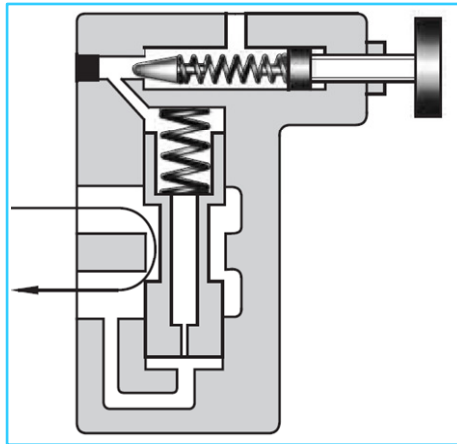
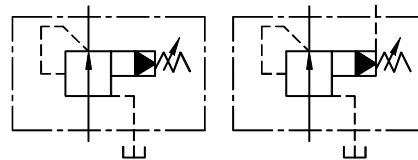


Pressure Reducing Valves

Pressure reducing valves are used to set the pressure of a hydraulic circuit below that of the main circuit. Operation under remote control is also possible by using the remote control port.



Graphic Symbols



Remote control connection

Specifications

Valve Name	Model Numbers		Max. Oper. Pressure Kgf/cm ²	Max. Flow ^{*1}		Drain ^{*2} Flow L/min.	Mass (Approx.)Kg.	
	Threaded Connection	Sub-plate Mounting		Setting Pressure Kgf/cm ²	Max. Flow L/min.		Threaded Connection	Sub-plate Mounting
Pressure Reducing Valve	RT-03-※-2280	RG-03-※-2280	210	7 - 10	40	0.8 - 1.0	4.3	4.5
				10 - 205	50			
	RT-06-※-2280	RG-06-※-2280	210	7 - 10	50	0.8 - 1.1	6.9	6.8
				10 - 15	100			
				15 - 205	125			
	RT-10-※-2280	RG-10-※-2180	210	7 - 10	130	1.2 - 1.5	12.0	11.0
				10 - 15	180			
				15 - 105	220			
				105 - 205	250			

*1 The max. flow rates are those shown at the primary pressure at 210 Kgf/cm².

*2 The drain flow rates are equal to pilot flow rates when differential pressure between primary and secondary pressure is at 205 Kgf/cm².

Model Number Designation

F-	R	T	-03	-B	-22	80
Special Seals	Series Number	Type of Mounting	Valve Size	Pres.Adj. Range Kg/cm ²	Design Number	Design Standard
F: Special Seals For Phosphate Ester Type Fluids (Omit if not required)	R: Pressure Reducing Valve	T: *1 Threaded Connection	03	B: 7-70 C: 35-140 H: 70-205	22	80
			06			
			10			
		G: Sub-Plate Mounting	03		22	
			06			
			10			

*1 Consult YUKEN for availability.

Attachment

Mounting Bolts

Valve Model Numbers	Socket Head Cap Screw	Qty.	Bolt Kit Model Number
RG-03	M10 x 50Lg.	4	BKRG-03-2280
RG-06		4	
RG-10	M10 x 50Lg.	6	BKRG-10-2180

Sub-plate

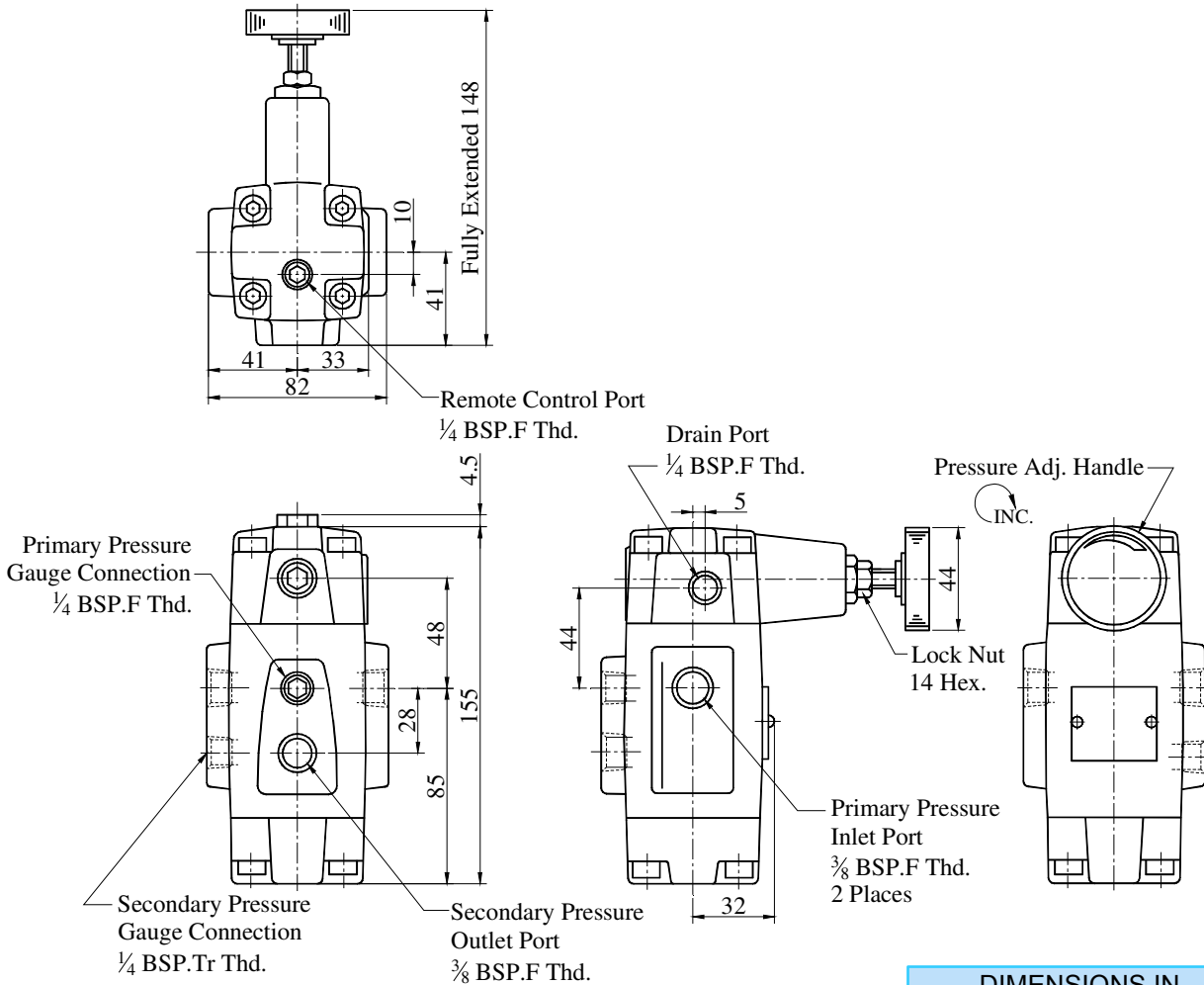
Valve Model Number	Sub – Plate Model Numbers	Thread Size	Mass Kg.
RG-03	HGM-03-2080	3/8 BSP.F	1.6
	HGM-03X-2080	1/2 BSP.F	
RG-06	HGM-06-2080	3/4 BSP.F	2.4
	HGM-06X-2080	1 BSP.F	3.0
RG-10	HGM-10-2080	1-1/4 BSP.F	4.8
	HGM-10X-2080	1-1/2 BSP.F	5.7

