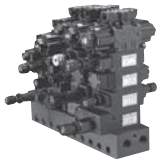
Modular Valve Series

5.2 to 79 gpm
3000, 3600, 5000 psi

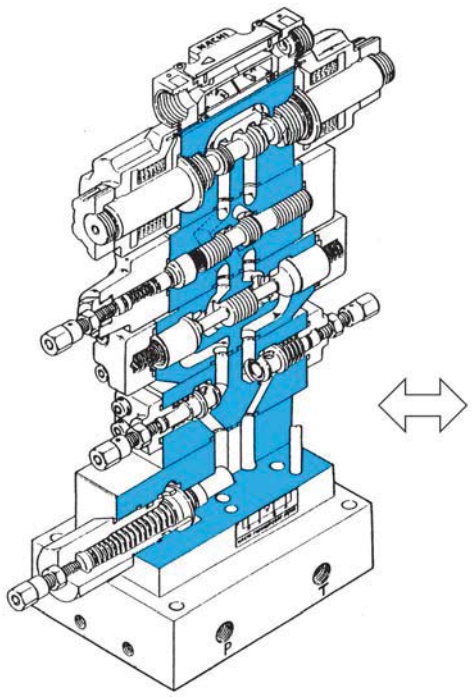


Overview

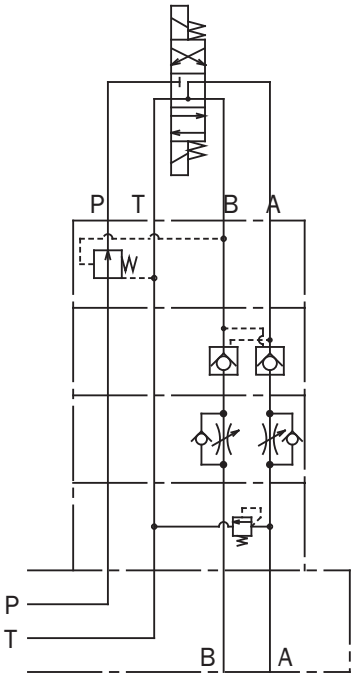
The modular valve is designed and engineered to integrate multiple hydraulic valve operations into a single unit, which eliminates the need for piping between valves and enables configuration of a circuit using a single modular valve. The result is an innovative valve system whose energy and materials efficiency provide advantages in terms of compact configuration, reliability, and more.
The illustrations below show one example of a circuit configuration using this system.

Features

1 High pressure and high volume.
Available maximum operating pressure operations are 3000, 3600, and 5000 psi, while maximum control flow rates are G01 13 gpm, G03 26 gpm, G04 79 gpm.
2 Ganging and bolting format allows for quick and easy circuit configuration as well as circuit changes and additions.
3 Compact module configurations greatly reduce space requirements.
4 Maintenance costs are also reduced because less piping and fewer couplings mean less need for acid rinsing and flushing of pipes.
5 Fewer fluid leak problems due to pipe resonance, noise, and loose couplings.
6 Circuit configuration is simple yet exact. Nameplates on the side of the valve show ISO codes that make it quick and easy to determine its performance.
7 A full lineup of models is available to meet a wide range of needs and circuit configurations: Model G01 (D03), G03 (D05), G04 (D07).



Integrated Structural Diagram



Integrated Circuit Diagram

Specifications

Name	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Gasket Surface Dimensions	Possible Number of Ganged Valves (Note 2)
01 Series	1/8	3600 (Note 1)	13	ISO 4401-03-02-0-94	1 to 4
03 Series	3/8	3600 (Note 1)	26	ISO 4401-05-04-0-94	1 to 4
04 Series	1/2	5000	79	ISO 4401-07-06-0-94	1 to 3 (Note 3)

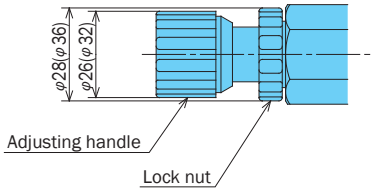
Note) 1. The M35 Series is available as a 5000 psi maximum operating pressure version of the 01 and 03 Series.
For details, see pages F92 and F93.
2. The number of ganged valves does not include solenoid valves.
3. Up to four valves can be ganged together if the maximum operating pressure is less than 3000 psi.

K Series Modular Valve

The valve shown in the photograph is available with nominal diameter 01 and 03 size adjusting bolts. Use the following format for specification.

Example: OCY–G01–W–Y–K–20

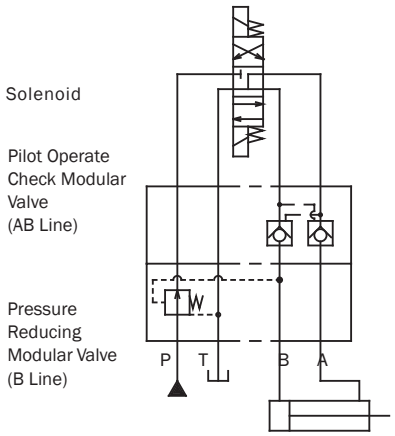
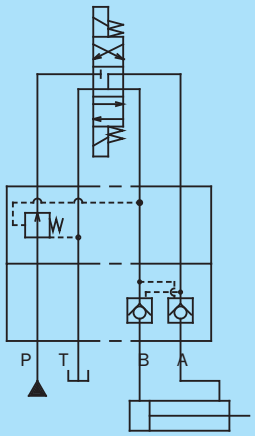
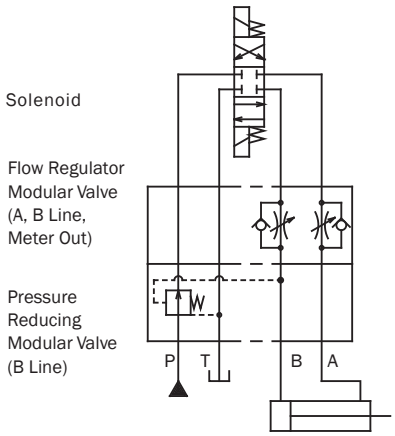
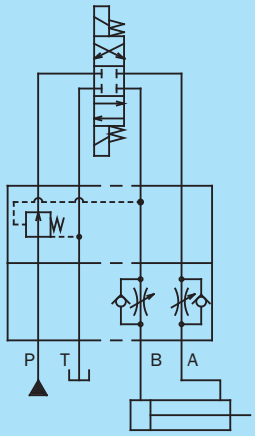
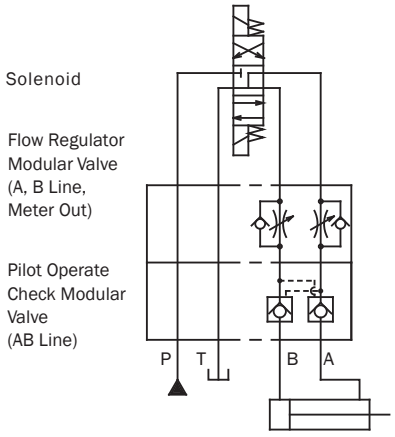
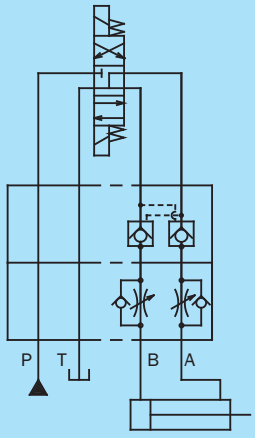
Auxiliary symbol
K: With handle



Dimensions in parentheses indicate nominal diameter 03.

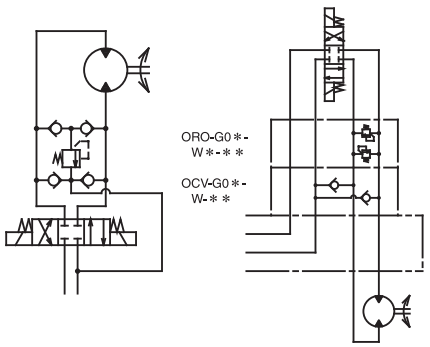
Precautions when Ganging Modular Valves

Note the following precautions when ganging modular valves together in the applicable example circuits.

Circuit Diagram	Description	Incorrect	Correct
Locking Circuit and Pressure Reducing Circuit	●Cylinder position not maintained ○Leaks occur because, during the pilot check, the line being maintained flows into the pilot line of the reducing valve.		
Pressure Reduction Circuit with Speed Control	●Insufficient cylinder output and drop in speed ○Pressure increases due to the restrictor effect of the flow regulator. Since the pilot runs from that line, pressure reduction makes smooth operation impossible.		
Locking Circuit and Speed Control Circuit	●Cylinder knocking ○Pressure is increased by the restrictor effect of the flow regulator. That pressure moves the pilot check in the closed direction, which causes the valve to repeatedly open and close.		

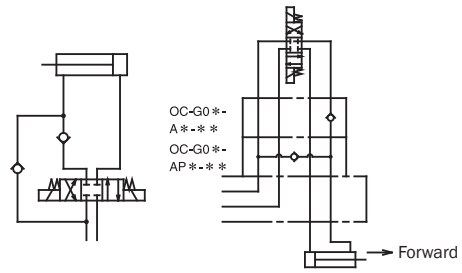
Valve Ganging Configuration Examples

Anti-cavitation Circuit G 01 03



- Surge pressure is prevented by the inertia of the actuator, and cavitation by fluid being sucked in through the opposite port, which is in negative pressure, is prevented.
- Example Valve Model Numbers (G03)
  Relief Valve ———— 0R0-G03-W*-J50
  Vacuum Check Valve —— 0CV-G03-W-J50

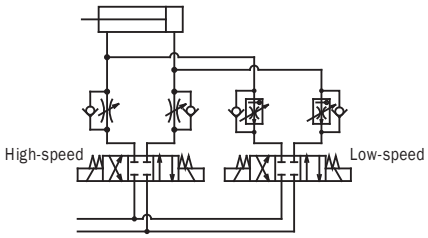
Differential Circuit G 01 03

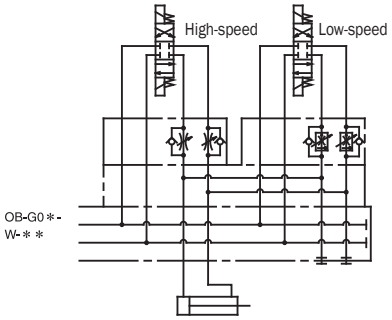


- When the cylinder advances, the rod side return fluid returns to the P port and the pump discharge rate and confluence are advanced at high speed (differential).
- Example Valve Model Numbers (G03)
  Check valve ———— 0C-G03-A*-J50
  Differential check valve —— 0C-G03-AP*-J50

  Important:
  Cylinder effective output is the rod surface area portion only.

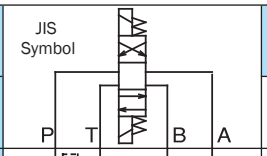
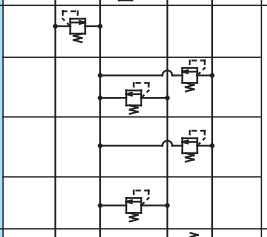
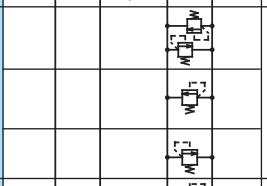
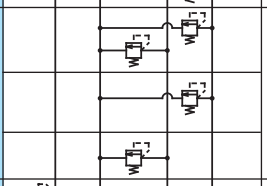
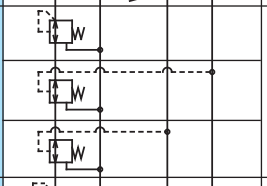
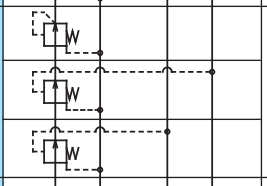
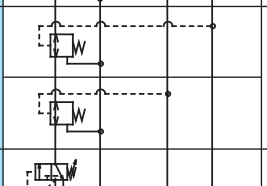
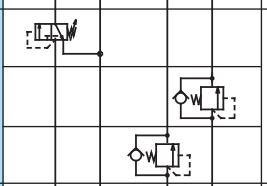
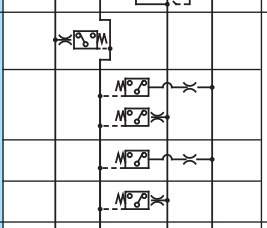
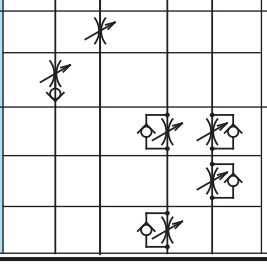
2-speed Circuit G 01 03





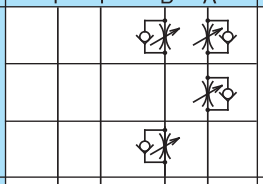
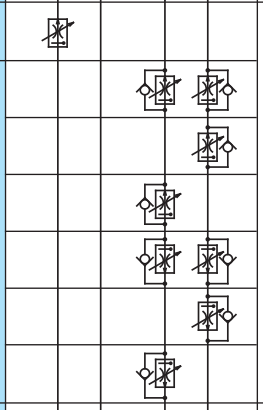
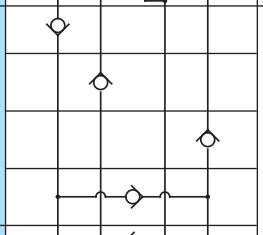
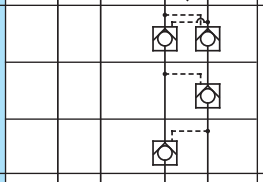
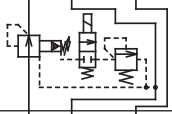
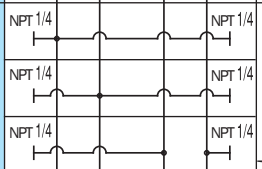
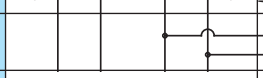
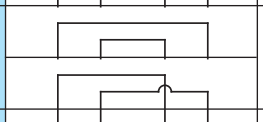
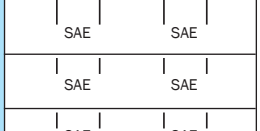
- This type of circuit allows variation between two actuator speeds. It prevents low-speed shock when the actuator starts up or stops, and it used when the intermediate stroke is operated at high speed.
- Example Valve Model Numbers (G03)
  2-speed Plate ———— 0B-G03-W-(H)-J30
  High-speed Flow Regulator Valve —— 0CY-G-03-W-Y-J51
  Low-speed Flow Control Valve ——— 0CF-G03-W60-Y-J50

G01 Modular Valve Series

Type	Name	Valve Model Number	Pressure Adjustment Range (Check Valve Cracking Pressure) psi	Maximum Flow Rate gpm	JIS Symbol	Height in	Weight lbs	Catalog Page
Solenoid Valves	Solenoid Valve	SS-G01-**-R-**-31 SA-G01-**-**-31		13				D-4 D-16
Pressure Control Valves	Relief Valves (Balance Type)	OR-G01-P $\frac{1}{3}$-20	1: 145 to 1000 3: 500 to 3600	13		1.57	3.3	F-10
		-W $\frac{1}{3}$-20					5.0	
		-A $\frac{1}{3}$-21					3.5	
		-B $\frac{1}{3}$-21						
	Brake Valves (Direct Type)	ORO-G01-W $\frac{1}{3}$-20	1: 115 to 1000 3: 500 to 3600	5.2		1.57	3.3	F-16
		-A $\frac{1}{3}$-20					3.0	
		-B $\frac{1}{3}$-20						
	Direct Relief Valves (Direct Type)	ORD-G01-W $\frac{1}{3}$-20	1: 115 to 1000 3: 500 to 3600	5.2		1.57	3.3	F-20
		-A $\frac{1}{3}$-20					3.0	
		-B $\frac{1}{3}$-20						
	Reducing Valves (Direct Type)	OG-G01-P $\frac{C}{2}$ 1-21	C: 20 to 500 1: 115 to 1000 2: 500 to 3000	13		1.57	2.8	F-25
		$\frac{C}{2}$ 1-21						
		$\frac{C}{2}$ 1-21						
	Balance Type Reducing Valves	OGB-G01-P $\frac{C}{3}$ 1-20	C: 20 to 500 1: 115 to 1000 3: 500 to 3000	10.5		1.57	4.1	F-32
		-A $\frac{C}{3}$ 1-20						
		-B $\frac{C}{3}$ 1-20						
	Reducing Valves (Direct Type)	OG-G01-A $\frac{C}{2}$ 1-E21	C: 20 to 500 1: 115 to 1000 2: 500 to 3000			1.57	2.8	F-34
		OG-G01-B $\frac{C}{2}$ 1-E21						
	Pressure Control Valves (Sequence Valves)	OQ-G01-P2 $\frac{1}{3}$-20	1: 115 to 1000 3: 500 to 3000	10.5		1.57	2.4	F-44
	Pressure Control Valves (Counter Balance Valves)	OCQ-G01-A1 $\frac{1}{2}$-20	1: 115 to 1000 2: 500 to 2000					F-47
		-B1 $\frac{1}{2}$-20						
	Pressure Switches	OW-G01-P $\frac{C}{3}$ 1-R-**-30	C: 72 to 500 1: 115 to 1000 3: 500 to 3000 Contact Capacitance AC 125V:5A DC 12V:2.2A DC 24V:1.1A	13		1.57	3.9	F-52
		-W $\frac{C}{3}$ 1-R-**-30					5.7	
		-A $\frac{C}{3}$ 1-R-**-30					3.9	
		-B $\frac{C}{3}$ 1-R-**-30						
Flow Control Valve	Flow Regulator Valve	OY-G01-T-20		13		1.57	2.2	F-55
	Flow Regulator Valves with Check	OCY-G01-P-20	5.8					
	Meter-Out Flow Regulator Valves	OCY-G01-W-Y-20	11.6	13			2.8	F-55
		-A-Y-20					2.6	F-63
		-B-Y-20						

F Modular Valves

G01 Modular Valve Series

Type	Name	Valve Model Number	Pressure Adjustment Range (Check Valve Cracking Pressure) psi	Maximum Flow Rate gpm	JIS Symbol P T B A	Height in	Weight lbs	Catalog Page
Flow Control Valves	Meter-in Flow Regulator Valve	OCY-G01-W-X-20	11.6	13		1.57	2.8	F-55
		-A-X-20					2.6	
		-B-X-20						
	Flow Control Valve (compensated)	OF-G01-P20-20	(Control Flow Rate) Differential Pressure 1000: 2.6 to 10.5 Differential Pressure 3000: .13 to 10.5				2.6	F-63
	Meter-out Flow Control Valves (compensated)	OCF-G01-W40-Y-30	115	10.5			3.7	
		-A40-Y-30					3.3	
		-B40-Y-30						
	Meter-in Flow Control Valves (compensated)	OCF-G01-W40-X-30	(Control Flow Rate) Differential Pressure 1000: 2.6 to 10.5 Differential Pressure 3600: .13 to 10.5				3.7	
		-A40-X-30					3.3	
		-B40-X-30						
Direction Control Valve	Check Valves	OC-G01-P $\frac{1}{3}$ 2-20	Cracking pressure 1: 5.8 2: 50 3: 72 *For differential circuit	13		1.57	2.2	F-69
		T $\frac{1}{3}$ 2-20					2.6	
		-A $\frac{1}{3}$ 2-21 *					2.2	
		-AP $\frac{1}{3}$ 2-20 *						
	Vacuum Check Valves	OCV-G01-W-20	2	13				
	Pilot Check Valves	OCP-G01-W $\frac{1}{2}$-(F)-21	Cracking pressure 1: 29 2: 72 (Auxiliary Symbol) Open Valve Ratio Standard: Parent Valve 37% F: Child Valve 6% : Parent Valve 51%	13		1.57	2.6	F-76
		-A $\frac{1}{2}$-(F)-21						
		-B $\frac{1}{2}$-(F)-21						
Composite Valves	2-pressure Reducing Valves	OGS-G01-P $\frac{C}{1}$ C-K(R)-**-22 High pressure side Low pressure side Power supply : C1, C2, D1, D2	C: 29 to 500 1: 115 to 1000 2: 500 to 2000	10.5		3.5	10.5	F-41
Other	Gauge Modular Blocks	OK-G01-P-(H)-E20		13		1	1.3	F-81
		-T-(H)-E20						
		-W-(H)-E20						
	2-speed Plates	OB-G01-W-(H)-20		13				
	End Plates	MOB-G01-(H)-10		–		20 1.41	0.3 0.6	F-85
	Free-flow plate	MOB-G01-A-10		13		1.41	0.6	
		-B-10						
	Base Blocks (Multi-block)	MOB -01X-B*-10	B: A, B ports * : Sequential number from 2 to 6 Single side outlet			–	–	F-90
		-01Y-W*-10	W: A, B ports Sequential number from 1 to 6 Dual side outlet					
	Sub Plate	MSA-01Y-10 MSA-01Y-T-10	None: Back side outlet T: Side outlet					H-4

G03 Modular Valve Series

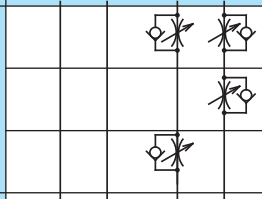
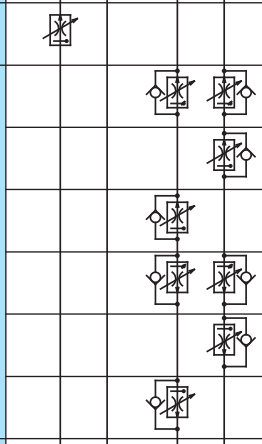
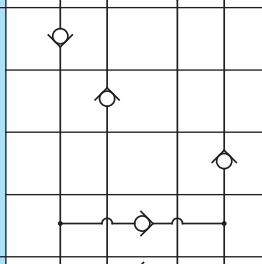
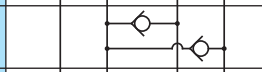
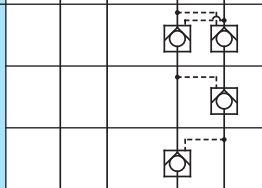
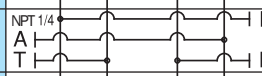
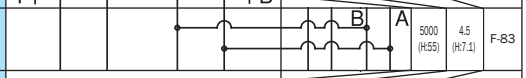
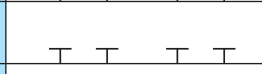
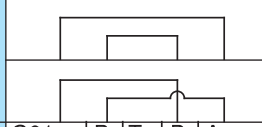
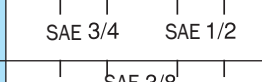
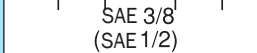
Type	Name	Valve Model Number	Pressure Adjustment Range (Check Valve Cracking Pressure) psi	Maximum Flow Rate gpm	JIS Symbol	Height in	Weight lbs	Catalog Page
Solenoid Valves	Solenoid Valves	SS-G03-**-R-**-E21-21 SA-G03-**-** -E21-21		26	P T B A			D-4 D-16
Pressure Control Valve	Relief Valves (Balance Type)	OR-G03-P $\frac{1}{3}$-E50	1: 1000 3: 500 to 3600 (Auxiliary Symbol) V: With vent port	21		2.1	6.8	F-10
		-W $\frac{1}{3}$-E50					8.5	
		-A $\frac{1}{3}$-E50					6.8	
		-B $\frac{1}{3}$-E50						
		OR-G03-P $\frac{1}{3}$-V-J50			V		6.8	
	Brake Valves (Direct Type)	ORO-G03-W $\frac{1}{3}$-J50	1: 115 to 1000 3: 500 to 3600	7.9		2.1	10.5	F-16
		-A $\frac{1}{3}$-J50					8.8	
		-B $\frac{1}{3}$-J50						
	Direct Relief Valves (Direct Type)	ORD-G03-W $\frac{1}{3}$-J50	1: 115 to 1000 3: 500 to 3600	7.9		2.1	8.5	F-20
		-A $\frac{1}{3}$-J50					6.8	
		-B $\frac{1}{3}$-J50						
	Reducing valve	OG-G03-P $\frac{C}{3}$ 1-(B)-E51	C: 36 to 500 1: 115 to 1000 3: 500 to 3000	21 However, C: 13	DR	2.1	7.9	F-25
		-A $\frac{C}{3}$ 1-(B)-E51			DR			F-34
		-B $\frac{C}{3}$ 1-(B)-E51			DR			
	Pressure Control Valves (Sequence Valves)	OQ-G03-P2 $\frac{A}{E}$ C-J50	A: 36 to 125 C: 125 to 500 E: 500 to 2000	21		2.1	7.7	F-44
	Pressure Control Valves (Counter Balance Valves)	OCQ-G03-A1 $\frac{A}{E}$ C-J50				2.1		F-47
		-B1 $\frac{A}{E}$ C-J50						
Flow Control Valve	Flow Regulator Valve	OCY-G03 -P -P-H -J50	(Function) H: High differential pressure regulator 14.5	26		2.1	6.3	F-55
	Meter-Out Flow Regulator Valves	-W-Y -W-HY -J51					6.8	
		-A-Y -A-HY -J51					6.6	
		-B-Y -B-HY -J51						

*There is no problem with seals and other parts when mixing these valves with NACHI G03 modular valve design number (J) 30 valves.

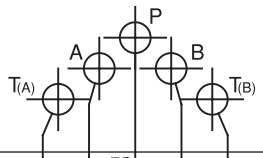
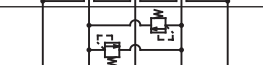
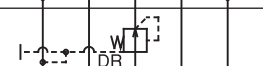
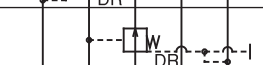
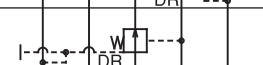
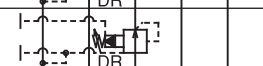
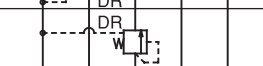
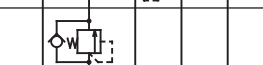
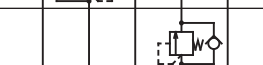
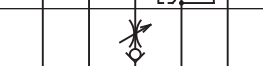
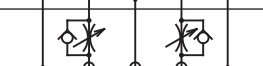
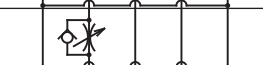
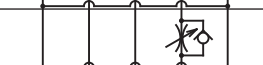
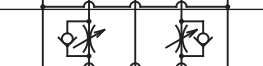
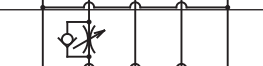
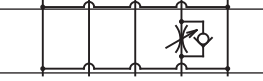
*G03 module valve installation bolts
For M6: Design number J50
For M8: Design number 50
For E: 1/4 - 20UNC
Unit has commonality. Also, two J-pins have been inserted diagonally for M6 applications.

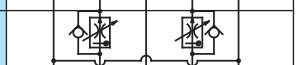
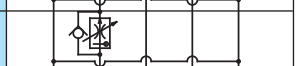
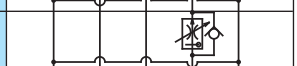
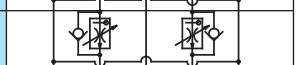
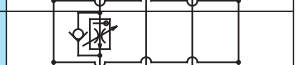
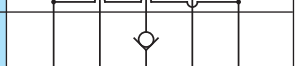
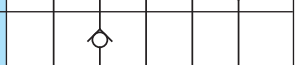
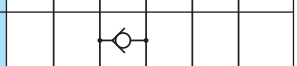
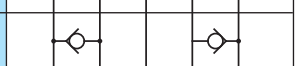
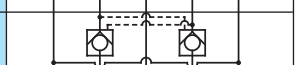
Note: G03 series modular valves have two T port locations: one on the A port side T (A) and one on the B port side T (B). The port that is used depends on the model number.

G03 Modular Valve Series

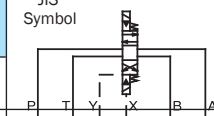
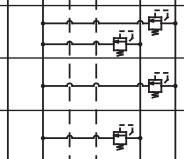
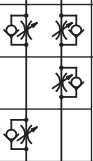
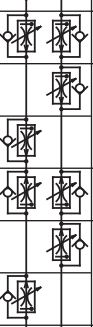
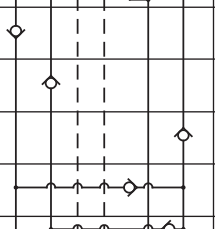
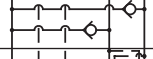
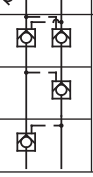
Type	Name	Valve Model Number	Pressure Adjustment Range (Check Valve Cracking Pressure) psi	Maximum Flow Rate gpm	ISO Symbol	Height in	Weight lbs	Catalog Page
Flow Control Valve	Meter-in Flow Regulator Valve	OCY-G03 -W-X / -W-HX -J51	(Function) H: High differential pressure regulator; 14.5	26		2.16	6.8	F-55
		-A-X / -A-HX -J51					6.6	
		-B-X / -B-HX -J51						
	Flow Control Valve (compensated)	OF-G03-P60-J50	(Control Flow Rate) Differential Pressure 1000: .07 to 15.8; Differential Pressure 3600: .13 to 15.8			2.16	6.8	F-63
	Meter-out Flow Control Valves (compensated)	OCF-G03-W60-Y-J50	15.8				11	
		-A60-Y-J50					10.1	
		-B60-Y-J50						
	Meter-in Flow Control Valves (compensated)	OCF-G03-W60-X-J50	(Volume control flow rate) Differential Pressure 1000: .13 to 15.8; Differential Pressure 3600: .02 to 15.8				11	
		-A60-X-J50					10.1	
		-B60-X-J50	(0.1{1})					
Direction Control Valve	Check Valves	OC-G03-P 1/2/3-J50	Cracking pressure 1: 5.8; 2: 50; 3: 72; *For differential circuit	26		2.16	5.9	F-69
		T 1/2/3-J50						
		-A 1/2/3-J50 *						
		-AP 1/2/3-J50 *						
	Vacuum Check Valves	OCV-G03-W-J50	2.1	26		2.16	7.7	F-69
	Pilot Check Valves	OCP-G03-W 1/2-(D)-J50	Cracking pressure 1: 29; 2: 72 (Auxiliary Symbol) Open Valve Ratio Standard : Child Valve 7% : Parent Valve 49% D : Parent Valve 49%	26		2.16	7.9	F-76
		-A 1/2-(D)-J50						
		-B 1/2-(D)-J50						
Other	Gauge Block	OK-G03-E50		26		2.16	5.0	F-81
	2-speed Plates	OB-G03-W-(H)-J30		26				F-83
	End Plates	MOB-G03-J50: For M6 MOB-G03-(H)-50: For M8		–		1.25 (H:58)	1.4 (H:2.5)	F-85
	Free Flow	MOB-G03-A-J50: For M6 MOB-G03-A-(H)-50: For M8		26		1.25 (H:58)	1.3 (H:2.3)	
		MOB-G03-B-J50: For M6 MOB-G03-B-(H)-50: For M8						
	Conversion plate (For 03/01 conversion)	MOB-G03-AA-50 MOB-G03-AA-J50		13		1.77	5.0	
	Base Blocks	MOB-03-B*-J30	*:Sequential number from 2 to 5 A, B port dual side outlet			–	–	F-91
	Sub Plate	MSA-03-E10 MS-03(X)-E10 MSA-03(X)-T-E10 MS-03(X)-T-E10	Bottom Outlet Bottom Outlet Side outlet Side outlet					D-9 H-5

G03 Modular Valve Series Detailed ISO Symbols

Type	Valve Model Number	Detailed ISO Symbols
Solenoid Valves	For M6, M8 SS-G03-**-R-**-E21 -21 SA-G03-**-** -E21 -21	
Pressure Control Valve	OR-G03-P 1/3-E50	
	OR-G03-W 1/3-E50	
	OR-G03-A 1/3-E50	
	OR-G03-B 1/3-E50	
	OR-G03-P 1/3-V-J50	
	ORO-G03-W 1/3-E50	
	ORO-G03-A 1/3-J50	
	ORO-G03-B 1/3-J50	
	ORD-G03-W 1/3-J50	
	ORD-G03-A 1/3-J50	
	ORD-G03-B 1/3-J50	
	OG-G03-P C 1-(B)-E51 3	
	OG-G03-A C 1-(B)-E51 3	
	OG-G03-B C 1-(B)-E51 3	
	OG-G03-P C 1-(B)V-J51 3	
	OQ-G03-P2 A C-J50 E	
	OCQ-G03-A1 A C-J50 E	
	OCQ-G03-B1 A C-J50 E	
Flow Control Valve	OCY-G03-P-J50	
	OCY-G03-W-Y-J51	
	OCY-G03-A-Y-J51	
	OCY-G03-B-Y-J51	
	OCY-G03-W-X-J51	
	OCY-G03-A-X-J51	
	OCY-G03-B-X-J51	

Type	Valve Model Number	Detailed ISO Symbols
		T(A) A P B T(B)
Flow Control Valve	OF-G03-P60-J50	
	OCF-G03-W60-Y-J50	
	OCF-G03-A60-Y-J50	
	OCF-G03-B60-Y-J50	
	OCF-G03-W60-X-J50	
	OCF-G03-A60-X-J50	
	OCF-G03-B60-X-J50	
Direction Control Valve	OC-G03-P 1 2-J50 3	
	OC-G03-T 1 2-J50 3	
	OC-G03-A 1 2-J50 3	
	OC-G03-AP 1 2-J50 3	
	OCV-G03-W-J50	
	OCP-G03-W 1/2-J50	
	OCP-G03-A 1/2-J50	
	OCP-G03-B 1/2-J50	
	OK-G03-J50	
Other	OB-G03-W-J30	
	MOB-G03-(H)-50 MOB-G03-J50	
	MOB-G03-A-(H)-50 MOB-G03-A-J50	
	MOB-G03-B-(H)-50 MOB-G03-B-J50	
	MOB-G03-AA-50 MOB-G03-AA-J50	
	MOB-03X-B*-50 MOB-03X-B*-J50	
	MS-03(X)-30 MSA-03(X)-10 MS-03(X)-T-10 MSA-03(X)-T-10	

G04 Modular Valve Series

Type	Name	Valve Model Number	Maximum Working psi	Maximum Flow Rate gpm	Pressure Adjustment Range (Check Valve Cracking Pressure) psi	JIS Symbol	Weight lbs	Catalog Page
Solenoid Valves	Solenoid Control Valves	DSS-G04-****-R-**-21	35MPa 5000	79			33	D-41
Pressure Control Valve	Relief valve	ORH-G04-P 1/3-10/5	35MPa 5000	79	1: 115 to 1000 3: 500 to 3600		15.4	F-10
	Direct Relief Valves	ORH-G04-DW- 1/3-10/5		13.2	1: 115 to 1000 3: 500 to 3600 5: 1000 to 5000		14.3	F-20
		ORH-G04-DA 1/3-10/5						
		ORH-G04-DB 1/3-10/5						
	Reducing valve	OGH-G04-P 1/3-(B)-10		79	1: 115 to 1000 3: 500 to 3600 (Auxiliary Symbol) B: External drain		17.6	F-25
		OGH-G04-A 1/3-(B)-10					17.6	F-32
		OGH-G04-B 1/3-(B)-10						
	Counter Balance Valves	OQH-G04-A1 A/C-10/E		79	A: 36 to 125 C: 72 to 500 E: 290 to 2000		17.6	F-47
		OQH-G04-B1 A/C-10/E					17.6	
Flow Control Valve	Flow Regulator Valves	OYH-G04-P-10		79	Check Valve Cracking Pressure 5.8		10.3	F-55
	Meter-in Flow Regulator Valve	OYH-G04-W-X-10		79	Check Valve Cracking Pressure 14.5		14.3	F-55
		OYH-G04-A-X-10					14.3	
		OYH-G04-B-X-10						
	Meter-Out Flow Regulator Valves	OYH-G04-W-Y-10					14.3	
		OYH-G04-A-Y-10					14.3	
		OYH-G04-B-Y-10						
	Meter-in Flow Control Valves	OFH-G04-W200-X-10		52.8	Check Valve Cracking Pressure 14.5		24.4	F-63
		OFH-G04-A200-X-10					22.5	
		OFH-G04-B200-X-10						
	Meter-out Flow Control Valves	OFH-G04-W200-Y-10					24.4	
		OFH-G04-A200-Y-10					22.5	
		OFH-G04-B200-Y-10						
Direction Control Valve	Check Valves	OCH-G04-P 1/2-10/3		79	1: 5.8 2: 50 3: 72		9.9	F-69
		OCH-G04-T 1/2-10/3					14.3	
		OCH-G04-A 1/2-10/3					9.9	
		OCH-G04-AP 1/2-10/3					9.9	
	Vacuum Check Valves	OVH-G04-W-10		79	14.5		14.3	F-69
	Pilot Check Valves	OPH-G04-W 1/2-(D)-10		79	1: 29 2: 72 (Auxiliary Symbol) Open Valve Ratio Standard : Child Valve 7% : Parent Valve 50% D : Parent Valve 50%		15	F-76
		OPH-G04-A 1/2-(D)-10						
		OPH-G04-B 1/2-(D)-10						

The G04 series modular valves do not have an L (DR_2) drain port, so they cannot be used in combination with pressure center type solenoid valves (D).

Relief Modular Valve

13 to 79 gpm
3600 to 5000 psi

Features

This modular relief valve provides maximum pressure control for a hydraulic circuit.

Wide ranging applicability Maximum Operating Pressure: 3600 to 5000 psi Pressure Adjustment Range: 115 to 3600, 5000.

Shockless unload, 2-pressure control, and other configurations are possible by switching the solenoid valve. Contact your agent for details.

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Pressure Adjustment Range psi	Weight lbs	Gasket Surface Dimensions
OR-G01-P1-20 P3	1/8	3600	13	* to 1000 500 - 3600	3.3	ISO 4401-03-02-0-94
OR-G01-W1-20 W3				* to 1000 500 - 3600	5	
OR-G01-A1-21 A3				* to 1000 500 - 3600	3.5	
OR-G01-B1-21 B3				* to 1000 500 - 3600	3.5	
OR-G03-P1-(V)-J50 P3	3/8	3600	21	* to 1000 500 - 3600	6.8	ISO 4401-05-04-0-94
OR-G03-W1-J50 W3				* to 1000 500 - 3600	8.6	
OR-G03-A1-J50 A3				* to 1000 500 - 3600	6.8	
OR-G03-B1-J50 B3				* to 1000 500 - 3600	6.8	
ORH-G04-P1-10 P3 P5	1/2	5000	79	* to 1000 500 - 3600 1000 - 5000	15.4	ISO 4401-07-06-0-94

Note: *See the Flow Rate - Low Pressure characteristics on page D-17 for information about items marked with an asterisk.

• Handling

1 When using a remote control valve in a vent circuit, certain vent circuit pipe capacities can cause vibration. Because of this, thick steel pipe with an inside diameter of .15 in that is no longer than three meters is recommended. Vent piping cannot be used with the 01 size. If a vent port is required for the 03 size, add the auxiliary code "V".

2 For use as a safety valve, use a pressure override that is higher than the required circuit pressure.

3 Make sure that tank port back pressure sure is no greater than 29 psi.

4 A small control flow rate can cause pressure instability. Use a control flow rate that is in accordance with the values shown below.

01 size: At least 1.3 gpm
03 size: At least 2.1 gpm
04 size: At least 2.1 gpm

For applications that require a flow rate that is less than the minimum flow rate, use an ORD-G** direct type relieve modular valve.

5 Note that a sub plate and installation bolts are not included. See pages H4 or F-87-89 if these items are required. 04

6 series modular valves do not have an L (DR drain port, so they cannot be used in combination with pressure center type solenoid valves (D).

7 Connect OR-G03-W*- (J) 50 to the two T-ports on the tanks.

Understanding Model Numbers

01: 03 size

OR – G 03 – P 1 – (K) – J50

- Design number — Note: For 03 size, relationship between mounting bolts and design number is indicated as J50: M6, 50: M8 E50: 1/4 - 20 For 01 size 20 or 21
- Auxiliary symbol K: With handle (01, 03 size) V: With vent port (03 size only)
- Pressure adjustment range 1, 3
- Control port P: P port W: A, B ports A: A port B: B port
- Nominal diameter (size) 01, 03
- Mounting method G: Gasket type
- Relief modular valve

04 size

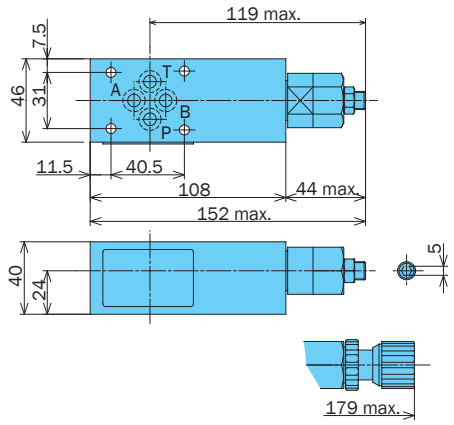
ORH – G 04 – P 5 – 10

- Design number
- Pressure adjustment range 1, 3, 5
- Control port P: P port
- Nominal diameter (size) 04
- Mounting method G: Gasket type
- M35 Series relief modular valve

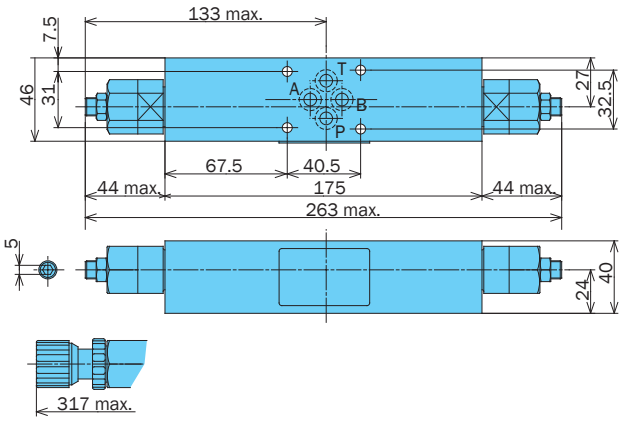
Installation Dimension Drawings

Note: Pressure is increased by clockwise (rightward) rotation of the adjusting screw (bolt), and decreased by counterclockwise (leftward) rotation.

