

WINMAN V Series Vane Pump

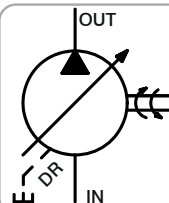
V Axial Vane Pump

V axial vane pump

Description

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

Symbol



nominal pressure: 175 bar
max. pressure: 280 bar
single operation period: 250bar/6ms
315bar/2.5ms

Specifications

Size	Model	Displacement at (7bar) 100 PSI						Pressure Adj.	Speed		Weight	
		cm³/rev	In³/rev	1500 RPM		1800 RPM			kgf/cm²	Max. RPM		Min. RPM
				LPM	U.S. GPM	LPM	U.S. GPM					
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)	

Technical Data

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 WINMAN instruction maunal.
4. WINMAN supply combinable pumps with different series, standard with Metric / SAE size.

V Series

Type code for standard program

V	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 adjustment	Rotation	Direction of pipe connections	Threads		Voltage	Threads type	Thru drive & 2nd pump	Special spec.	Mounting	Seals	Design No.	

Series

1	Axial vane pump variable displacement high pressure version	nominal pressure : 175 bar max. pressure : 280 bar single operation period: 250bar / 6ms, 315bar/2.5ms	V
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Size and displacement

2	Code	8	10	12	15	18	23	25	38	42	50	70	
	Size	1					2		3		4		
	Displacement	cm ³ /rev	8	10	12	15	18	23.0	25.0	37.8	42.0	51.5	69.7
		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 type

3	Standart pressure control	A	※
	Remote pressure control	G	
	Loas-sensing control	HL	☐
Pressure			
	A Low : 7KG		
	B Mid : 14KG		
	C High : 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	
	Load-sensing compensator + Proportional flow valve + Relief valve	HQ	
	Load-sensing compensator + Proportional pressure valve + Proportional flow valve	HK	

■ = aviable — = on request ※ = standard type Δ = custom made

V Series

Type code for standard program

V	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 adjustment	Rotation	Direction of pipe connections	Threads		Voltage	Threads type	Thru drive& 2nd pump	Special spec.	Mounting	Seals	Design No.

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	12	15	18	23	25	38	42	50	70	
6	None : Side port (Flange)	■	■	■	■	■	■	■	■	■	■	■	□※
	Rear port (Flange)	—	—	—	—	■	■	■	■	■	■	■	B
	Side port + Rear port (Flange)	—	—	—	—	■	■	■	■	■	—	—	B2

Shaft type

	Displacement	Code		
7	None	Key:		
	V15,V18	Splind shaft: S 13T 16/32 DP	S1 9T 16/32 DP	S2 11T 16/32 DP
	V23,V25 V38,V42	Splind shaft: S 13T 16/32 DP	S1 15T 16/32 DP	S3 13T 16/32 DP (longer)
	V50,V70	Splind shaft: S 13T 16/32 DP	S1 17T 12/24 DP	

Voltage

8	None	☐	※
	AC100V (50/60HZ)	A	
	AC110V (60HZ)	B	
	AC200V (50/60HZ)	C	
	AC220V (60HZ)	D	
	DC 12V	E	
	DC 24V	F	

V Series

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Series	Size and displacement	Control Device	Pressure adjustment	Rotation	Direction of pipe connections	Threads		Voltage	Threads type	Thru drive & 2nd pump	Special spec.	Mounting	Seals	Design No.

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 82.55mm SAE A	D
	ø 101.6mm 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 WINMAN, if other size required.)

Special specification

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

Mounting

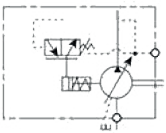
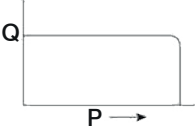
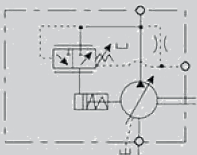
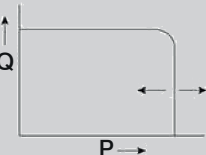
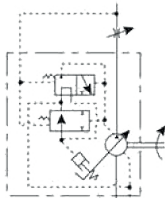
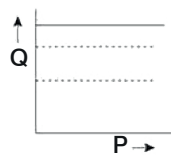
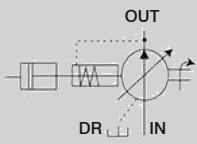
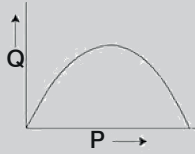
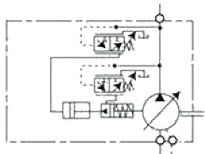
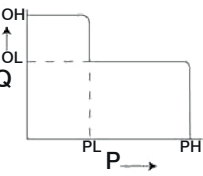
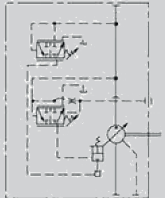
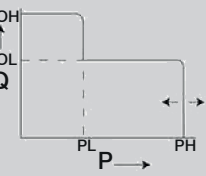
12	Only for V15, V18 can select "A", other displacement only select "None Standard"	None : Standard		※
		SAE A 2 bolt	A	

Special specification

13	NBR		※
	VITON	A	

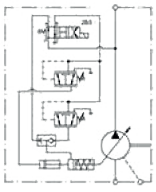
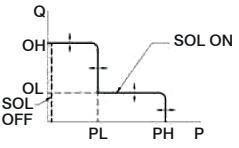
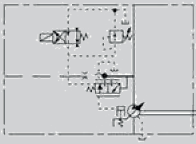
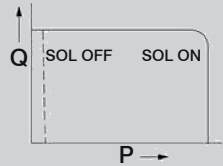
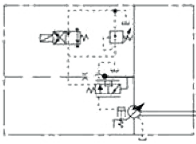
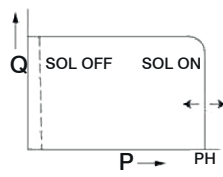
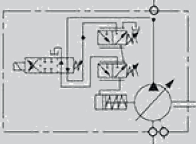
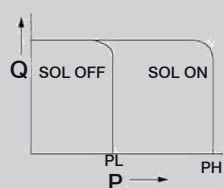
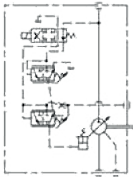
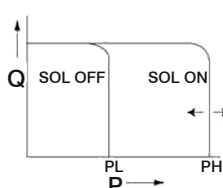
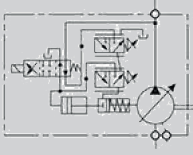
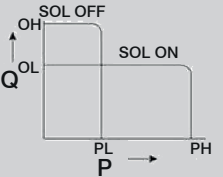
■ = aviable – = on request ※ = standard type △ = custom made

V Series
Control type

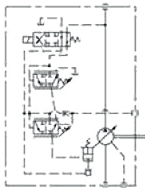
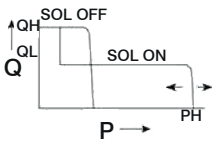
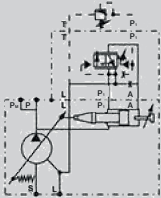
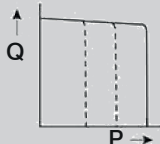
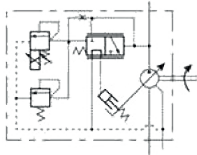
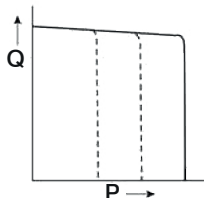
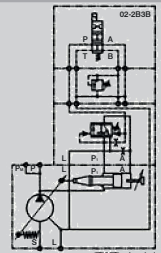
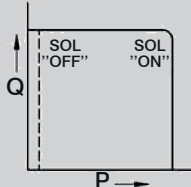
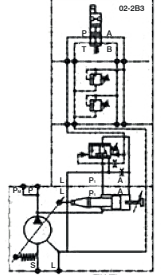
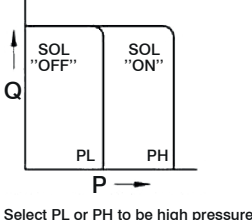
Controls	Symbol	Characteristic	Specifications
A type : Standard pressure control			1. When system pressure increase and reach present pressure the flow decrease automatically and pressure to be constant. 2. Pressure and flow can be adjusted manually.
G type : Remote pressure control			1. The same function of "A" control type. 2. Pressure be adjusted remotely by the remote control valve.
HL type : Load-sensing control			1. HL valve with 2 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 WINMAN solenoid control valve to reach good performance.