- Sub-plates are available. Specify sub-plate model number from the table above. When sub-plates are not used, the mounting surface should have a good machined finish.
- The sub-plates are the same as those for HC type pressure control valves. With the reducing and check valve, the sub-plate is used in position 180° turned (upside down) from the normal position. When mounting the sub-plate, be sure to bring the valve locating pin to the sub-plate pin hole. For HGM 06/06X/10/10X dimensions, see page 287 & 294 in EIC-C-1003.

Instructions

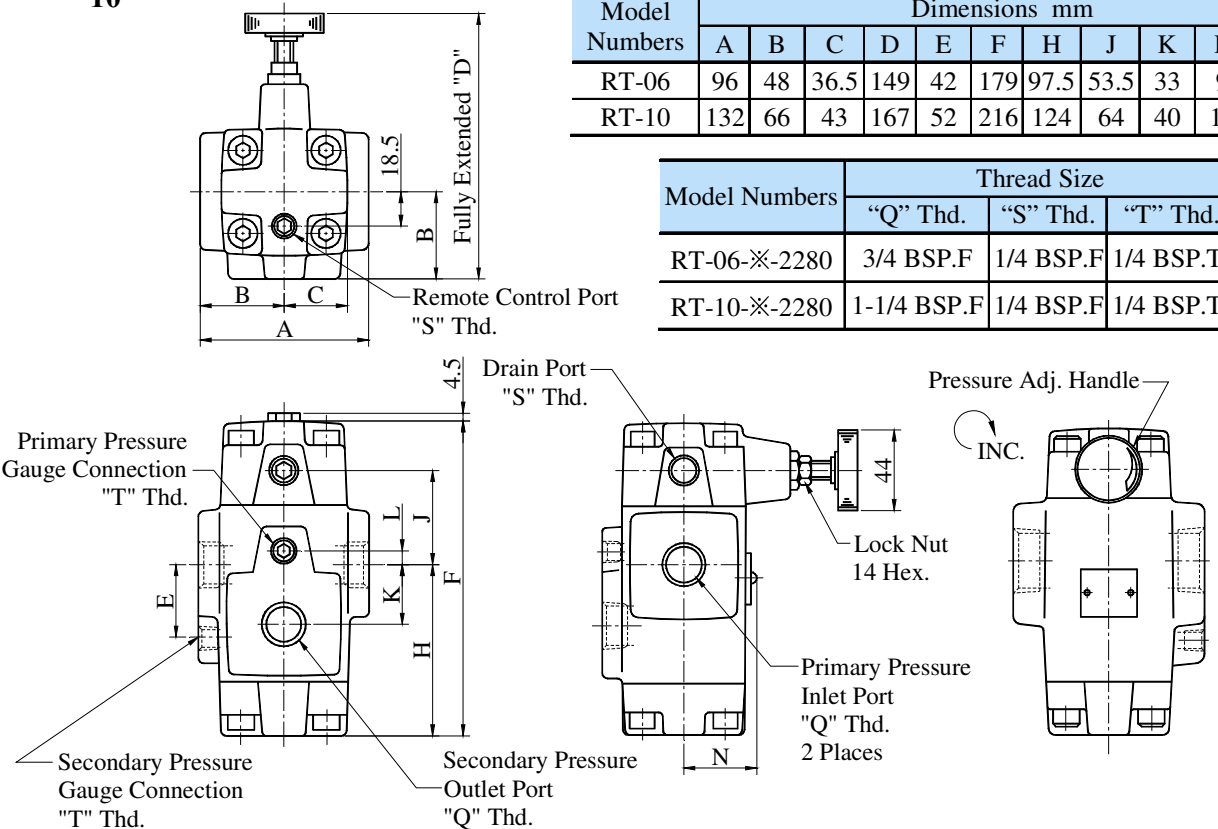
- To adjust the pressure, loosen the lock nut and turn the pressure adjustment handle slowly clockwise for higher pressures and anti-clockwise for lower pressures. After adjustments, do not forget to tighten the lock nut.
- Connect the drain port directly to the tank in which case the pressure at the drain port should be kept at a low back pressure close to the atmospheric pressure.
- In case of “Threaded Connections”, there are two threaded connections type primary pressure ports. They can be connected each other in-line; one as an inlet and the other as an outlet or the valve can be used by plugging one of the pressure ports.

● **RT-03-※-2280**



DIMENSIONS IN MILLIMETRES

● **RT-06-10-※-2280**

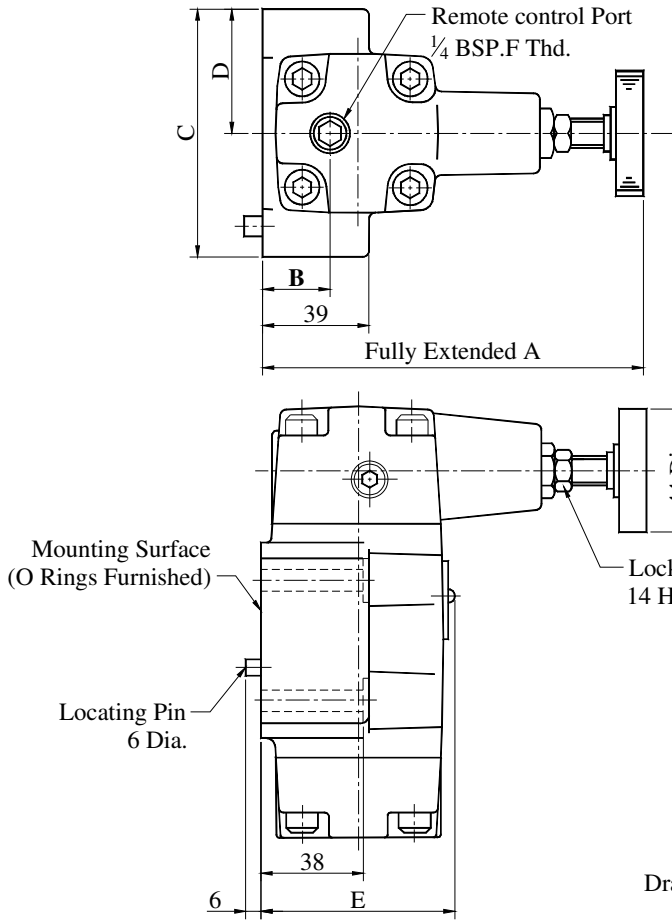


Model Numbers	Dimensions mm										
	A	B	C	D	E	F	H	J	K	L	N
RT-06	96	48	36.5	149	42	179	97.5	53.5	33	9	39
RT-10	132	66	43	167	52	216	124	64	40	12	46