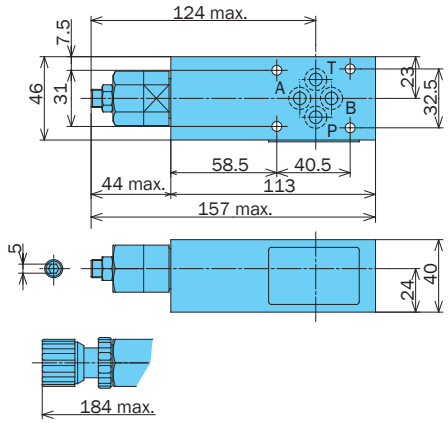
OR-G01-P-*-20



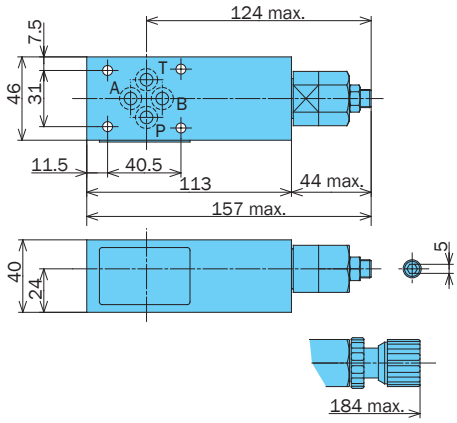
OR-G01-W*-20



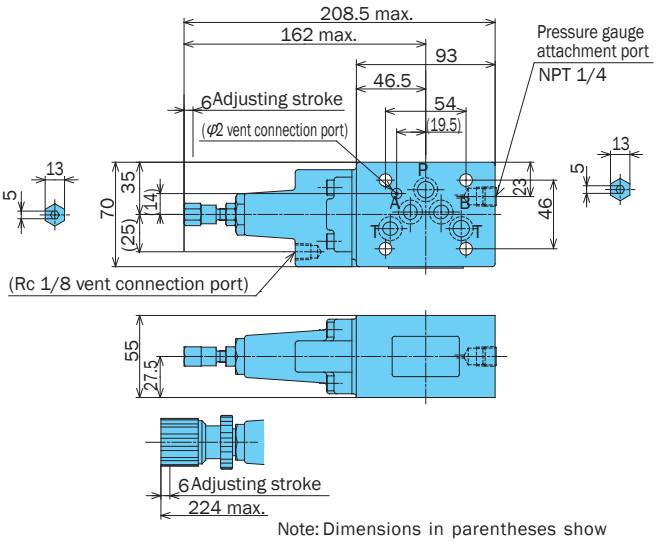
OR-G01-A*-21



OR-G01-B*-21

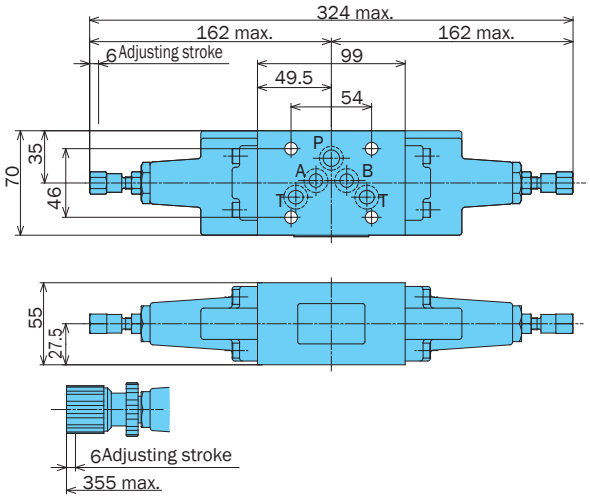


OR-G03-P*-(V)-J50

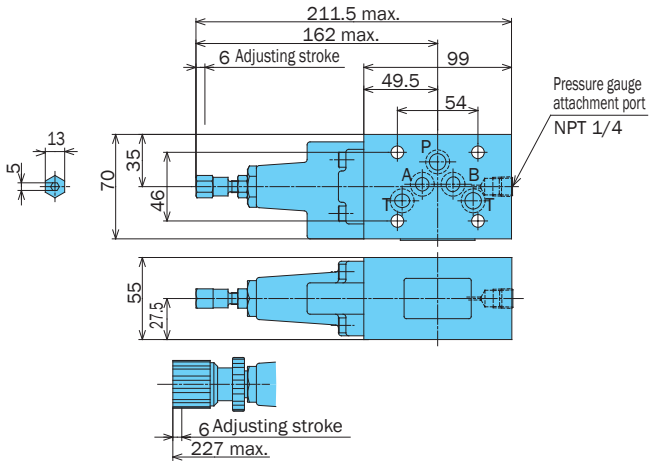


Note: Dimensions in parentheses show dimensions with vent port installed (V type)

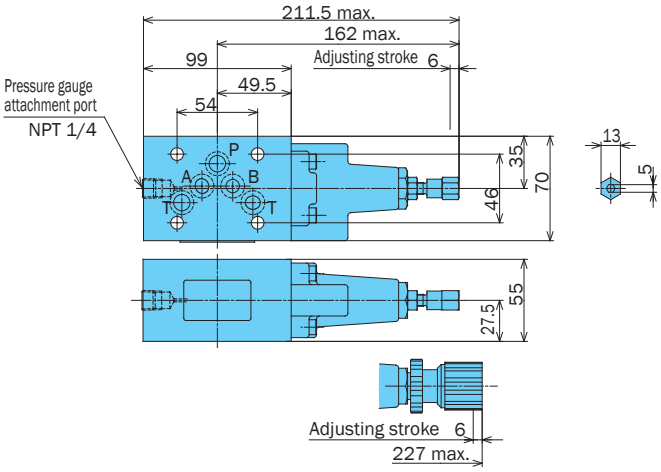
OR-G03-W*-J50



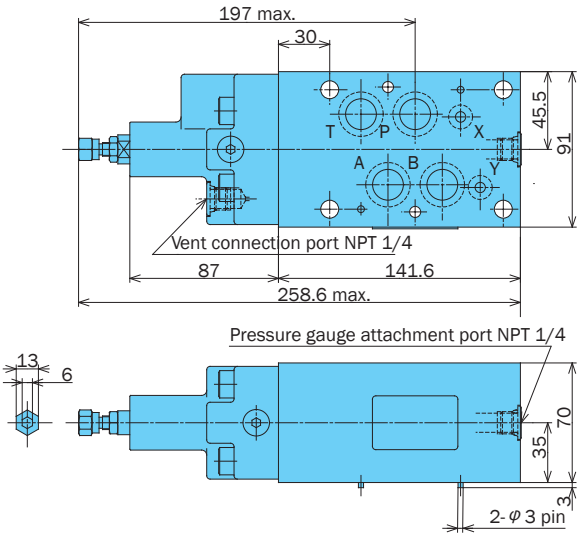
OR-G03-A*-J50



OR-G03-B*-J50



ORH-G04-P*-10

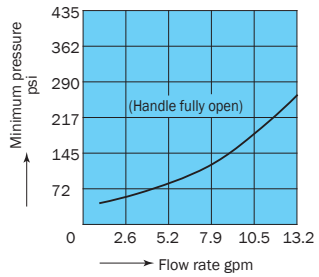


Performance Curves

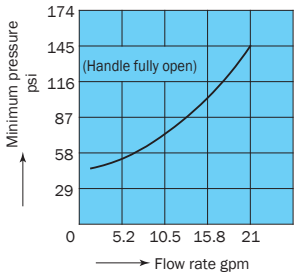
Differential Hydraulic Fluid Viscosity 32 centistokes

Flow Rate - Minimum Pressure Characteristics

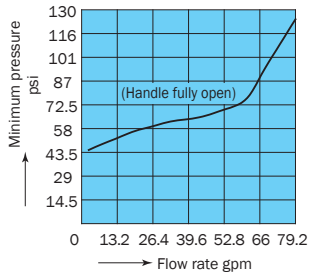
OR-G01-*1-20(21)



OR-G03-P1-J50

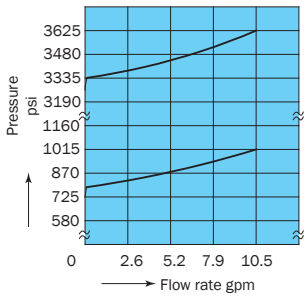


ORH-G04-P*-10

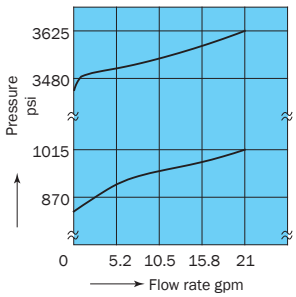


Pressure - Flow Rate Characteristics

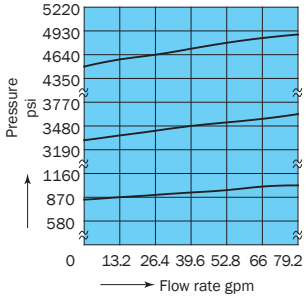
OR-G01-**-20(21)



OR-G03-P*-J50

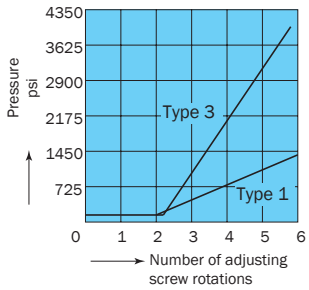


ORH-G04-P*-10

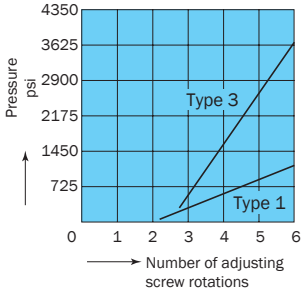


Number of Adjusting Screw Rotations - Pressure Characteristics

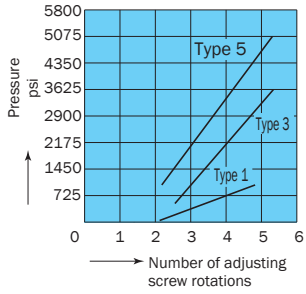
OR-G01-P*-20



OR-G03-P*-(J)50



ORH-G04-P*-10

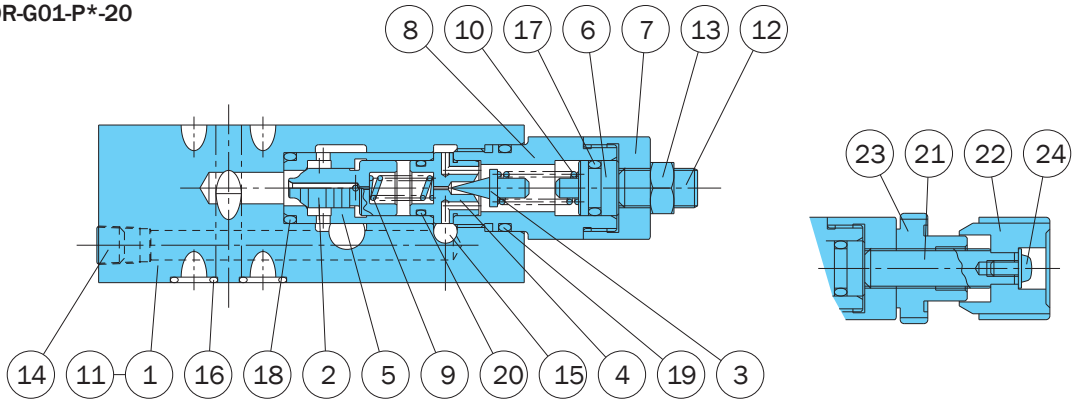


F

Modular Valves

Cross-sectional Drawing

OR-G01-P*-20



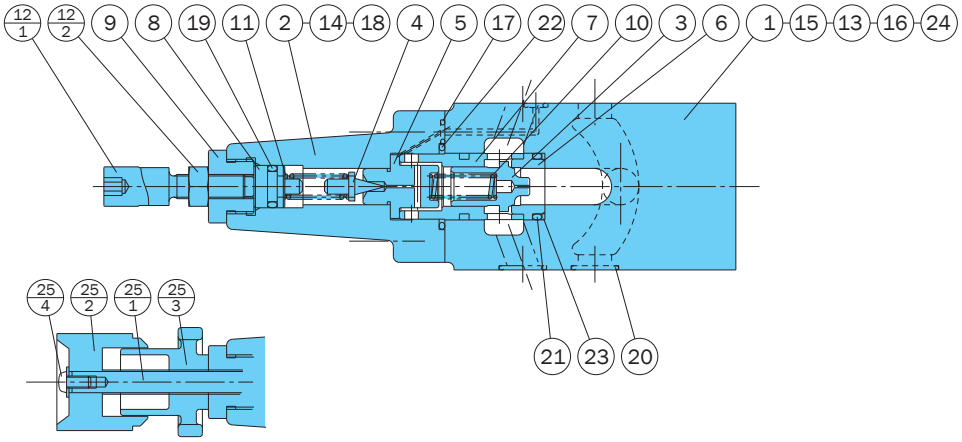
Part No.	Part Name
1	Body
2	Spool
3	Poppet
4	Seat
5	Sleeve
6	Plunger
7	Bushing
8	Retainer
9	Spring
10	Spring
11	Plate
12	Screw
13	Nut
14	Plug
15	Plug
16	O-ring
17	O-ring
18	O-ring
19	O-ring
20	O-ring
21	Screw
22	Knob
23	Nut
24	Screw

Seal Part List (Kit Model Number BRBS-01R*)

Part No.	Part Name	Part Number	Q'ty			
			P	W	A	B
16	O-ring	1B-P9	4	4	4	4
17	O-ring	1A-P10A	1	2	1	1
18	O-ring	1B-P14	1	2	1	1
19	O-ring	1B-P18	1	2	1	1
20	O-ring	AS568-013(Hs90)	1	2	1	1

Note) 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify P, W, A, or B for the asterisk (*) in the kit model number.

OR-G03-P*-V-J50



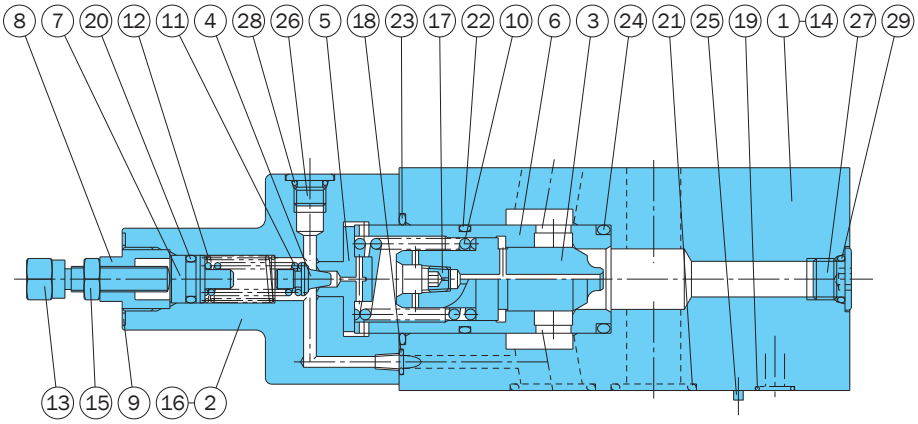
Part No.	Part Name
1	Body
2	Cover
3	Spool
4	Poppet
5	Seat
6	Seat
7	Sleeve
8	Plunger
9	Retainer
10	Spring
11	Spring
12	Screw kit
12_1	Screw
12_2	Nut
13	Plate
14	Screw
15	Plug
16	Plug
17	O-ring
18	O-ring
19	O-ring
20	O-ring
21	O-ring
22	O-ring
23	Backup ring
24	Pin
25	Handle kit
25_1	Screw
25_2	Knob
25_3	Nut
25_4	Screw

Seal Part List (Kit Model Number BRES-03R*)

Part No.	Part Name	Part Number	Q'ty		
			P/A/B	W	PV
17	O-ring	1B-P5	–	–	2
18	O-ring	1B-P7	1	2	1
19	O-ring	1A-P10A	1	2	1
20	O-ring	AS568-014(Hs90)	5	5	5
21	O-ring	1B-P18	2	4	2
22	O-ring	AS568-119(Hs90)	1	2	1
23	Backup ring	T2-P18	1	2	1

Note) 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Backup ring indicates JIS B2407-T2-**.
3. Specify P, W, or PV for the asterisk (*) in the kit model number.

ORH-G04-P*-10



Part No.	Part Name
1	Body
2	Cover
3	Spool
4	Poppet
5	Seat
6	Sleeve
7	Plunger
8	Retainer
9	Plate
10	Spring
11	Spring
12	Spring
13	Screw
14	Plate
15	Nut
16	Screw
17	Choke
18	O-ring
19	O-ring
20	O-ring
21	O-ring
22	O-ring
23	O-ring
24	O-ring
25	Pin
26	Plug
27	Plug
28	O-ring
29	O-ring

Seal Part List (Kit Model Number BRKS-04RP)

Part No.	Part Name	Part Number	Q'ty
18	O-ring	1B-P5	1
19	O-ring	AS568-012(Hs90)	2
20	O-ring	1A-P11	1
21	O-ring	AS568-118(Hs90)	4
22	O-ring	AS568-122(Hs90)	1
23	O-ring	AS568-127(Hs90)	1
24	O-ring	1B-P28	1
28	O-ring	1B-P8	3
29	O-ring	1B-P11	3

Note) O-ring 1A/B-** refers to JIS B2401-1A/B.

Brake Modular Valve

5.2 to 7.9 gpm
115 to 3045, 3625 psi

Features

This modular pressure control valve prevents abnormal pressure when the actuator stops, enabling smooth stops.

Wide ranging applicability Maximum Operating Pressure: 3625 psi.

Pressure Adjustment Range: 115 to 3045, 3625 psi.

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Pressure Adjustment Range psi	Weight lbs	Gasket Surface Dimensions
ORO-G01-W1-20 W3	1/8	3625	5.2	115 to 1000 500 to 3045	3.3	ISO 4401-03-02-0-94
ORO-G01-A1-20 A3				115 to 1000 500 to 3045	3.0	
ORO-G01-B1-20 B3				115 to 1000 500 to 3045	3.0	
ORO-G03-W1-J50 W3	3/8	3625	7.9	115 to 1000 500 to 3045	10.5	ISO 4401-05-04-0-94
ORO-G03-A1-J50 A3				115 to 1000 500 to 3045	8.8	
ORO-G03-B1-J50 B3				115 to 1000 500 to 3045	8.8	

• Handling

1 The pressure adjustment range is expressed using cracking pressure.
2 For use as a safety valve, use a pressure override that is higher than the required circuit pressure.
3 Note that a sub plate and installation bolts are not included. See pages H4 and F87-89 if these items are required.

Understanding Model Numbers

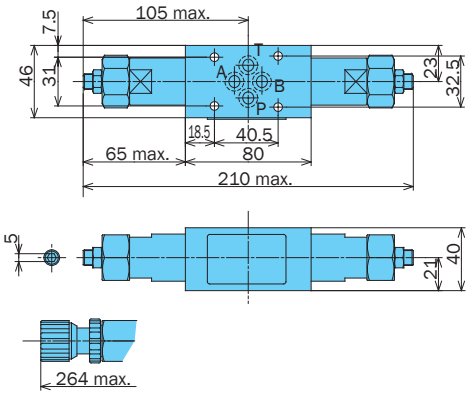
ORO – G 03 – A 3 – (K) – J50

- Design number — Note: For 01 size - 20; For 03 size, relationship between mounting bolts and design number is indicated as J50: M6, 50: M8.
- Auxiliary symbol K: With handle
- Pressure adjustment range 1, 3
- Control port W: A, B ports A: A port B: B port
- Nominal diameter (size) 01, 03
- Mounting method G: Gasket type
- Brake modulator valve

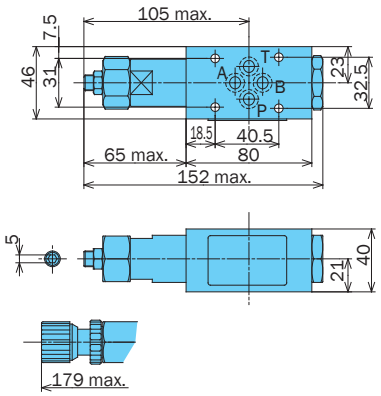
Specifications

Note: Pressure is increased by clockwise (rightward) rotation of the adjusting screw (bolt), and decreased by counterclockwise (leftward) rotation.

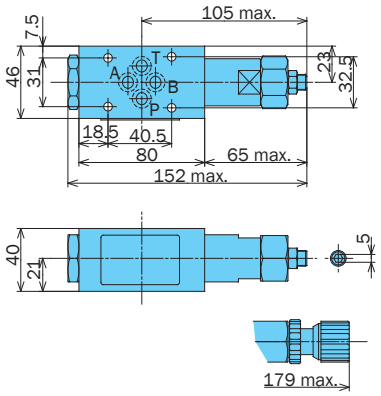
ORO-G01-W*-20



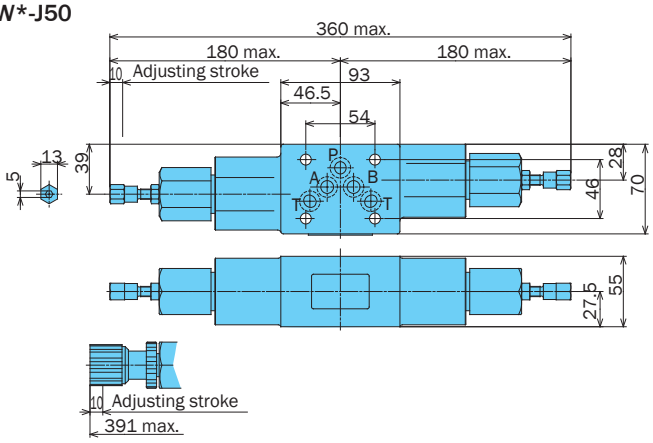
ORO-G01-A*-20



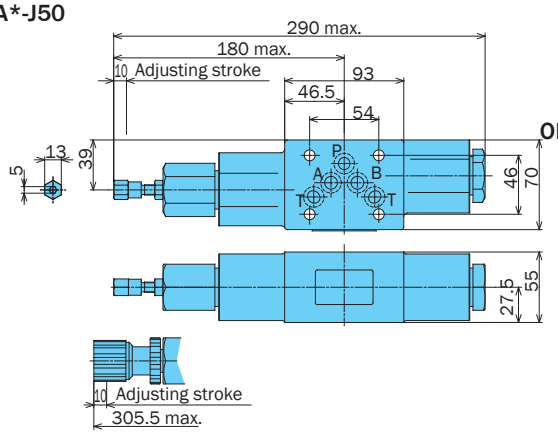
ORO-G01-B*-20



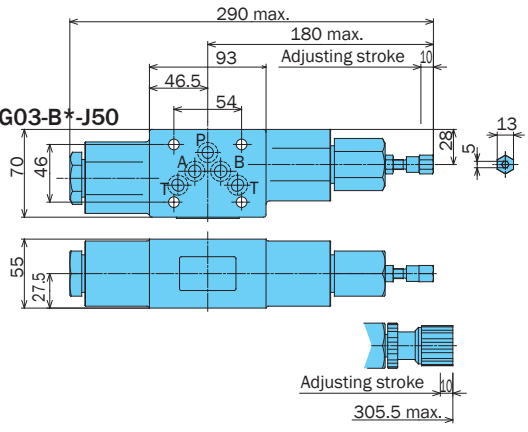
ORO-G03-W*-J50



ORO-G03-A*-J50



ORO-G03-B*-J50

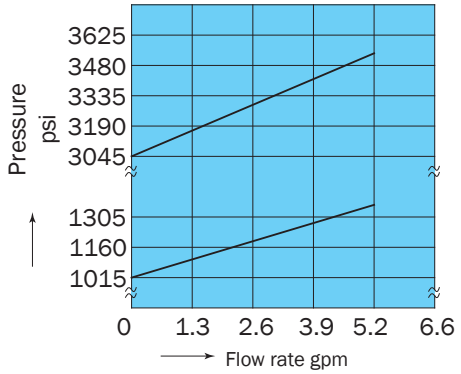


Performance Curves

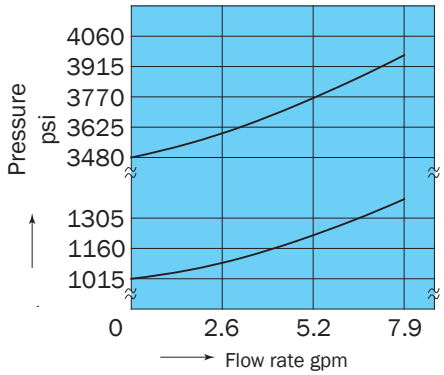
Differential Hydraulic Fluid Viscosity 32 centistokes

Pressure - Flow Rate Characteristics

ORO-G01--20**

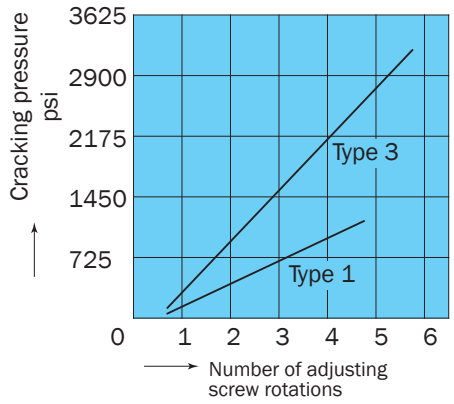


ORO-G03--J50**

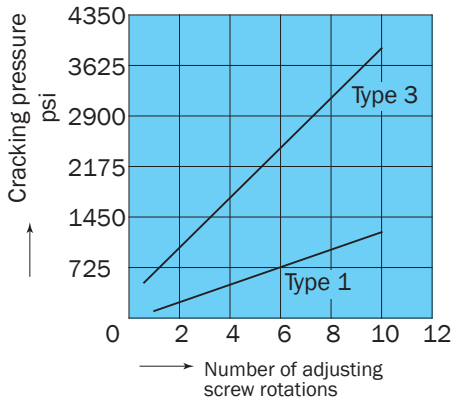


Number of Adjusting Screw Rotations - Pressure Characteristics

ORO-G01--20**

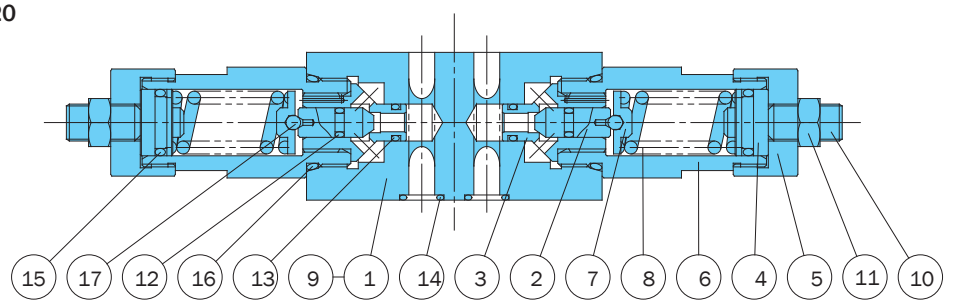


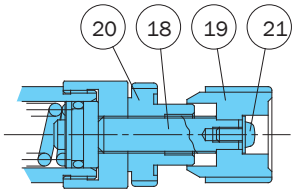
ORO-G03--J50**



Cross-sectional Drawing

ORO-G01-W*-20





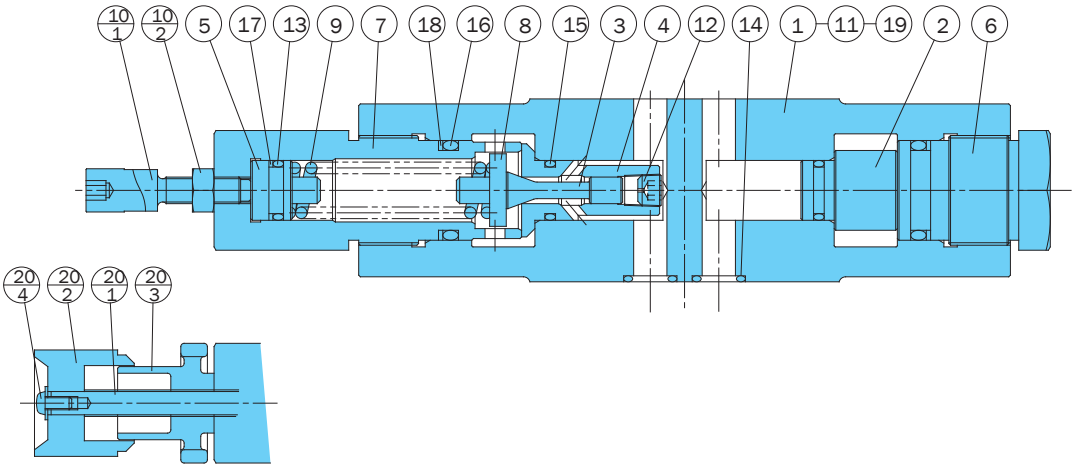
Part No.	Part Name
1	Body
2	Poppet
3	Seat
4	Plunger
5	Bushing
6	Retainer
7	Guide
8	Spring
9	Plate
10	Screw
11	Nut
12	O-ring
13	O-ring
14	O-ring
15	O-ring
16	O-ring
17	Ball
18	Screw
19	Knob
20	Nut
21	Screw

Seal Part List (Kit Model Number BRBS-01R0*)

Part No.	Part Name	Part Number	Q'ty		
			W	A	B
12	O-ring	1A-P5	2	1	1
13	O-ring	1B-P7	2	2	2
14	O-ring	1B-P9	4	4	4
15	O-ring	1B-P14	2	1	1
16	O-ring	1B-P22	2	2	2

Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify W, A, or B for the asterisk (*) in the kit model number.

ORO-G03-A*-J50



Part No.	Part Name
1	Body
2	Plug
3	Poppet
4	Seat
5	Plunger
6	Bushing
7	Retainer
8	Guide
9	Spring
10	Screw kit
10_1	Screw
10_2	Nut
11	Plate
12	Orifice
13	O-ring
14	O-ring
15	O-ring
16	O-ring
17	Backup ring
18	Backup ring
19	Pin
20	Handle kit
20_1	Screw
20_2	Knob
20_3	Nut
20_4	Screw

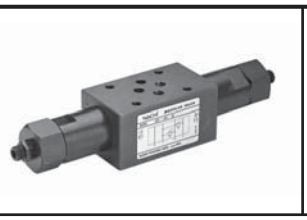
Seal Part List (Kit Model Number BRES-03R0*)

Part No.	Part Name	Part Number	Q'ty		
			W	A	B
13	O-ring	1A-P14	2	1	1
14	O-ring	AS568-014(Hs90)	5	5	5
15	O-ring	1B-P14	2	2	2
16	O-ring	1B-P24	2	2	2
17	Backup ring	T2-P14	2	1	1
18	Backup ring	T2-P24	2	2	2

Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Backup ring indicates JIS B2407-T2-**.
3. Specify W, A, or B for the asterisk (*) in the kit model number.

Direct Relief Modular Valve

5.2 to 13.2 gpm
115 to 3045, 3625, 5075 psi



Features

1 This modular relief valve provides maximum pressure control for a hydraulic circuit.

2 Wide ranging applicability Maximum Working Pressure: 3625, 5075 psi.

3 Pressure Adjustment Range: 115 to 3045, 3625, 5075 psi.

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Pressure Adjustment Range psi	Weight lbs	Gasket Surface Dimensions
ORD-G01-W1-20 W3	1/8	3625	5.2	115 to 1000 500 to 3045	3.3	ISO 4401-03-02-0-94
ORD-G01-A1-20 A3				115 to 1000 500 to 3045	3.0	
ORD-G01-B1-20 B3				115 to 1000 500 to 3045	3.0	
ORD-G03-W1-J50 W3	3/8	3625	7.9	115 to 1000 500 to 3625	10.5	ISO 4401-05-04-0-94
ORD-G03-A1-J50 A3				115 to 1000 500 to 3625	8.8	
ORD-G03-B1-J50 B3				115 to 1000 500 to 3625	8.8	
ORH-G04-DW1-10 DW3 DW5	1/2	5075	13.2	115 to 1000 500 to 3625 1000 to 5075	14.3	ISO 4401-07-06-0-94
ORH-G04-DA1-10 DA3 DA5				115 to 1000 500 to 3625 1000 to 5075	14.3	
ORH-G04-DB1-10 DB3 DB5				115 to 1000 500 to 3625 1000 to 5075	14.3	

• Handling

1 The pressure adjustment range is expressed using cracking pressure.
2 For use as a safety valve, use a pressure override that is higher than the required circuit pressure.
3 Tank port back pressure changes cracking pressure by the corresponding amount.
4 Note that a sub plate and installation bolts are not included. See pages H4 and F87-89 if these items are required.
5 04 series modular valves do not have an L (DR2) drain port, so they cannot be used in combination with pressure center type solenoid valves (D).

Understanding Model Numbers

01, 03 size

ORD – G 03 – W 3 – (K) – J50

- Design number — Note: E - NPT; For 01 size, 20; For 03 size, relationship between mounting bolts and design number is indicated as J50: M6, 50: M8.
- Auxiliary symbol K: With handle
- Pressure adjustment range 1, 3
- Control port W: A, B ports A: A port B: B port
- Nominal diameter (size) 01, 03
- Mounting method G: Gasket type
- Direct relieve modular valve

Understanding Model Numbers

04 size

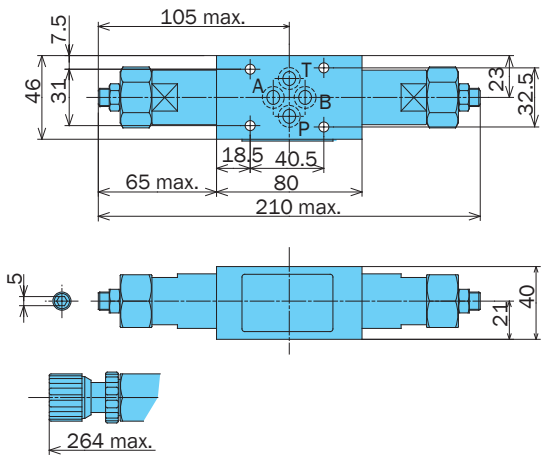
ORH – G 04 – D W 5 – 10

- Design number
- Pressure adjustment range 1, 3, 5
- Control port W: A, B ports; A: A port; B: B port
- Function symbol D: Direct type
- Nominal diameter (size) 04
- Mounting method G: Gasket type
- M35 Series relief modular valve

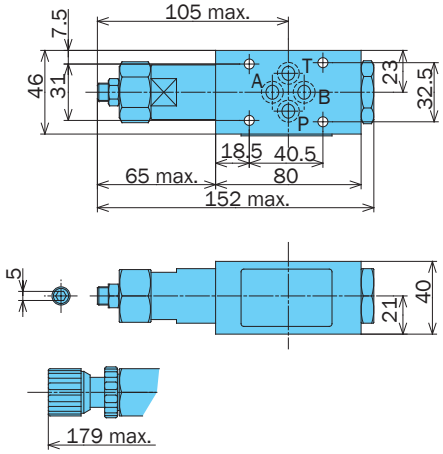
Understanding Model Numbers

Note: Pressure is increased by clockwise (rightward) rotation of the adjusting screw (bolt), and decreased by counterclockwise (leftward) rotation

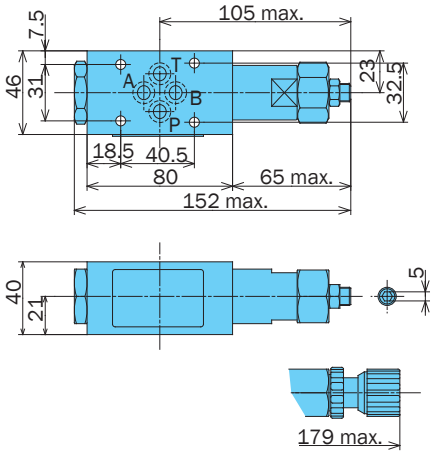
ORD-G01-W*-20



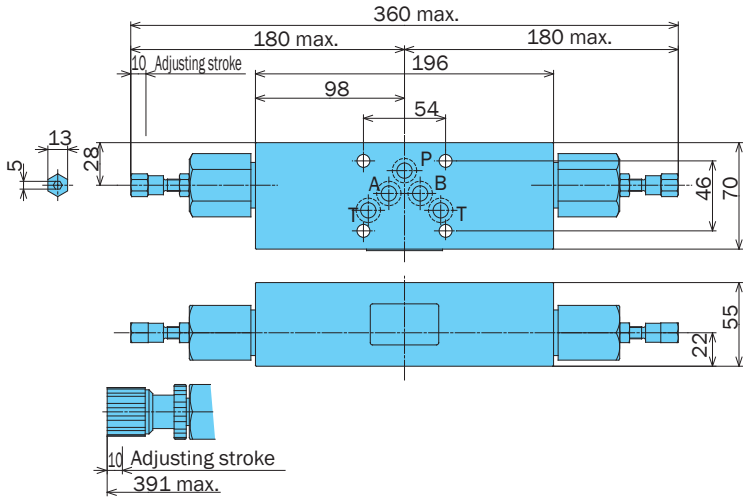
ORD-G01-A*-20



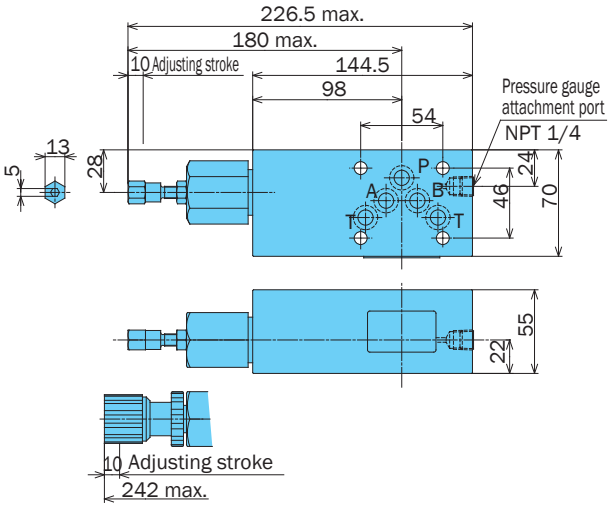
ORD-G01-B*-20



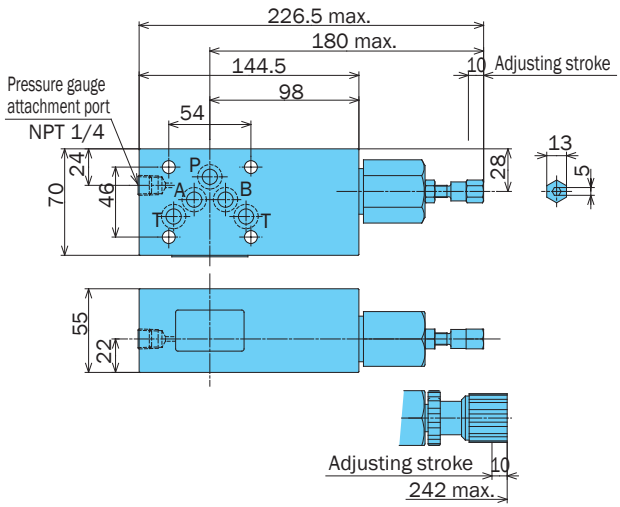
ORD-G03-W*-J50



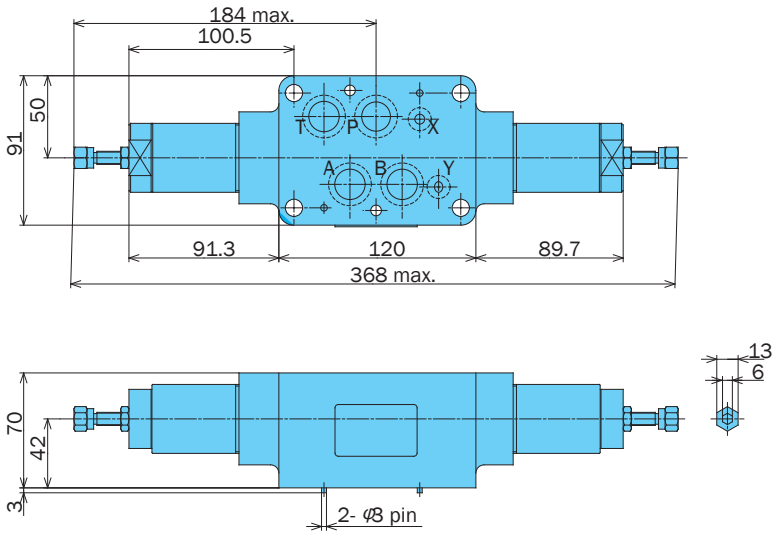
ORD-G03-A*-E50



ORD-G03-B*-E50



ORH-G04-DW*-10



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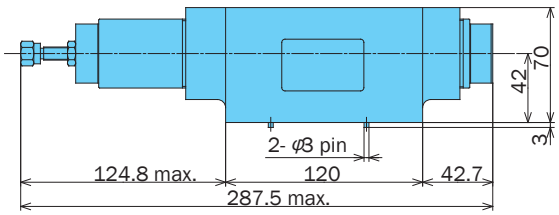

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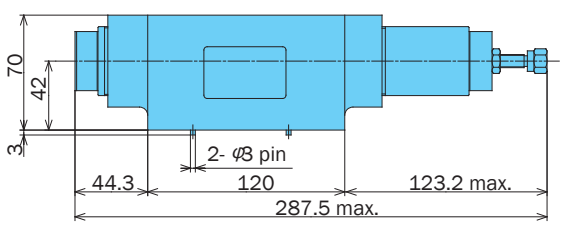
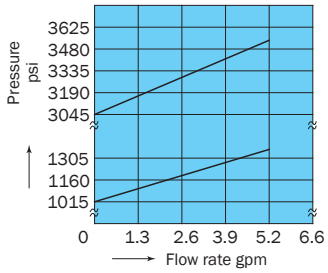


Performance Curves

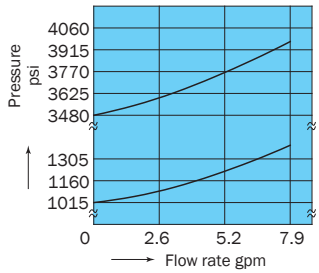
Differential Hydraulic Fluid Viscosity 32 centistokes

Pressure - Flow Rate Characteristics

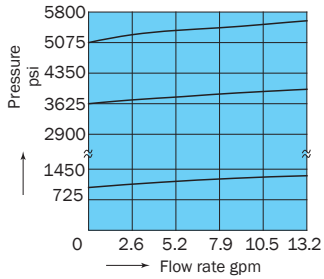
ORD-G01-**-20



ORD-G03-**-J50

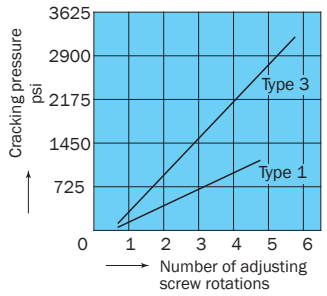


ORH-G04-DW*-10

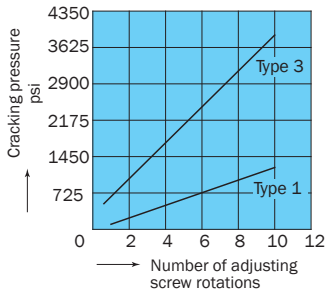


Number of Adjusting Screw Rotations - Pressure Characteristics

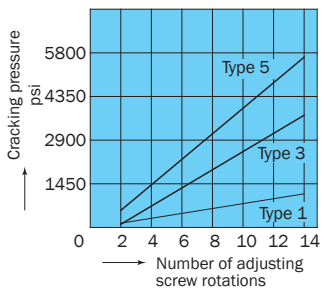
ORD-G01-**-20



ORD-G03-**-J50

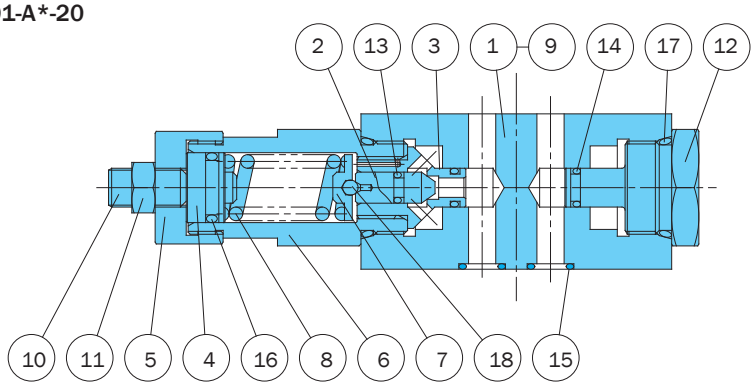


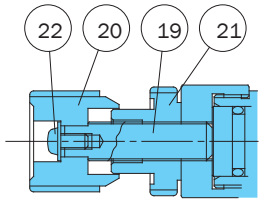
ORH-G04-DW*-10



Cross-sectional Drawing

ORD-G01-A*-20





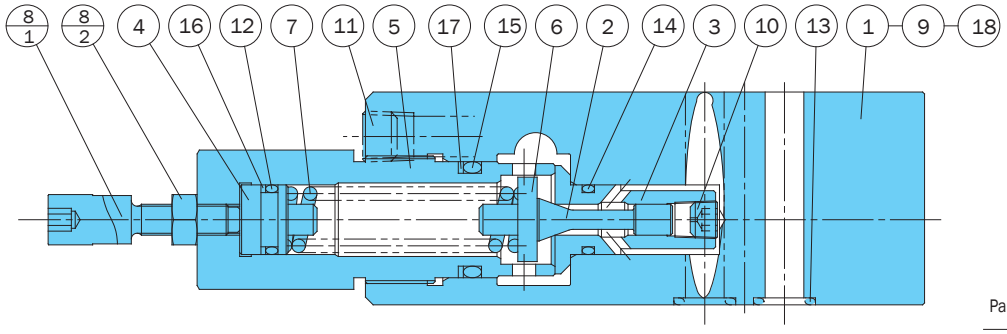
Seal Part List (Kit Model Number BRBS-01RD*)

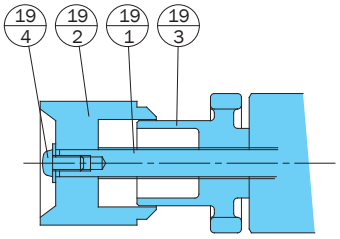
Part No.	Part Name	Part Number	Q'ty		
			W	A	B
13	O-ring	1A-P5	2	1	1
14	O-ring	1B-P7	2	2	2
15	O-ring	1B-P9	4	4	4
16	O-ring	1B-P14	2	1	1
17	O-ring	1B-P22	2	2	2

Note: 1.O-ring 1A/B-** refers to JIS B2401-1A/B.
2.Specify W, A, or B for the asterisk (*) in the kit model number.

