

HYDRAULIC PISTON PUMPS PQ SERIES



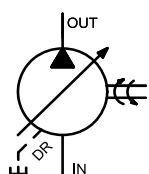
Working pressure: up to 250 bar
Peak pressure: up to 280 bar
Displacements: from 8cc to 70cc

AXIAL PISTON PUMP

PQ SERIES



1. PQ Series pump, new design for changeable angle of swash plate, wide applications.
2. Special design, low noise level during full pressure time.
3. Modular control, easy to design system, advantages are: power saving, small size, low cost.
4. Low power consuming, low oil temperature rising, suitable application for assembling small power units.



nominal pressure: 250bar
max. pressure: 280 bar

Specifications

Size	Model	Displacement at (7 bar) 100 PSI						Pressure Adj.	Speed		Weight
		cm³/rev	ln³/rev	1500 RPM LPM U.S. GPM		1800 RPM LPM U.S. GPM			kgf/cm²	Max. RPM	
1	PQ 8	8.0	0.48	12.0	3.17	14.4	3.8	1: 8~70 2: 15~140 3: 20~210 4: 20~250	1800	500	13 (28.6)
	PQ 10	10.0	0.61	15.0	3.90	18.0	4.76				13 (28.6)
	PQ 15	15.0	0.90	22.5	5.78	27.0	7.05				13 (28.6)
	PQ 18	17.8	1.09	26.7	7.05	32.0	8.45				13 (28.6)
2	PQ 23	23.0	1.40	35.4	9.11	41.4	10.94				22 (48.4)
	PQ 25	25.0	1.52	37.5	9.66	45.0	11.60				22 (48.4)
3	PQ 38	37.8	2.31	56.7	14.98	68.0	17.96				26 (57.2)
	PQ 42	42.0	2.56	63.0	16.23	76.0	19.58				26 (57.2)
4	PQ 50	51.5	3.14	77.2	20.37	92.7	24.48	1: 8~70 2: 15~140 3: 20~210			56 (123.2)
	PQ 70	69.7	4.25	104.5	27.6	125.4	33.10				56 (123.2)

1. Install outlet on top, the pipe pressure needs less than 2bar.
2. Using at max. pressure, please undre 6 sec for per-cycle time.
3. Hydraulic oil clean, please following instruction manual.
4. HYDRAUT supply combinable pumps with different series, standard with Metric / SAE size.

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TYPE CODE FOR STANDARD PROGRAM

PQ	15	A	3	R			-							
1	2	3	4	5	6	7		8	9	10	11	12	13	14
Series	Size and displacement	Control device	Pressure adjusting	Rotation	Direction of pipe connections	Shaft type		Voltage	Threads type	Thru drive & 2nd pump	Special spec.	Mounting	Seals	Design No.

Series

1	Axial piston pump variable displacement high pressure version	nominal pressure : 250 bar max. pressure : 280 bar	PQ
		version rear threaded port	PQR

2	Code		8	10	15	18	23	25	38	42	50	70
	Size						2		3		4	
	Displacement	cm ³ / rev	8	10	15	18	23.0	25.0	37.8	42.0	51.5	69.7
		In ³ / rev	0.48	0.61	0.90	1.1	1.40	1.52	2.31	2.56	3.14	4.25

Control device

	Standard pressure control			A	※
	Remote pressure control			G	
3	Load-sensing control	Pressure			HL ☐
		☐ A	Low : 7 bar		
		☐ B	Mid : 14 bar		
		☐ C	High : 21 bar		
		Muti-stage flow & Singe-stage pressure control (with cylinder)		B	
		2-stage pressure & Flow control		C	
	2-stage pressure & Flow control + Remote			CG	
	2-stage pressure & Flow control + Low tension unloading			CR	
	Low tension unloading + Pressure control			D	
	Low tension unloading + Pressure control + Remote			DG	
	Electric 2-stage pressure control			E	
	Electric 2-stage pressure control + Remote			EG	
	Electric 2-stage pressure control & Flow control			F	
	Electric 2-stage pressure control & Flow control + Remote			FG	
	Remote pressure compensator with NG6 interface			GM	
	Remote pressure compensator + Proportional pressure valve			GJ	
	Remote pressure compensator + Electrical unloading			GR	
	Remote pressure compensator + 2-stage pressure control			GB	
	Remote pressure compensator + Electrical unloading + 2-stage pressure control			GC	
	Load-sensing compensator + Proportional flow valve + Relief valve	Pressure			HQ ☐
		☐ A	Low : 7 bar		
		☐ B	Mid : 14 bar		
		☐ C	High : 21 bar		
		Pressure			
		☐ A	Low : 7 bar		HK ☐
	Load-sensing compensator + Proportional pressure valve + Proportional flow valve	☐ B	Mid : 14 bar		
		☐ C	High : 21 bar		

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Pressure adjusting

4	8~70 bar (0.8~6.9 Mpa)	1
	15~140 bar (1.5~13.7 Mpa)	2
	20~210 bar (2.0~20.6 Mpa)	3
	20~250 bar (2.0~24.5 Mpa)	4

Rotation

5	 Clockwise	R
	 Counter clockwise	L

Direction of pipe connections

		8	10	15	18	23	25	38	42	50	70	
6	None: Side port (Flange)	■	■	■	■	■	■	■	■	■	■	※
	Rear port (Flange)	■	■	■	■	■	■	■	■	■	■	B
	Side port + Rear port (Flange)	■	■	■	■	■	■	■	■	-	-	B2

B2 valid only for pumps from 23 to 70 cc/rev

Shaft type

	Displacement	Code
7	None	Key:
	PQ15, PQ18	Splind shaft: S 13T 16/32 DP S1 9T 16/32 DP S2 11T 16/32 DP
	PQ23, PQ25 PQ38, PQ42	Splind shaft: S 13T 16/32 DP S1 15T 16/32 DP
	PQ50, PQ70	Splind shaft: S 14T 12/24 DP

Voltage

8	None	
	AC100V (50/60HZ)	A
	AC110V (60HZ)	B
	AC220V (50/60HZ)	C
	AC220V (60HZ)	D
	DC 12V	E
	DC 24V	F ※

■ = available - = on request ※ = standard type △ = custom made

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Threads

9	PT (RC)	■	■	■	■	■	■	■	■	■	■	■	10	
	BSPP (G)	■	■	■	■	■	■	■	■	■	■	■	40	※
	NPT	△	△	△	△	△	△	△	△	△	△	△	50	
	UNF (SAE o-ring)	■	■	■	■	■	■	■	■	■	■	■	60	※
	Metric	△	△	△	△	△	△	△	△	△	△	△	70	

Thru drive & 2nd pump

10	without Thru drive		※
	Ø 50.8 mm SAE AA	C	
	Ø 82.55 mm SAE A	D	
	Ø 101.6 mm SAE B	E	
	Ø 127 mm	F	
	Ø 63 mm	I	
	Ø 80 mm	J	
	Ø 100 mm	K	
	Ø 125 mm	L	

(Please contact HYDRAUT, if other size required.)

Special specification

11	Standard type	X	※
	Low Pressure type	X1	
	Deahead pressure relief type	Z	

Mounting

12	Only for PQ15, PQ18 can select "A", other displacement only select "None: Standard"	None : Standard		※
		SAE A 2 bolt	A	

Seals

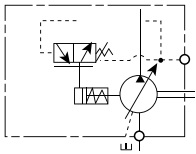
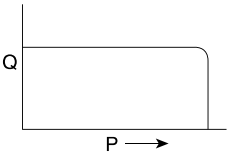
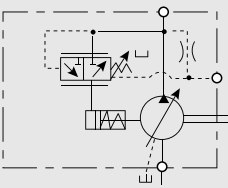
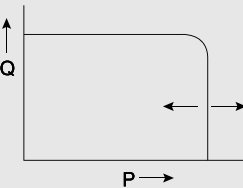
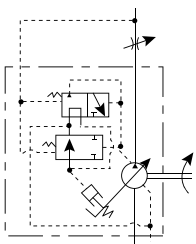
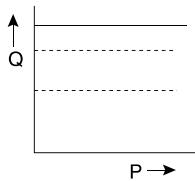
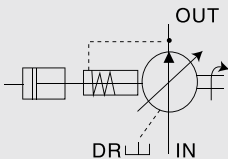
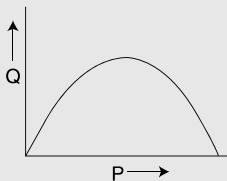
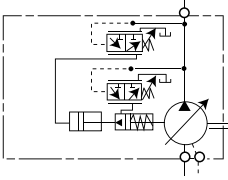
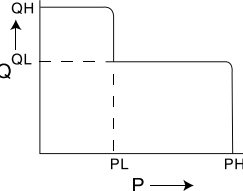
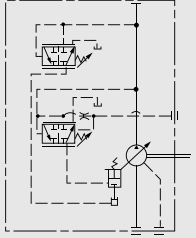
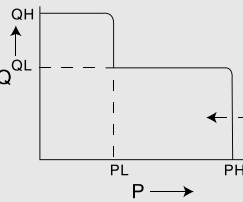
13	NBR		※
	VITON	A	

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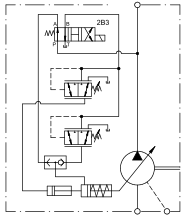
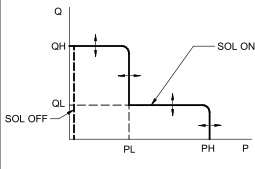
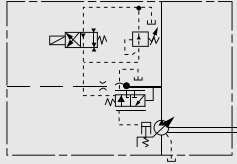
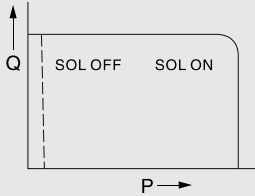
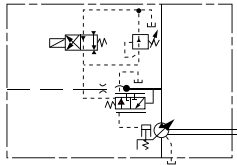
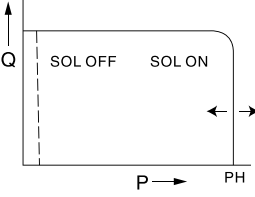
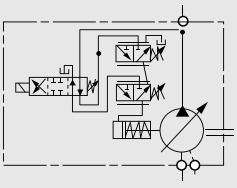
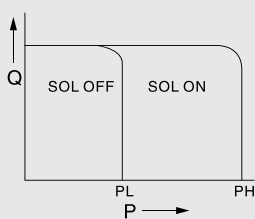
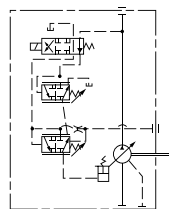
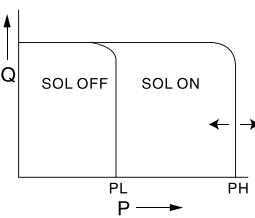
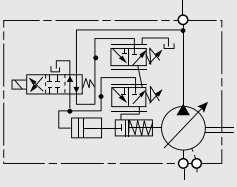
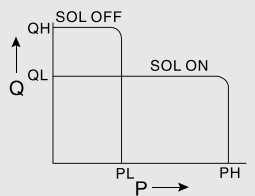
CONTROL TYPE

Controls	Symbol	Characteristic	Specifications
A type: Standard pressure control			- When system pressure increase and reach present pressure the flow decrease automatically and pressure to be constant. - Pressure and flow can be adjusted manually.
G type: Remote pressure control			- The same function of "A" control type. - Pressure can be adjusted remotely by the remote control valve.
HL type: Load-sensing control			- HL valve with 2 different pressure, control displacement. - The flow can be changed by HL valve, the sensing feedback can reach low oil temperature and energy saving.
B type: Multi-stage flow & Single-stage pressure control (with cylinder)			- Flow can be adjusted from 0 to maximum and pressure can be maintaining at preset pressure. - Absorbing impact and vibration which are produced by up down motions. It is suitable for lifting equipment etc.
C type: 2-stage pressure & Flow control			2-stage pressure to adjust PL to QH and : PH to QL. - When pressure increase and reach preset pressure "PH", flow is reduced to "QL". - Adapt for long dead head and short pressurizing machines, speedy and energy saving. - Pressure "PH""PL", and flow "QH""QL" can be adjusted optionally.
CG type: 2-stage pressure & Flow control + Remote			- The same function of "C" control type. - The pressure and the range can be adjusted by remote control valve. - Install HYDRAUT solenoid control valve to reach good performance.

AXIAL PISTON PUMP

PQ SERIES

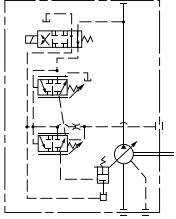
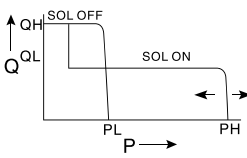
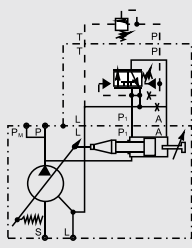
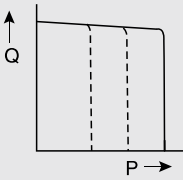
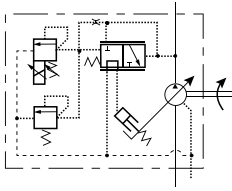
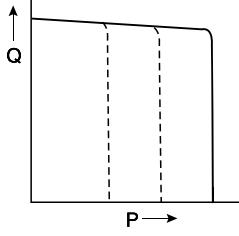
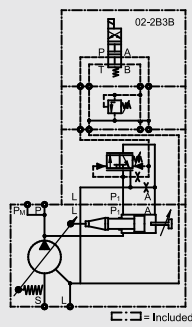
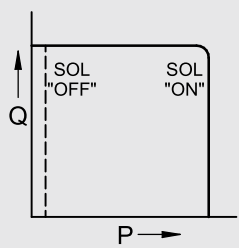
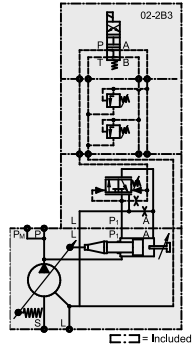
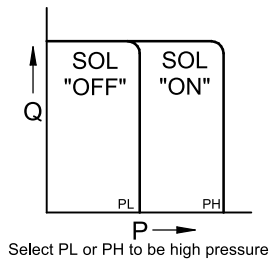
CONTROL TYPE

Controls	Symbol	Characteristic	Specifications
CR type: 2-stage pressure & Flow control + Low tension unloading			1. Install HYDRAUT solenoid valve, control 2-stage pressure. 2. It is suitable for constant speed lifting equipments, and setting 2-stage working pressure. 3. PL and PH, two options can be PH. SOL OFF: Low tension unloading SOL ON: 2-stage pressure&flow
D type: Low tension unloading + Pressure control			1. Same as type A and with low tension unloading. 2. It is adapt for long unloading operation. 3. When the system stops, oil temperature and noise maintain low level while being through the unloading.
DG type: Low tension unloading + Pressure control + Remote			1. The same function of "D" control type. 2. The pressure and the range can be adjusted by remote control valve. 3. Install HYDRAUT solenoid control valve to reach good performance.
E type: Electric 2-stage pressure control			1. 2-stage pressure is controlled by solenoid control valve. 2. Adapt for constant speed lifting equipments, and setting 2-stage working pressure. 3. PL and PH, two options can be PH.
EG type: Electric 2-stage pressure control + Remote			1. The same function of "E" control type. 2. The pressure and the range can be adjusted by remote control valve. 3. Install HYDRAUT solenoid control valve to reach good performance.
F type: Electric 2-stage pressure control & Flow control			1. Electric 2-stage pressure & flow control to adjust PL to QH, PH to QL. 2. Pressure "PL", "PH" and flow "QH" can be adjusted optionally.

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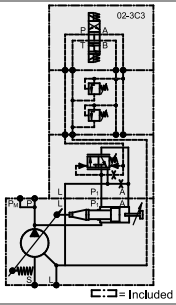
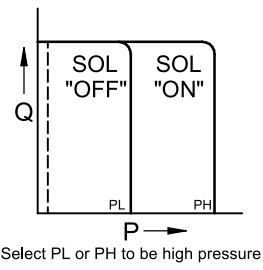
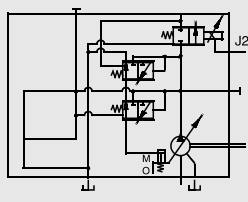
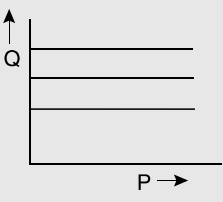
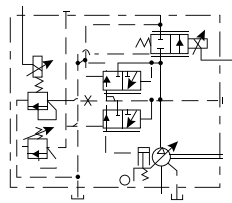
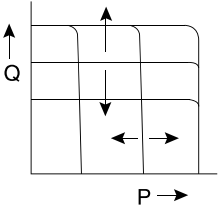
CONTROL TYPE

Controls	Symbol	Characteristic	Specifications
FG type: Electric 2-stage pressure control & Flow control + Remote			1.Electric 2-stage pressure & flow control to adjust PL to QH,PH to QL. 2.Pressure can be adjustd by remote control valve. 3.Pressure "PL", "PH" and flow "QH" can be adjusted optionally.
GM type: Remote pressure compensator with NG6 interface			1.GM Remote pressure compensator with NG6 interface. 2.Speedy reactions,stable pressure supply. 3.Adapt for manual or electric control.
GJ type: Remote pressure compensator + Proportional pressure valve			1.Same as type "GM" and with proportional pressure valve. 2.The proportional valve is installed on the NG6 interface to reach proportional electric control to save energy.
GR type: Remote pressure compensator + Electrical unloading			1.By adding a relief valve and solenoid control valve on the compensator makes pump have both function. 2.GR control is for long unloading situations. When the system stops, oil temperature and noise maintain low level while being through the unloading.
GB type: Remote pressure compensator + 2-stage pressure control			1.By adding a relief valve and solenoid control valve on the compensator makes pump have both function. 2.GB control is for Z-stage working pressure under the constant cylinder speed.

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CONTROL TYPE

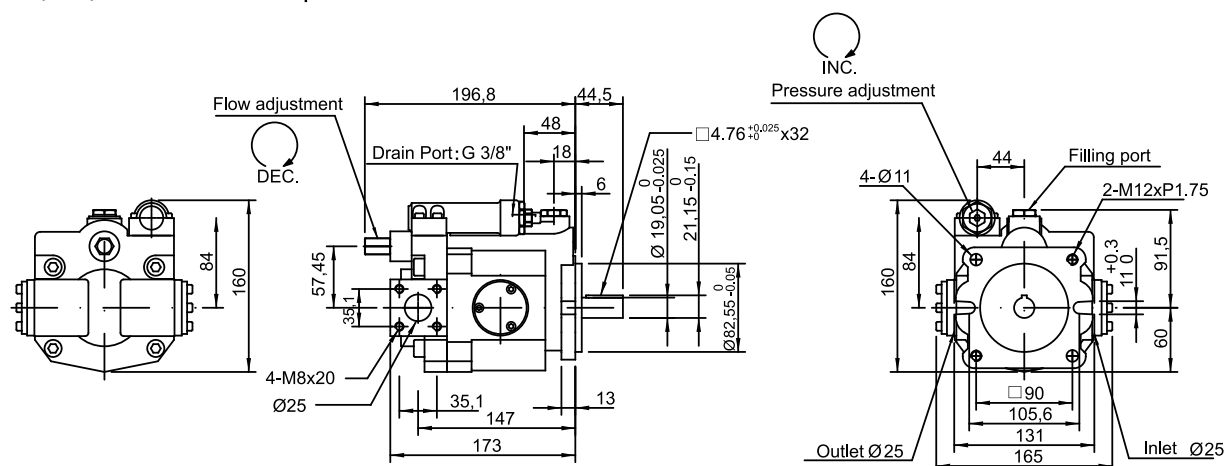
Controls	Symbol	Characteristic	Specifications
GC type: Remote pressure compensator + Electrical unloading + 2-stage pressure control			1.Control two different-stage limited pressure by adding solenoid valve and unloading function. 2.When the system stops,oil temperature and noise maintain low level by unloading function. 3.Adapt for stable cylinder speed,2-stage pressure,and long unloading situation.
HQ type: Load-sensing compensator + Proportional flow valve + Relief valve			1.HQ control with load-sensing and proportional flow control. 2.By electric input signal to adjust pump displacement,and the flow is controlled by electric modular control.
HK type: Load-sensing compensator + Proportional pressure valve + Proportional flow valve			1.HK offers the smallest pressure and flow according to different requirement. 2.The displacement is nearly zero when the system stands by,and the motor output is also nearly zero to saving energy. 3.When the system reaches setting pressure,the pump displacement will reduce by itself. It only needs to add the system required flow,and the pressure remains the same which control the oil temperature. 4.Compared with vane pump,gear pump+PQ valve can save 30-50% energy.