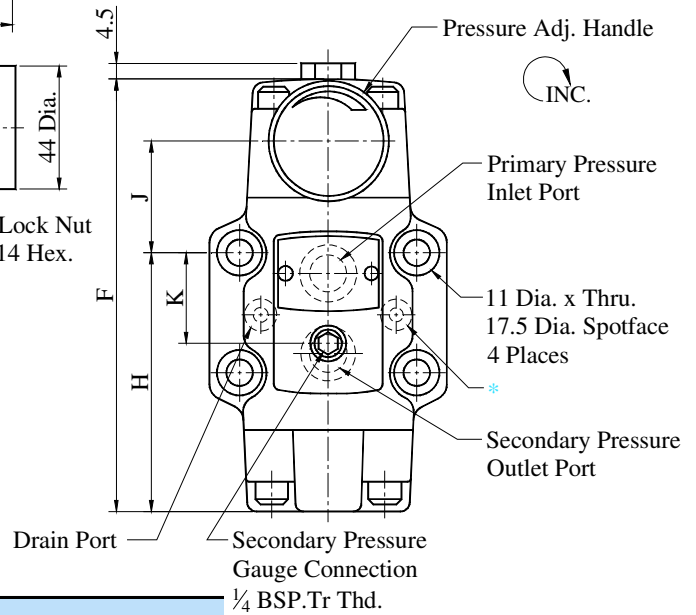
Model Numbers	Thread Size		
	"Q" Thd.	"S" Thd.	"T" Thd.
RT-06-※-2280	3/4 BSP.F	1/4 BSP.F	1/4 BSP.Tr
RT-10-※-2280	1-1/4 BSP.F	1/4 BSP.F	1/4 BSP.Tr

Pressure Reducing Valves

● RG-03-※-2280



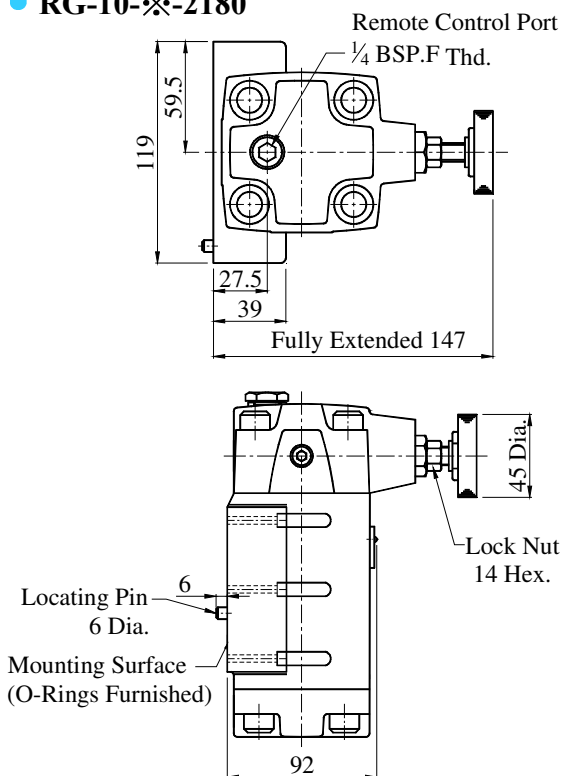
* Port connection is not required for RG models but an O-Ring should be furnished.



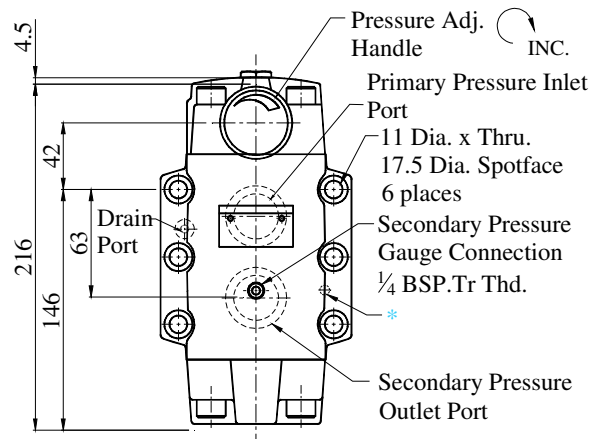
Model Numbers	Dimensions mm								
	A	B	C	D	E	F	H	J	K
RG-03	142	25	89	44.5	67	155.5	92.4	40.6	34.9
RG-06	141	21.5	102	51	79	179	111	40	48