Part No.	Part Name
1	Body
2	Poppet
3	Seat
4	Plunger
5	Bushing
6	Retainer
7	Guide
8	Spring
9	Plate
10	Screw
11	Nut
12	Bushing
13	O-ring
14	O-ring
15	O-ring
16	O-ring
17	O-ring
18	Ball
19	Screw
20	Knob
21	Nut
22	Screw

ORD-G03-A*-J50





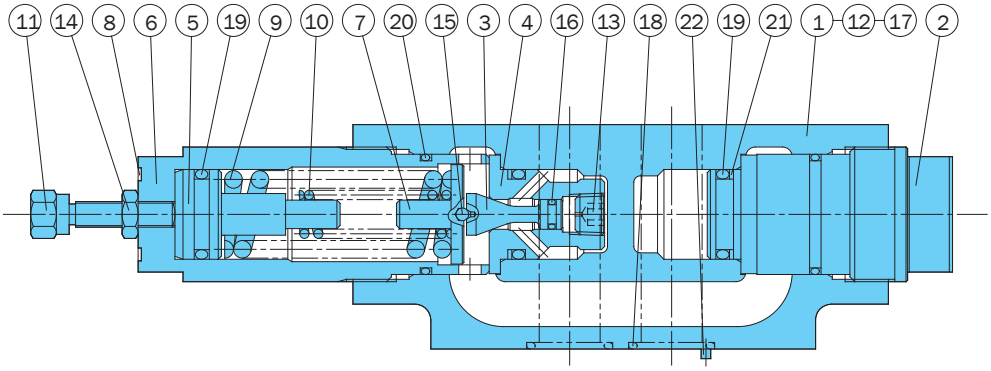
Seal Part List (Kit Model Number BRES-03RD*)

Part No.	Part Name	Part Number	Q'ty		
			A	B	W
12	O-ring	1A-P14	1	1	2
13	O-ring	AS568-014(Hs90)	5	5	5
14	O-ring	1B-P14	1	1	2
15	O-ring	1B-P24	1	1	2
16	Backup ring	T2-P14	1	1	2
17	Backup ring	T2-P24	1	1	2

Note) 1.O-ring 1A/B-** refers to JIS B2401-1A/B.
2.Backup ring indicates JIS B2407-T2-**.
3.Specify W, A, or B for the asterisk (*) in the kit model number

Part No.	Part Name
1	Body
2	Poppet
3	Seat
4	Plunger
5	Retainer
6	Guide
7	Spring
8	Screw kit
8_1	Screw
8_2	Nut
9	Plate
10	Orifice
11	Plug
12	O-ring
13	O-ring
14	O-ring
15	O-ring
16	Backup ring
17	Backup ring
18	Pin
19	Handle kit
19_1	Screw
19_2	Knob
19_3	Nut
19_4	Screw

ORH-G04-DA*-10



Seal Part List (Kit Model Number BRKS-04RD*)

Part No.	Part Name	Part Number	Q'ty		
			W	A	B
16	O-ring	1A-P6	2	1	1
17	O-ring	AS568-012(Hs90)	2	2	2
18	O-ring	AS568-118(Hs90)	4	4	4
19	O-ring	1B-P22A	4	3	3
20	O-ring	AS568-125(Hs70)	2	2	2
21	Backup ring	T2-P22A	2	2	2

Note) 1.O-ring 1A/B-** refers to JIS B2401-1A/B.
2.Backup ring indicates JIS B2407-T2-**.
3.Specify W, A, or B for the asterisk (*) in the kit model number.

Part No.	Part Name
1	Body
2	Plug
3	Poppet
4	Seat
5	Plunger
6	Retainer
7	Guide
8	Plate
9	Spring
10	Spring
11	Screw
12	Plate
13	Choke
14	Nut
15	Ball
16	O-ring
17	O-ring
18	O-ring
19	O-ring
20	O-ring
21	Backup ring
22	Pin

Pressure Reducing Modular Valve

10.5 to 79.2 gpm
3625, 5000 psi

Features

This modular valve makes the pressure in part of the circuit lower than that of the main circuit.

Even when pressure changes in the primary main circuit, the reduced secondary pressure is maintained at a constant level.
Maximum Operating Pressure: 3625, 5075 psi.

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Pressure Adjustment Range psi	Weight lbs	Gasket Surface Dimensions
OG-G01-PC-21 P1 P2	1/8	3625	13.2	21.7 to 500 115 to 1000 500 to 2320	2.8	ISO 4401-03-02-0-94
OG-G03-PC-(V)-J51 P1 P3	3/8	3625	21 but C : 13.2	36 to 500 115 to 1000 500 to 3045	8.3	ISO 4401-05-04-0-94
OGH-G04-P1-10 P3	1/2	5075	79.2	115 to 1000 500 to 3625	17.6	ISO 4401-07-06-0-94

• Handling

1 When using a remote control valve in a vent circuit, certain vent circuit pipe capacities can cause vibration. Because of this, thick steel pipe with an inside diameter of .15 in that is no longer than three meters is recommended. Vent piping cannot be used with the 01 size. If a vent port is required for the 03 size, add the auxiliary code "V".
2 For the 03 size, the drainage can be allowed to escape through the T port. In the case of a valve with the auxiliary symbol B, however, run a return pipe from the drain discharge port directly to the tank.
3 With the 04 sizes, piping is not required because drainage can be allowed to escape from the gasket side drain port. In the case of a valve with the auxiliary symbol B, however, run a return pipe from the drain discharge port directly to the tank.
4 Note that a change in drain back pressure causes a change in setting pressure.
5 With the 01, 03 sizes, the flow rate is limited at low pressures. See the Pressure-Flow Rate Characteristics on pages F-27 for more information.
6 Note that a sub plate and installation bolts are not included. See pages H4 and F87-89 if these items are required.
7 04 series modular valves do not have an L (DR2) drain port, so they cannot be used in combination with pressure center type solenoid valves (D).
8 With the 03, 04 sizes, the control port can be changed by altering the attachment orientation of the back cover. See the installation diagram for more information. After making this change, be sure also to make the other changes in accordance with the model number indicated on the nameplate.

Understanding Model Numbers

01, 03, size

OG – G 03 – P 1 – (B) – J51

- Design number — Note: For 01 size, 21; For 03 size, relationship between mounting bolts and design number is indicated as J51: M6, 51; M8. E: NPT piping (01, 03)
- Auxiliary symbol — B: See notes 2 and 3 under "Handling." K: With handle (01, 03 size) V: With vent port (03 size)
- Pressure adjustment range C, 1, 2, 3
- Control port P: P port
- Nominal diameter (size) 01, 03
- Mounting method G: Gasket type
- Pressure reducing modular valve

Understanding Model Numbers

04 size

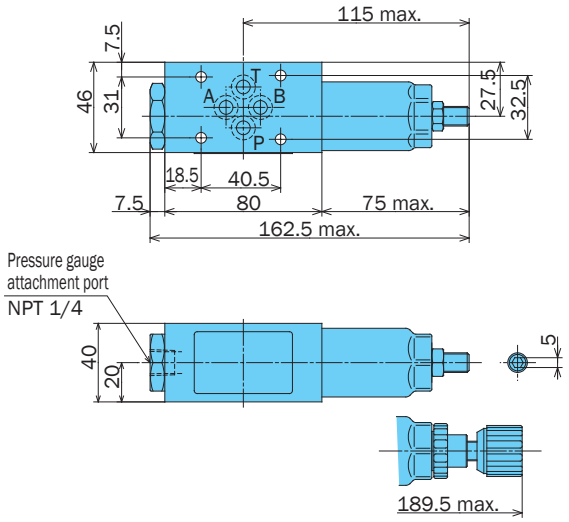
OGH – G 04 – P 1 – (B) – 10

- Design number
- Auxiliary symbol B: See note 3 under "Handling."
- Pressure adjustment range 1, 3
- Control port P: P port
- Nominal diameter (size) 04
- Mounting method G: Gasket type
- M35 Series reducing modular valve

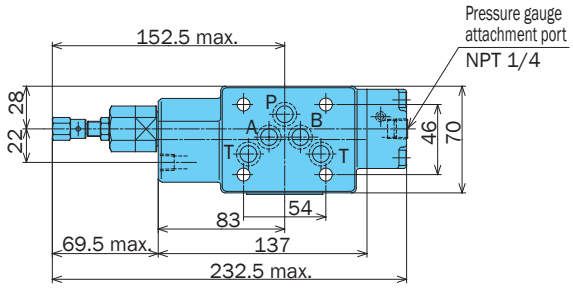
Installation Dimension Drawings

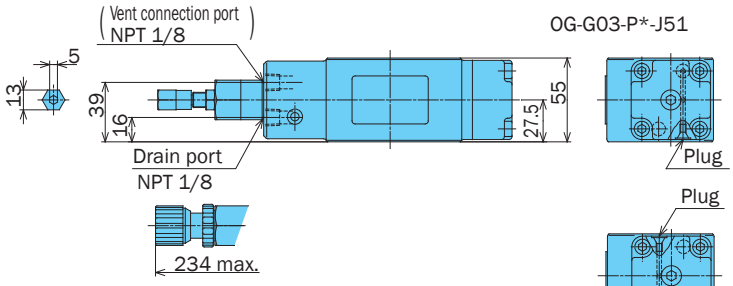
Note: Pressure is increased by clockwise (rightward) rotation of the adjusting screw (bolt), and decreased by counterclockwise (leftward) rotation.

OG-G01-P*-E21



OG-G03-P*-(V)-E51



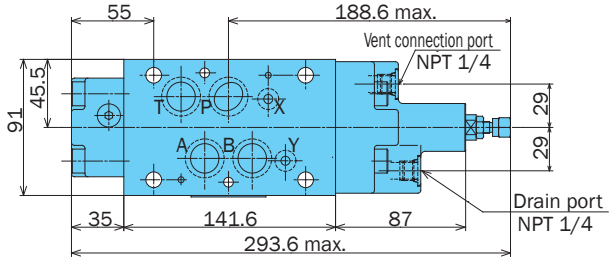


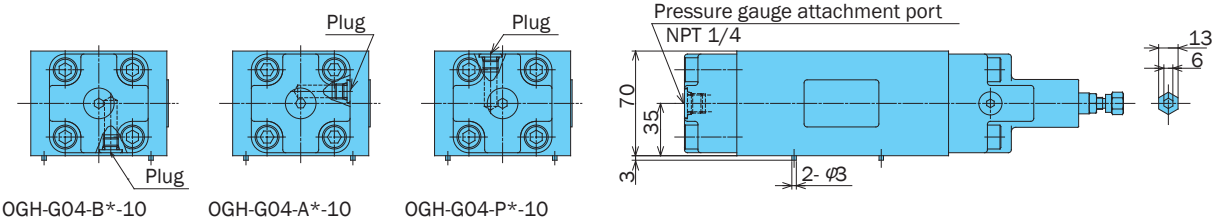
OG-G03-B*-J51

Note: 1. Conversion to B port control is possible by changing the back cover. Port control is determined by plug orientation.
2. When replacing the back cover, be sure also to change the nameplate to the applicable model type.
3. The tightening torque of the back cover bolts is: (M6) 7.3 to 9.5 ft lbs.

OGH-G04-P*-10

Note: 1. Conversion to A, B port control is possible by changing the back cover. Port control is determined by plug orientation.
2. When replacing the back cover, be sure also to change the nameplate to the applicable model type.
3. The tightening torque of the back cover bolts is: (M10) 33 to 40 ft lbs.





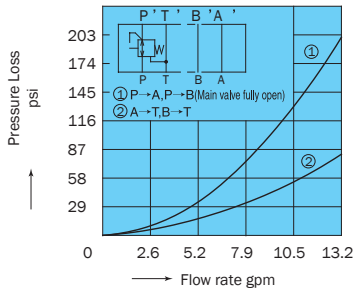
OGH-G04-B*-10 OGH-G04-A*-10 OGH-G04-P*-10

Performance Curves

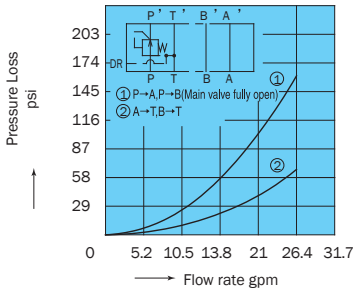
Differential Hydraulic Fluid Viscosity 32 centistokes

Pressure Loss Characteristics

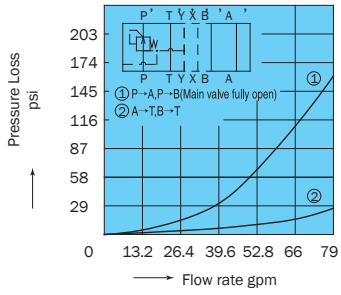
OG-G01-P*-21



OG-G03-P*-J51

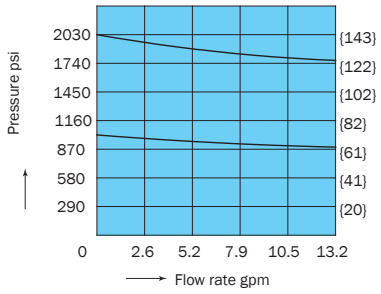


OGH-G04-**-10

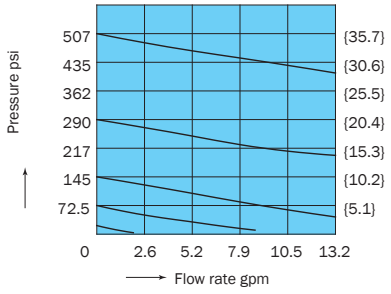


Pressure - Flow Rate Characteristics

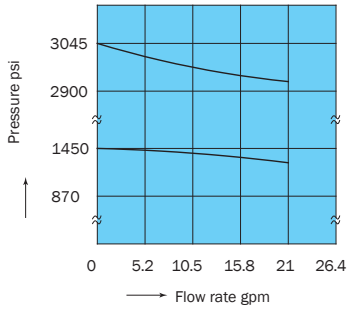
OG-G01-P $\frac{1}{2}$-21



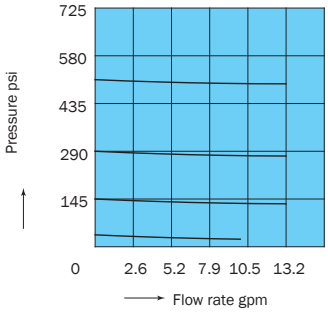
OG-G01-PC-21



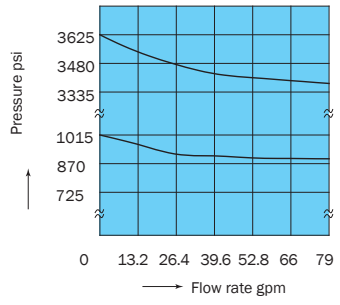
OG-G03-P $\frac{1}{3}$-J51



OG-G03-PC-J51



OGH-G04-**-10

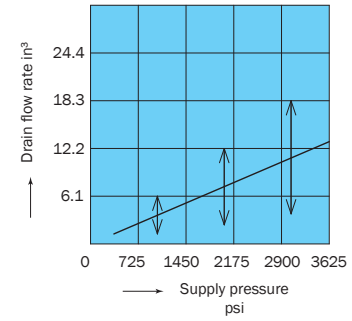


F

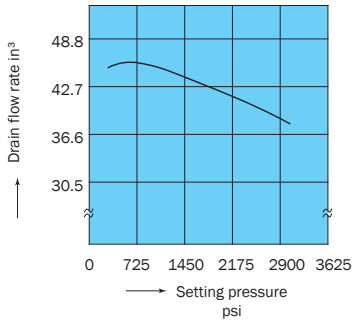
Modular Valves

Pressure - Drain Rate Characteristics

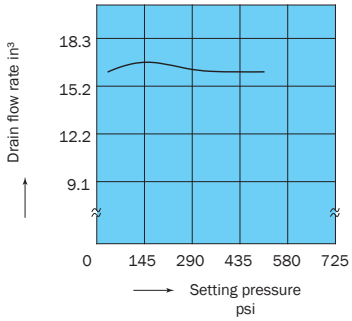
OG-G01-P*-21



OG-G03-P*-J51

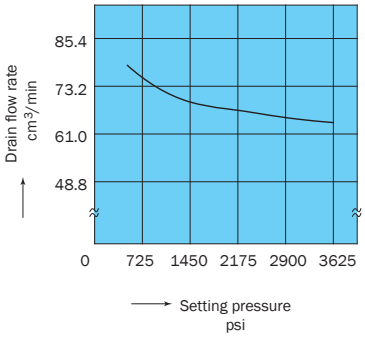


OG-G03-PC-J51



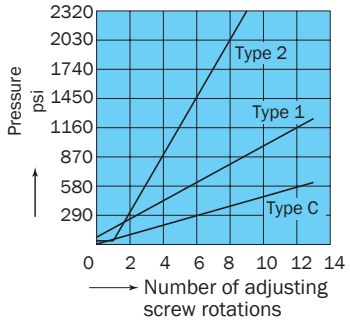
Determine it through the maximum value when designing the circuit.

OGH-G04-P3-10

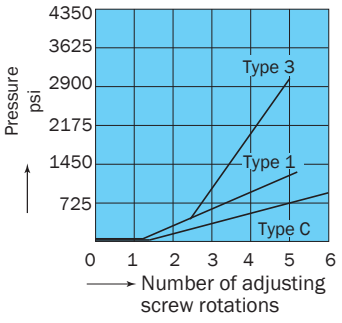


Number of Adjusting Screw Rotations - Pressure Characteristics

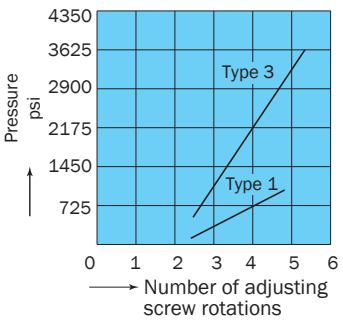
OG-G01-P*-21



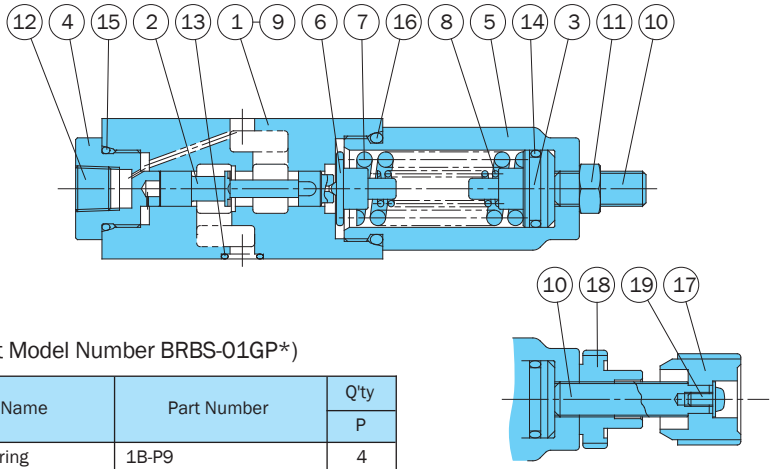
OG-G03-P*-51



OGH-G04-P*-10



0G-G01-P2-21



Part No.	Part Name
1	Body
2	Spool
3	Push rod
4	Bushing
5	Retainer
6	Guide
7	Spring
8	Spring
9	Plate
10	Screw
11	Nut
12	Plug
13	O-ring
14	O-ring
15	O-ring
16	O-ring
17	Knob
18	Nut
19	Screw

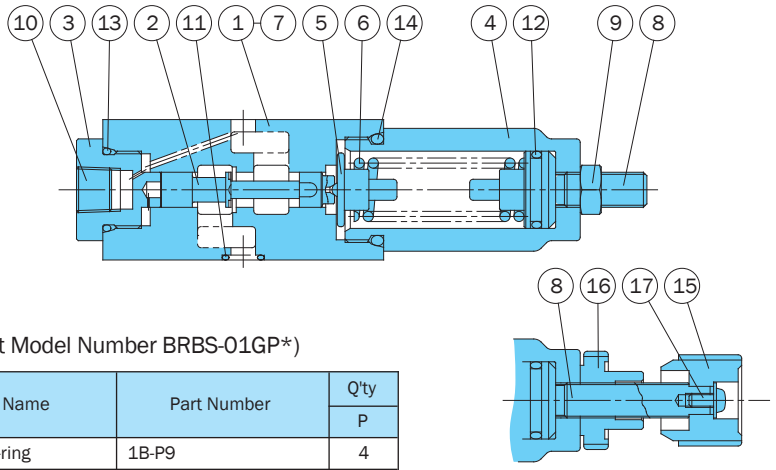
Seal Part List (Kit Model Number BRBS-01GP*)

Part No.	Part Name	Part Number	Q'ty P
13	O-ring	1B-P9	4
14	O-ring	1A-P18	1
15	O-ring	1B-P20	1
16	O-ring	1B-P26	1

Note: O-ring 1A/B-** refers to JIS B2401-1A/B.

Note:
Part number 8 is used in the case of pressure adjustment range type 2 only.

0G-G01-PC-21



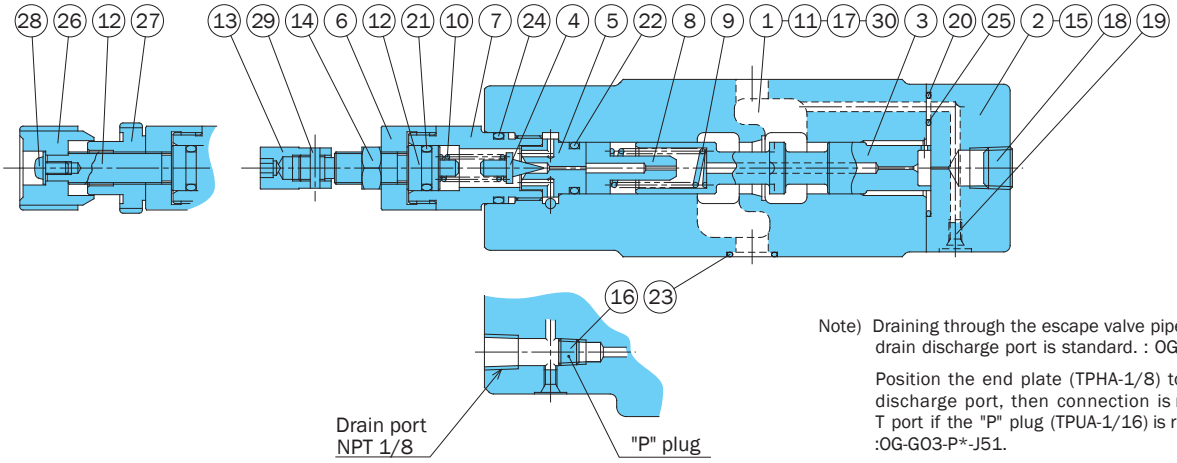
Part No.	Part Name
1	Body
2	Spool
3	Bushing
4	Retainer
5	Guide
6	Spring
7	Plate
8	Screw
9	Nut
10	Plug
11	O-ring
12	O-ring
13	O-ring
14	O-ring
15	Knob
16	Nut
17	Screw

Seal Part List (Kit Model Number BRBS-01GP*)

Part No.	Part Name	Part Number	Q'ty P
11	O-ring	1B-P9	4
12	O-ring	1A-P18	1
13	O-ring	1B-P20	1
14	O-ring	1B-P26	1

Note: O-ring 1A/B-** refers to JIS B2401-1A/B.

OG-G03-P*-E51



Note) Draining through the escape valve piped to the drain discharge port is standard. : OG-G03-P*-B-J51

Position the end plate (TPHA-1/8) to the drain discharge port, then connection is made to the T port if the "P" plug (TPUA-1/16) is removed. :OG-G03-P*-J51.

Seal Part List (Kit Model Number BRES-03GP-1A)

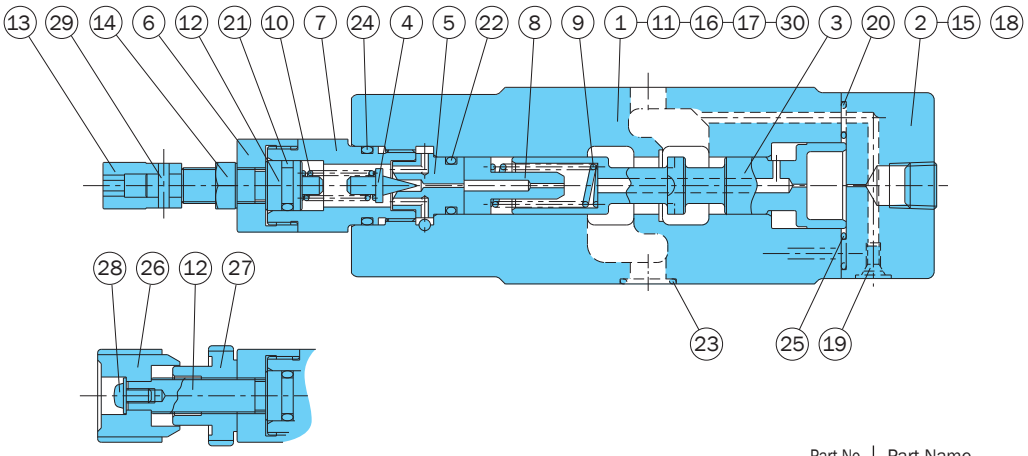
Part No.	Part Name	Part Number	Q'ty P
20	O-ring	1B-P6	2
21	O-ring	1A-P10A	1
22	O-ring	1B-P12	1
23	O-ring	AS568-014(Hs90)	5
24	O-ring	1B-P18	1
25	O-ring	AS568-023(Hs90)	1

Note) O-ring 1A/B-** refers to JIS B2401-1A/B.

Part No.	Part Name
1	Body
2	Cover
3	Spool
4	Poppet
5	Seat
6	Bushing
7	Retainer
8	Choke
9	Spring
10	Spring
11	Plate
12	Screw
13	Nut

Part No.	Part Name
14	Nut
15	Screw
16	Plug
17	Plug
18	Plug
19	Plug
20	O-ring
21	O-ring
22	O-ring
23	O-ring
24	O-ring
25	O-ring
26	Knob
27	Nut
28	Screw
29	Pin
30	Pin

OG-G03-PC-E51



Seal Part List (Kit Model Number BRES-03GP*-1A)

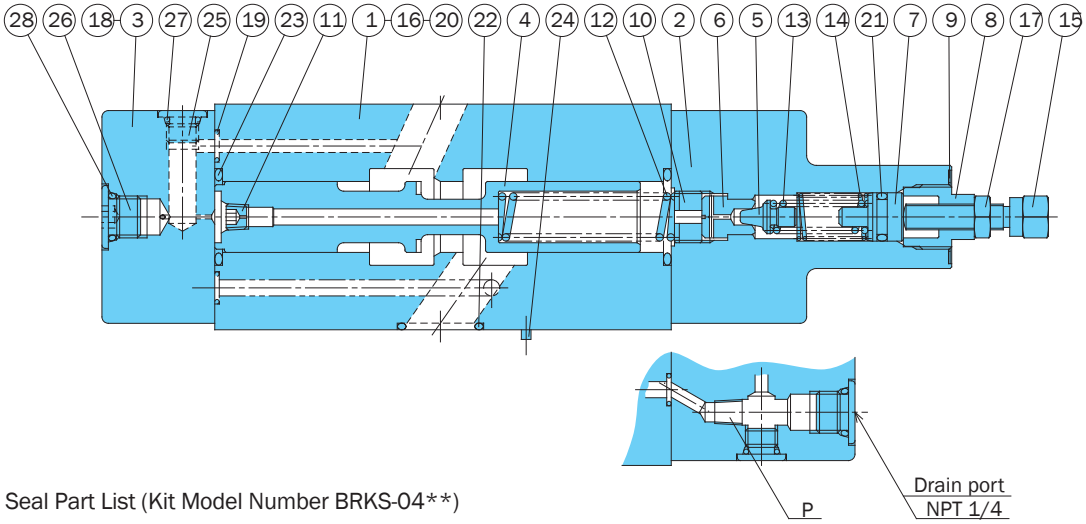
Part No.	Part Name	Part Number	Q'ty P
20	O-ring	1B-P6	2
21	O-ring	1A-P10A	1
22	O-ring	1B-P12	1
23	O-ring	AS568-014(Hs90)	5
24	O-ring	1B-P18	1
25	O-ring	AS568-023(Hs90)	1

Note) O-ring 1A/B-** refers to JIS B2401-1A/B.

Part No.	Part Name
1	Body
2	Cover
3	Spool
4	Poppet
5	Seat
6	Bushing
7	Retainer
8	Choke
9	Spring
10	Spring
11	Plate
12	Screw
13	Nut
14	Nut
15	Screw

Part No.	Part Name
16	Plug
17	Plug
18	Plug
19	Plug
20	O-ring
21	O-ring
22	O-ring
23	O-ring
24	O-ring
25	O-ring
26	Knob
27	Nut
28	Screw
29	Pin
30	Pin

OGH-G04-P*-E10



Part No.	Part Name
1	Body
2	Cover
3	Cover
4	Spool
5	Poppet
6	Seat
7	Plunger
8	Retainer
9	Plate
10	Collar
11	Choke
12	Spring
13	Spring
14	Spring
15	Screw
16	Plate
17	Nut
18	Screw
19	O-ring
20	O-ring
21	O-ring
22	O-ring
23	O-ring
24	Pin
25	Plug
26	Plug
27	O-ring
28	O-ring

Seal Part List (Kit Model Number BRKS-04**)

Part No.	Part Name	Part Number	Q'ty	
			G	GB
19	O-ring	1B-P7	4	4
20	O-ring	AS568-012(Hs90)	2	2
21	O-ring	1A-P11	1	1
22	O-ring	AS568-118(Hs90)	4	4
23	O-ring	1B-G25	2	2
27	O-ring	1B-P8	4	4
28	O-ring	1B-P11	3	2

Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify G (internal drain) or GB (external drain) for the asterisk (*) in the kit model number.

Note:
In the standard configuration, OGH-G04-P*-10 does not require a P plug, while OGH-G04-P*-B-10 requires a P plug (TPUA-1/16) and drain pipe from the cover.

Balanced Piston Type Pressure Reducing Modular Valve

10.5 gpm
21 to 3625 psi

Features

This modular valve makes the pressure in part of the circuit lower than the main circuit.
Even when pressure changes in the primary main circuit, the reduced secondary pressure is maintained at a constant level.
Compared with the direct type, this type of valve has outstanding Pressure-Flow Rate Characteristics, and a superior flow rate in the low pressure control range.
Maximum operating pressure: 3625 psi.

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Pressure Adjustment Range psi	Weight lbs	Gasket Surface Dimensions
OGB-G01-PC-20 P1 P3	1/8	3625	10.5	21 to 500 115 to 1000 500 to 3000	4.1	ISO 4401-03-02-0-94
OGB-G01-AC-20 A1 A3				21 to 500 115 to 1000 500 to 3000	4.1	
OGB-G01-BC-20 B1 B3				21 to 500 115 to 1000 500 to 3000	4.1	

Understanding Model Numbers

OGB – G 01 – P 1 – (K) – 20

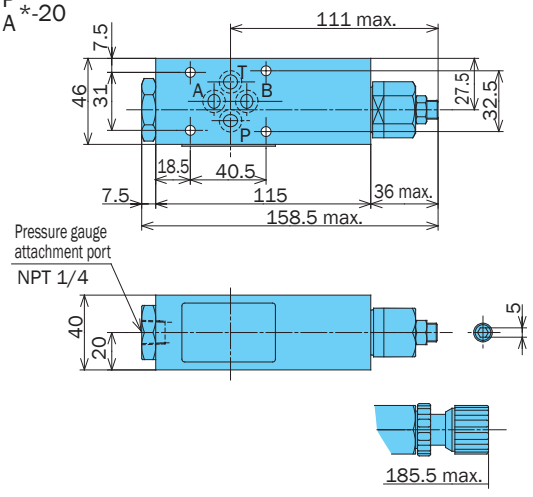
- Design number
- Auxiliary symbol K: With handle
- Pressure adjustment range C, 1, 3
- Control port P: P port A: A port B: B port
- Nominal diameter (size) 01
- Mounting method G: Gasket type
- Balanced piston type pressure reducing modular valve

• Handling
1 See the Pressure-Flow Rate Characteristics for information about how the flow rate is controlled at low pressures.
2 Note that a change in tank port back pressure causes a change in setting pressure.
3 Vent piping is not possible.
4 Note that a sub plate and installation bolts are not included. See pages H4 and F87-89 if these items are required.

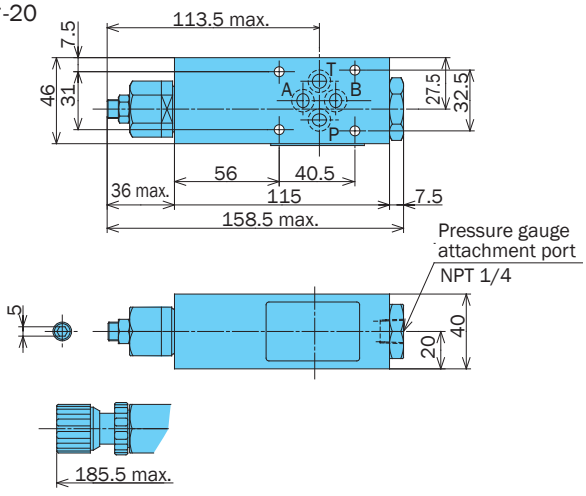
Installation Dimension Drawings

Note: Pressure is increased by clockwise (rightward) rotation of the adjusting screw (bolt), and decreased by counterclockwise (leftward) rotation.

OGB-G01-$\frac{P}{A}$*-20



OGB-G01-B*-20

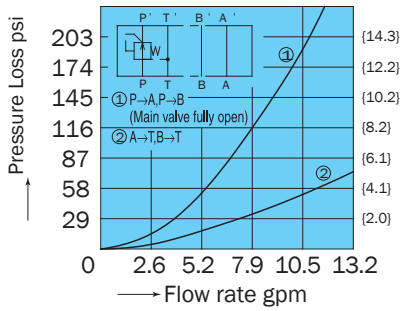


Performance Curves

Hydraulic Operating Fluid Viscosity 32 centistokes

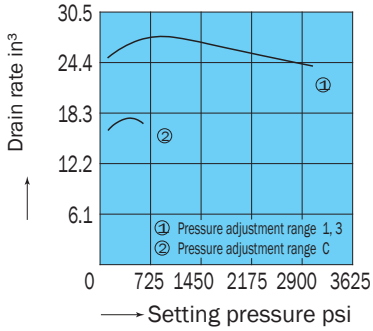
Pressure Loss Characteristics

OGB-G01-P*-20



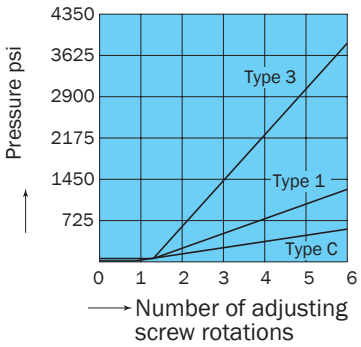
Pressure – Drain Rate Characteristics

OGB-G01-**-20



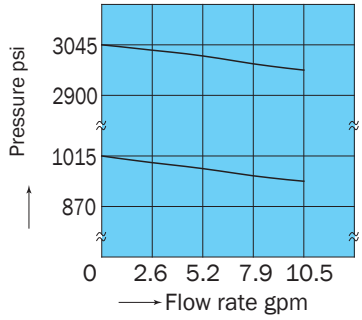
Number of Adjusting Screw Rotations – Pressure Characteristics

OGB-G01-P*-20

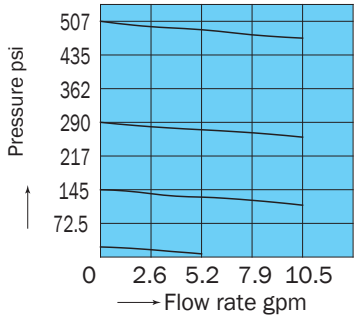


Pressure – Flow Rate Characteristics

OGB-G01-* 1/3-20

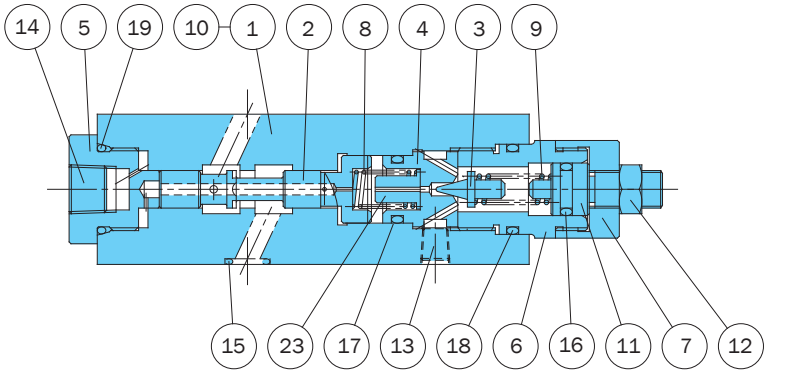


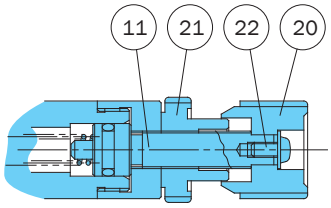
OGB-G01-*C-20



Cross-sectional Drawing

OGB-G01-P*-20





Seal Part List (Kit Model Number BRBS-01GB*)

Part No.	Part Name	Part Number	Q'ty		
			P	A	B
15	O-ring	1B-P9	4	4	4
16	O-ring	1A-P10A	1	1	1
17	O-ring	1B-P14	1	1	1
18	O-ring	1B-P20	1	1	1
19	O-ring	1B-P20	1	1	1

Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify P, A, or B for the asterisk (*) in the kit model number.

Part No.	Part Name
1	Body
2	Spool
3	Poppet
4	Seat
5	Bushing
6	Retainer
7	Bushing
8	Spring
9	Spring
10	Plate
11	Screw
12	Nut
13	Plug
14	Plug
15	O-ring
16	O-ring
17	O-ring
18	O-ring
19	O-ring
20	Knob
21	Nut
22	Screw
23	Choke

Pressure Reducing Modular Valve

10.5 to 79 gpm
3625 to 5075 psi

Features

This modular valve makes the pressure in part of the circuit lower than the main circuit.

Even when pressure changes in the primary main circuit, the reduced secondary pressure is maintained at a constant level.

Maximum Operating Pressure: 3625 to 5075 psi.

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Pressure Adjustment Range psi	Weight lbs	Gasket Surface Dimensions
OG-G01-AC-21 A1 A2	1/8	3625	10.5	21 to 500 115 to 1000 500 to 2320	2.8	ISO 4401-03-02-0-94
OG-G01-BC-21 B1 B2				21 to 500 115 to 1000 500 to 2320	2.8	
OG-G03-AC-J51 A1 A3	3/8	3625	21.1 but C : 13.2	36 to 500 115 to 1000 500 to 3000	8.3	ISO 4401-05-04-0-94
OG-G03-BC-J51 B1 B3				36 to 500 115 to 1000 500 to 3000	8.3	
OGH-G04-A1-10 A3	1/2	5075	79.2	115 to 1000 500 to 3625	17.6	ISO 4401-07-06-0-94
OGH-G04-B1-10 B3				115 to 1000 500 to 3625	17.6	

• Handling

1 When using a remote control valve in a vent circuit, certain vent circuit pipe capacities can cause vibration. Because of this, thick steel pipe with an inside diameter of φ 4mm that is no longer than three meters is recommended. Vent piping cannot be used with the 01, 03 sizes.

2 With the 01, 03 sizes, the flow rate is limited at low pressures. See the Pressure-Flow Rate Characteristics on page F-37 and F-38 for more information.

3 For the 03 size, the drainage can be allowed to escape through the T port. In the case of a valve with the auxiliary symbol B, however, run a return pipe from the drain discharge port directly to the tank.

4 With the 04 sizes, piping is not required because drainage can be allowed to escape from the gasket side drain port. In the case of a valve with the auxiliary symbol B, however, run a return pipe from the drain discharge port directly to the tank.

5 Note that a change in drain back pressure causes a change in setting pressure.

6 Note that a sub plate and installation bolts are not included. See pages H4and F87-89 if these items are required.

7 04 series modular valves do not have an L (DR2) drain port, so they cannot be used in combination with pressure center type solenoid valves (D).

8 With the 03, 04 sizes, the control port can be changed by altering the attachment orientation of the back cover. See the installation diagram for more information.
After making this change, be sure also to make the other changes as in accordance with the model number indicated on the nameplate.

9 Use the P port control valve concurrently with the 01 size central all-port-block (C5) solenoid valve if when the valve is in the central position and external pressure may cause the pressure at the control port to exceed the set pressure.