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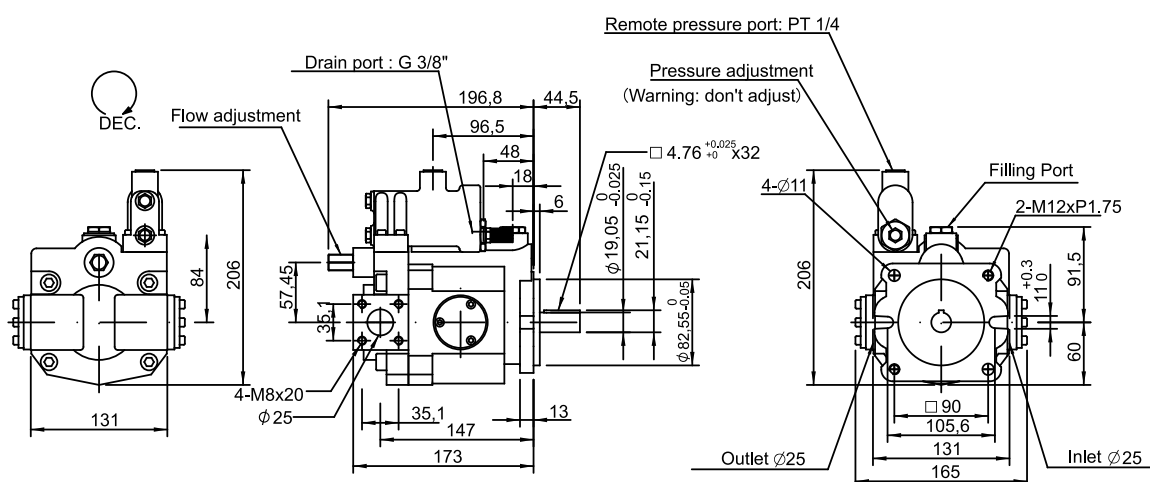
PQ SERIES

DIMENSION

PQ15A, PQ18A - Standard pressure control



PQ15G, PQ18G - Remote pressure control

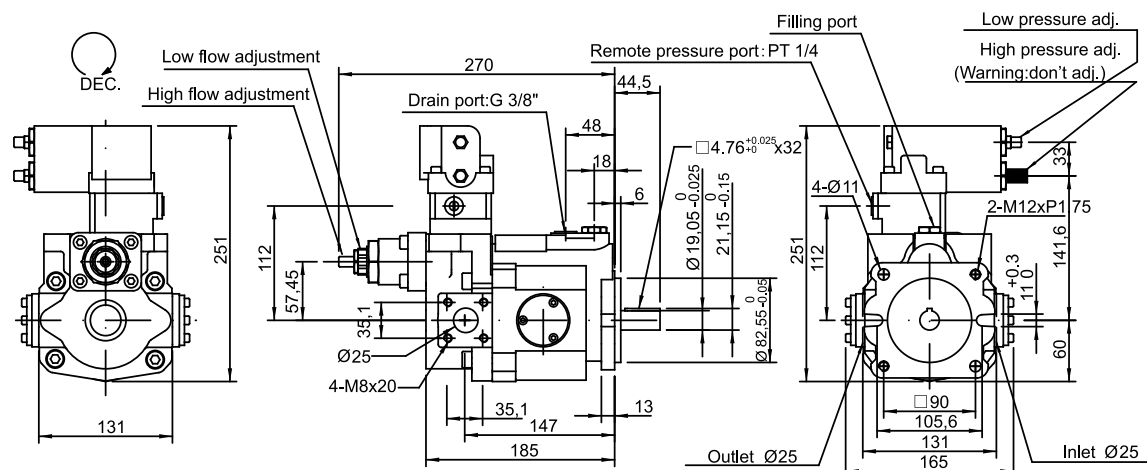


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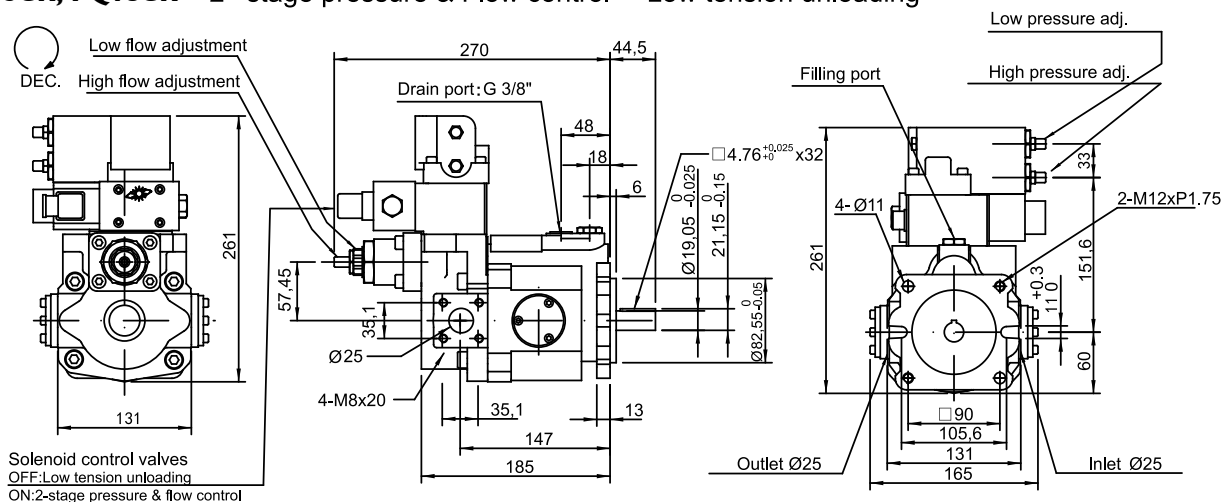
PQ SERIES

DIMENSION

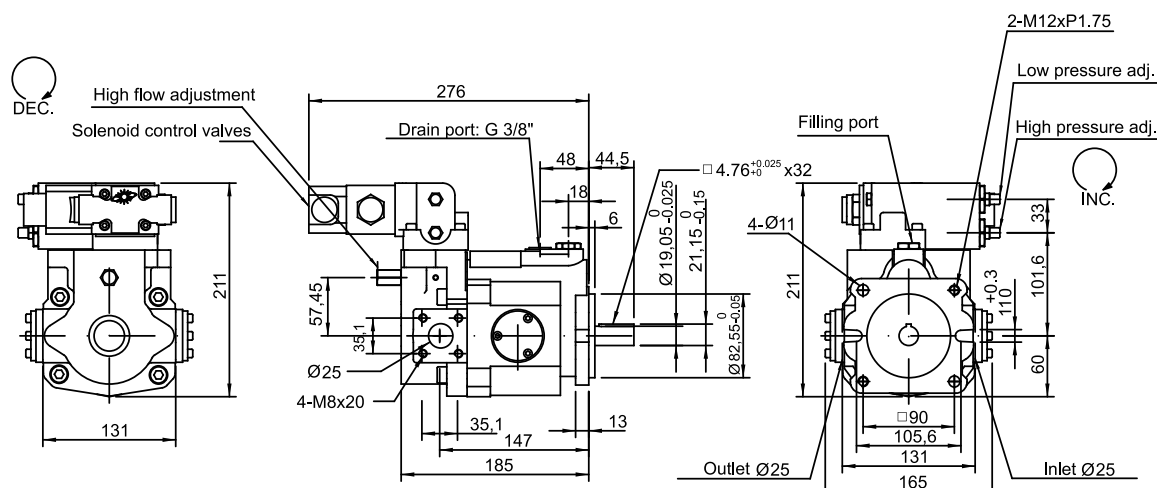
PQ15CG, PQ18CG - 2 - stage pressure & Flow control + Remote



PQ15CR, PQ18CR - 2 - stage pressure & Flow control + Low tension unloading



PQ15D, PQ18D - Low tension unloading + Pressure control

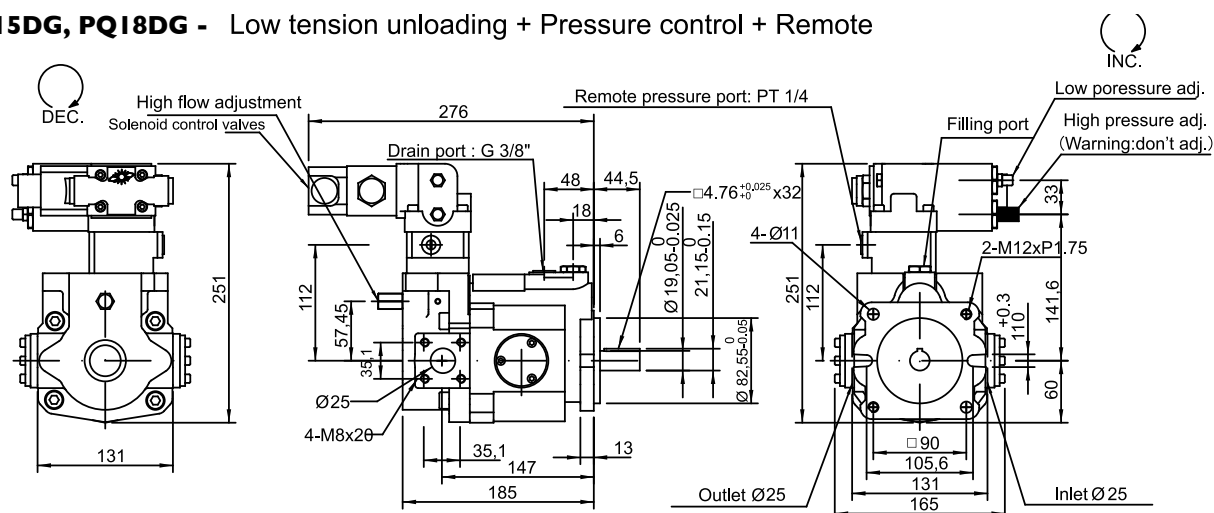


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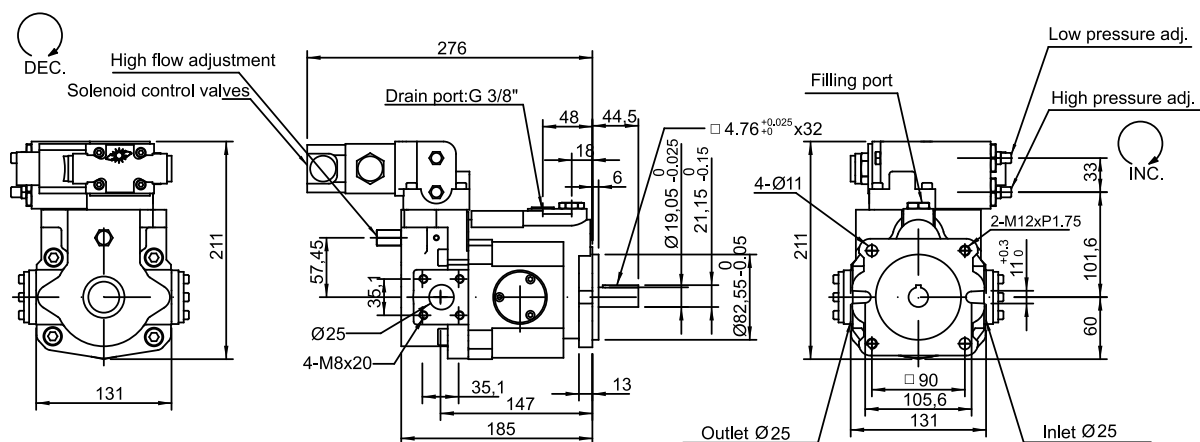
PQ SERIES

DIMENSION

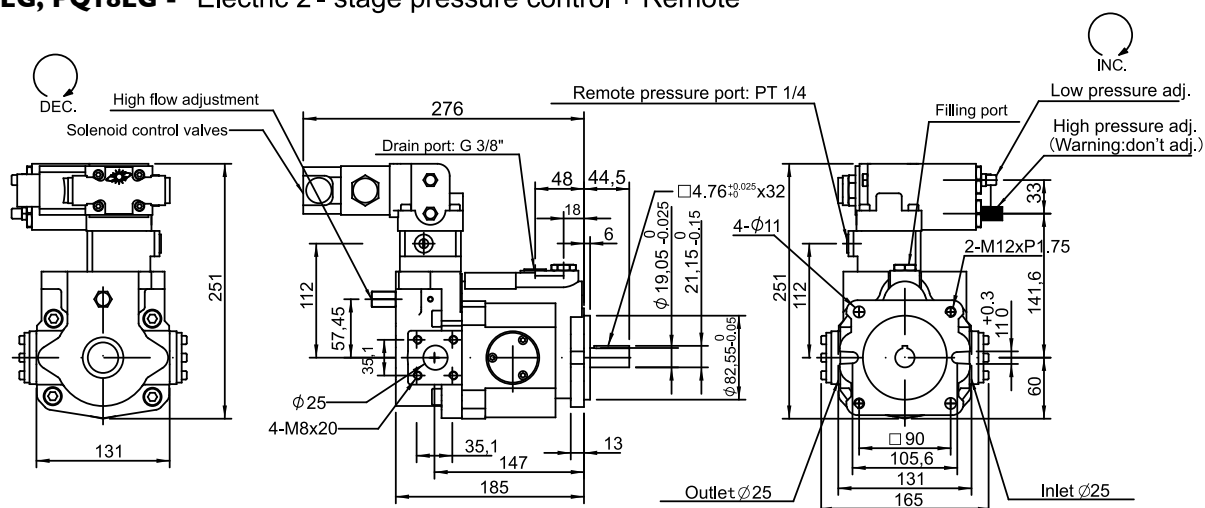
PQ15DG, PQ18DG - Low tension unloading + Pressure control + Remote



PQ15E, PQ18E - Electric 2 - stage pressure control

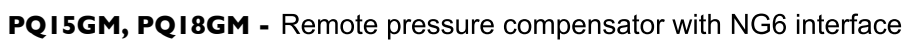


PQ15EG, PQ18EG - Electric 2 - stage pressure control + Remote



PQ SERIES

PQ15F, PQ18F - Electric 2-stage pressure control & Flow control

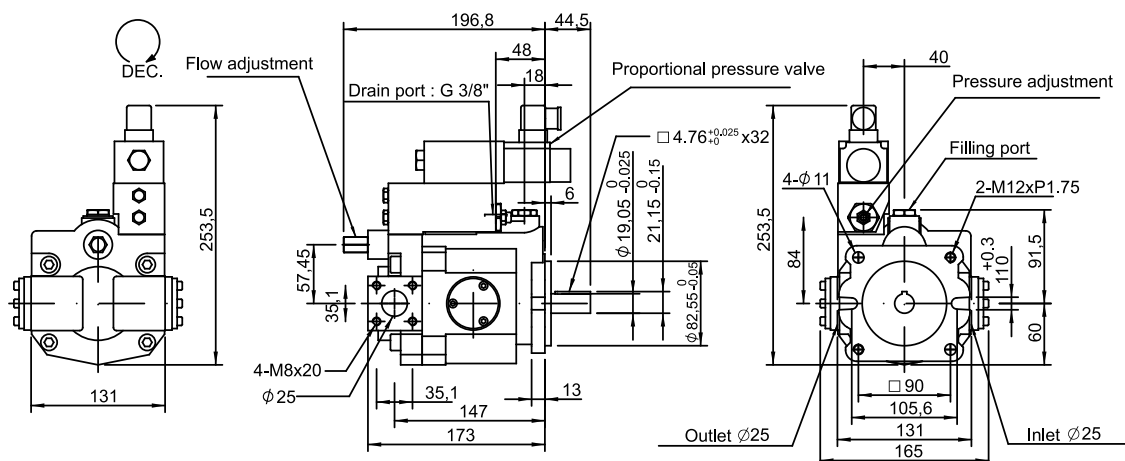


AXIAL PISTON PUMP

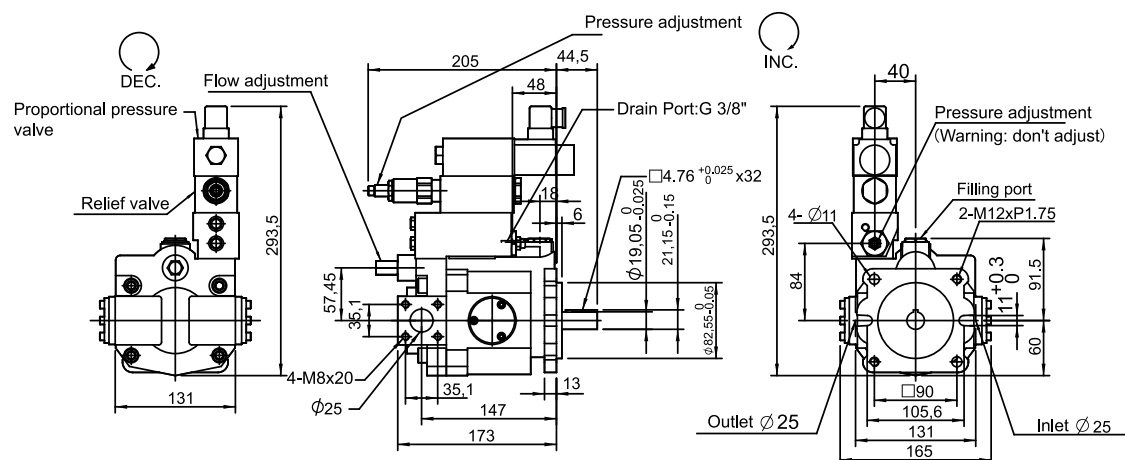
PQ SERIES

DIMENSION

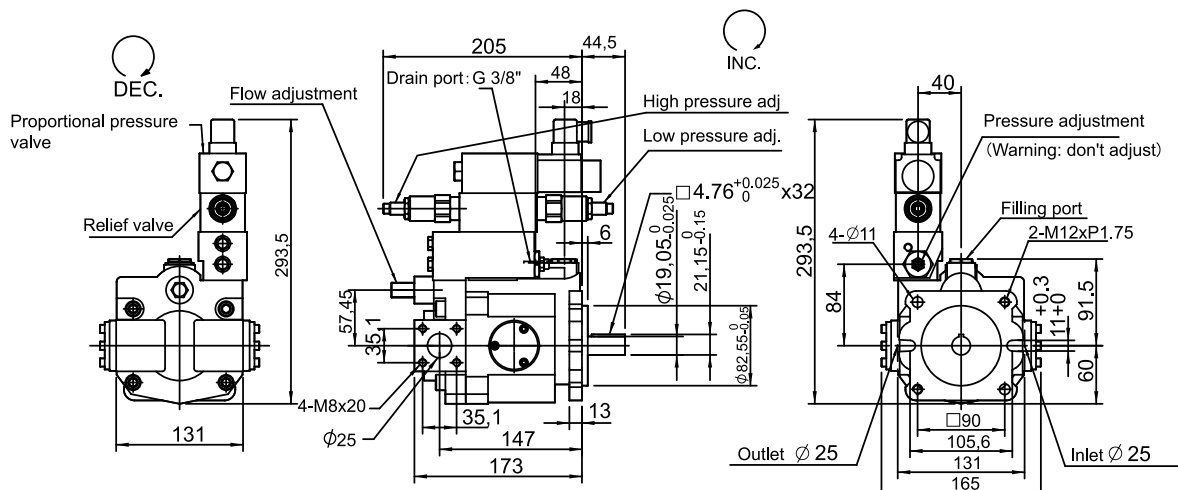
PQ15GJ, PQ18GJ - Remote pressure compensator + Proportional pressure valve