DIMENSIONS IN MILLIMETRES

● RG-10-※-2180

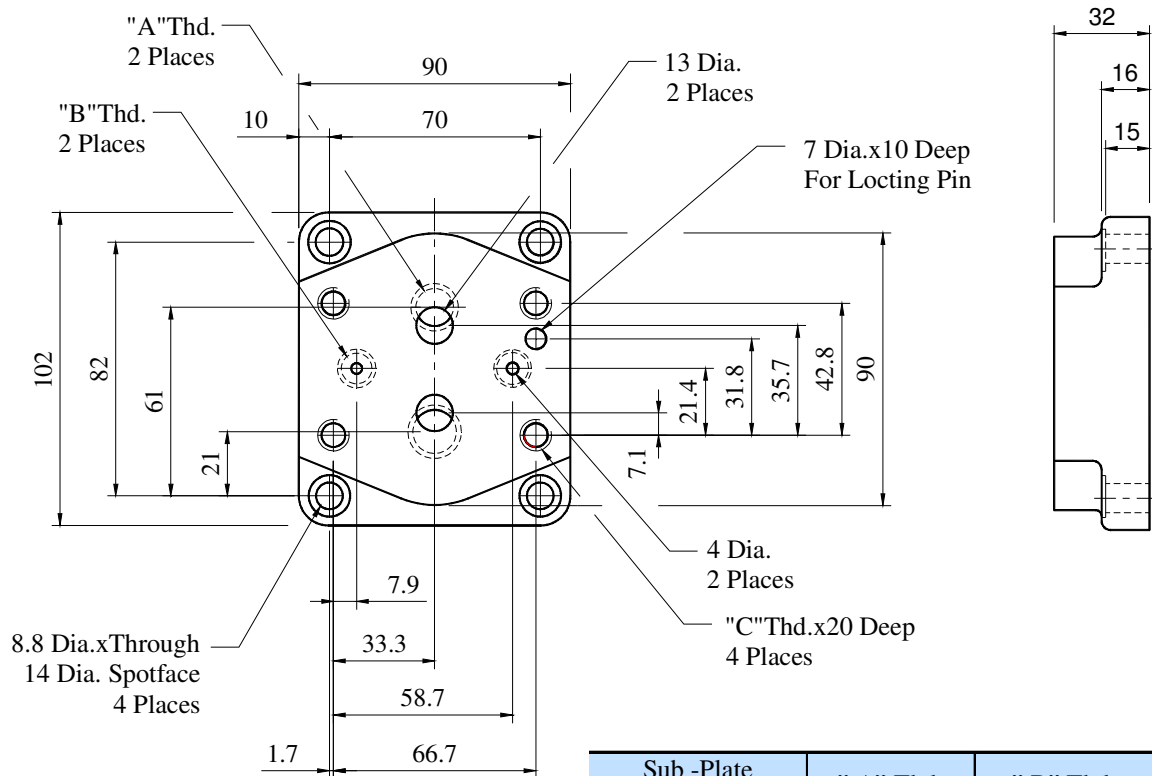


* Port connection is not required for RG models but an O-Ring should be furnished.



- **Sub-plate**
- **HGM-03-2080**
03x

DIMENSIONS IN MILLIMETRES



Sub -Plate Model Numbers	"A" Thd.	"B" Thd.	"C" Thd.
HGM-03-2080	3/8 BSP.F	1/4 BSP.F	M10
HGM-03X-2080	1/2 BSP.F		

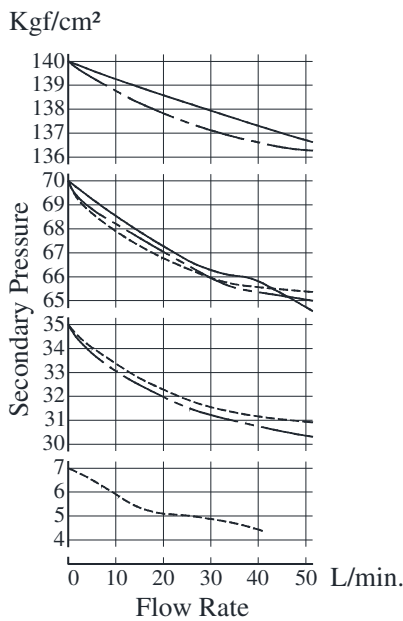
■ **Flow Rate vs. Secondary Pressure**

Primary Pressure : 210 Kgf/cm²
Hydraulic Fluid : Viscosity 35 mm²/s

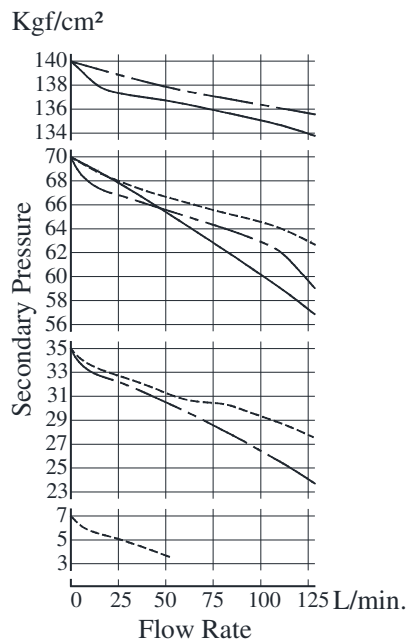
Pressure Adj. Range

- : "B"
- - - - - : "C"
- : "H"

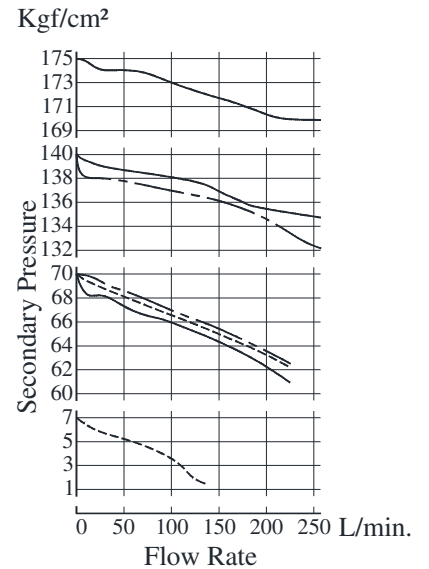
RT/RG-03
RCT/RCG-03



RT/RG-06
RCT/RCG-06



RT/RG-10
RCT/RCG-10



■ Spare Parts List

● List of Seals

Sl. No.	Name of Parts	Part Numbers			Quantity		
		RT RG ⁻⁰³	RT RG ⁻⁰⁶	RT RG ⁻¹⁰	RT-※	RG-※	RG-10
1	O - Ring	SO-NB-P6	SO-NB-P6	SO-NB-P6	4	4	3
2	O - Ring	SO-NA-P9	SO-NA-P9	SO-NA-P9	1	1	1
3	O - Ring	SO-NB-P9	SO-NB-P9	SO-NB-P9	-	2	1
4	O - Ring	SO-NB-P18	SO-NB-P28	SO-NB-P32	-	2	2
5	O - Ring	SO-NB-P22	SO-NB-P28	SO-NB-P36	2	2	2
6	Bonded Seal	SG-FB-1/4	SG-FB-1/4	SG-FB-1/4	1	1	1

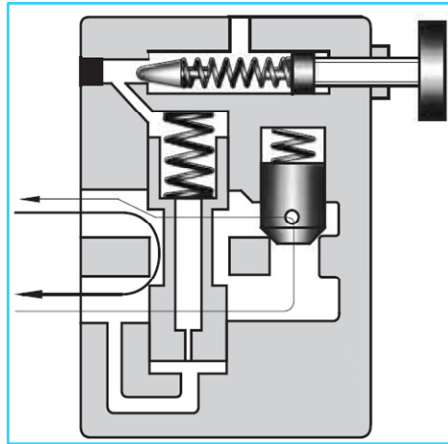
Note: When ordering the seals, please specify the seal kit number from the table below.