Understanding Model Numbers

01, 03 size

OG – G 01 – P 1 – (K) – 20

- 20 — Design number E: NPT piping (01, 03)
- (K) — Auxiliary symbol K: With handle
- 1 — Pressure adjustment range C, 1, 3
- P — Control port A: A port B: B port
- 01 — Nominal diameter (size) 01, 03
- G — Mounting method G: Gasket type
- OG — Balanced piston type pressure reducing modular valve

Understanding Model Numbers

04 size

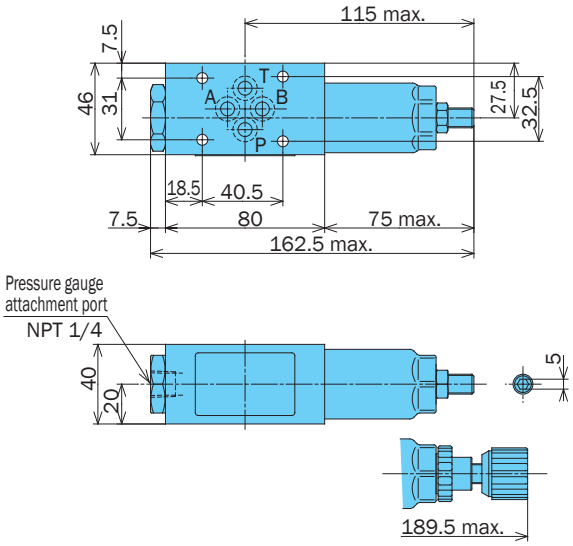
OGH – G 04 – A 1 – (B) – 10

- Design number
- Auxiliary symbol B: See note 4 under "Handling."
- Pressure adjustment range 1, 3
- Control port A: A port B: B port
- Nominal diameter (size) 04
- Mounting method G: Gasket type
- M35 Series pressure reducing modular valve

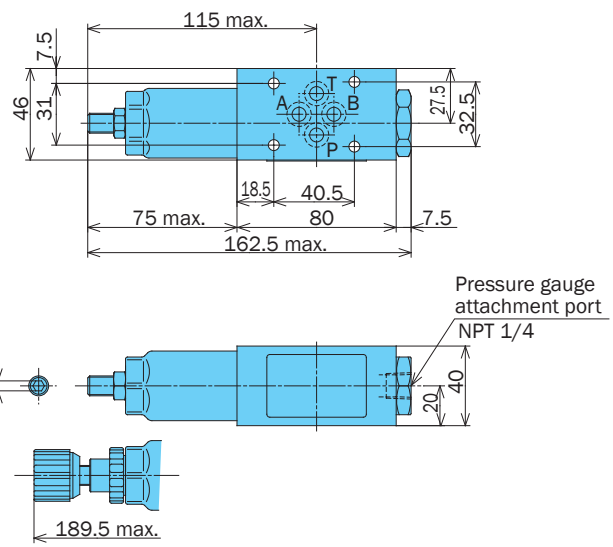
Installation Dimension Drawings

Note: Pressure is increased by clockwise (rightward) rotation of the adjusting screw (bolt), and decreased by counterclockwise (leftward) rotation.

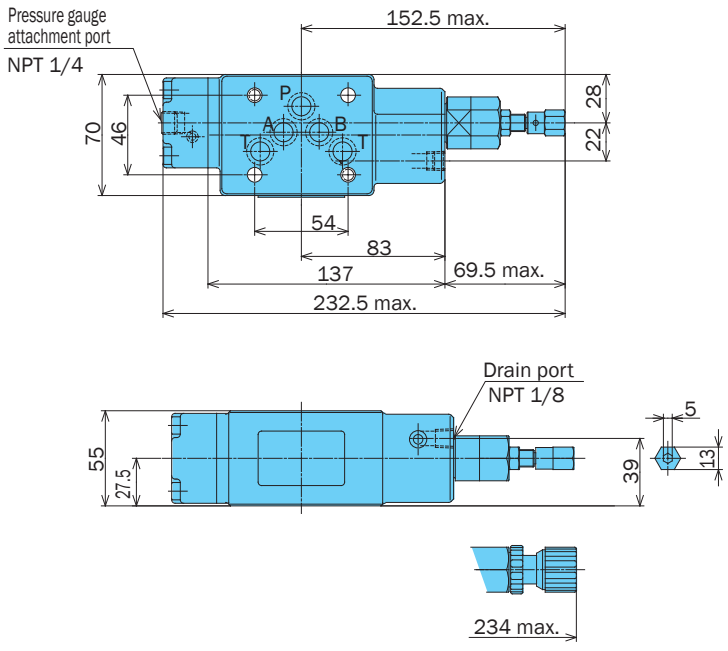
OG-G01-A*-E21



OG-G01-B*-E21



OG-G03-A*-E51



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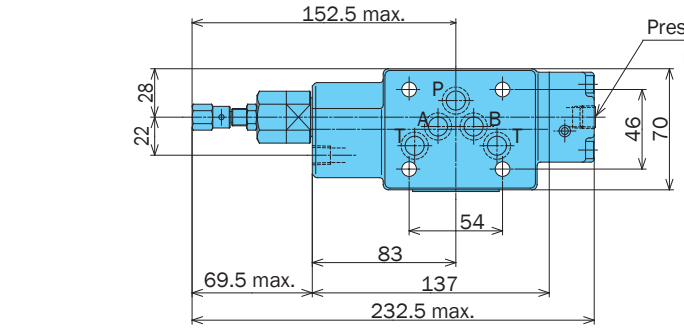
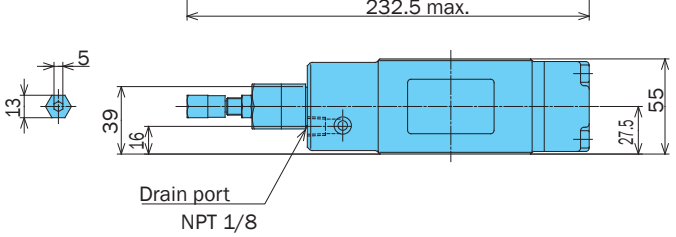
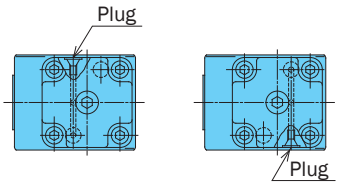
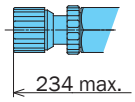


Note: 1. Conversion to P port control is possible by changing the back cover. Port control is determined by plug orientation.
2. When replacing the back cover, be sure also to change the nameplate to the applicable model type.
3. The tightening torque of the back cover bolts is: (M6) 7 - 9.5 ft lbs.



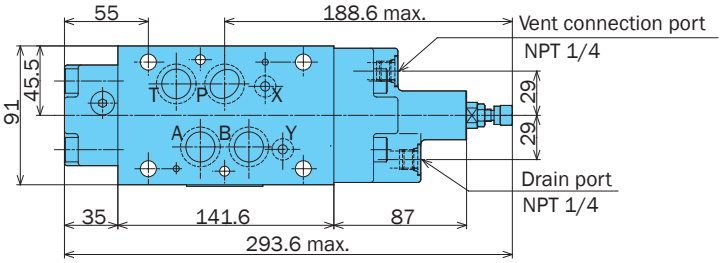


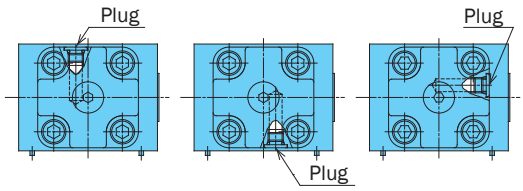
OG-G03-B*-J51 OG-G03-P*-J51

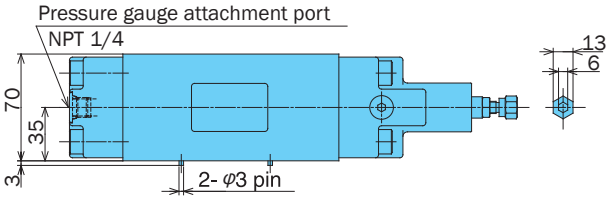


OGH-G04-A*-10

Note: 1. Conversion to P, B port control is possible by changing the back cover. Port control is determined by plug orientation.
2. When replacing the back cover, be sure also to change the nameplate to the applicable model type.
3. The tightening torque of the back cover bolts is: (M10) 33 - 40 ft lbs.







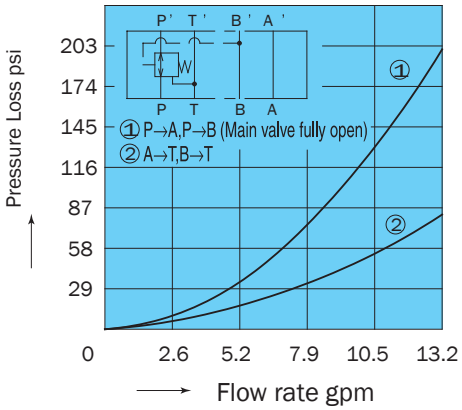
OGH-G04-P*-10 OGH-G04-B*-10 OGH-G04-A*-10

Performance Curves

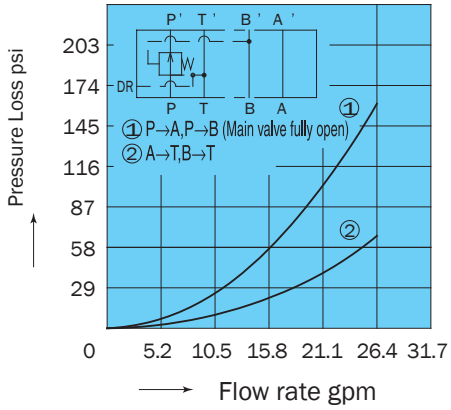
Hydraulic Operating Fluid Viscosity 32 centistokes.

Pressure Loss Curve

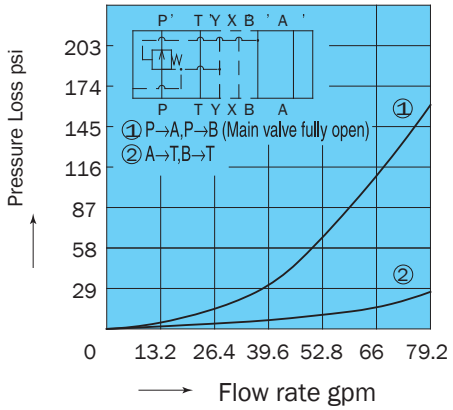
OG-G01-B*-21



OG-G03-B*-J51

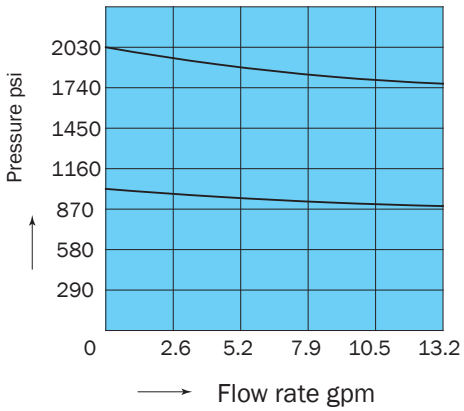


OGH-G04-**-10

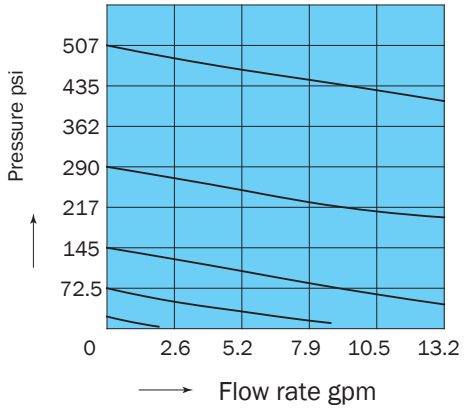


Pressure – Flow Rate Characteristics

OG-G01-B $\frac{1}{2}$-21



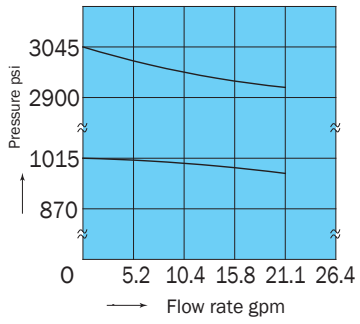
OG-G01-BC-21



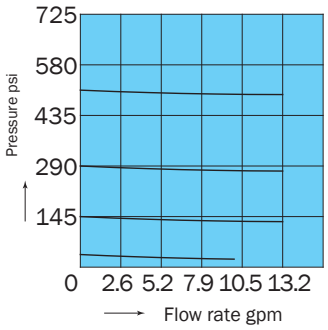
F

Modular Valves

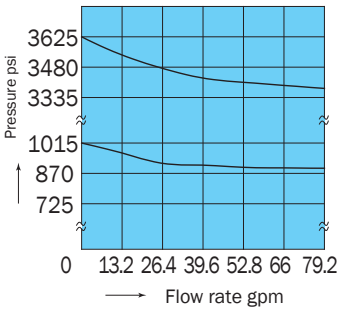
OG-G03-B $\frac{1}{3}$-J51



OG-G03-BC-J51

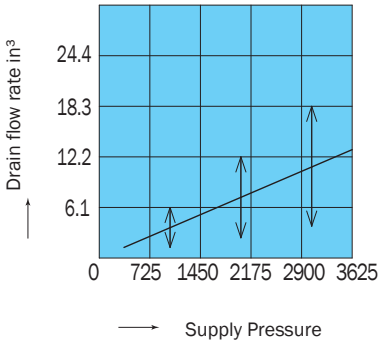


OGH-G04-**-10

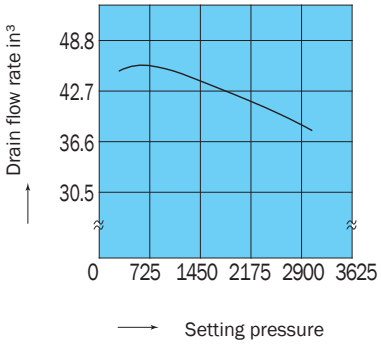


Pressure - Drain Rate Characteristics

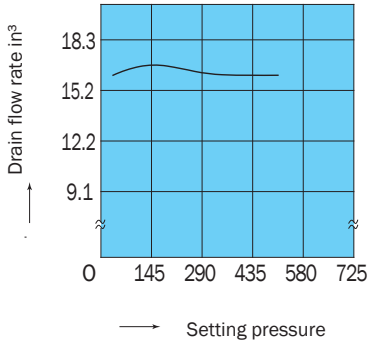
OG-G01-B*-21



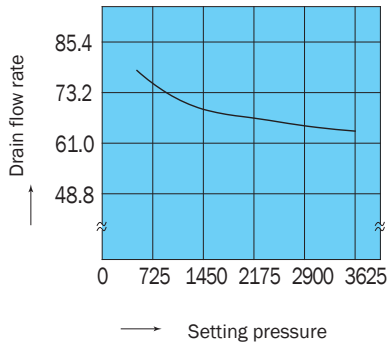
OG-G03-B*-J51



OG-G03-BC-J51

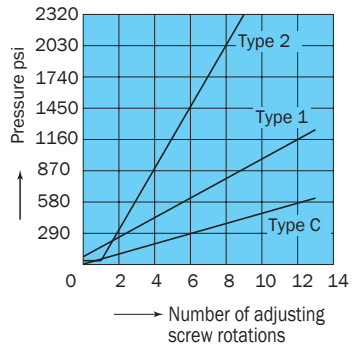


OGH-G04-*3-10

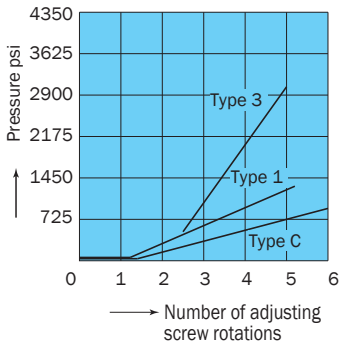


Number of Adjusting Screw Rotations - Pressure Characteristics

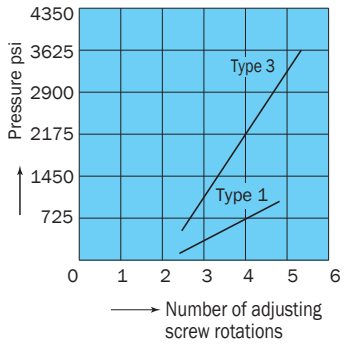
OG-G01-**-21



OG-G03-**-*-51

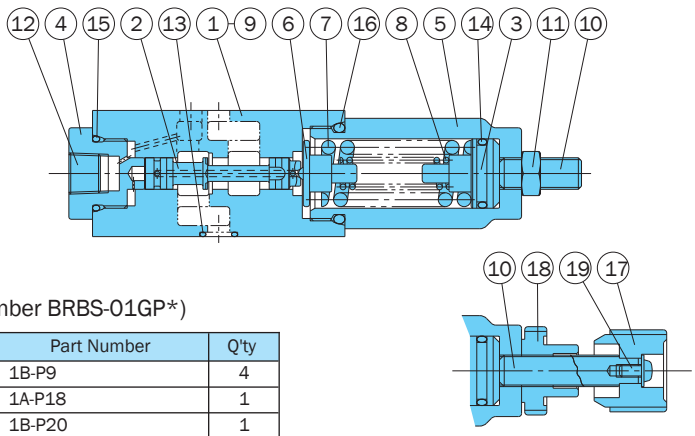


OGH-G04-**-10



Cross-sectional Drawing

OG-G01-A2-21



Part No.	Part Name
1	Body
2	Spool
3	Push rod
4	Bushing
5	Retainer
6	Guide
7	Spring
8	Spring
9	Plate
10	Screw
11	Nut
12	Plug
13	O-ring
14	O-ring
15	O-ring
16	O-ring
17	Knob
18	Nut
19	Screw

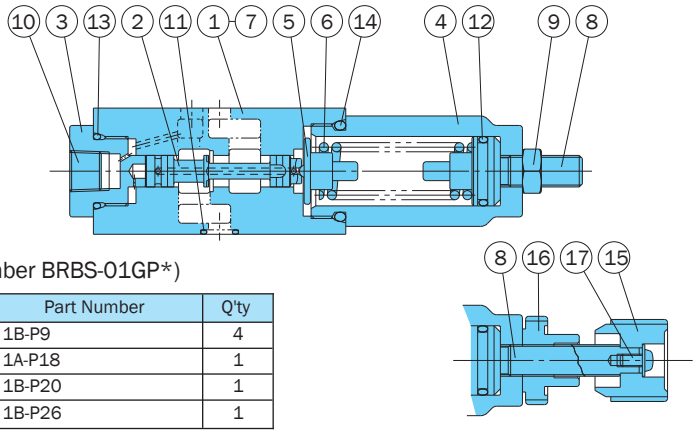
Seal Part List (Kit Model Number BRBS-01GP*)

Part No.	Part Name	Part Number	Q'ty
13	O-ring	1B-P9	4
14	O-ring	1A-P18	1
15	O-ring	1B-P20	1
16	O-ring	1B-P26	1

Note: O-ring 1A/B-** refers to JIS B2401-1A/B.

Note: Part number 8 is used in the case of pressure adjustment range type 2 only.

OG-G01-AC-21



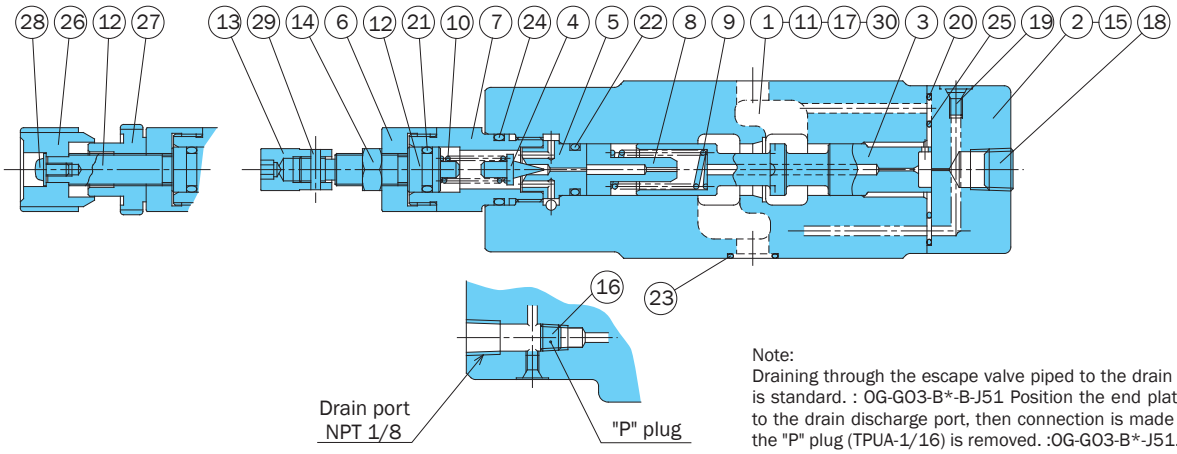
Part No.	Part Name
1	Body
2	Spool
3	Bushing
4	Retainer
5	Guide
6	Spring
7	Plate
8	Screw
9	Nut
10	Plug
11	O-ring
12	O-ring
13	O-ring
14	O-ring
15	Knob
16	Nut
17	Screw

Seal Part List (Kit Model Number BRBS-01GP*)

Part No.	Part Name	Part Number	Q'ty
11	O-ring	1B-P9	4
12	O-ring	1A-P18	1
13	O-ring	1B-P20	1
14	O-ring	1B-P26	1

Note: O-ring 1A/B-** refers to JIS B2401-1A/B.

OG-G03-B*-J51



Note:
Draining through the escape valve piped to the drain discharge port is standard. : OG-G03-B*-B-J51 Position the end plate (TPHA-1/8) to the drain discharge port, then connection is made to the T port if the "P" plug (TPUA-1/16) is removed. :OG-G03-B*-J51.

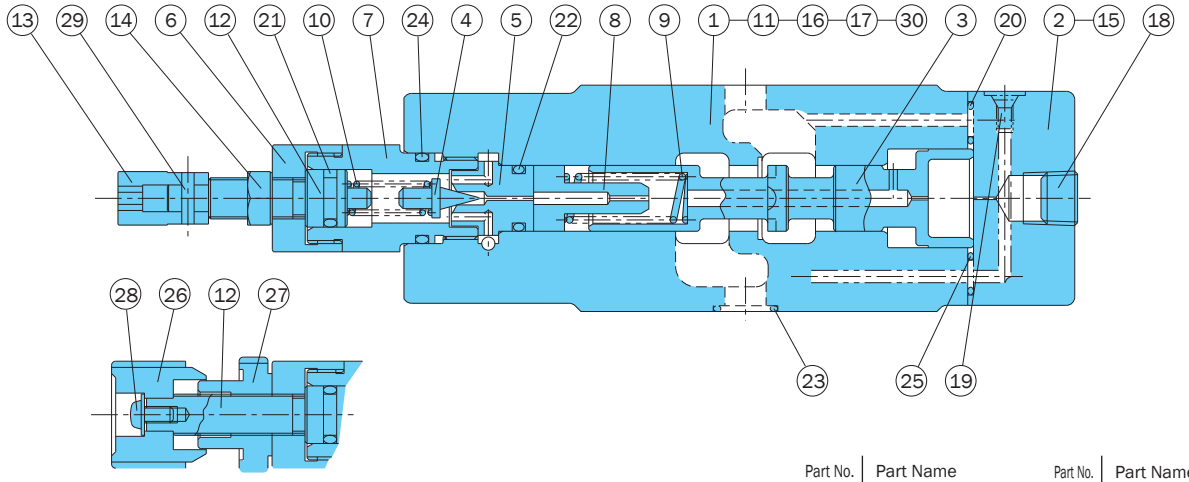
Seal Part List (Kit Model Number BRES-03G*-1A)

Part No.	Part Name	Part Number	Q'ty	
			A	B
20	O-ring	1B-P6	2	2
21	O-ring	1A-P10A	1	1
22	O-ring	1B-P12	1	1
23	O-ring	AS568-014(Hs90)	5	5
24	O-ring	1B-P18	1	1
25	O-ring	AS568-023(Hs90)	1	1

Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify A or B for the asterisk (*) in the kit model number.

Part No.	Part Name	Part No.	Part Name	Part No.	Part Name
1	Body	11	Plate	21	O-ring
2	Cover	12	Screw	22	O-ring
3	Spool	13	Nut	23	O-ring
4	Poppet	14	Nut	24	O-ring
5	Seat	15	Screw	25	O-ring
6	Bushing	16	Plug	26	Knob
7	Retainer	17	Plug	27	Nut
8	Choke	18	Plug	28	Screw
9	Spring	19	Plug	29	Pin
10	Spring	20	O-ring	30	Pin

OG-G03-BC-J51



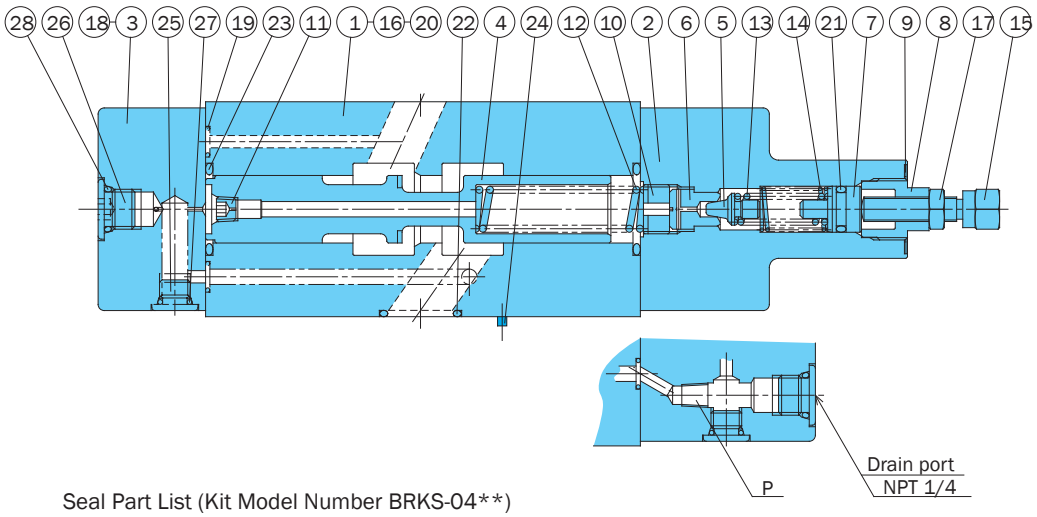
Seal Part List (Kit Model Number BRES-03GC*-1A)

Part No.	Part Name	Part Number	Q'ty	
			A	B
20	O-ring	1B-P6	2	2
21	O-ring	1A-P10A	1	1
22	O-ring	1B-P12	1	1
23	O-ring	AS568-014(Hs90)	5	5
24	O-ring	1B-P18	1	1
25	O-ring	AS568-023(Hs90)	1	1

Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify A or B for the asterisk (*) in the kit model number.

Part No.	Part Name	Part No.	Part Name
1	Body	16	Plug
2	Cover	17	Plug
3	Spool	18	Plug
4	Poppet	19	Plug
5	Seat	20	O-ring
6	Bushing	21	O-ring
7	Retainer	22	O-ring
8	Choke	23	O-ring
9	Spring	24	O-ring
10	Spring	25	O-ring
11	Plate	26	Knob
12	Screw	27	Nut
13	Nut	28	Screw
14	Nut	29	Pin
15	Screw	30	Pin

OGH-G04-**-10



Seal Part List (Kit Model Number BRKS-04**)

Part No.	Part Name	Part Number	Q'ty	
			G	GB
19	O-ring	1B-P7	4	4
20	O-ring	AS568-012(Hs90)	2	2
21	O-ring	1A-P11	1	1
22	O-ring	AS568-118(Hs90)	4	4
23	O-ring	1B-G25	2	2
27	O-ring	1B-P8	4	4
28	O-ring	1B-P11	3	2

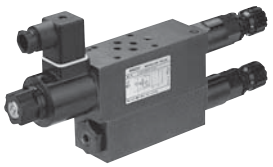
Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify G (internal drain) or GB (external drain) for the asterisk (*) in the kit model number.

Part No.	Part Name
1	Body
2	Cover
3	Cover
4	Spool
5	Poppet
6	Seat
7	Plunger
8	Retainer
9	Plate
10	Collar
11	Choke
12	Spring
13	Spring
14	Spring
15	Screw
16	Plate
17	Nut
18	Screw
19	O-ring
20	O-ring
21	O-ring
22	O-ring
23	O-ring
24	Pin
25	Plug
26	Plug
27	O-ring
28	O-ring

Note:
In the standard configu ration, OGH-G04-**-10 does not require a P plug, while OGH-G04-**-B-10 requires a P plug (TPUA-1/16) and drain pipe from the cover.

Two-Pressure Reducing Modular Valve

10.5 gpm
29 to 2030 psi



Features

When the pressure in part of the circuit is lower than the main circuit, this modular valve controls pressure by switching the low pressure to secondary pressure (high pressure, low pressure).
Even when pressure changes in the primary main circuit, the reduced secondary pressure is maintained at a constant level.
Maximum Operating Pressure: 1000, 3625 psi

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Pressure Adjustment Range psi		Weight lbs	Gasket Surface Dimensions
				Low pressure side	High pressure side		
OGS-G01-PCC-K-**-22 P1C	1/8	1000	10.5	29 to 500	29 to 5000	10.5	ISO 4401-03-02-0-94
					115 to 1000		
P21		3625		115 to 1000	500 to 2030		

Solenoid Specifications

Model No.	Rated Voltage	Starting Current	Holding Current	Holding Power
OGS-G01-P**-K- C1-22	AC100V 50/60HZ	2.2/2.0A	0.52/0.38A	25/22W
C2	AC200V 50/60HZ	1.1/1.0A	0.26/0.19A	25/22W
D1	DC12V	2.2A		26W
D2	DC24V	1.1A		26W

Understanding Model Numbers

OGS – G 01 – P 1 C – K(R) – C1 – 22

- 22: Design number
- C1: Power supply C1 : AC100V, C2 : AC200V, D1 : DC12V, D2 : DC24V
- K(R): Auxiliary symbol K: With handle (standard), R: With indicator light (optional), GR: With surgeless type indicator light (Option)
- C: Low pressure side pressure adjustment range C, 1
- 1: High pressure side pressure adjustment range C, 1, 2 (There is no 11, 2C combination.)
- P: Control port P: P port
- 01: Nominal diameter (size) 01
- G: Mounting method G: Gasket type
- OGS: Pressure reducing modular valve for two-press setting

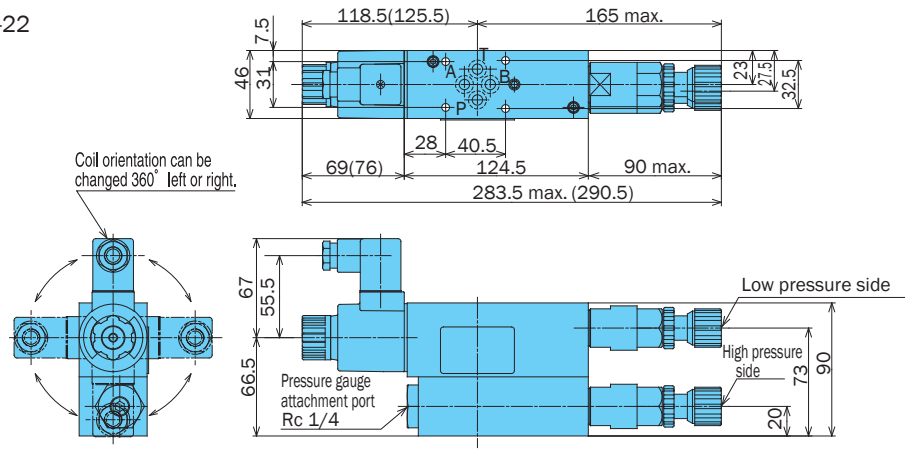
• Handling

1 See the Pressure-Flow Rate Characteristics for information about how the flow rate is controlled at low pressures.
2 Note that a change in tank port back pressure causes a change in setting pressure.
3 Instability occurs when there is a small setting pressure differential between the high pressure and low pressure, so be sure to maintain at least the minimum pressure differentials described below.
C Type:
At least 43 psi
1, 2 Type:
At least 72 psi
4 Vent piping is not possible.
5 Note that a sub plate and installation bolts are not included. See pages H4 and F87-89 if these items are required.
6 Low pressure is attained when the solenoid is on.
7 The coil surface temperature increases if this pump is kept continuously energized. Install the valve so there is no chance of it being touched directly by hand.
8 The wiring in the connector is the same as the SA series wet type solenoid valve. (See page D-22)

Installation Dimension Drawings

Note: 1. Dimensions in parentheses apply in the case of a DC solenoid
2. Pressure is increased by clockwise (rightward) rotation of the adjusting handle, and decreased by counterclockwise (leftward) rotation.

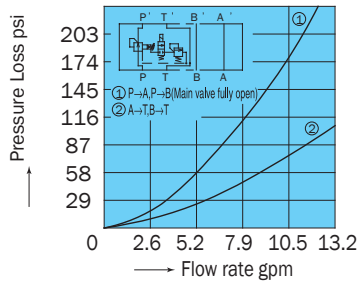
OGS-G01-P*C-K(R)-**-22



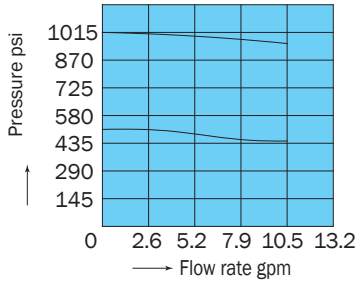
Performance Curves

Hydraulic Operating Fluid Viscosity 32 centistokes

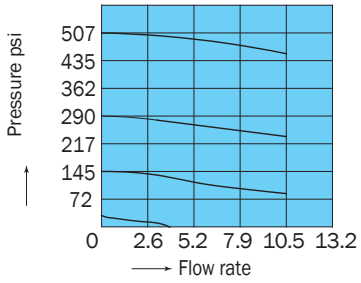
Pressure Loss Characteristics
OGS-G01-PIC-K-**-22



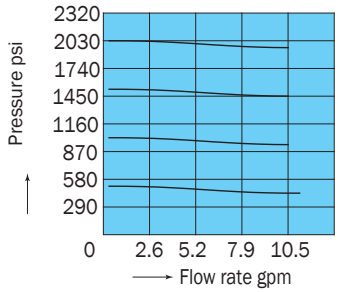
Pressure – Flow Rate Characteristics
OGS-G01-PIC-K-**-22
(Type 1)



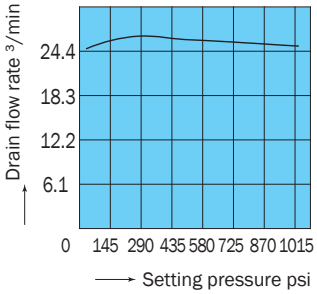
OGS-G01-P*C-K-**-22
(Type C))



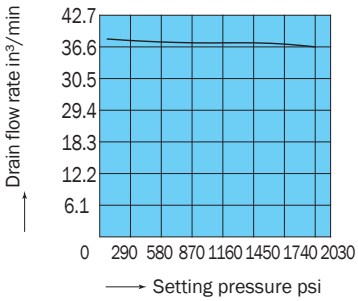
Pressure – Flow Rate Characteristics
OGS-G01-P21-K-**-22
(Type 2)



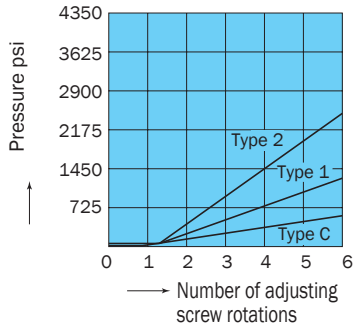
Pressure – Drain Rate Characteristics
OGS-G01-PIC-K-**-22



Pressure – Drain Rate Characteristics
OGS-G01-P21-K-**-22

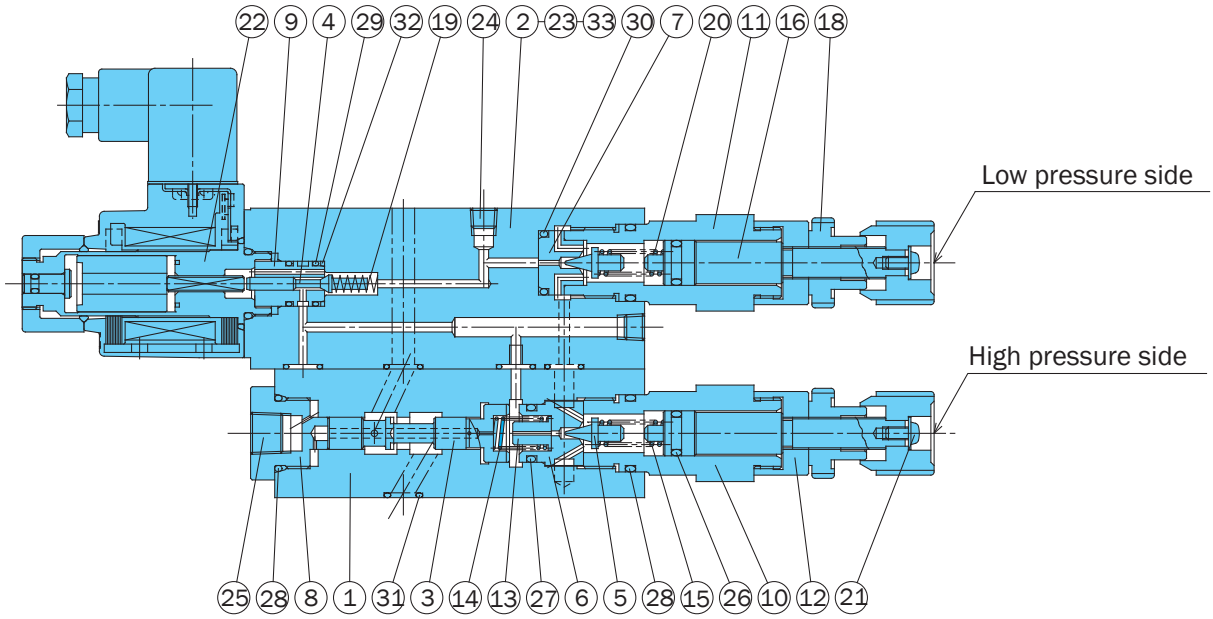


Number of Adjusting Screw Rotations Pressure Characteristics
OGS-G01-P**-22



Cross-sectional Drawing

OGS-G01-P*C-K(R)-**1-22



Seal Part List (Kit Model Number BRBS-01GSP-1A)

Part No.	Part Name	Part Number	Q'ty
26	O-ring	1A-P10A	2
27	O-ring	1B-P14	1
28	O-ring	1B-P20	3
29	O-ring	AS568-013(Hs90)	2
30	O-ring	1B-P16	1
31	O-ring	1B-P9	11
32	Backup ring	For AS568-013	1

Note: 1.O-ring 1A/B-** refers to JIS B2401-1A/B.

Part No.	Part Name
1	Body
2	Body
3	Spool
4	Spool
5	Poppet
6	Seat
7	Seat
8	Bushing
9	Sleeve
10	Retainer
11	Retainer
12	Bushing
13	Choke
14	Spring
15	Spring
16	Screw
17	Knob

Part No.	Part Name
18	Nut
19	Spring
20	Spring
21	Screw
22	Solenoid assy
23	Screw
24	Plug
25	Plug
26	O-ring
27	O-ring
28	O-ring
29	O-ring
30	O-ring
31	O-ring
32	Backup ring
33	Plate

Sequence Modular Valve

10.5 to 21 gpm
3625 psi

Features

This modular valve is a pressure control valve used for sequential actuator operations and for maintaining main circuit pressure.

Pressure adjustment is possible across a wide range, from 36 to 3045 psi.

Maximum Operating Pressure: 3625 psi.

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Pressure Adjustment Range psi	Weight lbs	Gasket Surface Dimensions
OQ-G01-P21-20 P23	1/8	3625	10.5	115 to 1000 500 to 3045	2.4	ISO 4401-03-02-0-94
OQ-G03-P2A-J50 P2C P2E	3/8	3625	21	36 to 123 123 to 500 500 to 2030	7.7	ISO 4401-05-04-0-94

Understanding Model Numbers

OQ – G 03 – P 2 A – (K) – J50

- Design number
  Note: For 01 size, 20
  For 03 size, relationship between mounting bolts and design number is indicated as J50: M6, 50: M8.
- Auxiliary symbol K: With handle (01, 03 size)
- Pressure adjustment range
- Type 2: Internal pilot External drain
- Control port P: P port
- Nominal diameter (size) 01, 03
- Mounting method G: Gasket type
- Sequence modular valve

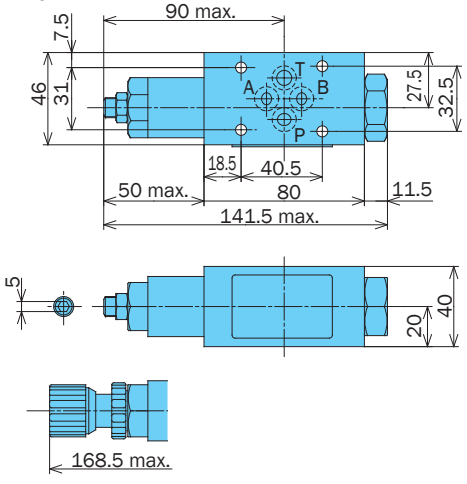
• Handling

1 The pressure adjustment range is expressed in terms of cracking pressure.
2 Install this valve directly above the sub plate or manifold.
3 When two or more of these valves are ganged in sequence, make sure the setting pressure differential between them is at least 145 psi.
4 Note that a sub plate and installation bolts are not included. See pages H4 and F87-89 if these items are required.

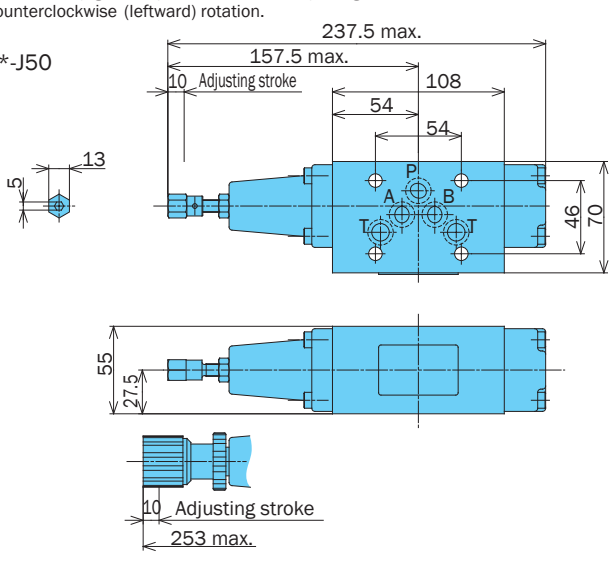
Installation Dimension Drawings

Note: Pressure is increased by clockwise (rightward) rotation of the adjusting screw (bolt), and decreased by counterclockwise (leftward) rotation.

