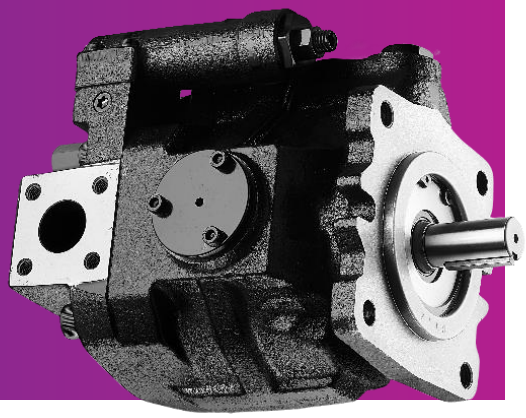
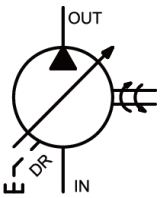
全懋精機股份有限公司
Camel Precision Co., Ltd.

V Series Axial Piston Pump





Nominal pressure：175 bar

Max. pressure：250 bar/6ms

Feature

- New design for changeable angle of swash plate, wide applications.
- Modular control, easy to design system, with great power saving trait and small size.
- Low power consuming, low oil temperature rising, suitable application for assembling small power unit.
- Special design, low noise level during full pressure time.

Application

Suitable for machine tools, press machine, stamping press, plastic molding machine.

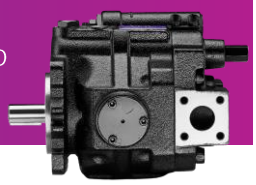
Model Code

Standard Products

Series	Size and Displacement	Control Device	Pressure Adjustment Range (bar)	Rotating Direction	
V	8, 10, 12, 15 18, 23, 25, 38 42, 50, 70	A: Standard pressure control	1 : 8 - 70 2 : 15–140 3 : 20-210 4 : 20–250	R Clockwise	L Counterclockwise

Remark：

1. Install outlet on top, the pipe pressure needs less than 2 bar.
2. Using at max. pressure, please under 6 seconds for per-cycle time.
3. Hydraulic oil cleaning specification, please refer to the instruction manual.
4. We supply combinable pumps with different series, standard with Metric / SAE size.



Order Model Description

V	15	A	3	R			-							
1	2	3	4	5	6	7		8	9	10	11	12	13	14
Series	Specification Displacement	Control Device	Pressure Adjustment Range	Rotating Direction	Direction of Piping Connections	Shaft Type		Voltage	Threads	Thru Drive & 2nd Pump	Special Specification	Mounting	Seals	Design No.

Series

1	V Series axial piston pump. Nominal pressure : 175 bar	Max. pressure : 250bar/6ms (1000ms =1sec)	V

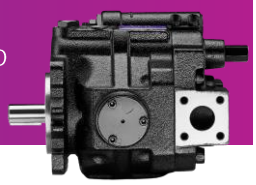
Size and Displacement

2	Code		8	10	12	15	18	23	25	38	42	50	70
	Size		1			2			3			4	
	Displacemen	cc/rev	8.0	10.0	12.0	15.0	18.0	23.0	25.0	37.8	42.0	51.5	69.7
	t	In^3/rev	0.48	0.61	0.73	0.90	1.1	1.40	1.52	2.31	2.56	3.14	4.25

Control Device

3			
	Standard pressure control		A *
	Remote pressure control		G
	Loading-sensing control	A ▲ Low Pressure: 7KG	HL ☐
		B Mid Pressure: 14KG	
		C High Pressure: 21KG	
	Multi-stage flow & single-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

●=Available | - =None available | *=Standard Type | ▲=Customized product



	Loading-sensing compensator	A Low Pressure: 7KG	HQ ☐
	+ Proportional flow valve	B Mid Pressure: 14KG	
	+ Relief valve	C High Pressure: 21KG	
	Loading-sensing compensator	A Low Pressure: 7KG	HK ☐
	+ Proportional pressure valve	B Mid Pressure : 14KG	
	+ Proportional flow valve	C High Pressure : 21KG	

Pressure Adjustment Range

		8	10	12	15	18	23	25	38	42	50	70	
4	8 - 70bar(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

Rotating Direction

5	Clockwise	R
	Counterclockwise	L

Direction of Piping Connections

		8	10	12	15	18	23	25	38	42	50	70	
6	None	●	●	●	●	●	●	●	●	●	●	●	☐ *
	Rear port (Flange)	—	—	—	—	—	●	●	●	●	●	●	B
	Side port+ Rear port(Flange)	—	—	—	—	—	●	●	●	●	—	—	B2

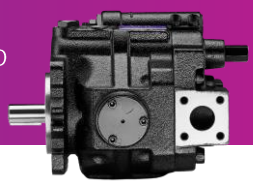
Shaft Type

	Displacement	Code		
7	None	Key shaft : ☐		
	V15, V18	Splined : S 13T 16/32 DP	S1 9T 16/32 DP	S2 11T 16/32 DP
	V23, V25	Splined : S 13T 16/32 DP	▲S1 15T 16/32 DP	▲S3 13T 16/32 DP Longer
	V38, V42	Splined : S 13T 16/32 DP	S1 15T 16/32 DP	S3 13T 16/32 DP Longer
	V50, V70	Splined : S 14T 12/24 DP	▲S1 17T 12/24DP	

Voltage

8	None : Without voltage	☐
	AC100V(50/60HZ)	A
	AC110V(60HZ)	B
	AC220V(50/60HZ)	C
	AC220V(60HZ)	D
	DC 12V	E
	DC 24V(Standard)	F *

●=Available　- =None available　*=Standard Type　▲=Customized product



Threads

9	PT(RC)	●	●	●	●	●	●	●	●	●	●	●	10 *
	BSPP(G)	●	●	●	●	●	●	●	●	●	●	●	40 *
	NPT	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	50
	UNF(SAE o-ring)	●	●	●	●	●	●	●	●	●	●	●	60
	Metric	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	70

Thru Drive & 2nd Pump

10	Single pump(without thru drive)	□
	⌀50.8mm SAE AA	C
	⌀82.55mm SAE A	D
	⌀101.6mm SAE B	E
	⌀127mm	F
	⌀63mm	I
	⌀80mm	J
	⌀100mm	K
	⌀125mm	L

Special Specification

11	Standard type	X	*
	Low pressure type	X1	
	Deadhead	Z	

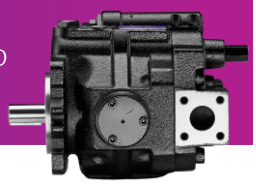
Mounting

12	Only for V15, V18 can select "A", Other displacement only select "None : Standard"	None : Standard	□	*
		SAE A 2 bolt	A	

Seals

13	NBR	□	*
	VITON	A	

●=Available | - =None available | *=Standard Type | ▲=Customized product

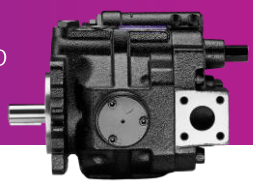


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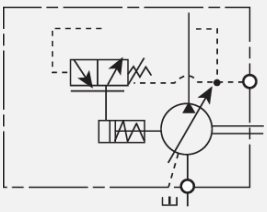
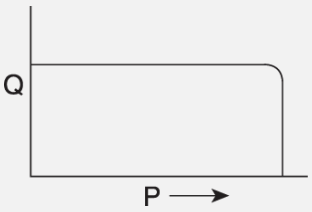
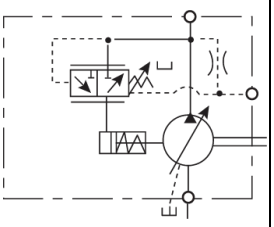
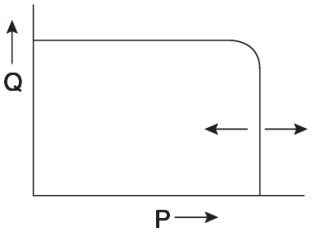
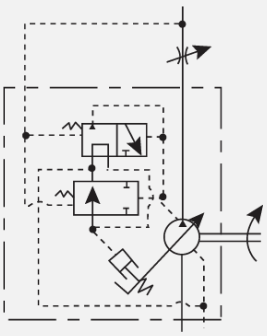
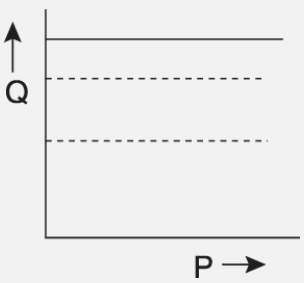
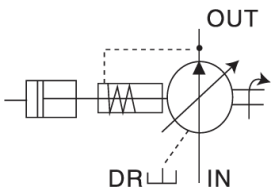
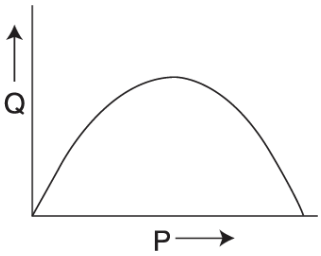
Size	Model	Displacement		Output*				Pressure Adjustment Range(bar)	Rotating Speed		Weight	
				1500 RPM		1800 RPM						
		(cc/rev)	(In^3/rev)	(LPM)	(GPM)	(LPM)	(GPM)		Max. RPM	Min. RPM	(kg)	(LB)
1	V8	8.0	0.48	12.0	3.17	14.4	3.8	1: 8 -70 2: 15 -140 3: 20 - 210 4: 20 - 250	1800	500	13	28.6
	V10	10.0	0.61	15.0	3.90	18.0	4.76				13	28.6
	V12	12.0	0.73	18.0	4.76	21.6	5.73				13	28.6
	V15	15.0	0.90	22.5	5.78	27.0	7.05				13	28.6
	V18	17.8	1.09	26.7	7.05	32.0	8.45				13	28.6
2	V23	23.0	1.40	35.4	9.11	41.4	10.94				22	48.4
	V25	25.0	1.52	37.5	9.66	45.0	11.60				22	48.4
3	V38	37.8	2.31	56.7	14.98	68.0	17.96				26	57.2
	V42	42.0	2.56	63.0	16.23	76.0	19.58				26	57.2
4	V50	51.5	3.14	77.2	20.37	92.7	24.48	1: 8 - 70 2: 15 - 140 3: 20 - 210			56	123.2
	V70	69.7	4.25	104.5	27.6	125.4	33.10				56	123.2

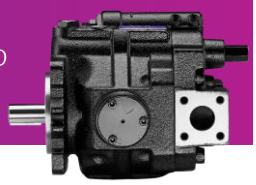
* At（7 bar）100 PSI

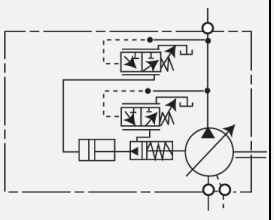
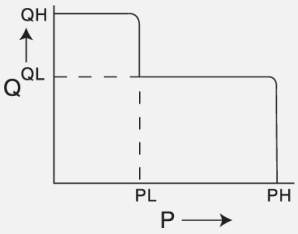
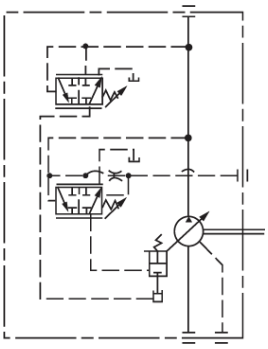
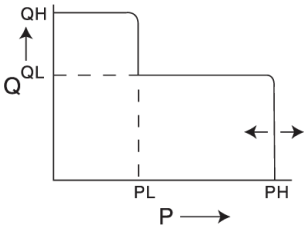
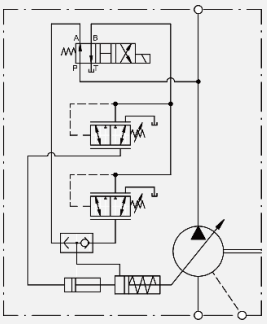
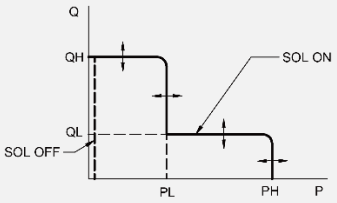
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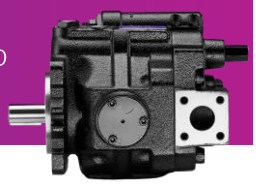


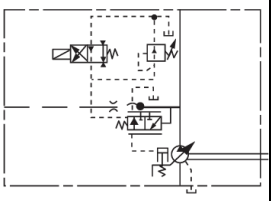
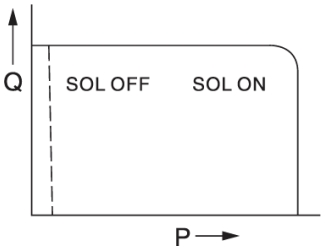
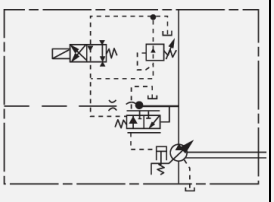
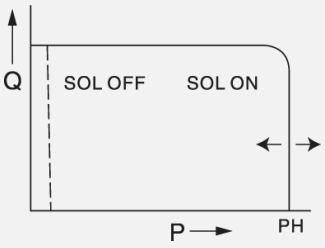
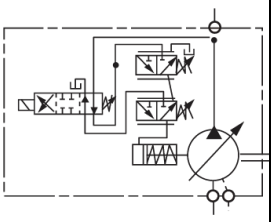
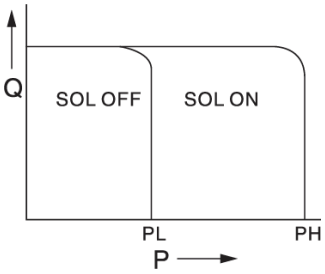
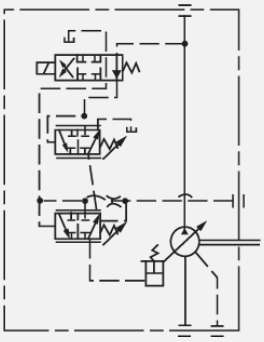
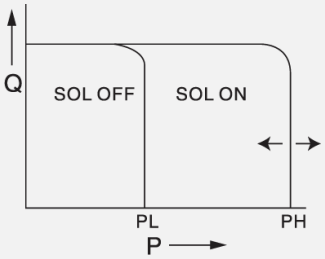
Control Type

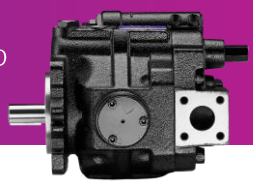
Control	Symbol	Characteristic	Specifications
A type: Standard pressure control			1. When system pressure increase and reach present, the flow decrease automatically and pressure still to be constant. 2. Pressure and flow can be adjusted manually.
G type: Remote pressure control			1. The same function of “A” control type. 2. Pressure can be adjusted remotely by the remote control valve.
HL type: Load-sensing control			1. HL valve with two different pressure, control displacement. 2. 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)			1. Flow can be adjusted from 0 to maximum and pressure can be maintaining at preset pressure. 2. Absorbing impact and vibration which are produced by up down motions. It is suitable for lifting equipment etc.

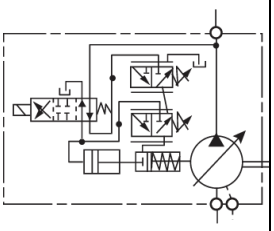
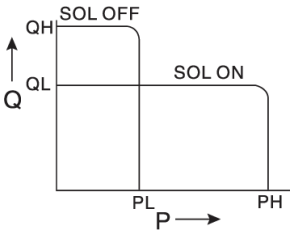
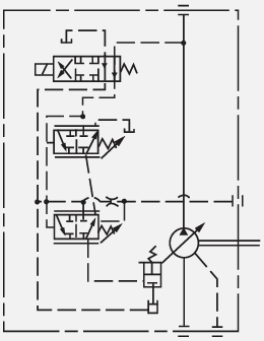
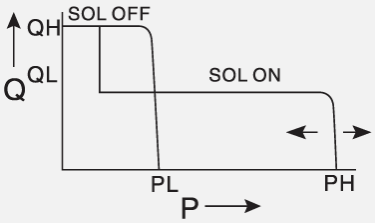
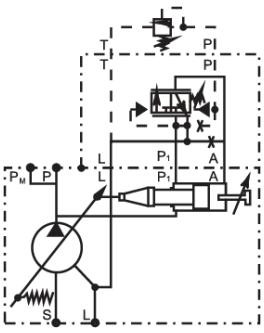
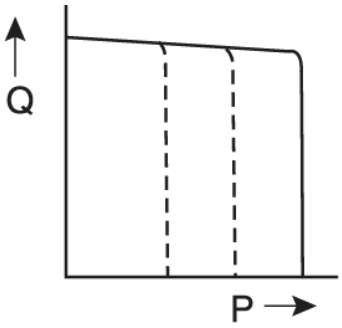


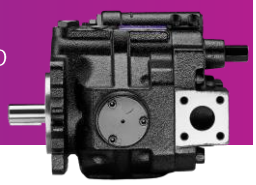
C type : 2-stage pressure & flow control			1. 2-stage pressure to adjust PL to QH and PH to QL. 2. When pressure increase and reach preset pressure “PH”, flow is reduced to “QL”. 3. Adapt for long dead head and short pressurizing machines, speedy and energy saving. 4. Pressure “PH”“PL”, and flow “QH”“QL” can be adjusted optionally.
CG type: 2-stage pressure & flow control + Remote			1. The same function of “C” control type. 2. The pressure and the range can be adjusted by remote control valve. 3. Install CML solenoid control valve to reach good performance.
CR type: 2-stage pressure & flow control + Low tension unloading			1. Install CML solenoid valve, control 2-stage pressure. 2. It is suitable for constant speed lifting equipment, and setting 2-stage working pressure. 3. PL and PH, two options can be PH. SOL OFF: Low tension unloading SOL OFF: 2-stage pressure & flow

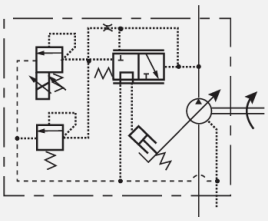
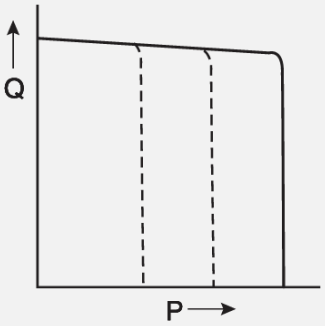
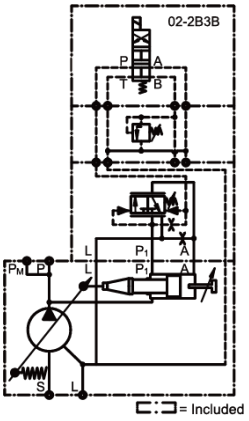
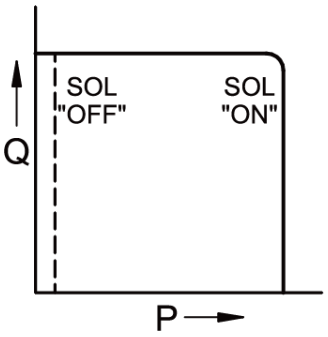
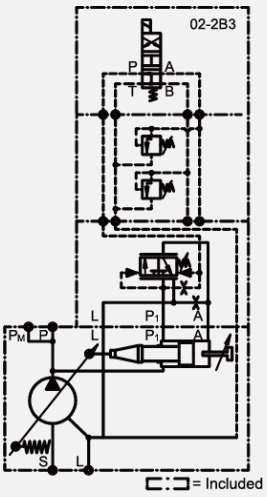
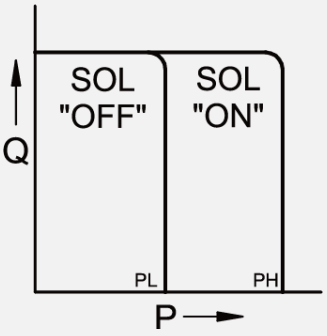


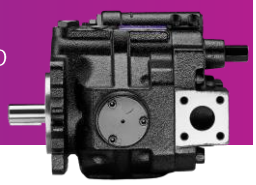
D type: Low tension unloading + Pressure			1. Same as type A and with low tension unloading. 2. It is adapt for long unloading operation. 3. When the system stops, oil temperature and noise maintain low level while being through the unloading.
DG type: Low tension unloading + Pressure control + Remote			1. The same function of “D” control type. 2. The pressure and the range can be adjusted by remote control valve. 3. Install CML 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 equipment, and setting 2-stage working pressure. 3. PL and PH, two options can be selected.
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 CML solenoid control valve to reach good performance.

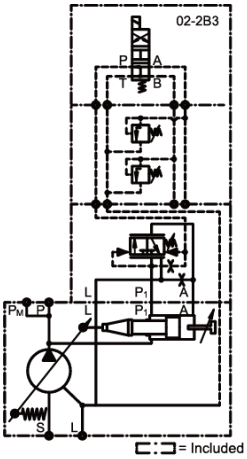
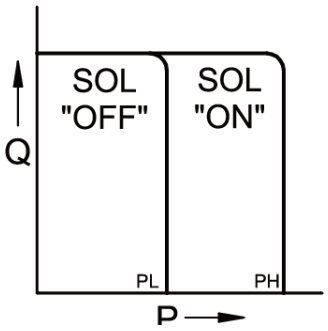
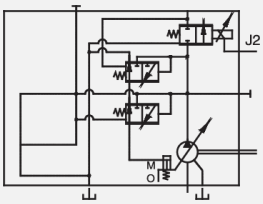
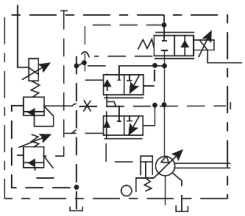
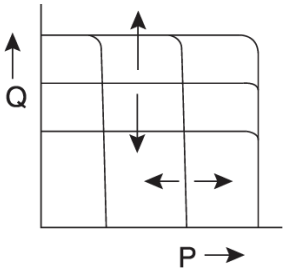


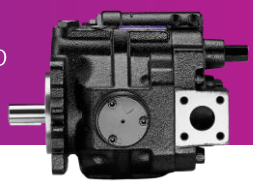
F type: Electric 2-stage pressure control & Flow control			1. Electric 2-stage pressure & flow control to adjust PL to QH, PH to QL. 2. Pressure "PL", "PH" and flow "QH" can be adjusted optionally.
FG type: Electric 2-stage pressure control & Flow control+ Remote			1. Electric 2-stage pressure & flow control to adjust PL to QH, PH to QL. 2. Pressure can be adjusted 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		 **Select PL or PH to be high pressure**	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.

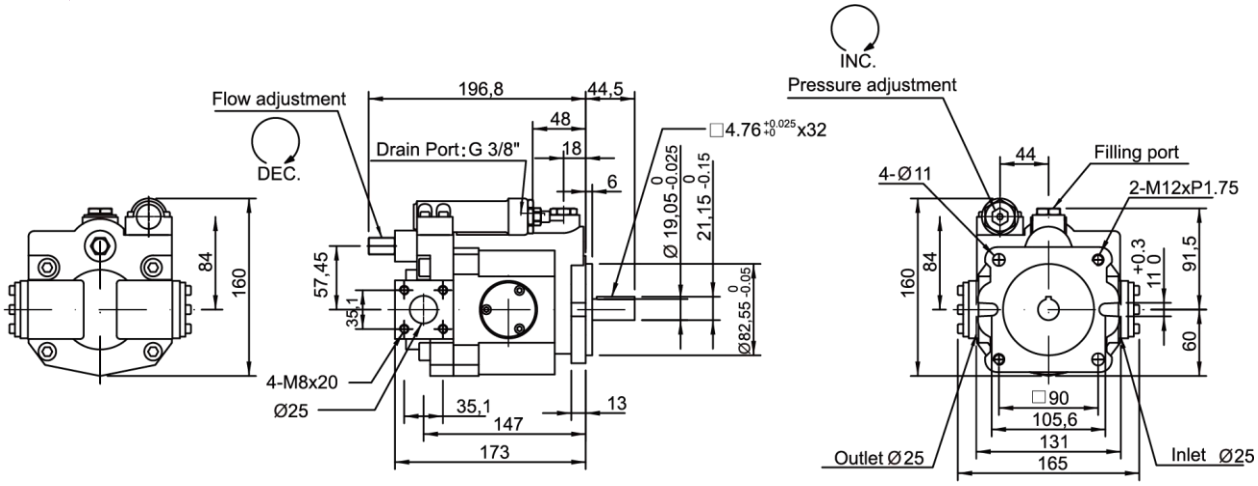


GC type: Remote pressure compensator + Electrical unloading + 2-stage pressure control		 **Select PL or PH to be high pressure**	1. Control two different-stage limited pressure by adding solenoid valve and unloading function. 2. When the system stops, oil temperature and noise maintain low level by unloading function. 3. Adapt for stable cylinder speed, 2-stage pressure, and long unloading situation.
HQ type: Loading-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.

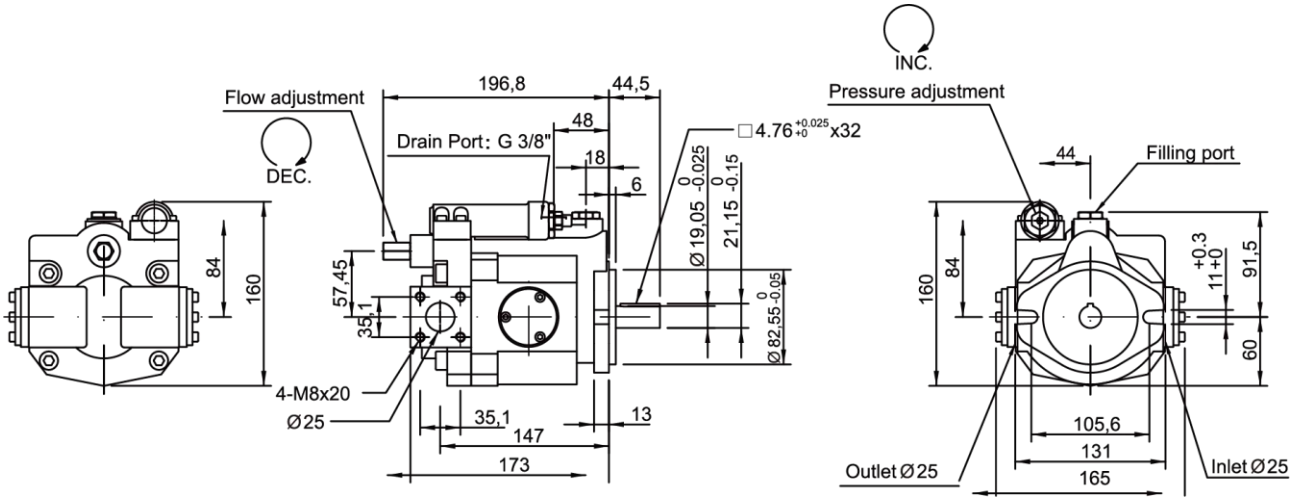


Dimension

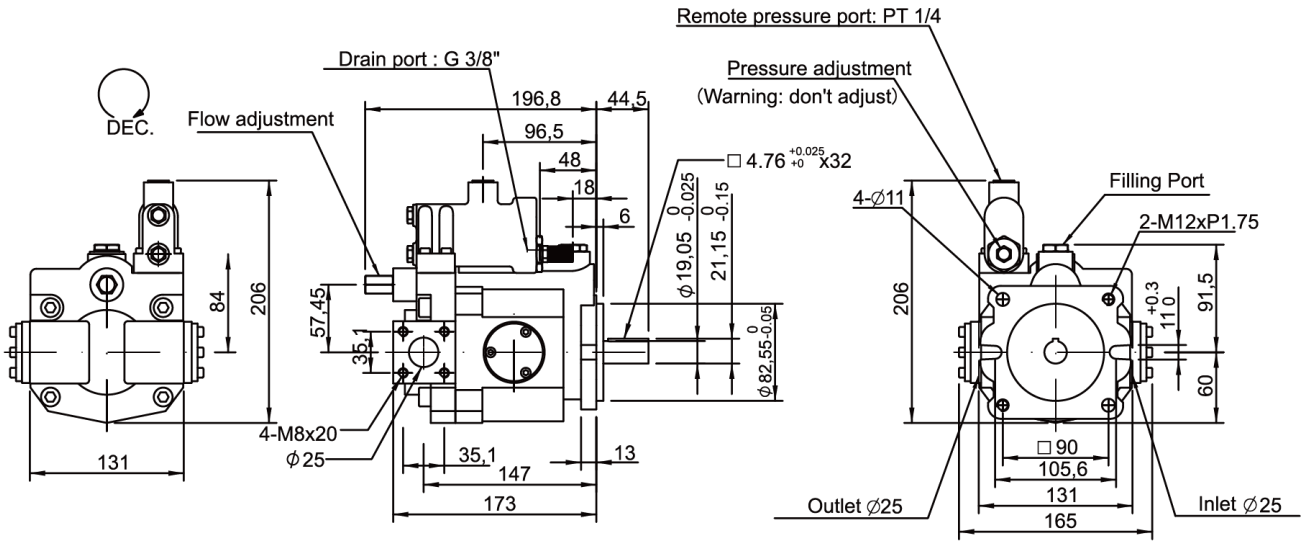
V15A, V18A Standard Pressure Control

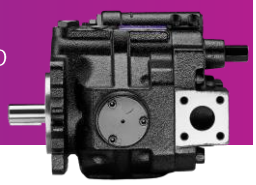


V15A, V18A Standard Pressure Control (SAE A2 bolt)