● List of Seal Kits

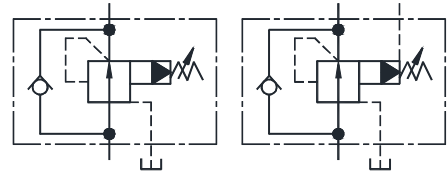
Valve Model Numbers	Seal Kit Numbers
RT-03-※-2280	KS-RT-03-22
RT-06-※-2280	KS-RT-06-22
RT-10-※-2280	KS-RT-10-22
RG-03-※-2280	KS-RG-03-22
RG-06-※-2280	KS-RG-06-22
RG-10-※-2180	KS-RG-10-21

Pressure Reducing and Check Valves

Pressure reducing and check valves are used to set the pressure of a hydraulic circuit below that of the main circuit. They have check valves, which allow a free flow from the secondary side to the primary. Operating under remote control is also possible by using the remote control port.



Graphic Symbols



Remote Control Connection

Specifications

Valve Name	Model Numbers		Max. Operating Pressure Kgf/cm ²	Max. flow ^{*1}		Drain Flow L/min. ^{*2}	Mass Kg.	
	Threaded Connection	Sub-plate Mounting		Set Pressure Kgf/cm ²	Max. Flow L/min.		Threaded Connection	Sub-plate Mounting
Pressure Reducing and Check Valve	RCT-03-※-22	RCG-03-※-22	210	7 - 10	40	0.8 - 1.0	4.8	5.4
				10 - 205	50			
	RCT-06-※-22	RCG-06-※-21	210	7 - 10	50	0.8 - 1.1	7.8	8.1
				10 - 15	100			
				15 - 205	125			
	RCT-10-※-22	RCG-10-※-21	210	7 - 10	130	1.2 - 1.5	13.8	13.8
				10 - 15	180			
				15 - 105	220			
				105 - 205	250			

*1 The max. flow rates are those shown at the primary pressure at 210 Kgf/cm².

*2 The drain flow rates are equal to pilot flow rates when differential pressure between primary and secondary pressure is at 205 Kgf/cm².

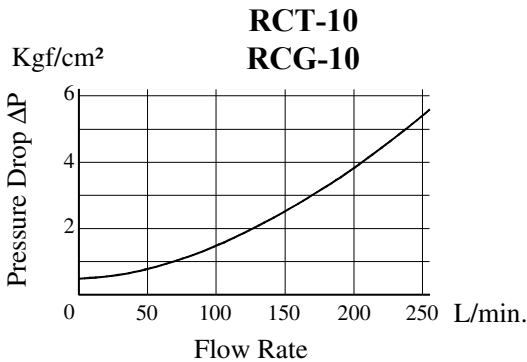
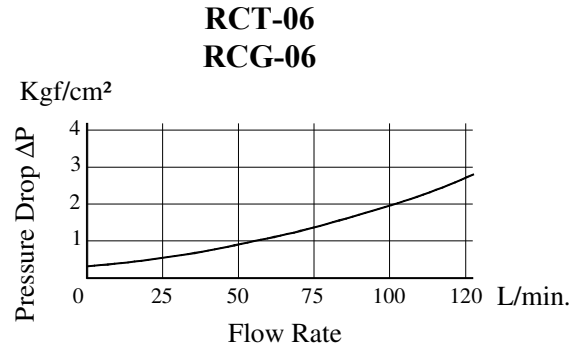
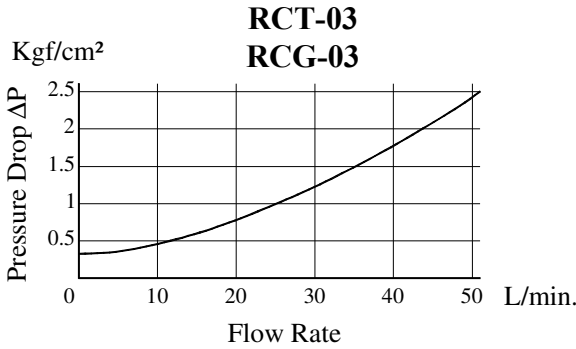
Model Number Designation

F-	R	T	-03	-B	-22	80
Special Seals	Series Number	Type of Mounting	Valve Size	Pres. Adj. Range Kgf/cm ²	Design Number	Design Standard
F: Special Seals For Phosphate Ester Type Fluids (Omit if not required)	RC: Pressure Reducing and Check Valve	T: ^{*1} Threaded Connection	03	B: 7 - 70 C: 35 - 140 H: 70 - 205	22	80
			06		22	
			10		22	
		G: Sub-Plate Mounting	03		22	
			06		21	
			10		21	

*1 Consult YUKEN for availability.

Pressure Drop For Reversed Free Flow

Hydraulic Fluid : Viscosity 35 mm²/s , specify Gravity 0.850



- For any other viscosity, multiply the factors in the table below.

Viscosity	cSt	15	20	30	40	50	60	70	80	90	100
Factor		0.81	0.87	0.96	1.03	1.09	1.14	1.19	1.23	1.27	1.30

- For any other specific gravity (G), the pressure drop ($\Delta P'$) may be obtained from the formula below.

$$\Delta P' = \Delta P (G'/0.850)$$

Flow Rate vs. Secondary Pressure

Refer Page No.302.

Sub-plate

Valve Model Number	Sub-plate Model Numbers	Thread Size	Mass Kg.
RCG-03	HGM-03-2080	3/8 BSP.F	1.6
	HGM-03X-2080	1/2 BSP.F	
RCG-06	HGM-06-2080	3/4 BSP.F	2.4
	HGM-06X-2080	1 BSP.F	3.0
RCG-10	HGM-10-2080	1-1/4 BSP.F	4.8
	HGM-10X-2080	1-1/2 BSP.F	5.7