OQ-G01-P2*-20



OQ-G03-P2*-J50

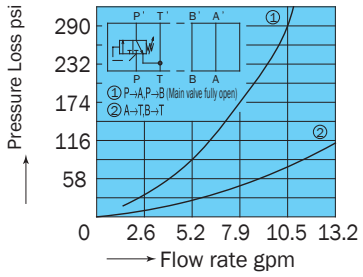


Performance Curves

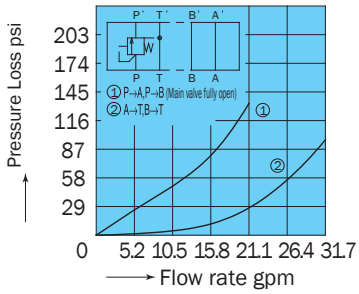
Hydraulic Operating Fluid Viscosity 32 centistokes

Pressure Loss Characteristics

0Q-G01-P2*-20

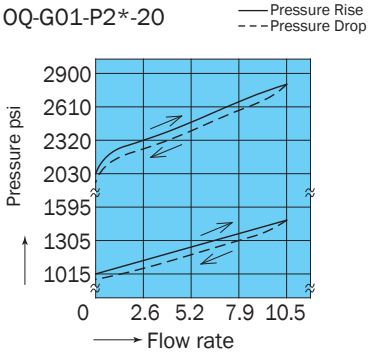


0Q-G03-P2A-J50

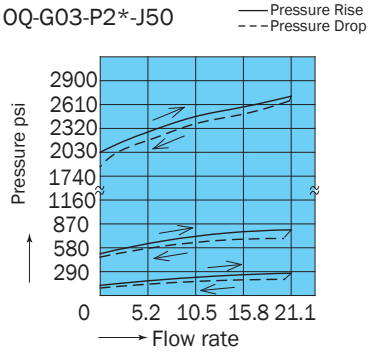


Pressure - Flow Rate Characteristics

0Q-G01-P2*-20

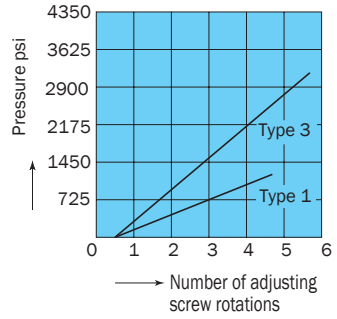


0Q-G03-P2*-J50

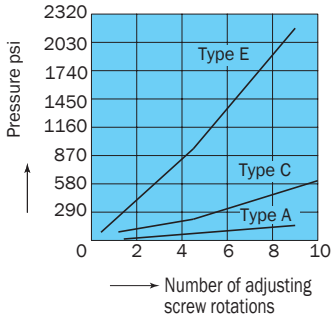


Number of Adjusting Screw Rotations - Pressure Characteristics

0Q-G01-P2*-20



0Q-G03-P2*-J50

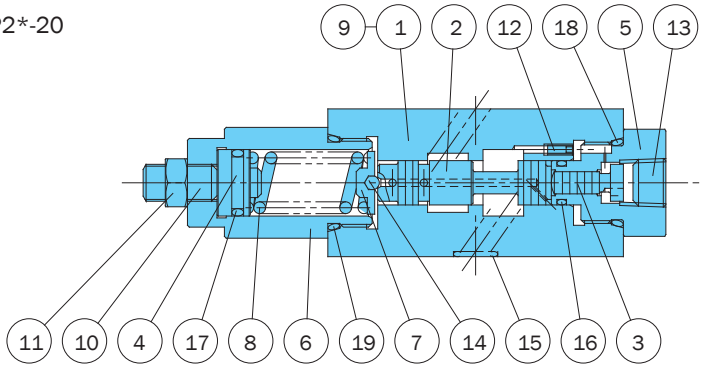


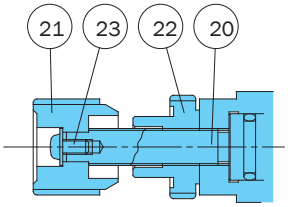
F

Modular Valves

Installation Dimension Drawings

0Q-G01-P2*-20





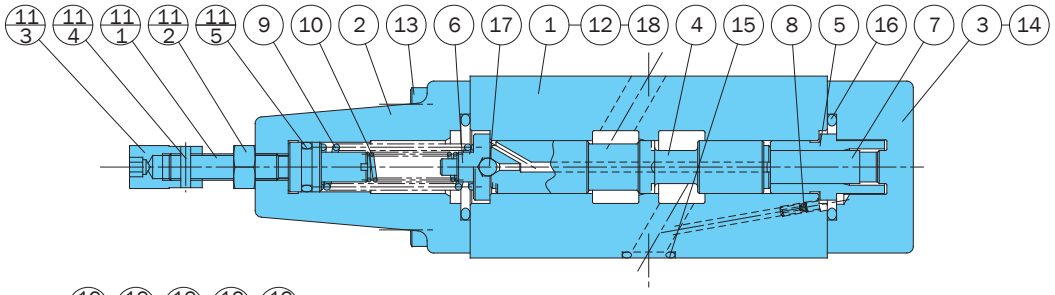
Part No.	Part Name
1	Body
2	Spool
3	Piston
4	Plunger
5	Bushing
6	Retainer
7	Guide
8	Spring
9	Plate
10	Screw
11	Nut
12	Choke
13	Plug
14	Ball
15	O-ring
16	O-ring
17	O-ring
18	O-ring
19	O-ring
20	Screw
21	Knob
22	Nut
23	Screw

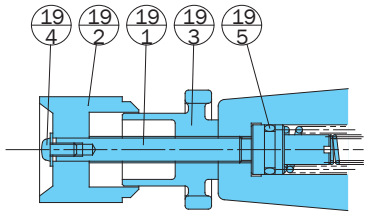
Seal Part List (Kit Model Number BRBS-01QP)

Part No.	Part Name	Part Number	Q'ty P
15	O-ring	1B-P9	4
16	O-ring	1B-P9	1
17	O-ring	1A-P14	1
18	O-ring	1B-P20	1
19	O-ring	1B-P22	1

Note: O-ring 1A/B-** refers to JIS B2401-1A/B.

0Q-G03-P2*-J50





Note: The 10 spring is not included with pressure adjustment Type A.

Seal Part List (Kit Model Number BRES-03QP)

Part No.	Part Name	Part Number	Q'ty P
11(19)$_5$	O-ring	1B-P11	1
15	O-ring	AS568-014(Hs90)	5
16	O-ring	1B-P26	2

Note: O-ring 1A/B-** refers to JIS B2401-1A/B.

Part No.	Part Name
1	Body
2	Cover
3	Cover
4	Spool
5	Sleeve
6	Guide
7	Plunger
8	Choke
9	Spring
10	Spring
11	Screw kit
11_1	Screw
11_2	Nut
11_3	Nut
11_4	Pin
11_5	O-ring
12	Plate
13	Screw
14	Screw
15	O-ring
16	O-ring
17	Ball
18	Pin
19	Handle kit
19_1	Screw
19_2	Knob
19_3	Nut
19_4	Screw
19_5	O-ring

Counter Balance Modular Valve

10.5 to 79 gpm
2030 psi

Features

This modular valve is used to control actuator back pressure and for other pressure control valve applications.

Pressure adjustment is possible across a wide range, from 36 to 2030 psi

Maximum Operating Pressure: 3625, 5075 psi

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Pressure Adjustment Range psi	Weight lbs	Gasket Surface Dimensions
OCQ-G01-A11-20 A12	1/8	3625	10.5	115 to 1000 500 to 2030	2.4	ISO 4401-03-02-0-94
OCQ-G01-B11-20 B12				115 to 1000 500 to 2030	2.4	
OCQ-G03-A1A-J50 A1C A1E	3/8	3625	21	36 to 123 123 to 500 500 to 2030	7.7	ISO 4401-05-04-0-94
OCQ-G03-B1A-J50 B1C B1E				36 to 123 123 to 500 500 to 2030	7.7	
OQH-G04-A1A-10 A1C A1E	1/2	5075	79	36 to 123 72 to 500 290 to 2030	17.6	ISO 4401-07-06-0-94
OQH-G04-B1A-10 B1C B1E				36 to 123 72 to 500 290 to 2030	17.6	

• Handling

1 The pressure adjustment range is expressed in terms of cracking pressure.

2 Run tank port piping directly to the tank, and ensure that back pressure is as small as possible.

3 Note that a sub plate and installation bolts are not included. See pages H4 and F87-89 if these items are required.

4 04 series modular valves do not have an L (DR2) drain port, so they cannot be used in combination with pressure center type solenoid valves (D).

Understanding Model Numbers

01, 03 size

OCQ – G 03 – B 1 A – (K) – J50

- OCQ: Counter balance modular valve
- G: Mounting method G: Gasket type
- 03: Nominal diameter (size) 01, 03
- B: Control port A: A port, B: B port
- 1: Type 1 { Internal pilot, Internal drain
- A: Pressure adjustment range
- (K): Auxiliary symbol K: With handle (01, 03 size)
- J50: Design number
  Note: For 01 size, 20
  For 03 size, relationship between mounting bolts and design number is indicated as J50: M6, 50 : M8.

F Modular Valves

Understanding Model Numbers

04 size

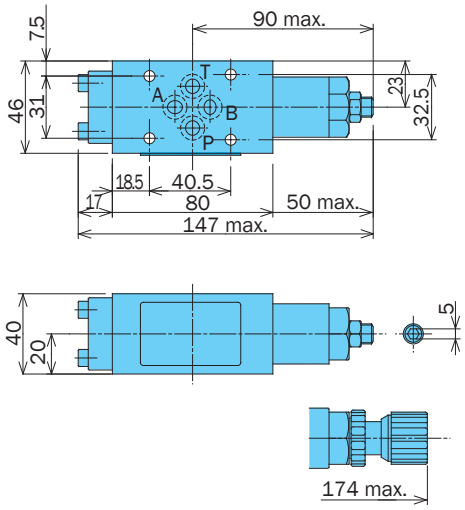
OQH – G 04 – B 1 A – 10

- Design number
- Pressure adjustment range A, C, E
- Type 1 { Internal pilot / Internal drain
- Control port A: A port / B: B port
- Nominal diameter (size) 04
- Mounting method G: Gasket type
- M35 Series counter balance modular valve

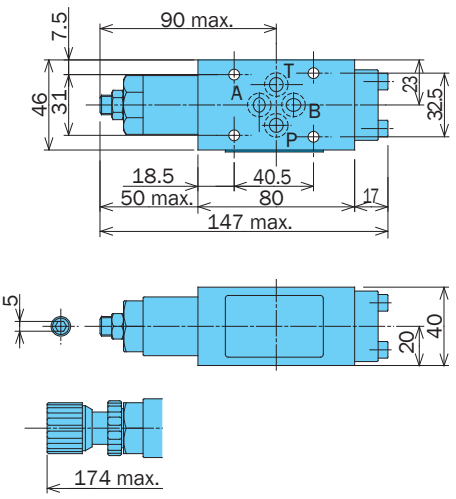
Installation Dimension Drawings

Note: Pressure is increased by clockwise (rightward) rotation of the adjusting screw (bolt), and decreased by counterclockwise (leftward) rotation.

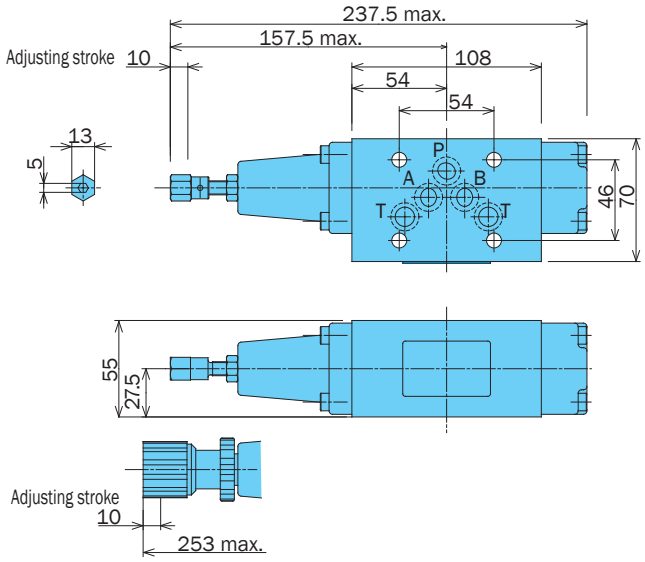
OCQ-G01-A1*-20



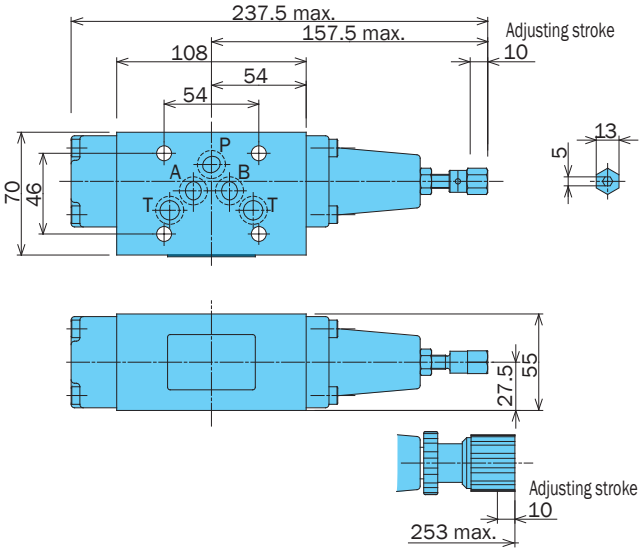
OCQ-G01-B1*-20



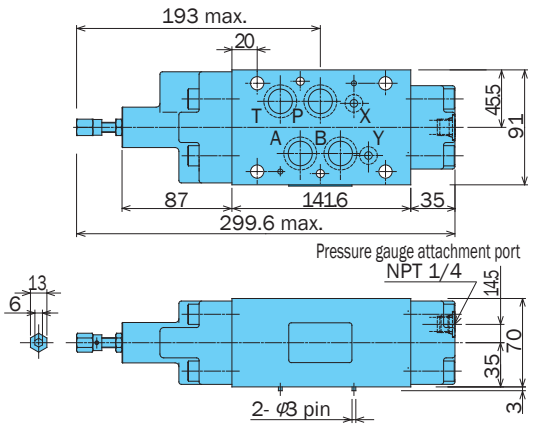
OCQ-G03-A1*-J50



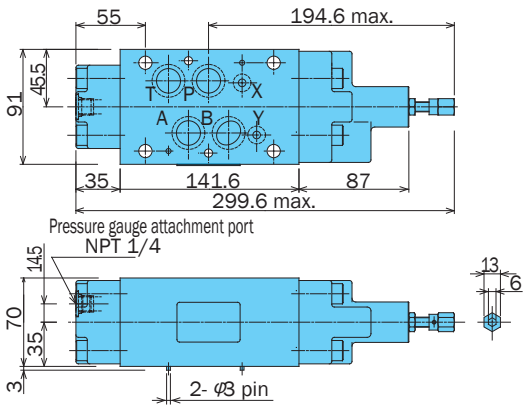
OCQ-G03-B1*-J50



OQH-G04-A1*-10



OQH-G04-B1*-10

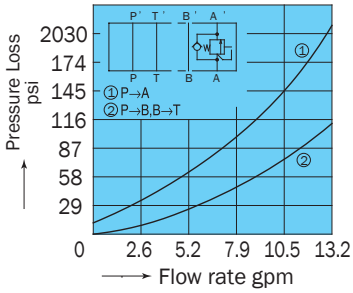


Performance Curves

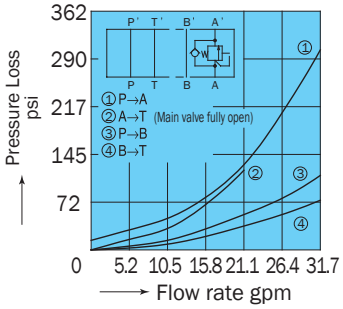
Hydraulic Operating Fluid Viscosity 32 centistokes

Pressure Loss Characteristics

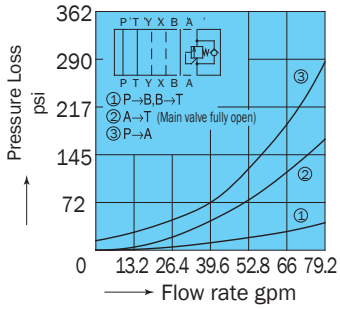
OCQ-G01-A1*-20



OCQ-G03-A1A-J50

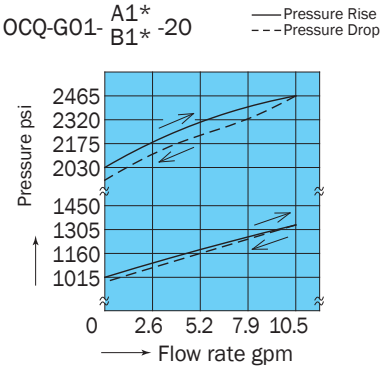


OQH-G04-B1A-10

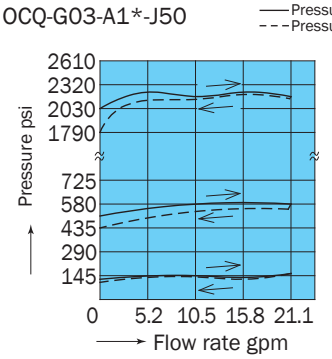


Pressure - Flow Rate Characteristics

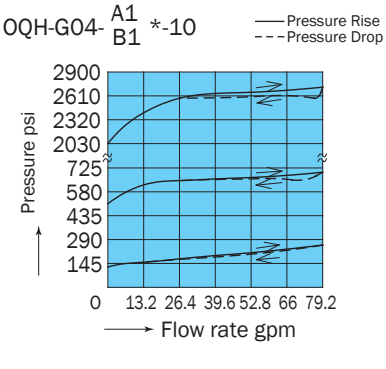
OCQ-G01- A1* / B1* -20



OCQ-G03-A1*-J50

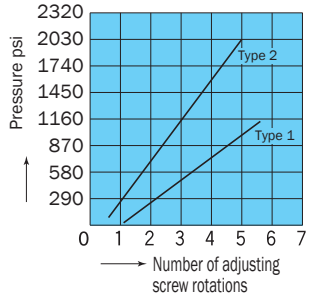


OQH-G04- A1 / B1 *-10

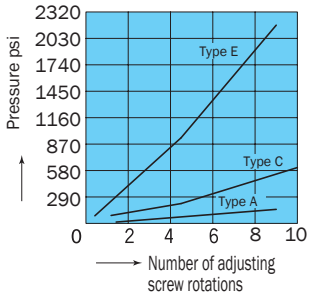


Number of Adjusting Screw Rotations - Pressure Characteristics

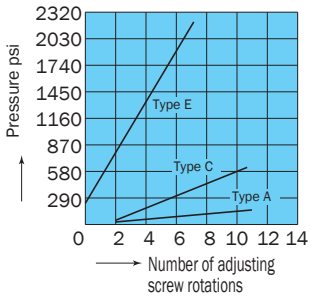
OCG-G01-A1*/B1*-20



OCG-G03-A1*/B1*-J50

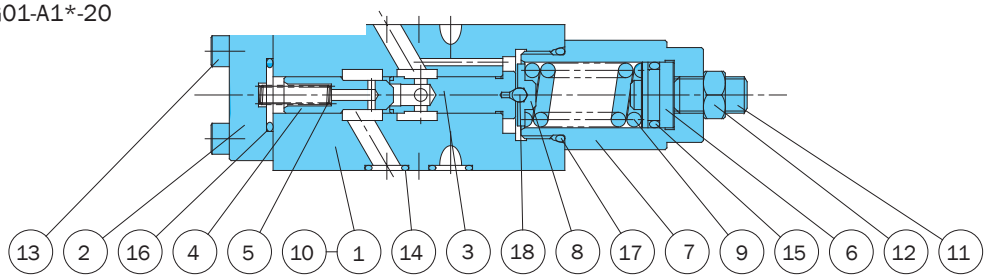


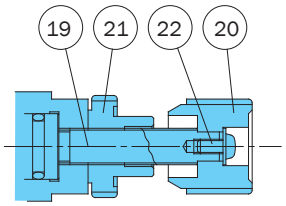
OQH-G04-A1*/B1*-10



Cross-sectional Drawing

OCQ-G01-A1*-20





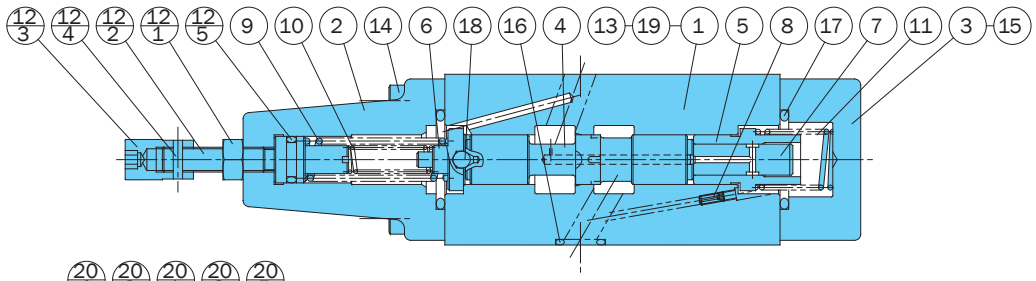
Seal Part List (Kit Model Number BRBS-01CQ*)

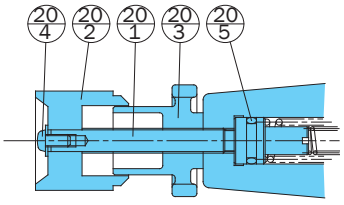
Part No.	Part Name	Part Number	Q'ty	
			A	B
14	O-ring	1B-P9	4	4
15	O-ring	1B-P14	1	1
16	O-ring	1B-P16	1	1
17	O-ring	1B-P22	1	1

Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify A or B for the asterisk (*) in the kit model number.

Part No.	Part Name
1	Body
2	Cover
3	Spool
4	Poppet
5	Spring
6	Plunger
7	Retainer
8	Guide
9	Spring
10	Plate
11	Screw
12	Nut
13	Screw
14	O-ring
15	O-ring
16	O-ring
17	O-ring
18	Ball
19	Screw
20	Knob
21	Nut
22	Screw

OCQ-G03-A1*-J50





Seal Part List (Kit Model Number BRES-03CQ*)

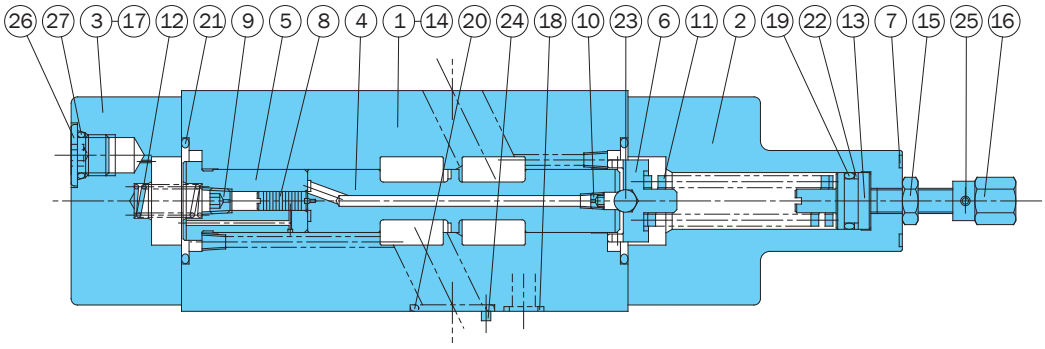
Part No.	Part Name	Part Number	Q'ty	
			A	B
12(20)$_5$	O-ring	1B-P11	1	1
16	O-ring	AS568-014(Hs90)	5	5
17	O-ring	1B-P26	2	2

Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify A or B for the asterisk (*) in the kit model number.

Note:
The 10 spring is not included with pressure adjustment Type A.

Part No.	Part Name
1	Body
2	Cover
3	Cover
4	Spool
5	Sleeve
6	Guide
7	Plunger
8	Choke
9	Spring
10	Spring
11	Spring
12	Screw kit
12_1	Screw
12_2	Nut
12_3	Nut
12_4	Pin
12_5	O-ring
13	Plate
14	Screw
15	Screw
16	O-ring
17	O-ring
18	Ball
19	Pin
20	Handle kit
20_1	Screw
20_2	Knob
20_3	Nut
20_4	Screw
20_5	O-ring

OQH-G04-B1*-10



Part No.	Part Name
1	Body
2	Cover
3	Cover
4	Spool
5	Sleeve
6	Guide
7	Plate
8	Plunger
9	Choke
10	Choke
11	Spring
12	Spring
13	Screw
14	Plate
15	Nut
16	Nut
17	Screw
18	O-ring
19	O-ring
20	O-ring
21	O-ring
22	Backup ring
23	Ball
24	Pin
25	Pin
26	Plug
27	O-ring

Seal Part List (Kit Model Number BRKS-04CQ*)

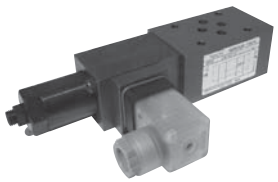
Part No.	Part Name	Part Number	Q'ty	
			A	B
18	O-ring	AS568-012(Hs90)	2	2
19	O-ring	1B-P14	1	1
20	O-ring	AS568-118(Hs90)	4	4
21	O-ring	1B-G35	2	2
22	Backup ring	T2-P14	1	1
27	O-ring	1B-P11	1	1

Note: The illustration shows the configuration for pressure adjustment ranges Type C and Type E. For Type A, there is no #8 piston or #10 choke.

Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Backup ring indicates JIS 2407-T2-**.
3. Specify A or B for the asterisk (*) in the kit model number.

Pressure Switch Modular Valve

13.2 gpm
3625 psi



Features

This modular valve detects pressure changes inside the hydraulic circuit and opens and closes an electrical circuit accordingly.

High precision detection, high precision circuit control, outstanding reliability.
Maximum operating pressure: 3625 psi
Indicator light built into the DIN connector shows operational status at a glance.
A double type is also available for control of both port A and port B in a compact configuration.

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Pressure Adjustment Range psi	Weight lbs	Gasket Surface Dimensions
OW-G01-PC-R-**-30 P1 P3	1/8	3625	13.2	72 to 500 116 to 1000 500 to 3045	3.9	ISO 4401-03-02-0-94
OW-G01-AC-R-**-30 A1 A3				72 to 500 116 to 1000 500 to 3045	3.9	
OW-G01-BC-R-**-30 B1 B3				72 to 500 116 to 1000 500 to 3045	3.9	
OW-G01-WC-R-**-30 W1 W3				72 to 500 116 to 1000 500 to 3045	5.7	

Electrical Specifications Micro Switch Manufacturer: Omron Model No. SS-5	Contact Capacitance (Resistive Load)	AC	125V	5A
			250V	3A
		DC	12V	2.2A
			24V	1.1A
	Mechanical Life	At least 1 × 10^7		
	Electrical Life	At least 3 × 10^6(AC,0.1A,cos φ=1)		
	Contact Resistance	30MΩ maximum (initial value)		
	Insulation Resistance	At least 100MΩ		
	Allowable Operating Frequency	60 times/minute (electrical)		
Operating Environment	Dust Resistance/Water Resistance Rank	JIS C0920 IP64		
	Ambient Temperature	-4° F to 158° F (non-condensation)		
	Operating Fluid: Fluid Temperature	-4° F to 158°	Use a fluid that is within both ranges.	
	Operating Fluid: Allowable Viscosity Range	15 to 300		
	Operating Fluid: Filtration	10μm maximum		

- Handling

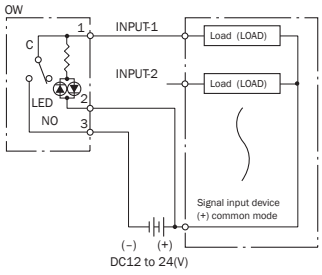
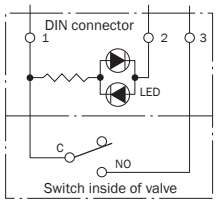
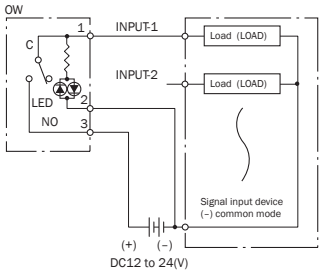
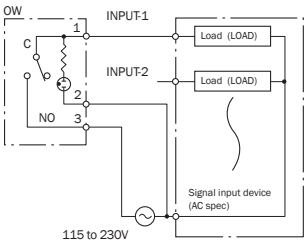
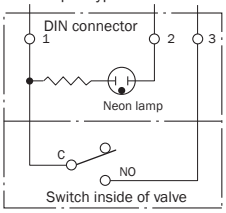
1 See the detailed explanation on the next page for information about wiring inside connectors.
2 Contacts are normally open type only, not normally closed type.
3 In addition to load wiring, power supply wiring is also required to illuminate the indicator light. See the wiring diagram for more information.
4 If the DIN connector interferes with other valves, remove the two switch installation bolts and change the installation orientation. If interference is caused in all orientations, install an interference blanker plate on top of the connector. Contact your agent if an interference blanker plate is required.
5 Note that a special type of DIN connector is required. The DIN connector is not interchangeable with the one for the SA type solenoid valve.
6 If you cannot remove the DIN connector when wiring, remove the switch installation bolts and then remove the DIN connector. The tightening torque for the installation bolts is 3.6 to 5.1 ft lbs.

Understanding Model Numbers

OW – G 01 – P 1 – (K)R – D2 – 30

- 30: Design number
- D2: Power supply specification C115: 115V; C2: 230V D1: 12V; D2: 24V
- (K)R: R: With indicator light (standard) K: With manual handle (optional)
- 1: Pressure adjustment range C: 72 to 500 psi; 1: 116 to 1000 psi ; 3: 500 to 3045 psi
- P: Control port P: P port; A: A port; B: B port; W: A, B ports
- 01: Nominal diameter (size) 01
- G: Mounting method G: Gasket type
- OW: Pressure switch modular valve

Connectors

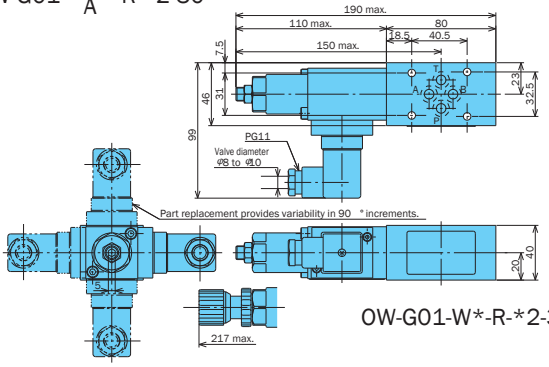
Model No.	Power supply specification	Wiring	Electrical Circuit Diagram
BRC41-01WD2	D2	◎When signal input device (load) remote common is plus OW Terminal 1 is connected to load, while Terminals 2 and 3 are connected to power (Terminal 2 to +). 	Normal open type with indicator  Pressure increase causes indicator to light. Circuit closed (ON) Pressure decrease causes indicator to go out. Circuit open (OFF)
		◎When signal input device (load) common is minus OW Terminal 1 is connected to load, while Terminals 2 and 3 are connected to power (Terminal 2 to –). 	
BRC41-01WC2	C2	◎When signal input device (load) is AC OW Terminal 1 is connected to load, while Terminals 2 and 3 are connected to power (Terminal 2 is nonpolar). 	Normal open type with indicator  Pressure increase causes indicator to light. Circuit closed (ON) Pressure decrease causes indicator to go out. Circuit open (OFF)

Note: 1. The DIN connector wiring connector port size is PG11.
2. The compatible cable diameter for the DIN connector is φ8 to φ10. Dust resistance and water resistance is lost for any cable outside this range.
3. The connector can be installed in different orientations are 90-degree increments by changing the orientation of the terminal block.
4. The connector is designed so the cover cannot be removed unless the installation screws are removed.
5. Use M3 for round type and Y type solderless terminals.
6. The tightening torque of M3 screws used for securing connectors and for terminals is 42 to 70 in lbs.

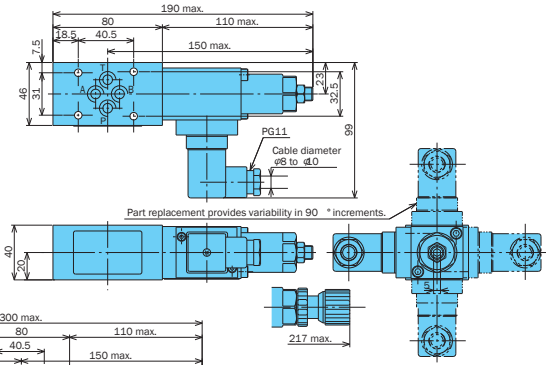
Installation Dimension Drawings

Note: Pressure is increased by clockwise (rightward) rotation of the adjusting screw, and decreased by counterclockwise (leftward) rotation.

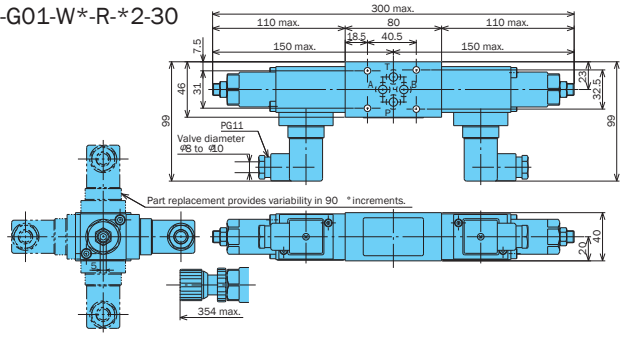
OW-G01- P/A *-R-*2-30



OW-G01-B*-R-*2-30



OW-G01-W*-R-*2-30

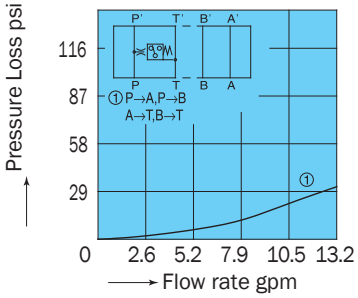


Performance Curves

Hydraulic Operating Fluid Viscosity 32 centistokes

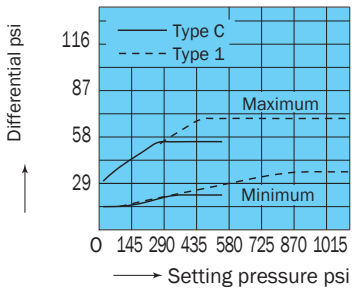
Pressure Loss Characteristics

OW-G01-**-R-**-30

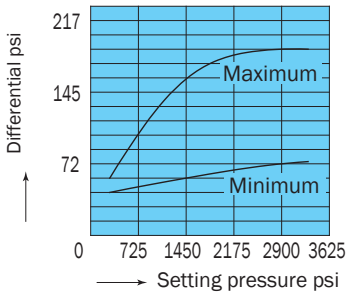


Setting Pressure - Differential Characteristics

OW-G01-* C/1 -R-**-30

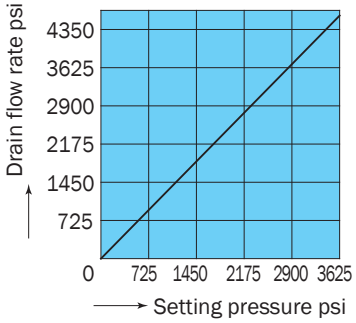


OW-G01-*3-R-**-30



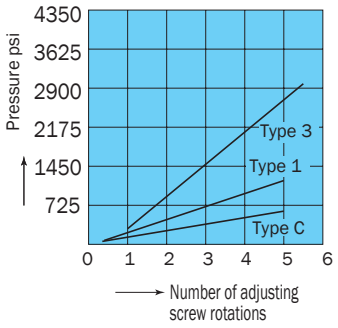
Drain Rate Characteristics

OW-G01-**-R-**-30



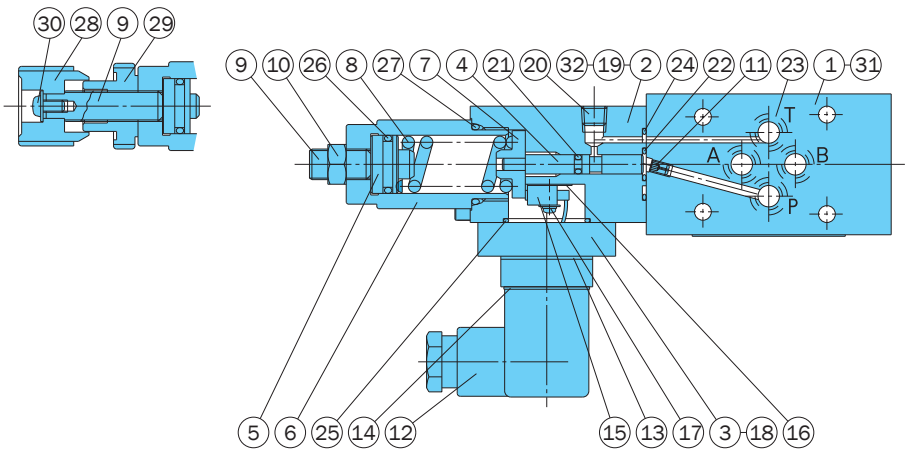
Number of Adjusting Screw Rotations Pressure Characteristics

OW-G01-**-R-**-30



Cross-sectional Drawing

OW-G01-P*-R-*2-30



Part No.	Part Name	Part No.	Part Name
1	Body	17	Screw
2	Cover	18	Screw
3	Cover	19	Screw
4	Piston	20	Plug
5	Push rod	21	O-ring
6	Retainer	22	O-ring
7	Guide	23	O-ring
8	Spring	24	O-ring
9	Screw	25	O-ring
10	Nut	26	O-ring
11	Choke	27	O-ring
12	Connector	28	Knob
13	Gasket	29	Nut
14	Gasket	30	Screw
15	Micro switch assy	31	Plate
16	Separator	32	Plate

Seal Part List (Kit Model Number BRCS-01W*)

Part No.	Part Name	Part Number	Q'ty			
			P	W	A	B
21	O-ring	1A-P3	1	2	1	1
22	O-ring	AS568-011(Hs90)	1	2	1	1
23	O-ring	1B-P9	4	4	4	4
24	O-ring	AS568-019(Hs70)	1	2	1	1
25	O-ring	AS568-022(Hs70)	1	2	1	1
26	O-ring	1A-P15	1	2	1	1
27	O-ring	1B-P22	1	2	1	1

Note: Specify P, W, A, or B for the asterisk (*) in the kit model number.

Flow Regulator Modular Valve

13.2 to 79 gpm
3625 to 5075 psi

Features

This modular valve is used to control actuator speed and for other flow control valve applications.

A wide range of models are available for A and B port control, A or B port control, and P or T port control.

Maximum Operating Pressure: 3625, 5075 psi

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Pressure Adjustment Range psi	Weight lbs	Gasket Surface Dimensions
OY-G01-T-20	1/8	3625	50	–	2.2	ISO 4401-03-02-0-94
OCY-G01-P-20				5.7	2.2	
OCY-G01-W-X-20				11.4	2.8	
A					2.6	
B						
OCY-G01-W-Y-20				11.4	2.8	
A					2.6	
B						
OCY-G03-P-J50	3/8	3625	100	5.7	6.4	ISO 4401-05-04-0-94
OCY-G03-W-X-J51				14.3	6.8	
A					6.6	
B						
OCY-G03-W-Y-J51				14.3	6.8	
A					6.6	
B						
OYH-G04-P-10	1/2	5075	300	5.7	10.3	ISO 4401-07-06-0-94
OYH-G04-W-X-10				14.3	14.3	
A					14.3	
B						
OYH-G04-W-Y-10				14.3	14.3	
A					14.3	
B						

• Handling

1 In a 03 size application where control differential pressure is large, use of an H type makes adjustment easier.

2 Note that a sub plate and installation bolts are not included. See pages H4 and F87-89 if these items are required.

3 04 series modular valves do not have an L (DR2) drain port, so they cannot be used in combination with pressure center type solenoid valves (D).

Understanding Model Numbers

01, 03 size

OCY – G 03 – W – (H) Y – (K) – J51

- J51: Design number
  Note: For 01 size, 20
  For 03 size, relationship between mounting bolts and design number is indicated as J50, J51: M6, 50, 51 : M8.
- (K): Auxiliary symbol K: With handle (01, 03 size only)
- Y: Control mechanism X: Meter-in Y: Meter-out
- (H): Control function None: Standard
  H: High-differential pressure type (03 size only)
- W: Control port W: A, B ports
  A: A port P: P port
  B: B port T: T port (01 size only)
- 03: Nominal diameter (size) 01, 03
- G: Mounting method G: Gasket type
- OCY: Flow regulator modular type
  OCY: With check valve
  OY : Without check valve (01 size T port control)

Understanding Model Numbers

04 size

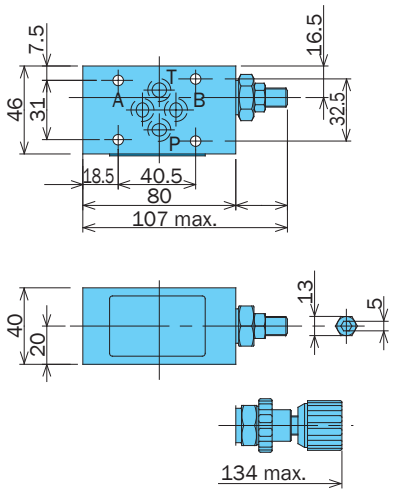
0YH – G 04 – W – Y – 10

- 10: Design number
- Y: Control mechanism X: Meter-in Y: Meter-out
- W: Control port P: P port, W: A, B ports, A: A port, B: B port
- 04: Nominal diameter (size) 04
- G: Mounting method G: Gasket type
- 0YH: M35 Series flow regulator modular valve

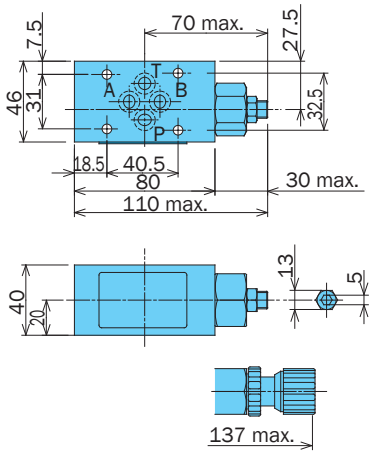
Installation Dimension Drawings

Note: The control flow rate is increased by counter clockwise (leftward) rotation of the adjusting screw.