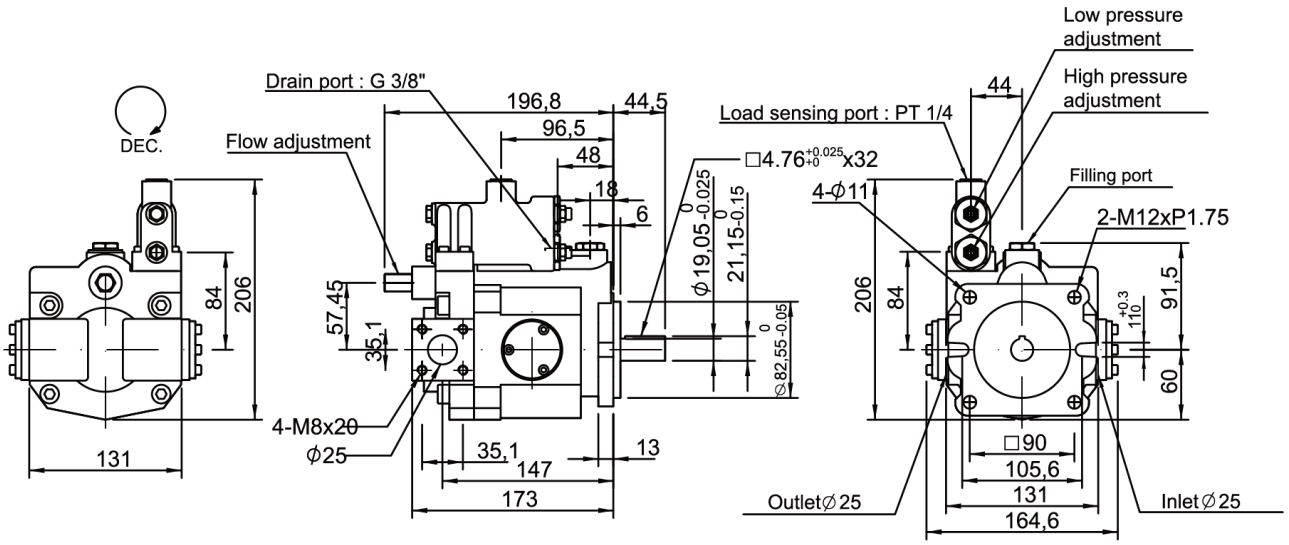


V15G, V18G Remote Pressure Control

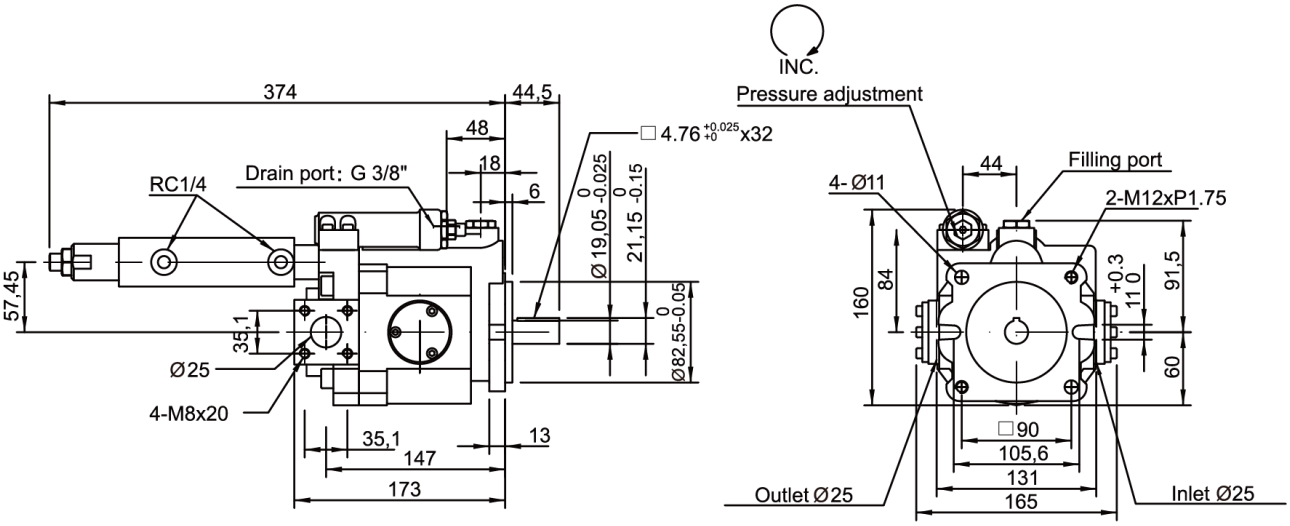




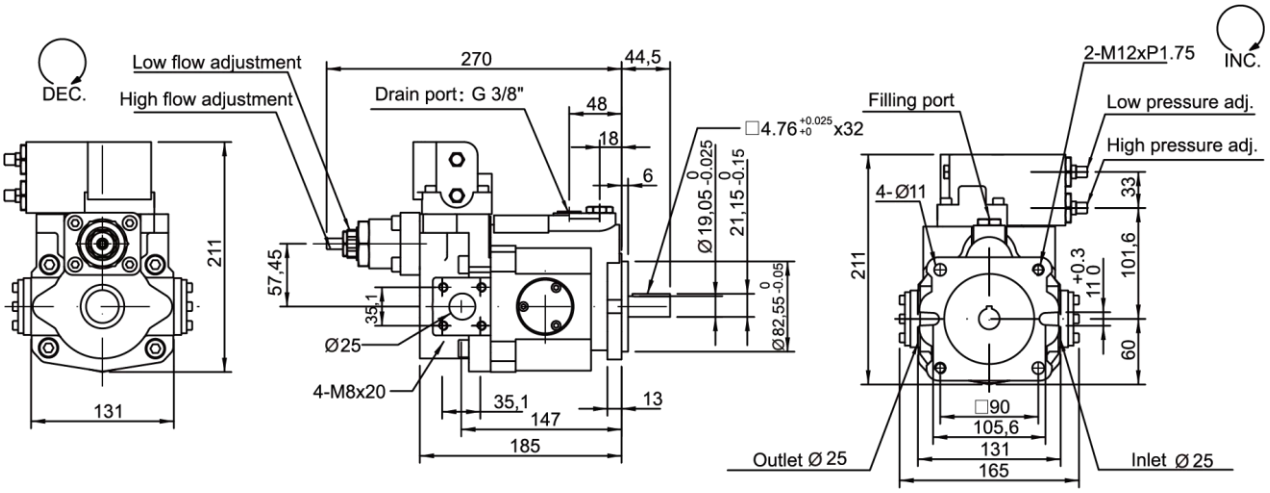
V15HL, V18HL Load-Sensing Control

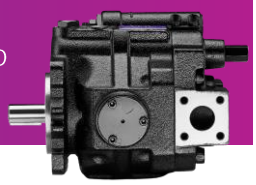


V15B, V18B Multi-Stage Flow & Single-Stage Pressure Control (with cylinder) (Remark: Install with A type control)

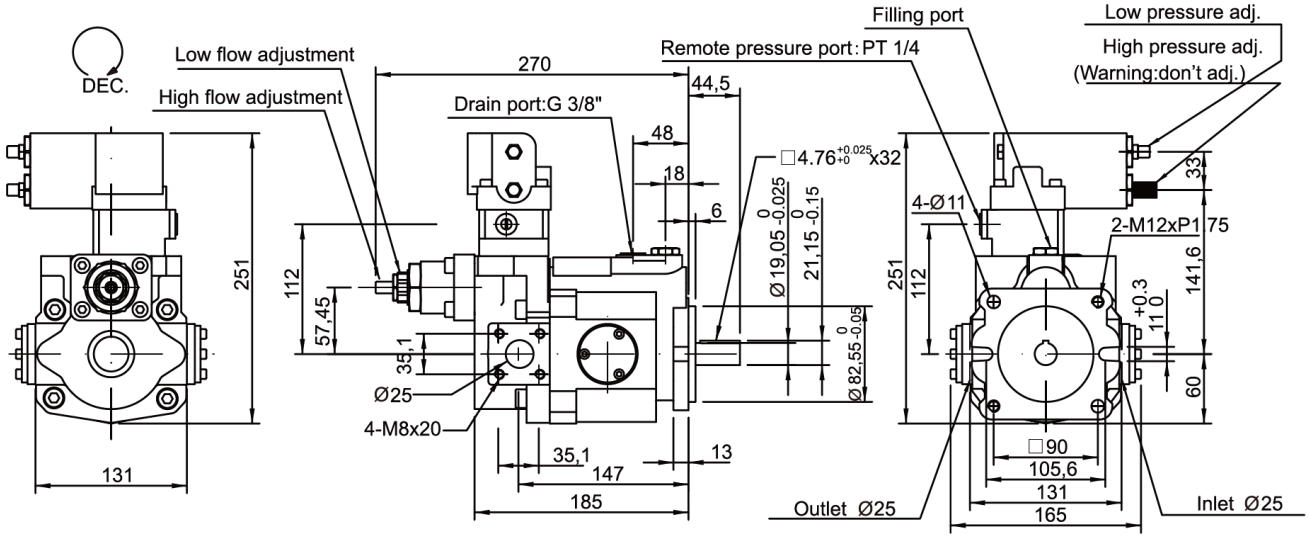


V15C, V18C 2-Stage Pressure & Flow Control

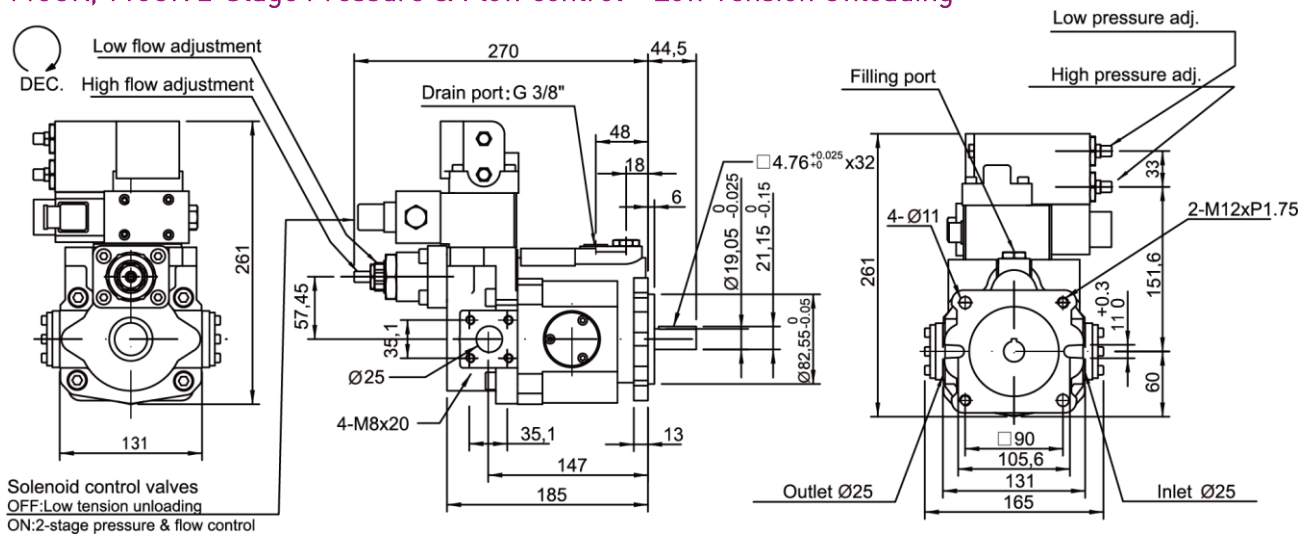




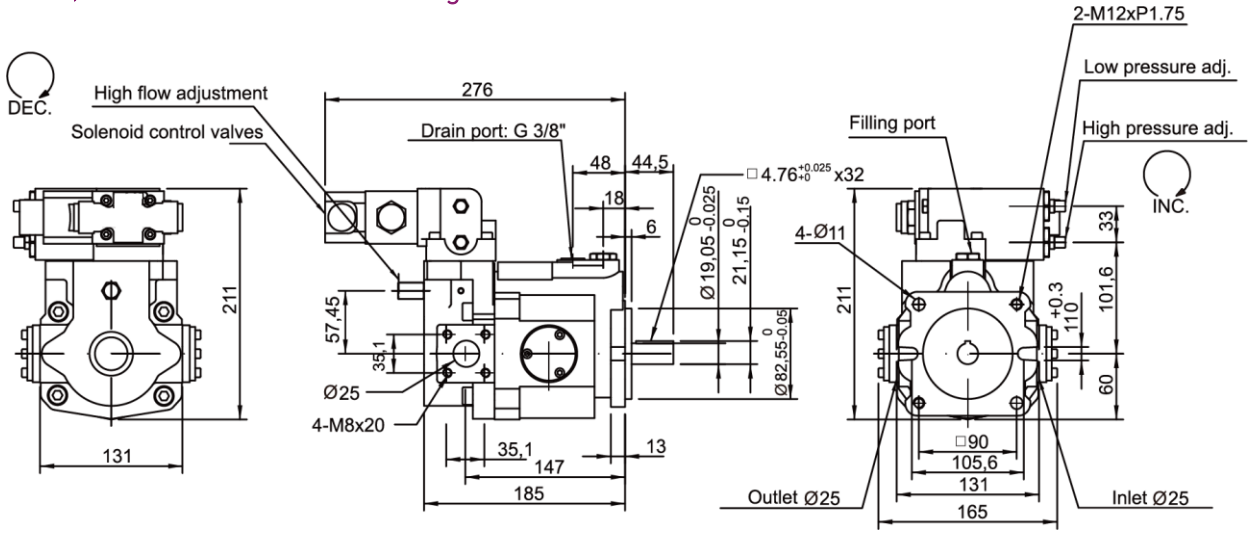
V15CG, V18CG 2-Stage Pressure & Flow Control + Remote

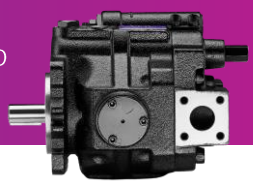


V15CR, V18CR 2-Stage Pressure & Flow control + Low Tension Unloading

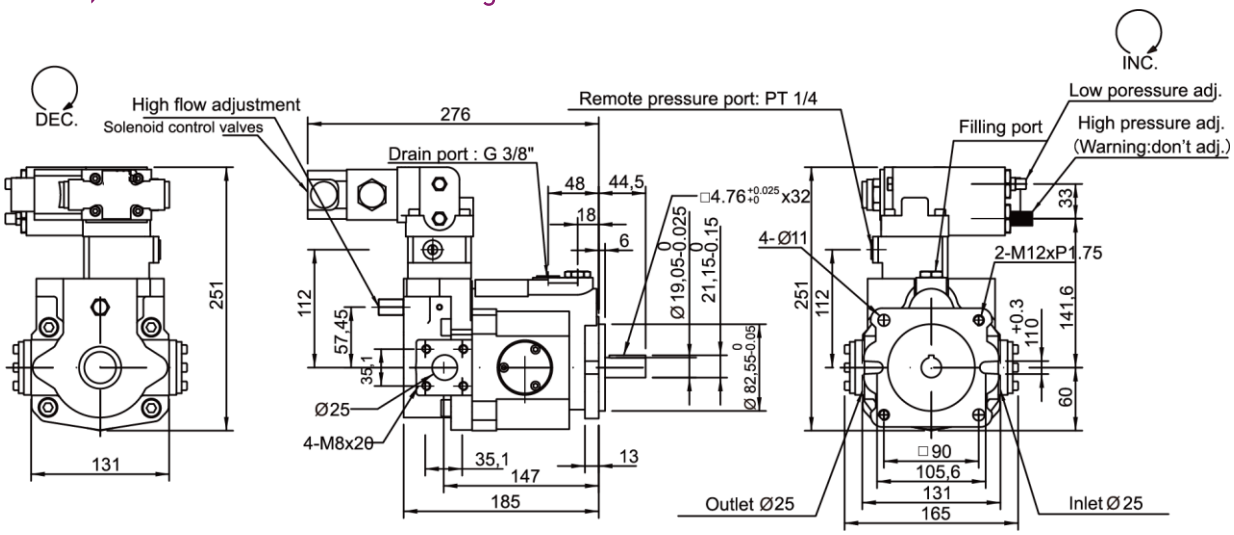


V15D, V18D Low Tension Unloading+ Pressure Control

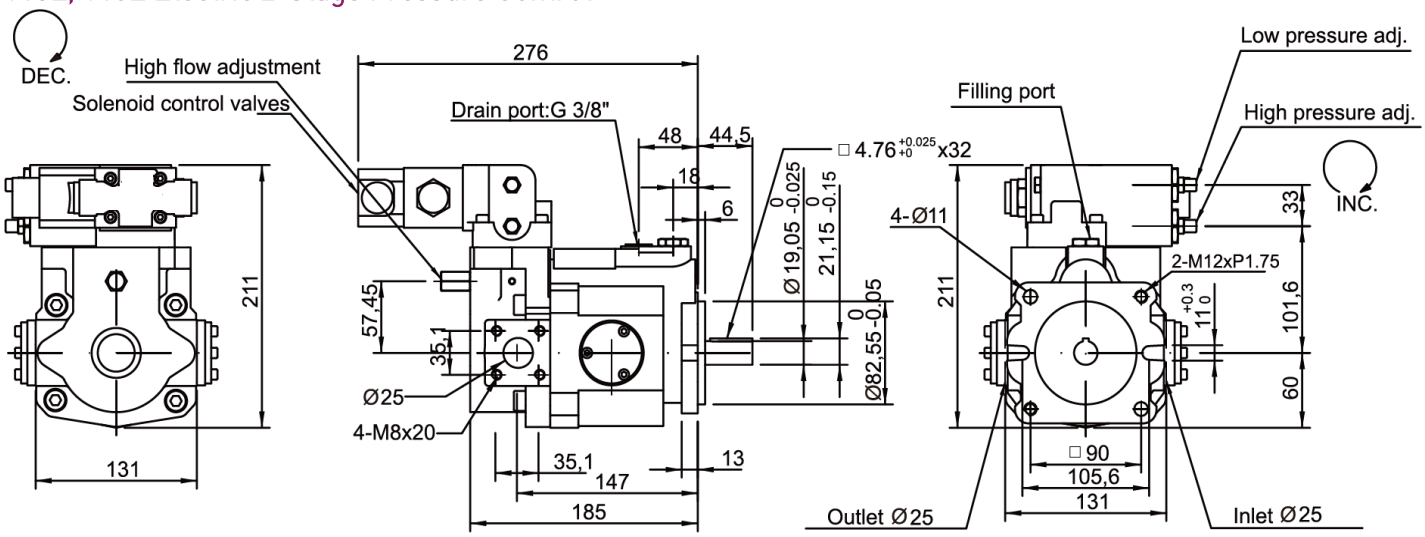




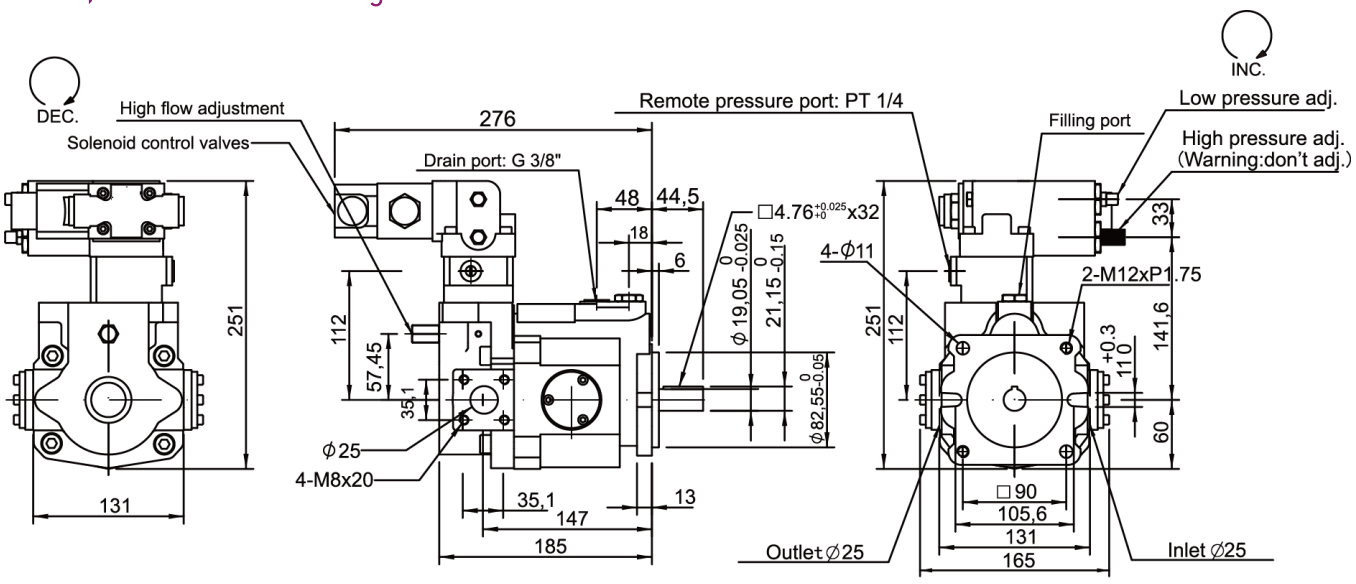
V15DG, V18DG Low Tension Unloading + Pressure Control + Remote

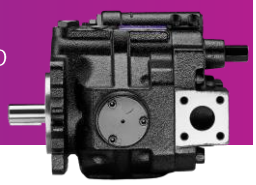


V15E, V18E Electric 2-Stage Pressure Control

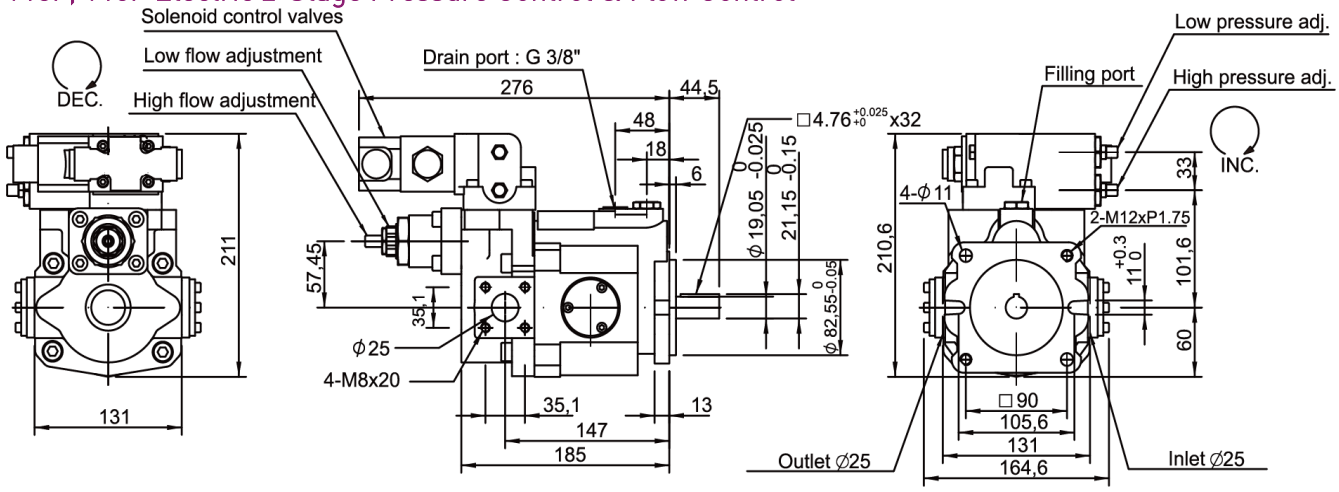


V15EG, V18EG Electric 2-Stage Pressure Control + Remote

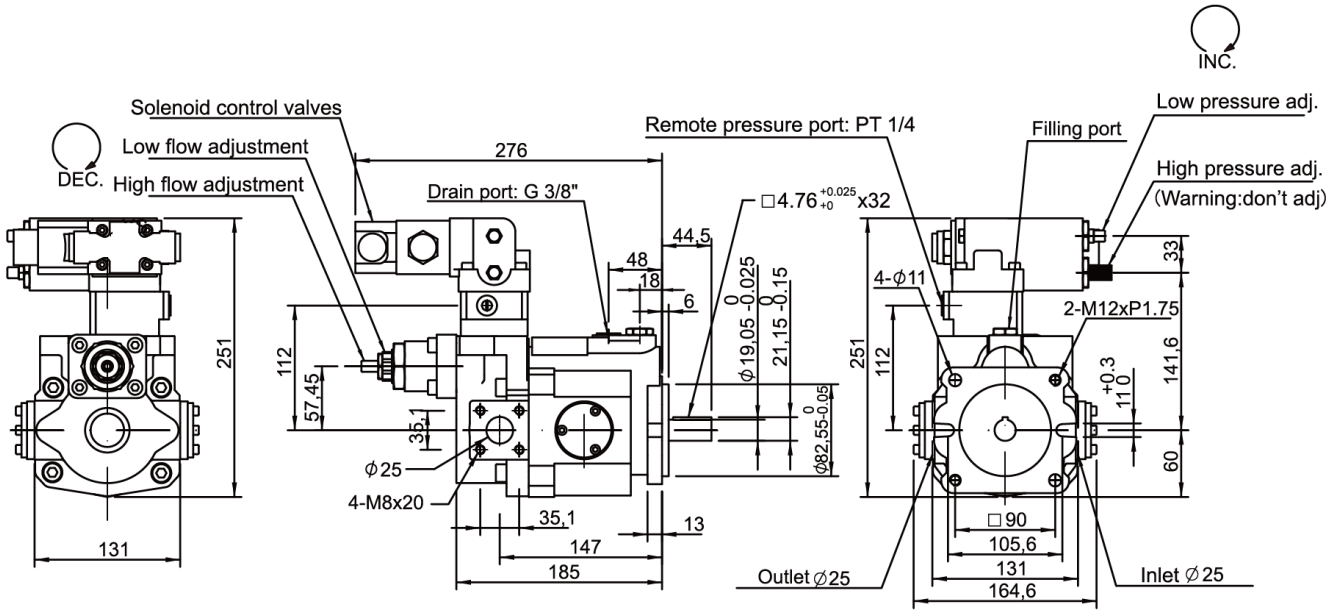




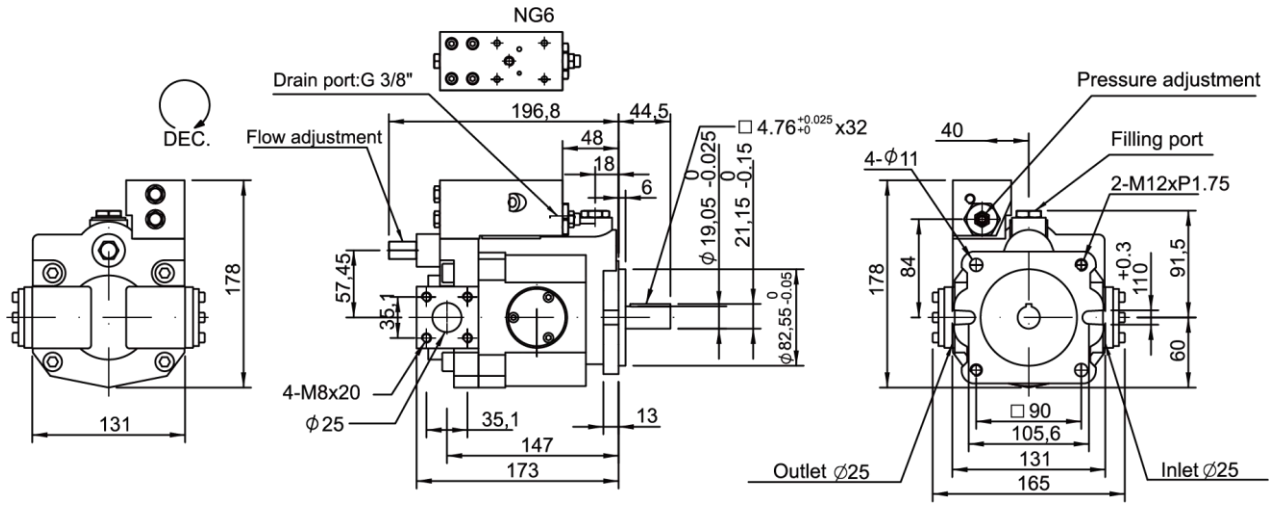
V15F, V18F Electric 2-Stage Pressure Control & Flow Control

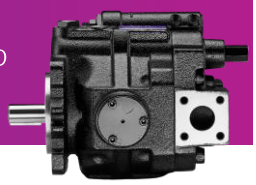


V15FG, V18FG Electric 2-Stage Pressure Control & Flow Control + Remote

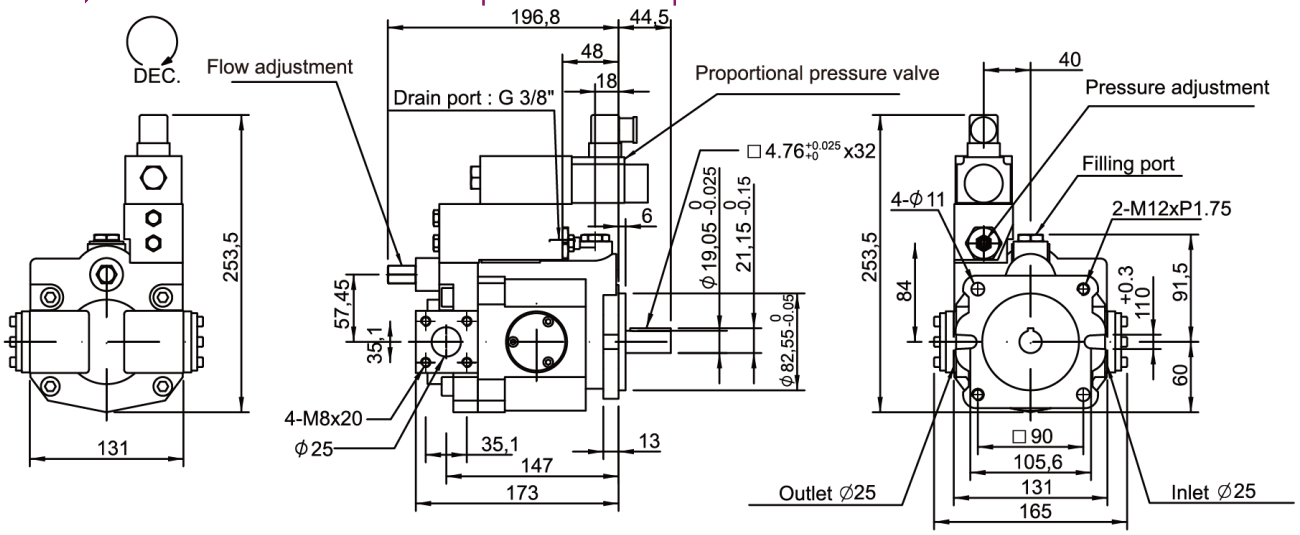


V15GM, V18GM Remote Pressure Compensator with NG6 interface

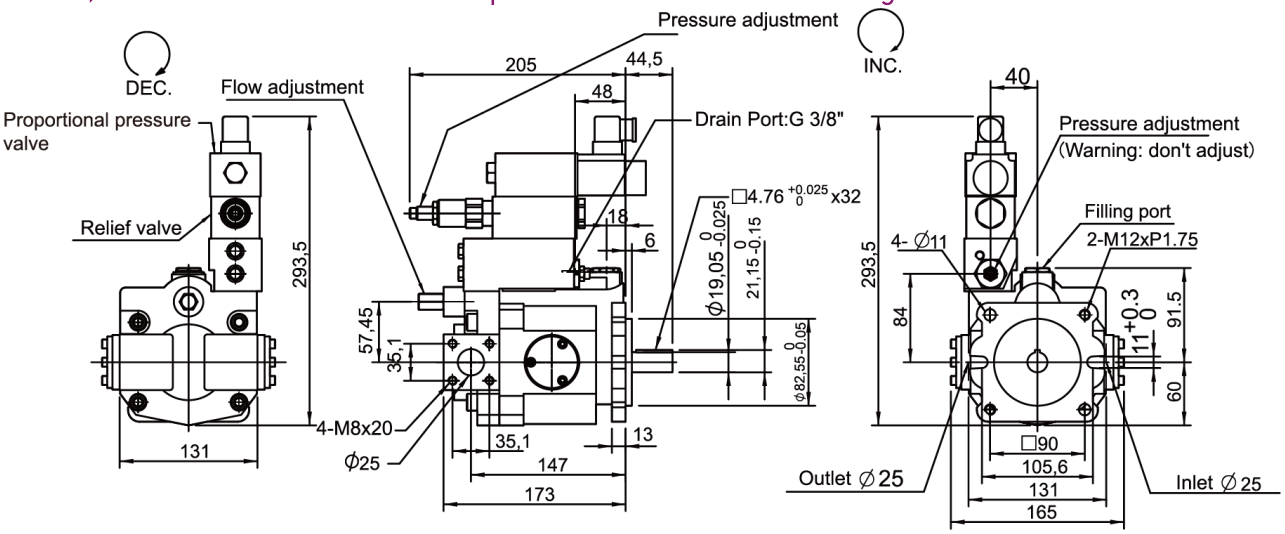




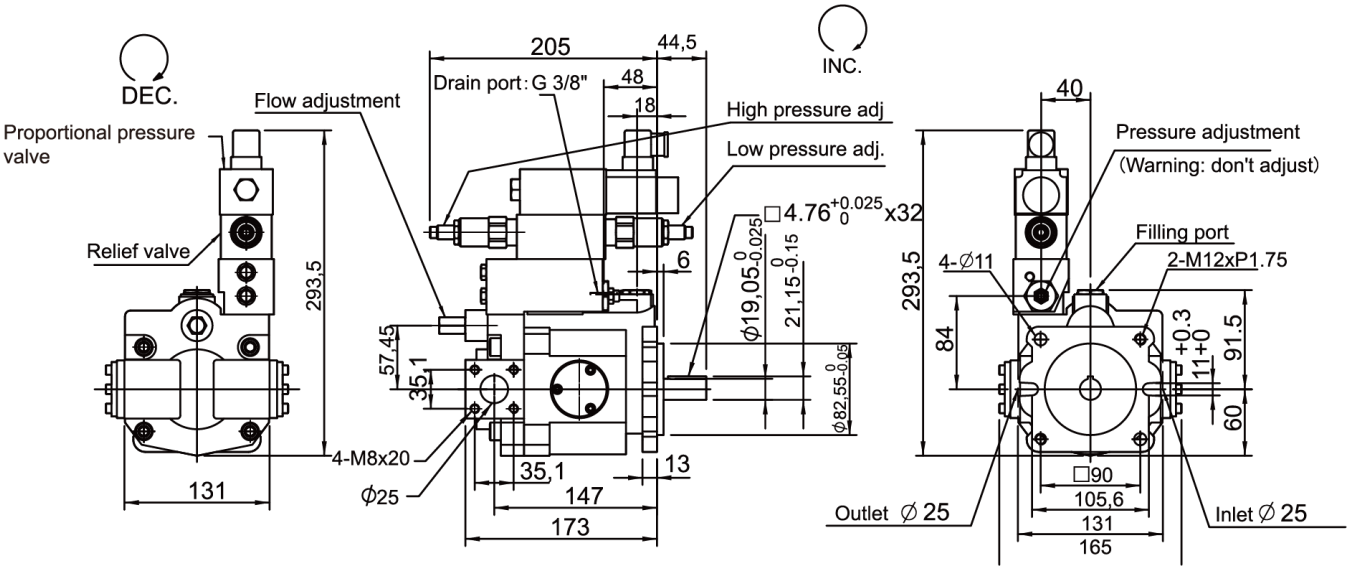
V15GJ, V18GJ Remote Pressure Compensator + Proportional Pressure Valve