Attachment

- Mounting Bolts**

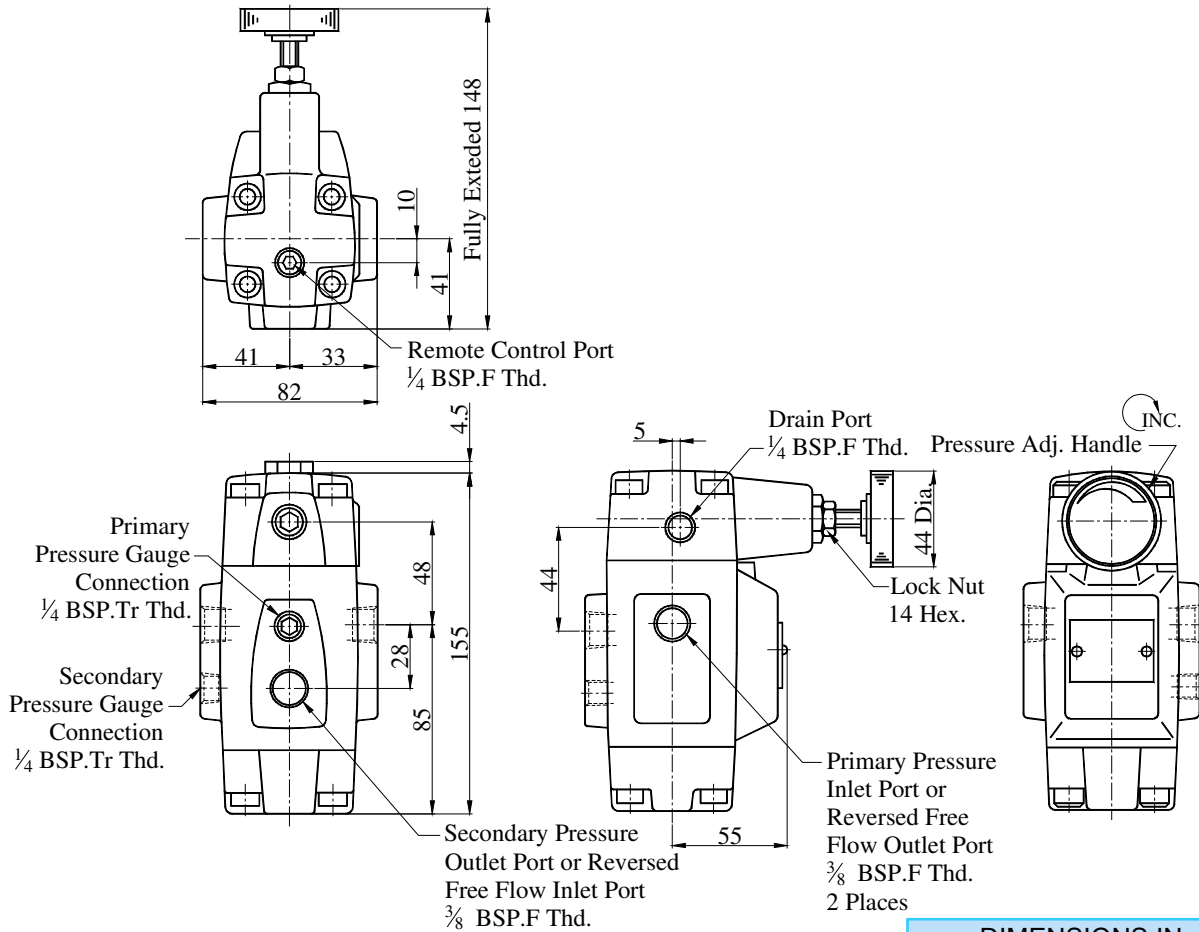
Valve Model Numbers	Socket Head Cap Screw	Qty.	Bolt Kit Model Number
RCG-03	M10 x 70Lg.	4	BKSRG-06-40
RCG-06	M10 x 80Lg.	4	BKHCG-06-20
RCG-10	M10 x 90Lg.	6	BKHCG-10-20

- Sub-plates are available. Specify sub-plate model number from the table above. When sub-plates are not used, the mounting surface should have a good machined finish.
- The sub-plates are the same as those for H and HC type pressure control valves. With the reducing and check valve, the sub-plate is used in position 180° turned (upside down) from the normal position. When mounting the sub-plate, be sure to bring the valve locating pin to the sub-plate pin hole. For HGM 03/03X dimensions see page 5 and for HGM 06/06X/10/10X dimensions, see page 287 & 294 in EIC-C-1003.

Instructions

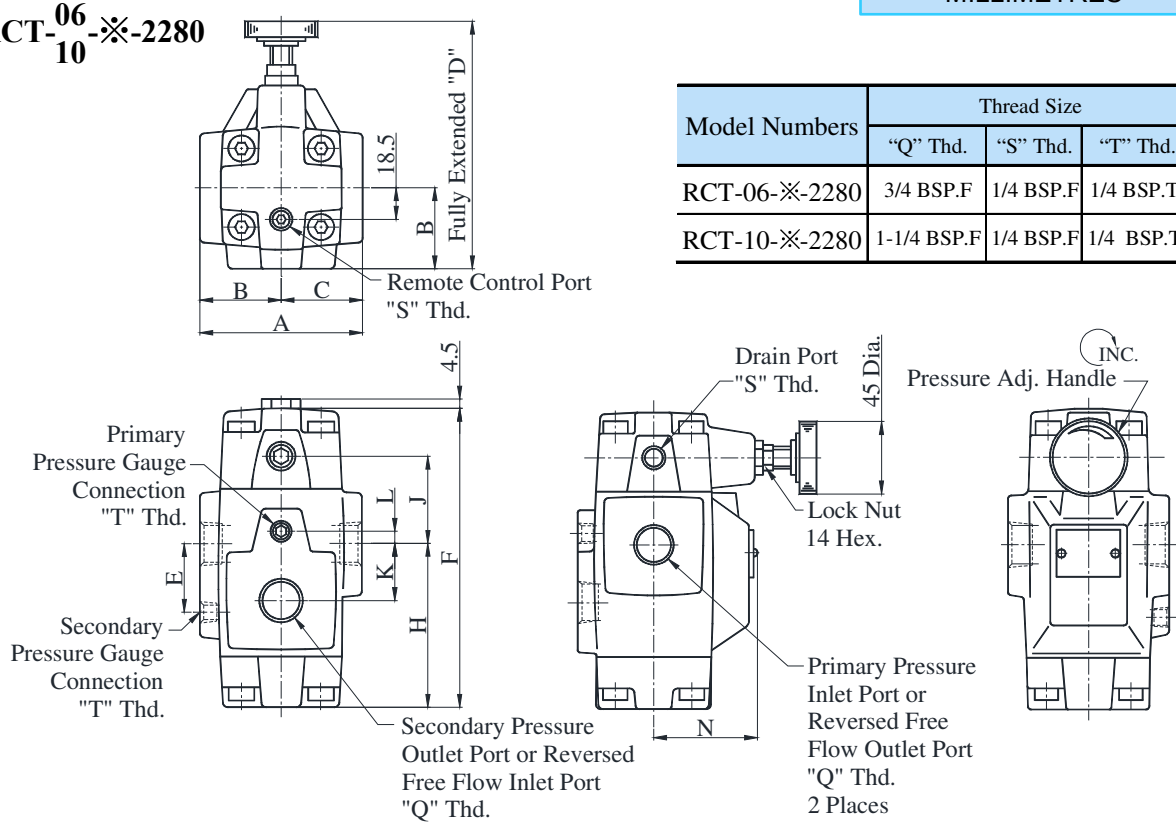
- To adjust the pressure, loosen the lock nut and turn the pressure adjustment handle slowly clockwise for higher pressures and anti-clockwise for lower pressures. After adjustments, do not forget to tighten the lock nut.
- Connect the drain port directly to the tank in which case the pressure at the drain port should be kept at a low back pressure close to the atmospheric pressure.
- In case of “Threaded Connections”, there are two threaded connections type primary pressure ports. They can be connected each other in-line; one as an inlet and the other as an outlet or the valve can be used by plugging one of the pressure ports.