PQ15GR, PQ18GR - Remote pressure compensator + Electrical unloading



PQ15GB, PQ18GB - Remote pressure compensator + 2-stage pressure control

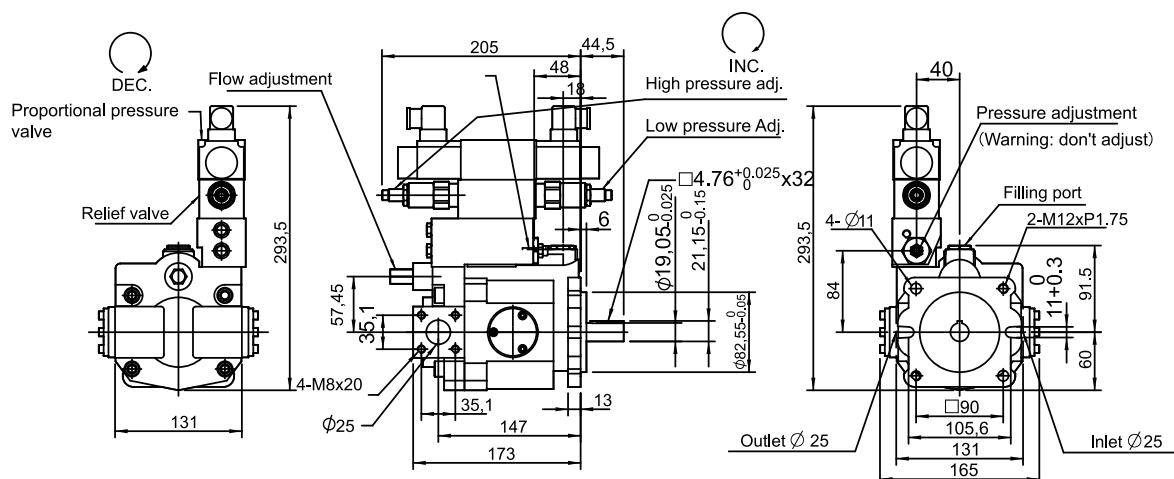


AXIAL PISTON PUMP

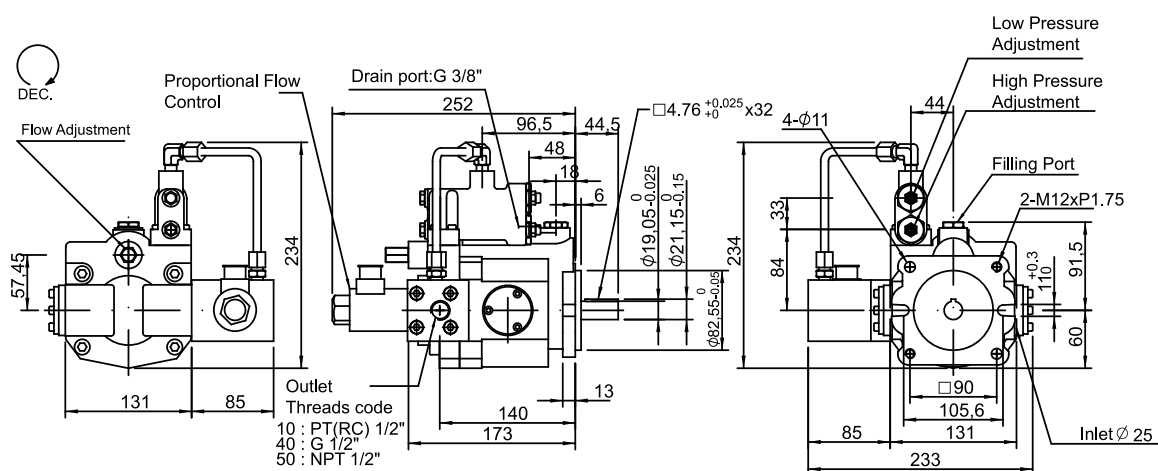
PQ SERIES

DIMENSION

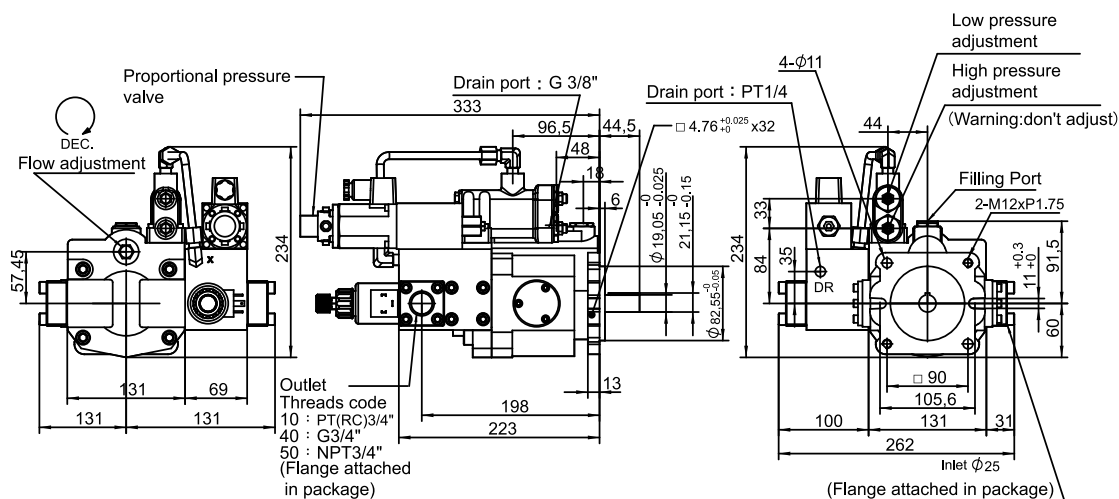
PQ15GC, PQ18GC - Remote pressure compensator + Electrical unloading + 2-stage pressure control



PQ15HQ, PQ18HQ - Load-sensing compensator + Proportional flow valve + Relief valve



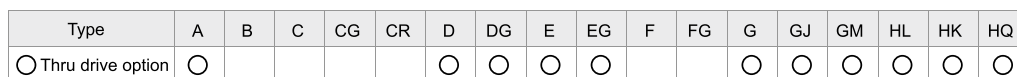
PQ15HK, PQ18HK - Load-sensing compensator + Proportional pressure valve + Proportional flow valve



PQ SERIES

PQ 15 — C

PQ 15 — D



Technical drawings of the 1000 Series 1/2" valves, showing three views: Outlet, Inlet, and Inlet (with a detail view).

Outlet View: Shows a square body with a central circular port. Dimensions include a port diameter of 35.1, a body width of 24, and a total height of 50.8. The body has four mounting holes.

Inlet View (Left): Shows a square body with a central circular port. Dimensions include a port diameter of 35.1, a body width of 24, and a total height of 50.8. The body has four mounting holes.

Inlet View (Right): Shows a square body with a central circular port. Dimensions include a port diameter of 35.1, a body width of 24, and a total height of 50.8. The body has four mounting holes. A detail view shows the internal structure with a dimension of 50.8 and a note "PT(RC) 3/4\".

Threads code:

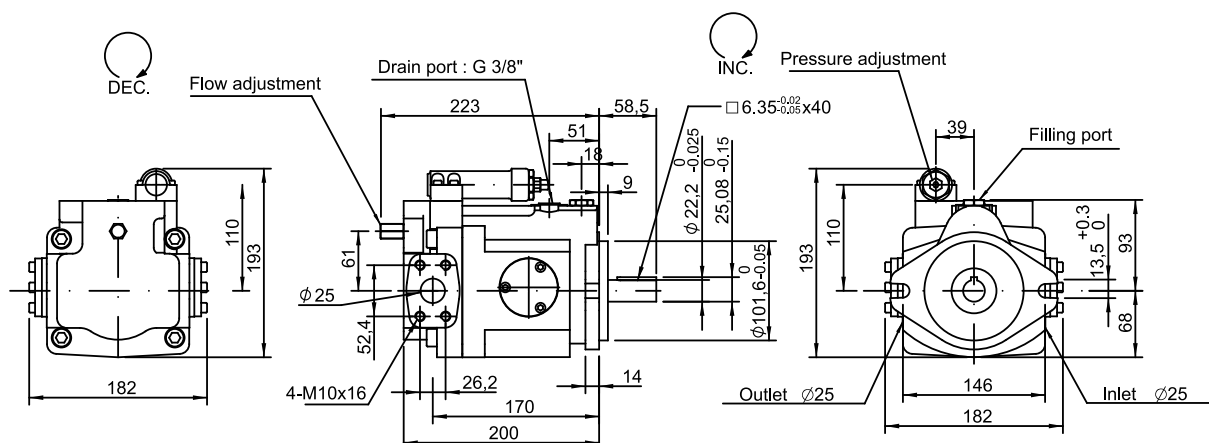
- 10:PT(RC) 3/4"
- 40:BSPP(G) 3/4"
- 50:NPT 3/4"

AXIAL PISTON PUMP

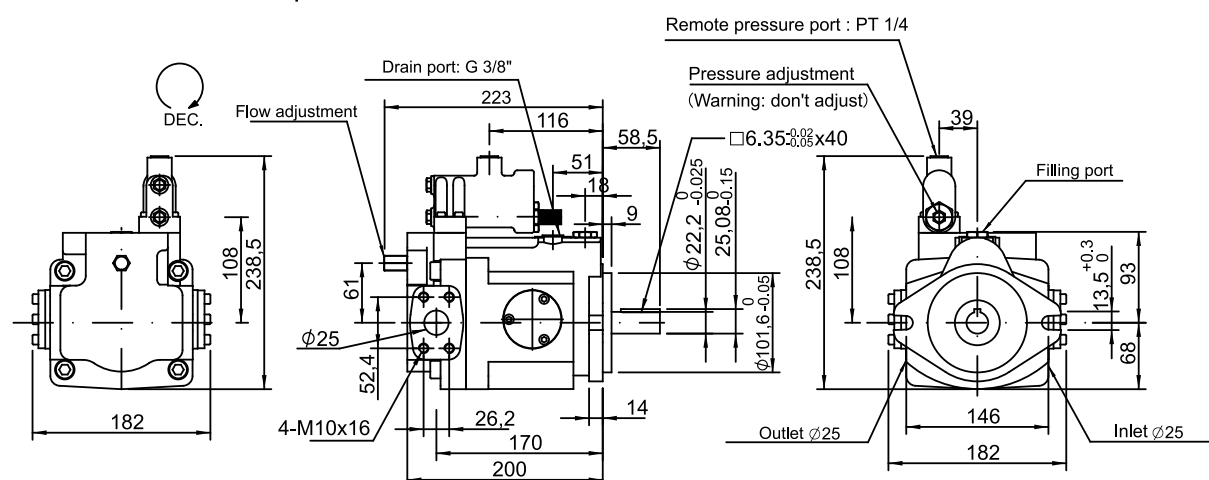
PQ SERIES

DIMENSION

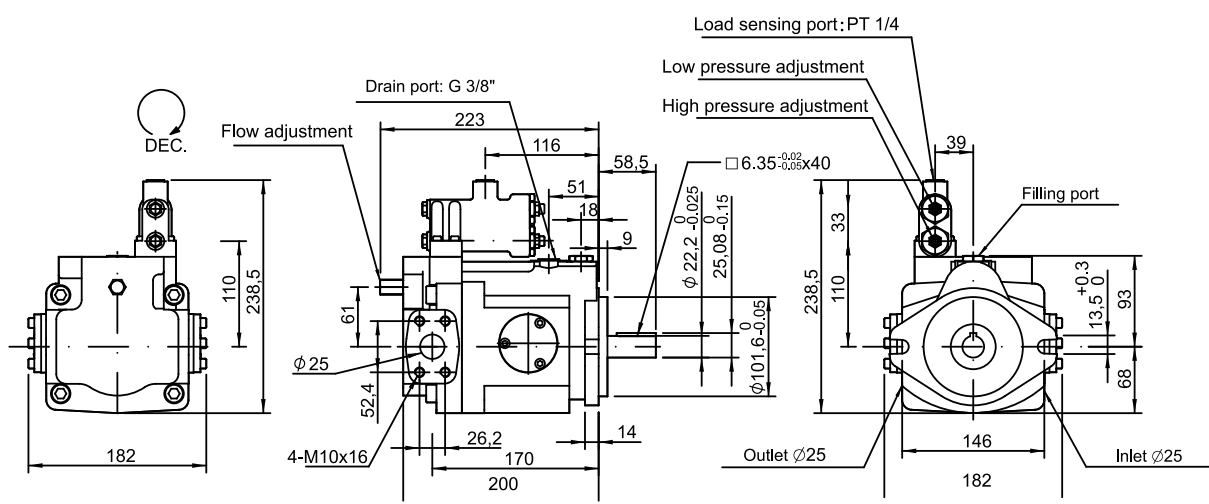
PQ23A, PQ25A - Standard pressure control



PQ23G, PQ25G - Remote pressure control



PQ23HL, PQ25HL - Load-sensing control

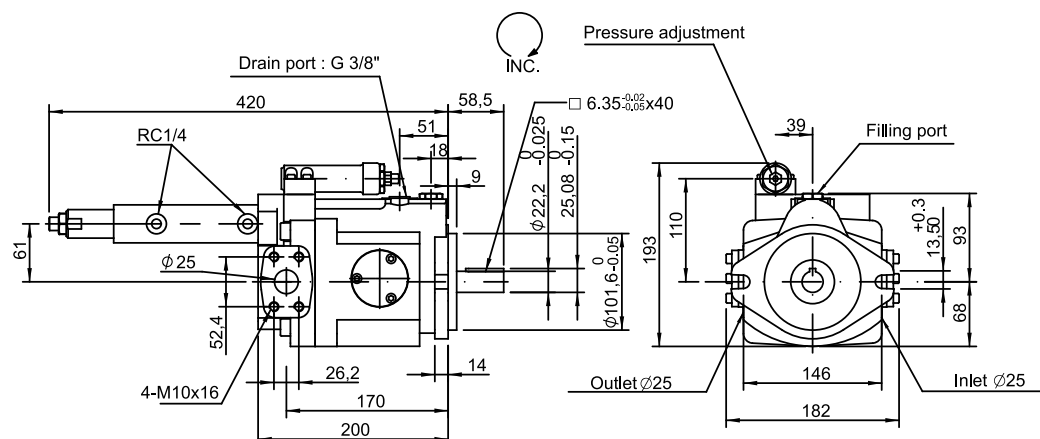


AXIAL PISTON PUMP

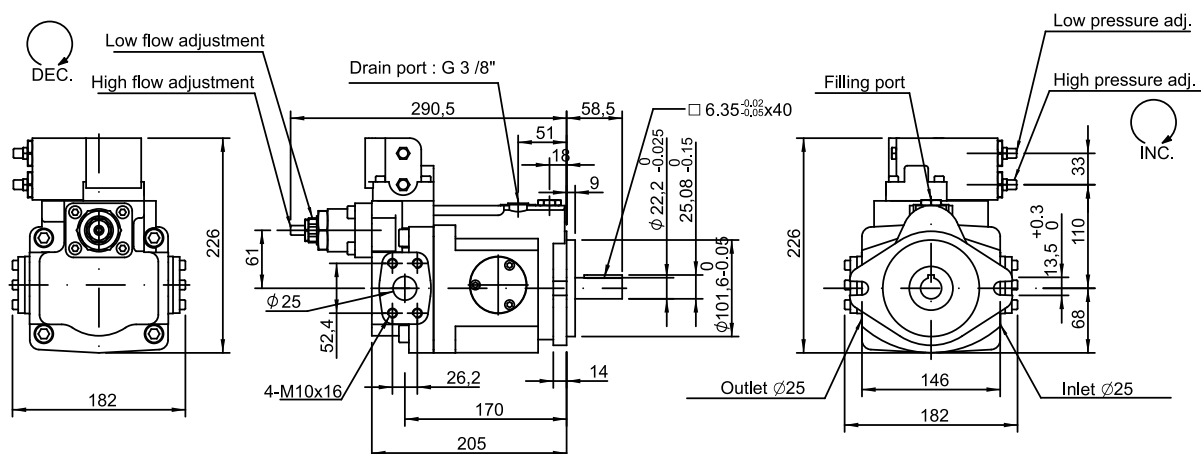
PQ SERIES

DIMENSION

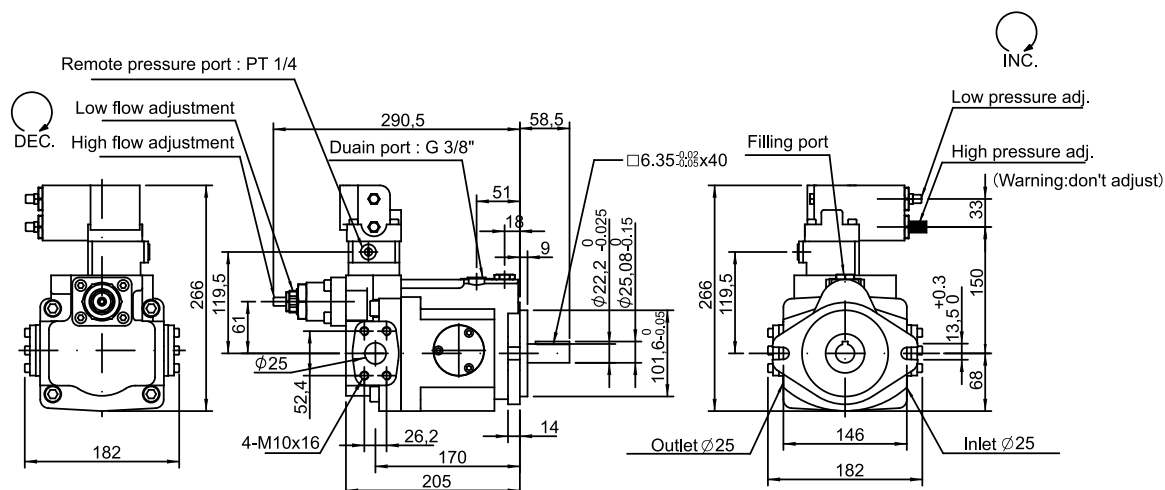
PQ23B, PQ25B - Multi-stage flow & Singe-stage pressure control (with cylinder)



PQ23C, PQ25C - 2-stage pressure & Flow control



PQ23CG, PQ25CG - 2-stage pressure & Flow control + Remote

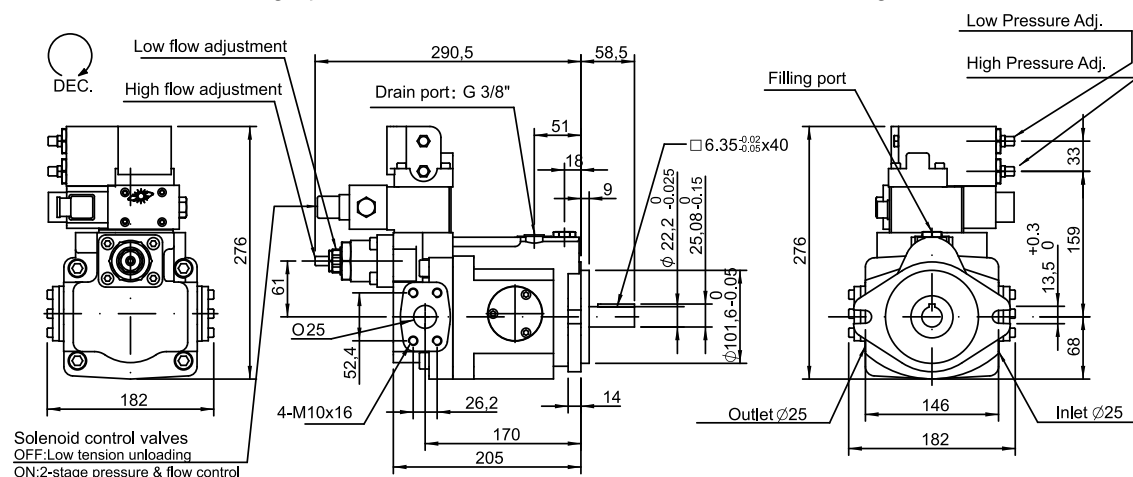


AXIAL PISTON PUMP

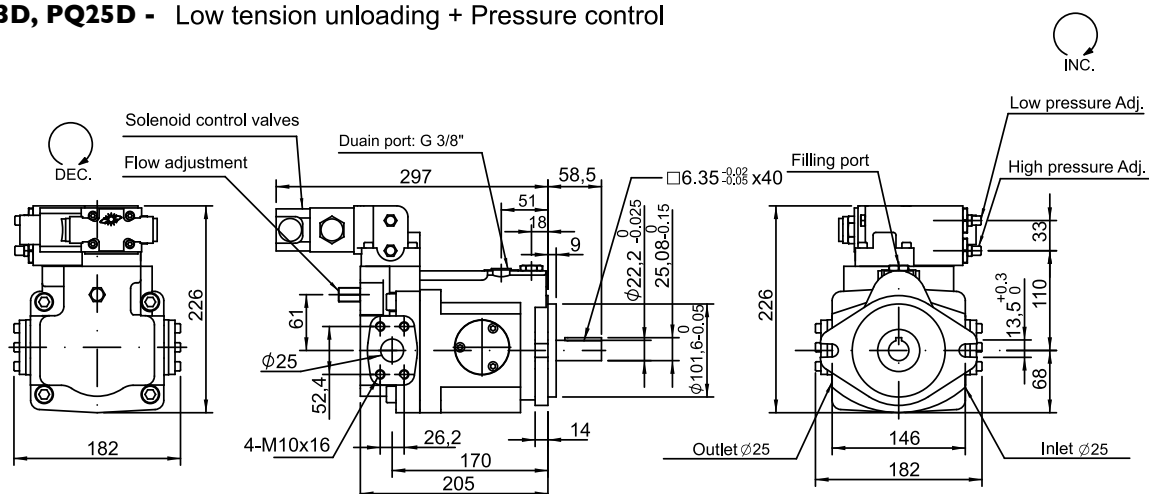
PQ SERIES

DIMENSION

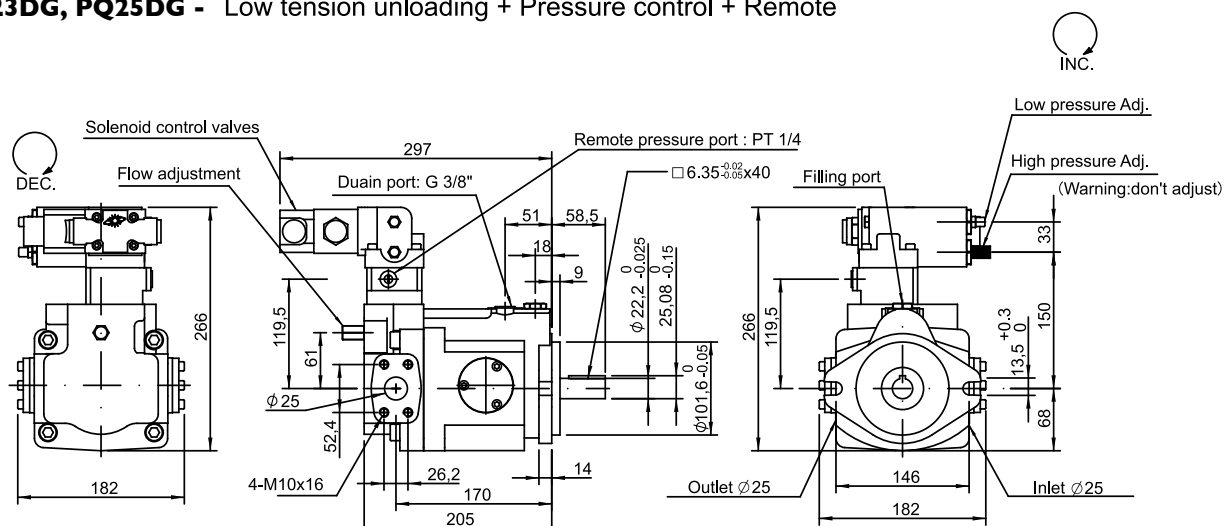
PQ23CR, PQ25CR - 2-stage pressure & Flow control + Low tension unloading