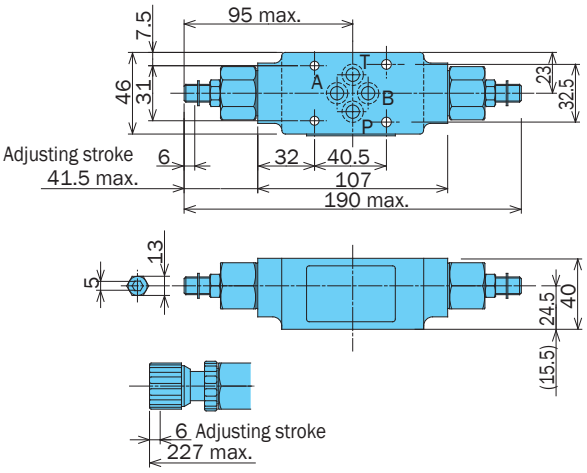
0Y-G01-T-20



0CY-G01-P-20

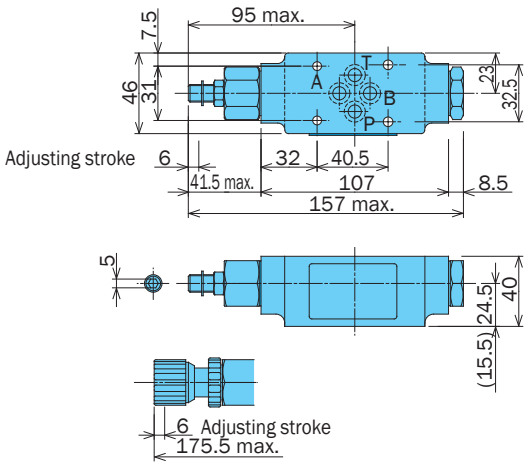


0CY-G01-W-$\frac{X}{Y}$-20



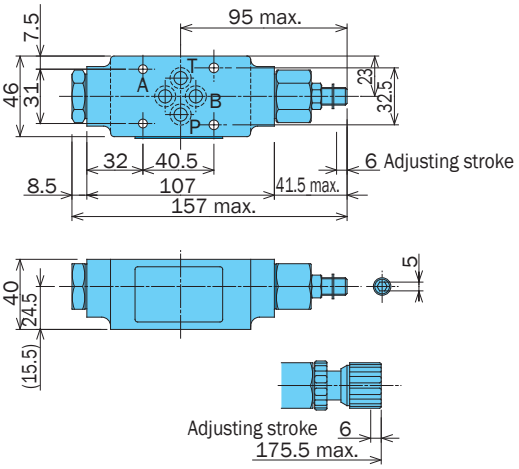
Note: Dimensions in the parentheses are for the 0CY-G01-W-X-20.

OCY-G01-A-$\frac{X}{Y}$-20



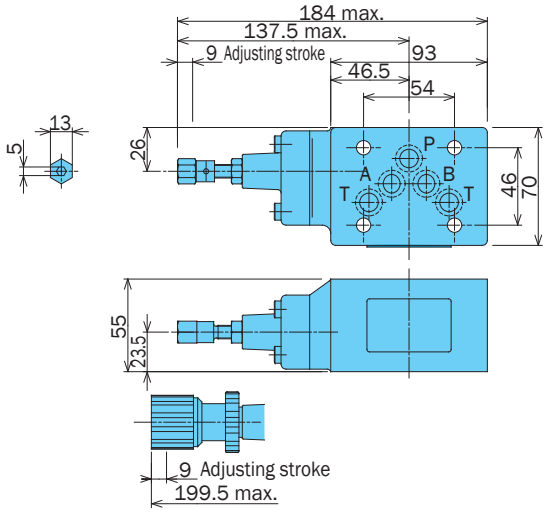
Note:
Dimensions in the parentheses are for the OCY-G01-A-X-20.

OCY-G01-B-$\frac{X}{Y}$-20

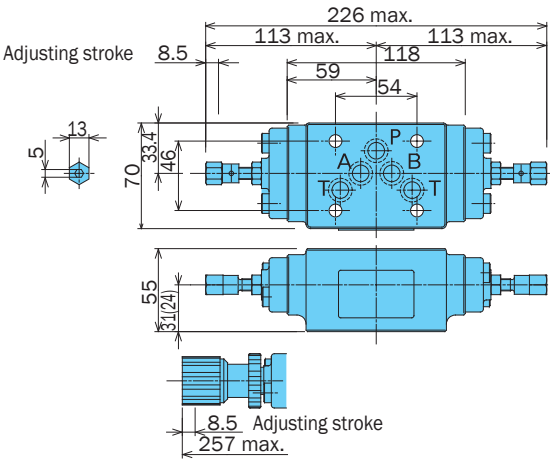


Note:
Dimensions in the parentheses are for the OCY-G01-B-X-20.

OCY-G03-P-J50

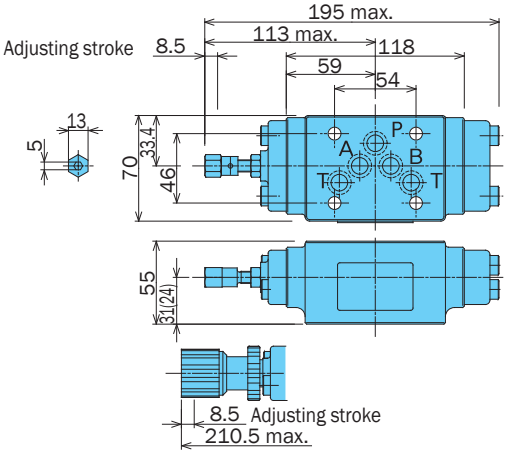


OCY-G03-W-$\frac{X}{Y}$-J51



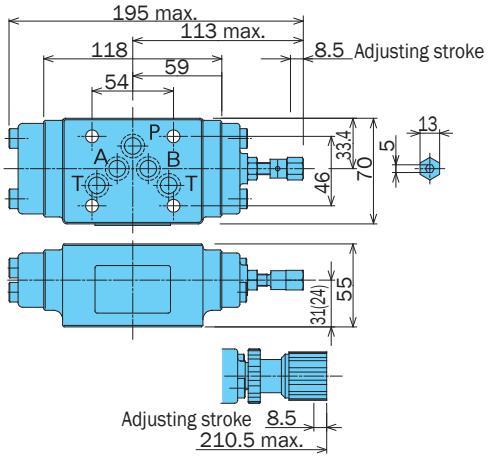
Note:
Dimensions in the parentheses are for the OCY-G03-W-X-J51.

OCY-G03-A-$\frac{X}{Y}$-J51



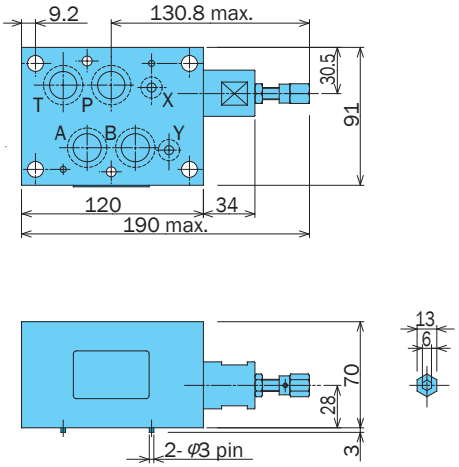
Note:
Dimensions in the parentheses are for the OCY-G03-A-X-J51.

OCY-G03-B-$\frac{X}{Y}$-J51

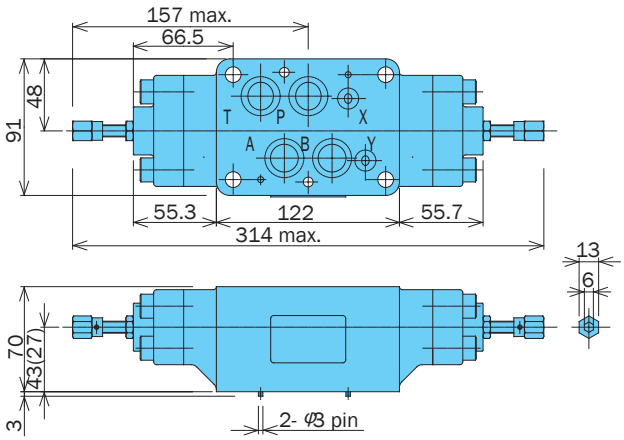


Note:
Dimensions in the parentheses are for the OCY-G03-B-X-J51.

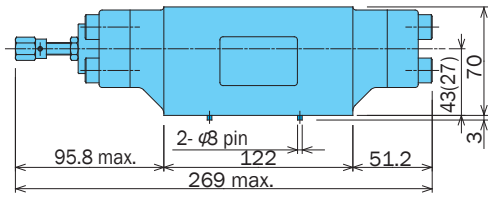
OYH-G04-P-10



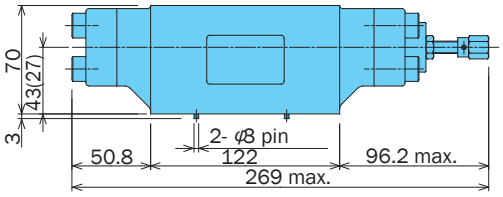
OYH-G04-W- X/Y -10



OYH-G04-A- X/Y -10



OYH-G04-B- X/Y -10



Note: Dimensions in the parentheses are for the OYH-G04-*-X-10.

F

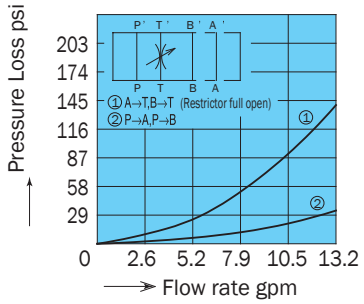
Modular Valves

Performance Curves

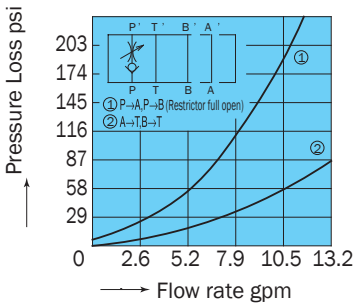
Hydraulic Operating Fluid Viscosity 32 centistokes

Pressure Loss Characteristics

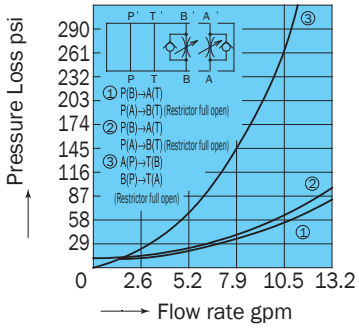
OY-G01-T-20



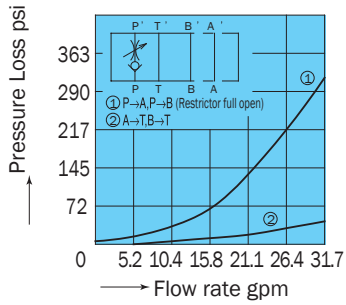
OCY-G01-P-20



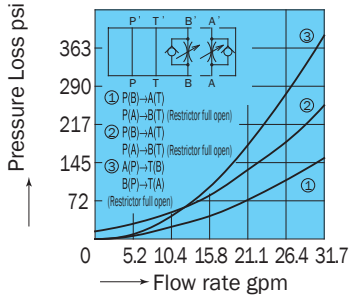
OCY-G01-W-Y-20
(OCY-G01-W-X-20)



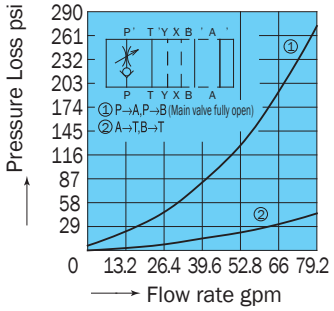
OCY-G03-P-J50



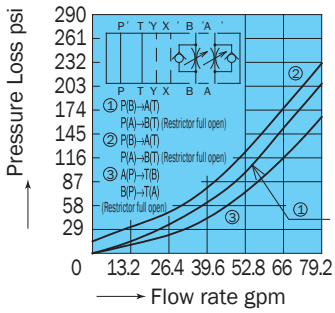
OCY-G03-W-Y-J51
(OCY-G03-W-X-J51)



OYH-G04-P-10

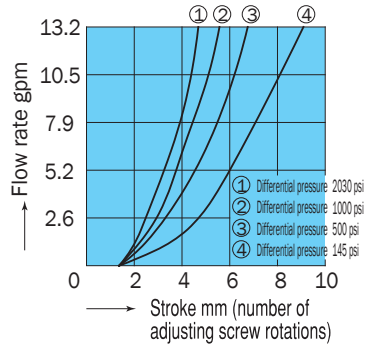


OYH-G04-W-Y-10
(OYH-G04-W-X-10)

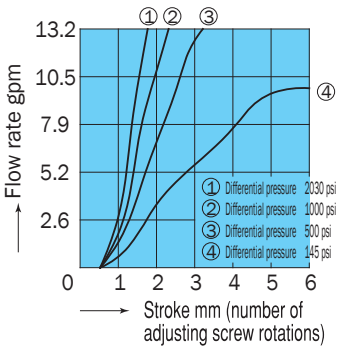


Stroke -- Flow Rate Characteristics

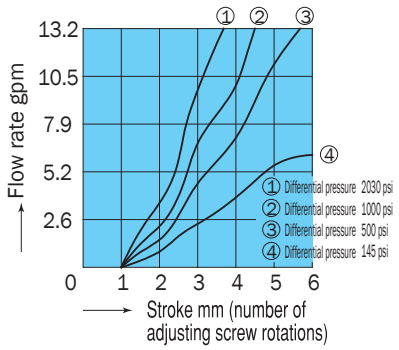
OY-G01-T-20



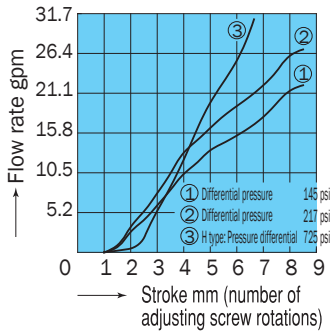
OCY-G01-P-20



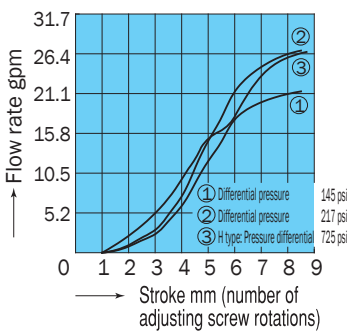
OCY-G01-*-*-20



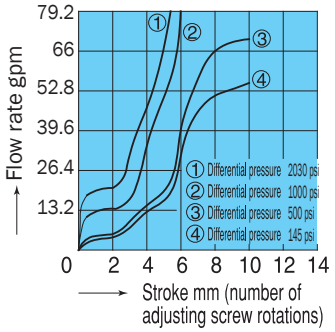
OCY-G03-P-(H)-J50



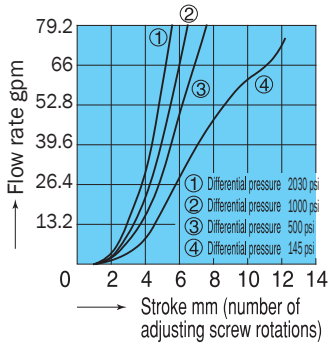
OCY-G03-W-(H)Y-J51



OYH-G04-P-10

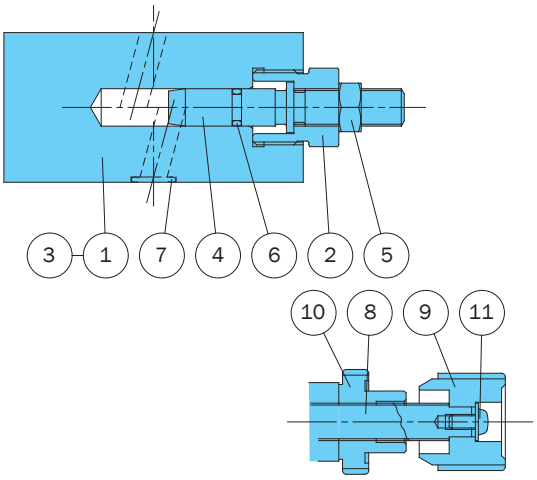


OYH-G04-W-Y-10



Cross-sectional Drawing

OY-G01-T-20



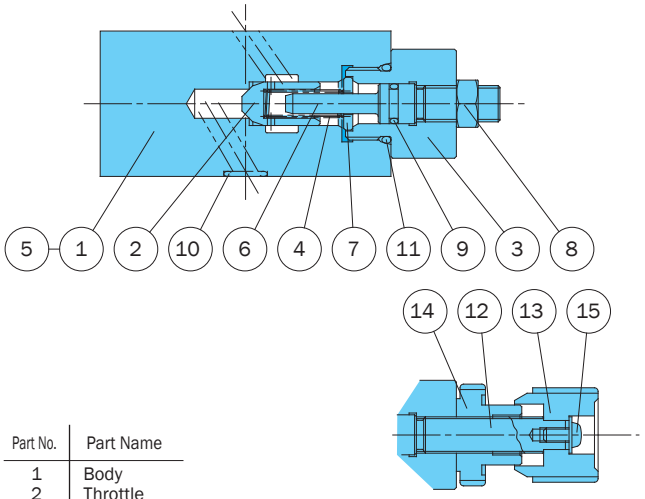
Part No.	Part Name
1	Body
2	Retainer
3	Plate
4	Screw
5	Nut
6	O-ring
7	O-ring
8	Screw
9	Knob
10	Nut
11	Screw

Seal Part List (Kit Model Number BFBS-01YT)

Part No.	Part Name	Part Number	Q'ty T
6	O-ring	1B-P7	1
7	O-ring	1B-P9	4

Note: O-ring 1A/B-** refers to JIS B2401-1A/B.

OCY-G01-P-20



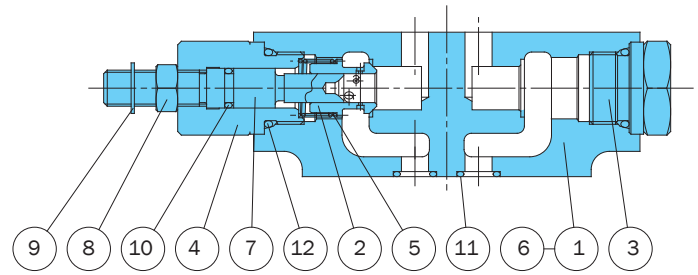
Part No.	Part Name
1	Body
2	Throttle
3	Retainer
4	Spring
5	Plate
6	Screw
7	Ring
8	Nut
9	O-ring
10	O-ring
11	O-ring
12	Screw
13	Knob
14	Nut
15	Screw

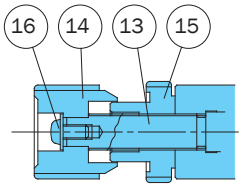
Seal Part List (Kit Model Number BFBS-01CYP)

Part No.	Part Name	Part Number	Q'ty T
9	O-ring	1B-P8	1
10	O-ring	1B-P9	4
11	O-ring	1B-P18	1

Note: O-ring 1A/B-** refers to JIS B2401-1A/B.

OCY-G01-A-Y-20





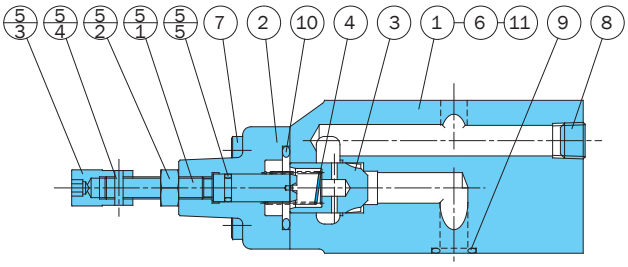
Seal Part List (Kit Model Number BFBS-01CY*)

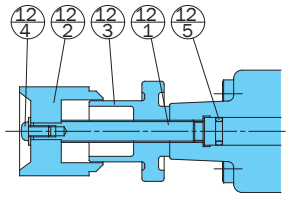
Part No.	Part Name	Part Number	Q'ty		
			W	A	B
10	O-ring	1B-P8	2	1	1
11	O-ring	1B-P9	4	4	4
12	O-ring	1B-P18	2	2	2

Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify W, A, or B for the asterisk (*) in the kit model number.

Part No.	Part Name
1	Body
2	Throttle
3	Bushing
4	Retainer
5	Spring
6	Plate
7	Screw
8	Nut
9	E-ring
10	O-ring
11	O-ring
12	O-ring
13	Screw
14	Knob
15	Nut
16	Screw

OCY-G03-P-J50





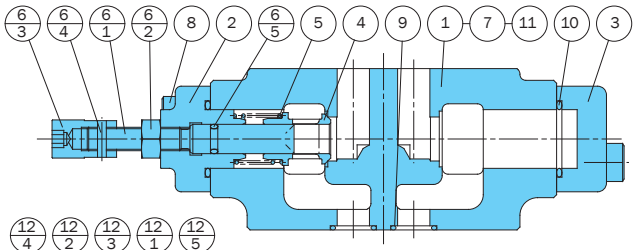
Seal Part List (Kit Model Number BFES-03CYP)

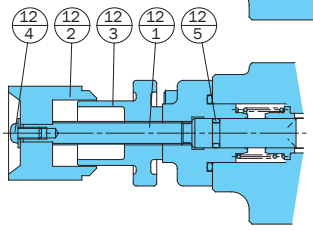
Part No.	Part Name	Part Number	Q'ty
			P
5(12)-5	O-ring	1B-P7	1
9	O-ring	AS568-014(Hs90)	5
10	O-ring	1B-P24	1

Note: O-ring 1A/B-** refers to JIS B2401-1A/B.

Part No.	Part Name
1	Body
2	Cover
3	Throttle
4	Spring
5	Screw kit
5_1	Screw
5_2	Nut
5_3	Nut
5_4	Pin
5_5	O-ring
6	Plate
7	Screw
8	Plug
9	O-ring
10	O-ring
11	Pin
12	Handle kit
12_1	Screw
12_2	Knob
12_3	Nut
12_4	Screw
12_5	O-ring

OCY-G03-A-Y-J51





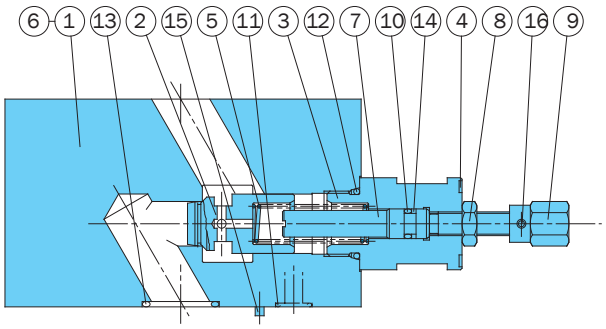
Seal Part List (Kit Model Number BFES-03CY*)

Part No.	Part Name	Part Number	Q'ty		
			W	A	B
6(12)-5	O-ring	1B-P7	2	1	1
9	O-ring	AS568-014(Hs90)	5	5	5
10	O-ring	1B-P22	2	2	2

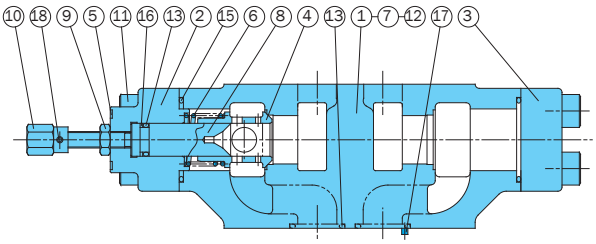
Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify W, A, or B for the asterisk (*) in the kit model number.

Part No.	Part Name
1	Body
2	Cover
3	Cover
4	Throttle
5	Spring
6	Screw kit
6_1	Screw
6_2	Nut
6_3	Nut
6_4	Pin
6_5	O-ring
7	Plate
8	Screw
9	O-ring
10	O-ring
11	Pin
12	Handle kit
12_1	Screw
12_2	Knob
12_3	Nut
12_4	Screw
12_5	O-ring

OYH-G04-P-10



OYH-G04-A-Y-10



Seal Part List
(Kit Model Number BFKS-04CYP)

Part No.	Part Name	Part Number	Q'ty
			P
10	O-ring	1B-P7	1
11	O-ring	AS568-012(Hs90)	2
12	O-ring	1B-P20	1
13	O-ring	AS568-118(Hs90)	4
14	Backup ring	T2-P7	1

Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Backup ring indicates JIS B 2407-T2-**.

Part No.	Part Name
1	Body
2	Throttle
3	Retainer
4	Plate
5	Spring
6	Plate
7	Screw
8	Nut
9	Nut
10	O-ring
11	O-ring
12	O-ring
13	O-ring
14	Backup ring
15	Pin
16	Pin

Seal Part List
(Kit Model Number BFKS-04CY*)

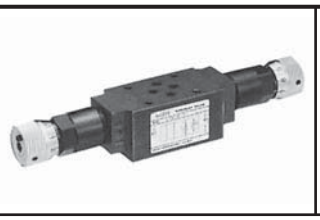
Part No.	Part Name	Part Number	Q'ty		
			W	A	B
12	O-ring	AS568-012 (Hs90)	2	2	2
13	O-ring	1A-P12	2	1	1
14	O-ring	AS568-118 (Hs90)	4	4	4
15	O-ring	AS568-127 (Hs90)	2	2	2
16	Backup ring	T2-P12	2	1	1

Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Backup ring indicates JIS B 2407-T2-**.
3. Specify W, A, or B for the asterisk (*) in the kit model number.

Part No.	Part Name
1	Body
2	Cover
3	Cover
4	Throttle
5	Plate
6	Spring
7	Plate
8	Screw
9	Nut
10	Nut
11	Screw
12	O-ring
13	O-ring
14	O-ring
15	O-ring
16	Backup ring
17	Pin
18	Pin

Flow Control Modular Valve
(Pressure and temperature compensated)

5.2 to 52.8 gpm
3045, 3625, 5075 psi



Features

This modular valve is used to control actuator speed and for other flow control valve applications.
A wide range of models are available for A and B port control, A or B port control, and P port control.
A pressure compensation mechanism ensures that the control flow rate does not change, even when there is pressure fluctuation.
The control flow rate remains stable, even when fluid temperature changes.
Maximum Operating Pressure: 3045, 3625, 5075 psi

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Control Flow Rate gpm	Check Valve Cracking pressure psi	Weight lbs	Gasket Surface Dimensions
OF-G01-P20-20	1/8	3045	.02 to 5.2(differential pressure: 1000 psi) .07 to 5.2(differential pressure: 3045 psi)	--	2.6	ISO 4401-03-02-0-94
OCF-G01-W40-X-30 A40 B40		3625	.02 to 10.5(differential pressure: 1000 psi) .13 to 10.5(differential pressure: 3625 psi)	.02	3.7 3.3	
OCF-G01-W40-Y-30 A40 B40				11.6	3.7 3.3	
OF-G03-P60-J50	3/8	3625	.07 to 15.8(differential pressure: 1000 psi) .13 to 15.8(differential pressure: 3625 psi)	--	6.8	ISO 4401-05-04-0-94
OCF-G03-W60-X-J50 A60 B60			.13 to 15.8(differential pressure: 1000 psi) .26 to 15.8(differential pressure: 3625 psi)	14.5	11 10.1	
OCF-G03-W60-Y-J50 A60 B60				14.5	11 10.1	
OFH-G04-W200-X-10 A200 B200	1/2	5075	2.6 to 52.8(differential pressure: 3045 psi) 3.9 to 52.8(differential pressure: 3625 psi) 5.2 to 52.8(differential pressure: 5075 psi)	14.5	24.4 22.4	ISO 4401-07-06-0-94
OFH-G04-W200-Y-10 A200 B200				14.5	24.4 22.4	

• Handling

1 For flow rate control, make sure that the pressure differential between the input port and output port is at least 145 psi. See the Flow Rate - Minimum Differential Pressure Characteristics for information about the OCF-G01 and OFF-G04 maximum control flow rate.
2 The control flow rate is increased by counter clockwise (leftward) rotation of the flow rate control knob.
3 Pressure rate control knob rotation resistance will increase as the pressure increases. However, do not use a spanner or other tool that fits around the knob to turn it. Instead, insert a 5mm hex spanner into the hex hole in the center of the knob and rotate it that way.
4 After adjusting the flow rate, fix it in place by turning the lock screw on the end of the knob to the right.
5 Note that a sub plate and installation bolts are not included. See pages H4 and F87-89 if these items are required.
6 04 series modular valves do not have an L (DR2) drain port, so they cannot be used in combination with pressure center type solenoid valves (D).
7 Flow rate fluctuation is ±5% within the temperature range of 68°F to 140°F.

Understanding Model Numbers

01, 03 size

OCF – G 03 – W 60 – Y – J50

- J50: Design number
  Note: For 01 size, 30, 20
  For 03 size, relationship between mounting bolts and design number is indicated as J50: M6, 50: M8
- Y: Control Mechanism X: Meter-in Y: Meter-out
- 60: Maximum control flow rate
- W: Control port W: A, B ports A: A port P: P port B: B port
- 03: Nominal diameter (size) 01, 03
- G: Mounting method G: gasket type
- OCF: Flow control modular valve
  OCF: with check valve
  OF: without check valve (P port control)

Understanding Model Numbers

04 size

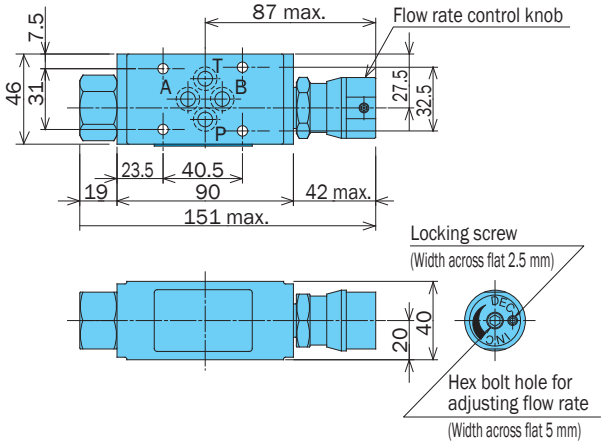
0FH – G 04 – W 200 – Y – 10

- Design number
- Control mechanism X: Meter-in Y: Meter-out
- Maximum control flow rate
- Control port W: A, B ports A: A port B: B port
- Nominal diameter (size) 04
- Mounting method G: Gasket type
- M35 Series flow control modular valve

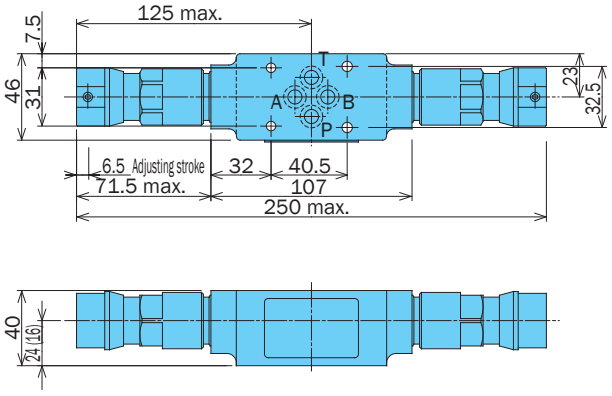
Installation Dimension Drawings

Note: The control flow rate is increased by counter clockwise (leftward) rotation of the flow rate control knob.

0F-G01-P20-20

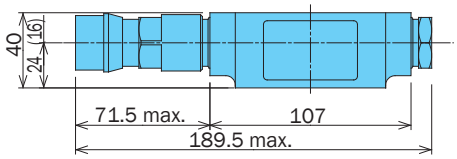


0CF-G01-W40-X/Y-30



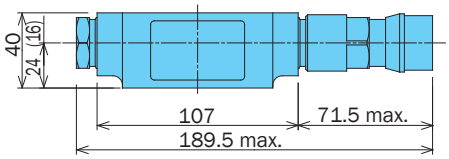
Note:
Dimensions in the parentheses are for the 0CF-G01-W40-X-30.

0CF-G01-A40-X/Y-30



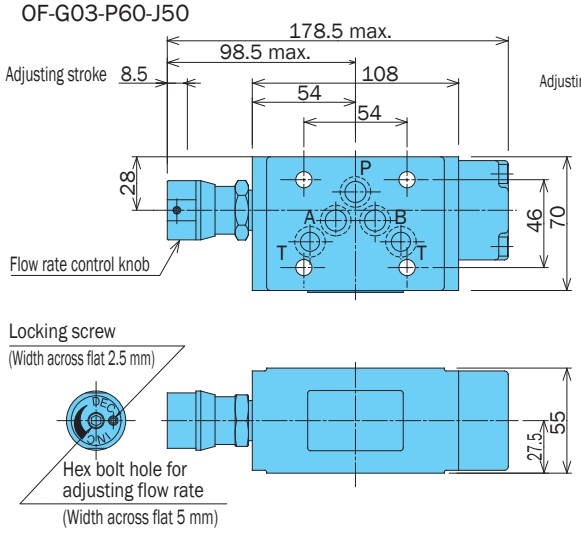
Note:
Dimensions in the parentheses are for the 0CF-G01-A40-X-30.

0CF-G01-B40-X/Y-30

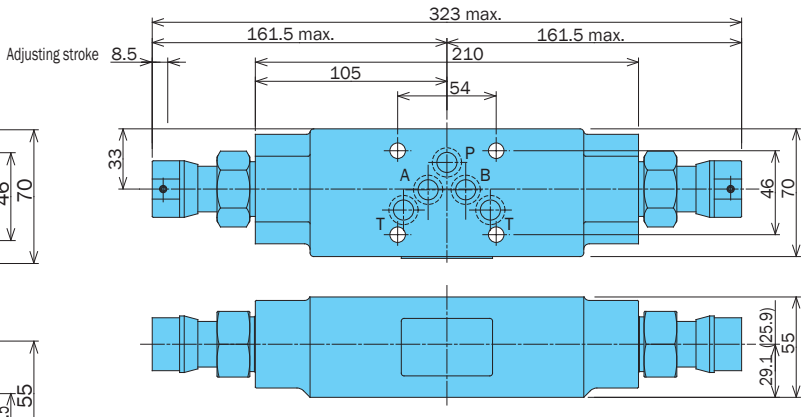


Note:
Dimensions in the parentheses are for the 0CF-G01-B40-X-30.

0F-G03-P60-J50

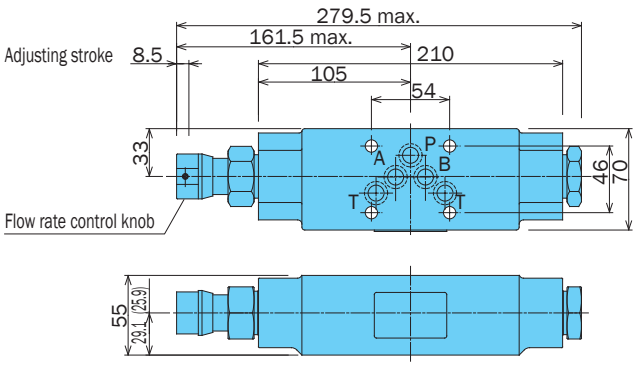


0CF-G03-W60-X/Y-J50



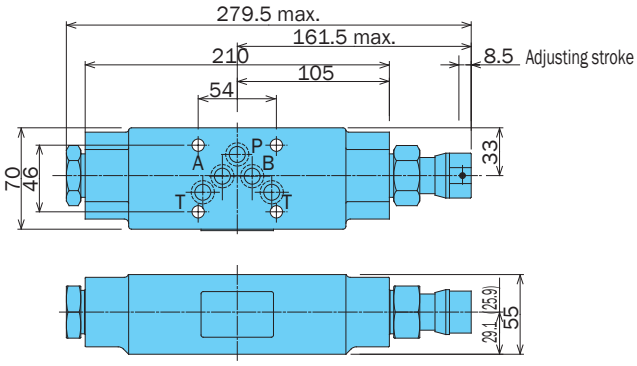
Note:
Dimensions in the parentheses are for the 0CF-G03-W60-X-J50.

OCF-G03-A60-X/Y-J50



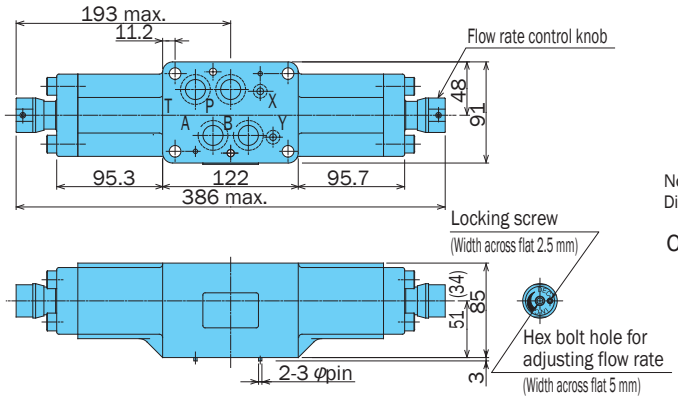
Note:
Dimensions in the parentheses are for the OCF-G03-A60-X-J50.

OCF-G03-B60-X/Y-J50



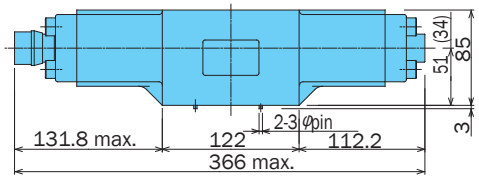
Note:
Dimensions in the parentheses are for the OCF-G03-B60-X-J50.

OFH-G04-W200-X/Y-10



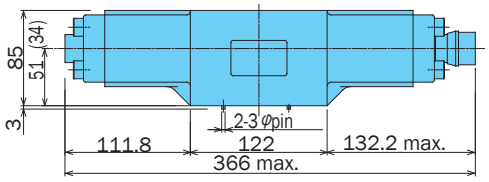
Note:
Dimensions in the parentheses are for the OFH-G04-W200-X-10.

OFH-G04-A200-X/Y-10



Note:
Dimensions in the parentheses are for the OCF-G04-A200-X-10

OFH-G04-B200-X/Y-10



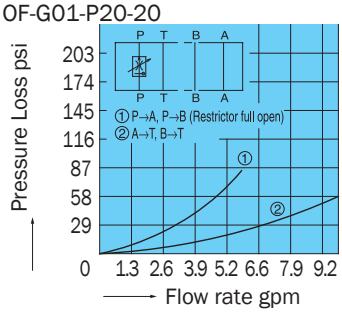
Note:
Dimensions in the parentheses are for the OFH-G04-B200-X-10.

Performance Curves

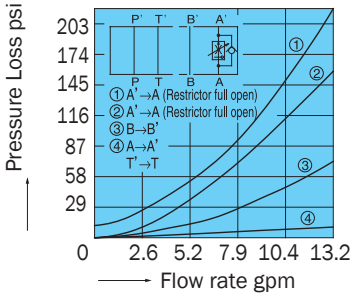
Hydraulic Operating Fluid Viscosity 32 centistokes

Pressure Loss Characteristics

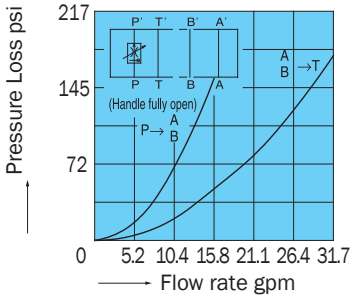
OF-G01-P20-20



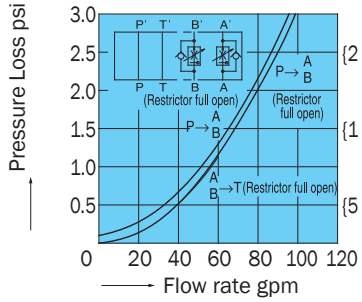
OCF-G01-A40-Y-30



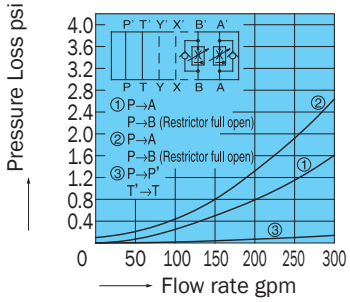
OF-G03-P60-J50



OCF-G03-W60-Y-J50

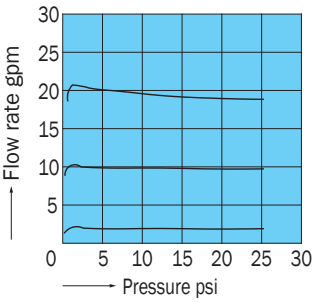


OFH-G04-W200-Y-10

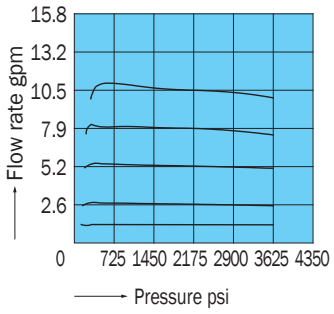


Pressure - Control Flow Rate Characteristics

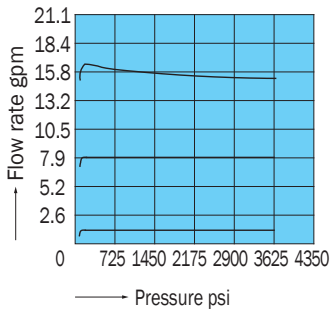
OF-G01-P20-20



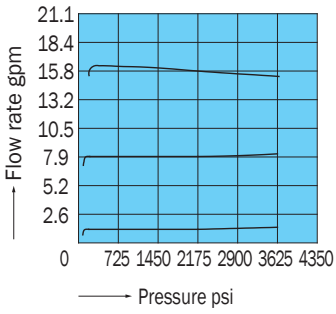
OCF-G01-*40-*-30



OF-G03-P60-J50

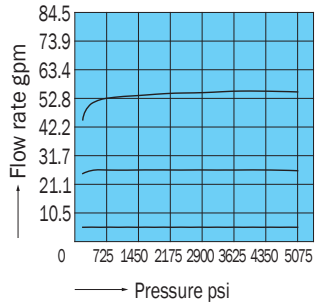


OCF-G03-W60-*-J50

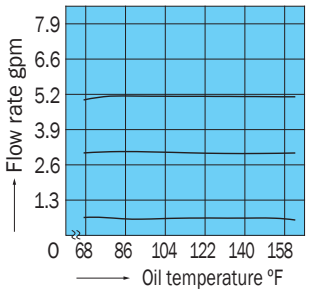


Fluid Temperature - Control Flow Rate Characteristics

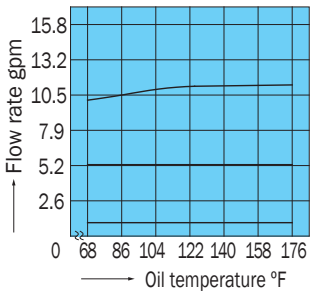
OFH-G04-W200-*-10



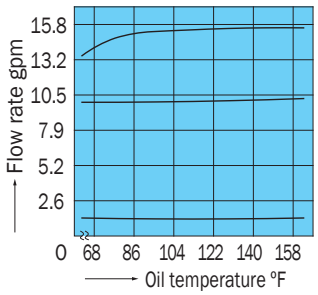
OF-G01-P20-20



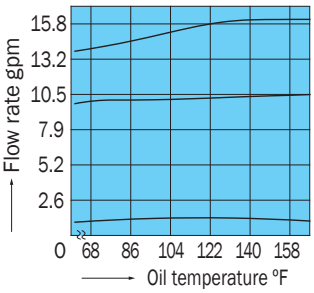
OCF-G01-*40-*-30



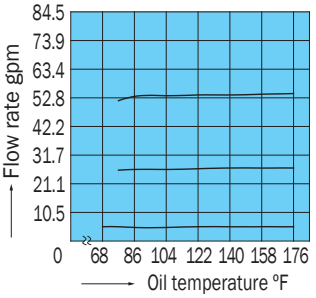
OF-G03-P60-J50



OCF-G03-W60-*-J50

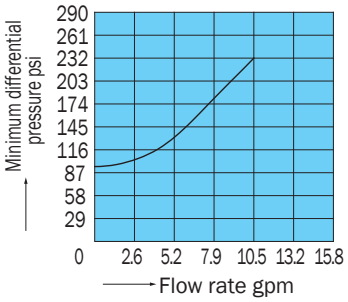


OFH-G04-W200-*-10

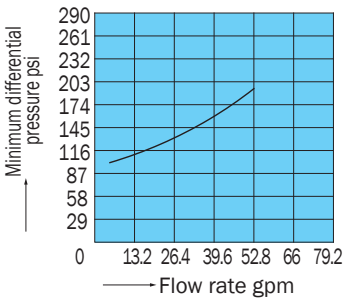


Flow Rate - Minimum Differential Pressure Characteristics

OCF-G01-*40-*-30

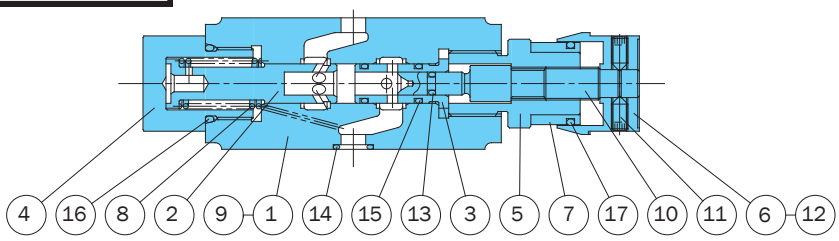


OFH-G04-W200-Y-10



Cross-sectional Drawing

0F-G01-P20-20



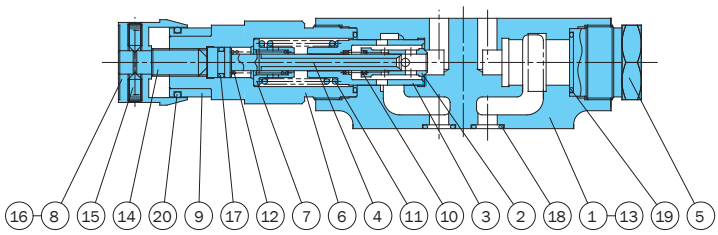
Seal Part List (Kit Model Number BFBS-01FP)

Part No.	Part Name	Part Number	Q'ty P
13	O-ring	1B-P4	1
14	O-ring	1B-P9	4
15	O-ring	1B-P9	2
16	O-ring	1B-P20	1
17	O-ring	1A-P21	1

Note: O-ring 1A/B-** refers to JIS B2401-1A/B.

