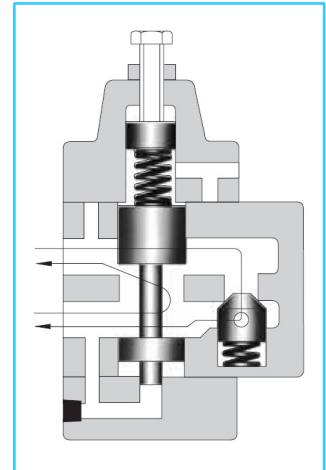


HC Type Pressure Control Valves

These valves are hydraulically damped, direct operated, pressure control valves which can be actuated by internal or external pilot pressure. They are available with integral check valves for use when reverse free flow from the secondary port to the primary port is desired. There are various types of valve including sequence counterbalance valves, all of which are operated by a pressure rise in the circuit, sensed either internally or remotely.



Specifications

Model Numbers		Max. Operating Pressure Kgf/cm ²	Max. Flow L/min.	Mass (Approx.) Kg.	
Threaded Connection	Sub-Plate Mounting			Threaded Connection	Sub-Plate Mounting
HCT-03-※※-※-2280	—	210	50	4.1	4.8
HCT-06-※※-※-2180	HCG-06-※-※-※-21		125	7.1	7.4
HCT-10-※※-※-2280	HCG-10-※-※-※-21		250	13.8	13.8

For Check Valve pressure drops, see free flow pressure drop characteristics.

Model Number Designation

F-	HC	T	-03	-C	3	-P	-21	80
Special Seals	Series Number	Type of Mounting	Valve Size	Pres. Adj. Range Kgf/cm ²	Valve Type ^{*1}	With Auxiliary Pilot Pressure	Design Number	Design Standards
F: Special Seals for Phosphate Ester Type Fluids. (Omit if not required)	HC: HC Type Pressure Control Valves	T: ^{*2} Threaded Connection	03	L: 2.5~4.5 M: 4.5~9 N: 9~18 A: 18~35 B: 35~70 C: 70~140	1 ^{*3} 2 3 4	P: ^{*4} With Auxiliary Pilot Pressure	22	80
			06				21	
			10				22	
		G: Sub-plate Mounting	—				—	—
			06				21	
			10				21	

*1 For details of valves types, see the following page.

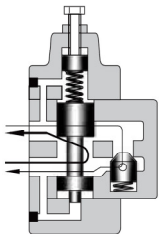
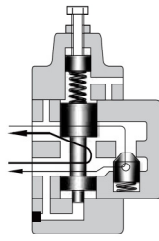
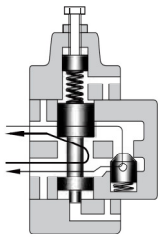
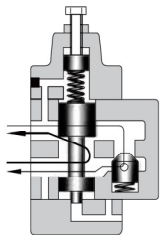
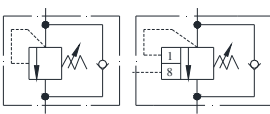
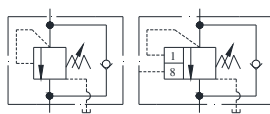
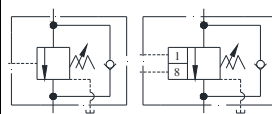
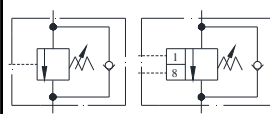
*2 Consult YUKEN for availability.

*3 Type 1 is only possible for pressure adjustment ranges L and M.

*4 Models with auxiliary pilot are used where valves must be operated under a lower external pilot pressure than the adjusted pressure (types N, A and B: about 1/8 of adjusted pressure; type C: about 1/16). This does not apply to pressure adjustment ranges L and M, and valve type 1.