PQ23D, PQ25D - Low tension unloading + Pressure control



PQ23DG, PQ25DG - Low tension unloading + Pressure control + Remote

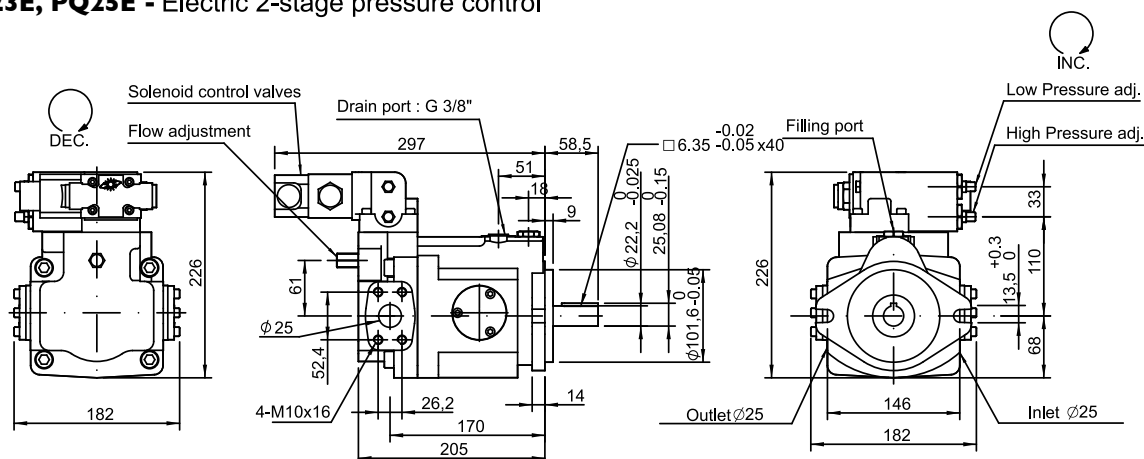


AXIAL PISTON PUMP

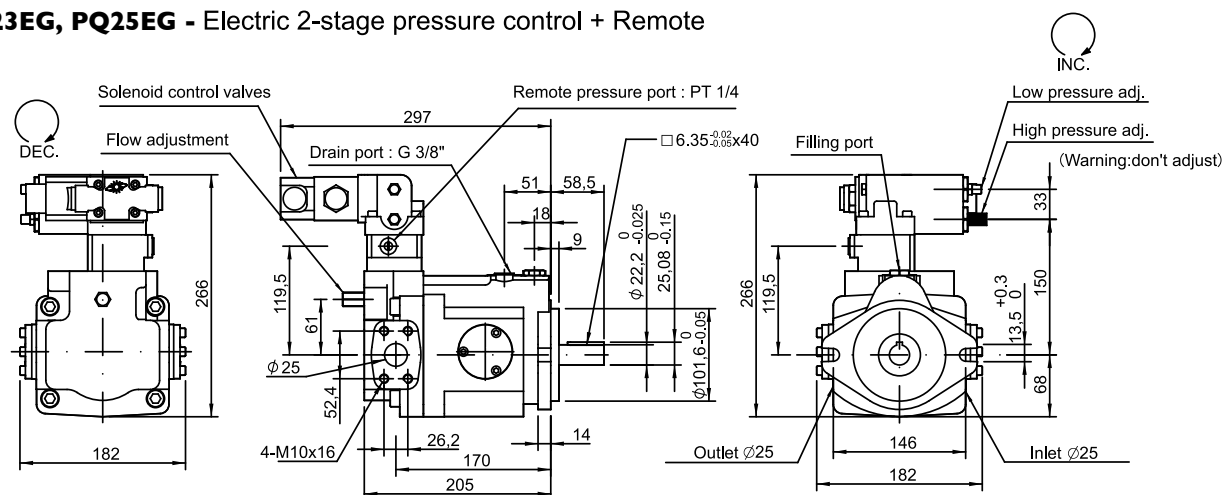
PQ SERIES

DIMENSION

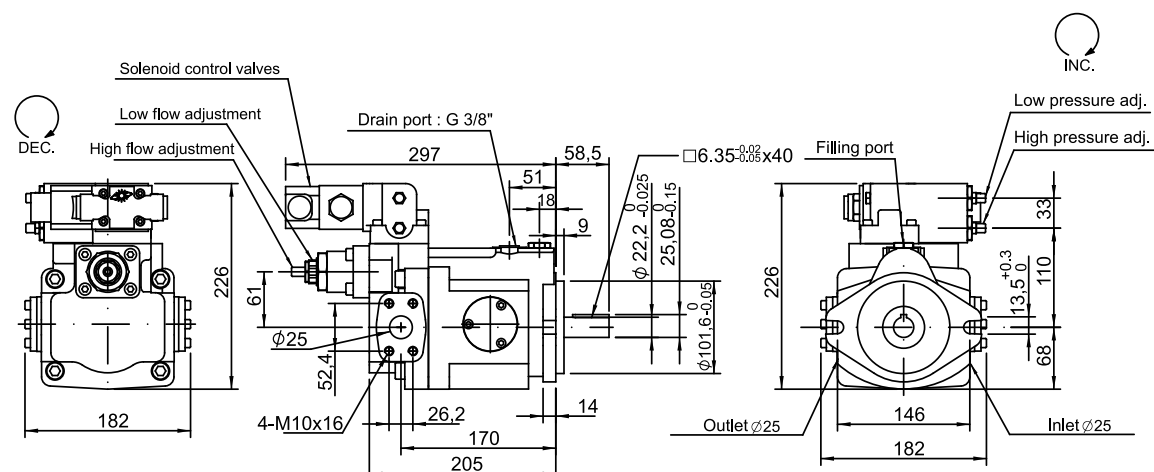
PQ23E, PQ25E - Electric 2-stage pressure control



PQ23EG, PQ25EG - Electric 2-stage pressure control + Remote



PQ23F, PQ25F - Electric 2-stage pressure control & Flow control

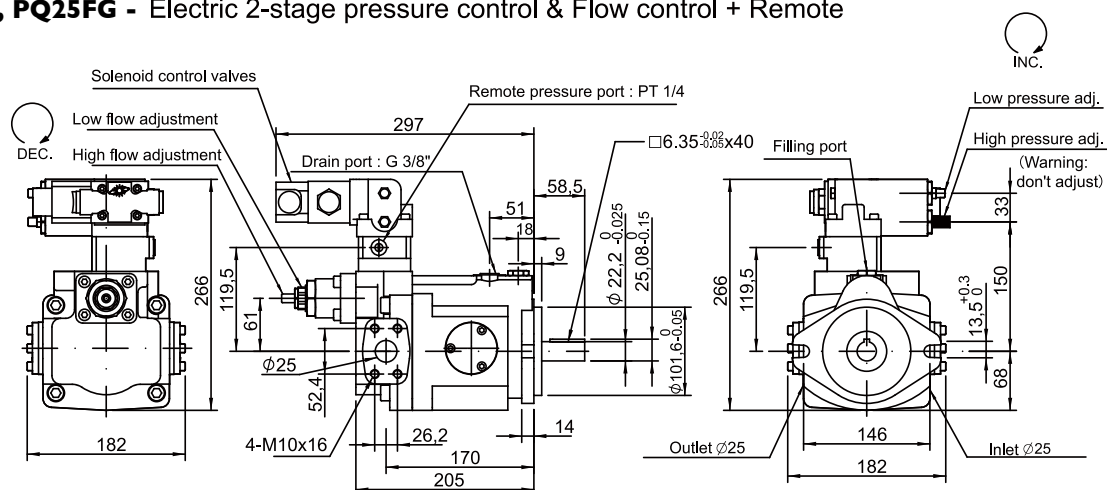


AXIAL PISTON PUMP

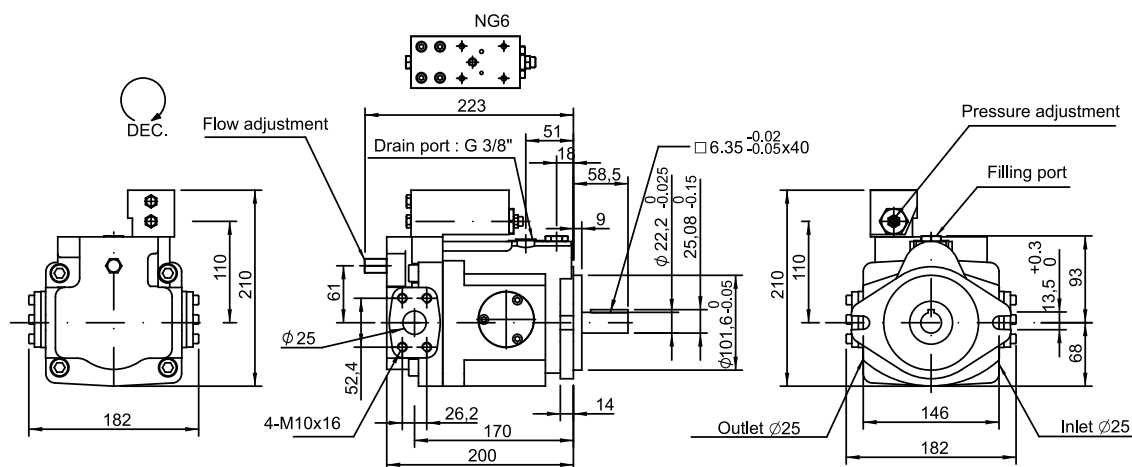
PQ SERIES

DIMENSION

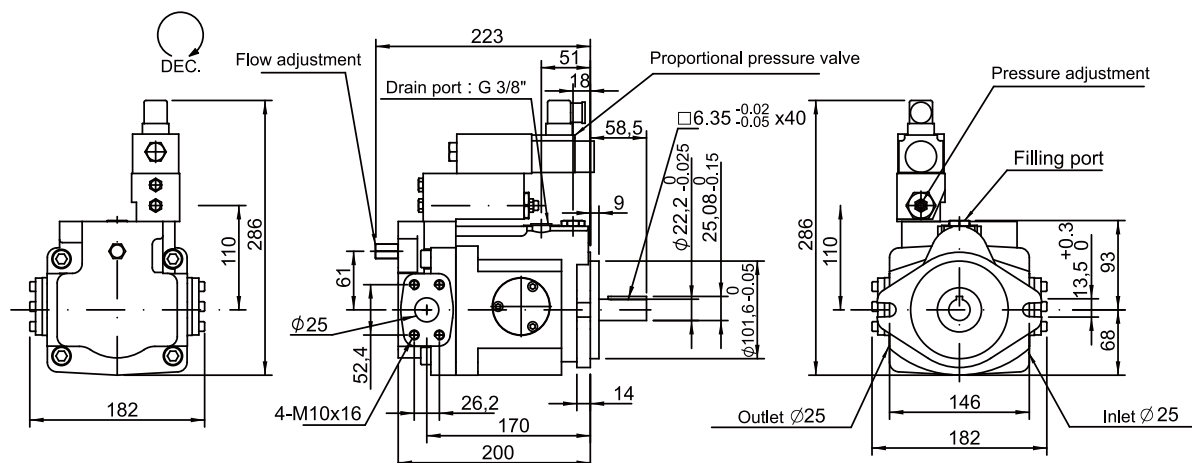
PQ23FG, PQ25FG - Electric 2-stage pressure control & Flow control + Remote



PQ23GM, PQ25GM - Remote pressure compensator with NG6 interface



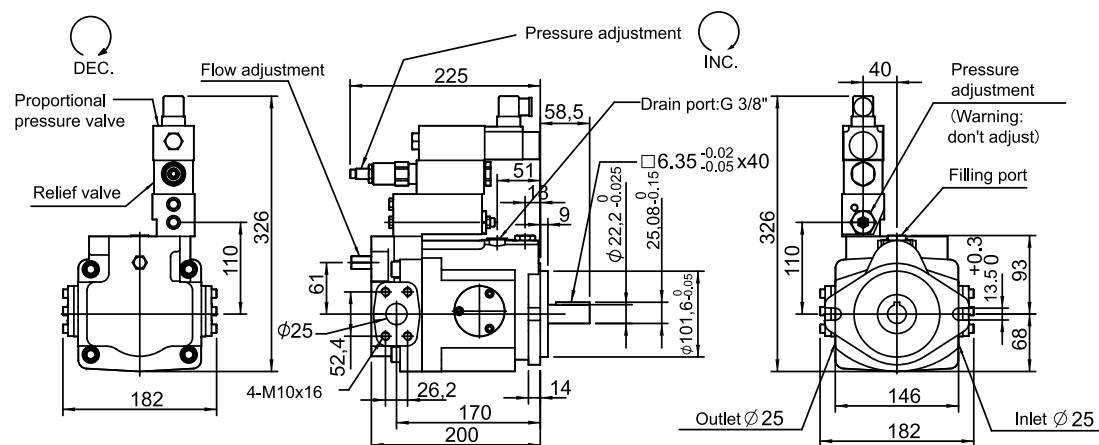
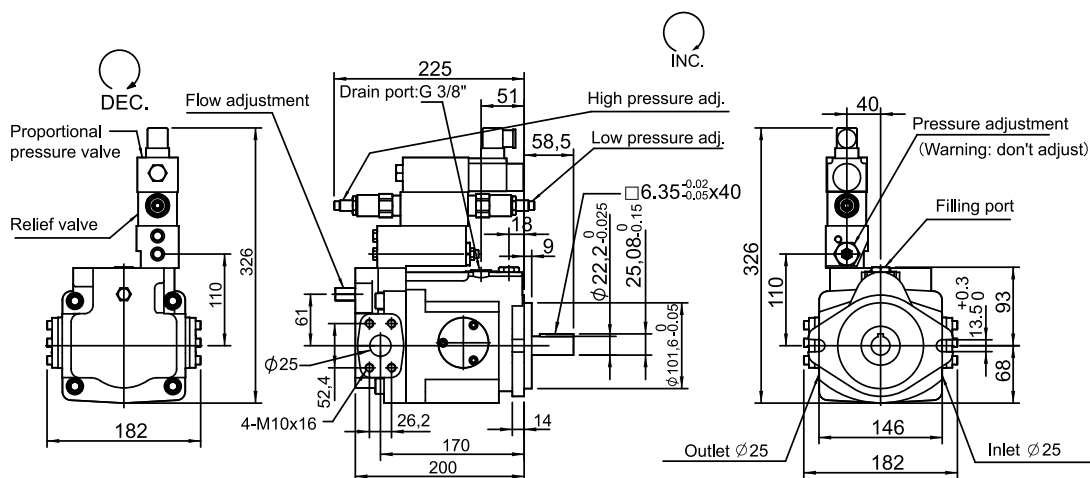
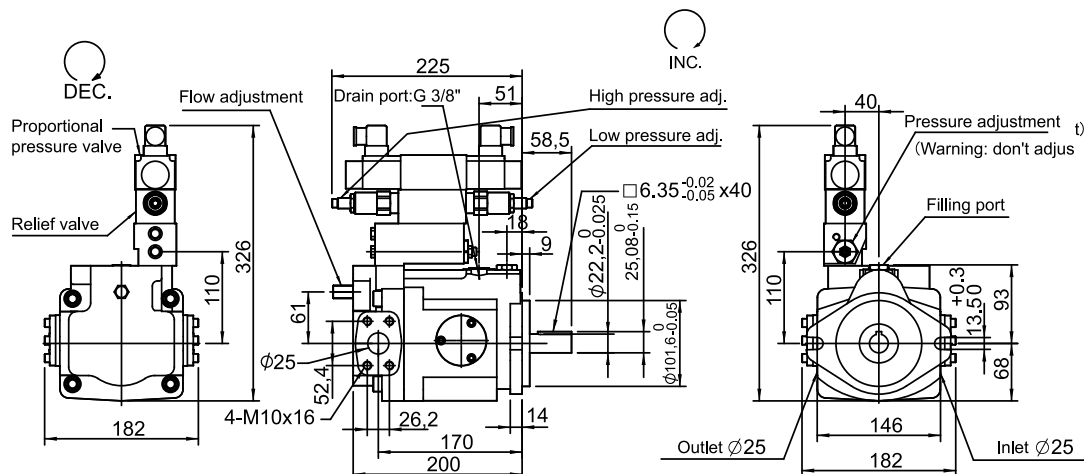
PQ23GJ, PQ25GJ - Remote pressure compensator + Proportional pressure valve



AXIAL PISTON PUMP

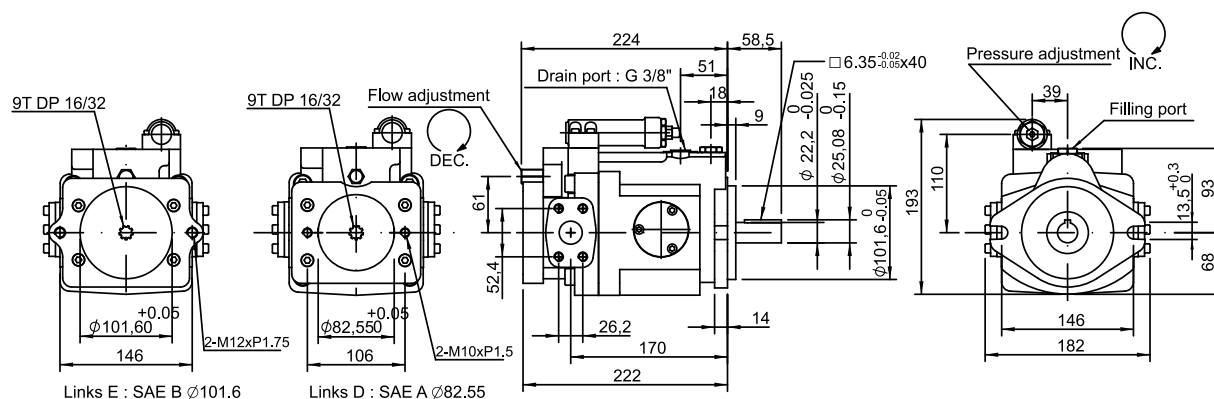
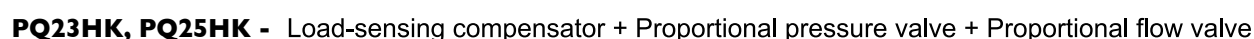
PQ SERIES

DIMENSION

PQ23GR, PQ25GR - Remote pressure compensator + Electrical unloading**PQ23GB, PQ25GB** - Remote pressure compensator + 2-stage pressure control**PQ23GC, PQ25GC** - Remote pressure compensator + Electrical unloading + 2-stage pressure control

PQ SERIES

PQ23HQ, PQ25HQ - Load-sensing compensator + Proportional flow valve + Relief valve

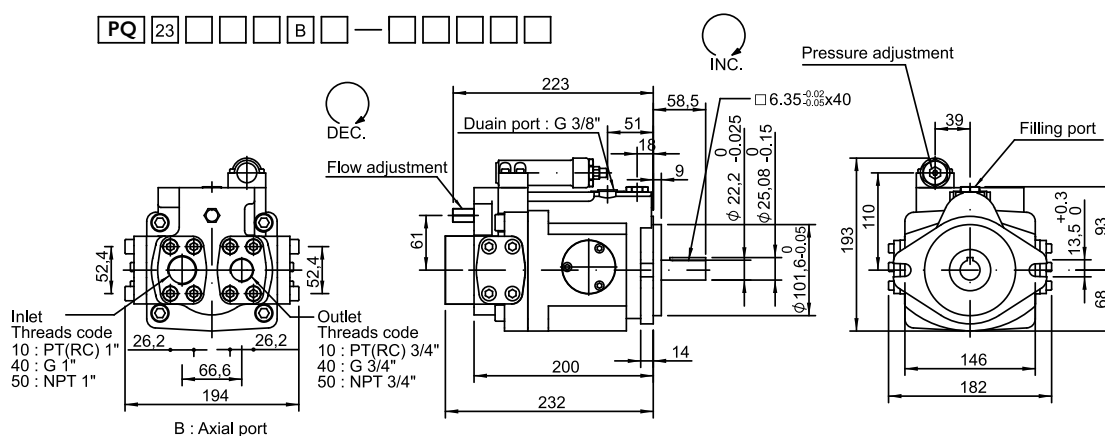


AXIAL PISTON PUMP

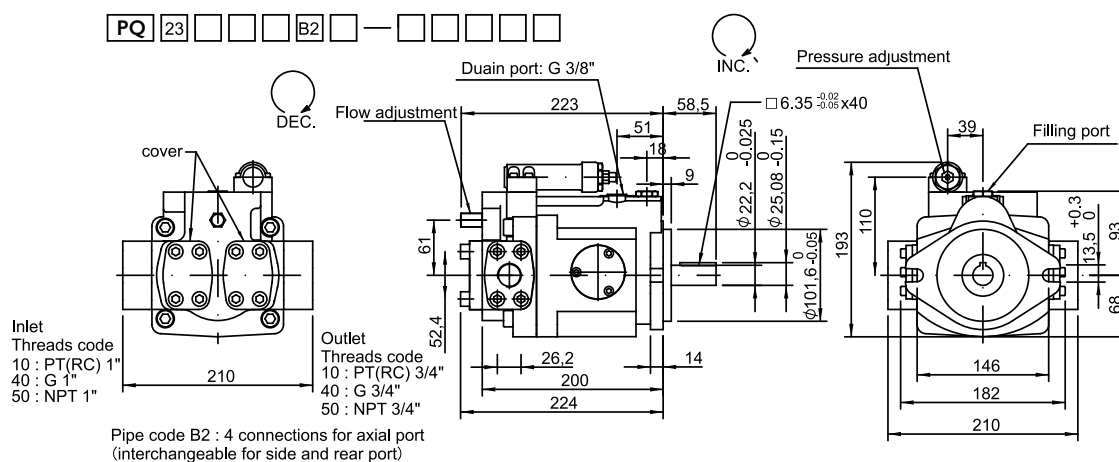
PQ SERIES

DIMENSION

PQ23, PQ25 - Rear port (Please flowing order code no.6, add "B")