● **RCT-03-※-2280**



DIMENSIONS IN MILLIMETRES

● **RCT-06-10-※-2280**

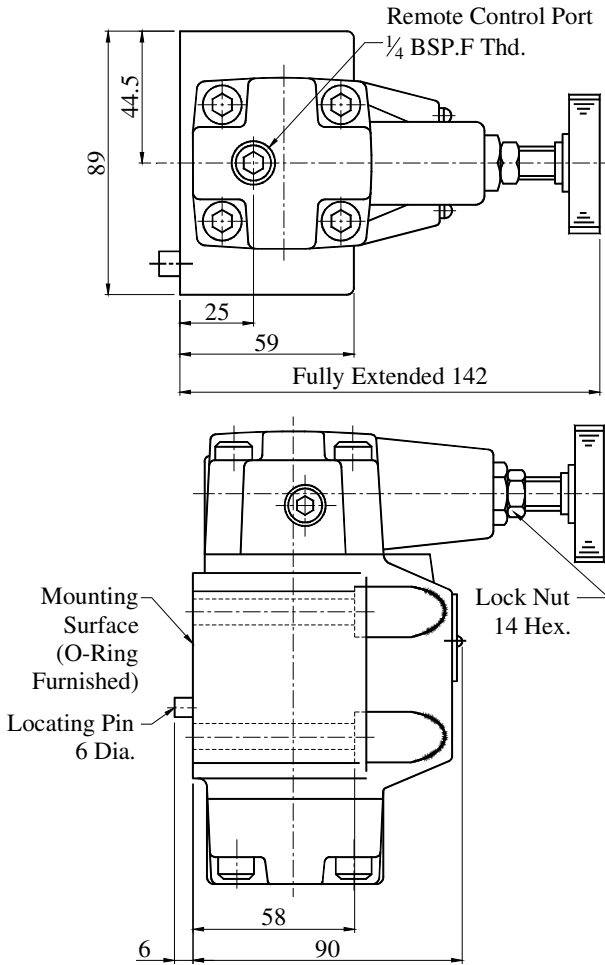


Model Numbers	Thread Size		
	"Q" Thd.	"S" Thd.	"T" Thd.
RCT-06-※-2280	3/4 BSP.F	1/4 BSP.F	1/4 BSP.Tr
RCT-10-※-2280	1-1/4 BSP.F	1/4 BSP.F	1/4 BSP.Tr

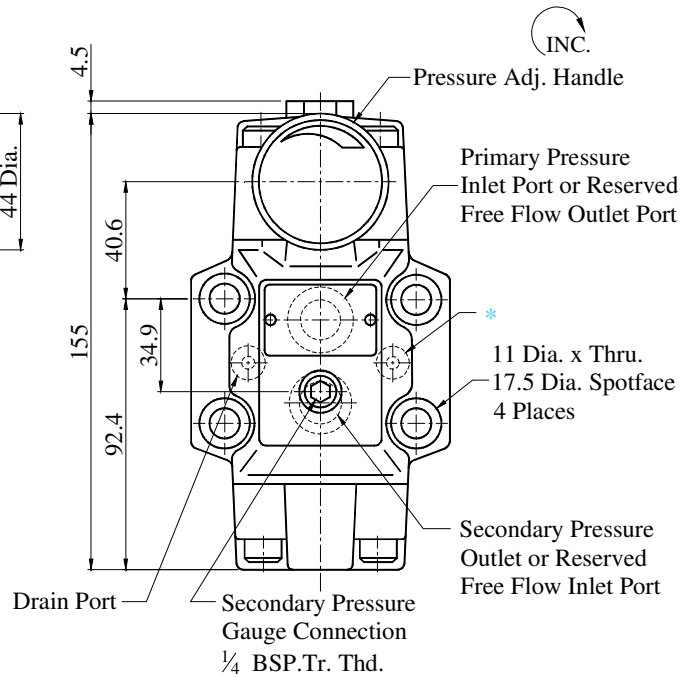
Model Numbers	Dimensions mm										
	A	B	C	D	E	F	H	J	K	L	N
RCT-06	96	48	36.5	149	42	179	97.5	53.5	33	9	68
RCT-10	132	66	43	167	52	216	124	64	40	12	86