Valve Types

HC Type

Valve Type	Type 1: Counterbalance Valve	Type 2: Sequence and Check Valve	Type 3: Sequence and Check Valve	Type 4: Counterbalance Valve
Pilot-Drain Type	Internal Pilot-Internal Drain	Internal Pilot-External Drain	External Pilot-External Drain	External Pilot-Internal Drain
Operations				
Graphic Symbols	 With auxiliary pilot port	 With auxiliary pilot port	 With auxiliary pilot port	 With auxiliary pilot port
Description	Used to prevent gravitational falls by generating a pressure on the actuator return side. If Primary pressure exceeds the pressure setting, fluid is released to keep the pressure constant.	Used to control the operating sequence of two or more actuators. If primary pressure exceeds the pressure setting effective fluid is delivered to the secondary side. Reversed flow is free by check valve.	Used for same purpose as for type 2. Operated by external pilot pressure irrespective of primary pressure. Reversed flow is free by check valve.	Used for the same purpose as for type 1. Operated by External pilot pressure irrespective of primary pressure. Reversed flow is free by check valve.

C
HC-Type Pressure Control Valves

Instructions

- To adjust the pressure, loosen the lock nut and turn the pressure adjustment screw slowly clockwise to increase pressure or anti-clockwise to decrease pressures. After adjustments, do not forget to tighten the lock nut.
- Connect the secondary side primary pressure ports of types 1 and 4 (internal drain) and the drain ports of types 2 and 3 (external drain) directly to the tanks with a back pressure close to the atmospheric pressure.
- There are two threaded connection primary pressure ports with HCT type. They can be connected each other in-line; one as inlet and the other as an outlet or the valve can be used by plugging one of the pressure ports.

Attachment

Mounting Bolts

Valve Model Numbers	Socket Head Cap Screw	Qty.	Bolt Kit Ordering Code
HCG-06	M10 x 80Lg.	4	BKHCG-06-20
HCG-10	M10 x 90Lg.	6	BKHCG-10-20

Sub-plate

Valve Model Numbers	Sub-Plate Model Numbers	Thread Size	Mass Kg.
HCG-06-※※	HGM-06-2080	3/4 BSP.F	2.4
	HGM-06X-2080	1 BSP.F	3.0
HCG-06-※※-P	HGM-06-P-2080	3/4 BSP.F	2.4
	HGM-06X-P-2080	1 BSP.F	3.0
HCG-10-※※	HGM-10-2080	1-1/4 BSP.F	4.8
	HGM-10X-2080	1-1/2 BSP.F	5.7
HCG-10-※※-P	HGM-10-P-2080	1-1/4 BSP.F	4.8
	HGM-10X-P-2080	1-1/2 BSP.F	5.7

- Sub-Plate are available. Specify the sub-plate model from the table above. When sub-plate are not used, the mounting surface should have a good machined finish.

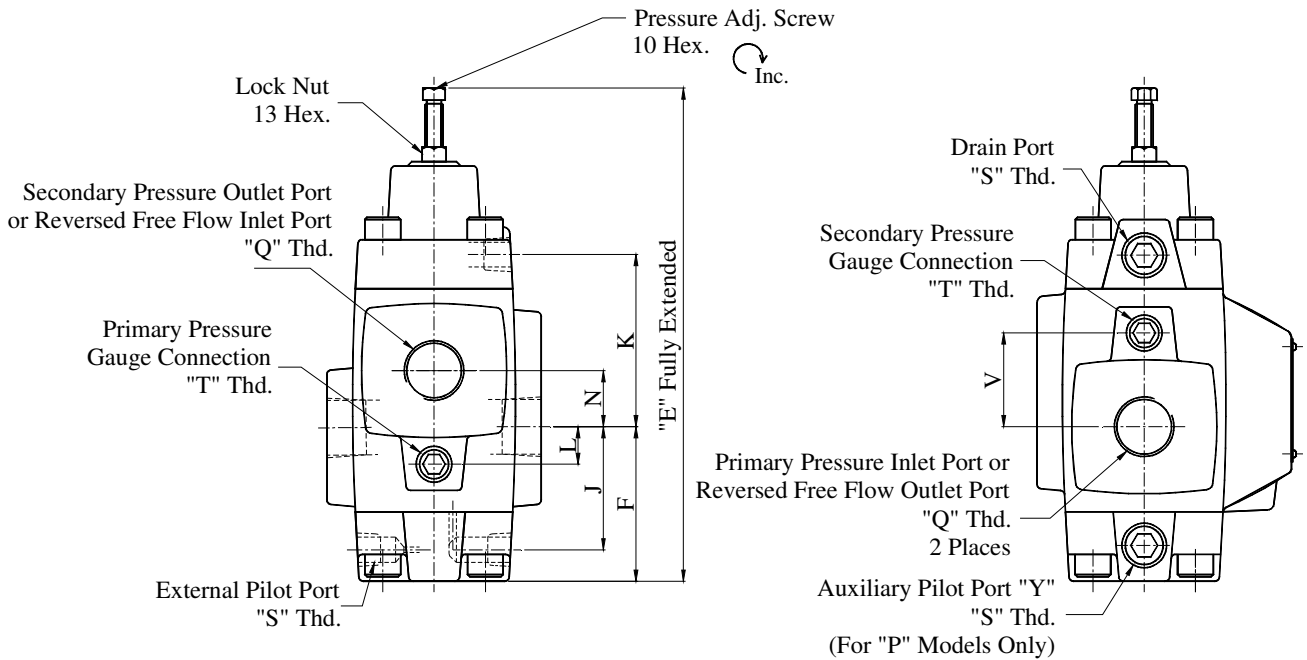
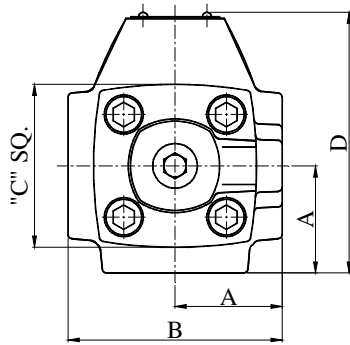
* Sub-Plates are same as applicable to HG-10-※※-※-10 valves. For dimensions refer page no. 287.