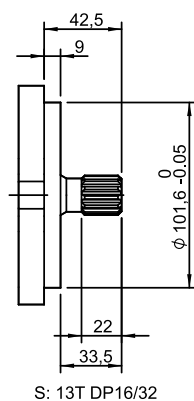


PQ23, PQ25 - 4 Connections for rear port (Please flowing order code no.6, add "B2")

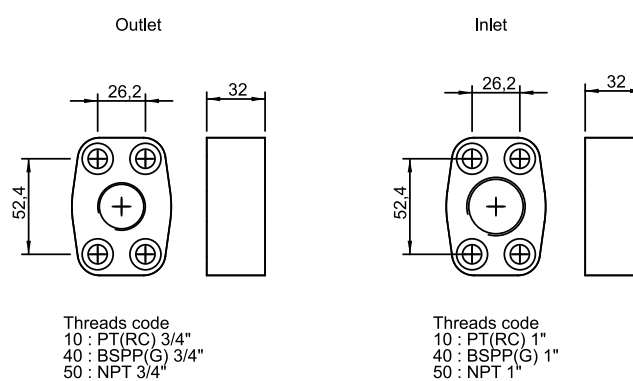


Type	A	B	C	CG	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HQ
○ Axial port option	○	○									○	○	○	○		

PQ23, PQ25 - Splined shaft type



PQ23, PQ25 - Inlet / Outlet

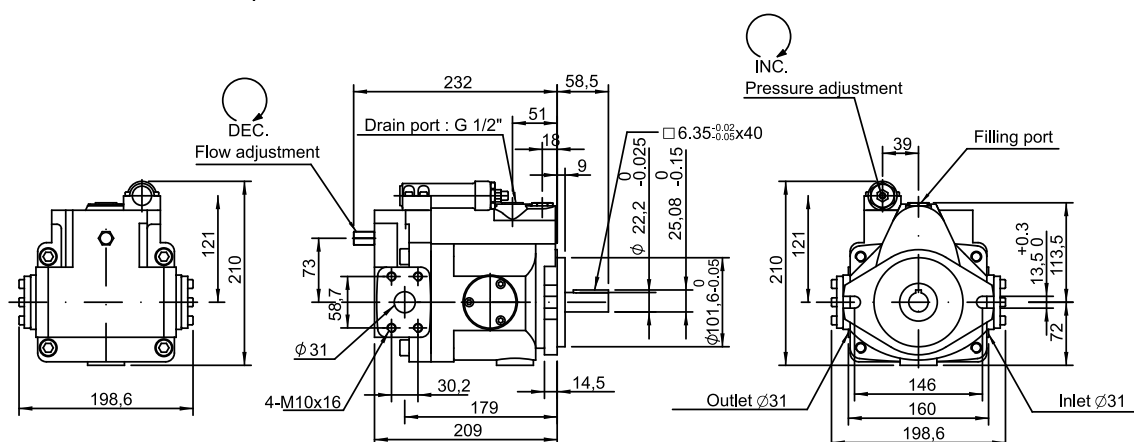


AXIAL PISTON PUMP

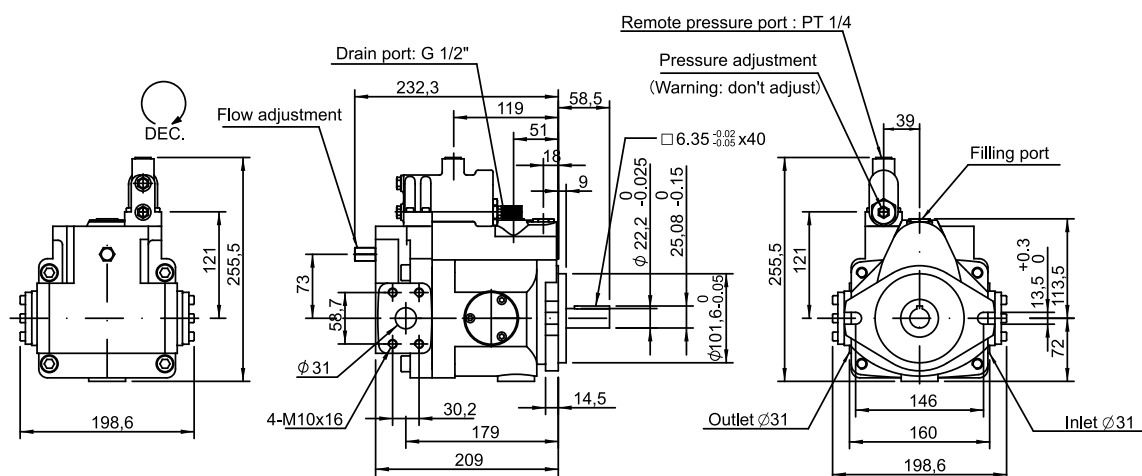
PQ SERIES

DIMENSION

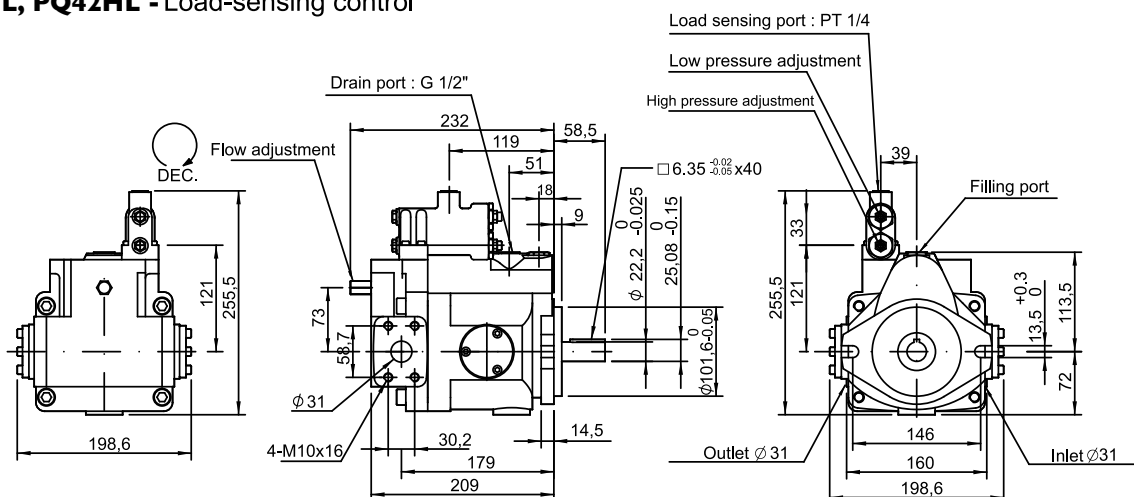
PQ38A, PQ42A - Standard pressure control



PQ38G, PQ42G - Remote pressure control



PQ38HL, PQ42HL - Load-sensing control

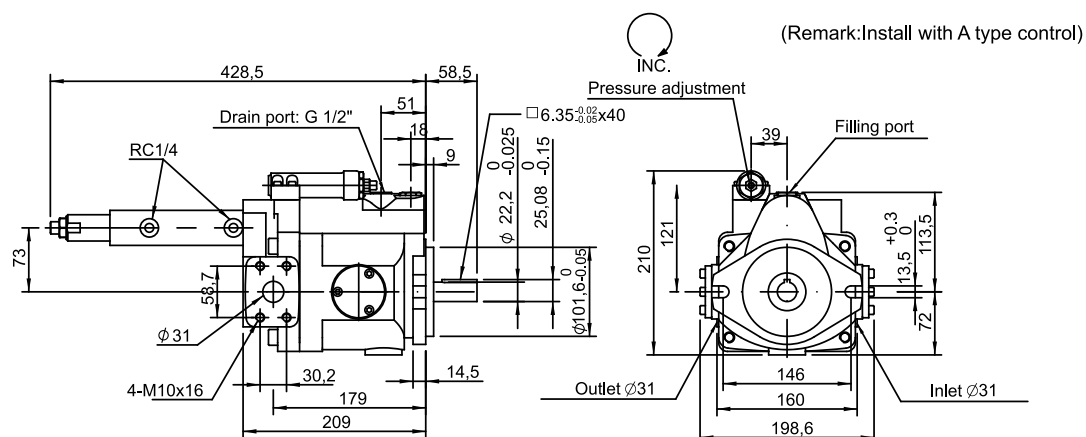


AXIAL PISTON PUMP

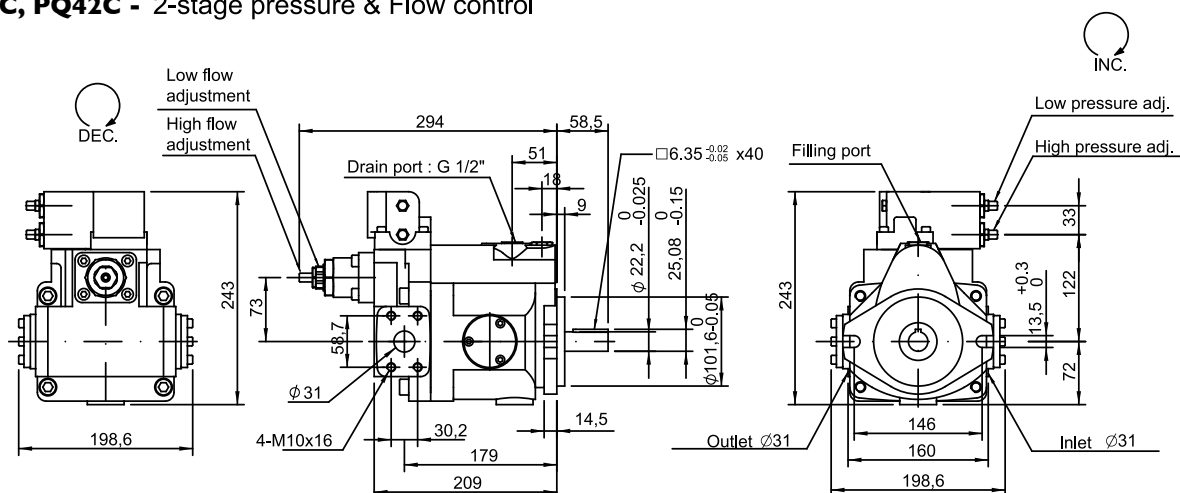
PQ SERIES

DIMENSION

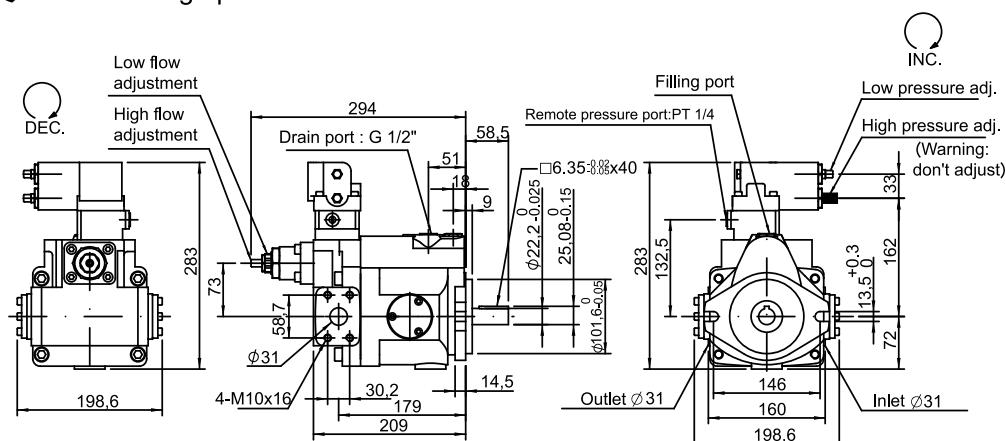
PQ38B, PQ42B - Multi-stage flow & Single-stage pressure control (with cylinder)



PQ38C, PQ42C - 2-stage pressure & Flow control



PQ38CG, PQ42CG - 2-stage pressure & Flow control + Remote

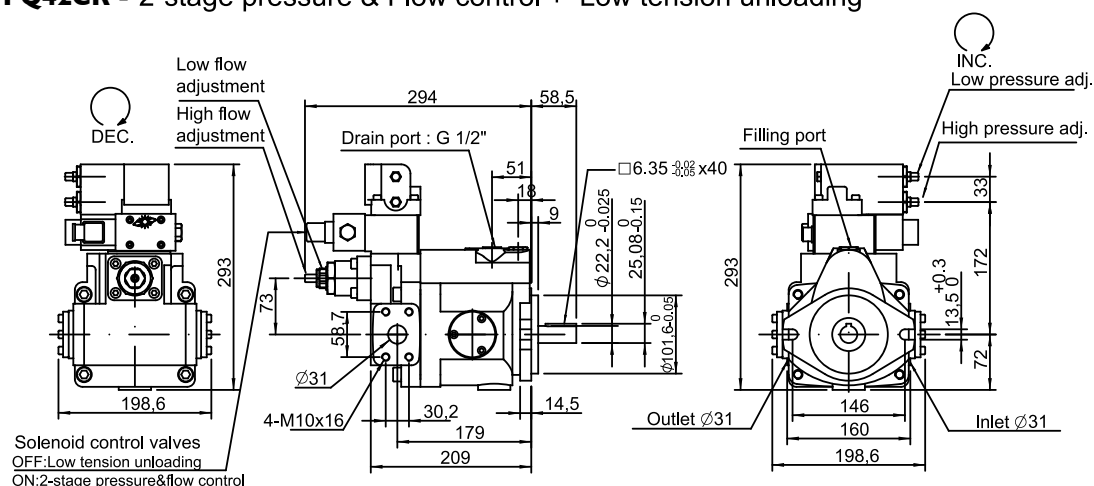


AXIAL PISTON PUMP

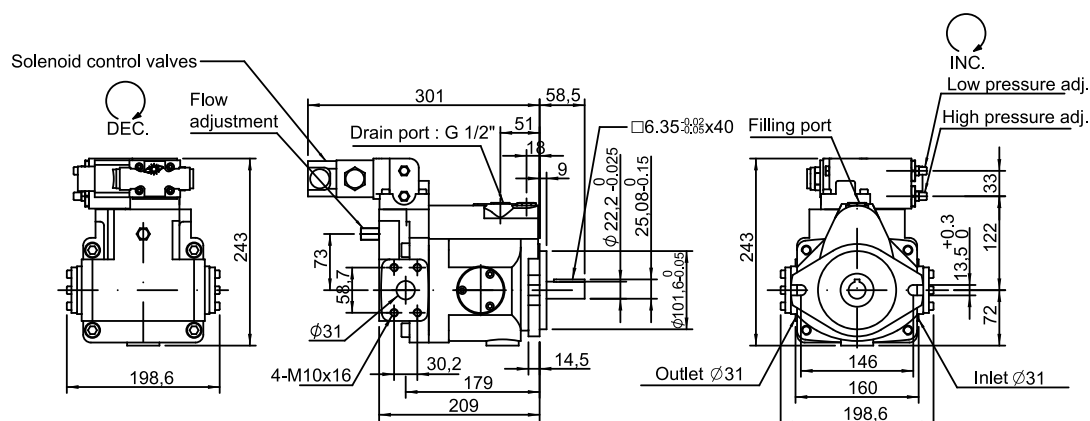
PQ SERIES

DIMENSION

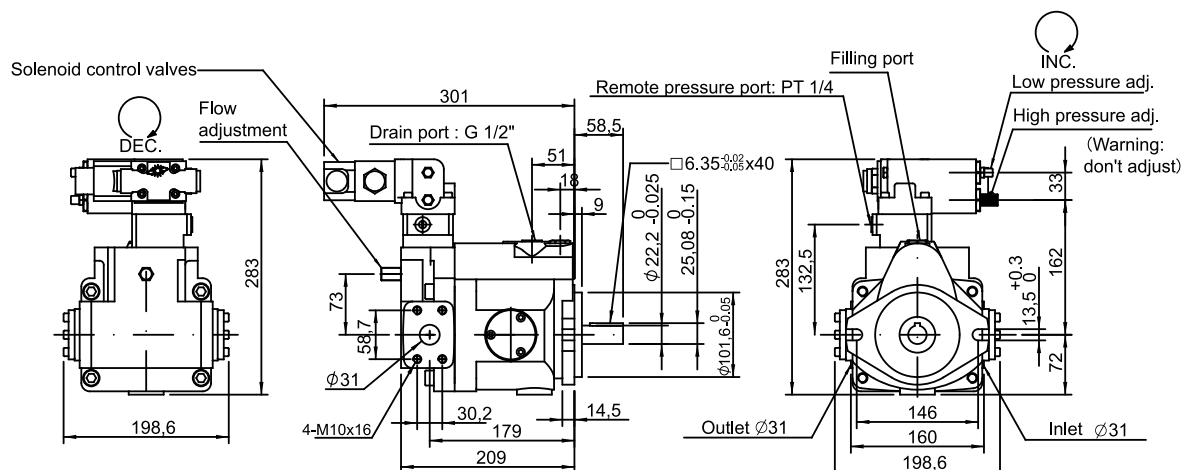
PQ38CR, PQ42CR - 2-stage pressure & Flow control + Low tension unloading