V Series

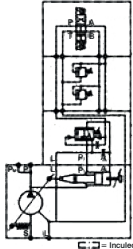
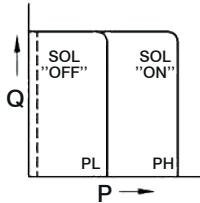
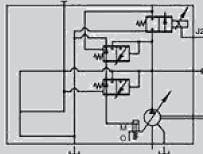
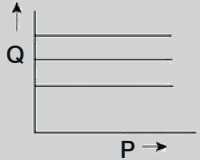
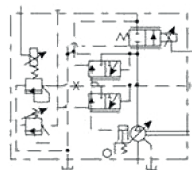
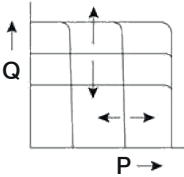
Control type

Controls	Symbol	Characteristic	Specifications
CR type : 2-stage pressure & Flow control + Low tension unloading			1. Install WINMAN solenoid valve, control 2-stage pressure. 2. It is suitable for constant speed lifting equipments, and setting 2-stage working pressure. 2.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 control			1. Same as type A and with low tension unloading. 2. It is adapt for long unloading operation. 2. When the system stopd, 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 range can be adjusted by remote control valve. 3. Install WINMAN 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. 2. 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 WINMAN 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.

V Series
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 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			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.

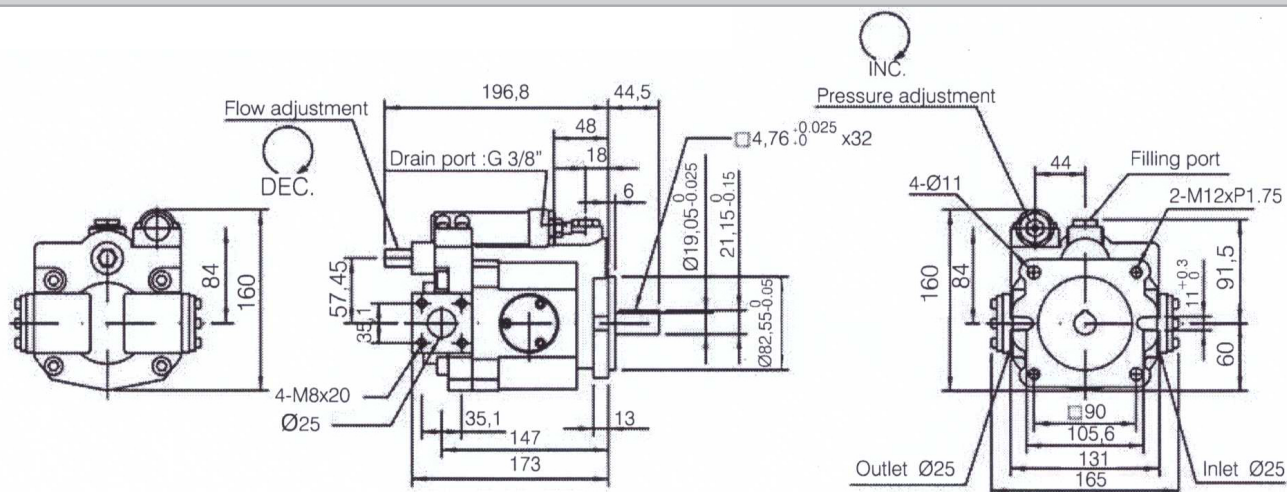
V Series
Control type

Controls	Symbol	Characteristic	Specifications
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 : 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 early 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.

WINMAN V Series Vane Pump

Dimension

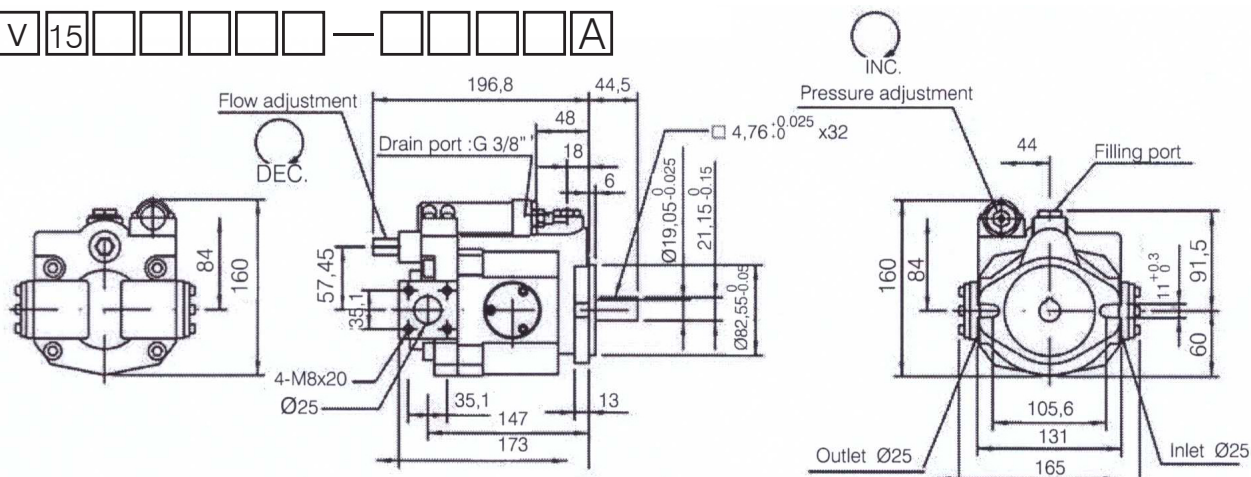
V15A, V18A Standard pressure control



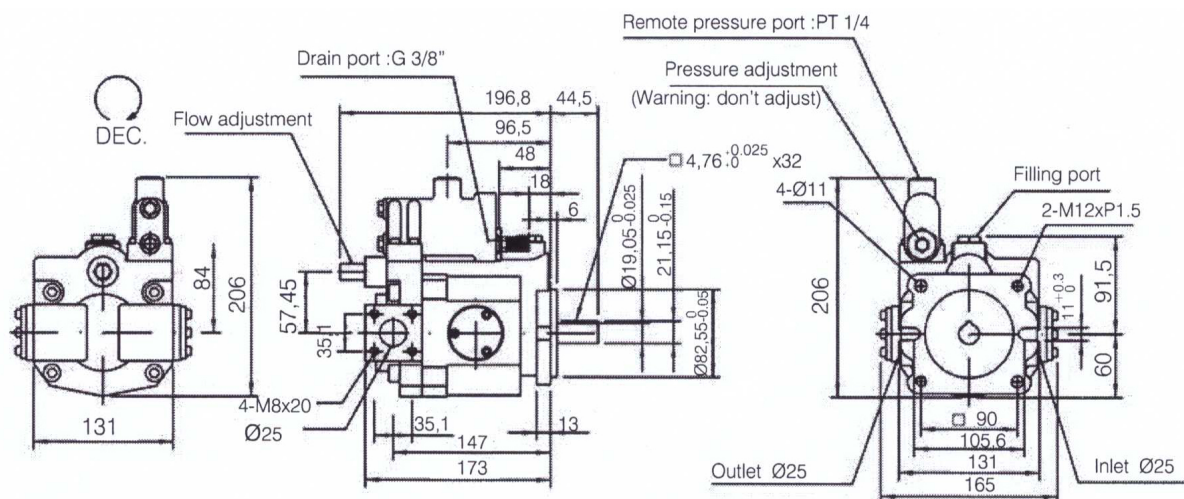
V15A, V18A Standard pressure control (SAE A2 bolt)