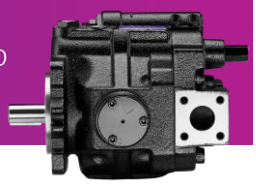


V15GR, V18GR Remote Pressure Compensator + Electrical Unloading

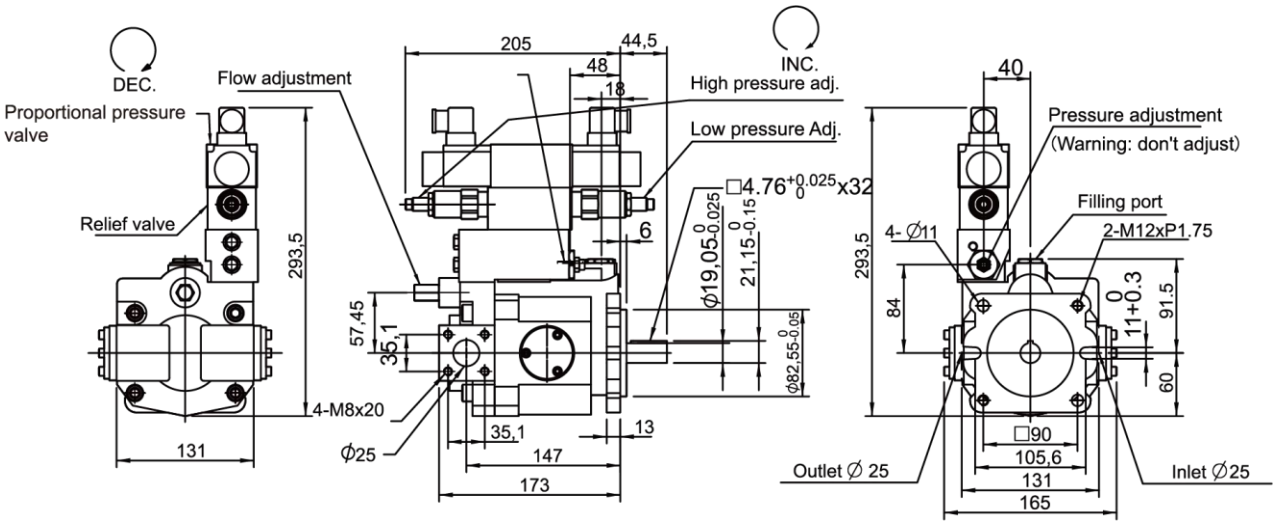


V15GB, V18GB Remote Pressure Compensator+ 2-stage Pressure Control

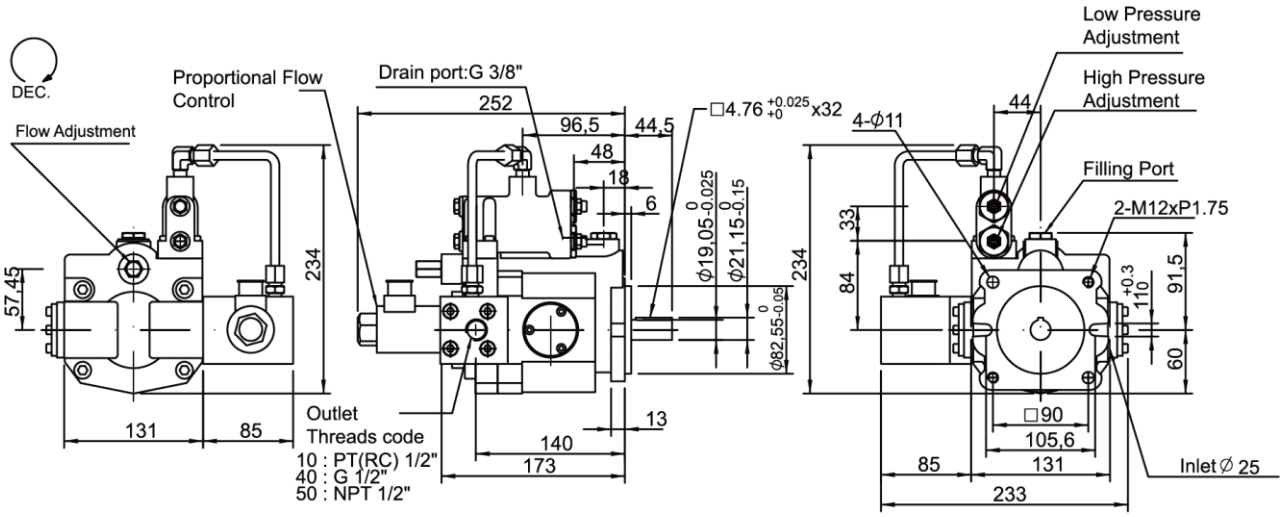




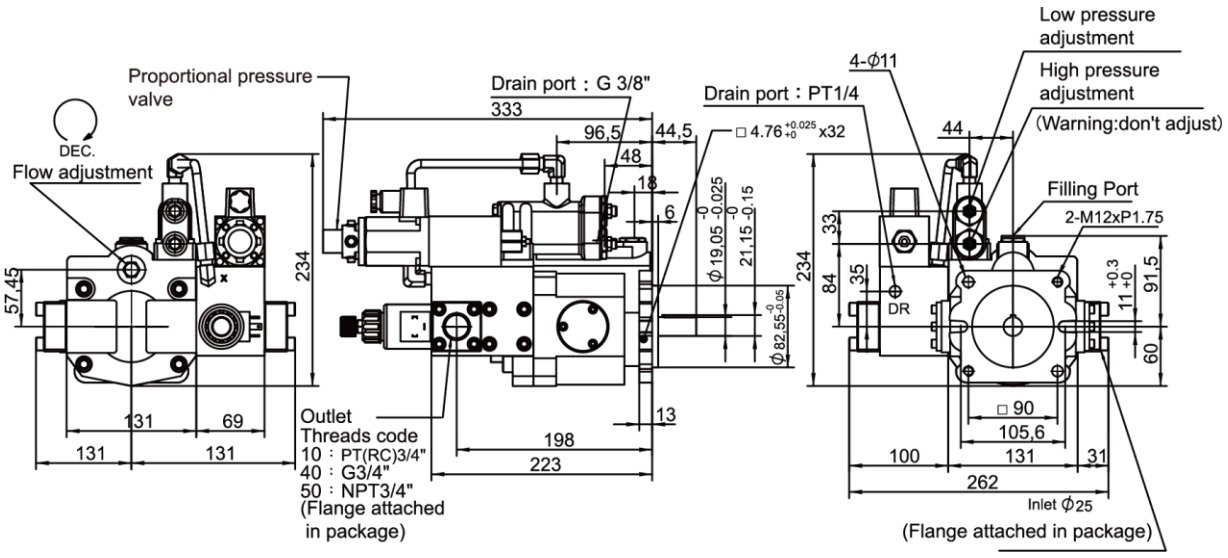
V15GC, V18GC Remote Pressure Compensator+ Electrical Unloading +2-Stage Pressure Control

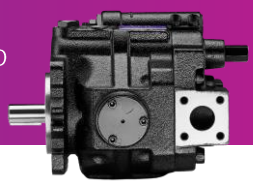


V15HQ, V18HQ Load-Sensing Compensator + Proportional Flow Valve + Relief Valve



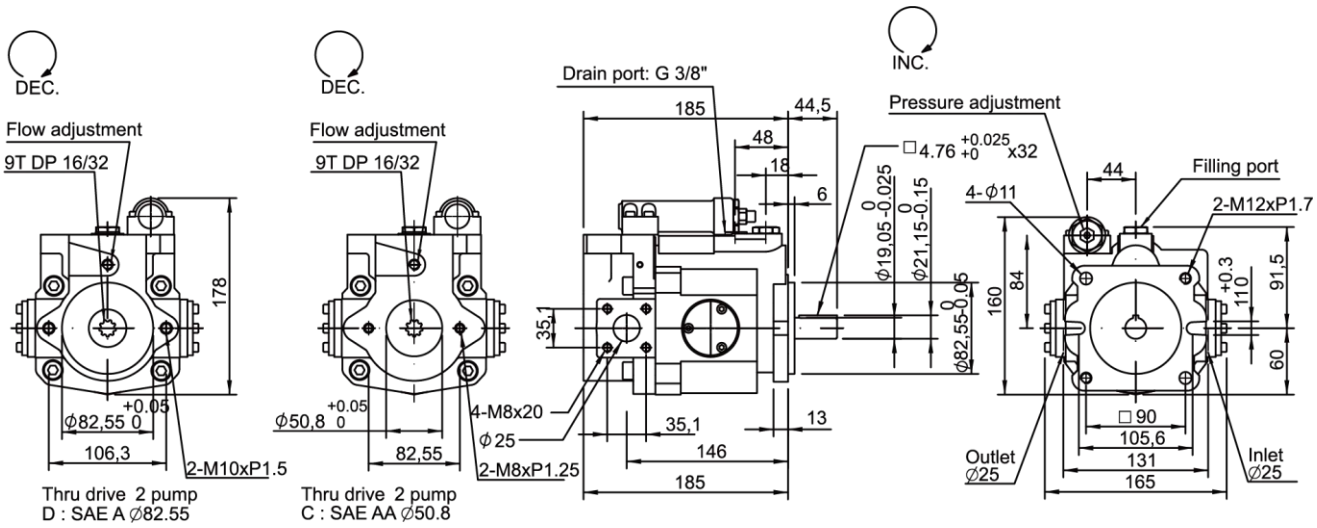
V15HK, V18HK Load-Sensing Compensator + Proportional Pressure Valve + Proportional Flow Valve





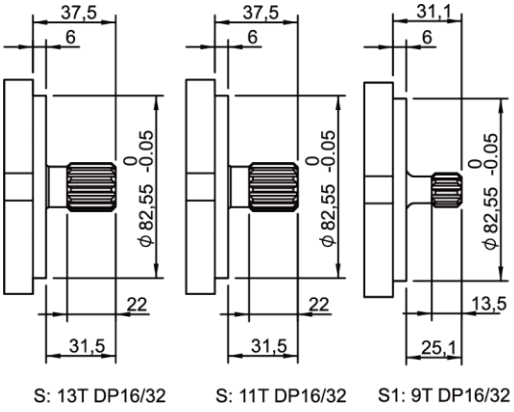
V15, V18 Thru Drive (SAE AAø50.8，Code C)

Thru Drive (SAE Aø82.55，Code D)

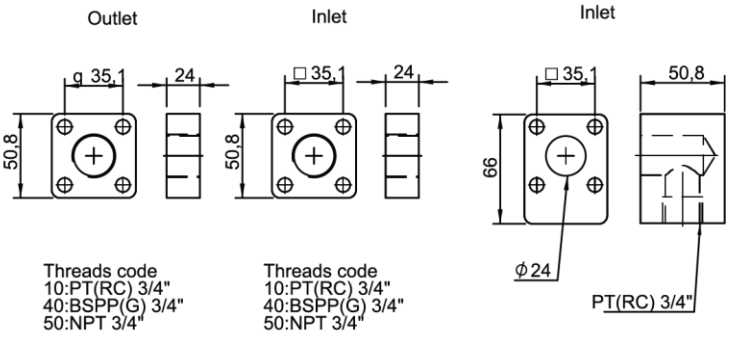


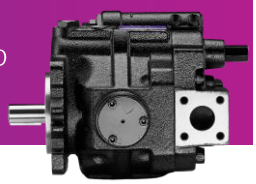
Type	A	B	C	CG	CR	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HQ
○ (Optional)	○					○	○	○	○			○	○	○	○	○	○

V15, V18 Splined Shaft Type

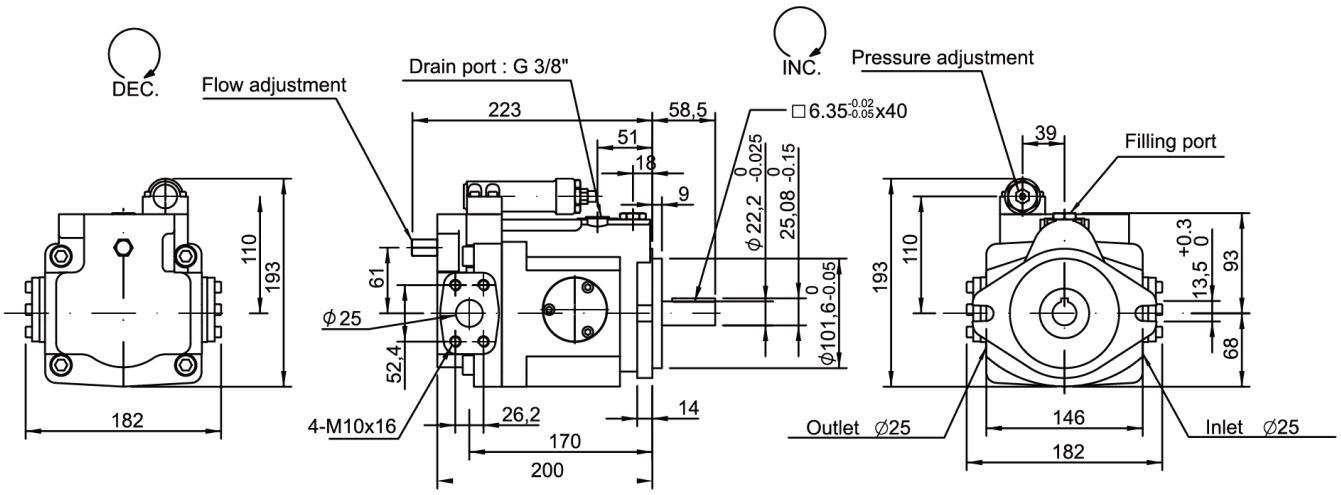


V15, V18 Inlet / Outlet

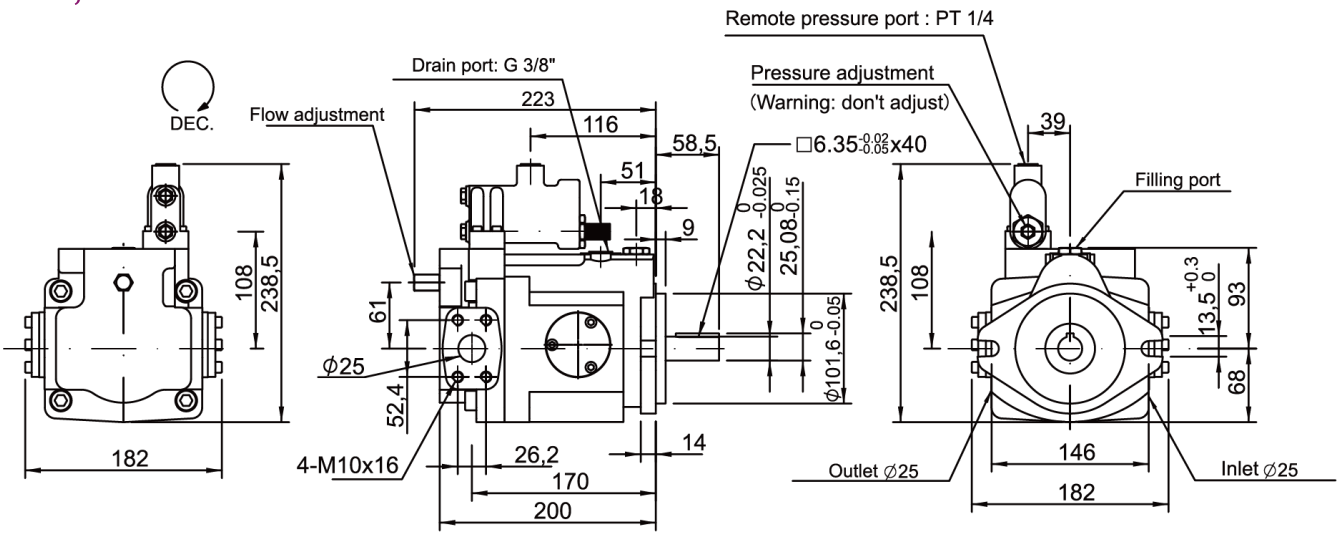




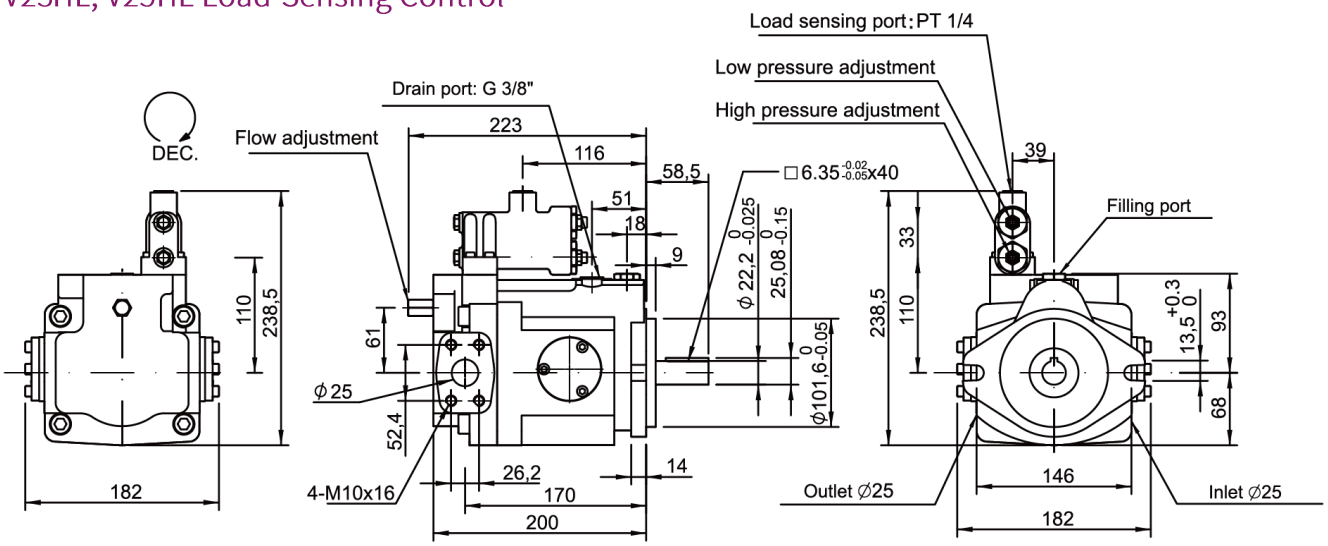
V23A, V25A Standard Pressure Control

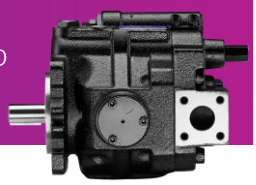


V23G, V25G Remote Pressure Control

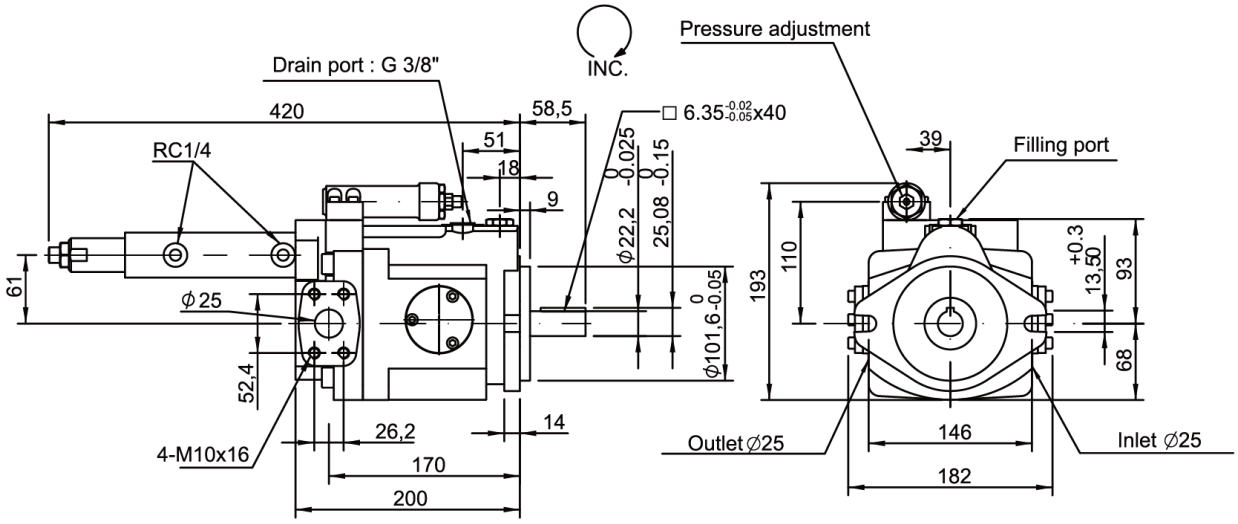


V23HL, V25HL Load-Sensing Control

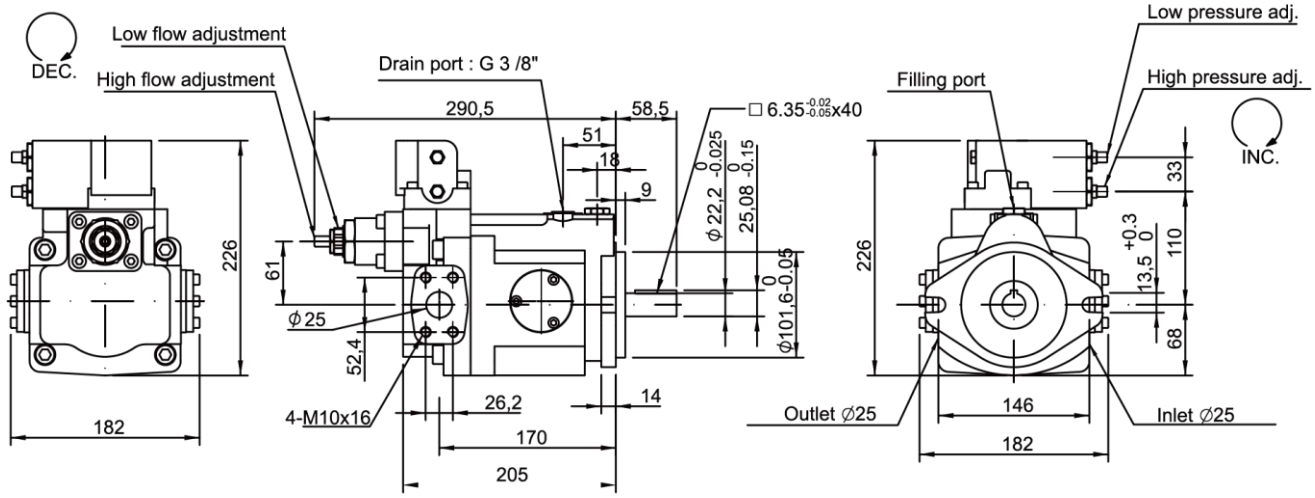




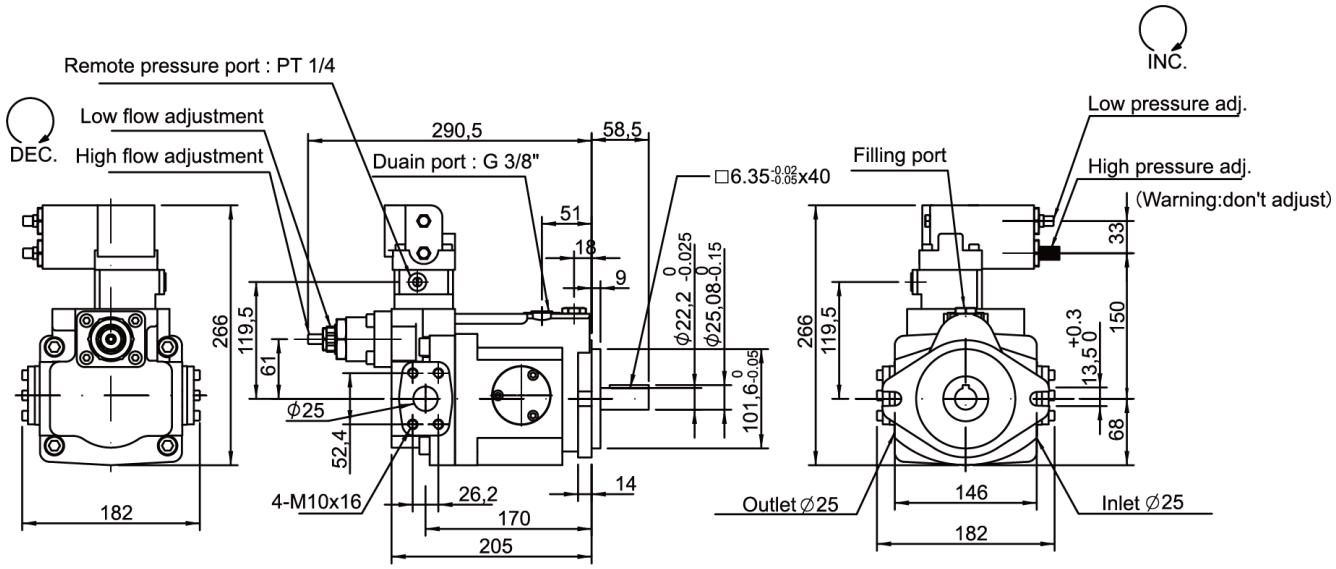
V23B, V25B Multi-Stage Flow & Single-Stage Pressure Control (with cylinder)

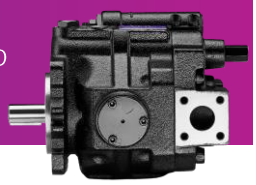


V23C, V25C 2-Stage Pressure & Flow Control

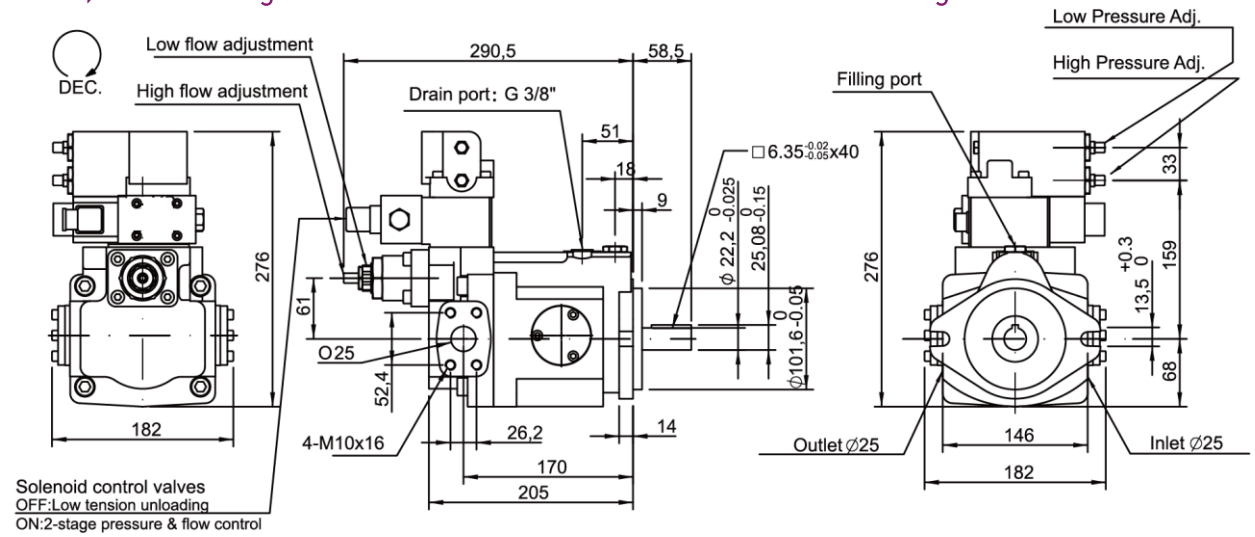


V23CG, V25CG 2-Stage Pressure & Flow Control + Remote

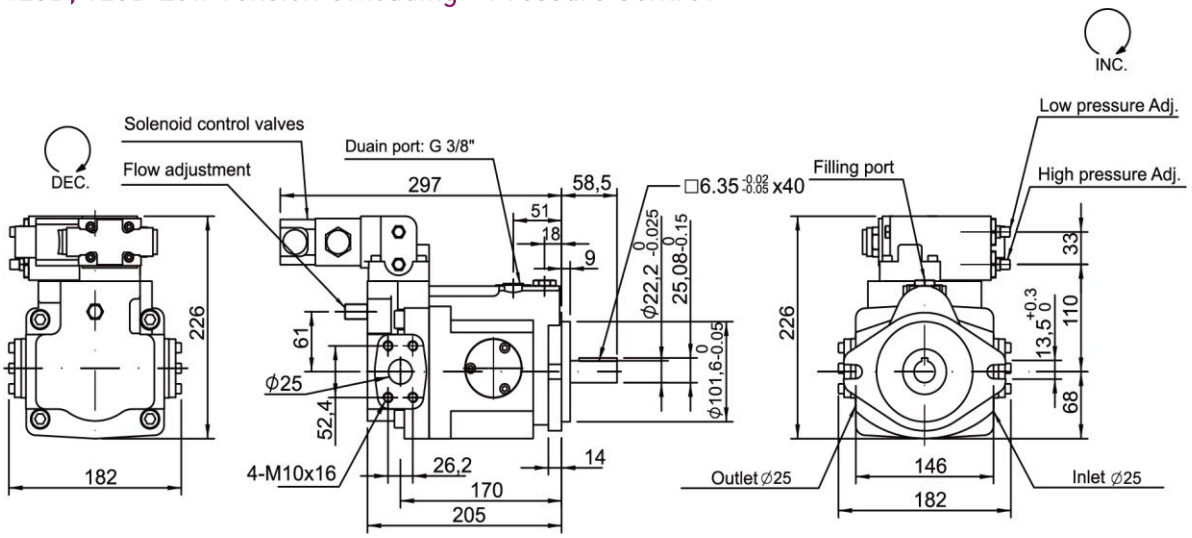




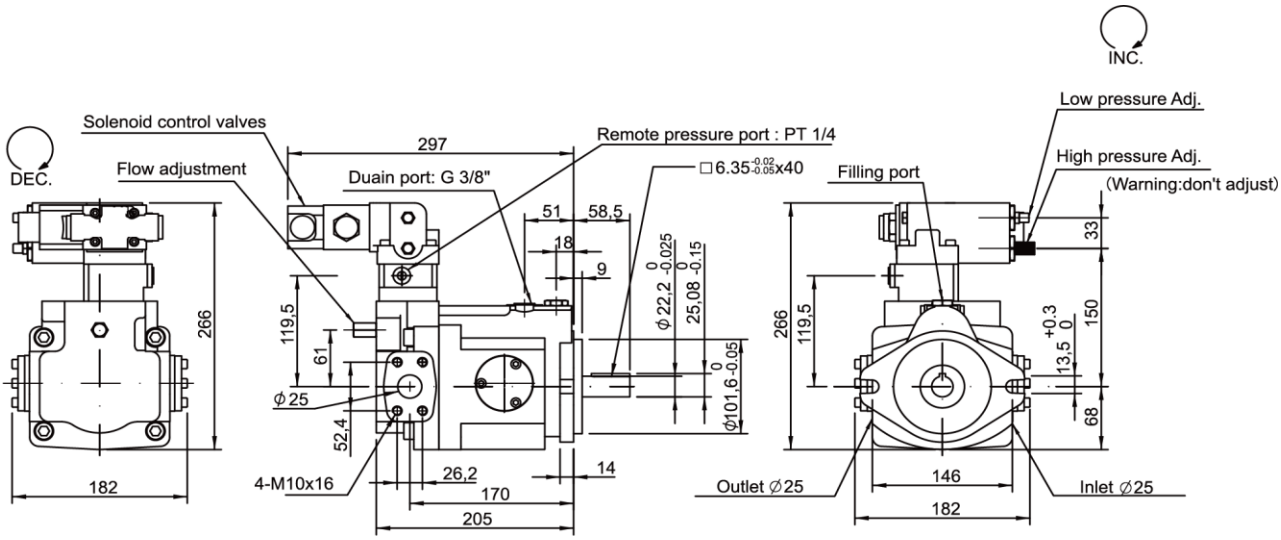
V23CR, V25CR 2-stage Pressure & Flow Control + Low Tension Unloading

