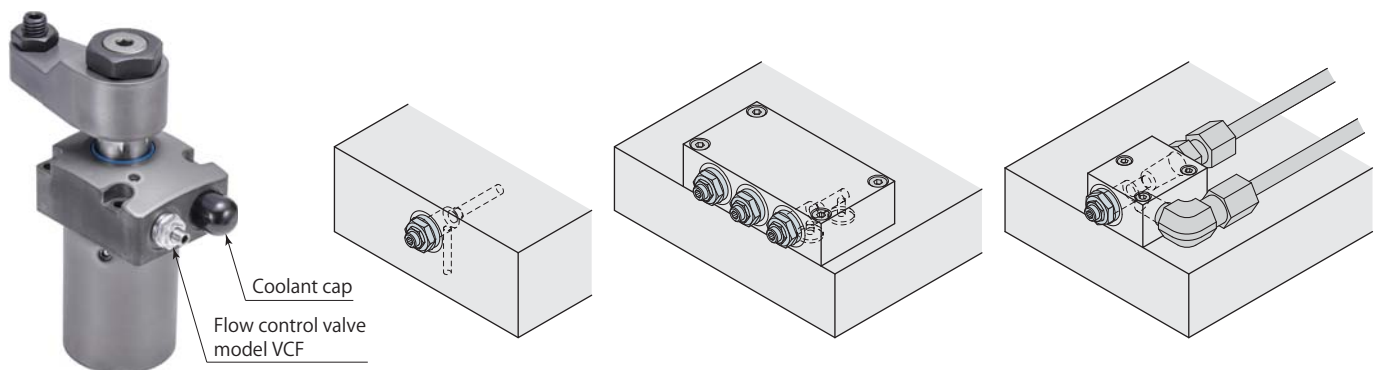
*: Concentricity is required when machining ϕD and Y-portion thread. Misalignment or machining defect may cause the trouble of installation and adjusting flow rate.

Mounting & dismounting of flow control valve, air bleeding valve

- When mounting or dismounting a flow control valve or air bleeding valve, be sure to set pressure within hydraulic circuit to 0 MPa before starting.
- When mounting a flow control valve or air bleeding valve, be sure to tighten it with the recommended tightening torque.
- When mounting a coolant cap (resin:POM), firmly press the body of cover. If it is not mounting properly, use a plastic mallet to tap it into place.
- When dismounting a coolant cap, use a sharp-pointed tool such as a precision screw driver by hooking the notched portion.



Mounting example



Cylinder mounting

Pallet mounting

Block mounting ①

Block mounting ②

Specifications

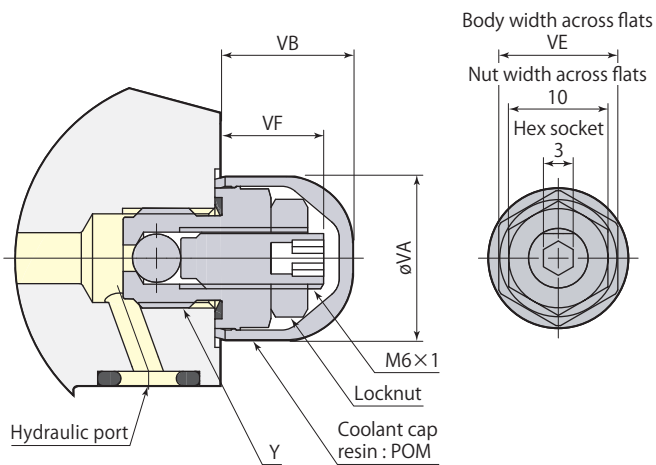


G port size

01 : G1/8**VCE 02** : G1/4**03** : G3/8

Model	VCE01	VCE02	VCE03
G port size	G1/8	G1/4	G3/8
Recommended tightening torque N·m	10	30	35
Mass kg	0.017	0.029	0.044
Pressure range MPa	0–50		
Operating temperature °C	0–70		
Fluid used	General mineral based hydraulic oil (ISO-VG32 equivalent)		

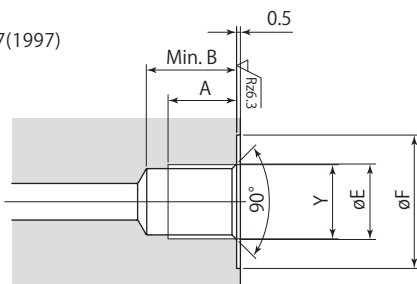
Dimensions



Model	VCE01	VCE02	VCE03
A	9	13	13
B	10	14	14
øE	9.9	13.3	16.8
øF	17.5	21.5	24.5
Y	G1/8	G1/4	G3/8
øVA	16	21	24
VB	13	13	14
VE	12	17	19
VF	10.5	10.5	11.5

Mounting details

Rz: ISO4287(1997)



- Use a closed wrench or socket wrench for mounting and dismounting.
- Air bleeding valve can be mounted on hydraulic port (G port) when manifold piping.

Applicable clamp and work support

Model	VCE01	VCE02	VCE03
Swing clamp (double acting)	CTM03, 04, 05, 06, 10 CTP04, 05, 06 CTU01, 02, 04, 06	CTM16 CTU10, 16	CTU25
Swing clamp (single acting)	CTN02, 04, 05, 06 CTT01, 02, 04, 06	CTN10, 16 CTT10, 16	CTT25
Swivel clamp (double acting)	CTS04, 06	CTS10, 16	–
Link clamp (double acting)	CLM03, 04, 05, 06, 10 CLP04, 05, 06 CLU02, 04, 06	CLM16 CLU10, 16	CLU25
Link clamp (single acting)	CLN04, 05, 06 CLT02, 04, 06	CLN10, 16 CLT10, 16	CLT25
Work lift cylinder	CNB01, 02, 04	–	–
Push, pull cylinder	CNA02, 04, 06	CNA10, 16	CNA25
Work support	CSU CST CSP-D(CSN, CSY, CSK)	–	–