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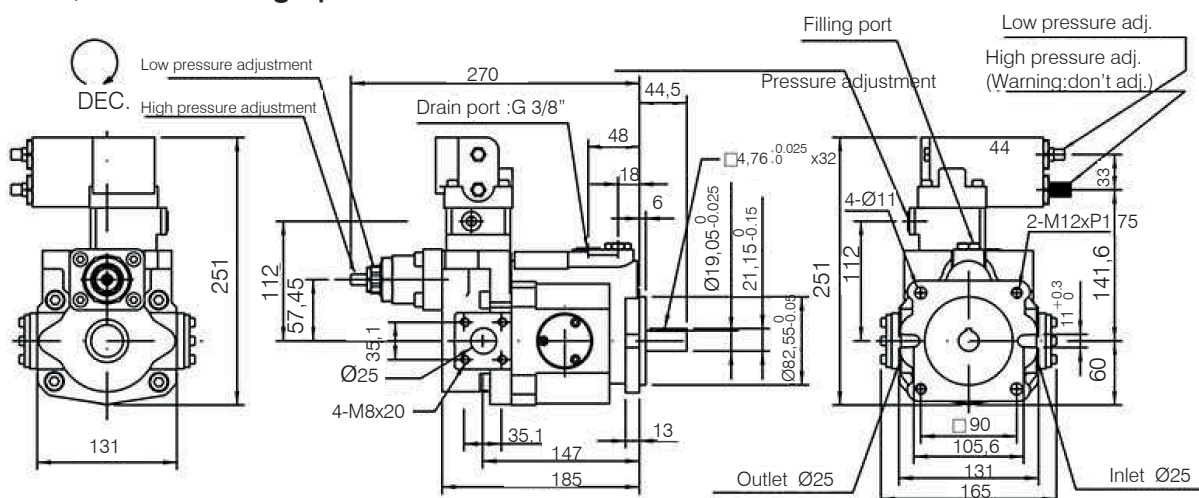
V 15 — A



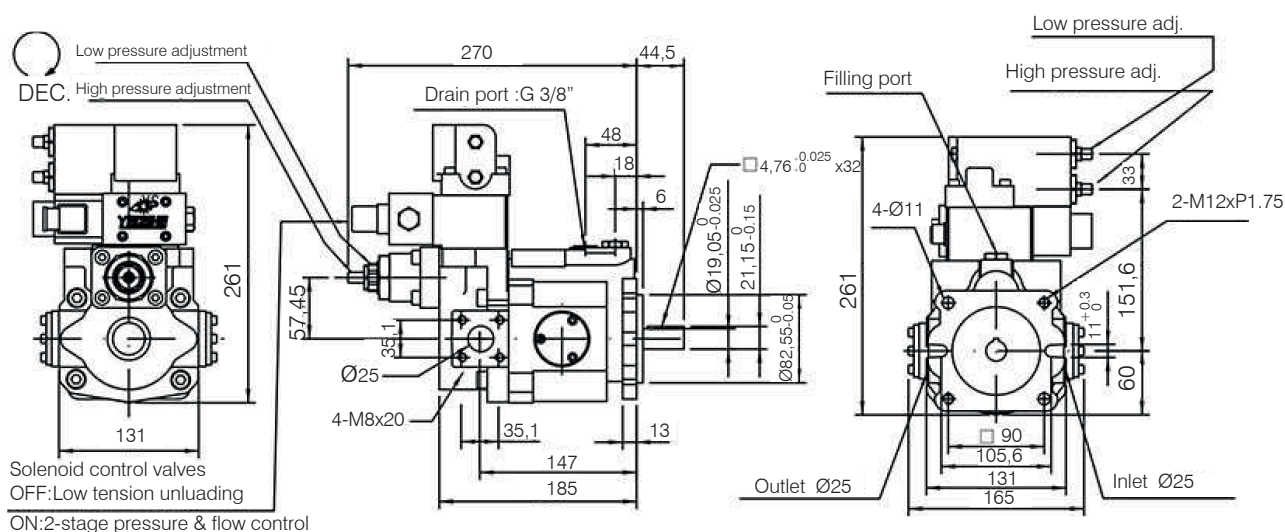
V15G, V18G Remote pressure control



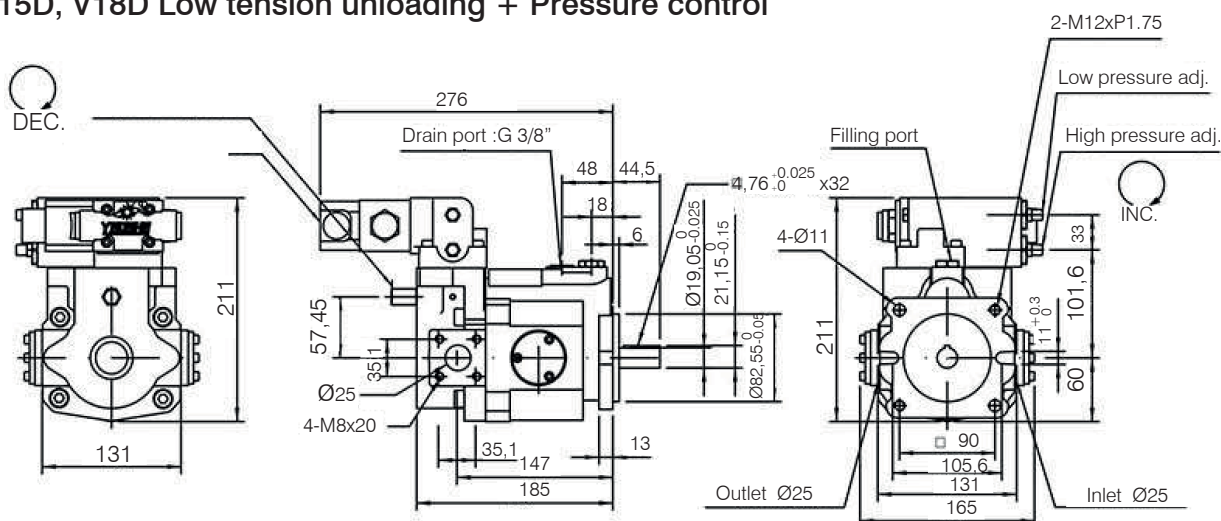
V15CG, V18CG 2-stage pressure & Flow control + Remote



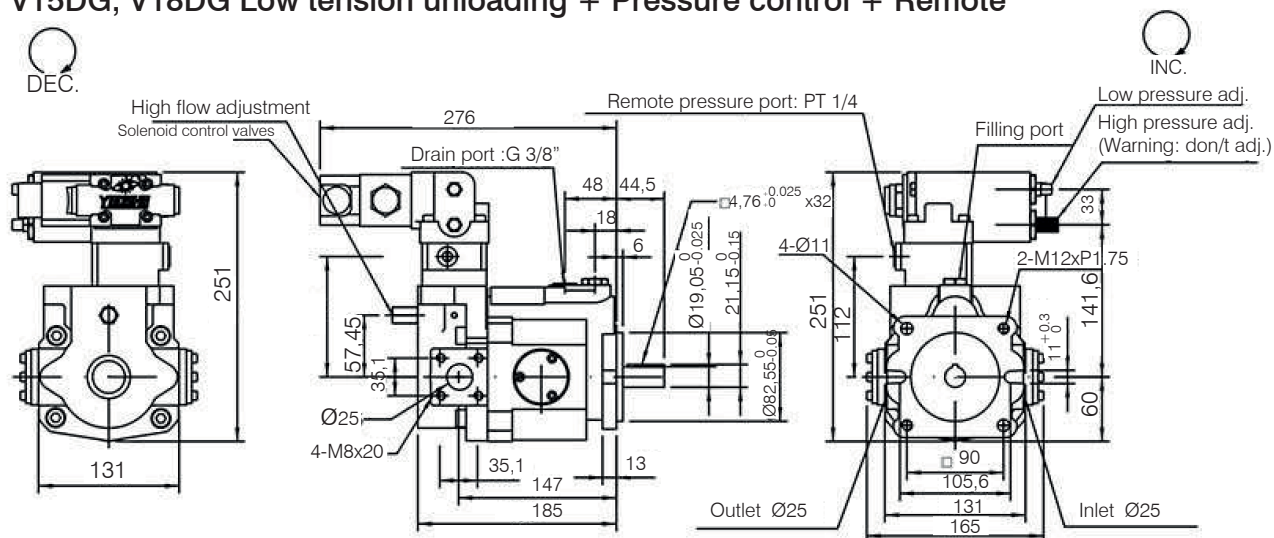
V15CR, V18CR 2-stage pressure & Flow control + Low tension unloading