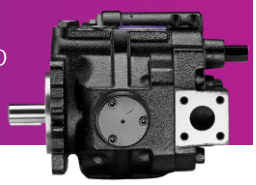


V23D, V25D Low Tension Unloading + Pressure Control

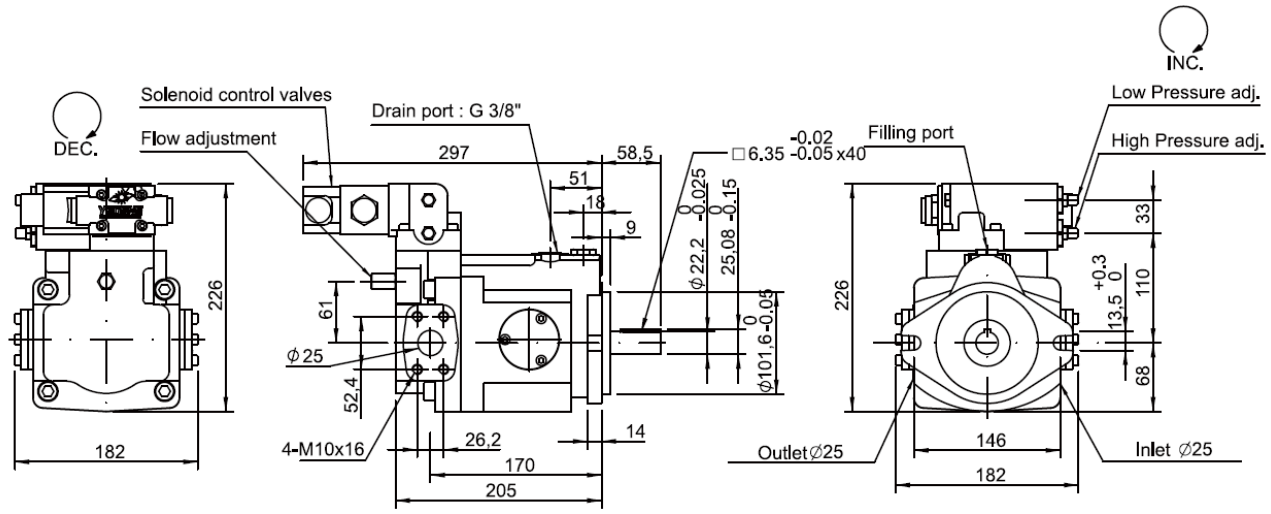


V23DG, V25DG Low Tension Unloading + Pressure Control + Remote

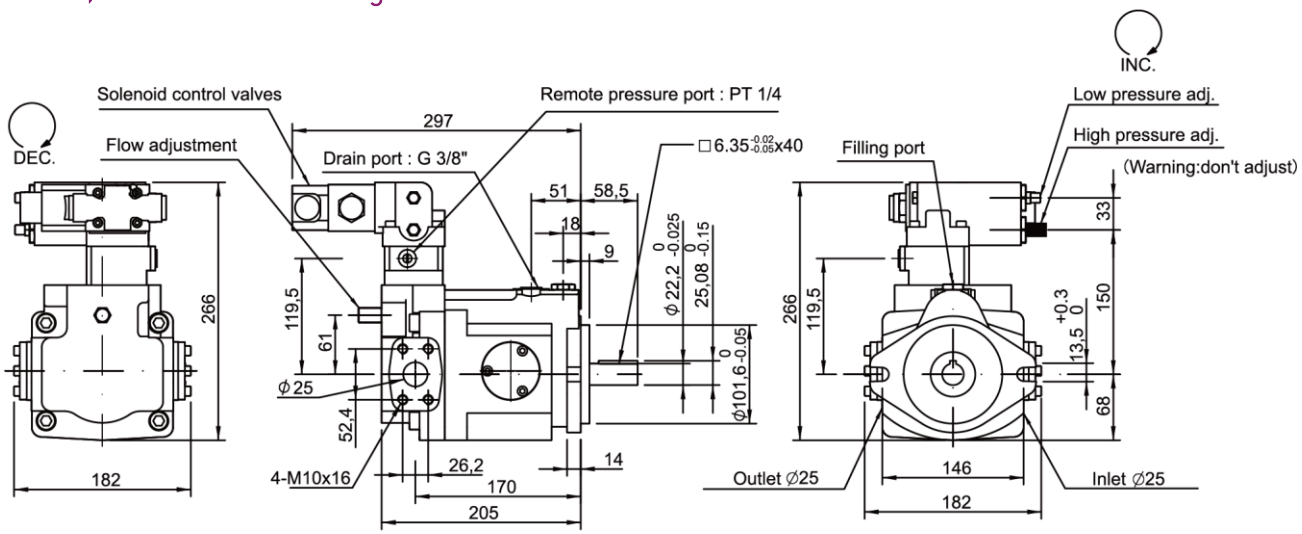


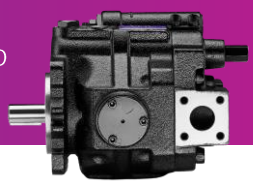


V23E, V25E Electric 2-Stage Pressure Control

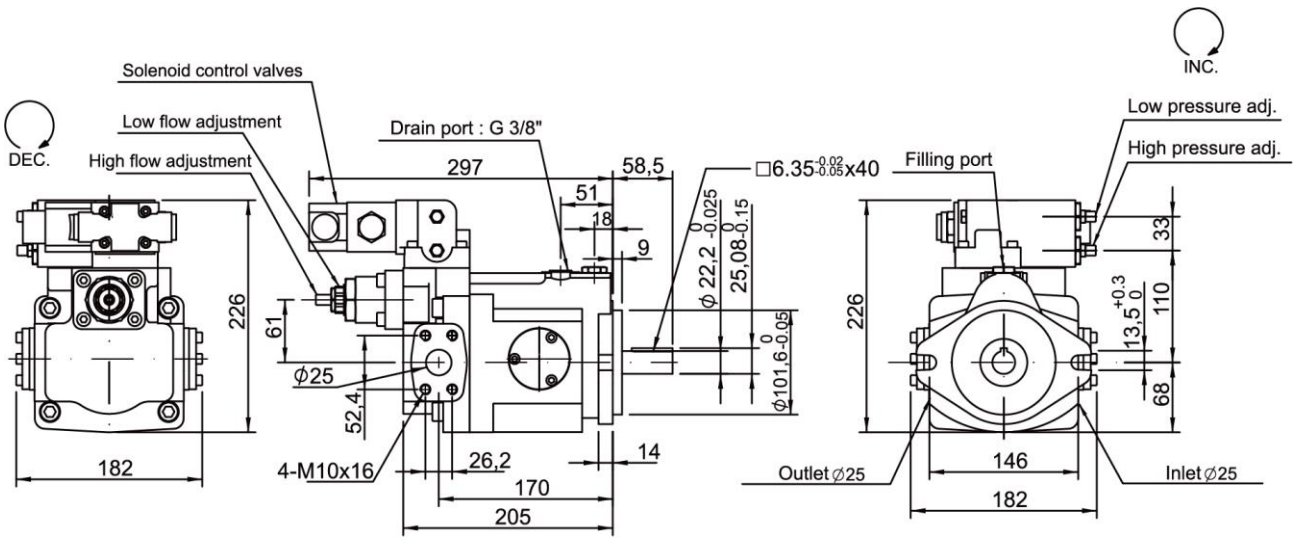


V23EG, V25EG Electric 2-Stage Pressure Control + Remote

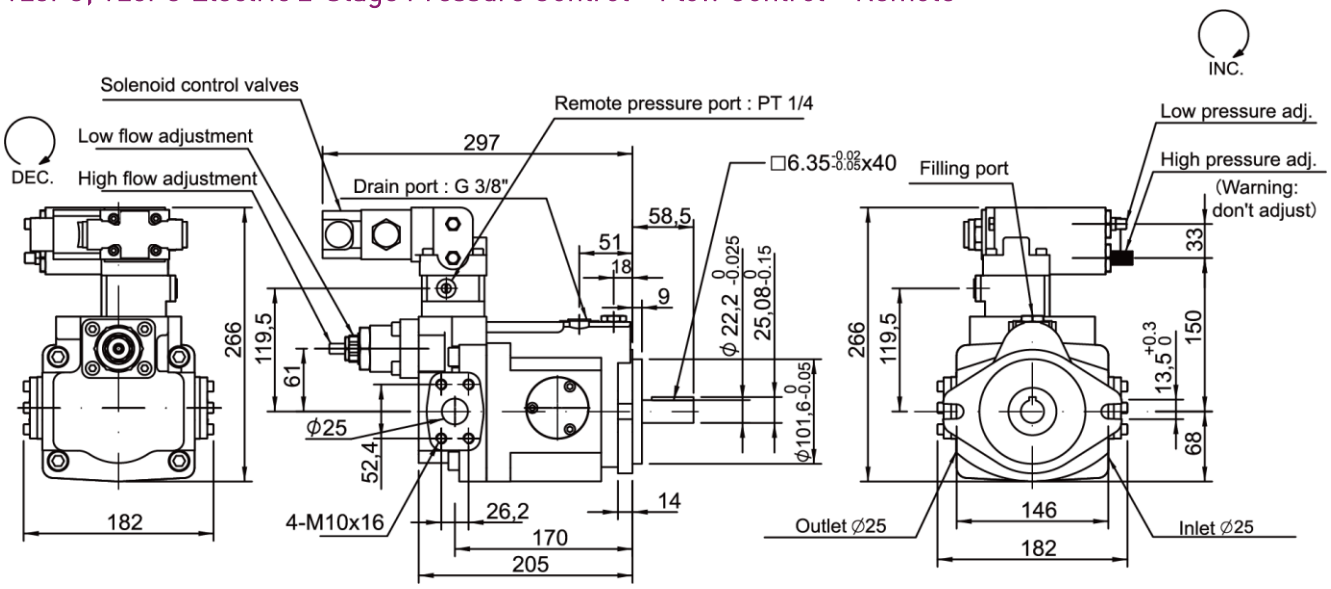


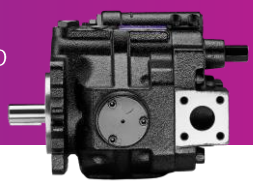


V23F, V25F Electric 2-Stage Pressure Control + Flow Control

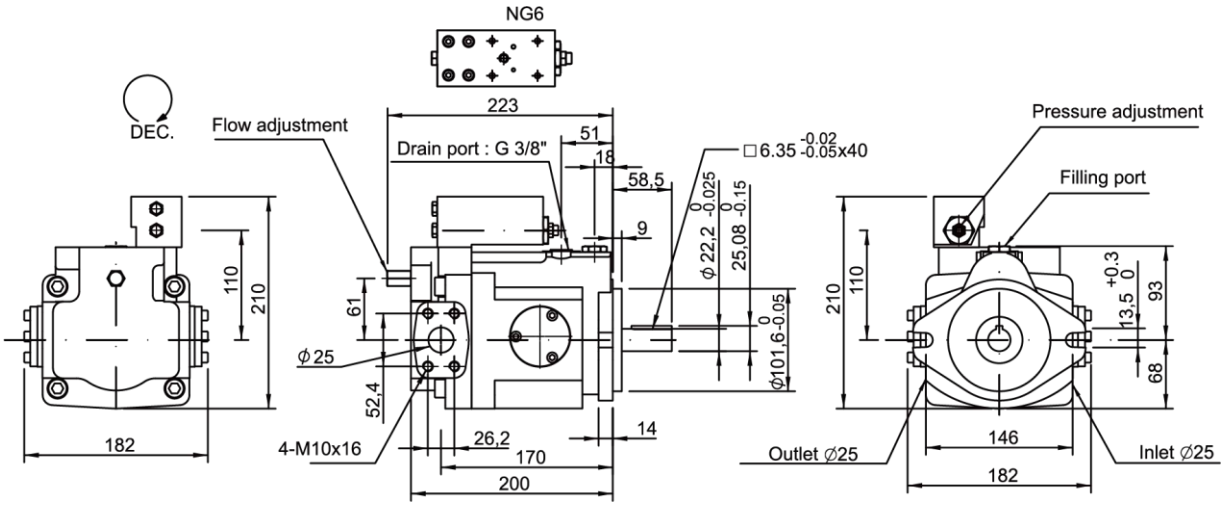


V23FG, V25FG Electric 2-Stage Pressure Control + Flow Control + Remote

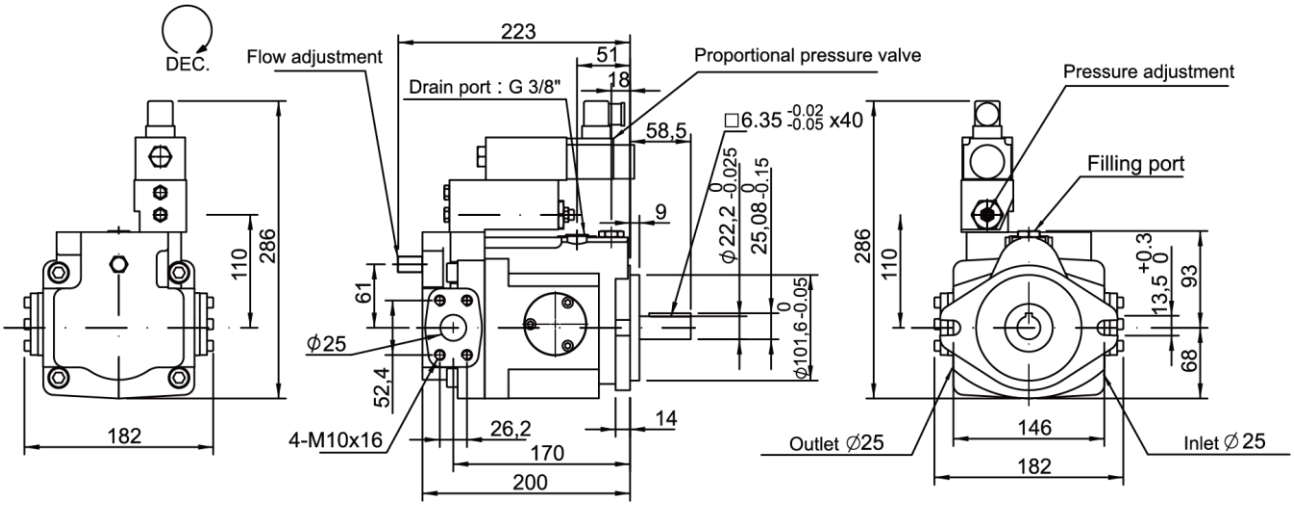




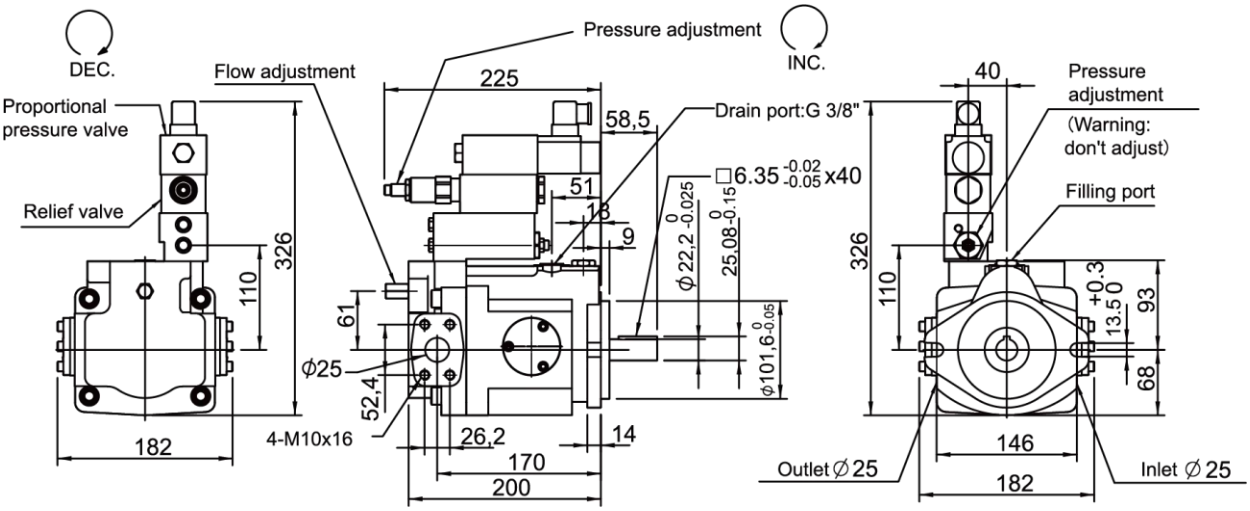
V23GM, V25GM Remote Pressure Compensator with NG6 interface

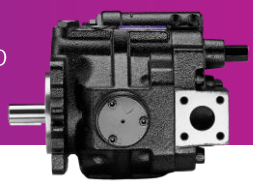


V23GJ, V25GJ Remote Pressure Compensator+ Proportional Pressure Valve

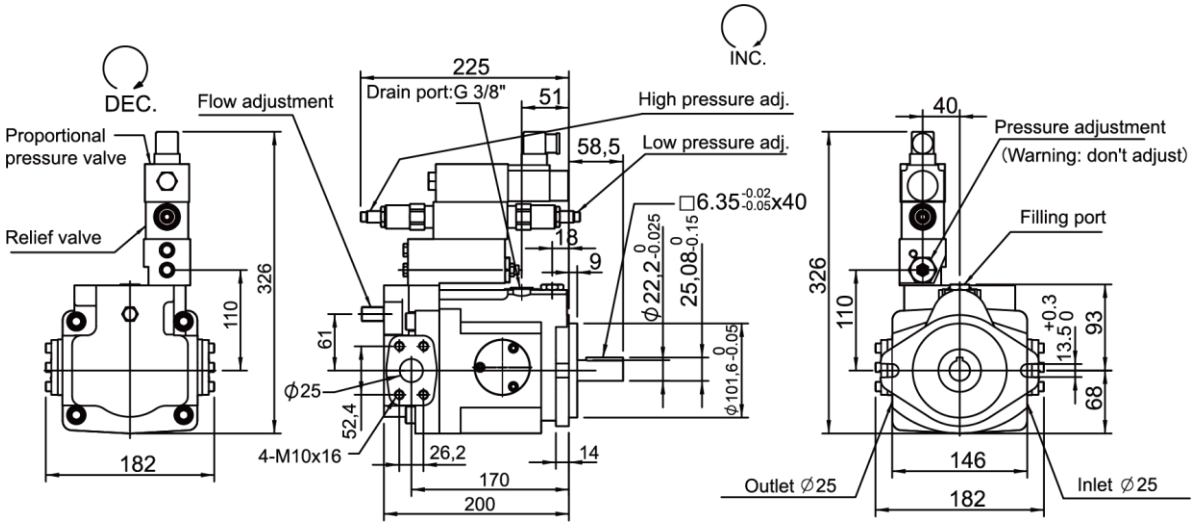


V23GR, V25GR Remote Pressure Compensator+ Electrical Unloading

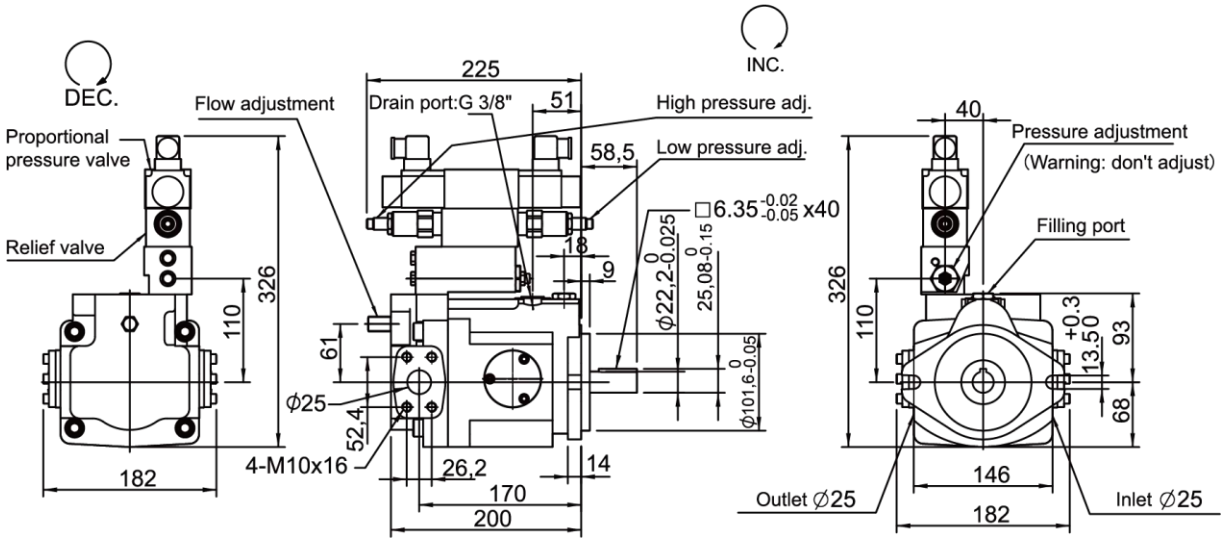




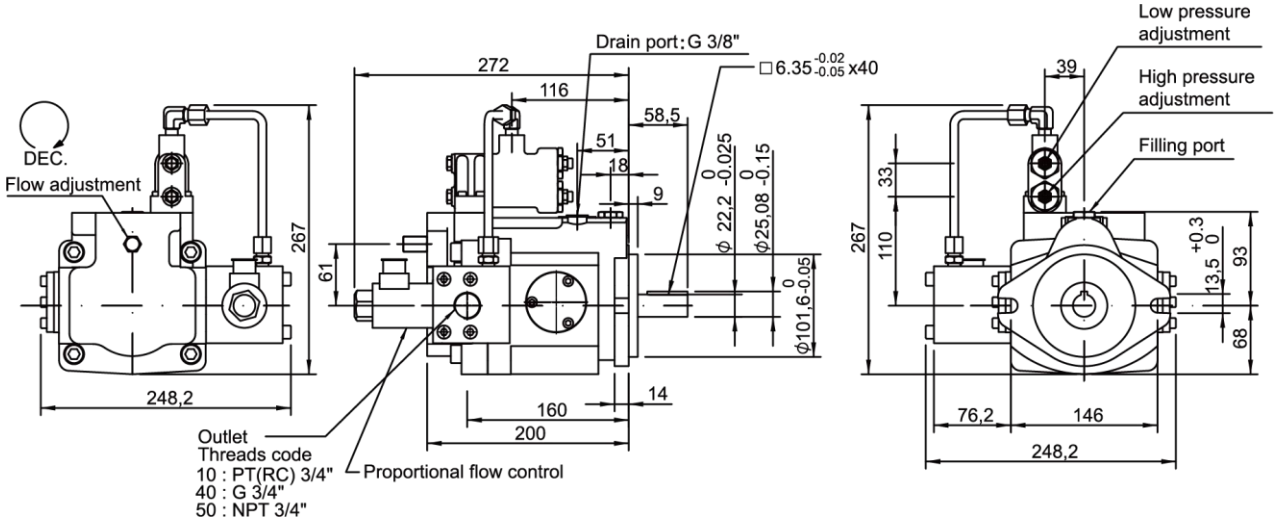
V23GB, V25GB Remote Pressure Compensator + 2-Stage Pressure Control

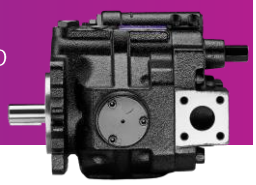


V23GC, V25GC Remote Pressure Compensator + Electrical Unloading + 2-Stage Pressure Control

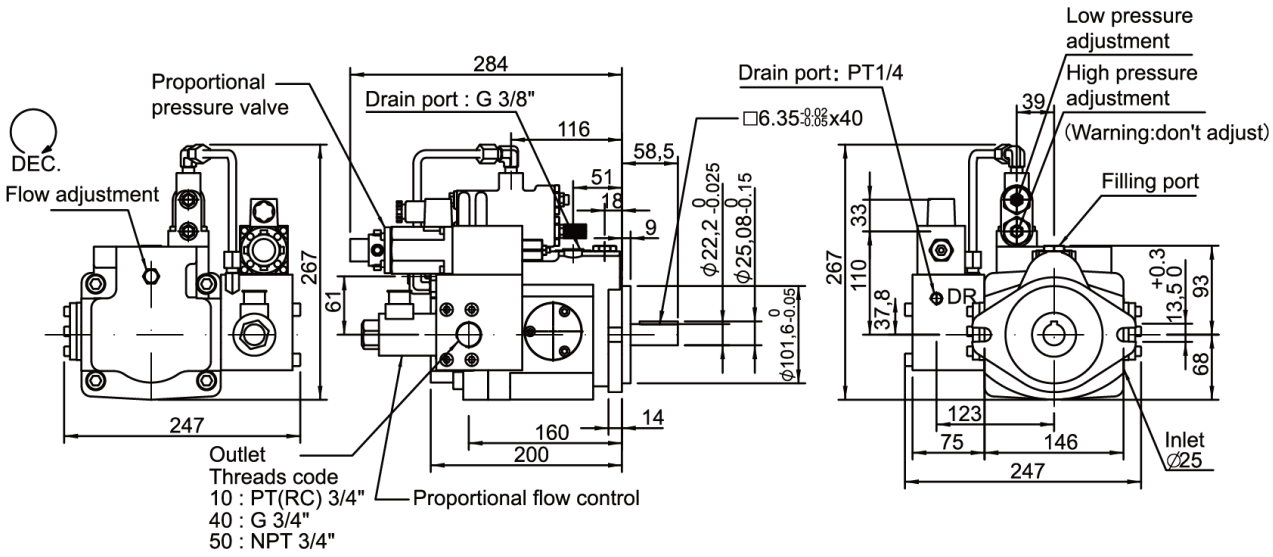


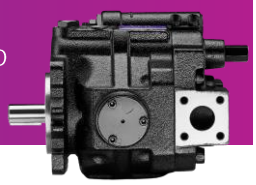
V23HQ, V25HQ Load-Sensing Compensator + Proportional Flow Valve + Relief Valve





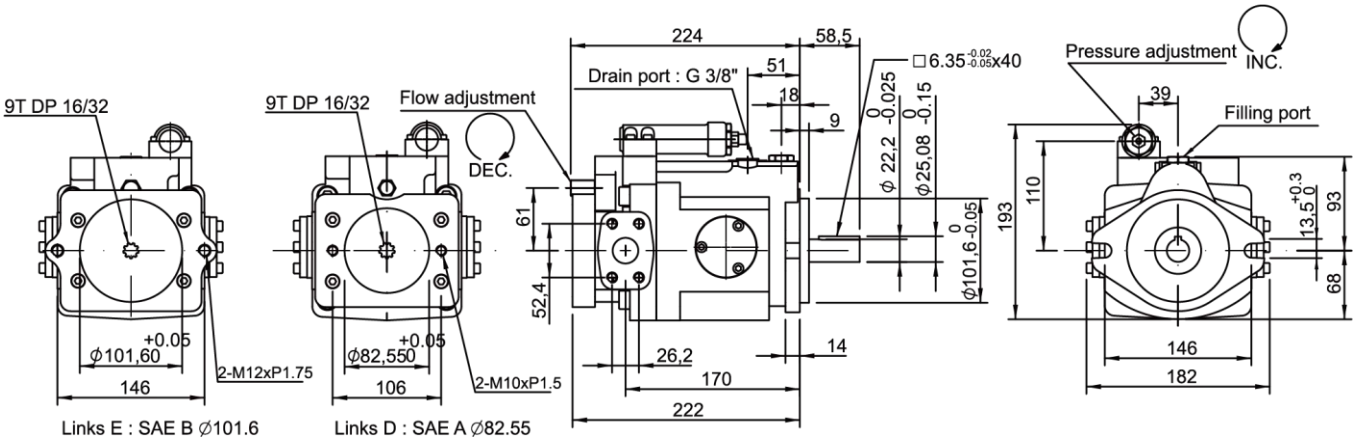
V23HK, V25HK Load-sensing Compensator + Proportional Pressure Valve + Proportional Flow Valve





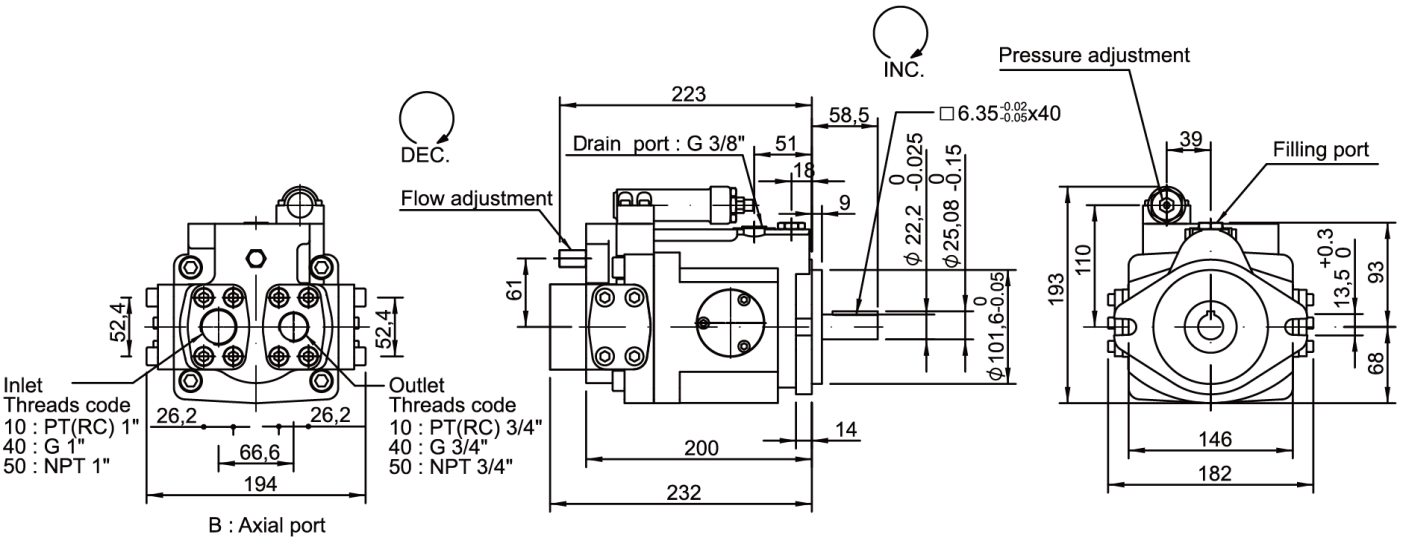
V23, V25 Thru Drive (SAE A ø82.55，Code D)

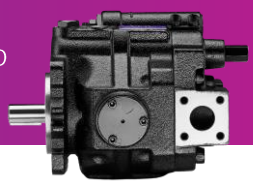
Thru Drive (SAE Bø101.6，Code E)