● **HCT-03,10-※※-※-2280**

Type 3: Sequence and Check Valve
(External Pilot, External Drain)

DIMENSIONS IN MILLIMETRES

Model Numbers	Thread Size		
	"Q" Thd.	"S" Thd.	"T" Thd.
HCT-03	3/8 BSP.F	1/4	1/4
HCT-10	1-1/4 BSP.F	BSP.F	BSP.Tr

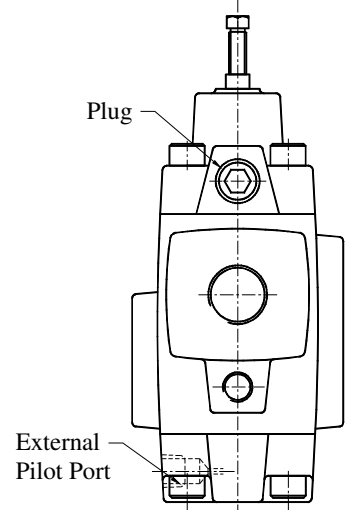
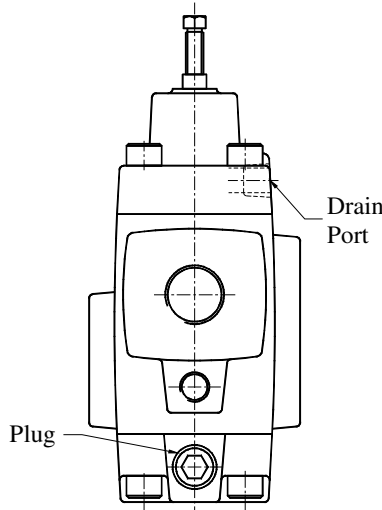
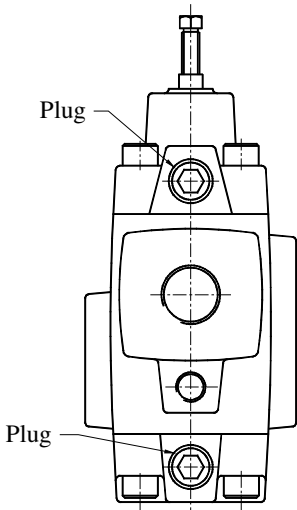


Model Numbers	Dimensions mm										
	A	B	C	D	E	F	J	K	L	N	V
HCT-03	41	82	60	96	191	57	43	70	0	28	28
HCT-10	66	132	86	152	272	84	66	98	12	40	52

Type 1: Counterbalance Valve
(Internal Pilot, Internal Drain)

Type 2: Sequence and Check Valve
(Internal Pilot, External Drain)