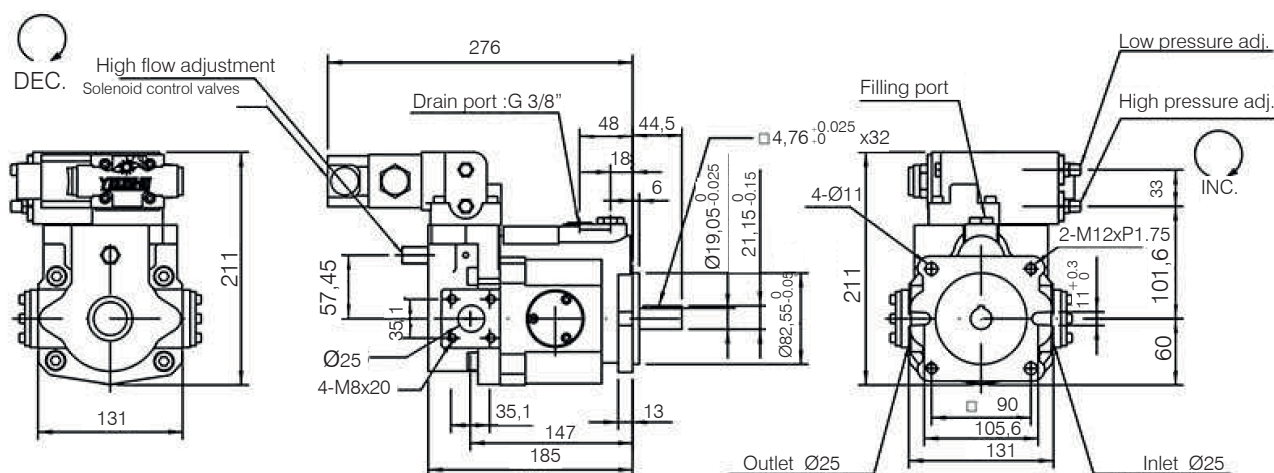
V15D, V18D Low tension unloading + Pressure control



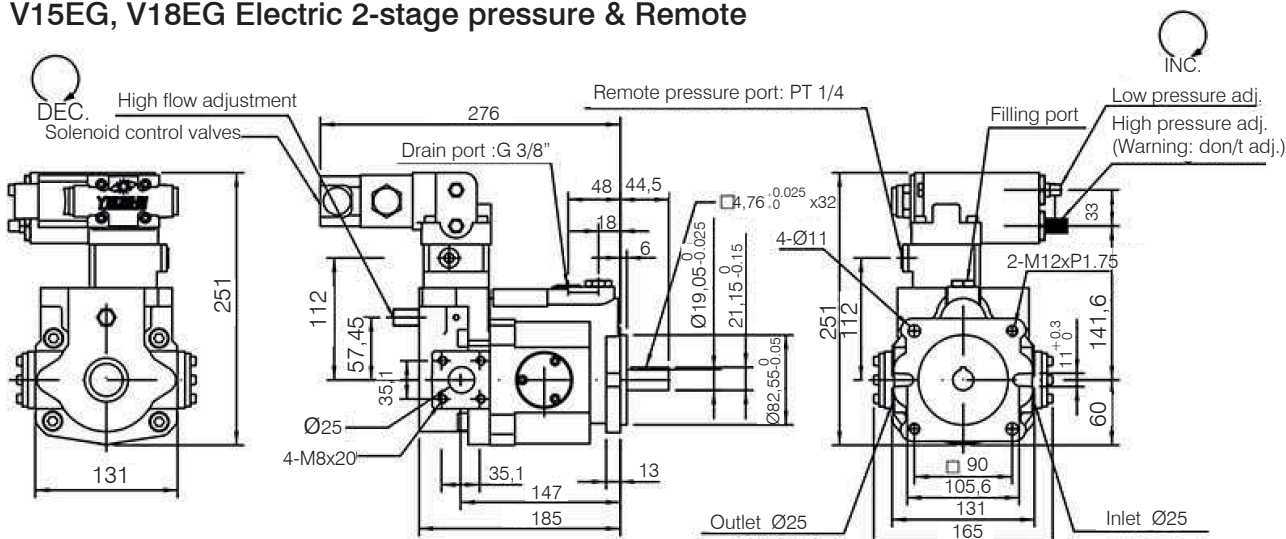
V15DG, V18DG Low tension unloading + Pressure control + Remote



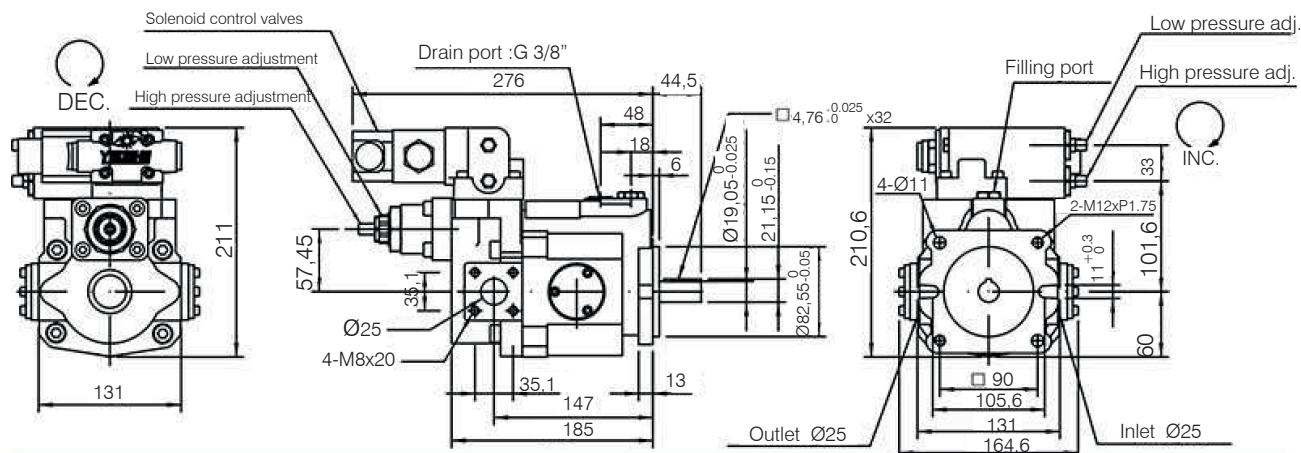
V15E, V18E Electric 2-stage pressure control



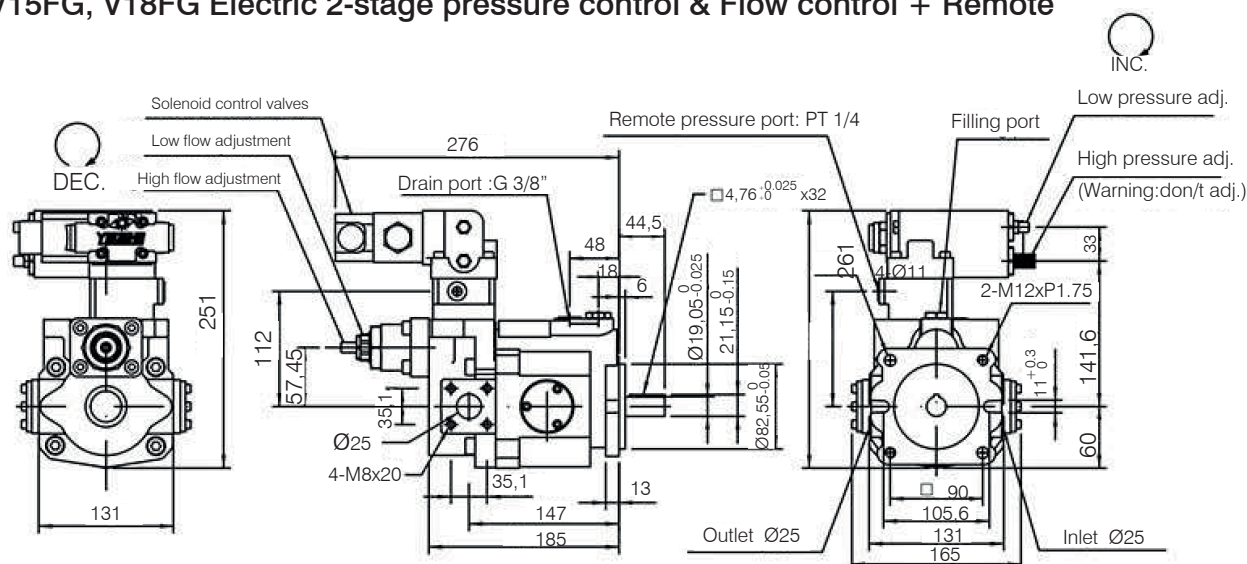
V15EG, V18EG Electric 2-stage pressure & Remote