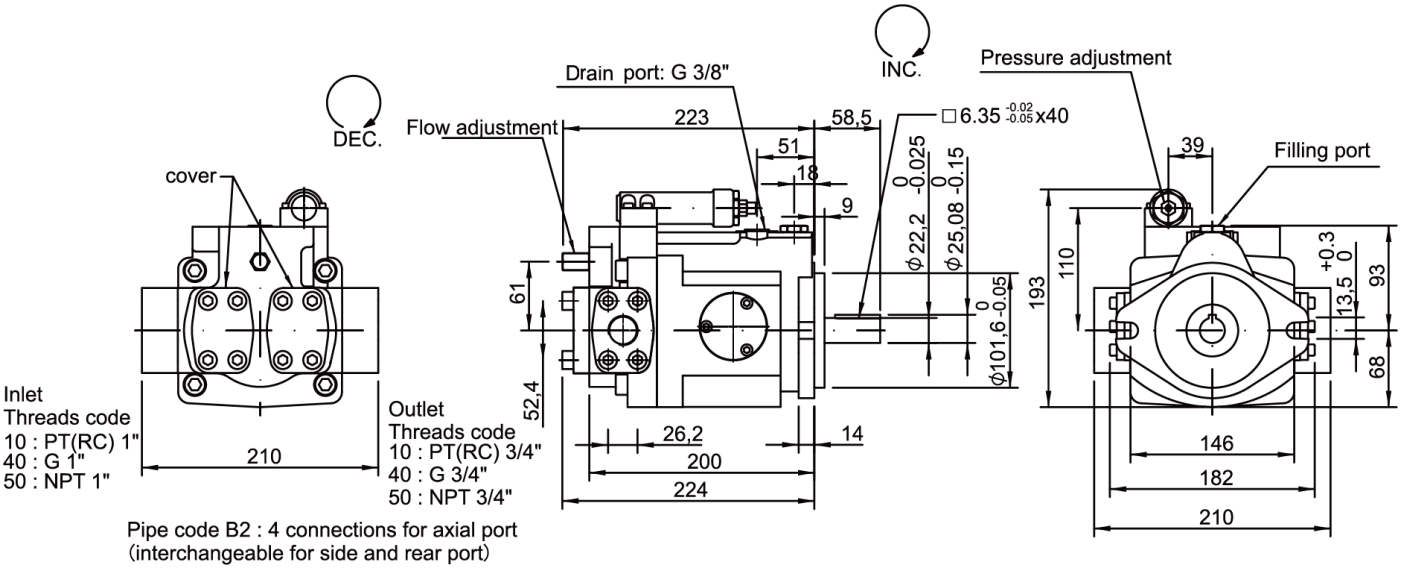
Type	A	B	C	CG	CR	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HQ
○ (Optional)	○					○	○	○	○			○	○	○	○	○	○

V23, V25 Rear Port (Please follow order code No.6, add “B”)



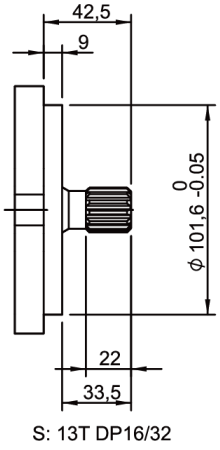


V23, V25 4 Connections for Rear Port (Please follow order code No.6, add"B2")

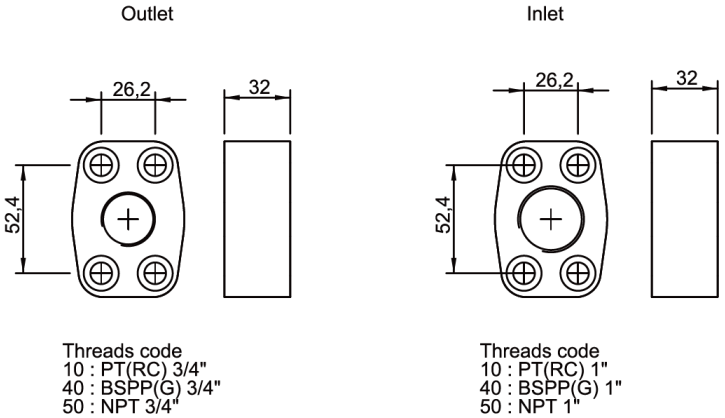


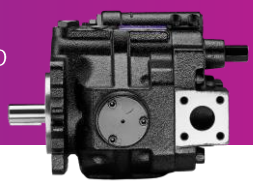
Type	A	B	C	CG	CR	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HQ
○ (Optional)	○	○										○	○	○	○		

V23, V25 Splined Shaft Type

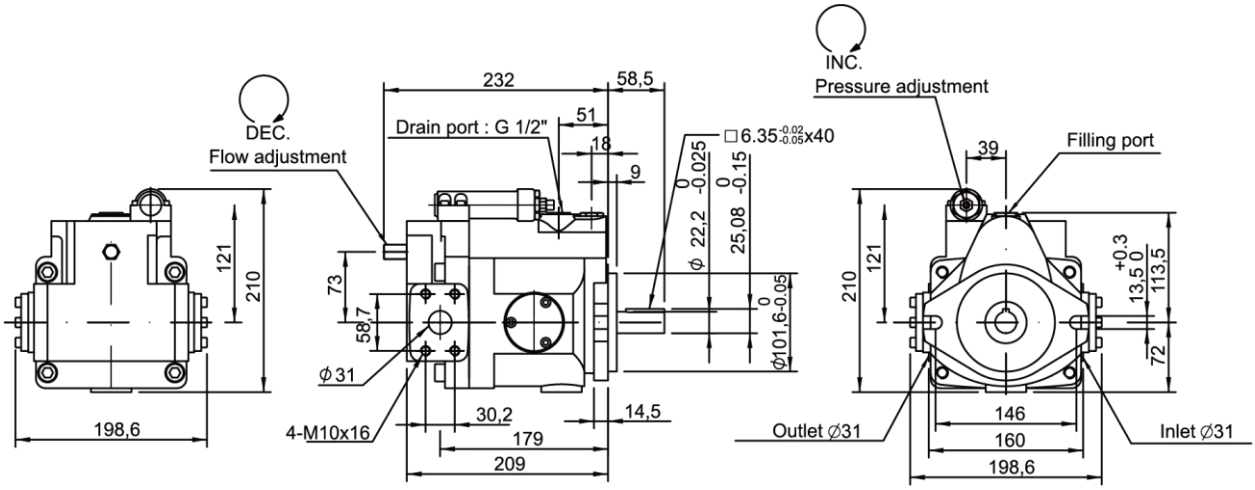


V23, V25 Inlet / Outlet

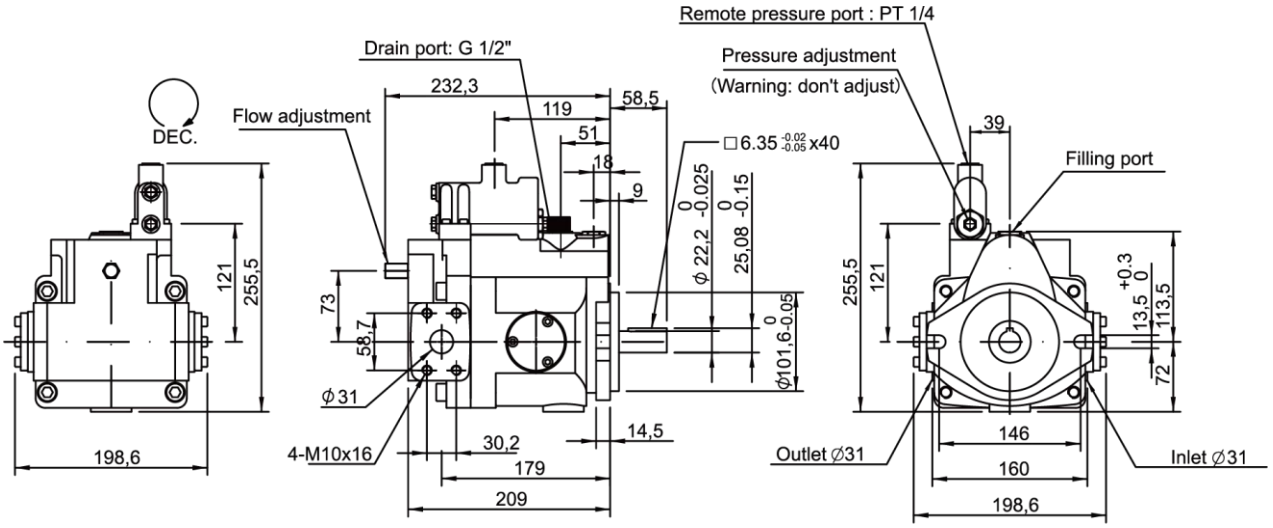




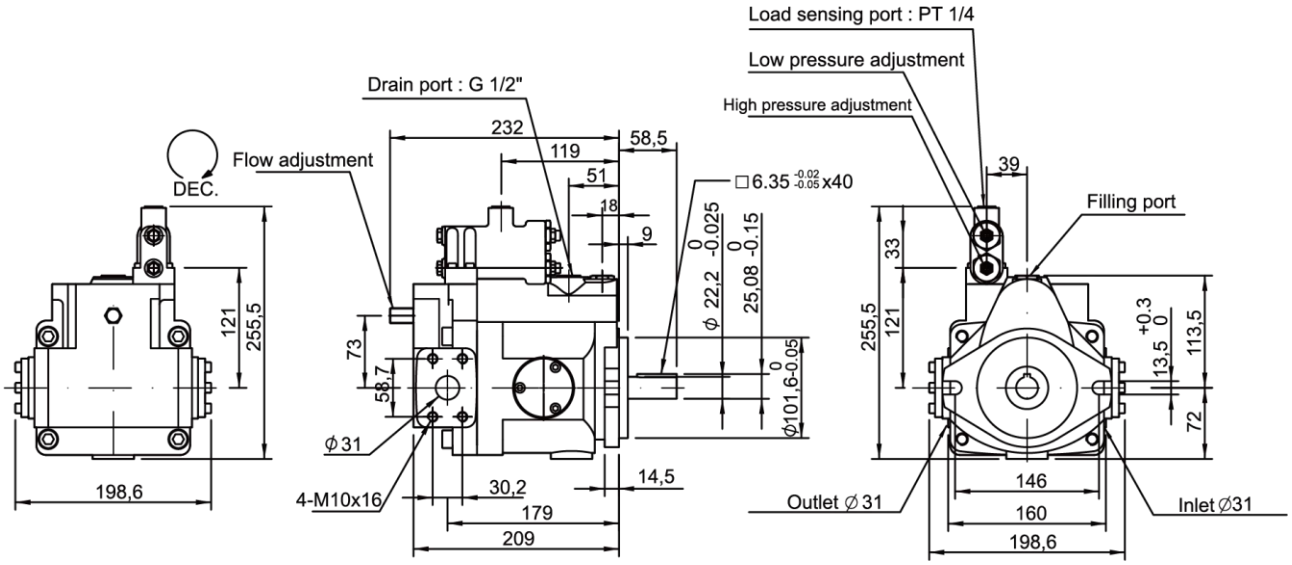
V38A, V42A Standard Pressure Control

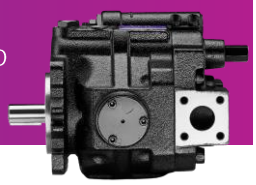


V38G, V42G Remote Pressure Control

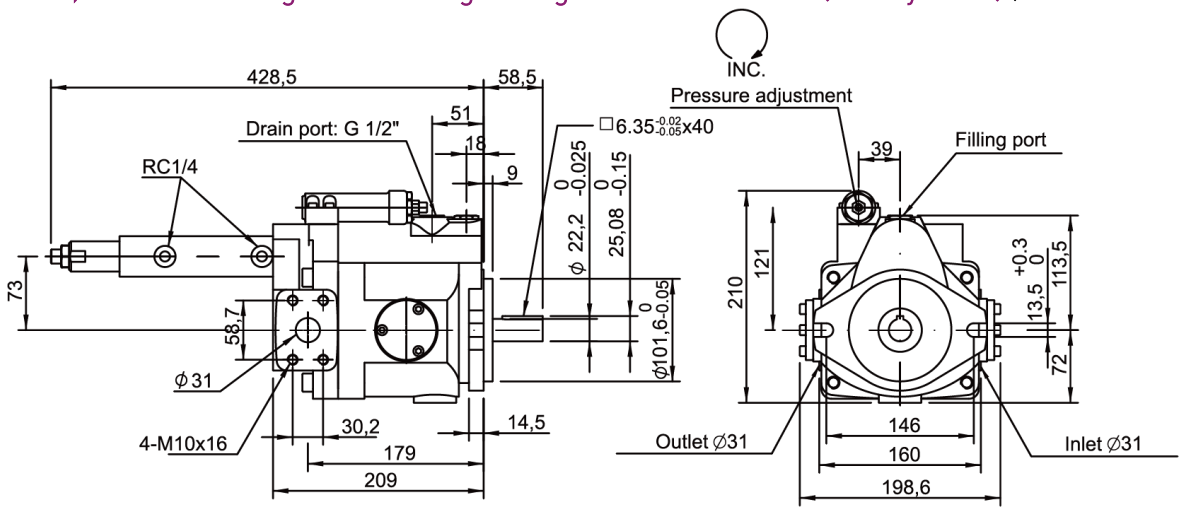


V38HL, V42HL Load-Sensing Control

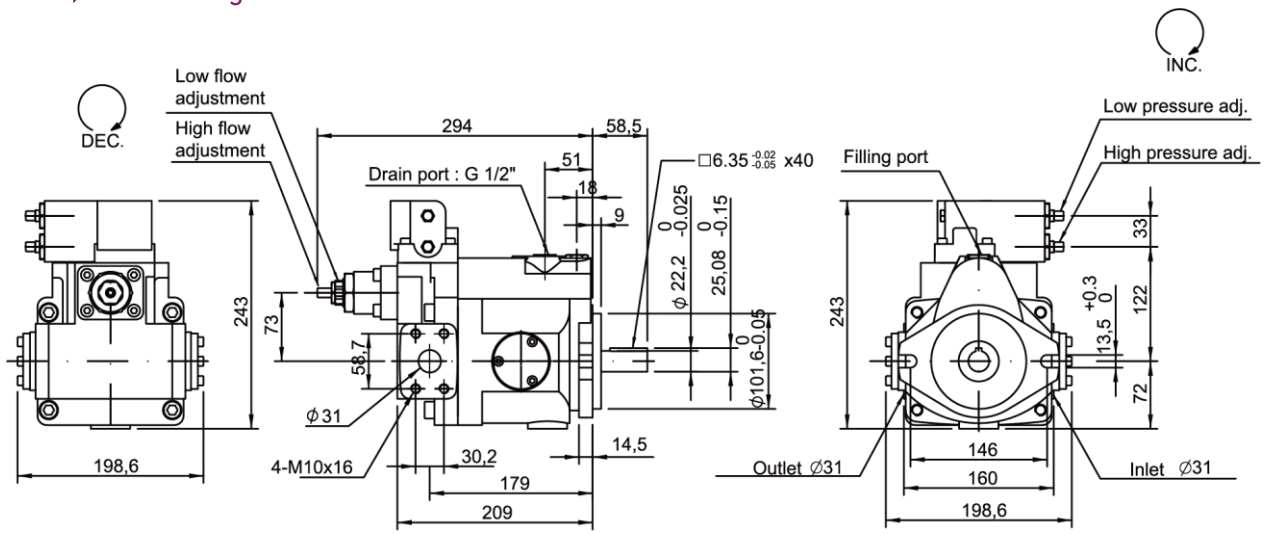




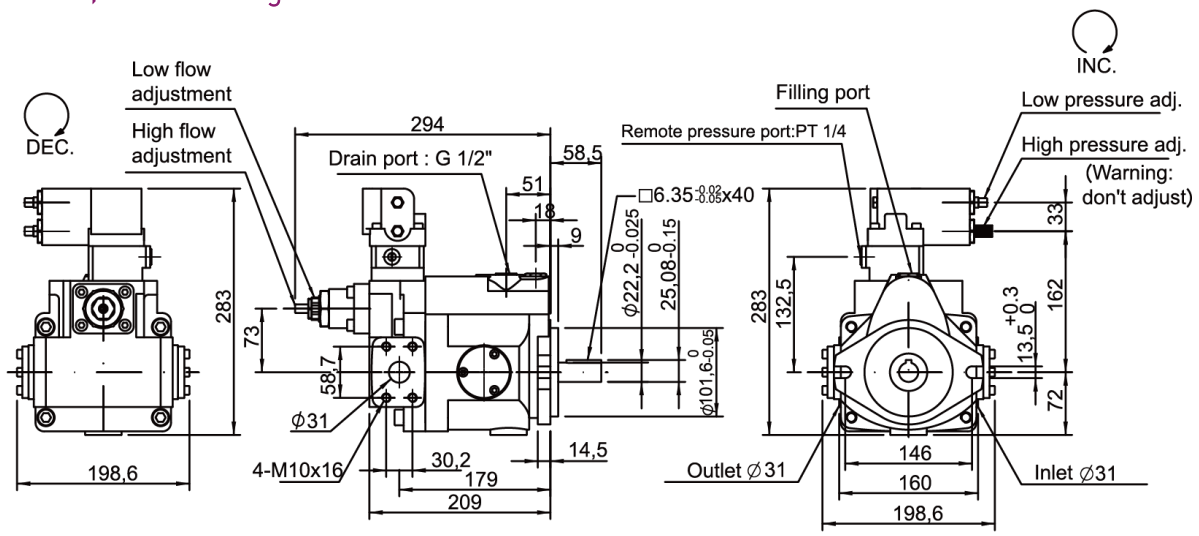
V38B, V42B Multi-Stage Flow & Single-Stage Pressure Control (with cylinder) (Remark: Install with A type control)

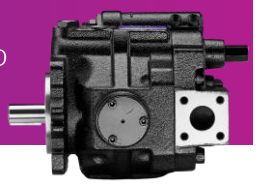


V38C, V42C 2-Stage Pressure & Flow Control

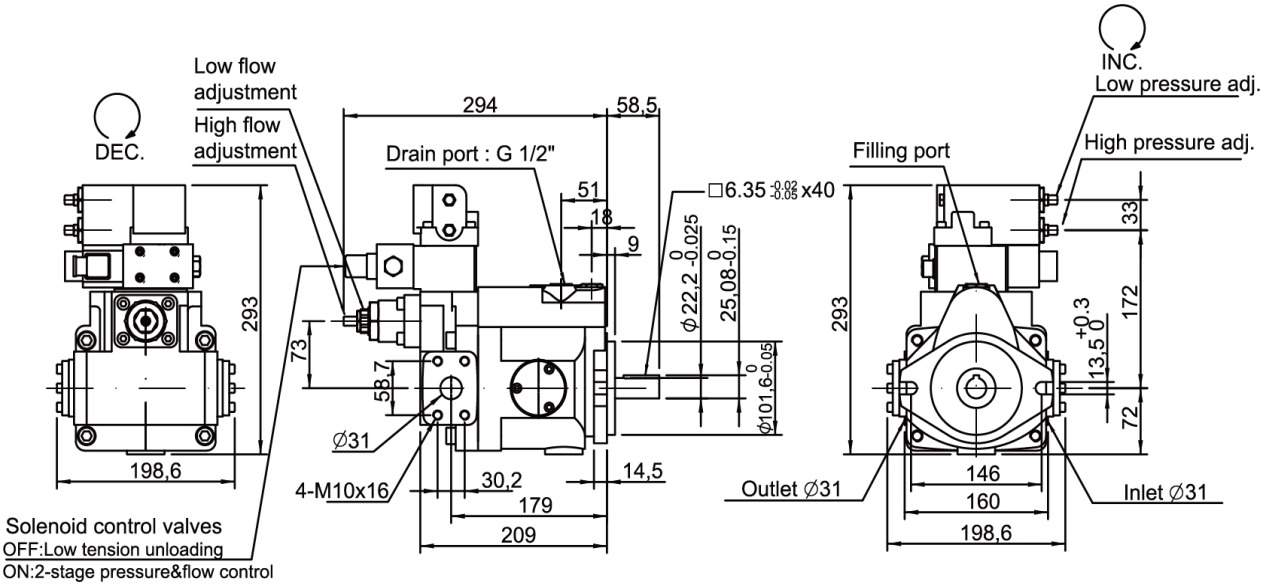


V38CG, V42CG 2-Stage Pressure & Flow Control + Remote

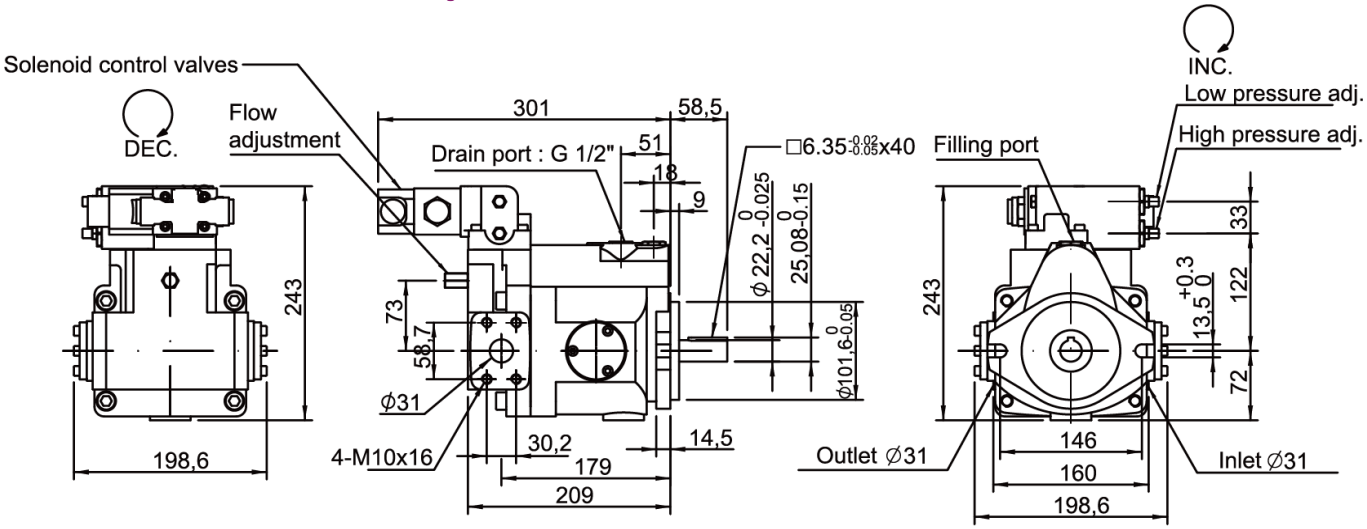


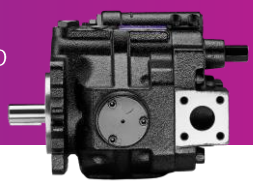


V38CR, V42CR 2-Stage Pressure & Flow Control + Low Tension Unloading

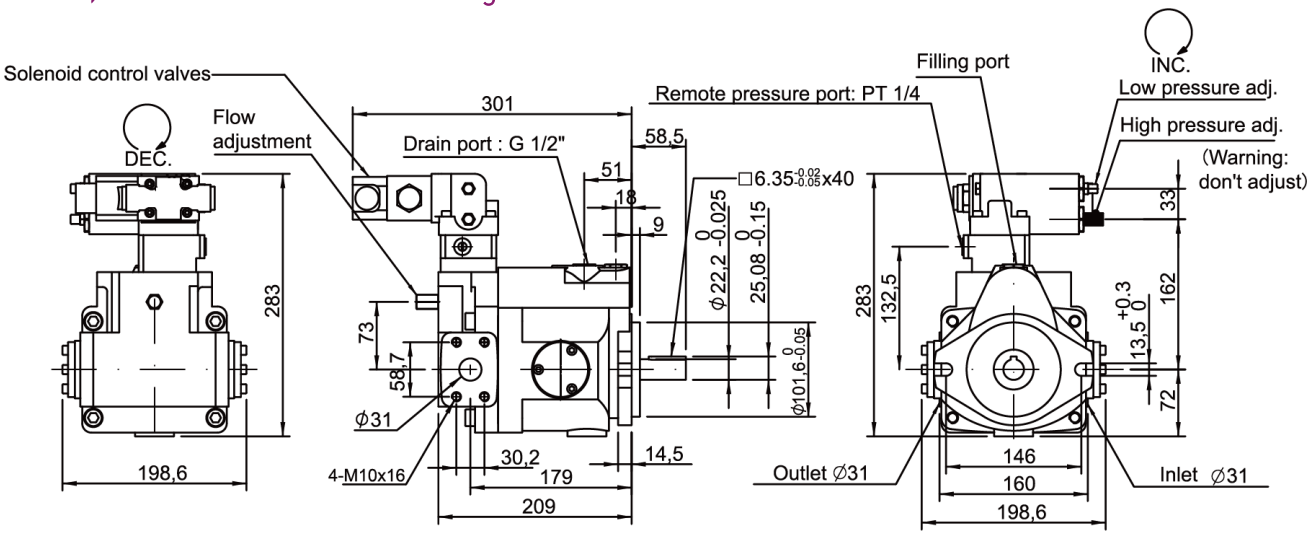


V38D, V42D Low Tension Unloading + Pressure Control

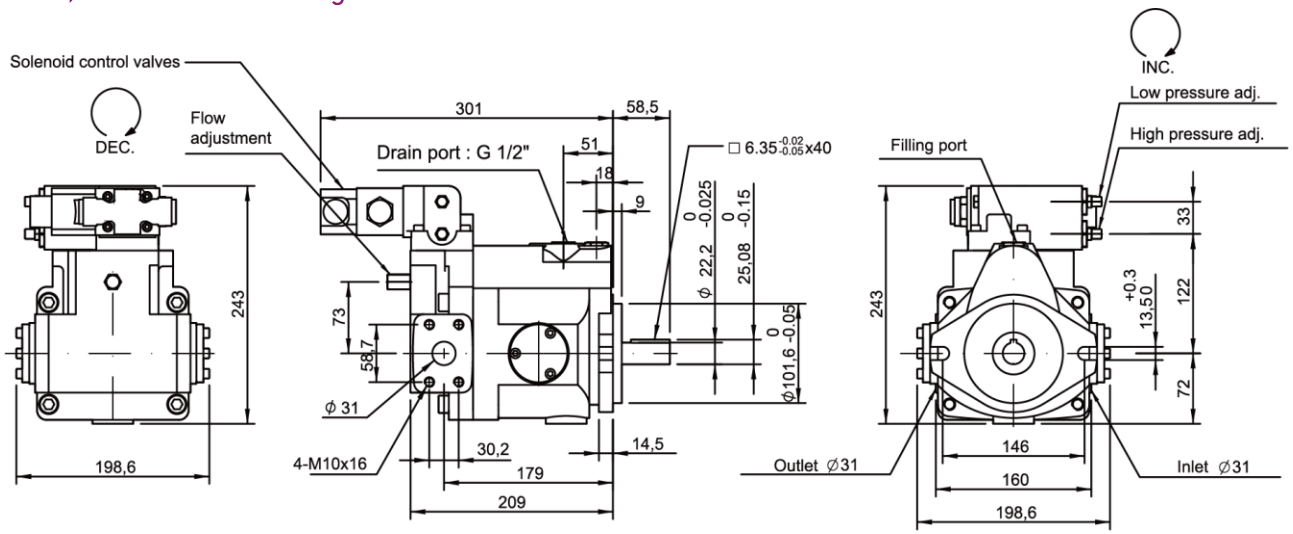




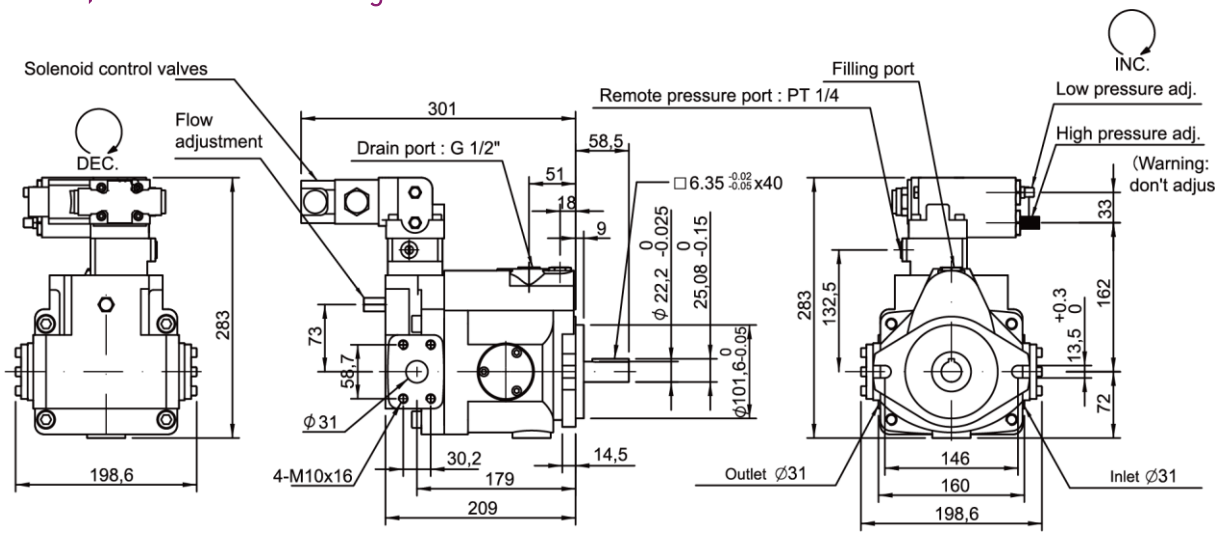
V38DG, V42DG Low Tension Unloading +Pressure Control+ Remote