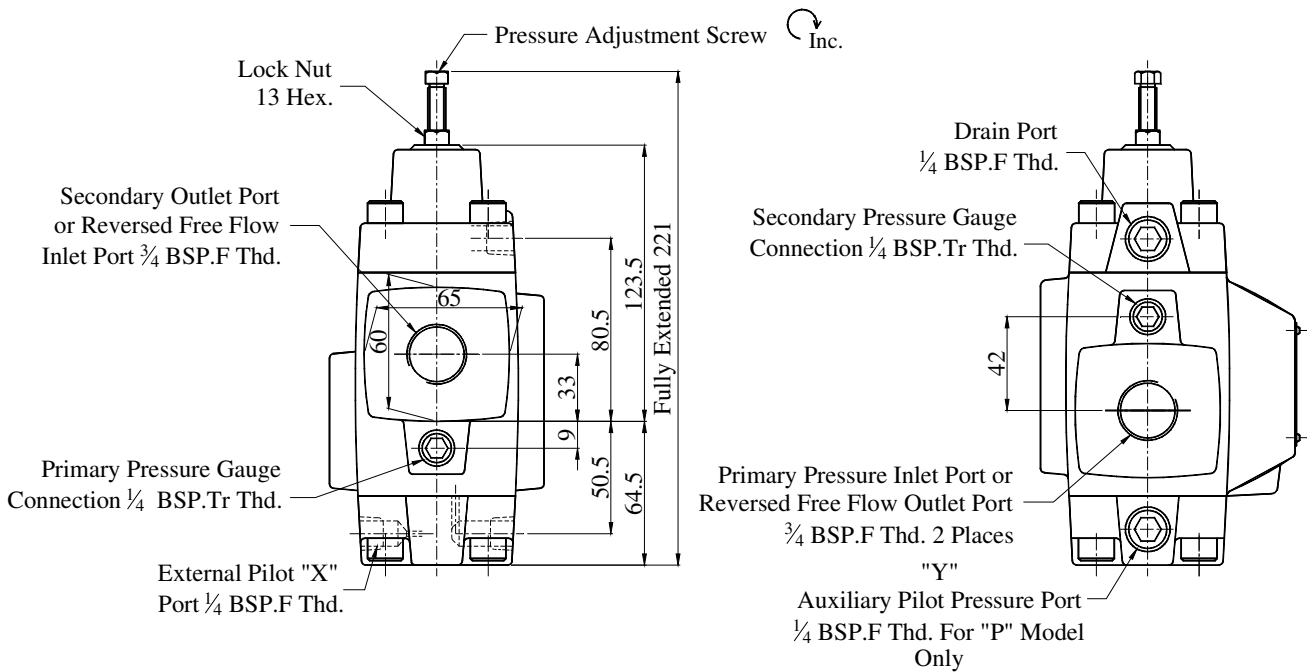
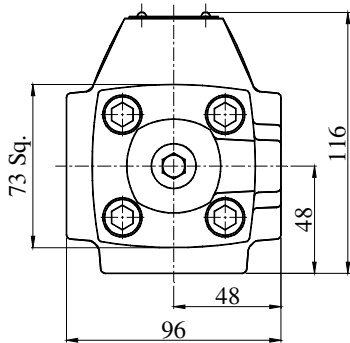
Type 4: Counterbalance Valve
(External Pilot, Internal Drain)