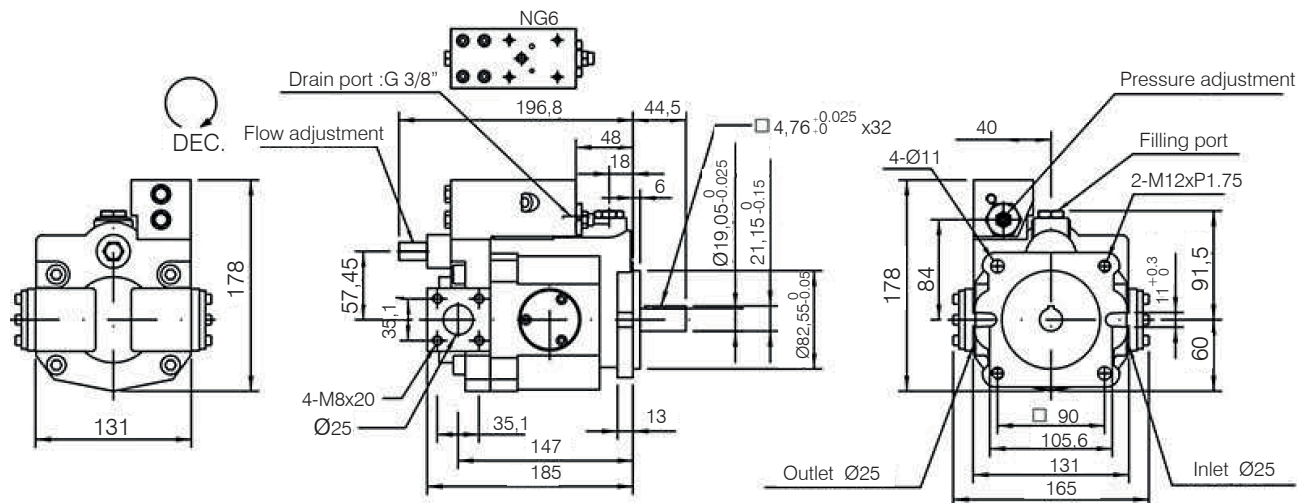
V15F, V18F Electric 2-stage pressure control & Flow control



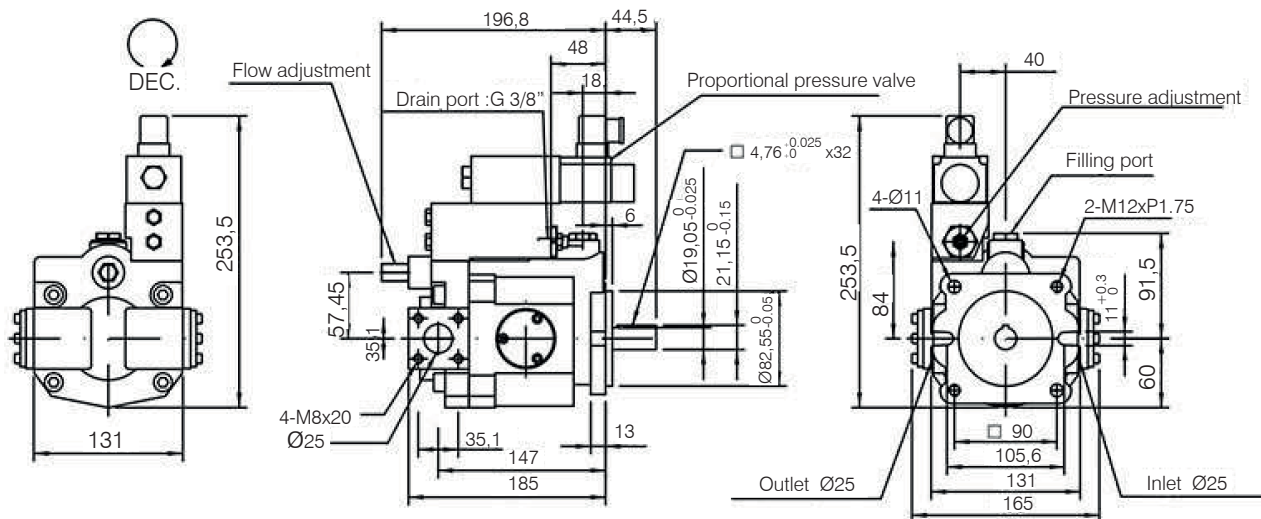
V15FG, V18FG Electric 2-stage pressure control & Flow control + Remote



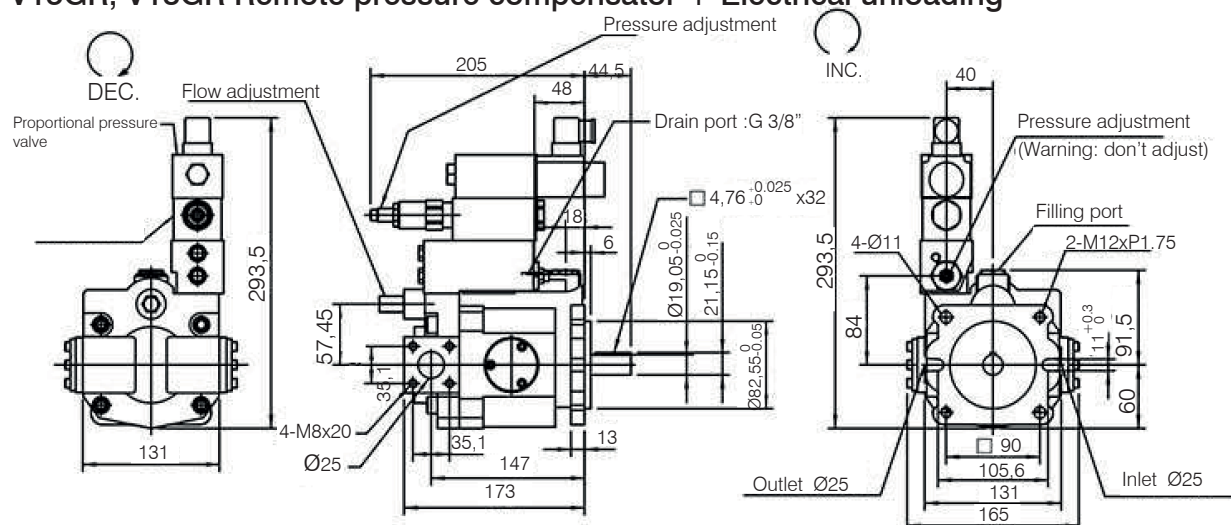
V15GM, V18GM Remote pressure compensator with NG6 interface



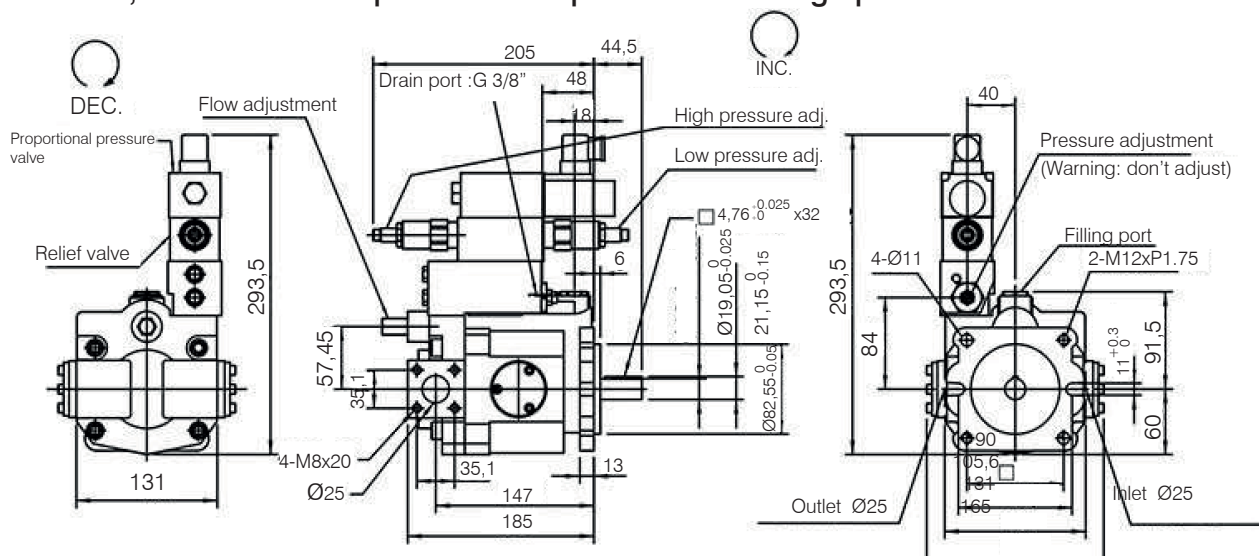
V15GJ, V18GJ Remote pressure compensator + Proportional pressure valve