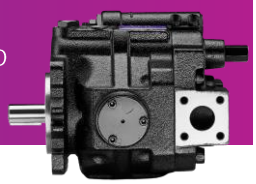


V38E, V42E Electric 2-Stage Pressure Control

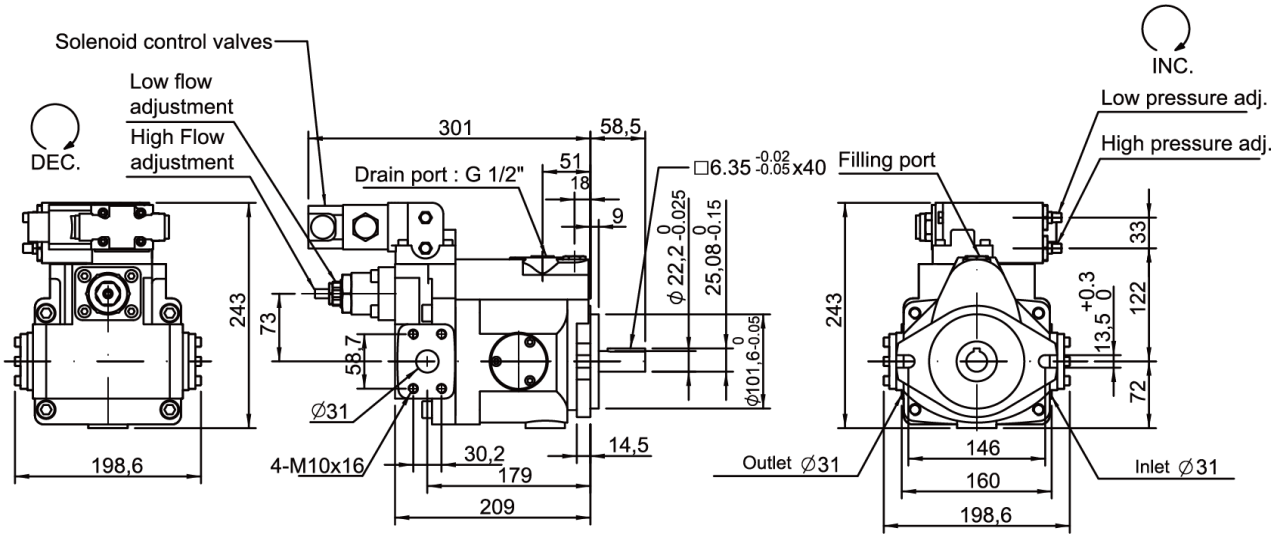


V38EG, V42EG Electric 2-Stage Pressure Control + Remote

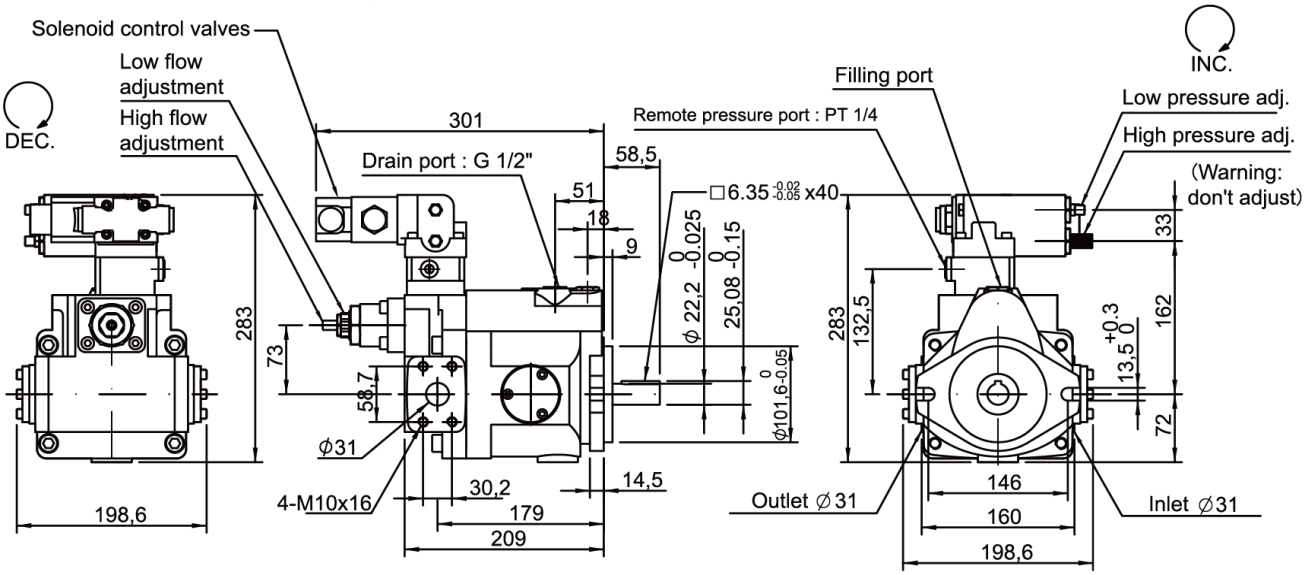


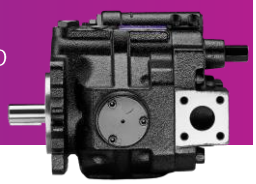


V38F, V42F Electric 2-Stage Pressure Control + Flow Control

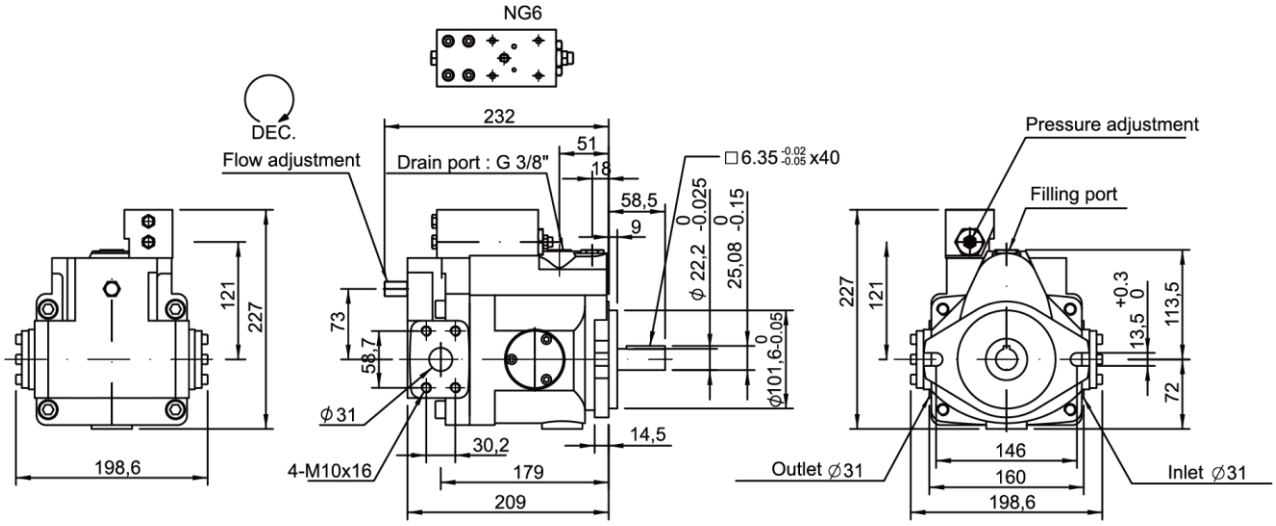


V38FG, V42FG Electric 2-Stage Pressure Control& Flow Control + Remote

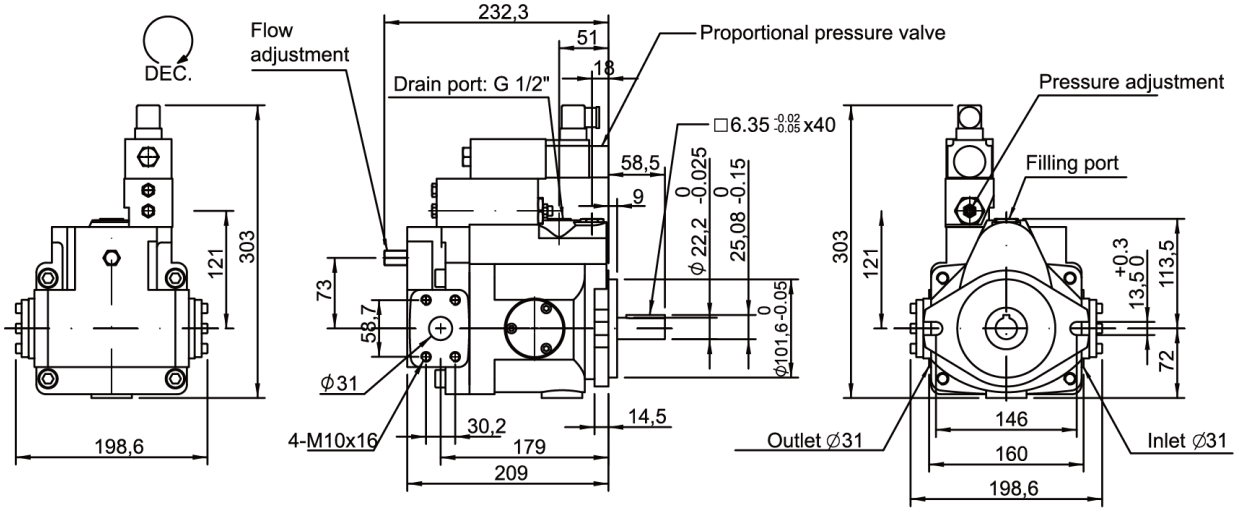




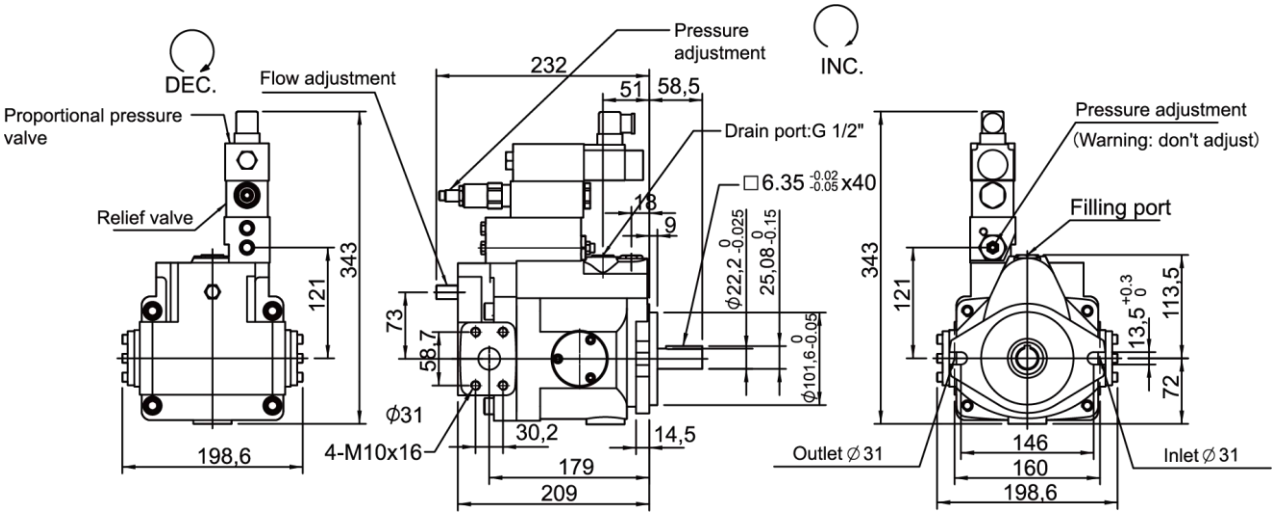
V38GM, V42GM Remote Pressure Compensator with NG6 Interface

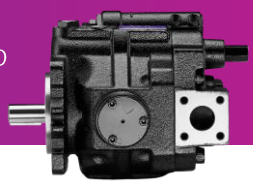


V38GJ, V42GJ Remote Pressure Compensator + Proportional Pressure Valve

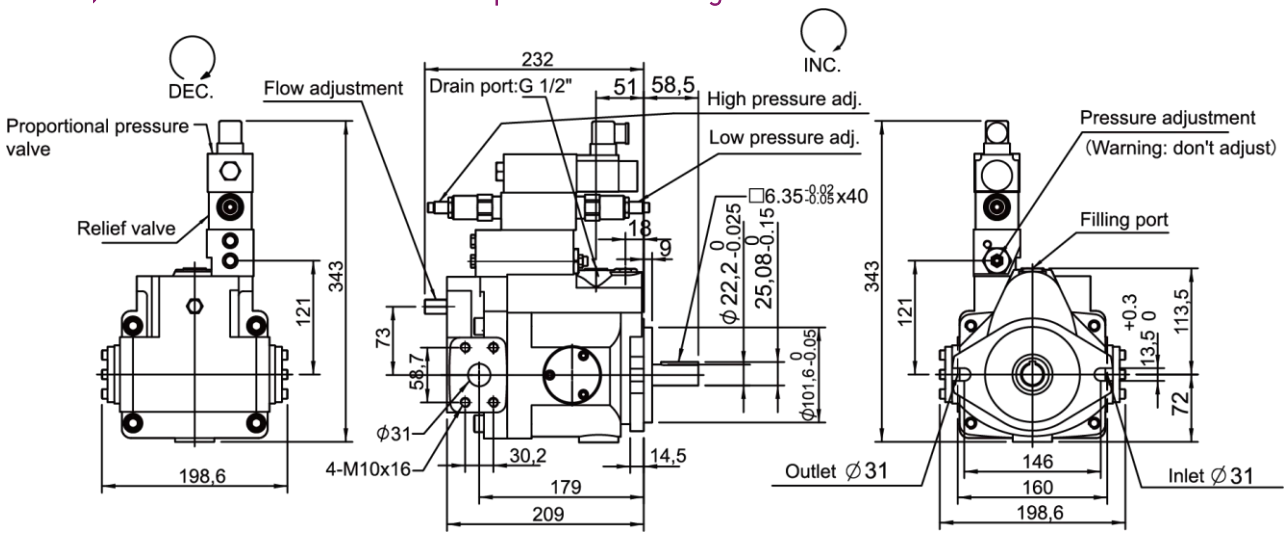


V38GR, V42GR Remote Pressure Compensator + Electrical Unloading

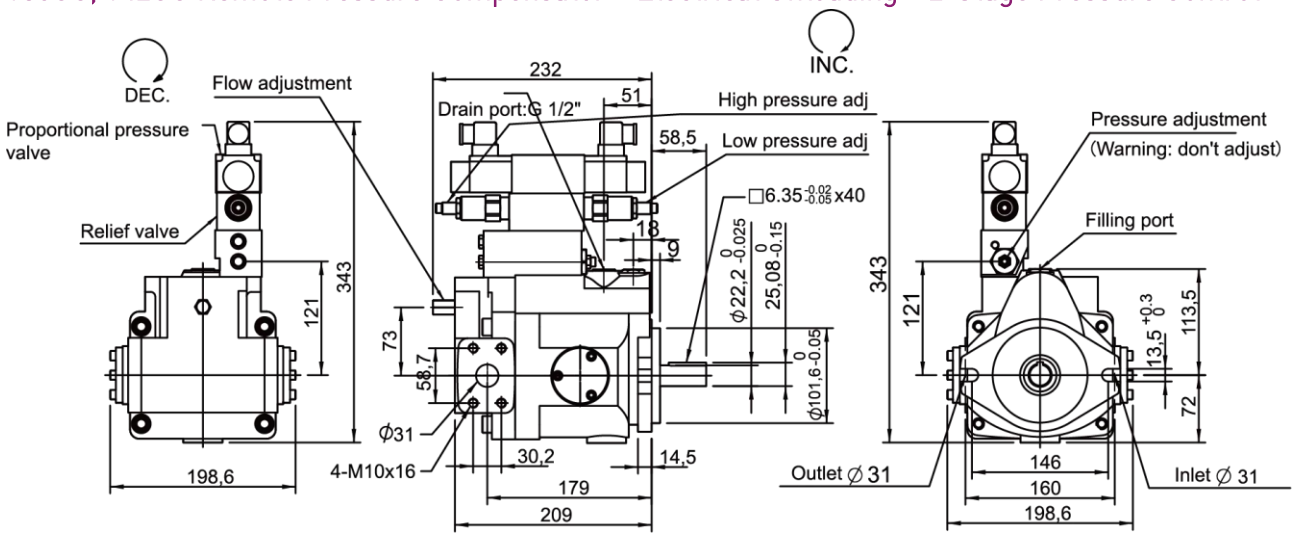




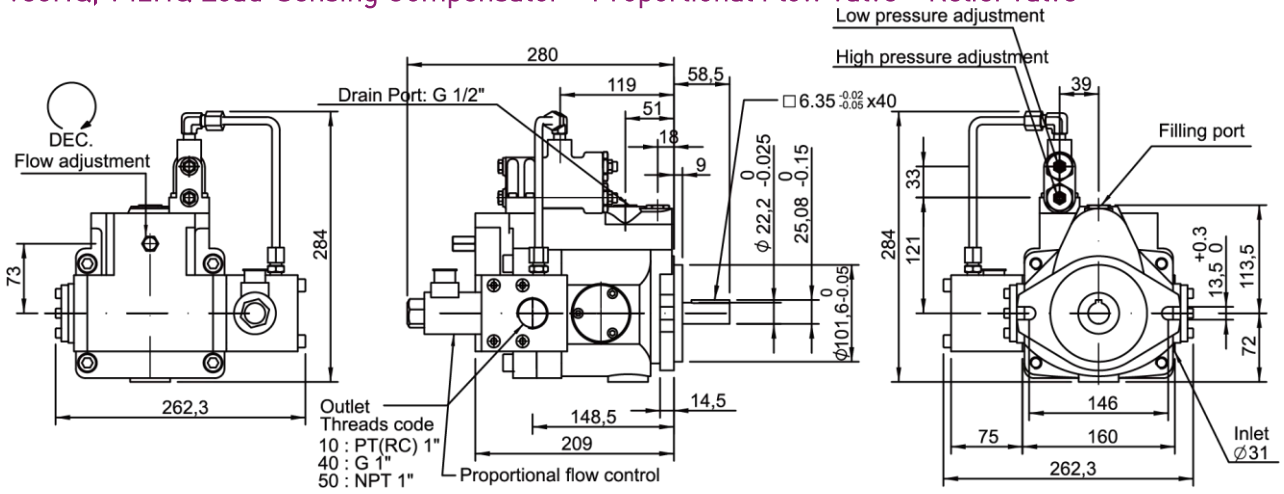
V38GB, V42GB Remote Pressure Compensator + 2-Stage Pressure Control

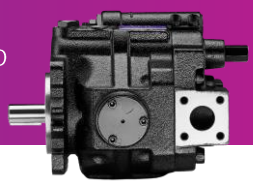


V38GC, V42GC Remote Pressure Compensator + Electrical Unloading + 2-Stage Pressure Control

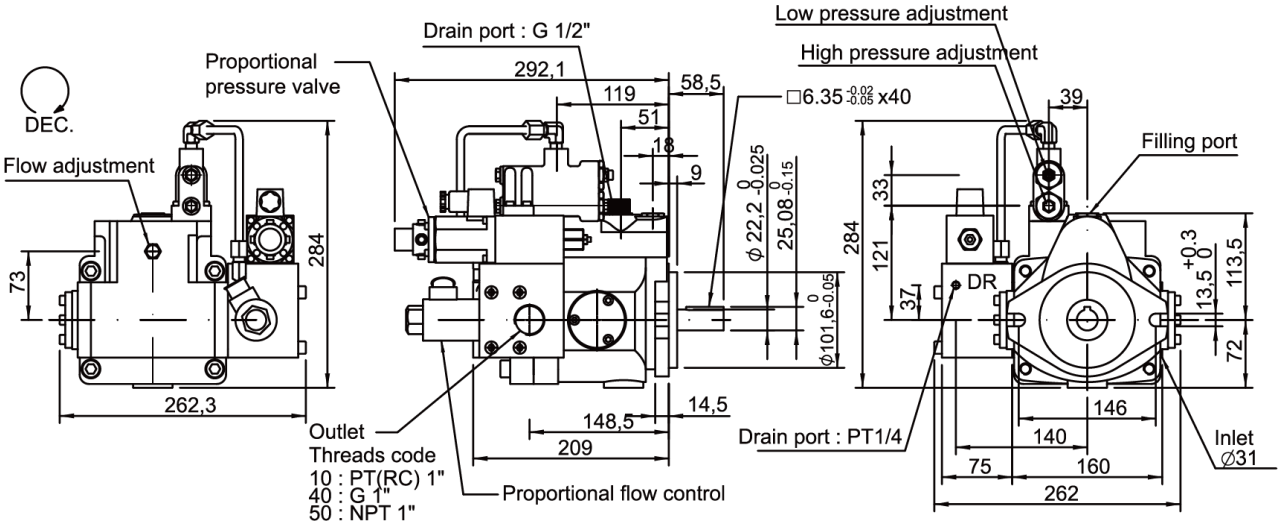


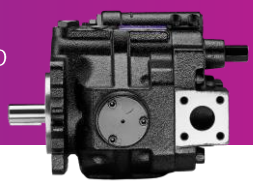
V38HQ, V42HQ Load-Sensing Compensator + Proportional Flow Valve + Relief Valve





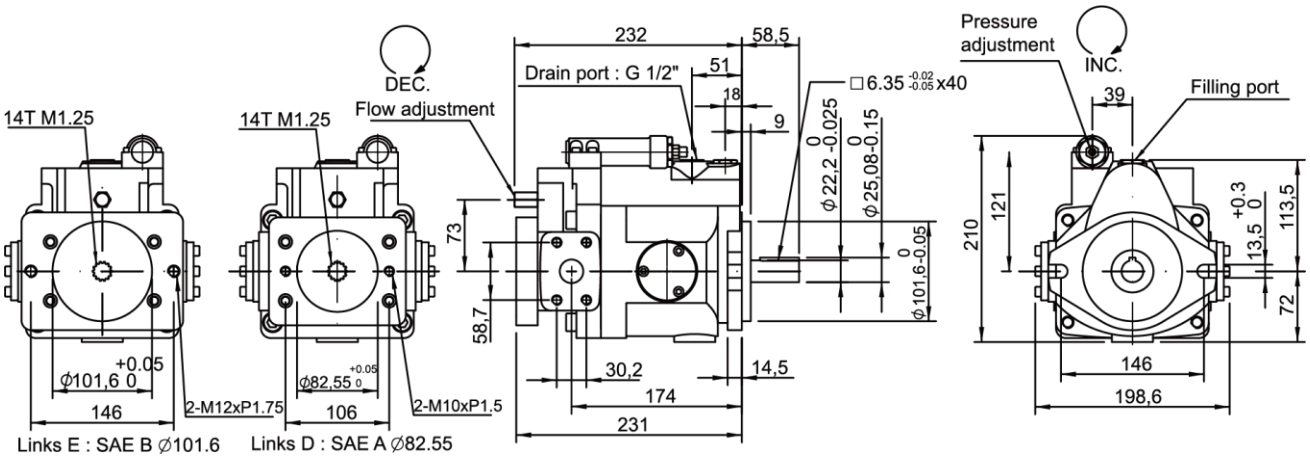
V38HK, V42HK Load-Sensing Compensator+ Proportional Pressure Valve + Proportional Flow Valve





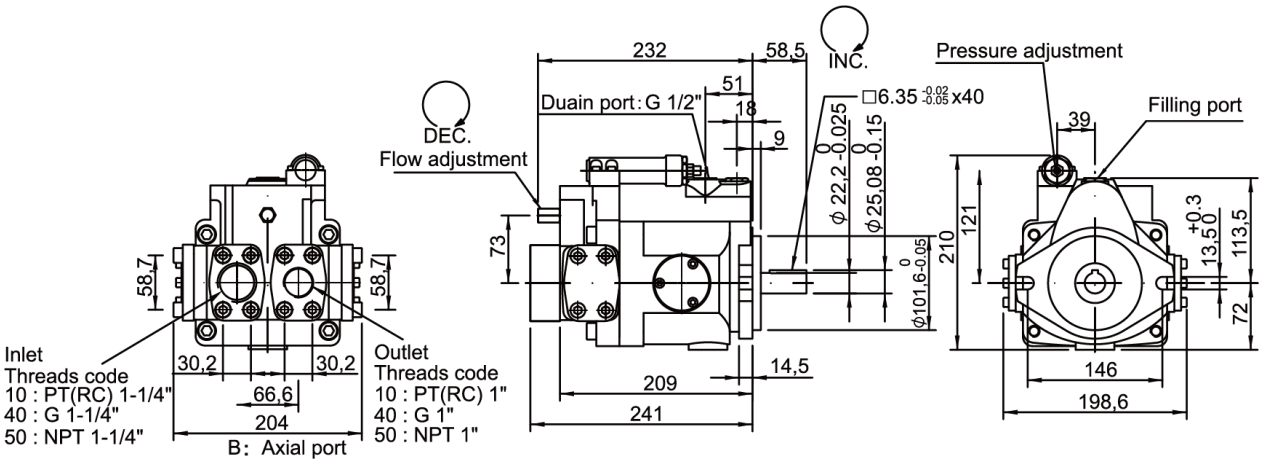
V38, V42 Thru Drive (SAE A ø82.55，Code D)

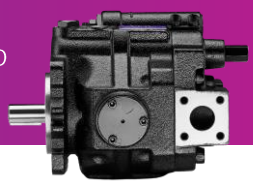
Thru Drive (SAE B Ø101.6，Code E)



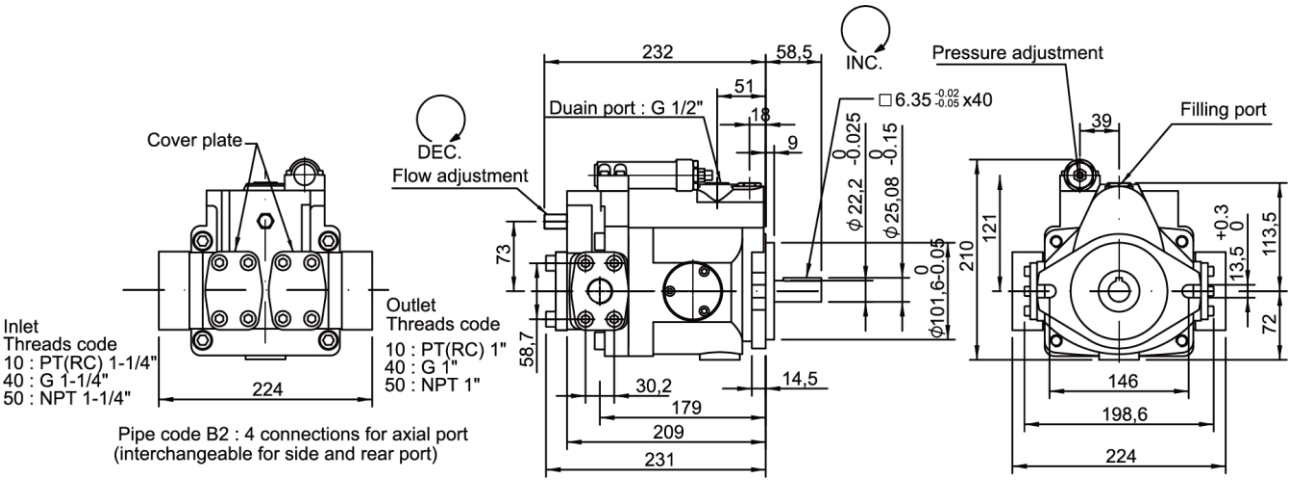
Type	A	B	C	CG	CR	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HQ
○ (Optional)	○					○	○	○	○			○	○	○	○	○	○

V38, V42 Rear Port (Please follow order code No.6, add "B")



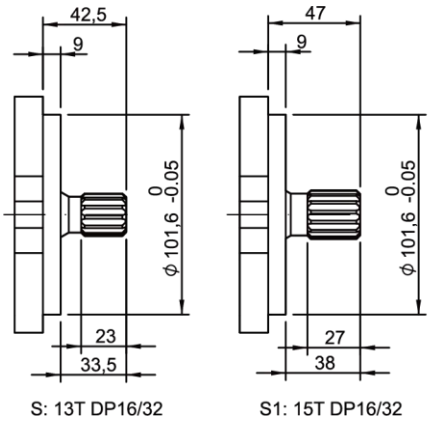


V38, V42 4 Connections for Rear Port (Please follow order code No.6, add "B2")

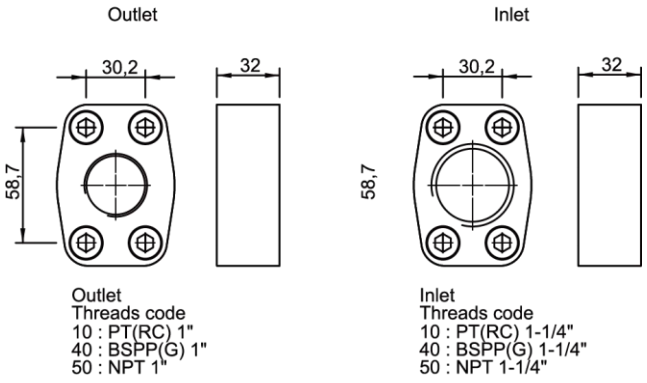


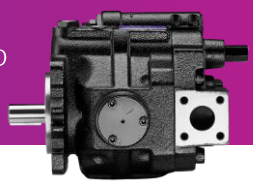
Type	A	B	C	CG	CR	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HQ
○ (Optional)	○	○	○	○						○	○	○	○	○	○		