● **HCT-06-※※-※-2180**

DIMENSIONS IN MILLIMETRES

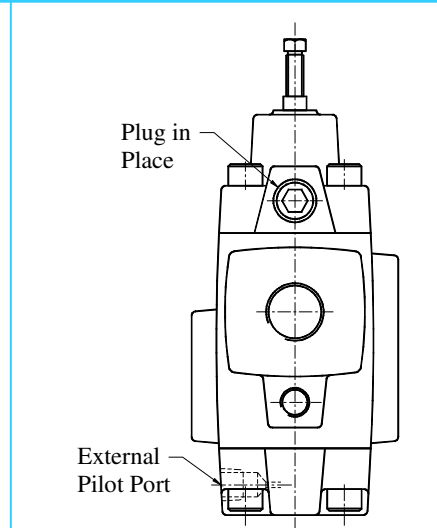
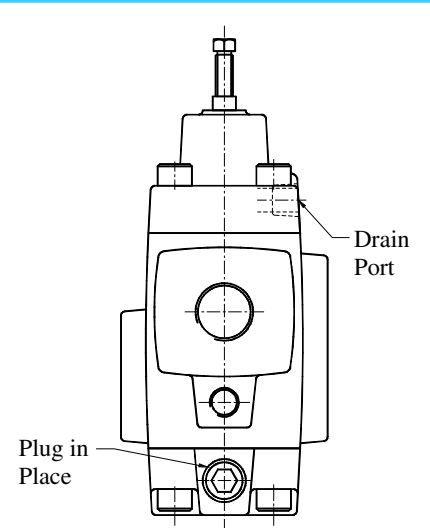
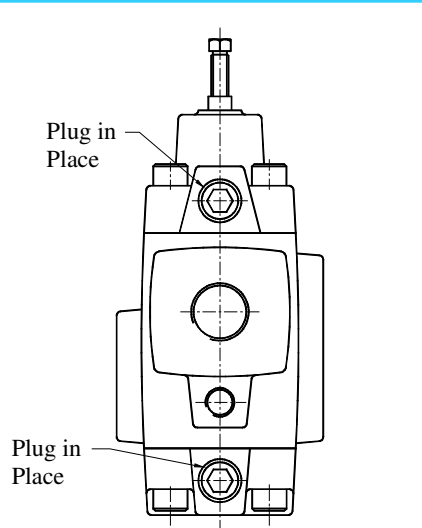
Type 3: Sequence and Check Valve
(External Pilot, External Drain)



Type 1: Counterbalance Valve
(Internal Pilot, Internal Drain)

Type 2: Sequence and Check Valve
(Internal Pilot, External Drain)

Type 4: Counterbalance Valve
(External Pilot, Internal Drain)

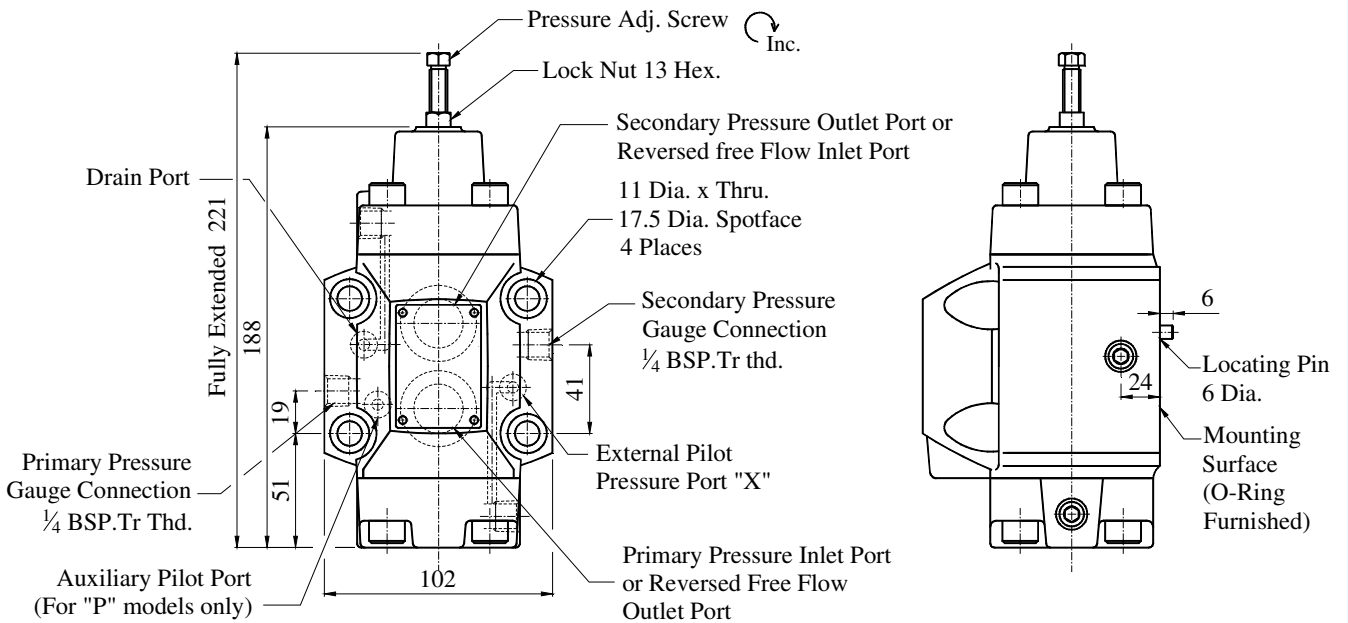
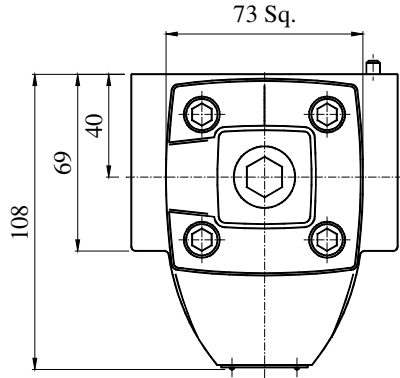