Pressure Reducing and Check Valves

● **RCG-03-※-2280**

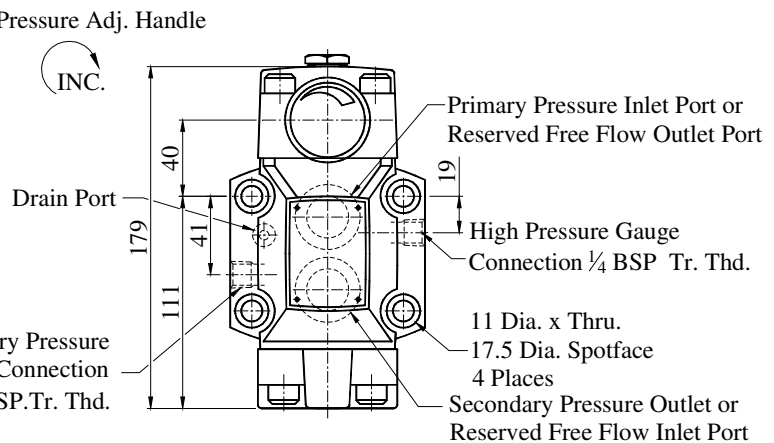
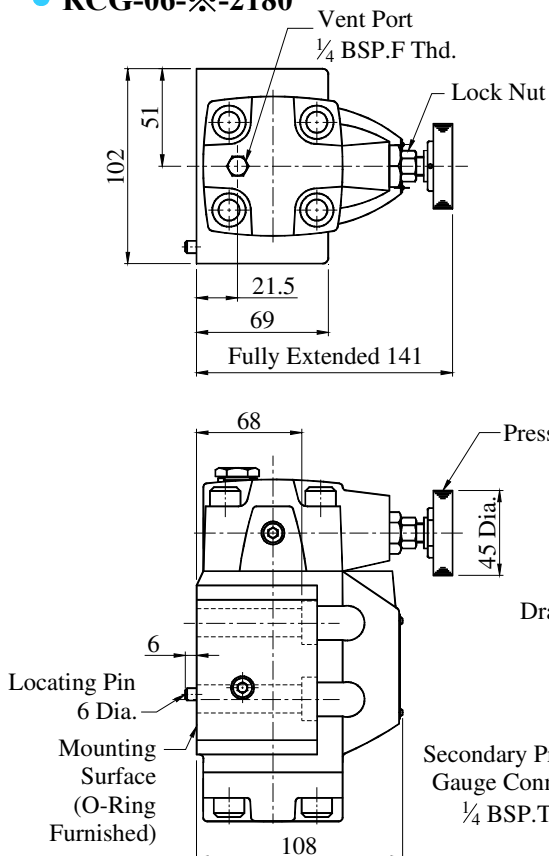


* Port connection is not required for RCG models but an O-Ring should be furnished.

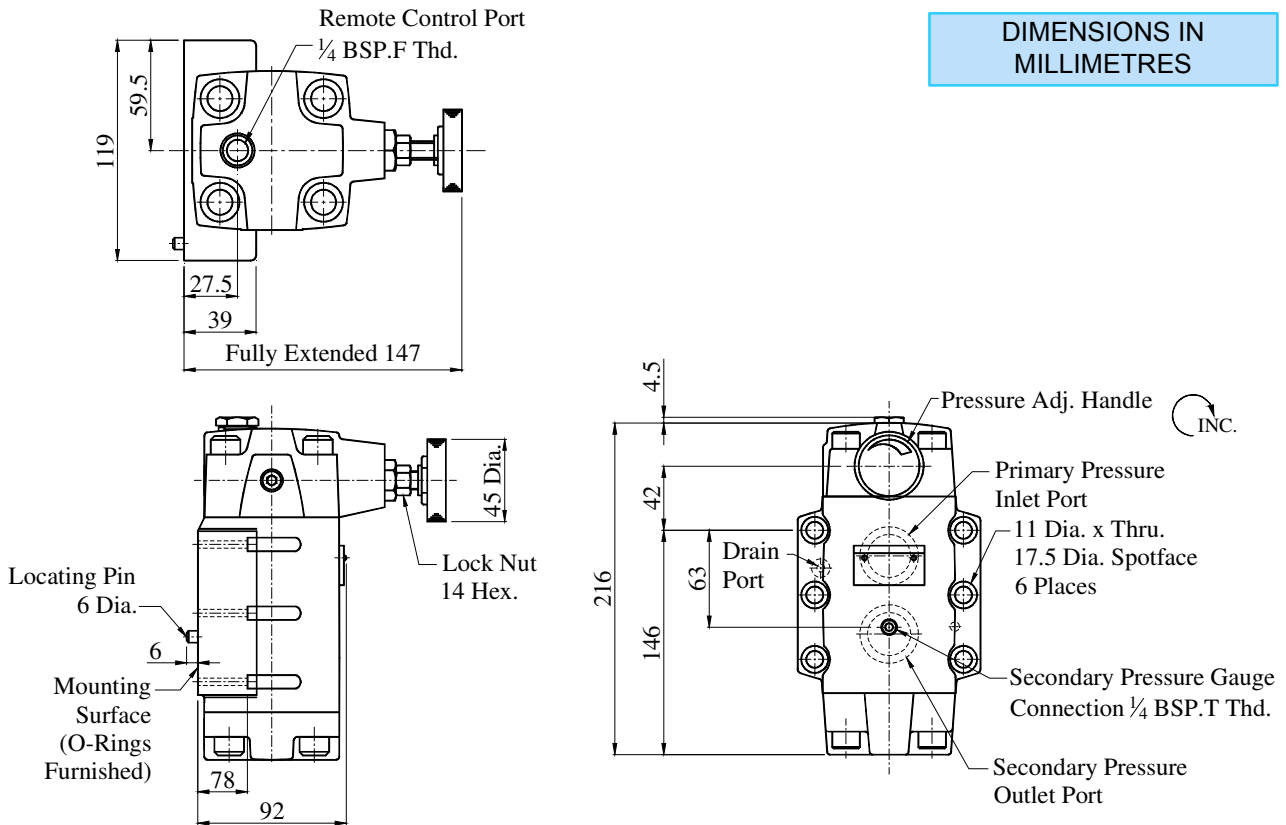


DIMENSIONS IN MILLIMETRES

● **RCG-06-※-2180**



● **RCG-10-※-2180**



DIMENSIONS IN MILLIMETRES

■ **Spare Parts List**

● **List of Seals**

Sl. No.	Name of Parts	Part Numbers			Quantity			
		RCT RCG -03	RCT RCG -06	RCT RCG -10	RCT-※	RCG-※	RCG-06	RCG-10
1	O - Ring	SO-NB-P6	SO-NB-P6	SO-NB-P6	4	4	4	4
2	O - Ring	SO-NA-P9	SO-NA-P9	SO-NA-P9	1	1	1	1
3	O - Ring	SO-NB-P9	SO-NB-P9	SO-NB-P9	-	2	2	1
4	O - Ring	SO-NB-P12	SO-NB-P18	SO-NB-P22A	1	1	1	1
5	O - Ring	SO-NB-P18	SO-NB-P28	SO-NB-P32	-	2	2	2
6	O - Ring	SO-NB-P22		SO-NB-P36	2	2		2
7	O - Ring	-	SO-NB-G30	-	-	-	2	-
8	Bonded Seal	SG-FB-1/4	SG-FB-1/4	SG-FB-1/4	1	1	1	1

Note: When ordering the seals, please specify the seal kit number from the table below.

● **List of Seals Kits**

Valve Model Numbers	Seal Kit Numbers
RCT-03-※-2280	KS-RCT-03-22
RCT-06-※-2280	KS-RCT-06-22
RCT-10-※-2280	KS-RCT-10-22
RCG-03-※-2280	KS-RCG-03-22
RCG-06-※-2180	KS-RCG-06-21
RCG-10-※-2180	KS-RCG-10-21