Part No.	Part Name
1	Body
2	Piston
3	Sleeve
4	Bushing
5	Retainer
6	Knob
7	Dial
8	Spring
9	Plate
10	Screw
11	Screw
12	Screw
13	O-ring
14	O-ring
15	O-ring
16	O-ring
17	O-ring

0CF-G01-A40-Y-30



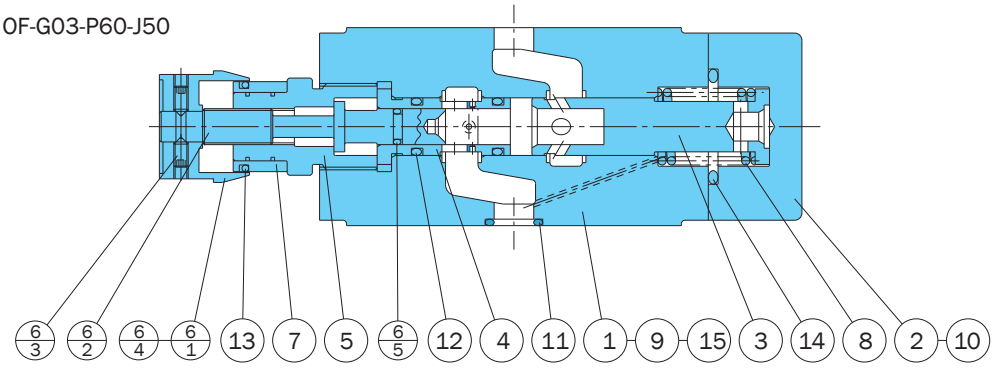
Seal Part List (Kit Model Number BFCS-01CF*)

Part No.	Part Name	Part Number	Q'ty W	Q'ty A	Q'ty B
17	O-ring	1A-P8	2	1	1
18	O-ring	1B-P9	4	4	4
19	O-ring	AS568-018(Hs90)	2	2	2
20	O-ring	1A-P21	1	1	1

Note:
1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify W, A, or B for the asterisk (*) in the kit model number.

Part No.	Part Name
1	Body
2	Throttle
3	Piston
4	Rod
5	Bushing
6	Retainer
7	Guide
8	Knob
9	Dial
10	Spring
11	Spring
12	Spring
13	Plate
14	Screw
15	Screw
16	Screw
17	O-ring
18	O-ring
19	O-ring
20	O-ring

0F-G03-P60-J50



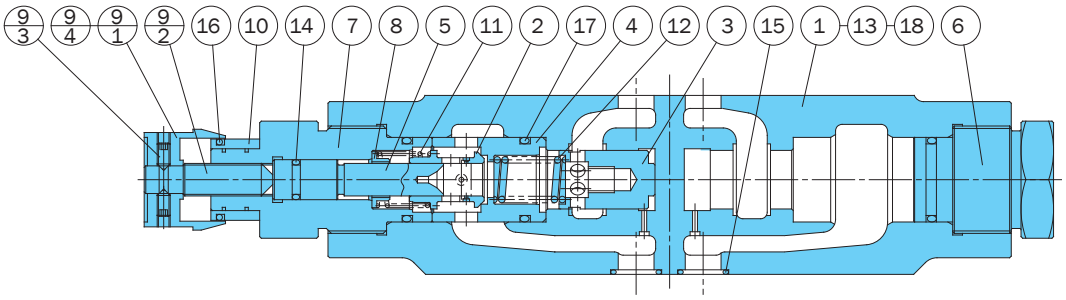
Seal Part List (Kit Model Number BFES-03FP)

Part No.	Part Name	Part Number	Q'ty PC
6_{-5}	O-ring	1A-P7	1
11	O-ring	AS568-014(Hs90)	5
12	O-ring	1B-P12	2
13	O-ring	1A-P21	1
14	O-ring	1B-P26	1

Note: O-ring 1A/B-** refers to JIS B2401-1A/B.

Part No.	Part Name
1	Body
2	Cover
3	Piston
4	Sleeve
5	Retainer
6	Screw kit
6_{-1}	Knob
6_{-2}	Screw
6_{-3}	Screw
6_{-4}	Screw
6_{-5}	O-ring
7	Dial
8	Spring
9	Plate
10	Screw
11	O-ring
12	O-ring
13	O-ring
14	O-ring
15	Pin

0CF-G03-A60-Y-J50



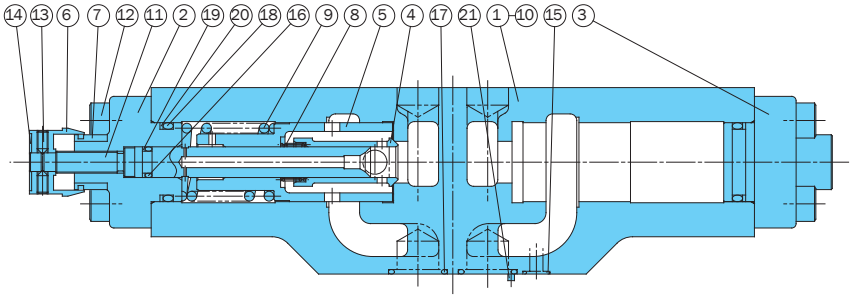
Part No.	Part Name
1	Body
2	Throttle
3	Piston
4	Sleeve
5	Rod
6	Bushing
7	Retainer
8	Guide
9	Screw kit
9_{-1}	Knob
9_{-2}	Screw
9_{-3}	Screw
9_{-4}	Screw
10	Dial
11	Spring
12	Spring
13	Plate
14	O-ring
15	O-ring
16	O-ring
17	O-ring
18	Pin

Seal Part List (Kit Model Number BFES-03CF*)

Part No.	Part Name	Part Number	Q'ty		
			W	A	B
14	O-ring	1A-P10	2	1	1
15	O-ring	AS568-014(Hs90)	5	5	5
16	O-ring	1A-P21	2	1	1
17	O-ring	1B-P22	4	3	3

Note:
1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify W, A, or B for the asterisk (*) in the kit model number.

0FH-G04-A200-Y-10



Part No.	Part Name
1	Body
2	Cover
3	Cover
4	Throttle
5	Piston
6	Knob
7	Dial
8	Spring
9	Spring
10	Plate
11	Screw
12	Screw
13	Screw
14	Screw
15	O-ring
16	O-ring
17	O-ring
18	O-ring
19	Backup ring
20	Backup ring
21	Pin

Seal Part List (Kit Model Number BFKS-04CF*)

Part No.	Part Name	Part Number	Q'ty		
			W	A	B
15	O-ring	AS568-012(Hs90)	2	2	2
16	O-ring	1B-P10A	2	1	1
17	O-ring	AS568-118(Hs90)	4	4	4
18	O-ring	1B-P30	2	2	2
19	Backup ring	T2-P10A	2	1	1
20	Backup ring	T2-P30	2	2	2

Note:
1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Backup ring indicates JIS B 2407-T2-**.
3. Specify W, A, or B for the asterisk (*) in the kit model number.

Check Modular Valve

13.2 to 79.2 gpm
3625, 5075 psi

Features

This modular valve is a check valve that prevents reverse-flow.

The 01, 03, 04 sizes include types that can also be used as suction and differential circuits.

Maximum Operating Pressure: 3625, 5075 psi

Specifications

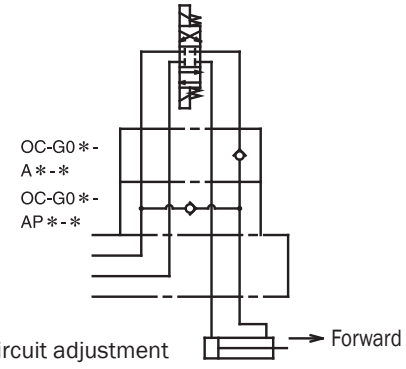
Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Cracking pressure psi	Weight lbs	Gasket Surface Dimensions
OC-G01-P1-20 P2 P3	1/8	3625	13.2	5.8 50.7 72.5	2.2	ISO 4401-03-02-0-94
OC-G01-T1-20 T2 T3				5.8 50.7 72.5	2.2	
OC-G01-A1-21 A2 A3				5.8 50.7 72.5	2.6	
OC-G01-AP1-20 AP2 AP3				5.8 50.7 72.5	2.2	
OCV-G01-W-20				2.1	2.2	
OC-G03-P1-J50 P2 P3	3/8	3625	26.4	5.8 50.7 72.5	5.9	ISO 4401-05-04-0-94
OC-G03-T1-J50 T2 T3				5.8 50.7 72.5	5.9	
OC-G03-A1-J50 A2 A3				5.8 50.7 72.5	5.9	
OC-G03-AP1-J50 AP2 AP3				5.8 50.7 72.5	5.9	
OCV-G03-W-J50				2.1	7.7	
OCH-G04-P1-10 P2 P3	1/2	5075	79.2	5.8 50.7 72.5	9.9	ISO 4401-07-06-0-94
OCH-G04-T1-10 T2 T3				5.8 50.7 72.5	14.3	
OCH-G04-A1-10 A2 A3				5.8 50.7 72.5	9.9	
OCH-G04-AP1-10 AP2 AP3				5.8 50.7 72.5	9.9	
OVH-G04-W-10				1.4	14.3	

• Handling

1 Differential circuit can be easily configured at P → B by attaching OC-G**-A* above the OC-G**-AP* on the subplate. (See the figure to the right.)

2 Note that a sub plate and installation bolts are not included. See pages H4 and F87-89 if these items are required.

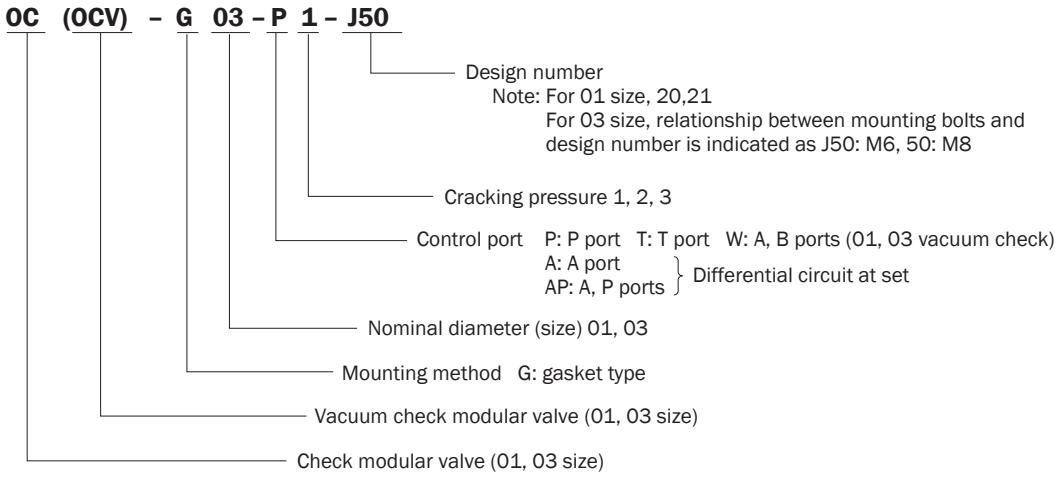
3 04 series modular valves do not have an L (DR2) drain port, so they cannot be used in combination with pressure center type solenoid valves (D).



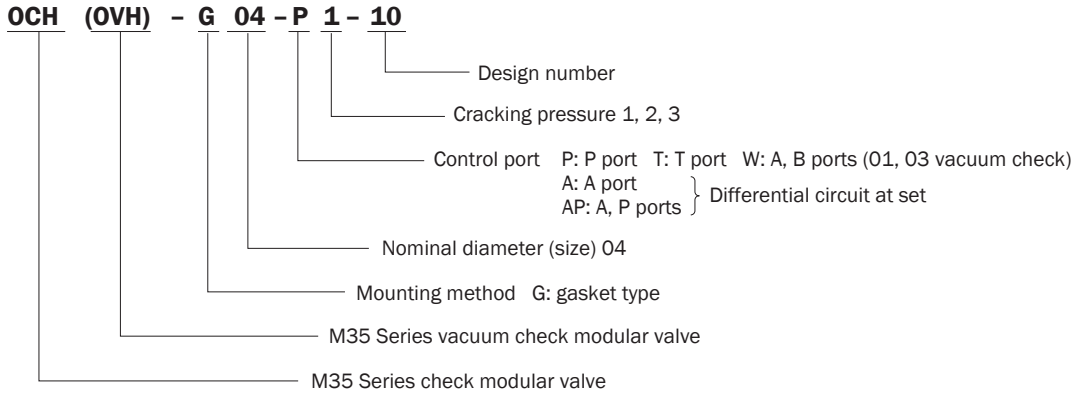
Differential circuit adjustment

Understanding Model Numbers

01, 03 size

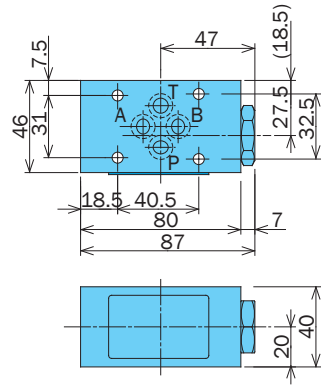


04 size

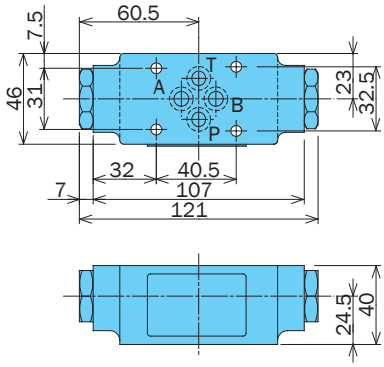


Installation Dimension Drawing

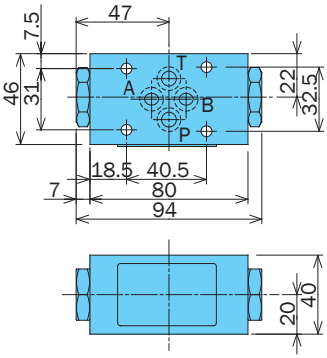
OC-G01-T*-20 (P, AP)



OC-G01-A*-21

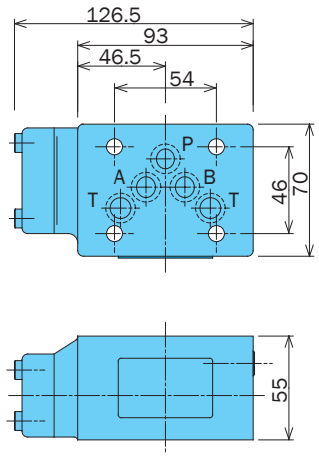


OCV-G01-W-20

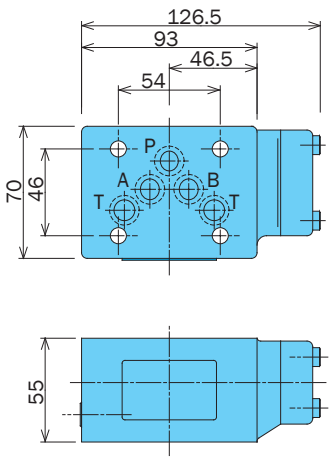


Note: Dimensions in the parentheses are for the OC-G01-T*-20.

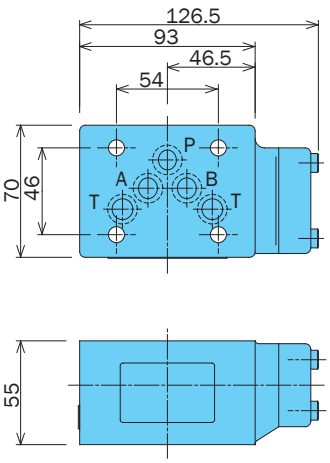
OC-G03- (P, AP) *-J50



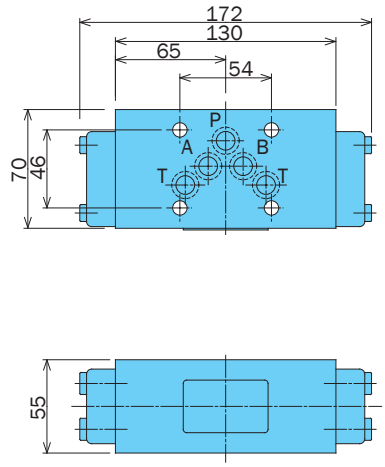
OC-G03-A*-J50



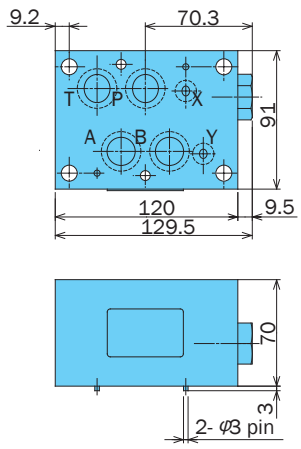
OC-G03-T*-J50



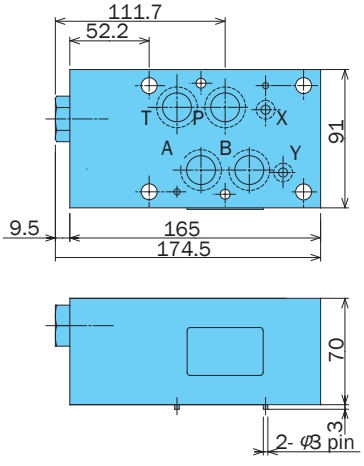
OCV-G03-W-J50



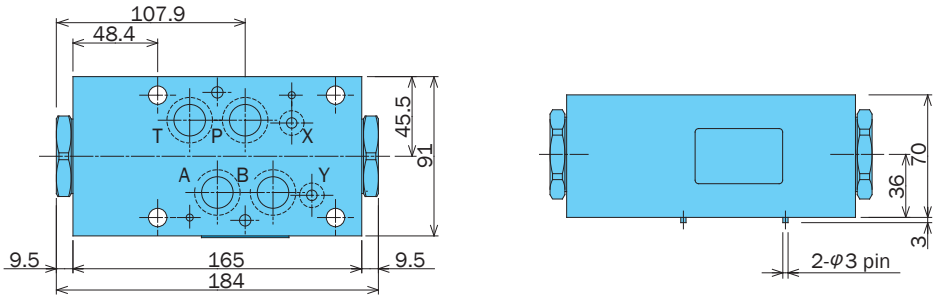
OCH-G04-A*-10 (P, AP)



OCH-G04-T*-10



OVH-G04-W-10

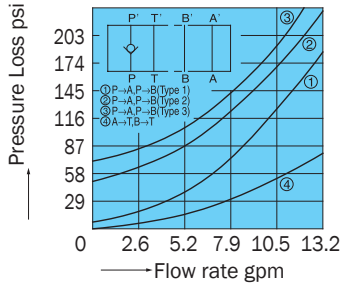


Performance Curves

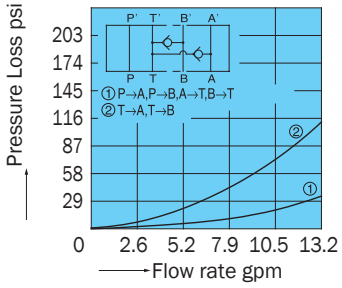
Hydraulic Operating Fluid Viscosity 32 centistokes

Pressure Loss Characteristics

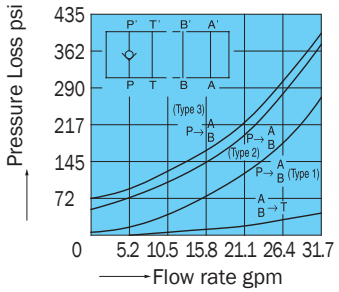
OC-G01-P*-20



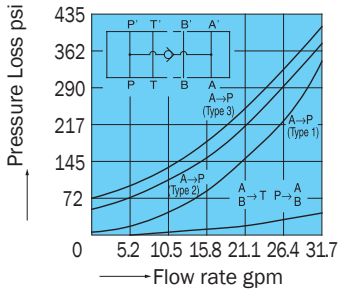
OCV-G01-W-20



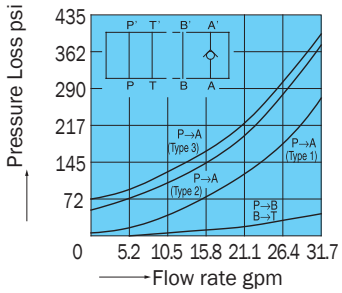
OC-G03-P*-J50



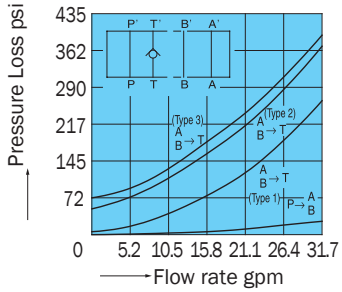
OC-G03-AP*-J50



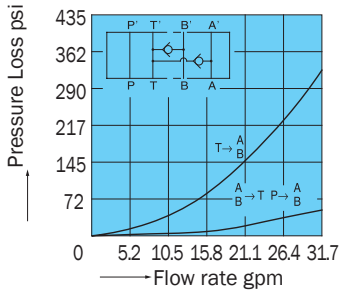
OC-G03-A*-J50



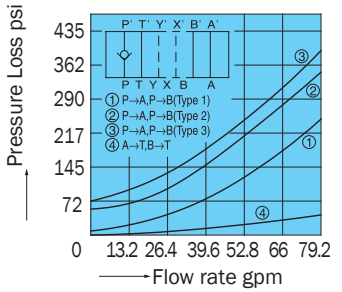
OC-G03-T*-J50



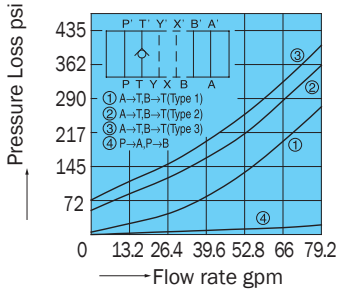
OCV-G03-W-J50



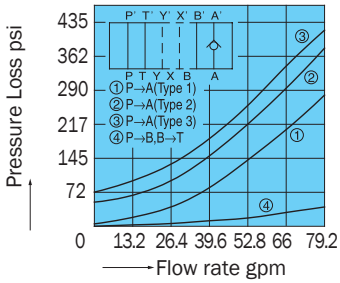
OCH-G04-P*-10



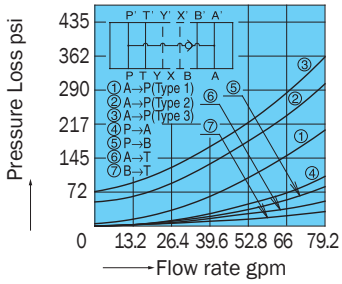
OCH-G04-T*-10



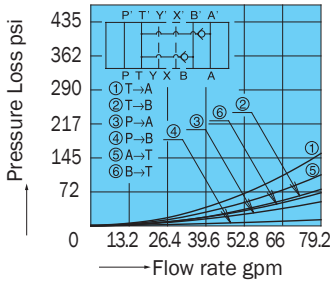
OCH-G04-A*-10



OCH-G04-AP*-10

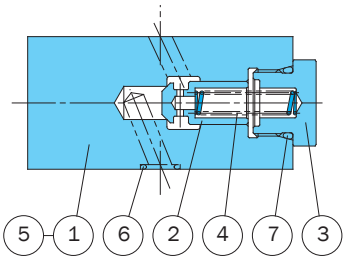


OVH-G04-W-10



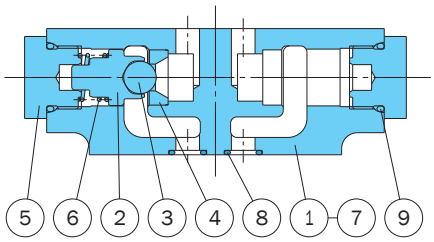
Cross-sectional Drawing

P
OC-G01-T*-20
AP



Part No.	Part Name
1	Body
2	Poppet
3	Spring seat
4	Spring
5	Plate
6	O-ring
7	O-ring

OC-G01-A*-21



Part No.	Part Name
1	Body
2	Poppet
3	Ball
4	Seat
5	Spring seat
6	Spring
7	Plate
8	O-ring
9	O-ring

Seal Part List (Kit Model Number BRBS-01C*)

Part No.	Part Name	Part Number	Q'ty		
			P	T	AP
6	O-ring	1B-P9	4	4	4
7	O-ring	1B-P18	1	1	1

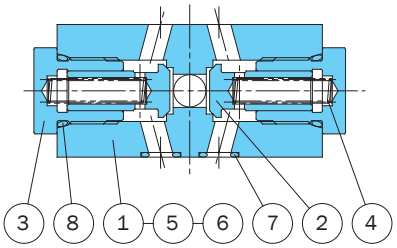
Note:
1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify P, T, or AP for the asterisk (*) in the kit model number.

Seal Part List (Kit Model Number BDBS-01CA)

Part No.	Part Name	Part Number	Q'ty
			A
8	O-ring	1B-P9	4
9	O-ring	1B-P18	2

Note:
O-ring 1A/B-** refers to JIS B2401-1A/B.

OCV-G01-W-20



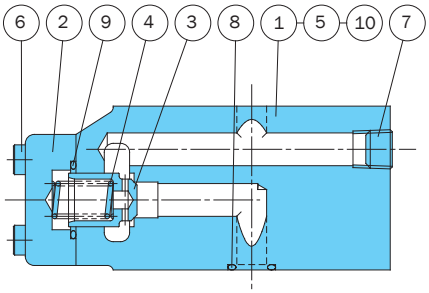
Part No.	Part Name
1	Body
2	Poppet
3	Guide
4	Spring
5	Plate
6	Plug
7	O-ring
8	O-ring

Seal Part List (Kit Model Number BDBS-01CVW)

Part No.	Part Name	Part Number	Q'ty
			W
7	O-ring	1B-P9	4
8	O-ring	1B-P18	2

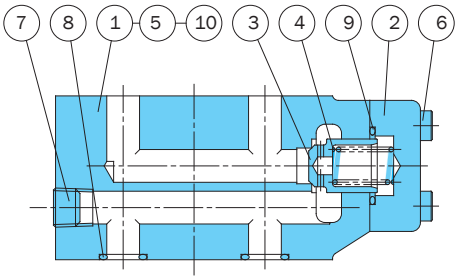
Note:
1. O-ring 1A/B-** refers to JIS B2401-1A/B.

OC-G03-P*-J50



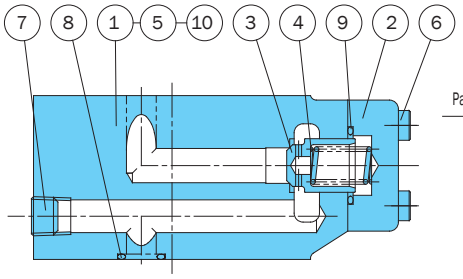
Part No.	Part Name
1	Body
2	Cover
3	Poppet
4	Spring
5	Plate
6	Screw
7	Plug
8	O-ring
9	O-ring
10	Pin

OC-G03-T*-J50



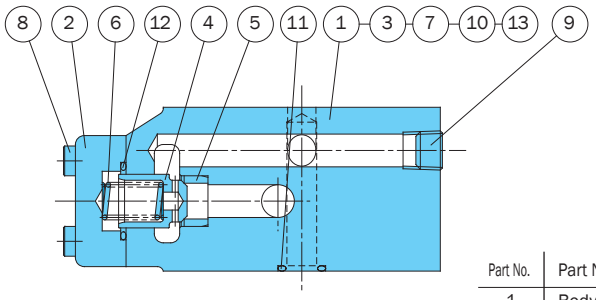
Part No.	Part Name
1	Body
2	Cover
3	Poppet
4	Spring
5	Plate
6	Screw
7	Plug
8	O-ring
9	O-ring
10	Pin

OC-G03-A*-J50



Part No.	Part Name
1	Body
2	Cover
3	Poppet
4	Spring
5	Plate
6	Screw
7	Plug
8	O-ring
9	O-ring
10	Pin

OC-G03-AP*-J50



Part No.	Part Name
1	Body
2	Cover
3	Plug
4	Poppet
5	Seat
6	Spring
7	Plate
8	Screw
9	Plug
10	O-ring
11	O-ring
12	O-ring
13	Pin

Seal Part List (Kit Model Number BDES-03C*)

Part No.	Part Name	Part Number	Q'ty		
			P	T	A
8	O-ring	AS568-014(Hs90)	5	5	5
9	O-ring	1B-P22	1	1	1

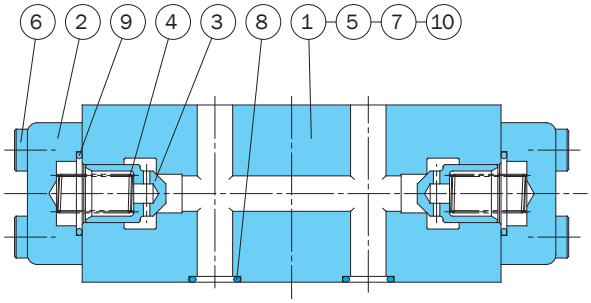
Note:
1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify P, T, or A for the asterisk (*) in the kit model number.

Seal Part List (Kit Model Number BDES-03CAP)

Part No.	Part Name	Part Number	Q'ty
			AP
10	O-ring	1B-P11	1
11	O-ring	AS568-014(Hs90)	5
12	O-ring	1B-P22	1

Note:
O-ring 1A/B-** refers to JIS B2401-1A/B.

OCV-G03-W-J50

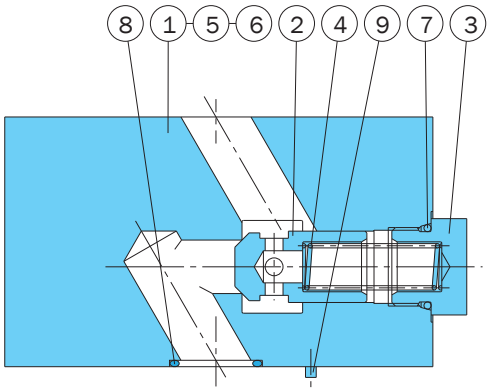


Seal Part List (Kit Model Number BDES-03CVW)

Part No.	Part Name	Part Number	Q'ty
			W
7	O-ring	1B-P10A	2
8	O-ring	AS568-014(Hs90)	5
9	O-ring	1B-P22	2

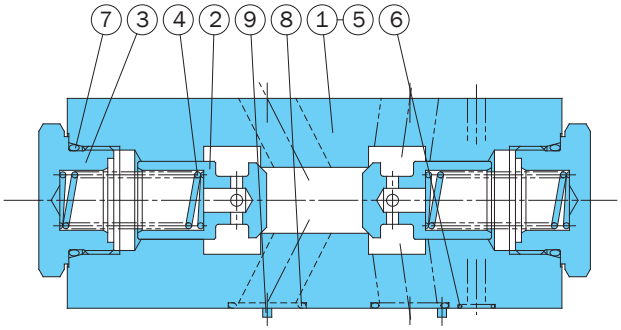
Part No.	Part Name	Part No.	Part Name	Part No.	Part Name
1	Body	5	Plate	9	O-ring
2	Cover	6	Screw	10	Pin
3	Poppet	7	O-ring		
4	Spring	8	O-ring		

OCH-G04-P*-10



Part No.	Part Name
1	Body
2	Poppet
3	Spring seat
4	Spring
5	Plate
6	O-ring
7	O-ring
8	O-ring
9	Pin

OVH-G04-W-10



Part No.	Part Name
1	Body
2	Poppet
3	Spring seat
4	Spring
5	Plate
6	O-ring
7	O-ring
8	O-ring
9	Pin

Seal Part List (Kit Model Number BDKS-04C*)

Part No.	Part Name	Body	Q'ty			
			P	T	A	AP
6	O-ring	AS568-012(Hs90)	2	2	2	2
7	O-ring	1B-P20	1	1	1	1
8	O-ring	AS568-118(Hs90)	4	4	4	4

Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify P, T, A, or AP for the asterisk (*) in the kit model number.

Seal Part List (Kit Model Number BDKS-04CVW)

Part No.	Part Name	Part Number	Q'ty
6	O-ring	AS568-012(Hs90)	2
7	O-ring	1B-P32	2
8	O-ring	AS568-118(Hs90)	4

Note: O-ring 1A/B-** refers to JIS B2401-1A/B.

Pilot Operated Check Modular Valve

13.2 to 79.2 gpm
3625 to 5075 psi

Features

This modular valve is used to prevent actuator self-running and to maintain actuator position.

Maximum Operating Pressure: 3625, 5075 psi

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Cracking pressure psi	Area Ratio			Weight lbs	Gasket Surface Dimensions
					Pilot Piston	Check Valve Seat	Needle Valve Seat		
OCP-G01-W1-21 W2	1/8	3625	13.2	29 72	1	0.37	--	2.6	ISO 4401-03-02-0-94
OCP-G01-A1-21 A2				29 72					
OCP-G01-B1-21 B2				29 72					
OCP-G01-W1-F-21 W2				29 72	1	0.51	0.06	2.6	
OCP-G01-A1-F-21 A2				29 72					
OCP-G01-B1-F-21 B2				29 72					
OCP-G03-W1-J50 W2	3/8	3625	26.4	29 72	1	0.49	0.07	7.9	ISO 4401-05-04-0-94
OCP-G03-A1-J50 A2				29 72					
OCP-G03-B1-J50 B2				29 72					
OCP-G03-W1-D-J50 W2				29 72	1	0.49	--		
OCP-G03-A1-D-J50 A2				29 72					
OCP-G03-B1-D-J50 B2				29 72					
OPH-G04-W1-10 W2	1/2	5075	79.2	29 72	1	0.50	0.07	14.9	ISO 4401-07-06-0-94
OPH-G04-A1-10 A2				29 72					
OPH-G04-B1-10 B2				29 72					
OPH-G04-W1-D-10 W2				29 72	1	0.50	--		
OPH-G04-A1-D-10 A2				29 72					
OPH-G04-B1-D-10 B2				29 72					

• Handling

1 Note that when the 01 size has the auxiliary symbol "F," tank port back pressure can cause the small valve to open, making it impossible to maintain pressure.

2 If tank port back pressure causes the small valve to open and make it impossible to maintain pressure with the 03, 04 size, use a direct type with auxiliary symbol "D."

3 Minimum pilot pressure fluctuates with the input side pressure during reverse flow. Operate the valve so pressure is at least twice as high as the required pressure obtained using the minimum pilot pressure characteristics graph.

4 Note that a sub plate and installation bolts are not included. See pages H4 and F87-89 if these items are required.

5 04 series modular valves do not have an L (DR2) drain port, so they cannot be used in combination with pressure center type solenoid valves (D).

Understanding Model Numbers

OCP – G 03 – W 1 – (D) – J50 01, 03 size

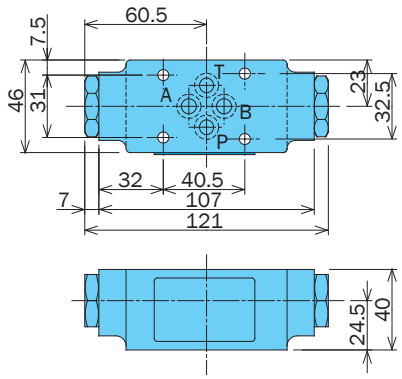
- Design number
  Note: For 01 size, 21
  For 03 size, relationship between mounting bolts and design number is indicated as J50: M6, 50 : M8.
- Auxiliary symbol F: With shock-resistant mechanism (01 size only)
  D: No small valve poppet (03 size only)
- Cracking pressure 1: 29 psi 2: 72 psi
- Control port W: A, B ports A: A port B: B port
- Nominal diameter (size) 01, 03
- Mounting method G: Gasket type
- Pilot operated check modular valve

OPH – G 04 – W 1 – (D) – 10 04 size

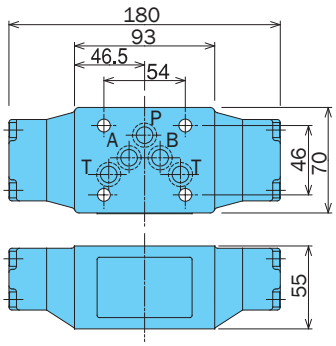
- Design number
- Auxiliary symbol D: No small valve poppet
- Cracking pressure 1: 29 psi
  2: 72 psi
- Control port W: A, B ports A: A port B: B port
- Nominal diameter (size) 04
- Mounting method G: Gasket type
- M35 Series pilot operated check modular valve

Installation Dimension Drawings

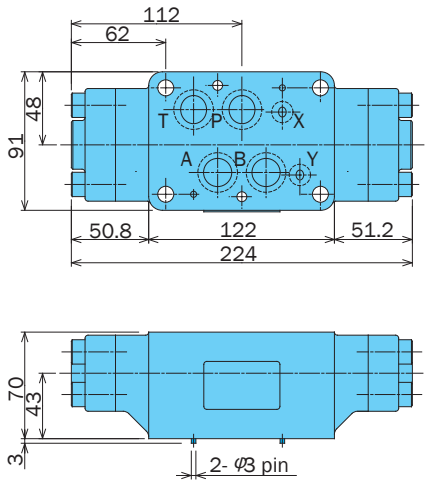
OCP-G01-**-(F)-21



OCP-G03-**-(D)-J50



OPH-G04-**-(D)-10

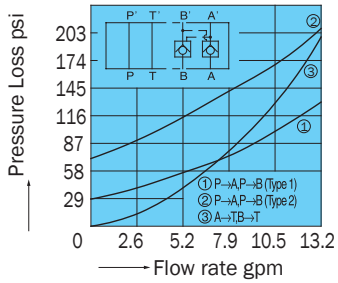


Specifications

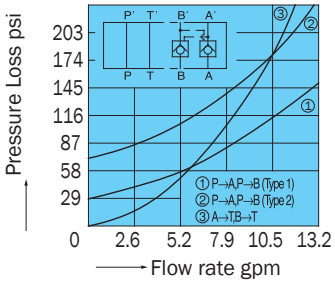
Hydraulic Operating Fluid Viscosity 32 centistokes

Pressure Loss Characteristics

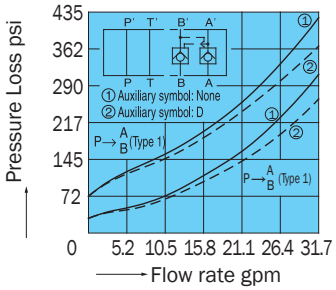
OCP-G01-W*-21



OCP-G01-W*-F-21

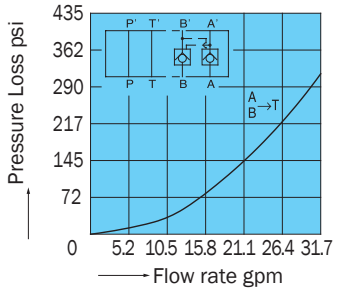


OCP-G03-W*-(D)-J50

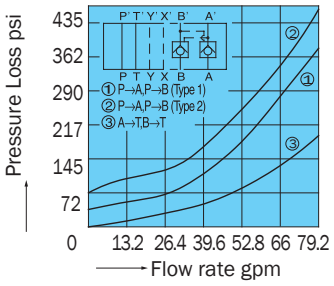


Pressure Loss Characteristics (Reverse Free Flow)

OCP-G03-W*-J50

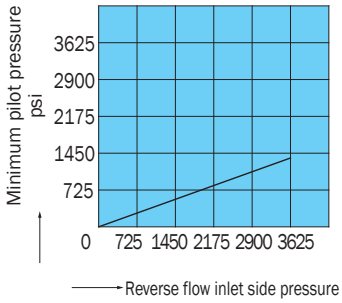


OPH-G04-W*-10

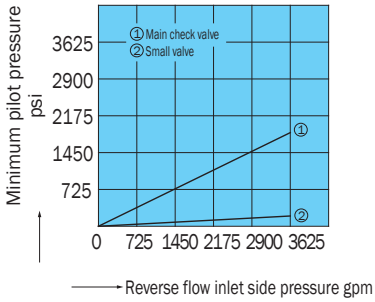


Minimum Pilot Pressure Characteristics

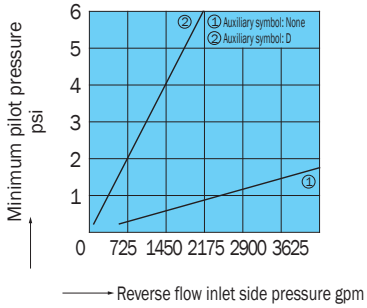
OCP-G01-**-21



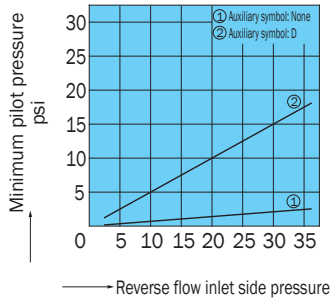
OCP-G01-**-F-21



OCP-G03-W*-(D)-J50

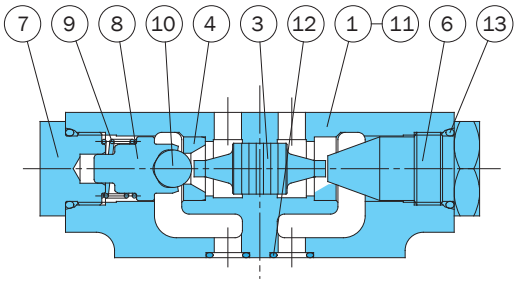


OPH-G04-W*-(D)-10

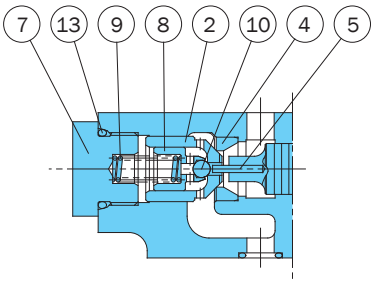


Cross-sectional Drawing

OCP-G01-A*-21



OCP-G01-A*-F-21



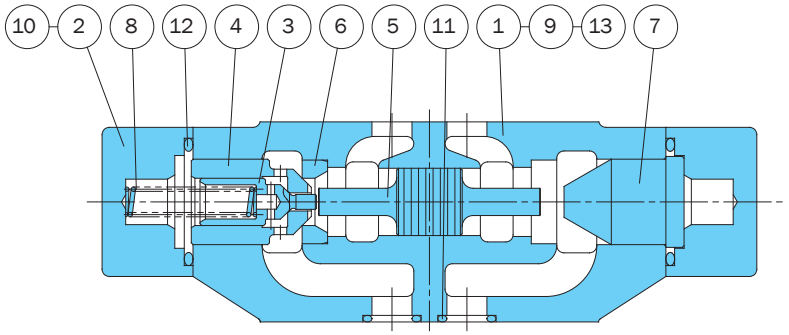
Part No.	Part Name
1	Body
2	Poppet
3	Piston
4	Seat
5	Rod
6	Bushing
7	Spring seat
8	Guide
9	Spring
10	Ball
11	Plate
12	O-ring
13	O-ring

Seal Part List (Kit Model Number BDBS-01CP)

Part No.	Part Name	Part Number	Q'ty		
			W	A	B
12	O-ring	1B-P9	4	4	4
13	O-ring	1B-P18	2	2	2

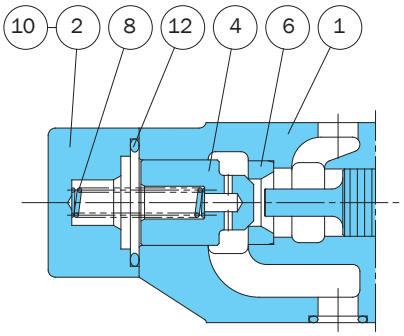
Note: 1.O-ring 1A/B-** refers to JIS B2401-1A/B.
2.Specify W, A, or B for the asterisk (*) in the kit model number.