● **HCG-06-※※-※-21**

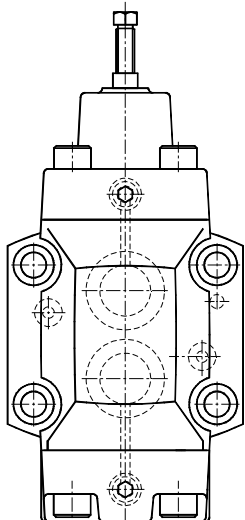
Type 3: Sequence and Check Valve
(External Pilot, External Drain)

Mounting Surface
HCG-06: ISO 5781-AH-08-2-A

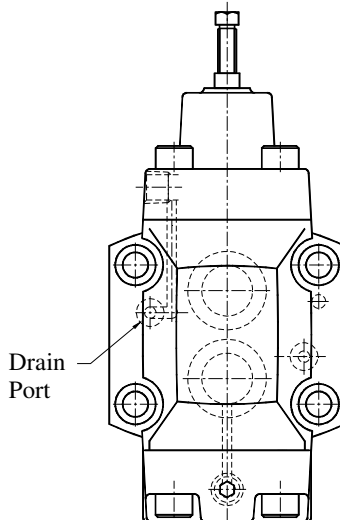
**DIMENSIONS IN
MILLIMETRES**



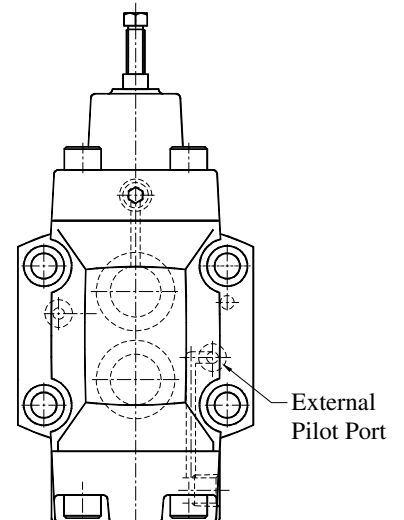
Type 1: Counterbalance Valve
(Internal Pilot, Internal Drain)



Type 2: Sequence and Check Valve
(Internal Pilot, External Drain)



Type 4: Counterbalance Valve
(External Pilot, Internal Drain)