V38, V42 Splined Shaft Type

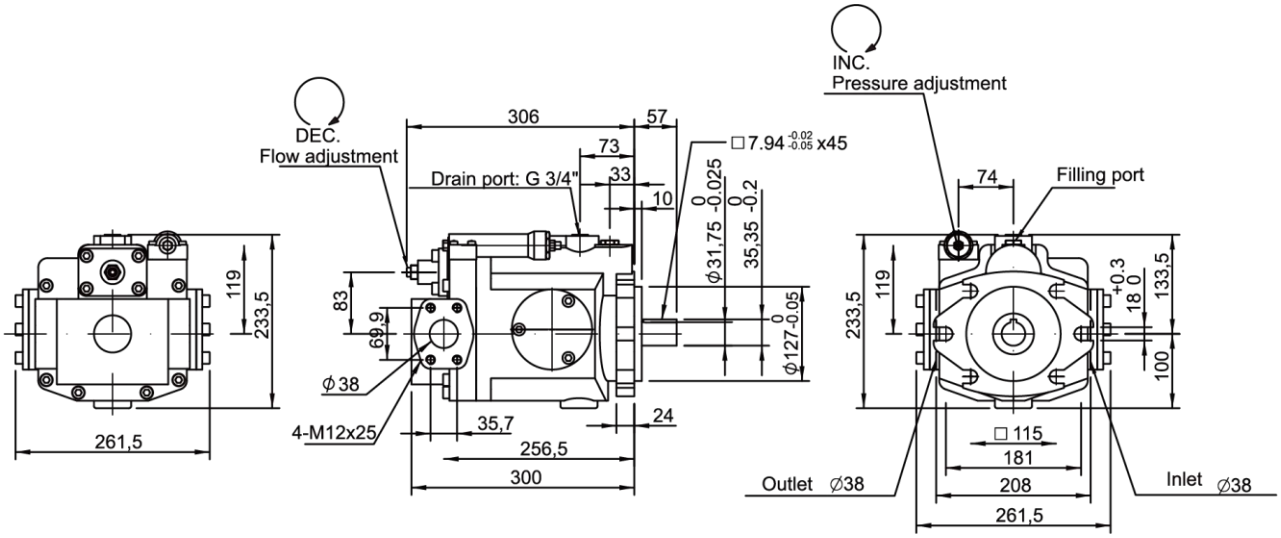


V38, V42 Inlet / Outlet

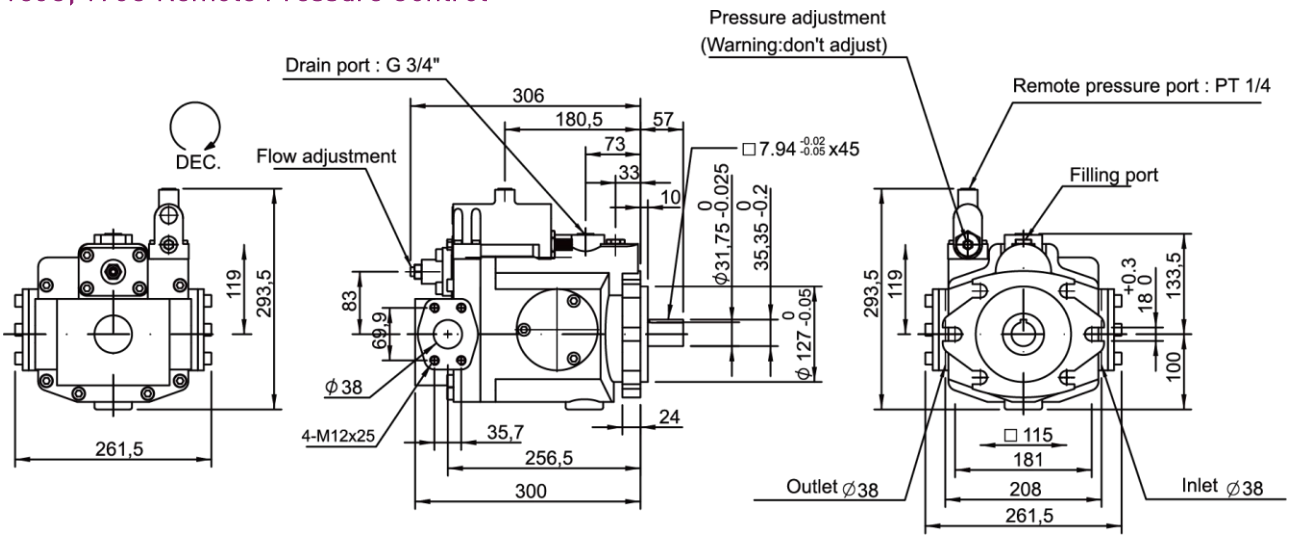




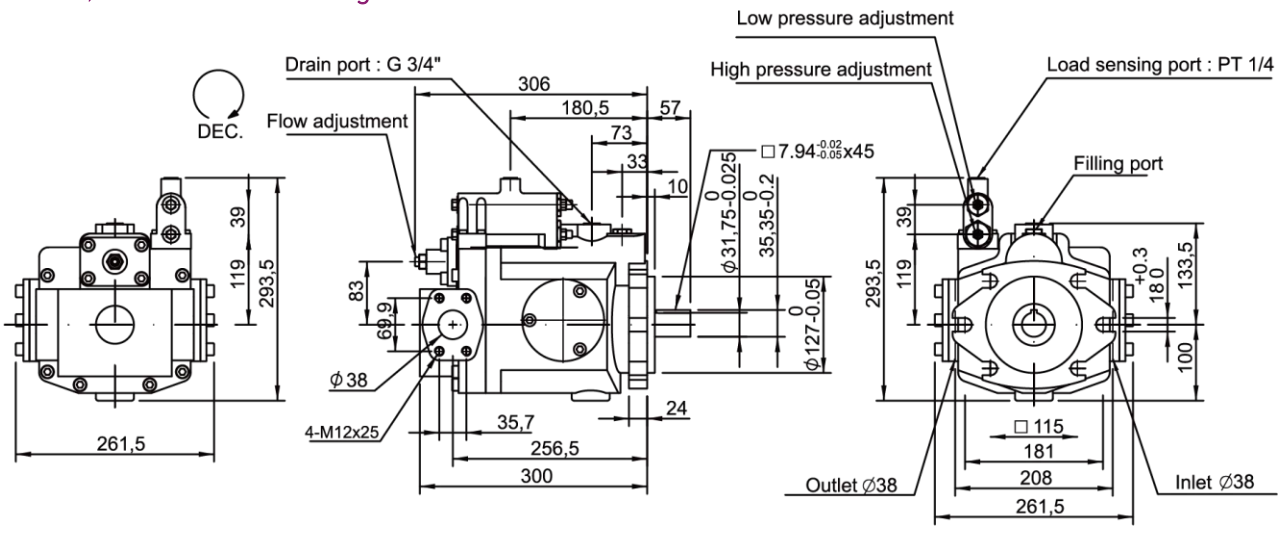
V50A, V70A Standard Pressure Control

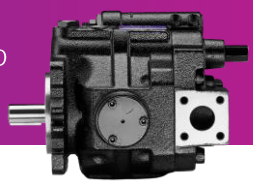


V50G, V70G Remote Pressure Control

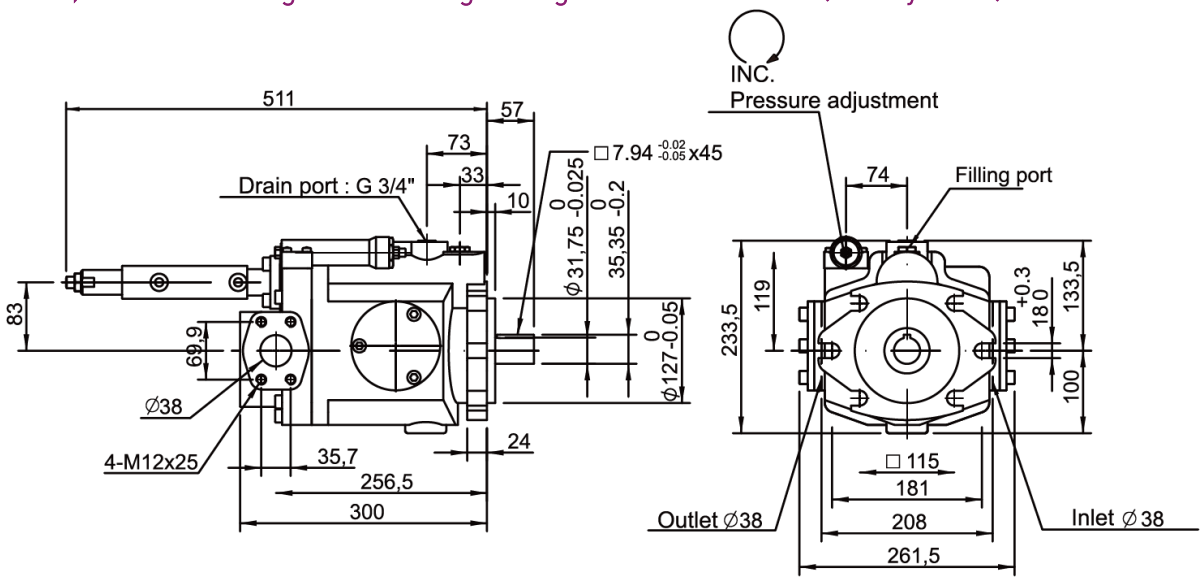


V50HL, V70HL Load-Sensing Control

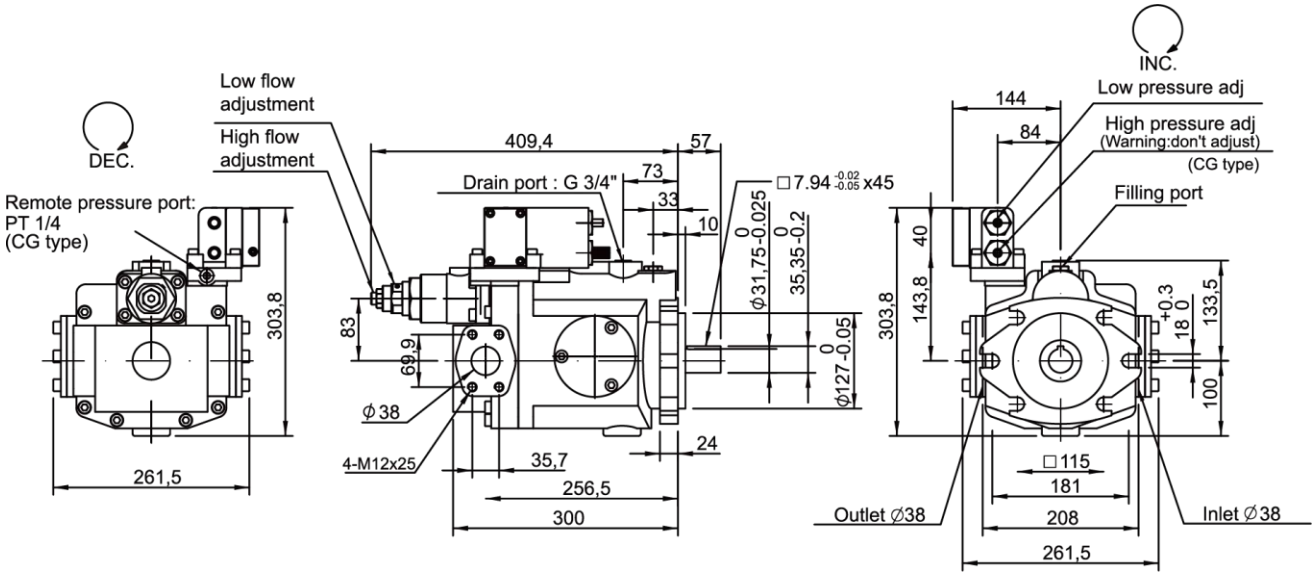


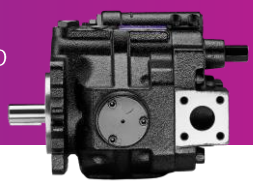


V50B, V70B Multi-Stage Flow & Single-Stage Pressure Control (with cylinder) Remark: Install with A type control

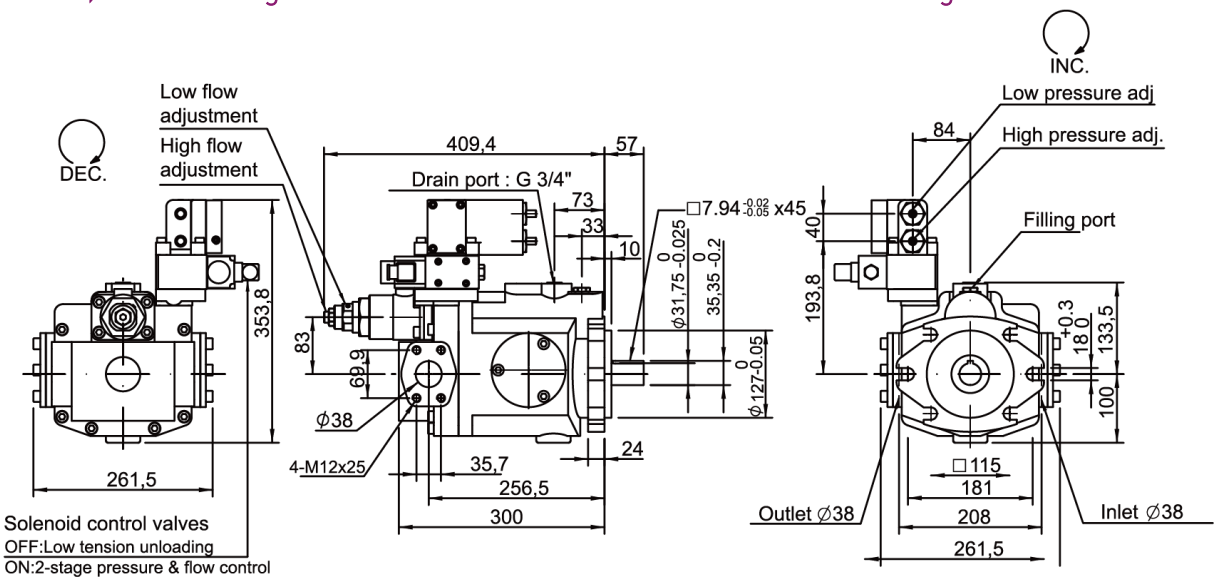


V50C, V70C 2-Stage Pressure & Flow Control
V50CG, V70CG 2-Stage Pressure & Flow Control + Remote

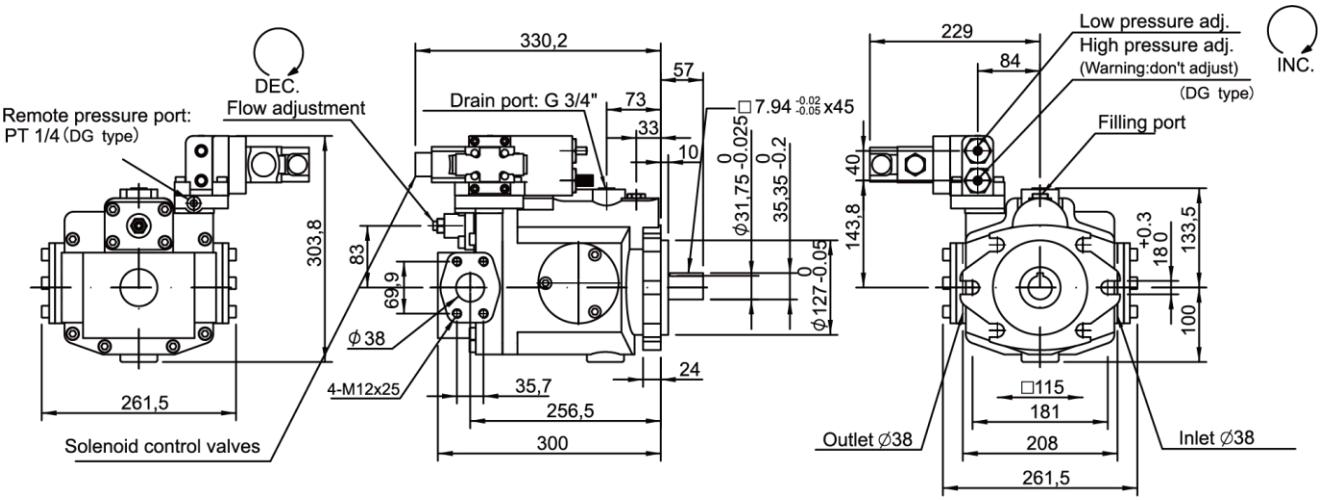


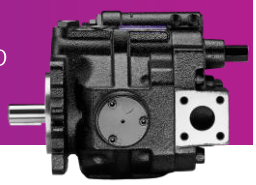


V50CR, V70CR 2-Stage Pressure & Flow Control + Low Tension Unloading

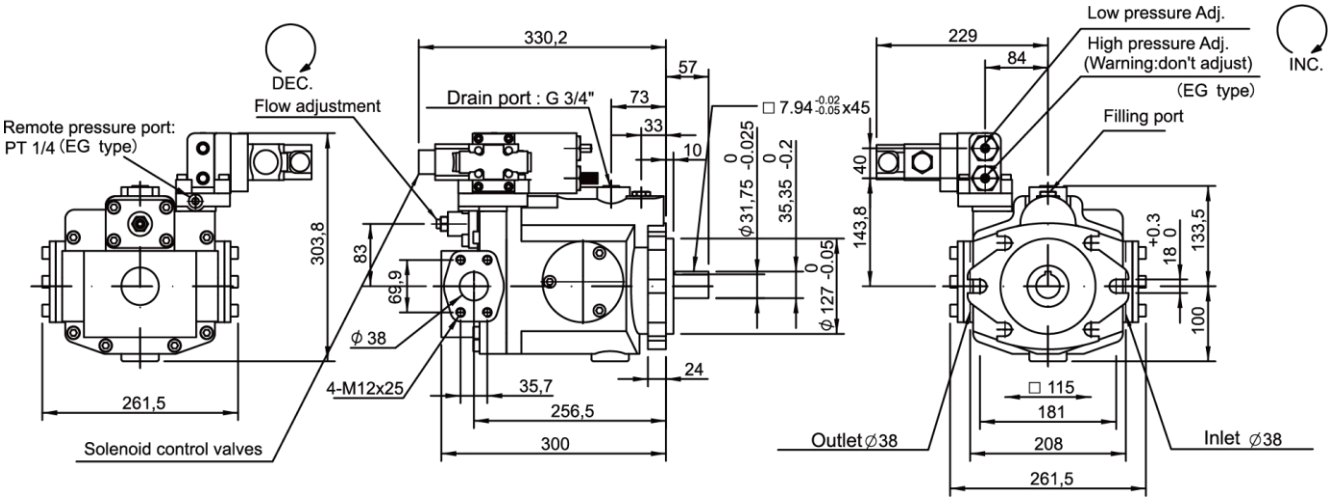


V50D, V70D Low Tension Unloading + Pressure Control
V50DG, V70DG Low Tension Unloading + Pressure Control + Remote

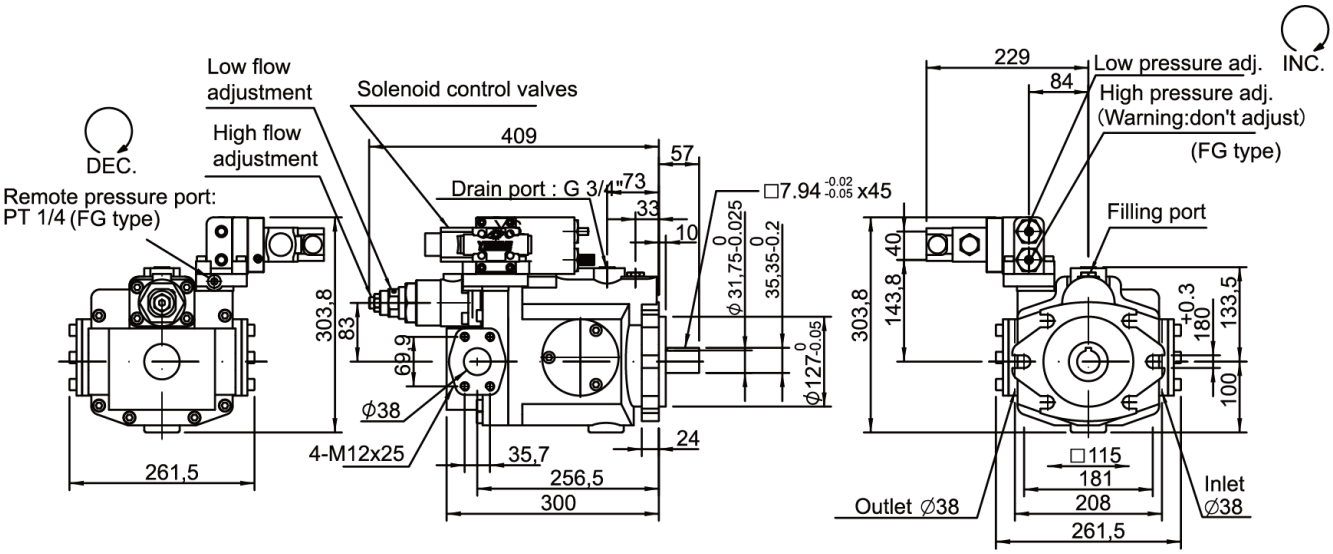


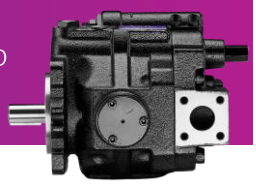


V50E, V70E Electric 2-Stage Pressure Control
V50EG, V70EG Electric 2-Stage Pressure Control + Remote

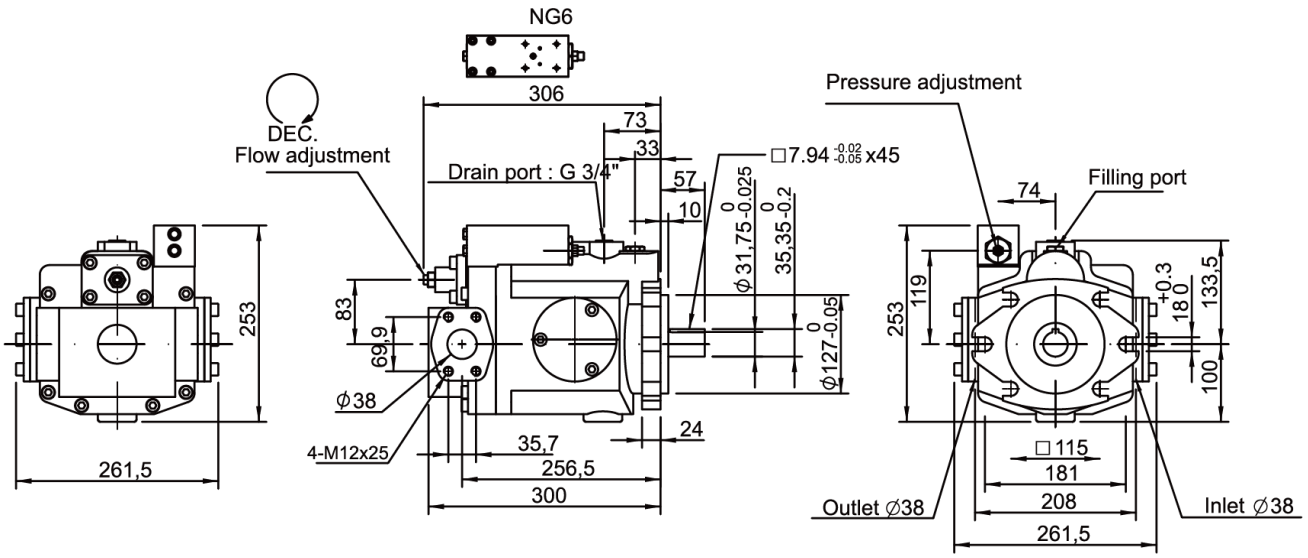


V50F, V70F Electric 2-Stage Pressure Control & Flow Control
V50FG, V70FG Electric 2-Stage Pressure Control & Flow Control + Remote

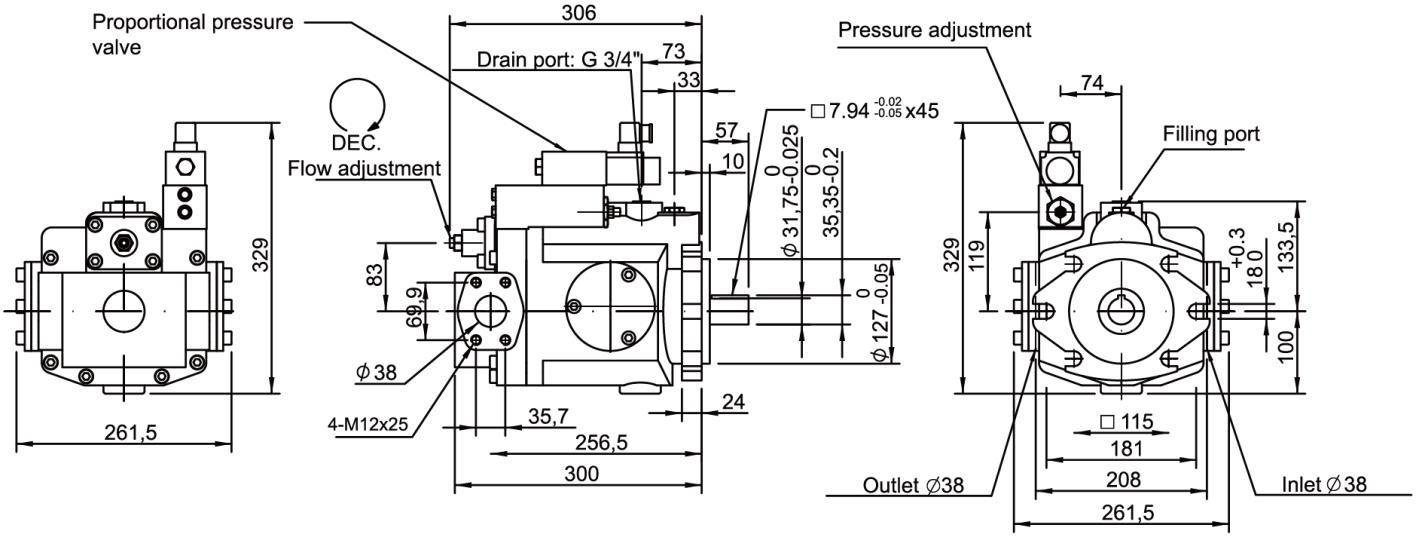


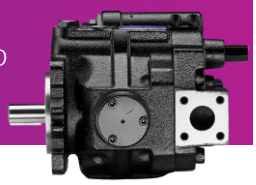


V50GM, V70GM Remote Pressure Compensator with NG6 interface

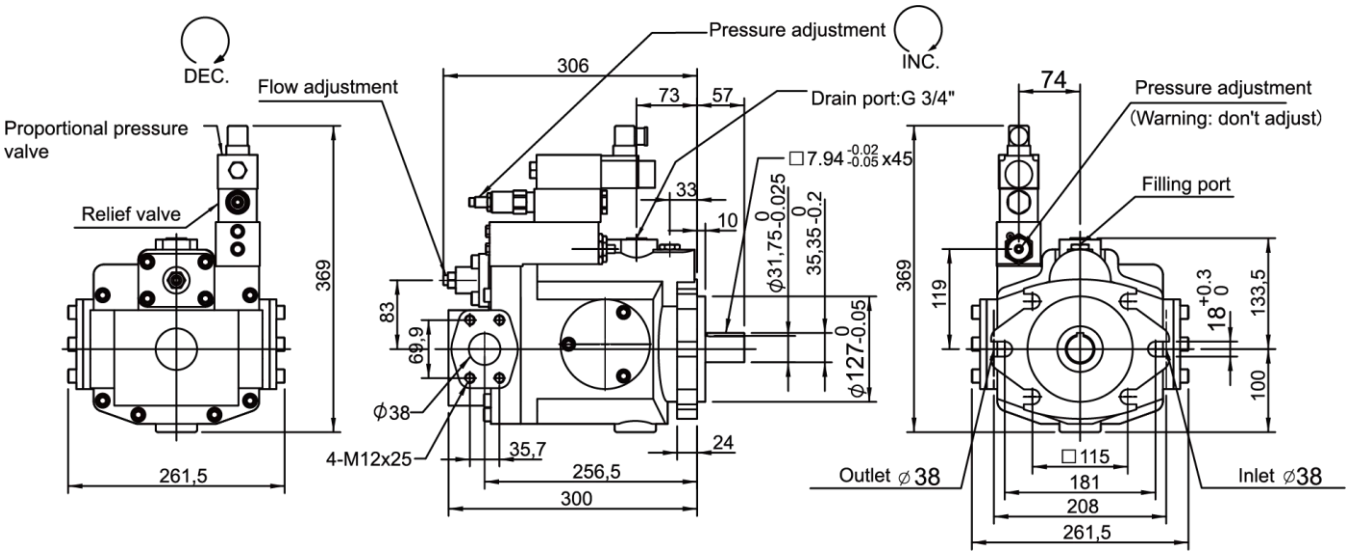


V50GJ, V70GJ Remote Pressure Compensator + Proportional Pressure Valve

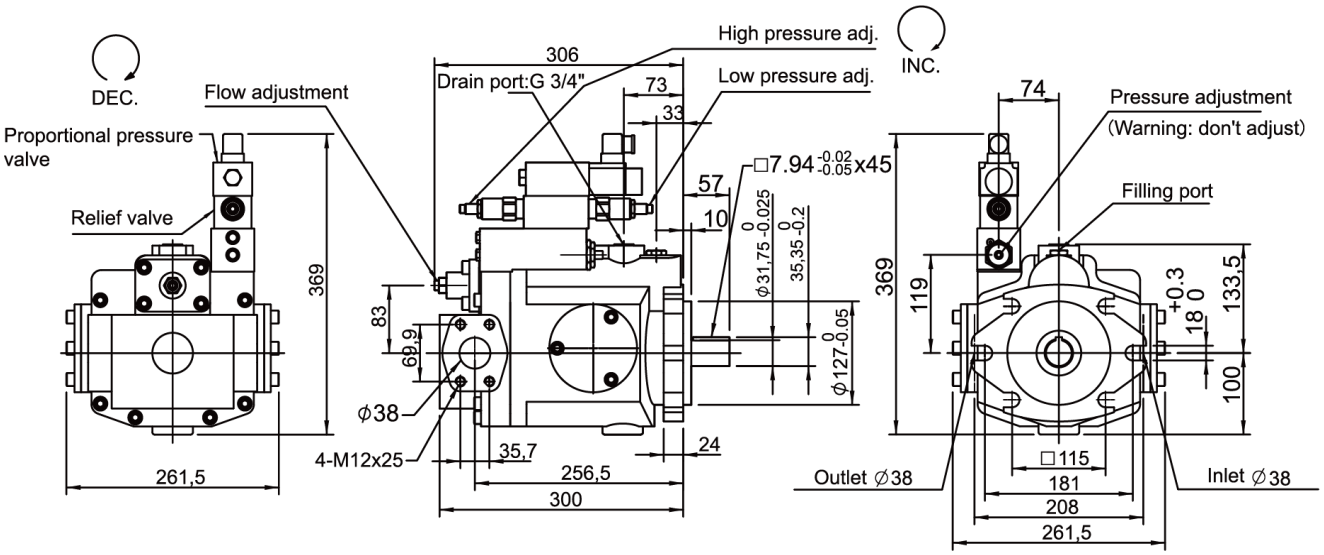


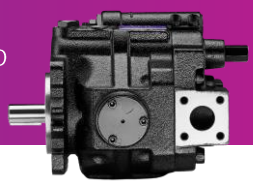


V50GR, V70GR Remote Pressure Compensator + Electrical Unloading

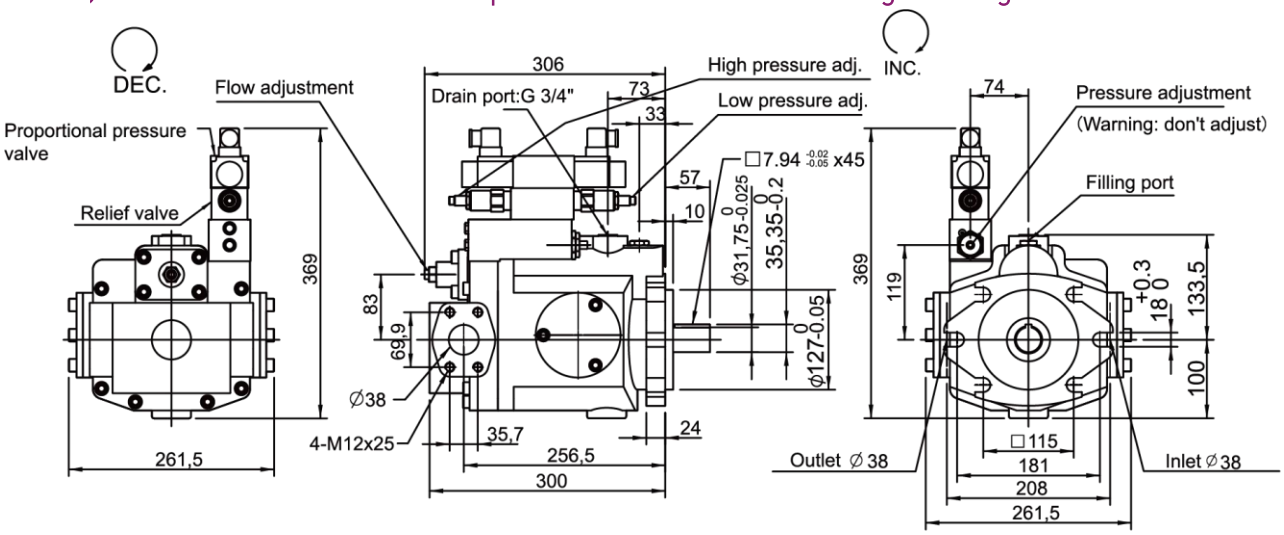


V50GB, V70GB Remote Pressure Compensator+ 2-Stage Pressure Control

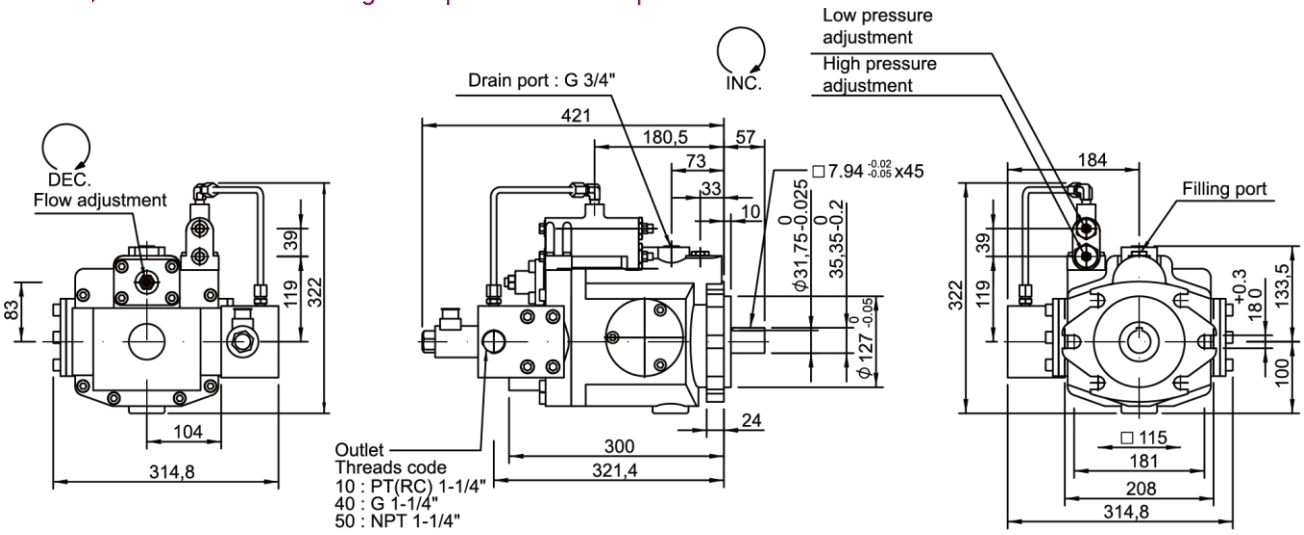




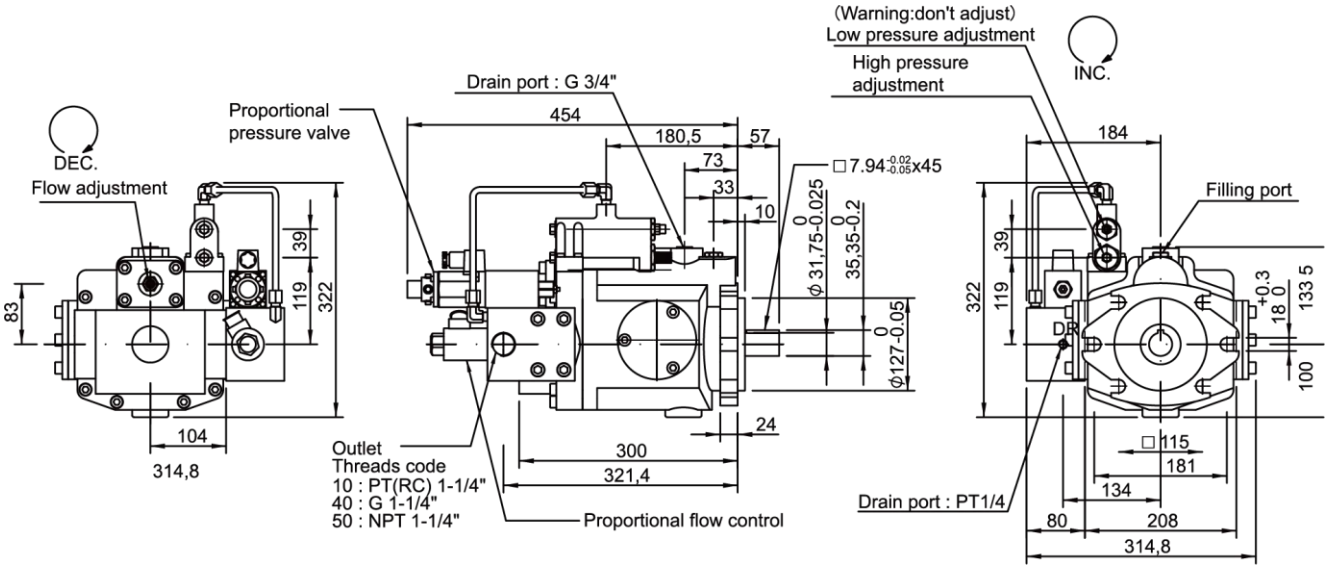
V50GC, V70GC Remote Pressure Compensator + Electrical Unloading + 2-Stage Pressure Control