OCP-G03-A*-J50



Part No.	Part Name
1	Body
2	Cover
3	Poppet
4	Poppet
5	Piston
6	Seat
7	Bushing
8	Spring
9	Plate
10	Screw
11	O-ring
12	O-ring
13	Pin

OCP-G03-**-D-J50

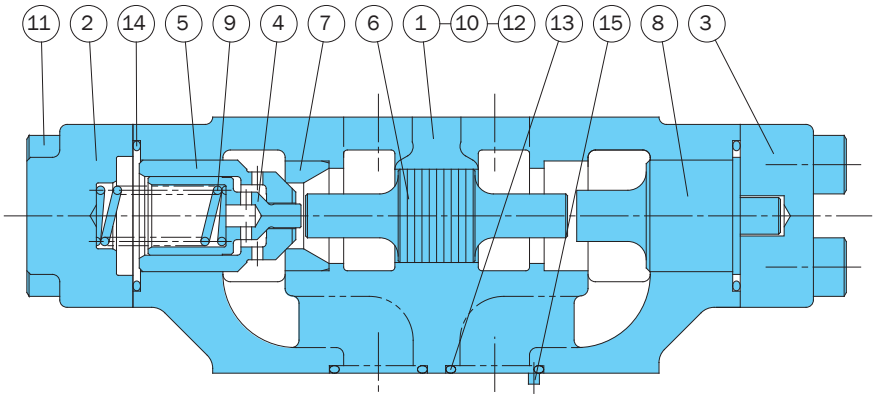


Seal Part List (Kit Model Number BDES-03CP*)

Part No.	Part Name	Part Number	Q'ty		
			W	A	B
11	O-ring	AS568-014(Hs90)	5	5	5
12	O-ring	1B-P29	2	2	2

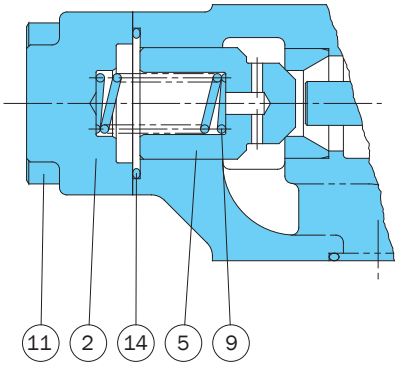
Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify W, A, or B for the asterisk (*) in the kit model number.

OPH-G04-A*-10



Part No.	Part Name
1	Body
2	Cover
3	Cover
4	Poppet
5	Poppet
6	Piston
7	Seat
8	Bushing
9	Spring
10	Plate
11	Screw
12	O-ring
13	O-ring
14	O-ring
15	Pin

OPH-G04-**-D-10



Seal Part List (Kit Model Number BDKS-04CP*)

Part No.	Part Name	Part Number	Q'ty		
			W	A	B
12	O-ring	AS568-012(Hs90)	2	2	2
13	O-ring	AS568-118(Hs90)	4	4	4
14	O-ring	AS568-127(Hs90)	2	2	2

Note: 1.Specify W, A, or B for the asterisk (*) in the kit model number.

Gauge Modular Block

13.2 to 26.4 gpm
3625 psi

Features

This modular block makes it possible to attach a pressure gauge to the P and T ports or the A and B ports.

Connection to the ports is extremely simple.

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Weight lbs	Gasket Surface Dimensions
OK-G01-P-E20 OK-G01-T-E20	1/8	3625	13.2	1.3	ISO 4401-03-02-0-94
OK-G01-W-E20				1.3	
OK-G01-P-H-E20 OK-G01-T-H-E20				2.2	
OK-G01-W-H-E20				2.2	
OK-G03-E50	3/8	3625	26.4	5.0	ISO 4401-05-04-0-94

Understanding Model Numbers

OK – G 01 – P – (H) – 20

- OK: Gauge modular block
- G: Mounting method G: Gasket type
- 01: Nominal diameter (size) 01, 03
- P: Pressure output port P: P port T: T port W: A, B ports
- (H): Auxiliary symbol H: 40 mm thick (01 size only)
- 20: Design number
  Note: For 03 size, relationship between mounting bolts and design number is indicated as J50: M6, 50 : M8.
  E: NPT piping 01, 03

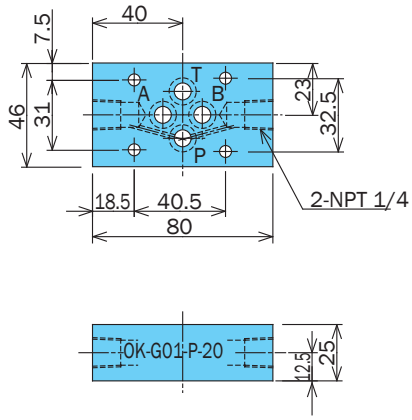
• Handling

1 When installing the OK-G01-P- (H)-E20, OK-G01-T-(H)-E20, or OK-G01-W-(H)-E20, make sure the model number printing is oriented so it can be read correctly from the P port side.

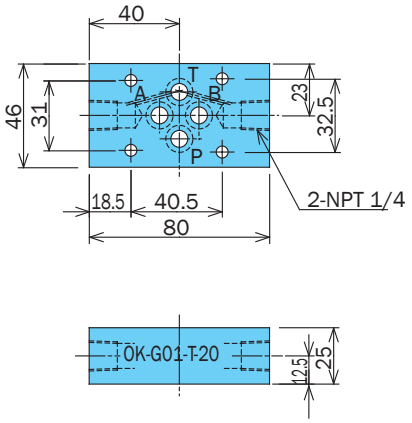
2 Note that a sub plate and installation bolts are not included. See pages H4 and F87-89 if these items are required.

Installation Dimension Drawings

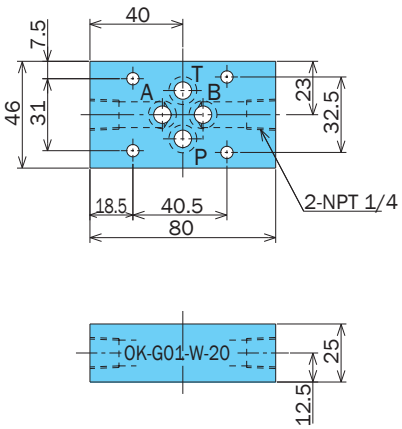
OK-G01-P-E20



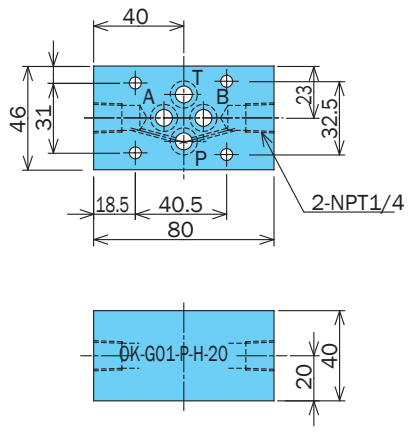
OK-G01-T-E20



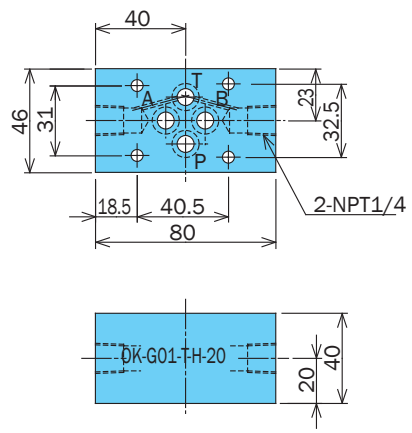
OK-G01-W-E20



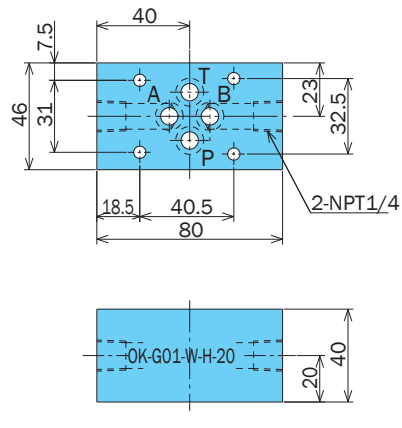
OK-G01-P-H-E20



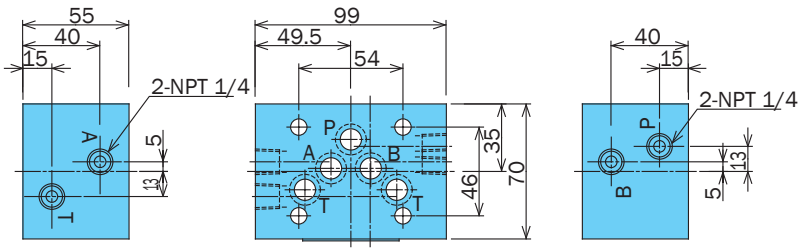
OK-G01-T-H-E20



OK-G01-W-H-E20



OK-G03-E50



High-Low System Block

13.2 to 26.4 gpm
3625 psi

Features

Simple high-low 2-speed control can be attained by stacking this block on top of a high-low base block and manifold, which configures a speed control circuit.

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Weight lbs
OB-G01-W-20	1/8	3625	13.2	3.3
OB-G01-W-H-20				5.5
OB-G03-W-J30	3/8	3625	26.4	9.9
OB-G03-W-H-J30				15.6

• Handling

1 If a base block is required, use MOB-01Y-W*-10 for the 01 size and MOB-03X-B*-J30 for the 03 size, because their valve pitches match. MOB-01X-B*-10 has a different valve pitch, and so cannot be used.

2 When installing this block, make sure the nameplate is oriented so it can be read correctly from the A port side.

3 Both of the cylinder ports on this block's manifold side (bottom) are open. Because of this, close one of the base block cylinder ports (A1, B1 or A2, B2 on the next page), or modify the manifold so it has a single cylinder port only.

4 Note that installation bolts are not included. See pages H4 and F87-89 if these items are required.

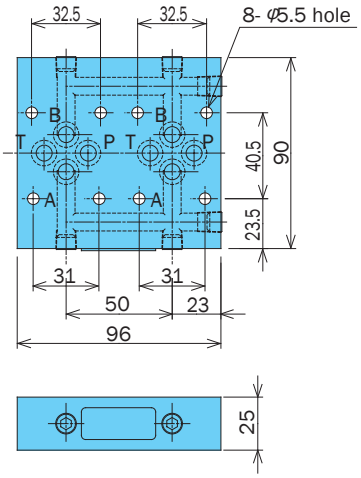
Understanding Model Numbers

OB – G 01 – W – (H) – 20

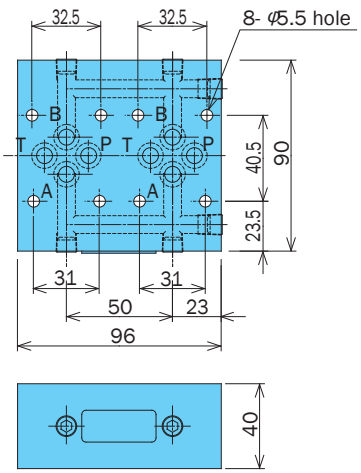
- 20 — Design number
  Note: For 03 size, relationship between mounting bolts and design number is indicated as J30: M6, 30 : M8.
- (H) — Auxiliary symbol H: 40 mm thick (01 size), 55 mm thick (03 size)
- W — High-low system
- 01 — Nominal diameter (size) 01, 03
- G — Mounting method G: Gasket type
- OB — High-low system block

Installation Dimension Drawings

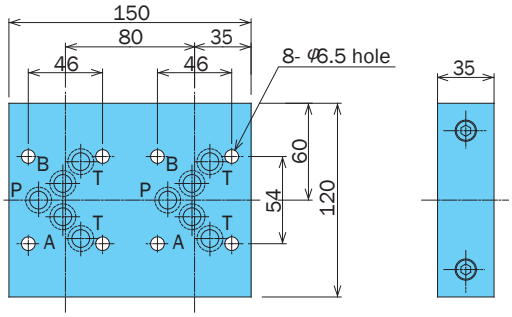
OB-G01-W-20



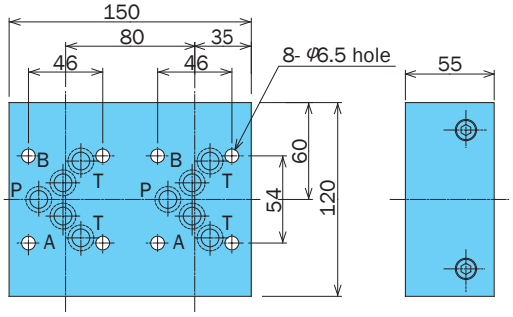
OB-G01-W-H-20

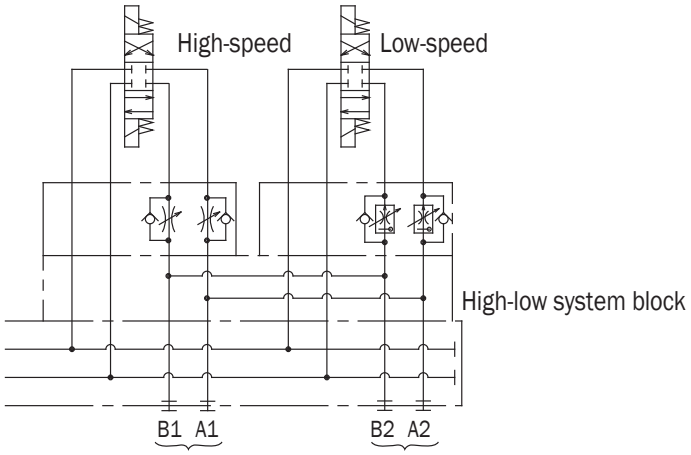


OB-G03-W-J30



OB-G03-W-H-J30





Use either one.

F

Modular Valves

End Plate, Free Flow Plate, 03/01 Change Plate

13.2 to 26.4 gpm
3625 psi

Features

The end plate is a modular valve plate used to close off a circuit that is not required, and when using a relief modular valve in a standalone configuration.
The free flow plate is a modular valve plate is used in a one-way circuit that does not require a solenoid valve.
The 03/01 change plate makes it possible to use an 01 size modular valve with an 03 size sub-plate and base block.
The 06/04 change plate makes it possible to use an 04 size modular valve with an 06 size sub-plate and base block.

Specifications

Model No.	Nominal Diameter(Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Weight lbs
MOB-G01-10	1/8	3625	–	.6
MOB-G01-H-10				1.3
MOB-G01-A-10 MOB-G01-B-10			13.2	1.3
MOB-G03-J50	3/8	3625	–	3.0
MOB-G03-H-50				5.5
MOB-G03-A-J50 MOB-G03-B-J50			26.4	2.8
MOB-G03-A-H-50 MOB-G03-B-H-50				5.0
MOB-G03-AA-J50			13.2	5.0
MOB-G06-AA-5411A	3/4	3045	52.8	17.6

Understanding Model Numbers

MOB – G 03 – A – (H) – J50

- MOB: Modular valve plate
- G: Mounting method G: Gasket type
- 03: Nominal diameter (size) 01, 03
- A: Port connection status
  - None: All ports blocked (stop plate)
  - A : P←→A, B←→T (Free-flow plate)
  - B : P←→B, A←→T (Free-flow plate)
  - AA : G03→G01, G06→G04
    - P→P
    - T→T
    - A→A
    - B→B
    - (03/01 Switching plate, 06/04 Conversion plate)
- (H): Auxiliary symbol H: Tightening height 36mm (01 size), 58mm (03 size)
- J50: Design number

Note: Auxiliary symbol (tightening height) and design number (G03 size)
- J50: M6 type 26.5mm
- 50: M8 type 23.4mm
- H-50: M8 type 58mm (stop plate and relief low plate only)
- 5411A: 06/04 conversion plate (special item)

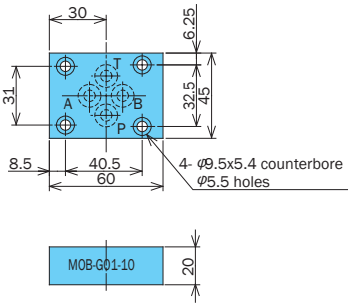
Model No.	Bolt Dimensions	Q'ty
MOB-G01-10	M5 × 25	4
MOB-G01-*-10	M5 × 45	4
MOB-G03-J50 MOB-G03-$\frac{A}{B}$J50 MOB-G03-AA-J50	M6 × 35	4
MOB-G03-50 MOB-G03-$\frac{A}{B}$50 MOB-G03-AA-50	M8 × 35	4
MOB-G03-H-50 MOB-G03-$\frac{A}{B}$H-50	M8 × 70	4
MOB-G06-AA-5411A	M12 × 70	6

• Handling
1 Installation bolts are not included. Use the table to the right to specify bolts for stand-alone use.

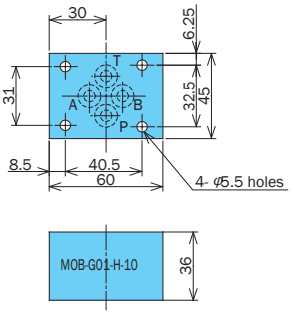
F Modular Valves

Installation Dimension Drawings

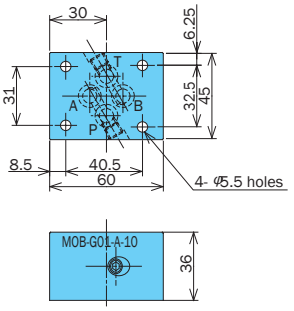
MOB-G01-10



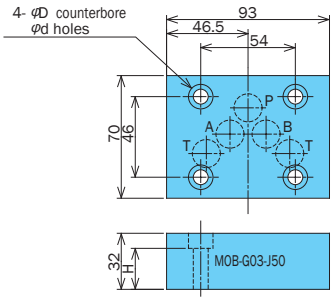
MOB-G01-H-10



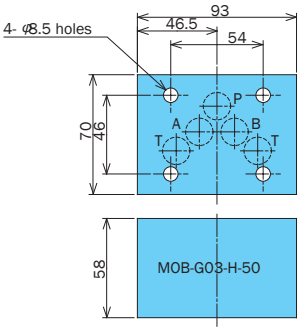
MOB-G01- A (B) -10



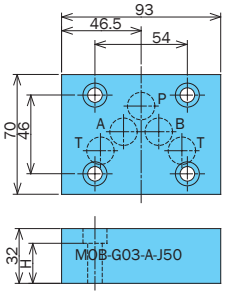
MOB-G03-J50



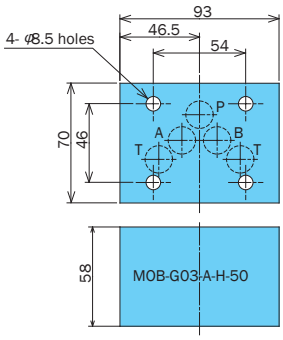
MOB-G03-H-50



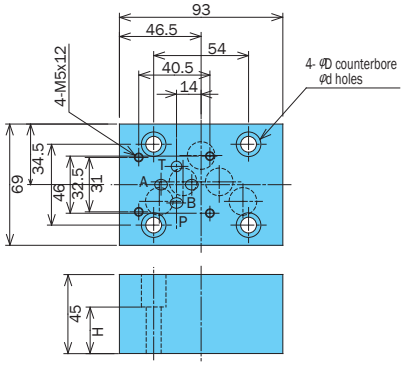
MOB-G03- A B -J50



MOB-G03- A B -H-50

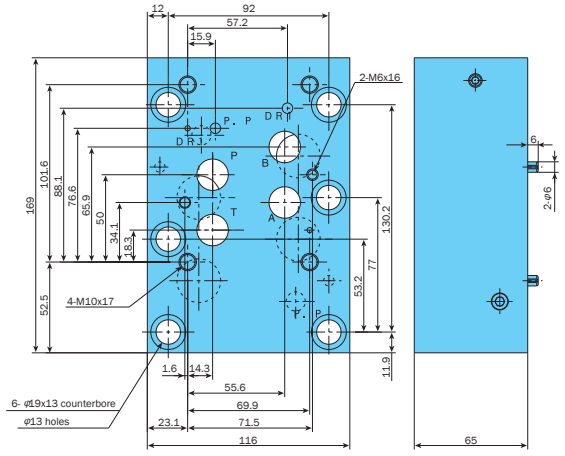


MOB-G03-AA-J50



Model No.	D	H	d
MOB-G03-*-50	14	23.4	8.5
MOB-G03-*-J50	11	26.5	6.5

MOB-G06-AA-5411A

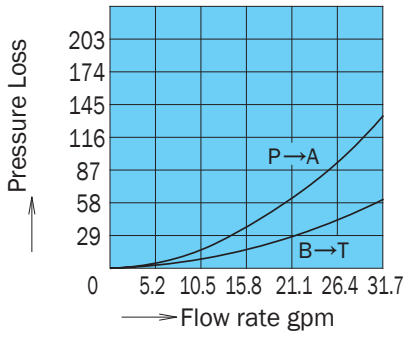


Performance Curves

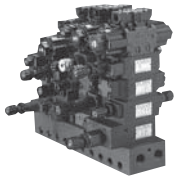
Hydraulic Operating Fluid
Viscosity 32 centistokes

Pressure Loss Characteristics

MOB-G03-A-J50



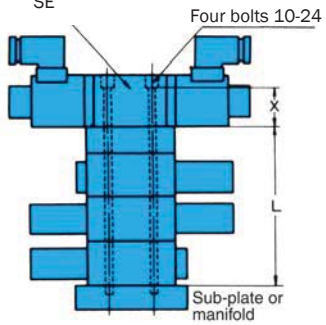
Valve Installation Bolt List



E: UNC Thread
01 (nominal diameter)

SS
SA -G01-***-**-E31

SL
SE -G01-***-**-40

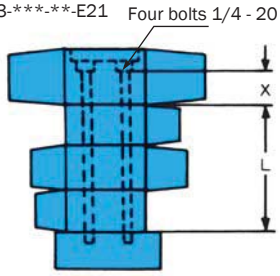


Model Number	X
SA-G01-***-**-E31	37.5
SS-G01-***-R-**-E31	
SL-G01- ***-R- **-E31	
SE-G01- ***-GR- **-40	

Type	Model Number	Dimension L	Bolt length
Hexagon Socket Head Bolt	0TH-01-70-10	25	70
	85	40	85
	110	65	110
	125	80	125
	150	105	150
	165	120	165
	190	145	190
	205	160	205
Stat Bolt	0TD-01-80-10	25	80
	95	40	95
	120	65	120
	135	80	135
	145	90	145
	160	105	160
	175	120	175
	185	130	185
	200	145	200
	210	155	210
	215	160	215
	225	170	225
	240	185	240
	250	195	250
	265	210	265
	275	220	275

E: UNC Thread
03 (nominal diameter)

SS-G03-***-**-E22
SA-G03-***-**-E21

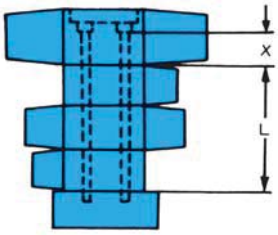


Model Number	X
SS-G03- ***-R- **-E22 SA-G03- ***-R- **-E21	60.5

Type	Model Number	Dimension L	Bolt length
Hexagon Socket Head Bolt	0TH-03-125-J30	55	M6 × 125
	-180-	110	M6 × 180
Stat Bolt	0TD-03-135-J30	55	M6 × 135
	-190-	110	M6 × 190
	-245-	165	M6 × 245
	-300-	220	M6 × 300

E: UNC Thread

SS-G03-***-**-22
SA-G03-***-**-21

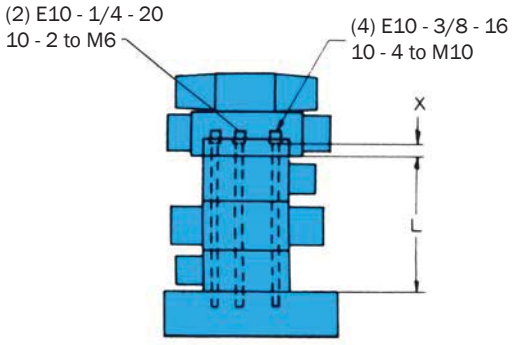


Model Number	X
SS-G03- ***-R- **-22 SA-G03- ***-R- **-21	58

Type	Model Number	Dimension L	Bolt length
Hexagon Socket Head Bolt	0TH-03-125-30	55	M8 × 125
	-180-	110	M8 × 180
Stat Bolt	0TD-03-135-30	55	M8 × 135
	-190-	110	M8 × 190
	-245-	165	M8 × 245
	-300-	220	M8 × 300

Note:
1 Model numbers indicate bolt kits for one solenoid valve.
2 Up to four modular valves can be ganged together.
3 01 Size Modular valves at a height of 40 + 25 = 65 mm are ganged to one level.
4 2-pressure reducing valves at a height of 90 mm are ganged to two levels.

04 (nominal diameter)

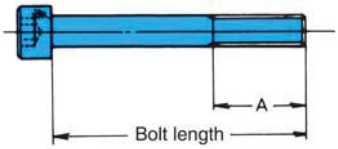


Model Number	X
DSS-G04-***-R-**-22 DSA-G04-***-**-22	34

Type	Model Number	Dimension L	Bolt Size	Bolt length
Hexagon Socket Head Bolt	0TH-04-120-10	70	M6	115
			M10	120
	-135-	85	M6	130
			M10	135
	-190-	140	M6	185
			M10	190
	-205-	155	M6	200
			M10	205
Stat Bolt	0TD-04-135-10	70	M6	123
			M10	135
	-150-	85	M6	138
			M10	150
	-205-	140	M6	193
			M10	205
	-220-	155	M6	210
			M10	220
	-275-	210	M6	265
			M10	275
	-290-	225	M6	278
			M10	290

Note: 1. The above model numbers indicate bolt kits for one solenoid valve.
2. Up to three modular valves can be ganged together.
3. There is a bolt for ganging four valves, but the maximum operating pressure is limited to 3045 psi. For details, consult your agent. (See page D-4)

Hexagon socket head bolt

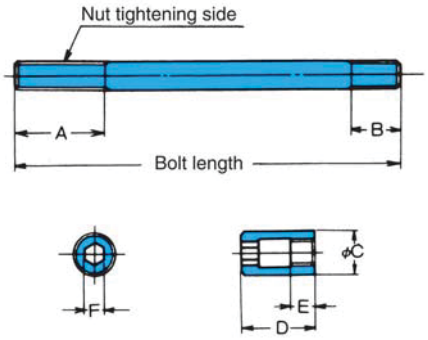


Nominal Diameter	A	Bolt Size
01	15	10 - 24
03	18	1/4 - 20

Tightening Torque

Nominal Diameter	Bolt Size	Tightening Torque N ft lbs
01	10 - 24 UNC	3.6 to 5.1
03	1/4 - 20 UNC	7.3 to 9.5

Stat Bolts and Nuts



Model No.	A	B	C	D	E	F	Bolt Size
0TD-01-***-10	12	9	8.5	16	11	4	M5
0TD-03-***-J30	20	10	10	18	11.5	5	M6
0TD-03-***-30	25	12.5	13	22	15	6	M8
0TD-04-***-10	20	10	10	18	11.5	5	M6
	25	18	16	23	15	8	M10

Stat bolts and nuts are included. The E dimension is the effective screw depth.

01, 03 Base Block

Features

This block, which allows piping from both sides, is designed for use with combinations of two or more solenoid valves and modular valves.

Understanding Model Numbers

MOB - 01 X - B3 - 10

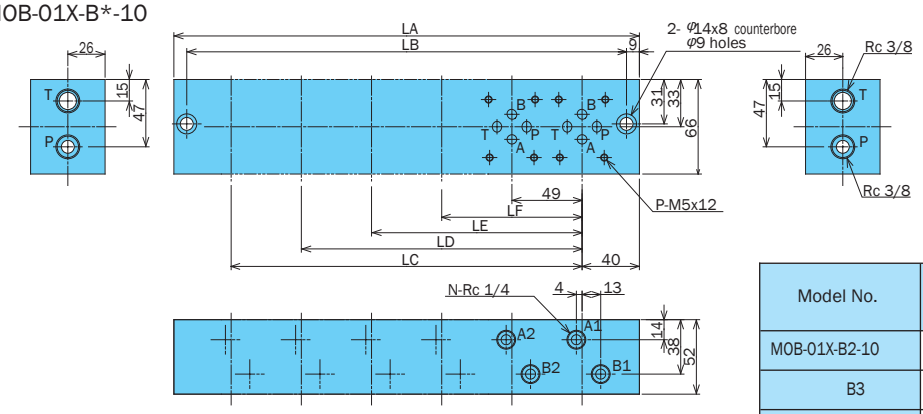
- Design number
- Sequential number
- A, B port piping diameter — X: One size larger than nominal diameter; Y: Two size larger than nominal diameter
- Nominal diameter (size) 01, 03
- Base block for modular valve

Note: Another series of multi-pump blocks is available for the MBS and MBW Series NACHI PACK. For details, see page L-24.

Installation Dimension Drawings

01 (nominal diameter) base block

MOB-01X-B*-10



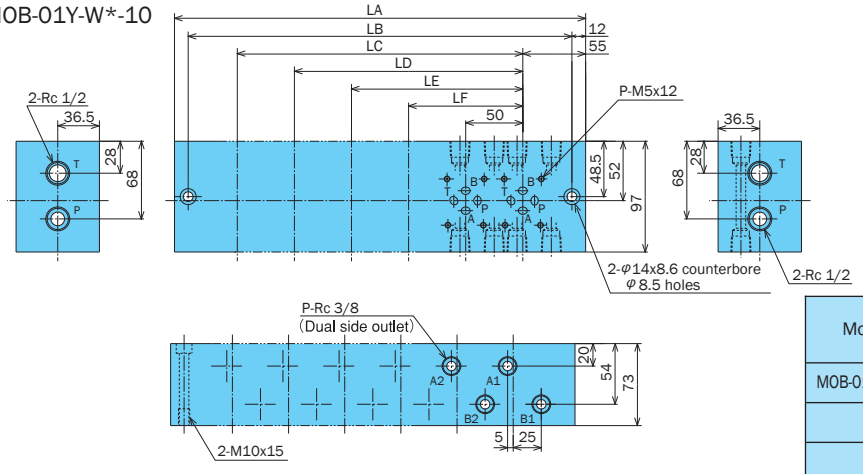
Model No	Pipe Outlet Size (A, B)	Maximum Working Pressure psi	Recommended Flow Rate gpm
MOB-01X-B*-10	1/4	3625	5.2

Plug Tightening Torque

Plug Configuration	Tightening Torque N ft lbs
TPHA-1/4	13.4 to 22
TPHA-3/8	29.5 to 35

Model No.	LA	LB	LC	LD	LE	LF	N	P	Weight lbs
MOB-01X-B2-10	129	111	–	–	–	–	4	8	6.1
B3	178	160				98	6	12	8.3
B4	227	209			147		8	16	10.8
B5	276	258		196			10	20	13.0
B6	325	307	245				12	24	15.2

MOB-01Y-W*-10



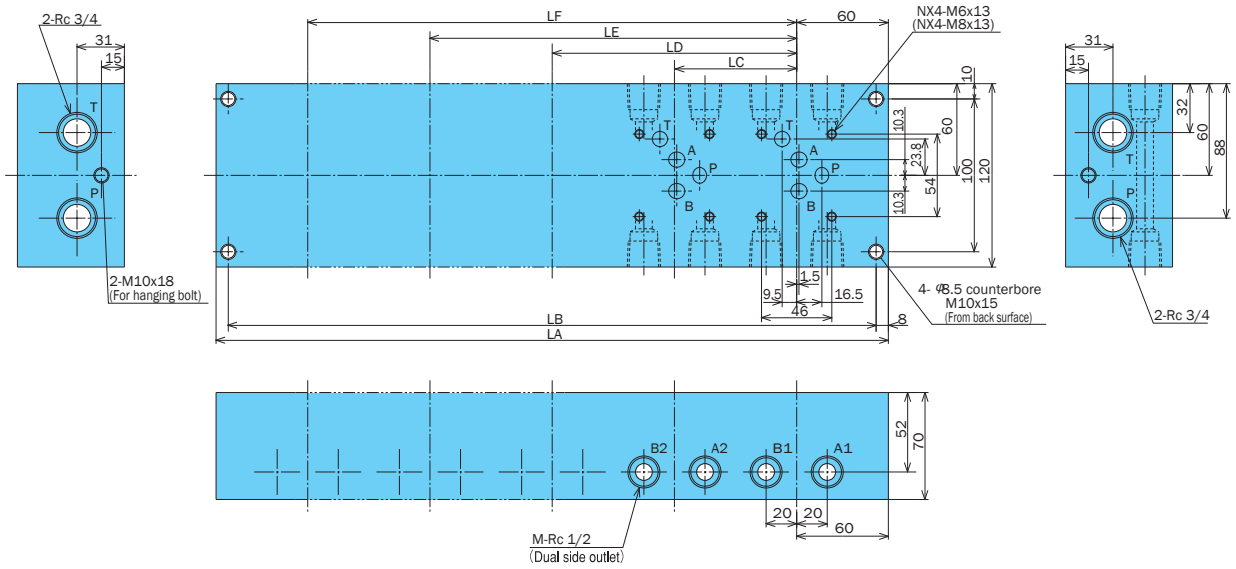
Model No	Pipe Outlet Size (A, B)	Maximum Working Pressure psi	Recommended Flow Rate gpm
MOB-01Y-W*-10	3/8	3625	10.5

Plug Tightening Torque

Plug Configuration	Tightening Torque N ft lbs
TPHA-3/8	29.5 to 35
TPHA-1/2	40.5 to 48

Model No.	LA	LB	LC	LD	LE	LF	P	Weight lbs
MOB-01Y-W1-10	110	86	–	–	–	–	4	11.2
W2	160	136					8	16.0
W3	210	186				100	12	21.1
W4	260	236			150		16	26.0
W5	310	286		200			20	30.8
W6	360	336	250				24	35.7

03 (nominal diameter) base block
MOB-03X-B*-(J)30



Plug Tightening Torque

Plug Configuration	Tightening Torque N ft lbs
TPHA-1/2	40.5 to 48
TPHA-3/4	66 to 73.7

Model No	Pipe Outlet Size (A, B)	Maximum Working Pressure psi	Recommended Flow Rate gpm
MOB-03X-B*-(J) 30	1/2	3625	21.1

Model No.	Dimensions								Weight lbs
	LA	LB	LC	LD	LE	LF	M	N	
MOB-03X-B2 -(J) 30	200	184	80	–	–	–	8	2	22.7
B3	280	264	80	160			12	3	31.5
B4	360	344	80	160	240		16	4	40.5
B5	440	424	80	160	240	320	20	5	49.3

Note: Dimensions in parentheses are for model number MOB-03X-B*-30, which is the model number when using M8 valve mounting bolts.

High-pressure M35 Series

13 to 80 gpm
5075 psi

Overview

The High-Pressure M35 Series responds to the needs of high density in a variety of fields by enabling higher density hydraulic systems.
This valve incorporates NACHI original flow control technology and heat treatment, plus precision machining to createhigh-performance valves with the following features:

- High-pressure 35MPa
- High reliability and compact design

- Press Machinery
  Press brakes, punching presses
- Underground Machinery
  Shield tunneling machinery, removal systems, etc.
- Construction Machinery
  From mini vehicles to 6 to 10-ton vehicles, shovels, etc.
- Environmental Related
  Granulators, filter presses, scrap presses
- Testing Equipment
  Impulse, durability, performance testers, etc.

(For details see catalog number 9265-3.)

- M35 Series Modular Valve (O * H)

By integrating multiple hydraulic devices, this valve can be used when configuring hydraulic circuits even in the high-pressure range. See page F9 for information about the 04 size.
This series consists of pressure, flow rate, and flow direction control valves.
Maximum Working Pressure: 5075 psi
Maximum Flow Rate: to 80 gpm

- M35 Series Non-leak Solenoid Valve (SNH)

A NACHI original structure is used to configure this wettype shutoff valve that isolates internal leaks. Installation conforms to ISO4401 standards, so it can be used in a wide range of applications in combination with modular valves. For more information, see page D-53.
Maximum Working Pressure: 5075 psi
Maximum Flow Rate: to 25 gpm

- M35 Series Related Components
  - Pump (See page A-42.)
    Rated Pressure: 5075 psi
    Capacity: 1.7 to 2.4 cu in/rev
  - High-response proportional flow control valve
    Maximum Working Pressure: 5075 psi
    Maximum Flow Rate: to 90 gpm
- M35 Series Industry Specific Components
  - Jack Valve
    Maximum Working Pressure: 5075 psi
    Maximum Flow Rate: to 25 gpm
  - Logic Cartridge Mono Block
    Maximum Working Pressure: 5075 psi
    Maximum Flow Rate: to 1850 gpm
- M35 Series Industry Specific Components
  - Hydraulic accessories (stop valves, filters, accumulators, hoses, etc.); NACHI-MOOG servo level

Specifications

M35 Series Modular Valve

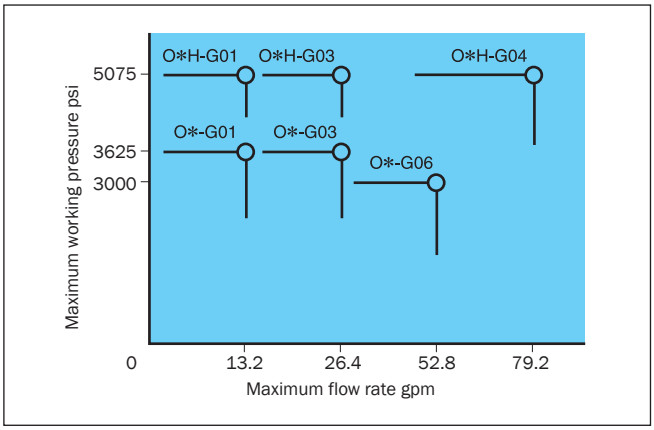
Size	Maximum Working Pressure psi	Maximum Flow Rate gpm	Number of Integration Levels
01	5075	13.2	to 3
03		26.4	
04		79.2	

Dimensions

Size	Height (mm)	Width (mm)	Remarks
01	40	46	Same dimensions as the M25 Series
03	55	70	
04	70	91	

Note: M8 installation bolts only are used for the 03 size.

Modular Valve Product Series



01, 03 Size Specifications

		Valve Model Number	Maximum Operating Power psi	Maximum Flow Rate gpm	Pressure Adjustment Range (Cracking Pressure) psi	ISO Symbol
Solenoid Valves	Solenoid Valves	SA-G**-**-**-31(21) SS-G**-**-**-31(22)				P T B A
Pressure Control Valves	Relief Valves (Balance Type)	ORH-G01-P*-10 -W*- ORH-G03-P*-10 -W*-		G01 10.5 G03 21.1	500 - 3625 1000 - 5075 P: P (→T) port W: AB (→T) port	
	Relief Valves (Direct Type)	ORH-G01-DW*-10 -DA*- -DB*- ORH-G03-DW*-10 -DA*- -DB*-		G01 5.2 G03 7.9	500 - 3625 1000 - 5075 DW: AB (→T) port DA: A (→T) port DB: B (→T) port	
	Reducing Valve	0GH-G01-P*-10 -B*- 0GH-G03-P*-(B)-10 -B*-		G01 10.5 G03 21.1	500 - 3625 P: P port B: B port	
Flow Control Valves	Flow Regulator Valves	OYH-G01-W-Y-10 -A-Y- -B-Y- -W-X- -A-X- -B-X- OYH-G03-W-Y-10 -A-Y- -B-Y- -W-X- -A-X- -B-X-	5075	G01 13.2 G03 26.4	Y: Meter out X: Meter in W: AB port A: A port B: B port	
Direction Control Valves	Check Valves	OCH-G01-P*-10 -T*- OCH-G03-P*-10 -T*-		G01 13.2 G03 26.4	1: 5.8 2: 50.7 3: 72.5 P: P port T: T port	
	Pilot Check Valves	0PH-G01-W*-(F)-10 -A*- -B*- 0PH-G03-W*-(D)-10 -A*- -B*-		G01 13.2 G03 26.4	1: 29 2: 72.5 W: AB port A: A port B: B port D: Direct type (no small valve, G03 only) F: Decomp type (with small valve, G01 only)	

ORH : Relief valve

OGH : Reducing valve

OPH : Pilot check valve