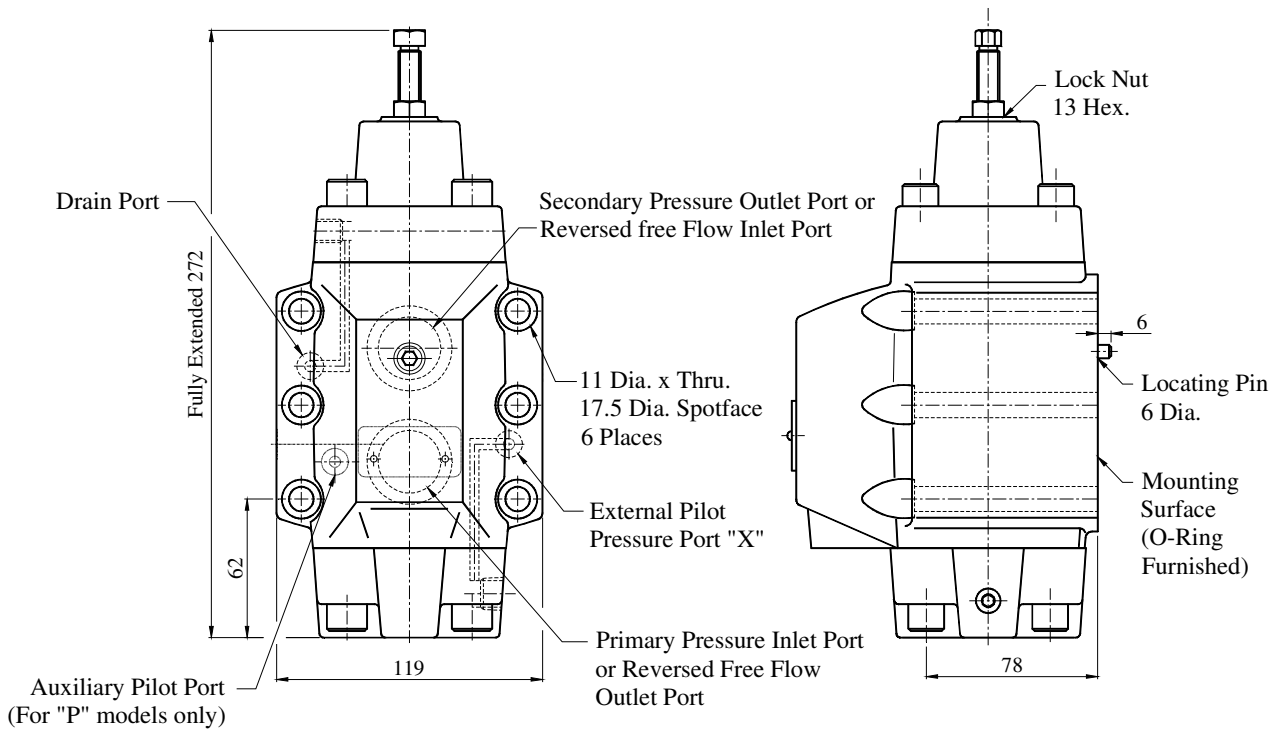
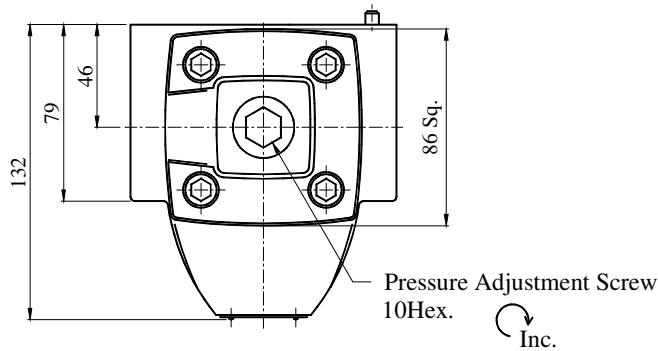
HC-Type Pressure control Valves

● **HCG-10-※※※-※-21**

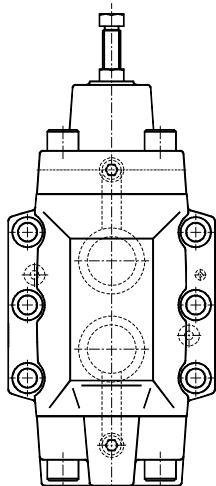
Mounting Surface
ISO 5781-AJ-10-2-A

DIMENSIONS IN
MILLIMETRES

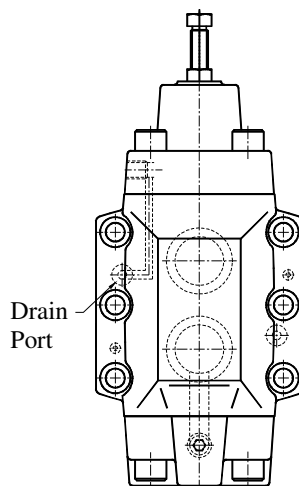
Type 3: Sequence and Check Valve
(External Pilot, External Drain)



Type 1: Counterbalance Valve
(Internal Pilot, Internal Drain)



Type 2: Sequence and Check Valve
(Internal Pilot, External Drain)



Type 4: Counterbalance Valve
(External Pilot, Internal Drain)