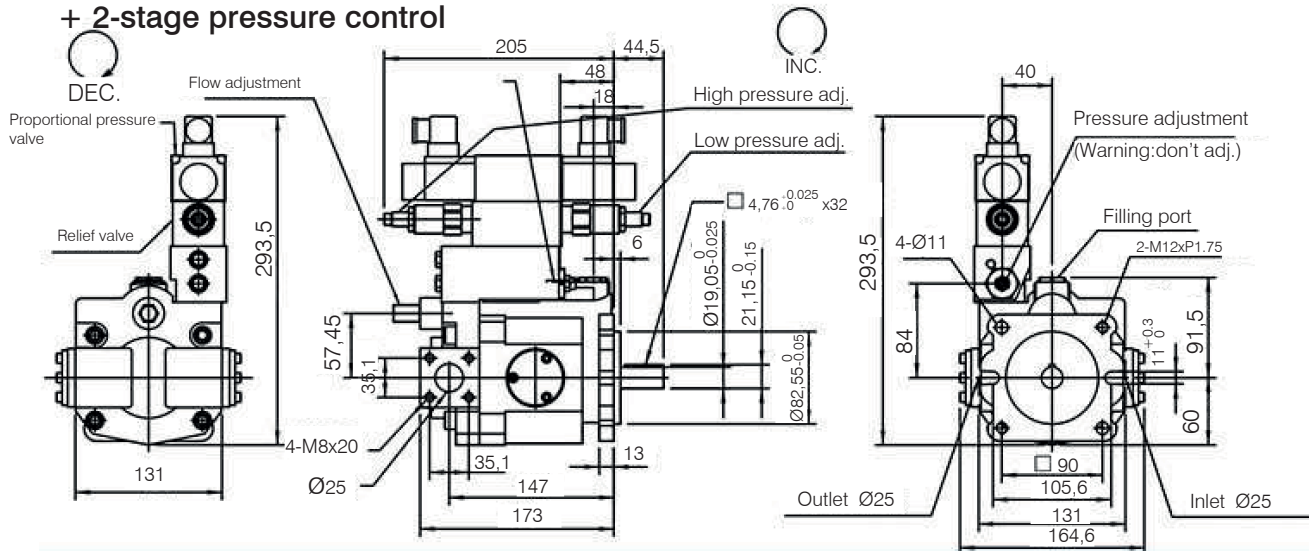
V15GR, V18GR Remote pressure compensator + Electrical unloading



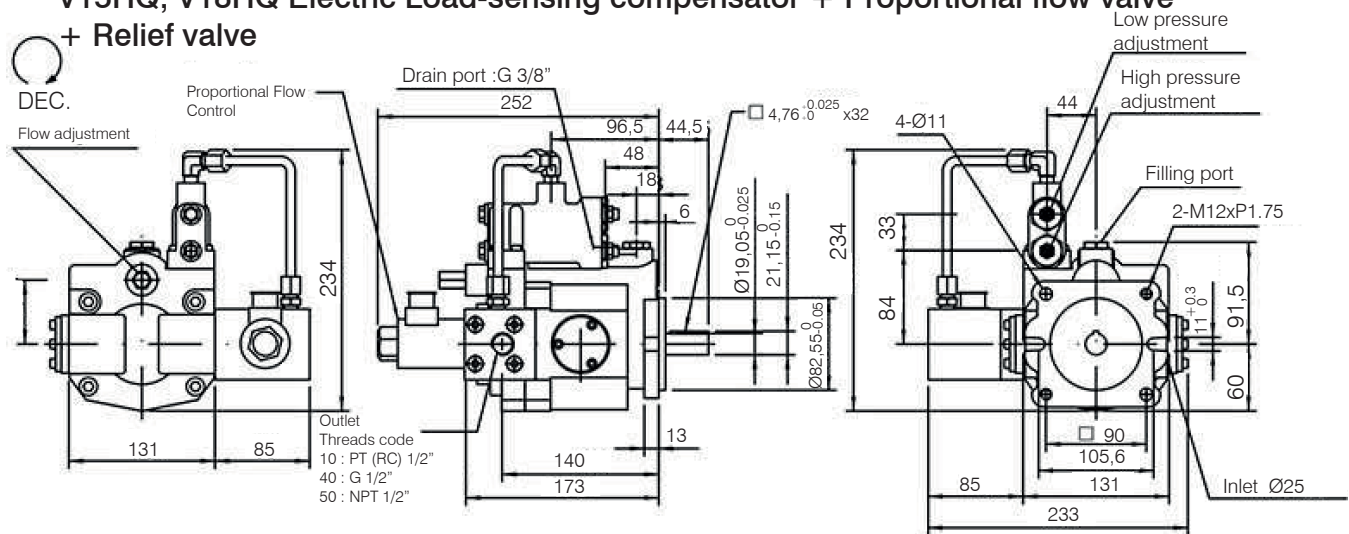
V15GB, V18GB Remote pressure compensator + 2-stage pressure control



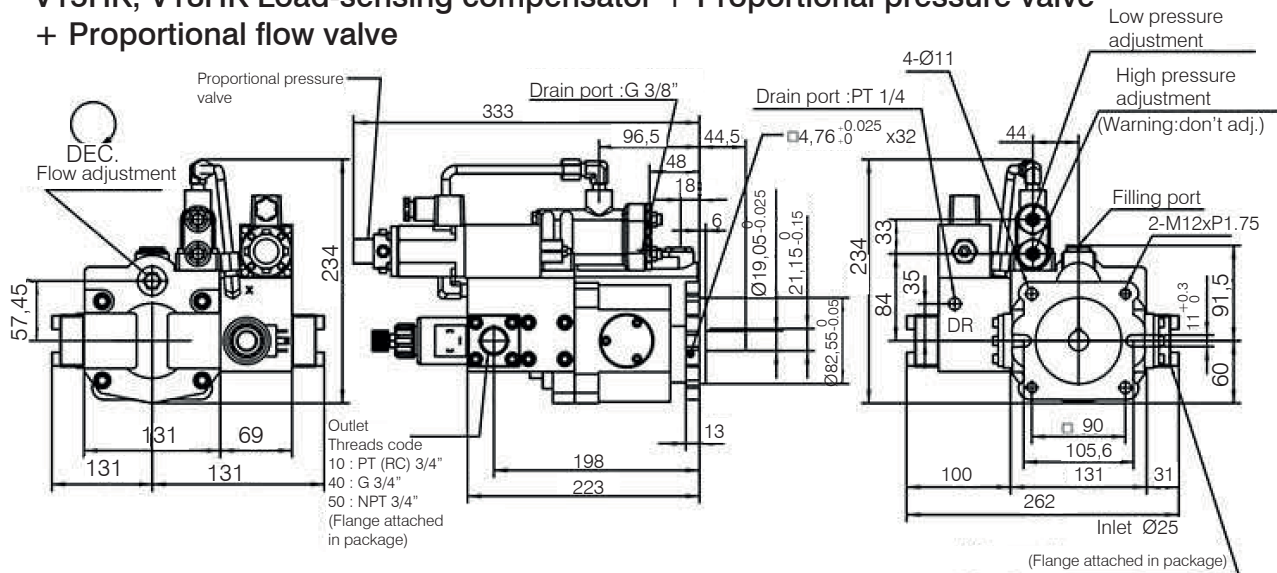
V15GC, V18GC Remote pressure compensator + Electrical unloading + 2-stage pressure control