PQ38D, PQ42D - Low tension unloading + Pressure control



PQ38DG, PQ42DG - Low tension unloading + Pressure control + Remote

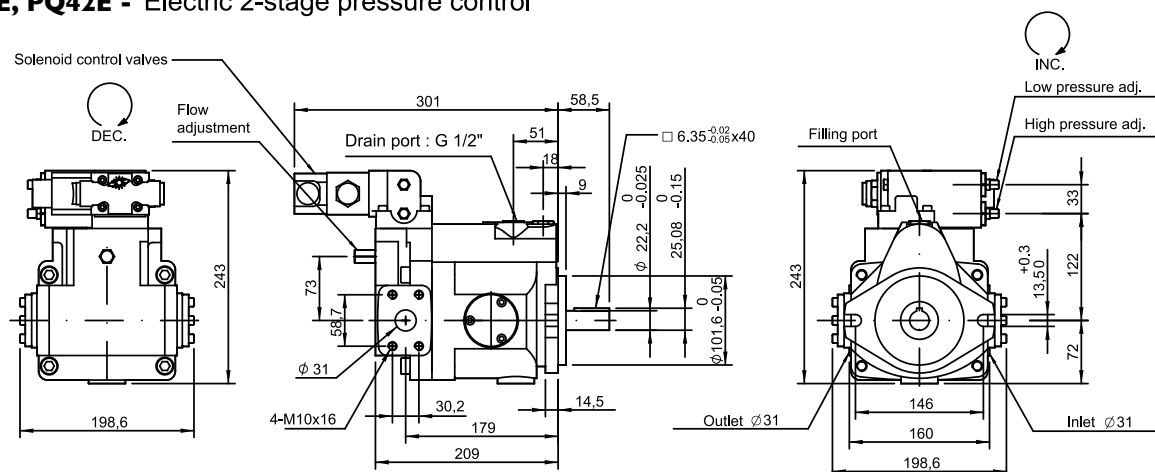


AXIAL PISTON PUMP

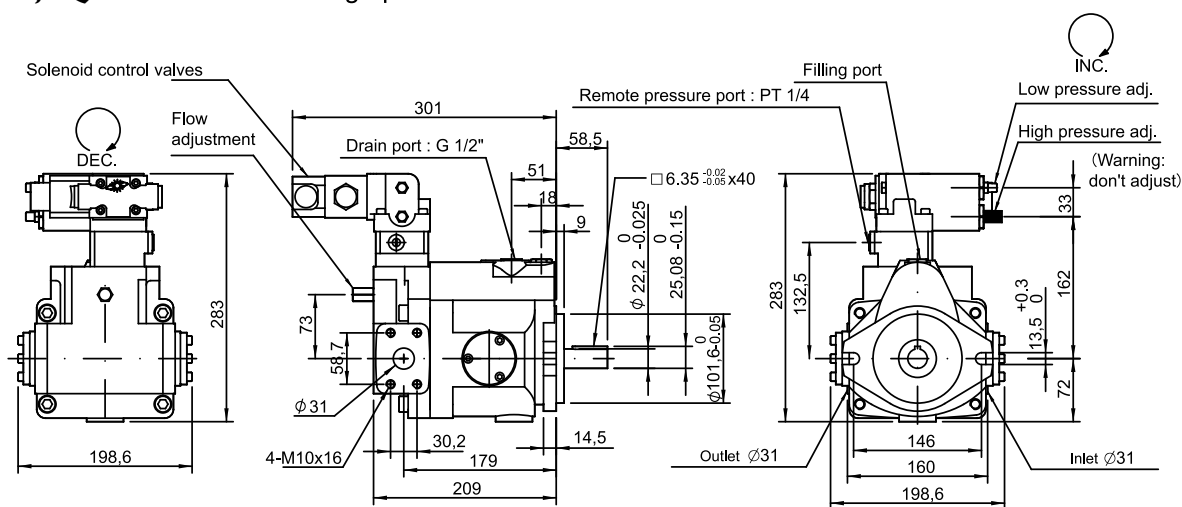
PQ SERIES

DIMENSION

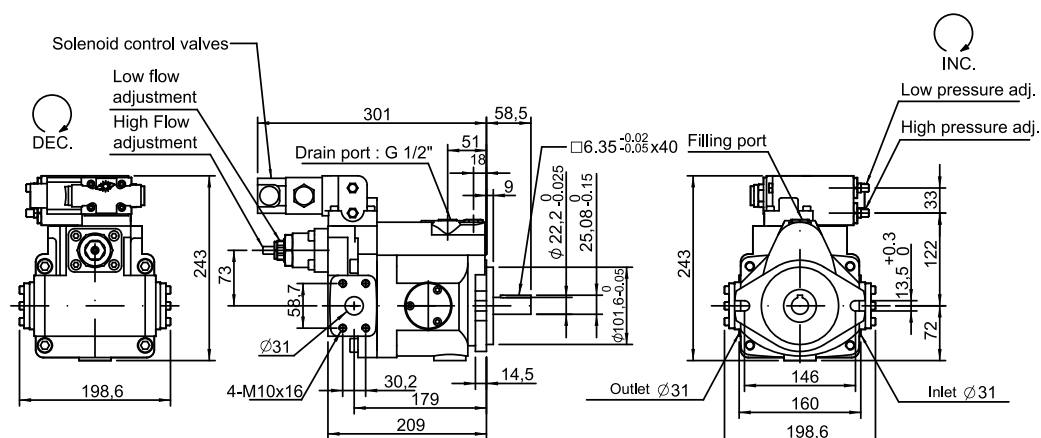
PQ38E, PQ42E - Electric 2-stage pressure control



PQ38EG, PQ42EG - Electric 2-stage pressure control + Remote



PQ38F, PQ42F - Electric 2-stage pressure control & Flow control

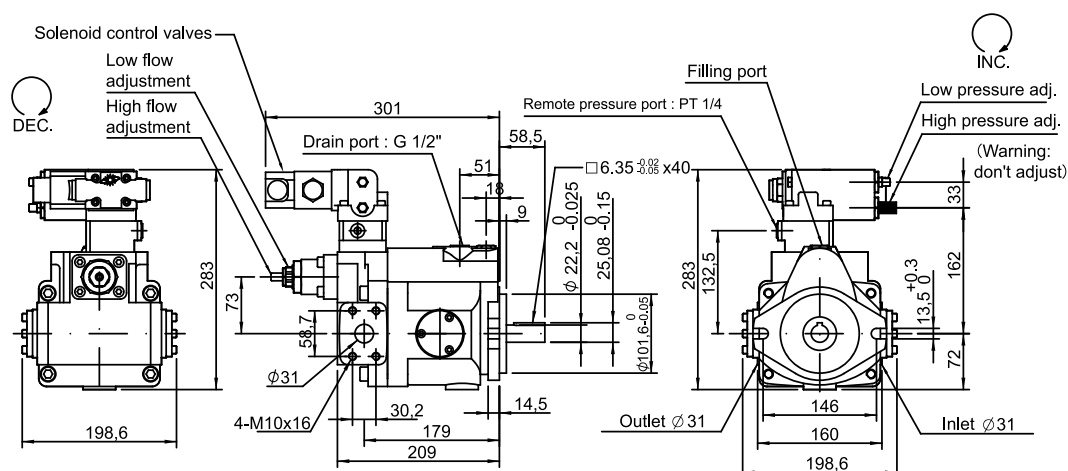


AXIAL PISTON PUMP

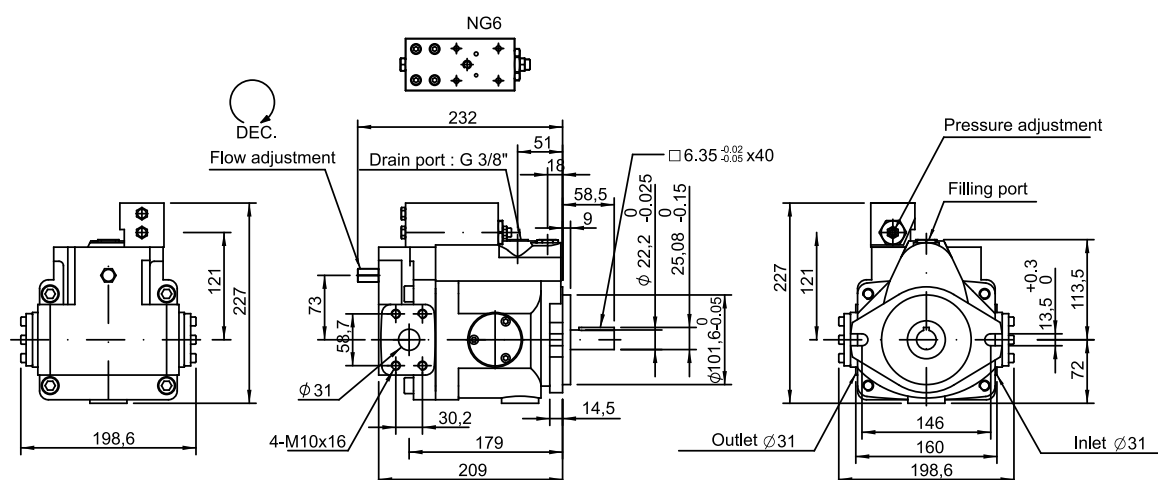
PQ SERIES

DIMENSION

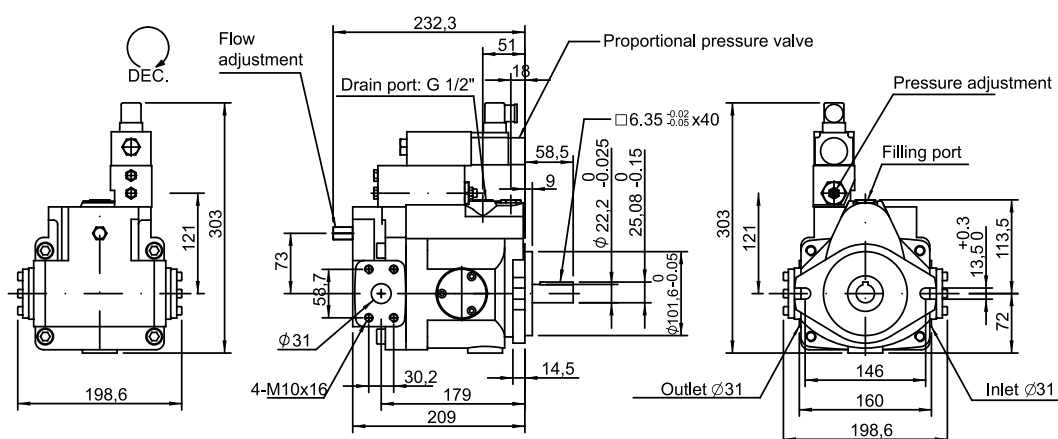
PQ38FG, PQ42FG - Electric 2-stage pressure control & Flow control + Remote



PQ38GM, PQ42GM - Remote pressure compensator with NG6 interface



PQ38GJ, PQ42GJ - Remote pressure compensator + Proportional pressure valve

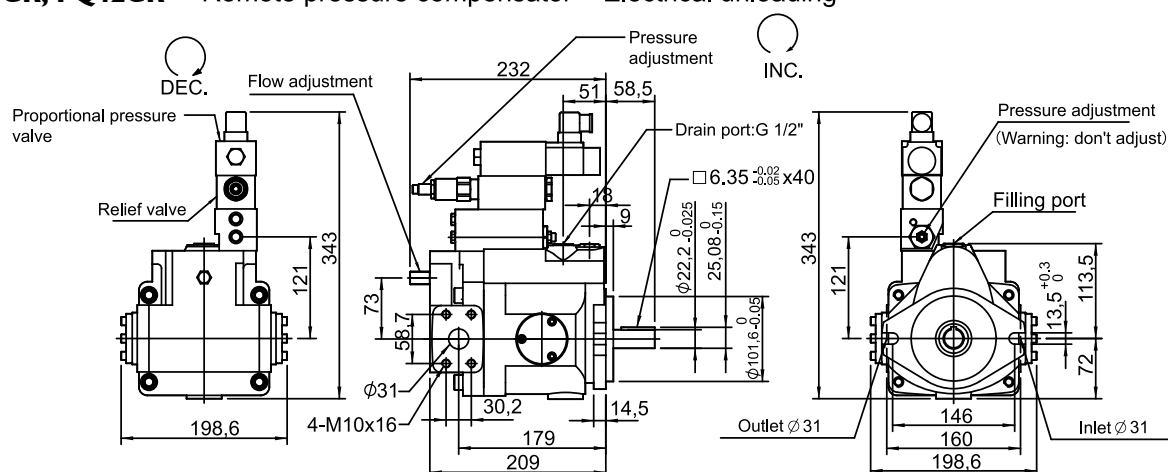


AXIAL PISTON PUMP

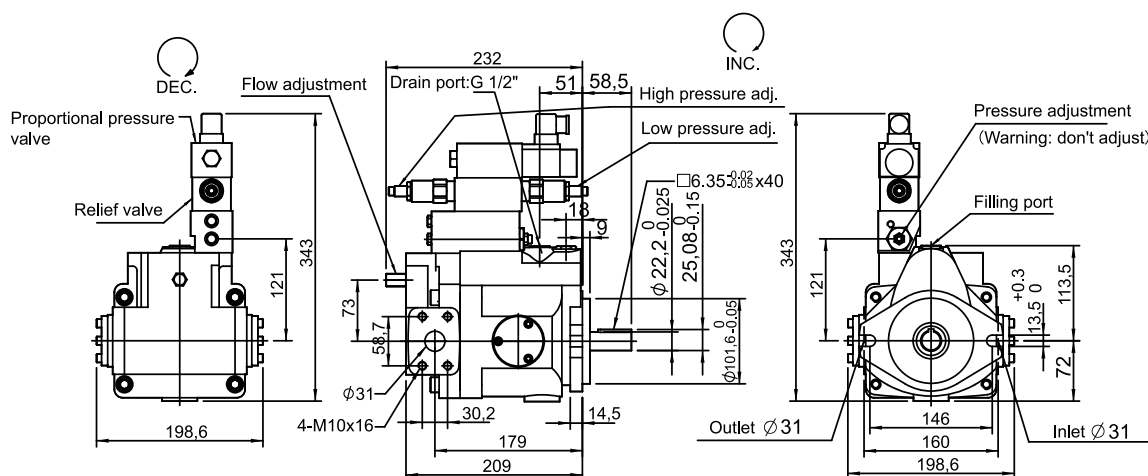
PQ SERIES

DIMENSION

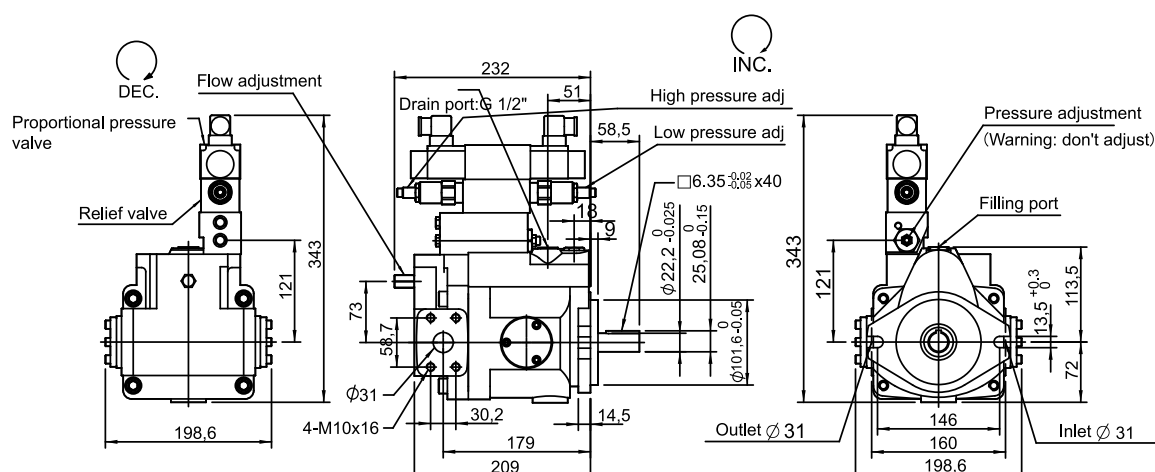
PQ38GR, PQ42GR - Remote pressure compensator + Electrical unloading



PQ38GB, PQ42GB - Remote pressure compensator + 2-stage pressure control

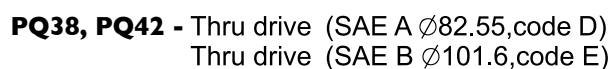


PQ38GC, PQ42GC - Remote pressure compensator + Electrical unloading + 2-stage pressure control

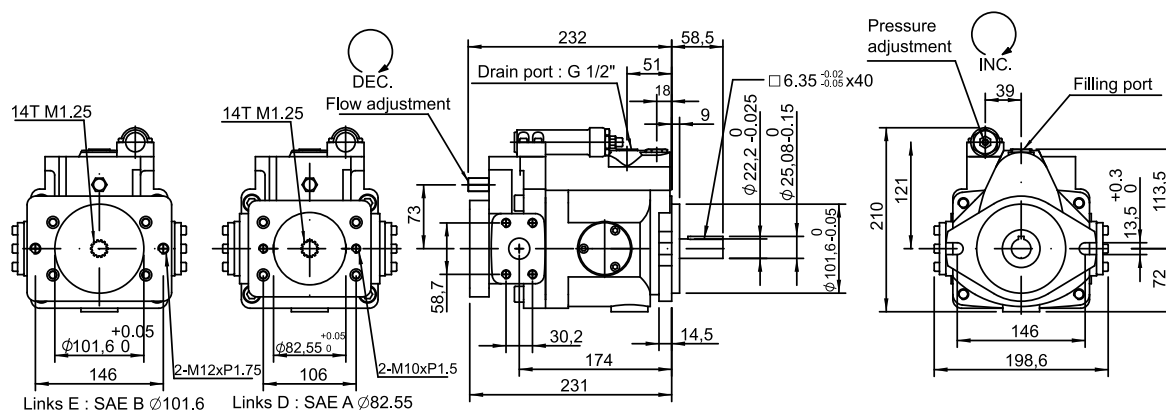


PQ SERIES

PQ38HQ, PQ42HQ - Load-sensing compensator + Proportional flow valve + Relief valve



Type	A	B	C	CG	CR	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HC
○ Thru drive option	○					○	○	○	○			○	○	○	○	○	○



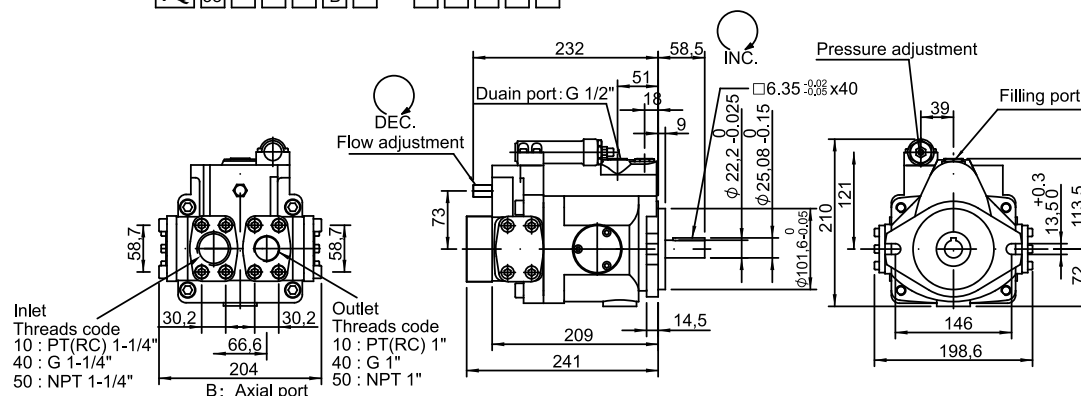
AXIAL PISTON PUMP

PQ SERIES

DIMENSION

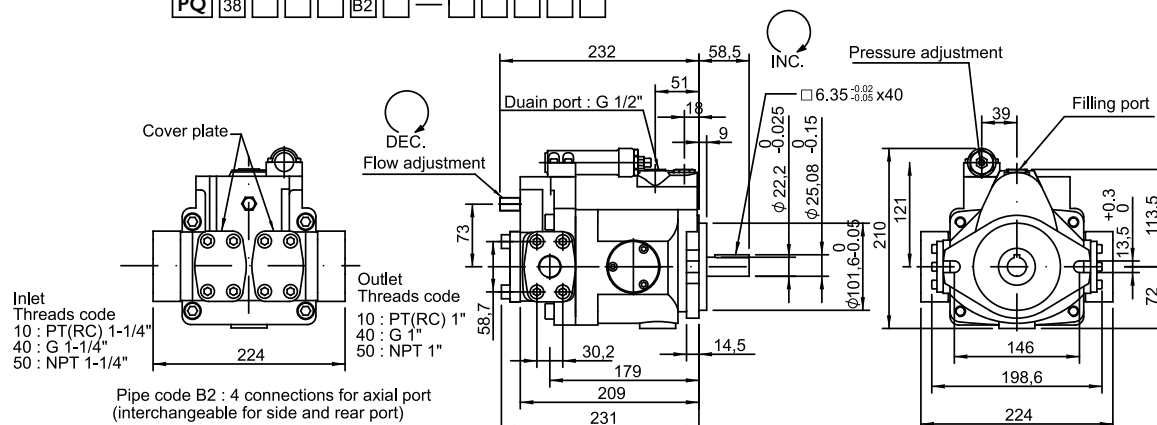
PQ38, PQ42 - Rear port (Please following order code no.6, add "B")

PQ 38 □ □ □ B □ — □ □ □ □ □



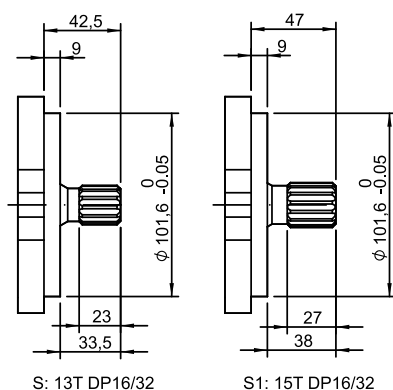
PQ38, PQ42 - 4 connections for rear port (Please following order code no.6, add "B2")

PQ 38 □ □ □ B2 □ — □ □ □ □ □

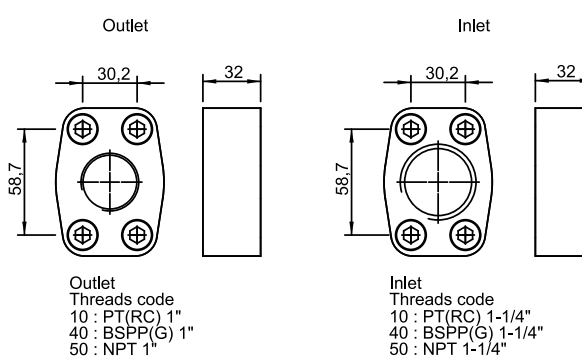


Type	A	B	C	CG	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HQ
○ Axial port option	○	○	○	○					○	○	○	○	○	○		