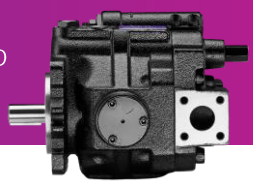


V50HQ, V70HQ Load-Sensing Compensator + Proportional Flow Valve + Relief Valve

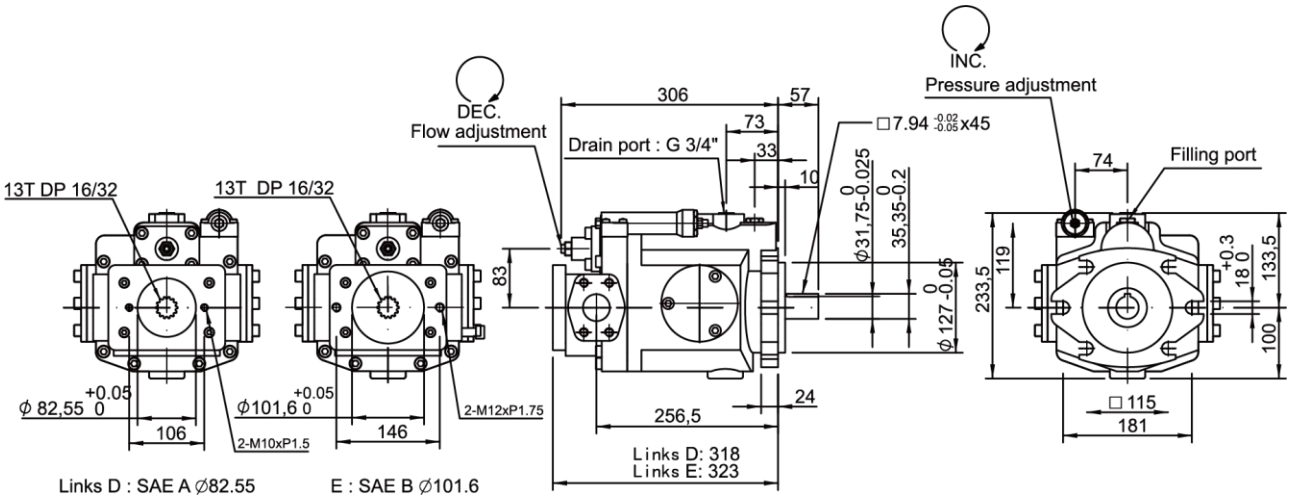


V50HK, V70HK Load-sensing Compensator + Proportional Pressure Valve + Proportional Flow Valve



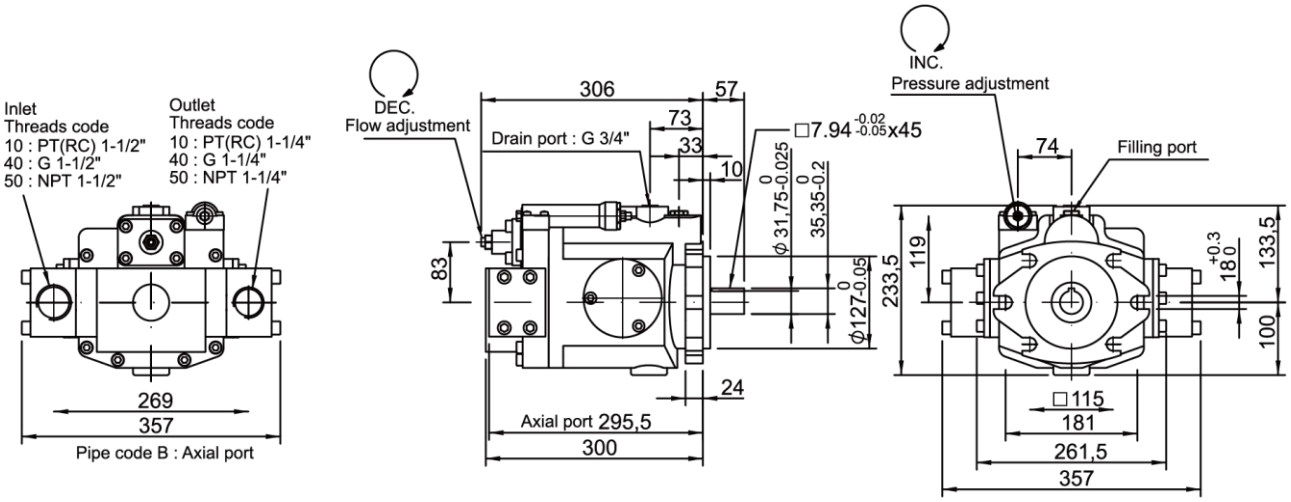


V50, V70 Thru Drive (SAEA ø82.55, SAE B ø101.6 D or E)

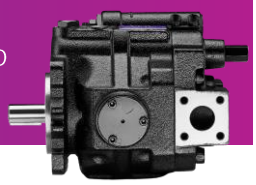


Type	A	B	C	CG	CR	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HQ
○ (Optional)	○					○	○	○	○			○	○	○	○	○	○

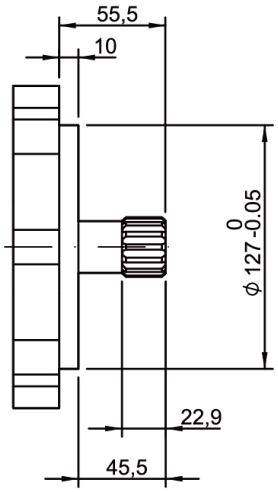
V50, V70 Rear Port (Please follow order code No.6 add “B”)



Type	A	B	C	CG	CR	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HQ
○ (Optional)	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		



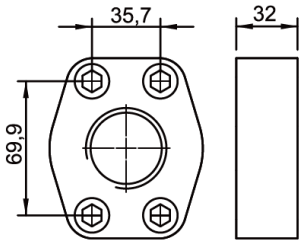
V50, V70 Splined Shaft Type



S: 14T DP12/24

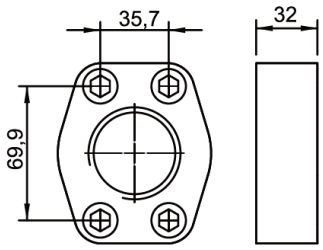
V50, V70 Inlet / Outlet

Outlet



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

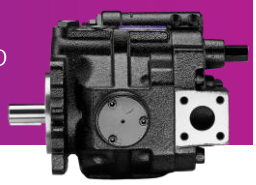
Inlet



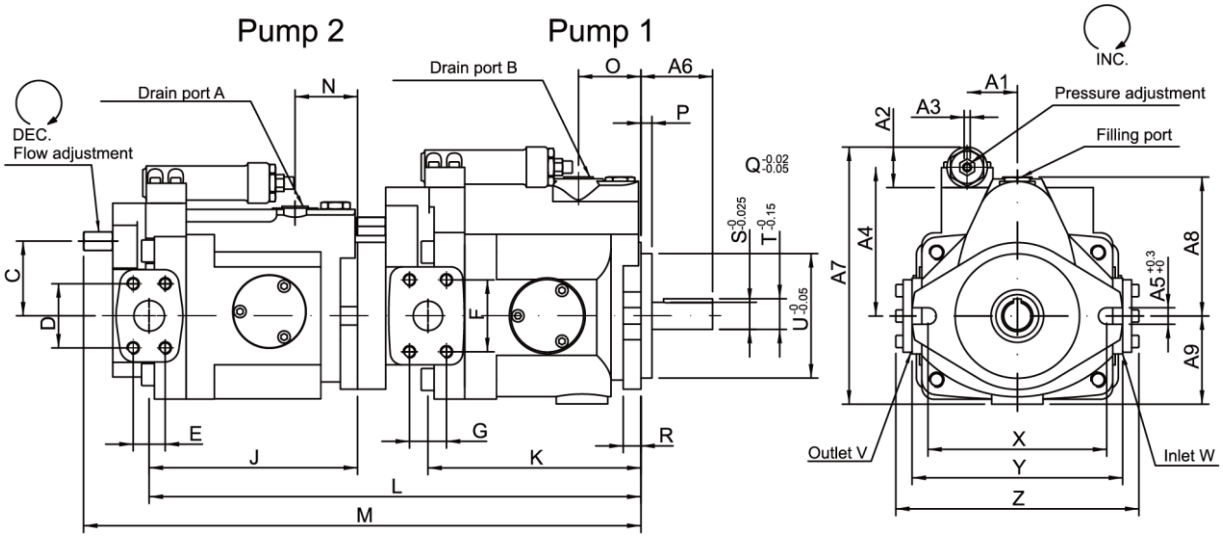
Threads code
10 : PT(RC) 1-1/2"
40 : G 1-1/2"
50 : NPT 1-1/2"

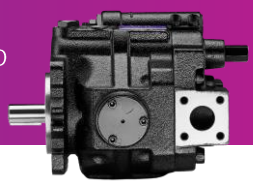
Pump Combination

Front Pump	V15 (V18)	V23 (V25)	V23 (V25)	V38 (V42)	V38 (V42)	V38 (V42)	V50 (V70)	V50 (V70)	V50 (V70)
Secondary Pump	V15 (V18)	V15 (V18)	V23 (V25)	V15 (V18)	V23 (V25)	V38 (V42)	V15 (V18)	V23 (V25)	V38 (V42)
A	G 3/8"	G 3/8"	G 3/8"	G 3/8"	G 3/8"	G 1/2"	G 3/8"	G 3/8"	G 1/2"
B	G 3/8"	G 3/8"	G 3/8"	G 1/2"	G 1/2"	G 1/2"	G 3/4"	G 3/4"	G 3/4"
C	57.45	57.45	61	57.45	61	73	57.45	61	73
D	35.1	35.1	52.4	35.1	52.4	58.7	35.1	52.4	58.7
E	35.1	35.1	26.2	35.1	26.2	30.2	35.1	26.2	30.2
F	35.1	52.4	52.4	58.7	58.7	58.7	69.9	69.9	69.9
G	35.1	26.2	26.2	30.2	30.2	30.2	35.7	35.7	35.7
H	M8x20	M8x20	M10x16	M8x20	M10x16	M10x16	M8x20	M10x16	M10x16
I	M8x20	M10x16	M10x16	M10x16	M10x16	M10x16	M12x25	M12x25	M12x25
J	147	147	170	147	170	179	147	170	179
K	147	170	170	179	179	179	256.5	256.5	256.5
L	332	369	402	378	401	410	464	493	502
M	382	419	455	428	454	465	515	546	555
N	48	48	51	48		51	48	51	51
O	48	51	51	51	51	51	73	73	73
P	6	9	9	9	9	9	10	10	10

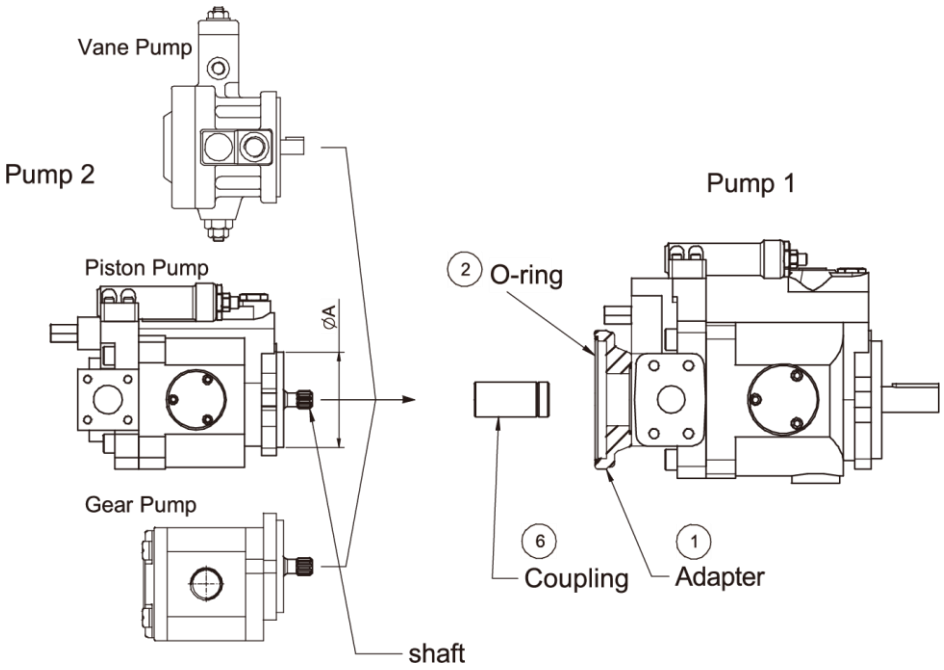


Front Pump	V15 (V18)	V23 (V25)	V23 (V25)	V38 (V42)	V38 (V42)	V38 (V42)	V50 (V70)	V50 (V70)	V50 (V70)
Secondary Pump	V15 (V18)	V15 (V18)	V23 (V25)	V15 (V18)	V23 (V25)	V38 (V42)	V15 (V18)	V23 (V25)	V38 (V42)
Q	4.76x32	6.35x40	6.35x40	6.35x40	6.35x40	6.35x40	7.94x45	7.94x45	7.94x45
R	13	14	14	14.5	14.5	14.5	24	24	24
S	Ø19.05	Ø22.22	Ø22.22	Ø22.22	Ø22.22	Ø22.22	Ø31.75	Ø31.75	Ø31.75
T	21.15	25.08	25.08	25.08	25.08	25.08	35.35	35.35	35.35
U	Ø82.55	Ø101.6	Ø101.6	Ø101.6	Ø101.6	Ø101.6	Ø127	Ø127	Ø127
V	Ø25	Ø25	Ø25	Ø31	Ø31	Ø31	Ø38	Ø38	Ø38
W	Ø25	Ø25	Ø25	Ø31	Ø31	Ø31	Ø38	Ø38	Ø38
X	106	146	146	146	146	146	181	181	181
Y	131	146	146	160	160	160	208	208	208
Z	165	182	182	198.6	198.6	198.6	261.5	261.5	261.5
Al	44	39	39	39	39	39	74	74	74
A2	31.2	31.2	31.2	31.2	31.2	31.2	40	40	40
A3	5	5	5	5	5	5	8	8	8
A4	84	110	110	121	121	121	119	119	119
A5	11	13.5	13.5	13.5	13.5	13.5	18	18	18
A6	44.5	58.5	58.5	58.5	58.5	58.5	57	57	57
A7	160	193	193	210	210	210	233.5	233.5	233.5
A8	91.5	93	93	113.5	113.5	113.5	133.5	133.5	133.5
A9	60	68	68	72	72	72	100	100	100

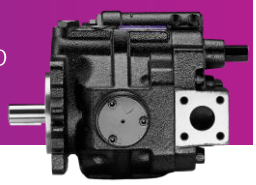




Pump Combination-coupling

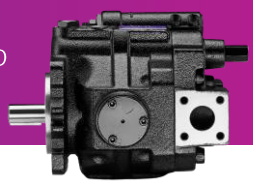


No.	Front Pump	Secondary Pump			Coupling
	Model	Model	ØA	Shaft	
15-1	V15, V18	Piston pump: V15-18, AR16-22 Gear pump: HGP-3A	SAE Ø82.55	9T 16/32 DP	COUP-V15+15
23-1	V23, V25	Piston pump: V15-18, AR16-22 Gear pump: HGP-3A Vane pump: F30, F40, PV2R1	SAE A Ø82.559T Vane pump Ø95.02	9T 16/32 DP	COUP-V23-1
23-3A				13T 16/32 DP	COUP-V23-3
23-5				Cylindric Ø19.05*4.76	COUP-V23-5
23-6		Piston pump: V23-25 Vane pump: T6C	SAE B Ø101.6 Metric Ø100	Cylindric Ø22.22*6.35 Cylindric Ø22.22*4.76 13T 16/32 DP	COUP-V23-6 COUP-V23-3
23-3B					
38-1	V38, V42	Vane pump: T6C, F30, F40, PV2R1 Gear pump: HGP-3A	SAE A Ø82.55 Vane pump Ø95.02	9T 16/32 DP	COUP-V38-1
38-3A				13T 16/32 DP	COUP-V38-3
38-5				Cylindric Ø19.05*4.76	COUP-V38-5
38-6		Piston pump: V23-25, V38-V42, PV016-023 Vane pump: T6C, PV2R2	SAE B Ø101.6 Metric Ø100	Cylindric Ø22.22*6.35 Cylindric Ø22.22*4.76	COUP-V38-6
38-7				Cylindric Ø25.4*6.35	COUP-V38-7
38-3B				13T 16/32 DP	COUP-V38-3
38-4				15T 16/32 DP	COUP-V38-4
70-1	V50, V70	Piston pump: V15-18, AR16-22 Gear pump: HGP-3A Vane pump: F30, F40, PV2R1	SAE A Ø82.55 Vane pump Ø95.02	9T 16/32 DP	COUP-V70-1
70-3A				13T 16/32 DP	COUP-V70-3 COUP-V70-5
70-5				Cylindric 019.05*4.76	

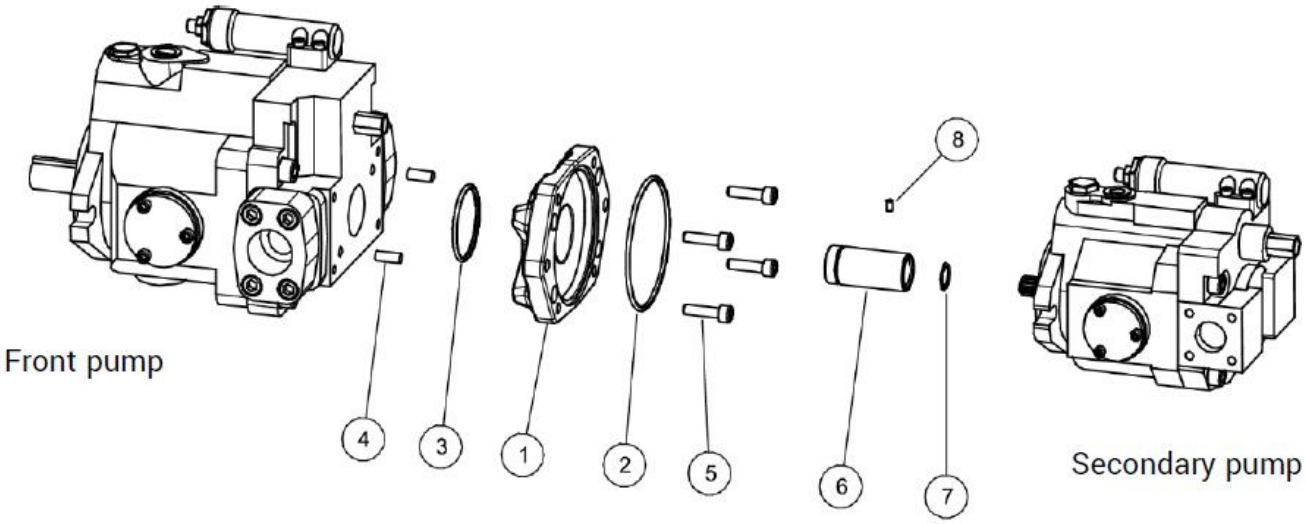


No.	Front Pump	Secondary Pump			Coupling
	Model	Model	ØA	Shaft	
70-6		Piston pump: V23-25, V38-V42, PV016-023 Vane pump: T6C, PV2R2	SAE B Ø101.6 Metric Ø100	Cylindric Ø22.22*6.35	COUP-V70-6
				Cylindric Ø22.22*4.76	
70-7				Cylindric Ø25.4*6.35	COUP-V70-7
70-3B				13T 16/32 DP	COUP-V70-3
70-4				15T 16/32 DP	COUP-V70-4

⌀A	①Adaptor	②O-ring
SAE A Ø82.55	23A-83-D	G80
Vane pump Ø95.02	23A-83-G	G95
SAE B Ø101.6	23A-83-E	G100
Metric Ø100	23A-83-J	G100

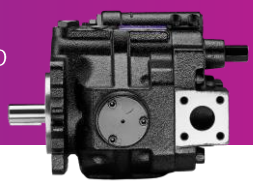


Pump Combination-Coupling



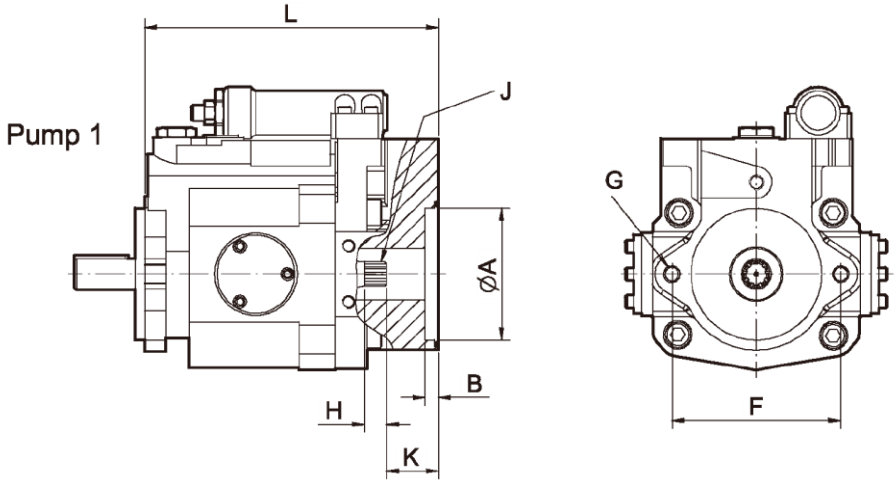
⑥Coupling	⑦Snap Ring	Depending whether secondary pump to use snap ring or not (• :With snap ring)			⑧Screw
		Piston pump: V15~18,AR16	Gear pump: HGP- 3A	Vane pump: F30, F40	
COUP-V15+15	R13	•	•	•	–
COUP-V23-1	R13	•	•		–
COUP-V23-3	R20	•			–
COUP-V23-5	R20			•	M5x8
COUP-V23-6	–				M5x8
COUP-V38-1	R13	•	•		–
COUP-V38-3	R20	•			–
COUP-V38-4	–				–
COUP-V38-5	R20			•	M5x8
COUP-V38-6	–				M5x8
COUP-V38-7	–				M5x8
COUP-V70-1	R13	•	•		–
COUP-V70-3	R20	•			–
COUP-V70-4	–				–
COUP-V70-5	R20			•	M5x8
COUP-V70-6	–				M5x8
COUP-V70-7	–				M5x8

③O-ring	G55
④Pin	Ø8x16 x2 nos
⑤Screw	M8x30 x4 nos



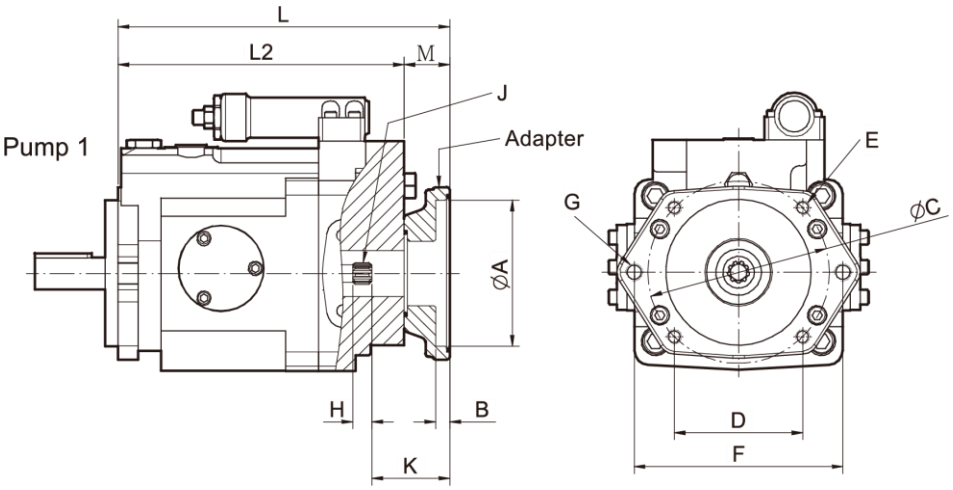
Pump Combination- Thru Drive Dimension

V15, V18



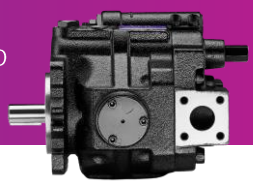
Model	Secondary Pump	ØA	B	ØC	D	E	F	G
V15, V18	SAE A	Ø82.55	8.35	–	–	–	106.3	M10xP1.5

V23-V70



Model	Secondary Pump	ØA	B	ØC	D	E	F	G
V23-V70	SAE A	Ø82.55	8.35	Ø127	89.8	M10xP1.5	106.3	M10xP1.5
	SAE A	Ø101.6	10	Ø127	89.8	M10xP1.5	146	M12xP1.75
	Metric	Ø100	10	Ø125	88.39	M10xP1.5	140	M12xP1.75
	Vane Pump	Ø95.02	8.35	–	90	M10xP1.5	–	–

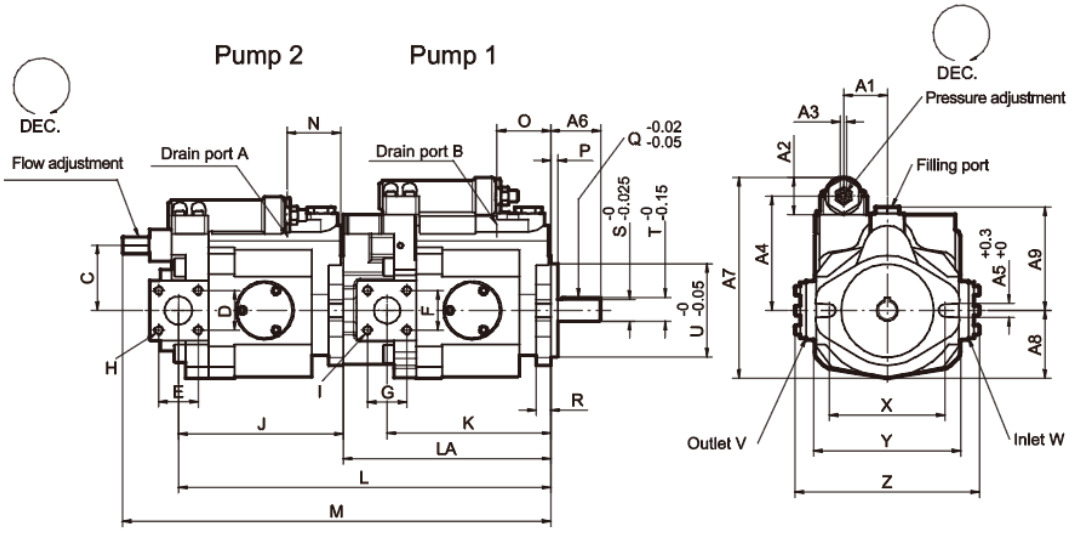
Model	K	H	J	M	L	L2
V15, V18	33	13.5	9T 16/32 DP	–	185	–
V23, V25	59	13.5	9T 16/32 DP	32	237	205
V38, V42	66	20	14T M1.25	32	241	209
V50, V70	66.4	22	13T 16/32 DP	32	332	300



Pump Combination- Thru Drive Dimension

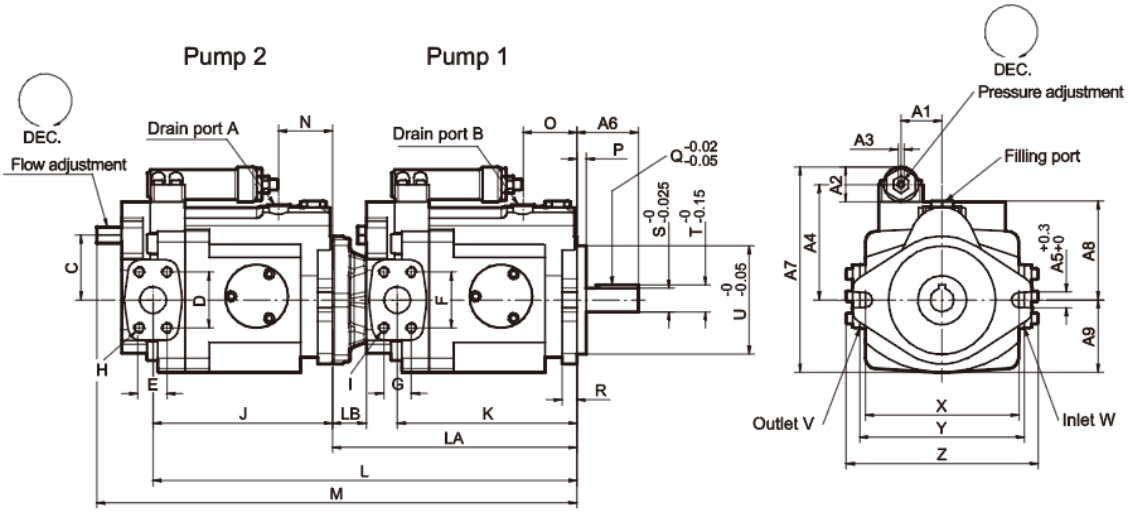
View A

Front Pump V15, Secondary Pump V15

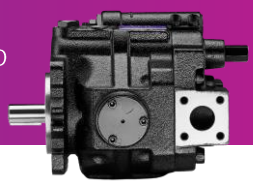


View B

Front Pump V23-70, Secondary Pump V15-V38



Front Pump	Secondary Pump	A	B	C	D	E	F	G	H	I
V15,V18	V15,V18	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
V23, V25	V15, V18	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
V23, V25	V23, V25	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
V38, V42	V15,V18	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



Front Pump	Secondary Pump	A	B	C	D	E	F	G	H	I
V38, V42	V23, V25	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
V38, V42	V38,V42	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
V50, V70	V15, V18	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
V50, V70	V23, V25	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
V50, V70	V38, V42	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

Front Pump	Secondary Pump	J	K	L	LA	LB	M	N	0	P	Q	R	S	T	U
V15,V18	V15, V18	147	147	332	185	–	382	48	48	6	4.76x32	13	Ø19.05	21.15	Ø82.55
V23, V25	V15, V18	147	170	384	237	32	411	48	51	9	6.35x40	14	Ø22.22	25.08	Ø101.6
V23, V25	V23, V25	170	170	407	237	32	455	51	51	9	6.35x40	14	Ø22.22	25.08	Ø101.6
V38,V42	V15, V18	147	179	388	241	32	438	48	51	9	6.35x40	14.5	Ø22.22	25.08	Ø101.6
V38, V42	V23, V25	170	179	411	241	32	464	51	51	9	6.35x40	14.5	Ø22.22	25.08	Ø101.6
V38, V42	V38, V42	179	179	420	241	32	473	51	51	9	6.35x40	14.5	Ø22.22	25.08	Ø101.6
V50, V70	V15, V18	147	256.5	479	332	32	529	48	73	10	7.94x45	24	Ø31.75	35.35	Ø127
V50, V70	V23, V25	170	256.5	502	332	32	555	51	73	10	7.94x45	24	Ø31.75	35.35	Ø127
V50, V70	V38, V42	179	256.5	511	332	32	564	51	73	10	7.94x45	24	Ø31.75	35.35	Ø127

Front Pump	Secondary Pump	V	W	X	Y	Z	A1	A2	A3	A4	A5	A6	A7	A8	A9
V15,V18	V15, V18	Ø25	Ø25	106	131	165	44	31.2	5	84	11	44.5	160	91.5	60
V23, V25	V15, V18	Ø25	Ø25	146	146	182	39	31.2	5	110	13.5	58.5	193	93	68
V23, V25	V23, V25	Ø25	Ø25	146	146	182	39	31.2	5	110	13.5	58.5	193	93	68
V38, V42	V15, V18	Ø31	Ø31	146	160	198.6	39	31.2	5	121	13.5	58.5	210	113.5	72
V38, V42	V23, V25	Ø31	Ø31	146	160	198.6	39	31.2	5	121	13.5	58.5	210	113.5	72
V38, V42	V38, V42	Ø31	Ø31	146	160	198.6	39	31.2	5	121	13.5	58.5	210	113.5	72
V50, V70	V15, V18	Ø38	Ø38	181	208	261.5	74	40	8	119	18	57	233.5	133.5	100
V50,V70	V23, V25	Ø38	Ø38	181	208	261.5	74	40	8	119	18	57	233.5	133.5	100
V50, V70	V38, V42	Ø38	Ø38	181	208	261.5	74	40	8	119	18	57	233.5	133.5	100