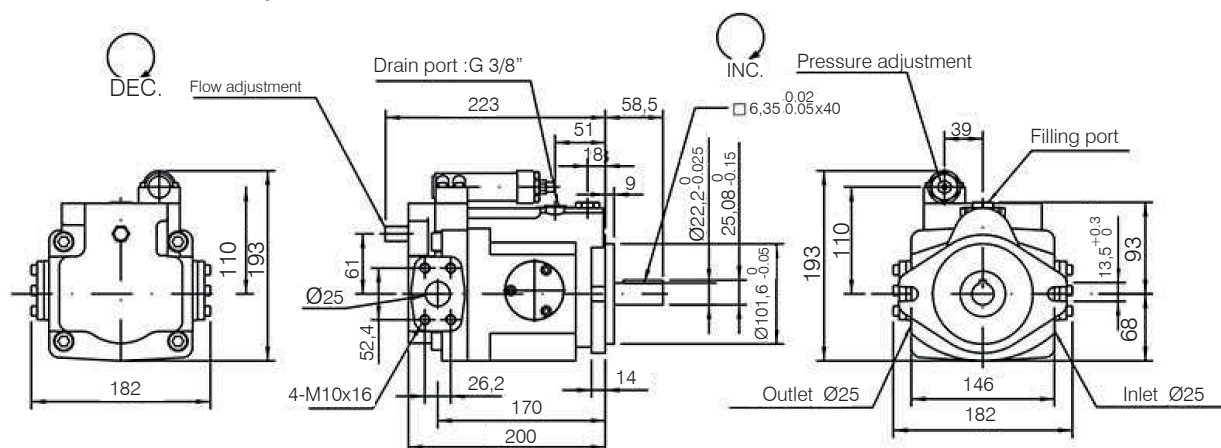
V15HQ, V18HQ Electric Load-sensing compensator + Proportional flow valve + Relief valve



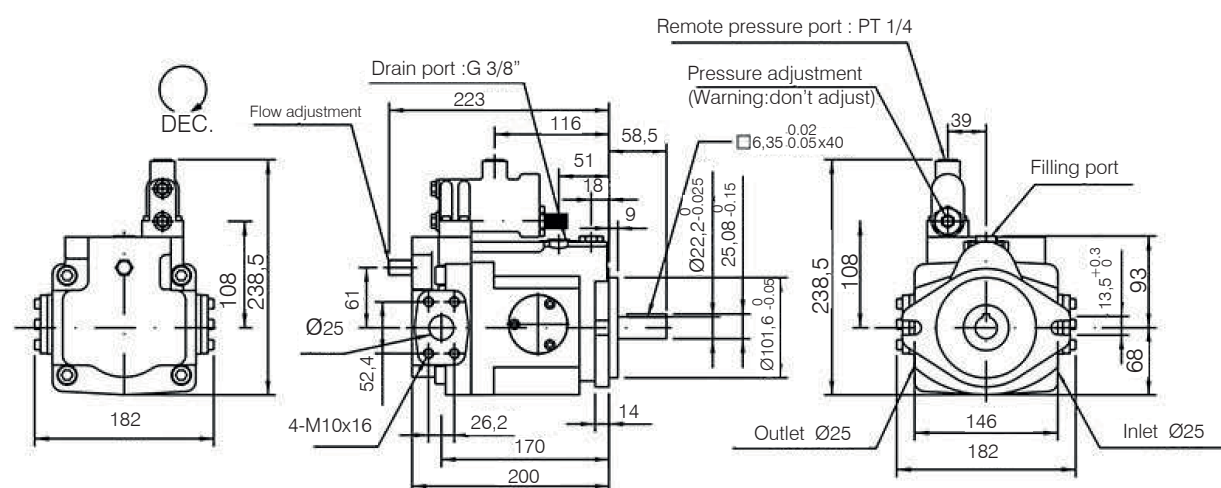
V15HK, V18HK Load-sensing compensator + Proportional pressure valve + Proportional flow valve