PQ38, PQ42 - Splined shaft type

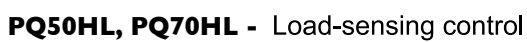


PQ38, PQ42 - Inlet / Outlet



PQ SERIES

PQ50A, PQ70A - Standard pressure control

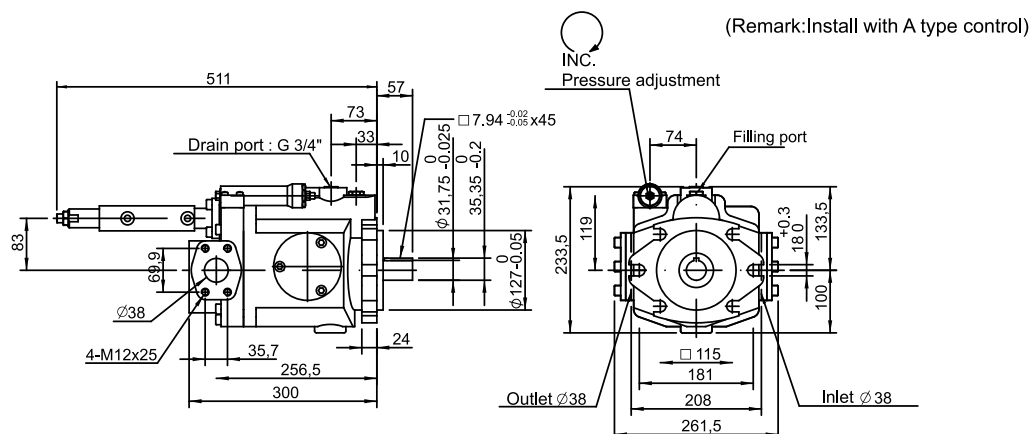


AXIAL PISTON PUMP

PQ SERIES

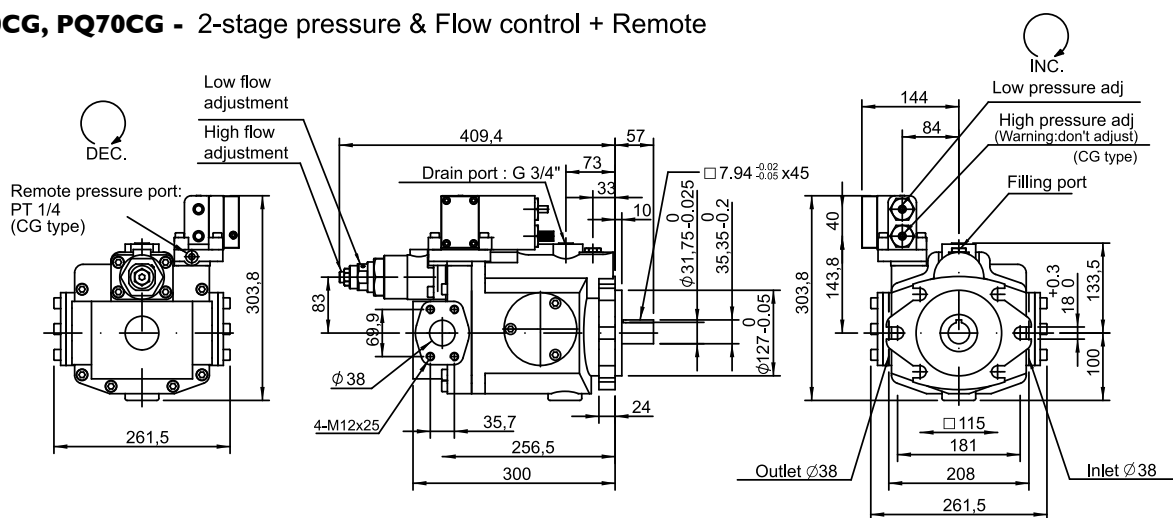
DIMENSION

PQ50B, PQ70B - Multi-stage flow & Singe-stage pressure control (with cylinder)

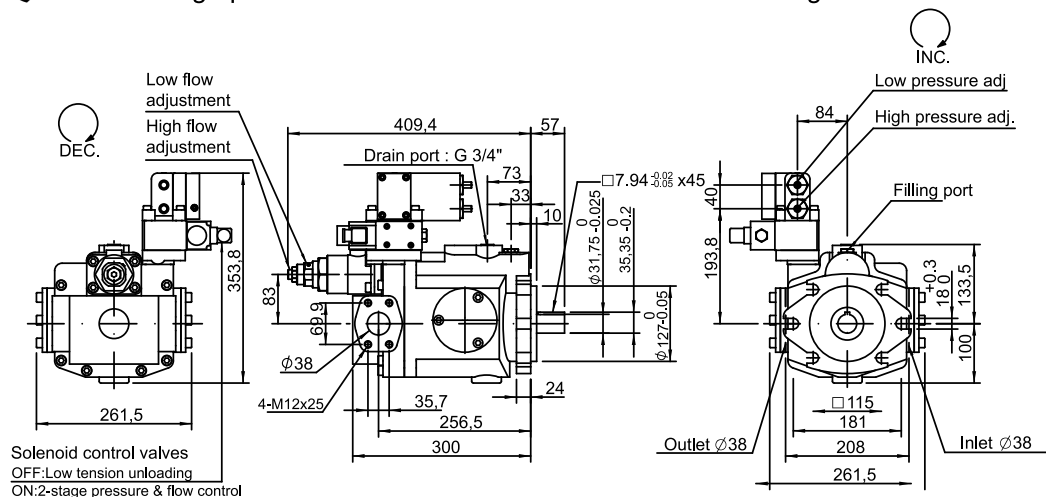


PQ50C, PQ70C - 2-stage pressure & Flow control

PQ50CG, PQ70CG - 2-stage pressure & Flow control + Remote



PQ50CR, PQ70CR - 2-stage pressure & Flow control + Low tension unloading



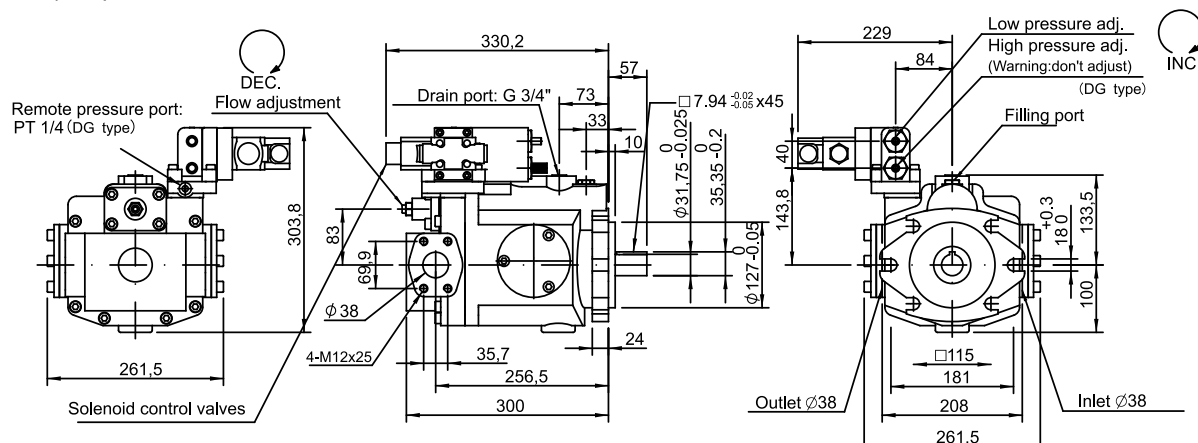
AXIAL PISTON PUMP

PQ SERIES

DIMENSION

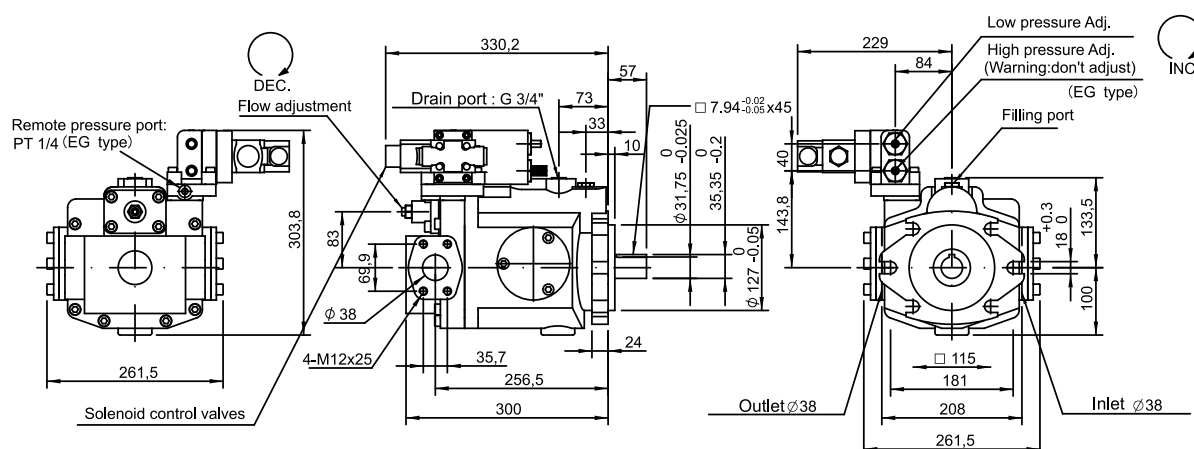
PQ50D, PQ70D - Low tension unloading + Pressure control

PQ50DG, PQ70DG - Low tension unloading + Pressure control + Remote



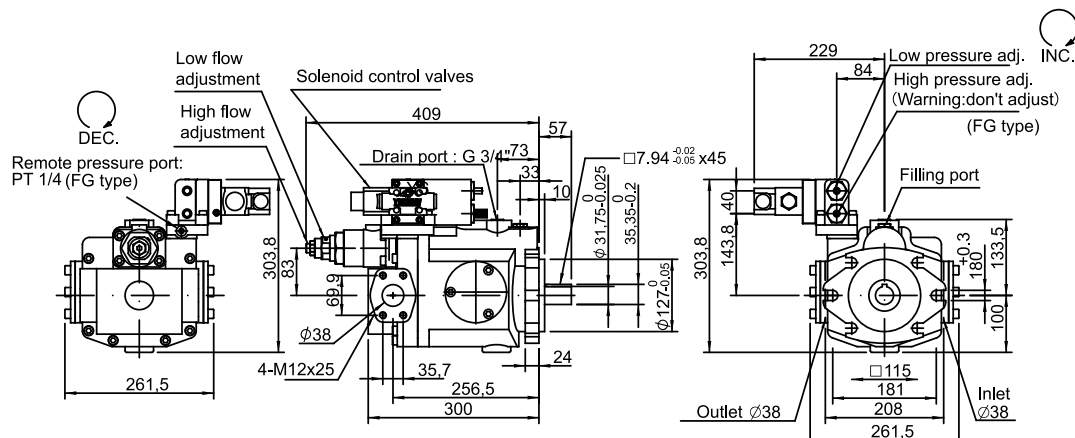
PQ50E, PQ70E - Electric 2-stage pressure control

PQ50EG, PQ70EG - Electric 2-stage pressure control + Remote



PQ50F, PQ70F - Electric 2-stage pressure control & Flow control

PQ50FG, PQ70FG - Electric 2-stage pressure control & Flow control + Remote

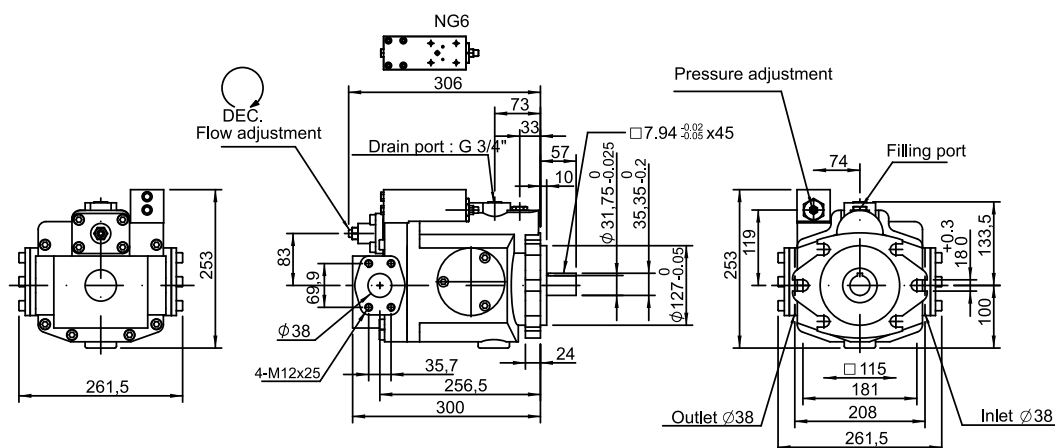


AXIAL PISTON PUMP

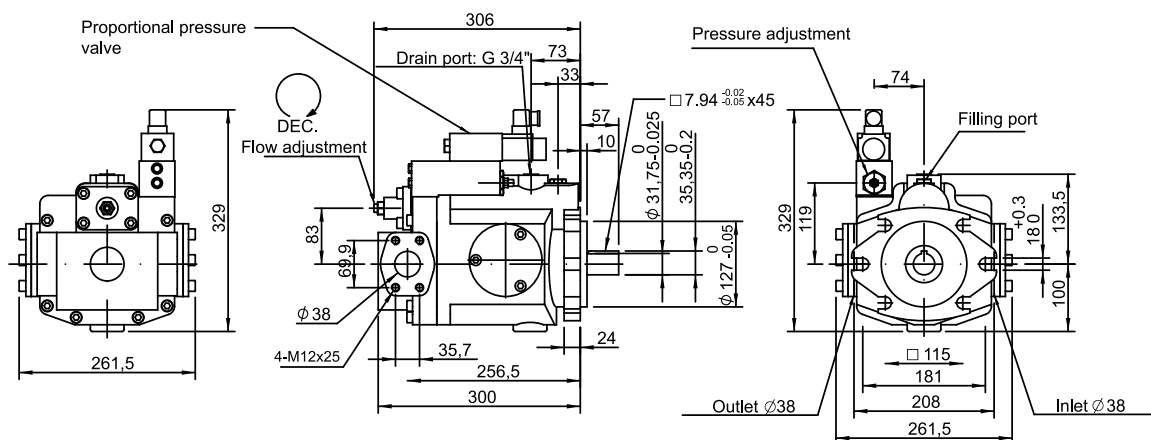
PQ SERIES

DIMENSION

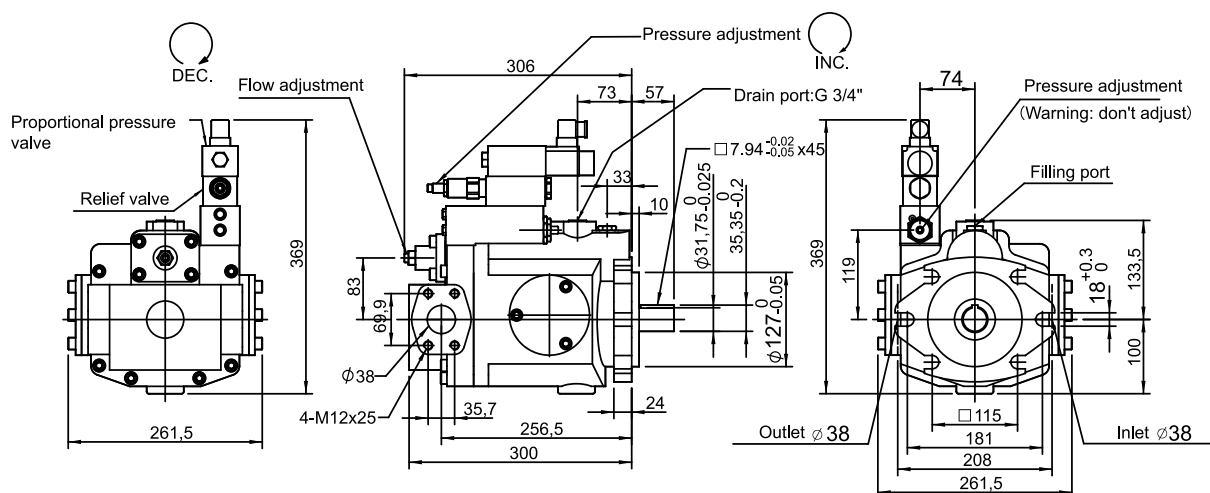
PQ50GM, PQ70GM - Remote pressure compensator with NG6 interface



PQ50GJ, PQ70GJ - Remote pressure compensator + Proportional pressure valve



PQ50GR, PQ70GR - Remote pressure compensator + Electrical unloading

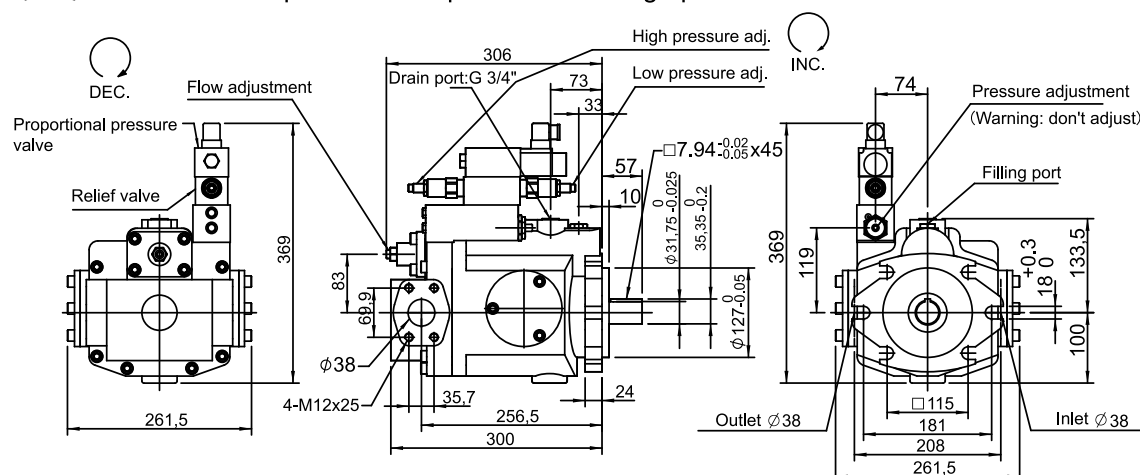


AXIAL PISTON PUMP

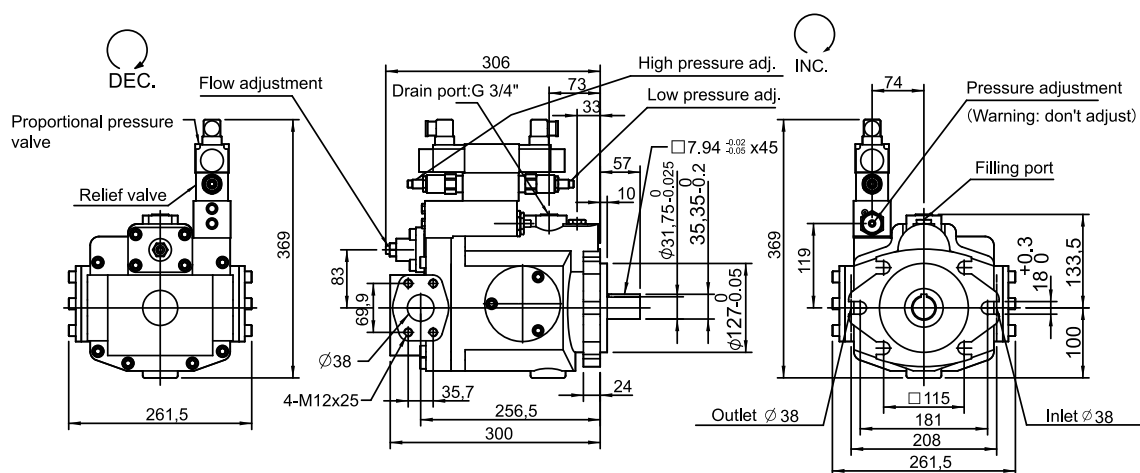
PQ SERIES

DIMENSION

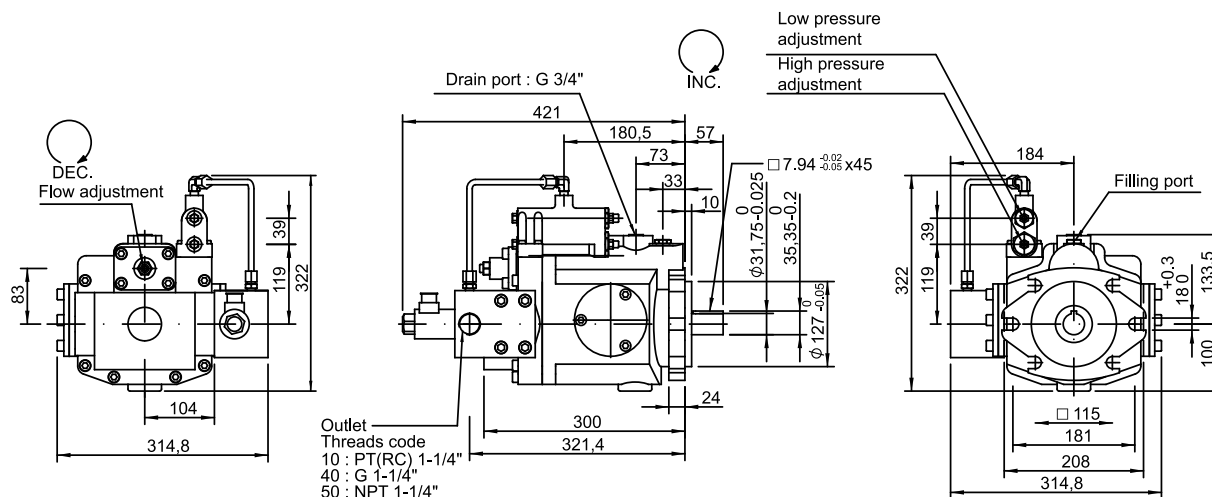
PQ50GB, PQ70GB - Remote pressure compensator + 2-stage pressure control



PQ50GC, PQ70GC - Remote pressure compensator + Electrical unloading + 2-stage pressure control



PQ50HQ, PQ70HQ - Load-sensing compensator + Proportional flow valve + Relief valve

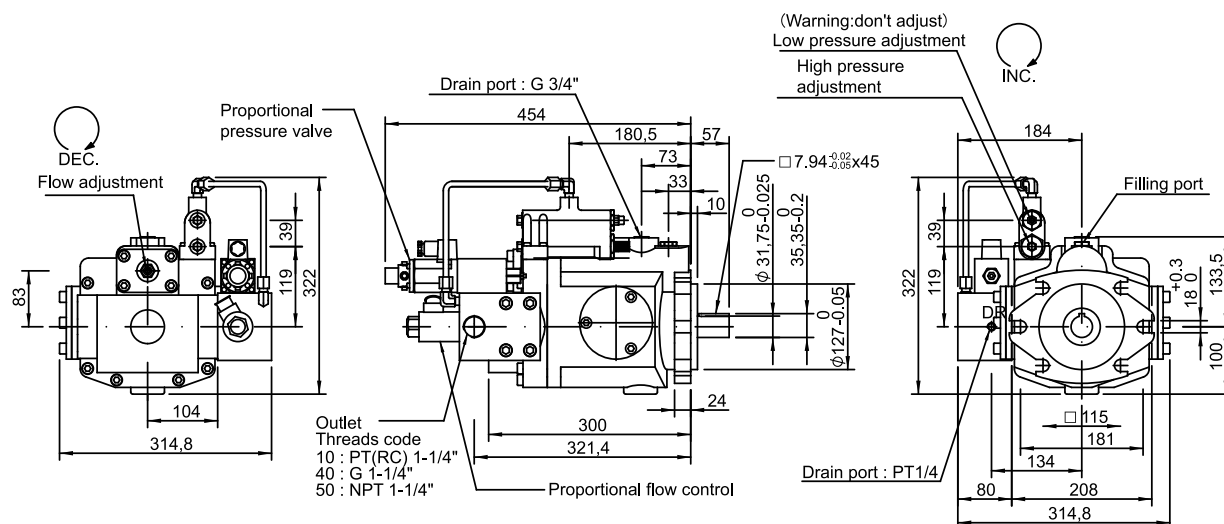


AXIAL PISTON PUMP

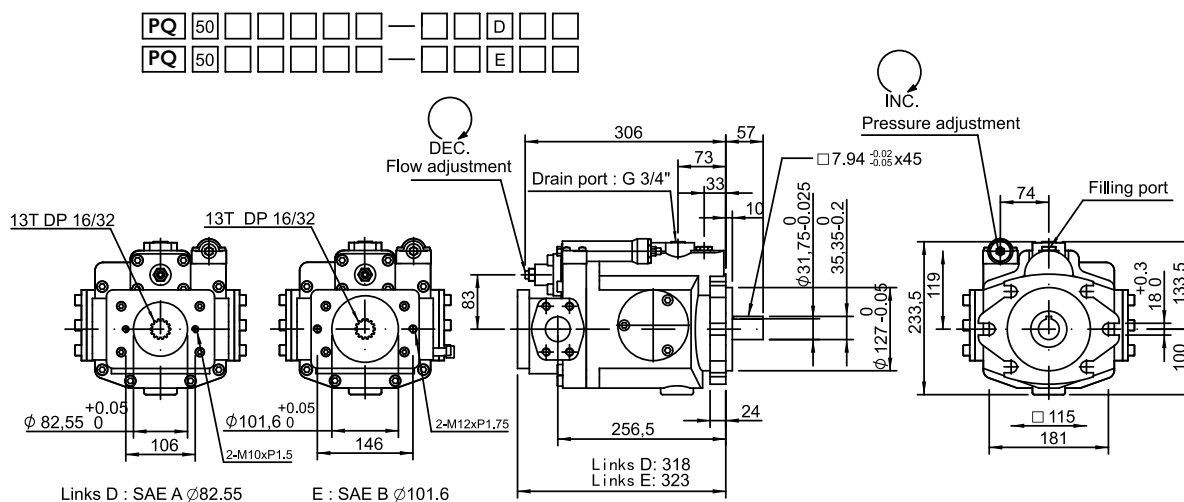
PQ SERIES

DIMENSION

PQ50HK, PQ70HK - Load-sensing compensator + Proportional pressure valve + Proportional flow valve



PQ50, PQ70 - Thru drive (SAE A $\varnothing 82.55$, SAE B $\varnothing 101.6$, code D or E)



Type	A	B	C	CR	CG	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HQ
Thru drive option	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

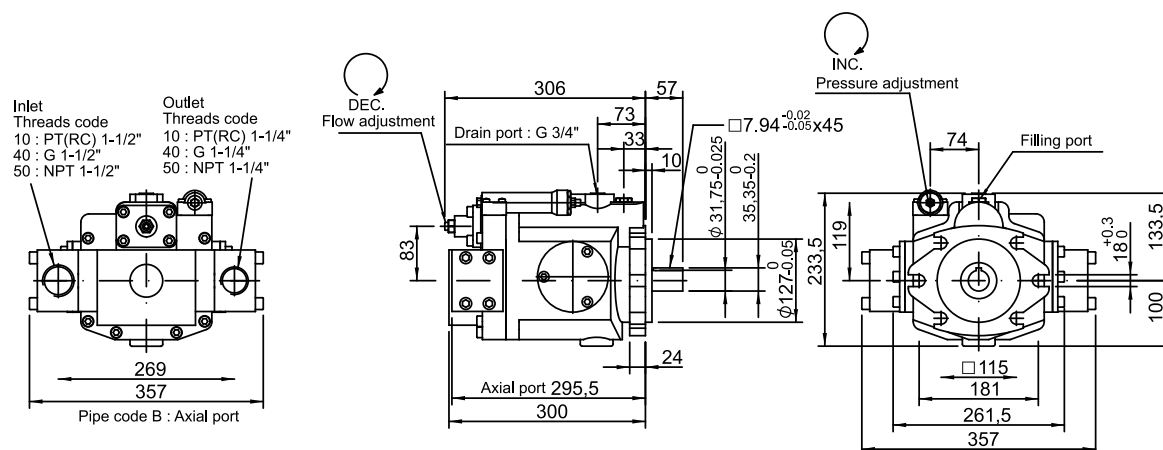
AXIAL PISTON PUMP

PQ SERIES

DIMENSION

PQ50, PQ70 - Rear port (Please following order code no.6 add "B")

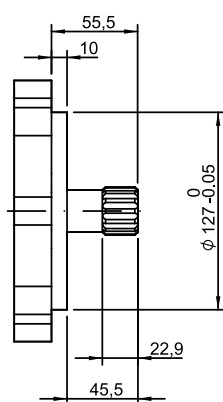
PQ 50 B —



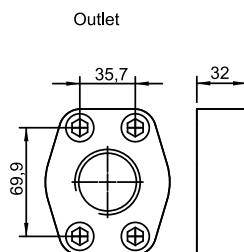
Type	A	B	C	CR	CG	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HQ
○ Thru drive option	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

PQ50, PQ70 - Splined shaft type

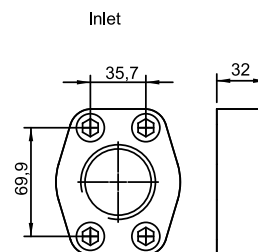
PQ50, PQ70 - Inlet / outlet



S: 14T DP12/24



Threads code
10 : PT(RC) 1-1/4"
40 : G 1-1/4"
50 : NPT 1-1/4"

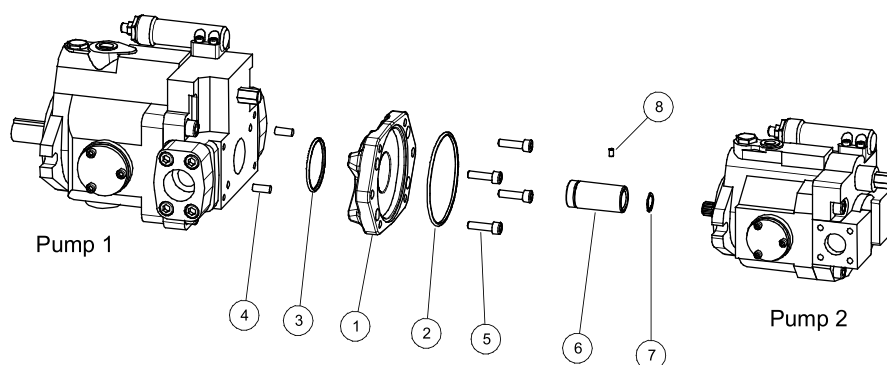


Threads code
10 : PT(RC) 1-1/2"
40 : G 1-1/2"
50 : NPT 1-1/2"

AXIAL PISTON PUMP

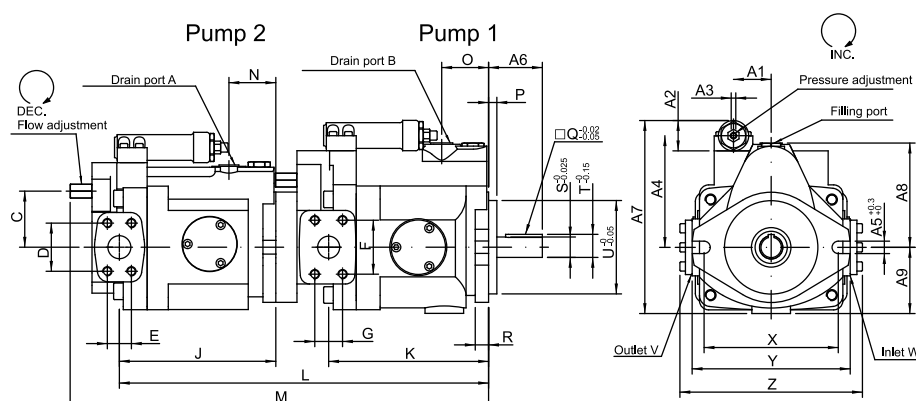
PQ SERIES

PUMP COMBINATION - COUPLING



⑥ Coupling	⑦ Snap ring	Depending 2nd pump to use snap ring or not (● : With snap ring)			⑧ Screw
		Piston pump: PQ15~18, AR16	Gear pump: HGP- 3A	Vane pump: F30, F40	
COUP - PQ15+15	R13	●	●	●	--
COUP - PQ23-1	R13	●	●		--
COUP - PQ23-3	R20	●			--
COUP - PQ23-5	R20			●	M5 x8
COUP - PQ23-6	--				M5 x8
COUP - PQ38-1	R13	●	●		--
COUP - PQ38-3	R20	●			--
COUP - PQ38-4	--				--
COUP - PQ38-5	R20			●	M5 x8
COUP - PQ38-6	--				M5 x8
COUP - PQ38-7	--				M5 x8
COUP - PQ70-1	R13	●	●		--
COUP - PQ70-3	R20	●			--
COUP - PQ70-4	--				--
COUP - PQ70-5	R20			●	M5 x8
COUP - PQ70-6	--				M5 x8
COUP - PQ70-7	--				M5 x8

③ O-ring	G55
④ Pin	ø8x16 x2 nos
⑤ Screw	M8x30 x4 nos

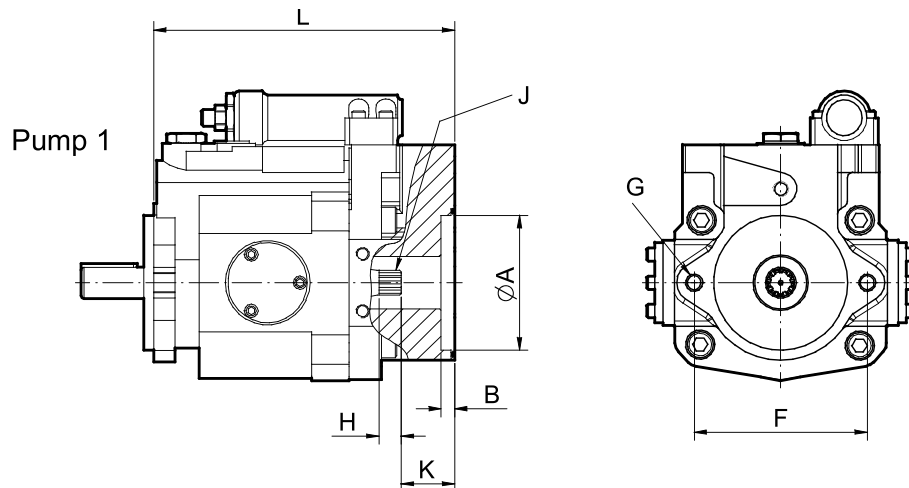


AXIAL PISTON PUMP

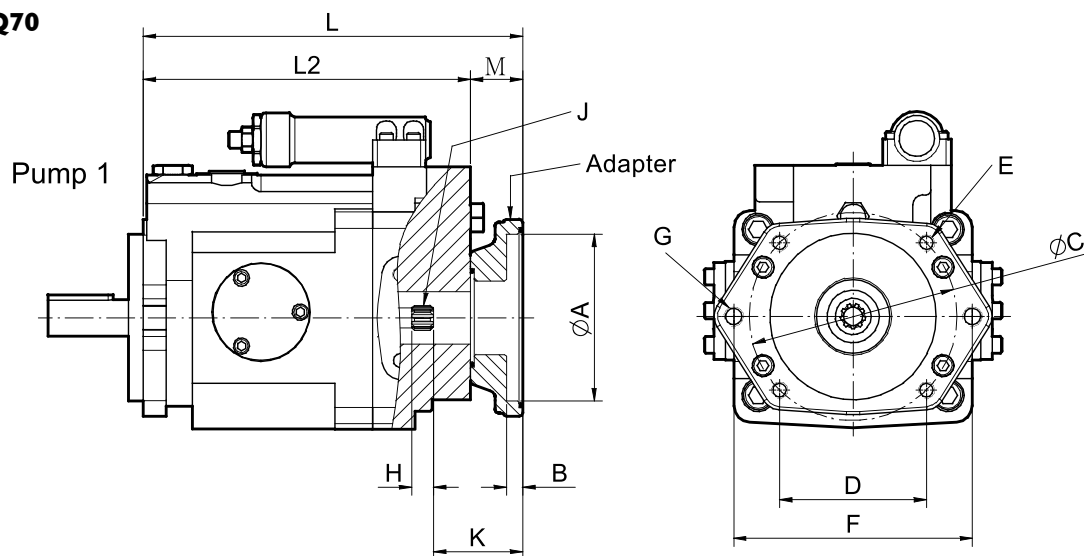
PQ SERIES

PUMP COMBINATION - TRU DRIVE DIMENSION

PQ15, PQ18



PQ23~PQ70



Model	2nd Pump	ϕA	B	ϕC	D	E	F	G
PQ15, PQ18	SAE A	$\phi 82.55$	8.35	--	--	--	106.3	M10xP1.5
	SAE A	$\phi 82.55$	8.35	$\phi 127$	89.8	M10xP1.5	106.3	M10xP1.5
PQ23~ PQ70	SAE A	$\phi 101.6$	10	$\phi 127$	89.8	M10xP1.5	146	M12xP1.75
	Metric	$\phi 100$	10	$\phi 125$	88.39	M10xP1.5	140	M12xP1.75
	Vane Pump	$\phi 95.02$	8.35	--	90	M10xP1.5	--	--

Model	K	H	J	M	L	L2		
PQ15, PQ18	33	13.5	9T 16/32 DP	--	185	--		
PQ23, PQ25	59	13.5	9T 16/32 DP	32	237	205		
PQ38, PQ42	66	20	14T M1.25	32	241	209		
PQ50, PQ70	64.4	22	13T 16/32DP	32	332	300		

PQ SERIES

PUMP 1 PQ15, PUMP 2 PQ15



AXIAL PISTON PUMP

PQ SERIES

PUMP COMBINATION - TRU DRIVE DIMENSION

Pump 1	Pump 2	A	B	C	D	E	F	G	H	I
PQ15, PQ18	PQ15, PQ18	G 3/8" (RC 3/8")	G 3/8" (RC 3/8")	57.45	35.1	35.1	35.1	35.1	M8xP1.25x20	M8xP1.25x20
PQ23, PQ25	PQ15, PQ18	G 3/8" (RC 3/8")	G 3/8" (RC 3/8")	57.45	35.1	35.1	52.4	26.2	M8xP1.25x20	M10xP1.5x16
PQ38, PQ42	PQ23, PQ25	G 3/8" (RC 3/8")	G 3/8" (RC 3/8")	61	52.4	26.2	52.4	26.2	M10xP1.5x16	M10xP1.5x16
PQ38, PQ42	PQ15, PQ18	G 3/8" (RC 3/8")	G 1/2" (RC 1/2")	57.45	35.1	35.1	58.7	30.2	M8xP1.25x20	M10xP1.5x16
PQ38, PQ42	PQ23, PQ25	G 3/8" (RC 3/8")	G 1/2" (RC 1/2")	61	52.4	26.2	58.7	30.2	M10xP1.5x16	M10xP1.5x16
PQ38, PQ42	PQ38, PQ42	G 1/2" (RC 1/2")	G 1/2" (RC 1/2")	73	58.7	30.2	58.7	30.2	M10xP1.5x16	M10xP1.5x16
PQ50, PQ70	PQ15, PQ18	G 3/8" (RC 3/8")	G 3/4" (RC 3/4")	57.45	35.1	35.1	69.9	35.7	M8xP1.25x20	M12xP1.75x25
PQ50, PQ70	PQ23, PQ25	G 3/8" (RC 3/8")	G 3/4" (RC 3/4")	61	52.4	26.2	69.9	35.7	M10xP1.5x16	M12xP1.75x25
PQ50, PQ70	PQ38, PQ42	G 1/2" (RC 1/2")	G 3/4" (RC 3/4")	73	58.7	30.2	69.9	35.7	M10xP1.5x16	M12xP1.75x25

Pump 1	Pump 2	J	K	L	LA	LB	M	N	O	P	Q	R	S	T	U
PQ15, PQ18	PQ15, PQ18	147	147	332	185	—	382	48	48	6	4.76x32	13	Ø19.05	21.15	Ø82.55
PQ23, PQ25	PQ15, PQ18	147	170	384	237	32	411	48	51	9	6.35x40	14	Ø22.22	25.08	Ø101.6
PQ23, PQ25	PQ23, PQ25	170	170	407	237	32	455	51	51	9	6.35x40	14	Ø22.22	25.08	Ø101.6
PQ38, PQ42	PQ15, PQ18	147	179	388	241	32	438	48	51	9	6.35x40	14.5	Ø22.22	25.08	Ø101.6
PQ38, PQ42	PQ23, PQ25	170	179	411	241	32	464	51	51	9	6.35x40	14.5	Ø22.22	25.08	Ø101.6
PQ38, PQ42	PQ38, PQ42	179	179	420	241	32	473	51	51	9	6.35x40	14.5	Ø22.22	25.08	Ø101.6
PQ50, PQ70	PQ15, PQ18	147	256.5	479	332	32	529	48	73	10	7.94x45	24	Ø31.75	35.35	Ø127
PQ50, PQ70	PQ23, PQ25	170	256.5	502	332	32	555	51	73	10	7.94x45	24	Ø31.75	35.35	Ø127
PQ50, PQ70	PQ38, PQ42	179	256.5	511	332	32	564	51	73	10	7.94x45	24	Ø31.75	35.35	Ø127

Pump 1	Pump 2	V	W	X	Y	Z	A1	A2	A3	A4	A5	A6	A7	A8	A9
PQ15, PQ18	PQ15, PQ18	Ø25	Ø25	106	131	165	44	31.2	5	84	11	44.5	160	91.5	60
PQ23, PQ25	PQ15, PQ18	Ø25	Ø25	146	146	182	39	31.2	5	110	13.5	58.5	193	93	68
PQ23, PQ25	PQ23, PQ25	Ø25	Ø25	146	146	182	39	31.2	5	110	13.5	58.5	193	93	68
PQ38, PQ42	PQ15, PQ18	Ø31	Ø31	146	160	198.6	39	31.2	5	121	13.5	58.5	210	113.5	72
PQ38, PQ42	PQ23, PQ25	Ø31	Ø31	146	160	198.6	39	31.2	5	121	13.5	58.5	210	113.5	72
PQ38, PQ42	PQ38, PQ42	Ø31	Ø31	146	160	198.6	39	31.2	5	121	13.5	58.5	210	113.5	72
PQ50, PQ70	PQ15, PQ18	Ø38	Ø38	181	208	261.5	74	40	8	119	18	57	233.5	133.5	100
PQ50, PQ70	PQ23, PQ25	Ø38	Ø38	181	208	261.5	74	40	8	119	18	57	233.5	133.5	100
PQ50, PQ70	PQ38, PQ42	Ø38	Ø38	181	208	261.5	74	40	8	119	18	57	233.5	133.5	100

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