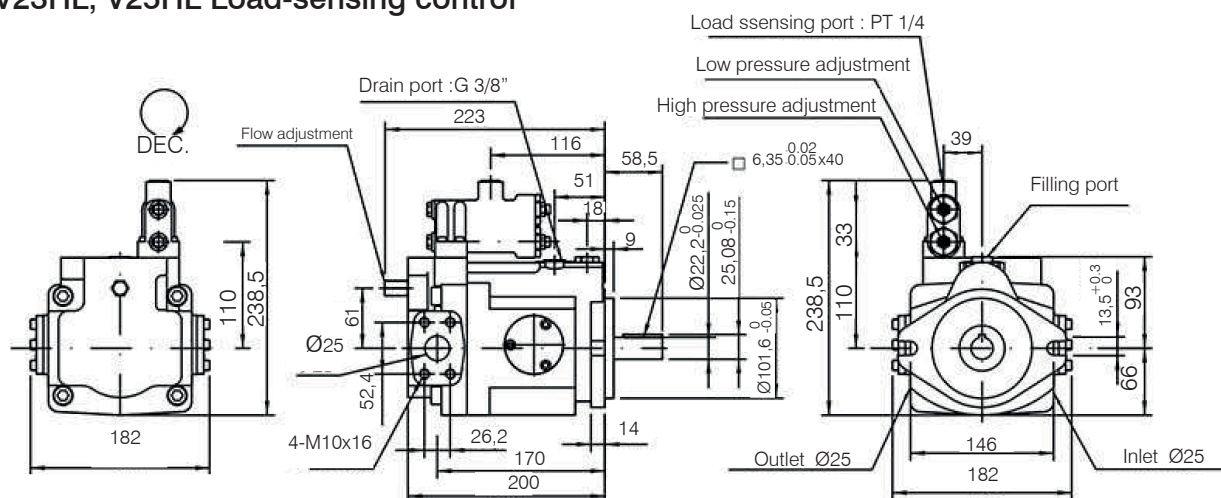
V23A, V25A Stand pressure control



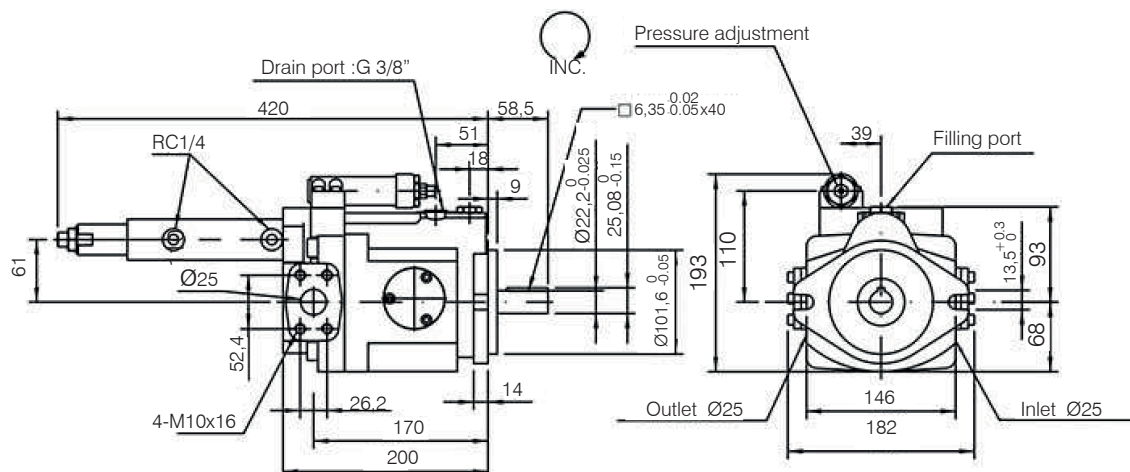
V23G, V25G Remote pressure control



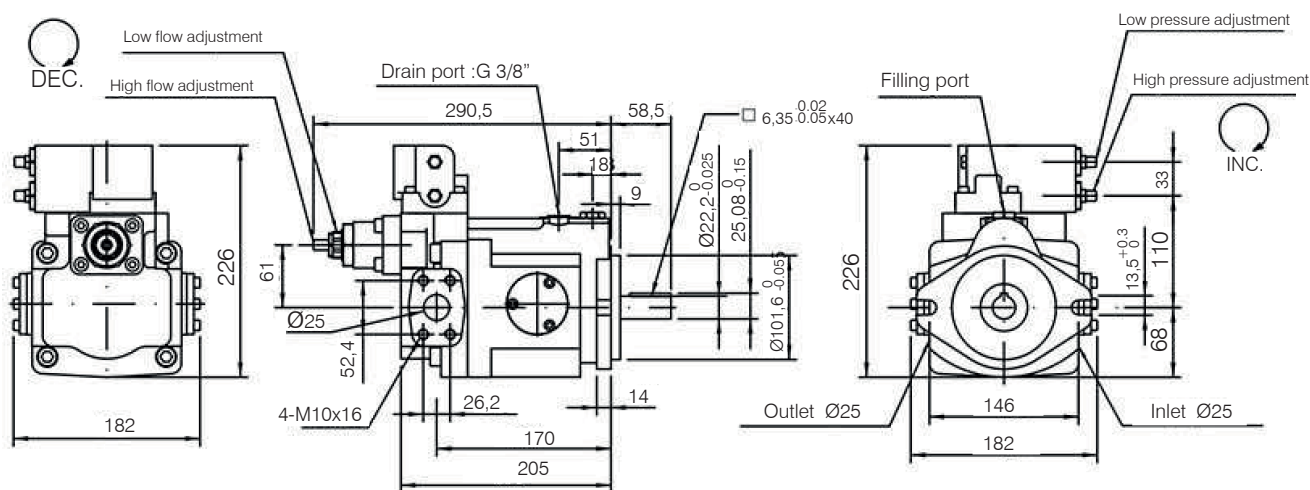
V23HL, V25HL Load-sensing control



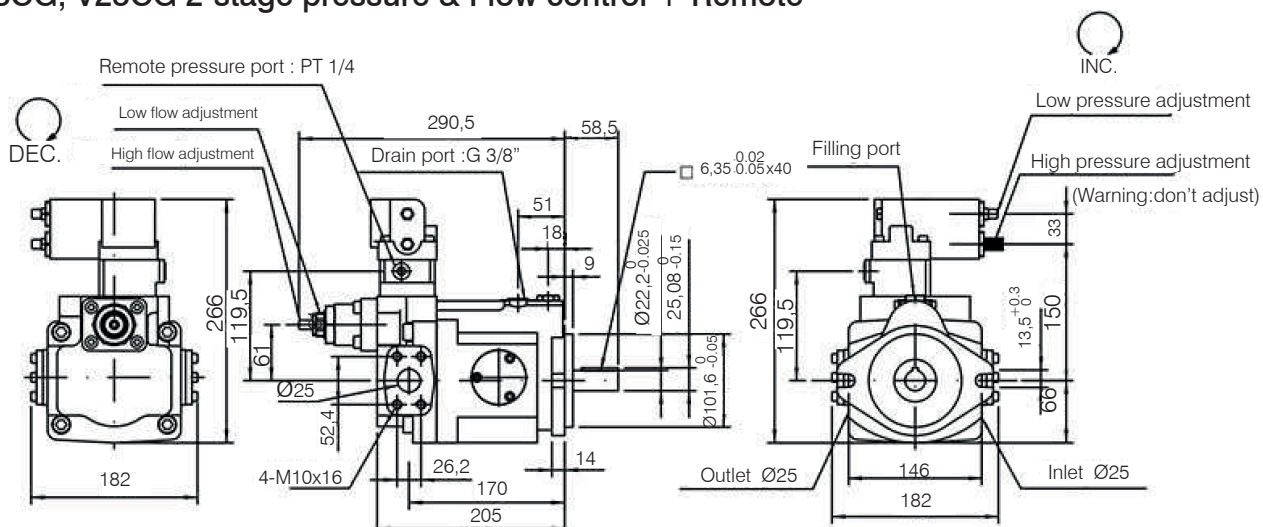
V23B, V25B Multi-stage flow & Single-stage pressure control (with cylinder)



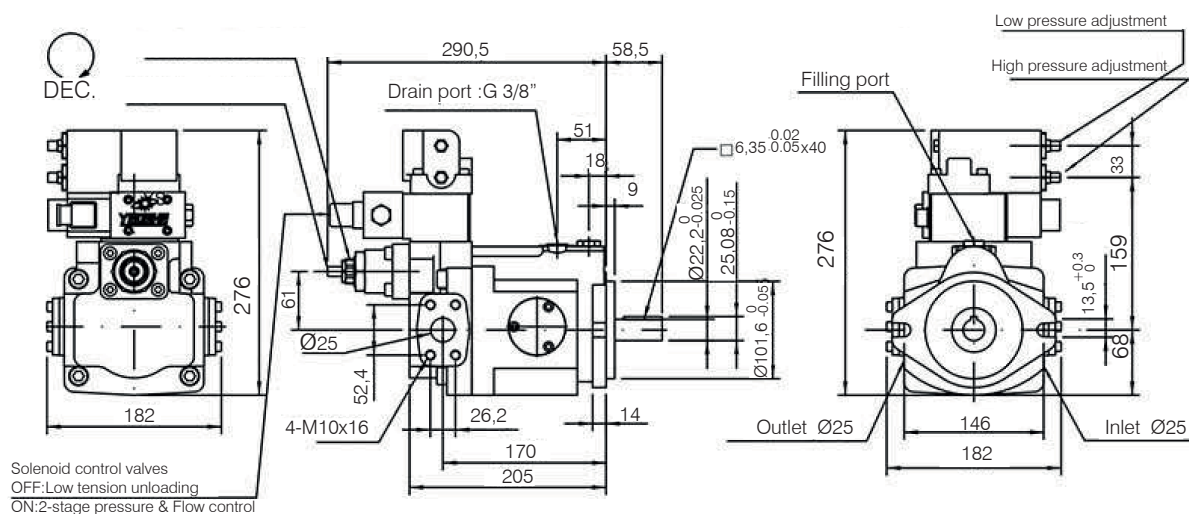
V23C, V25C 2-stage pressure & Flow control



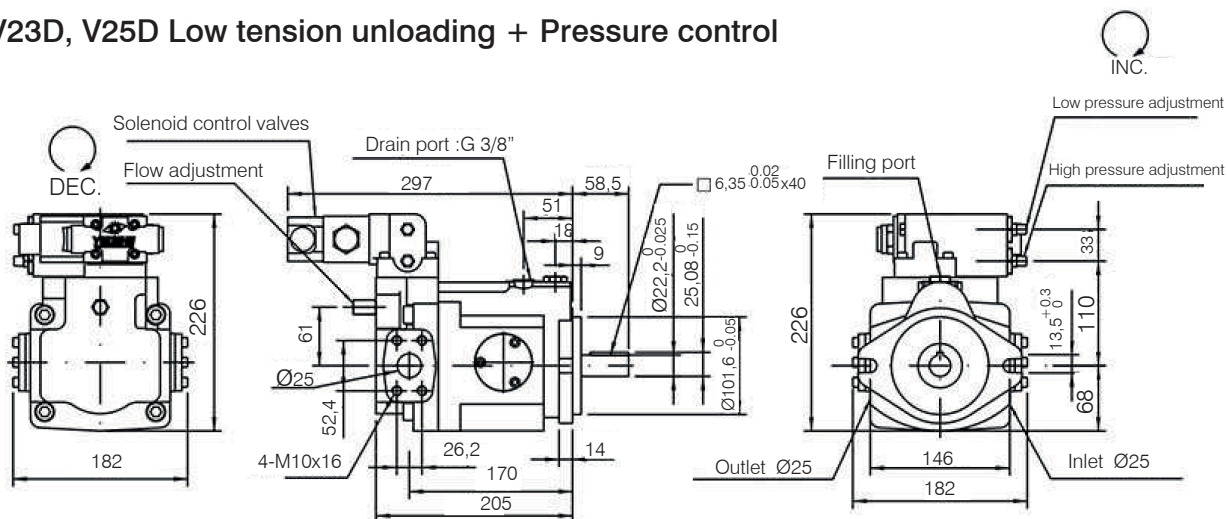
V23CG, V25CG 2-stage pressure & Flow control + Remote



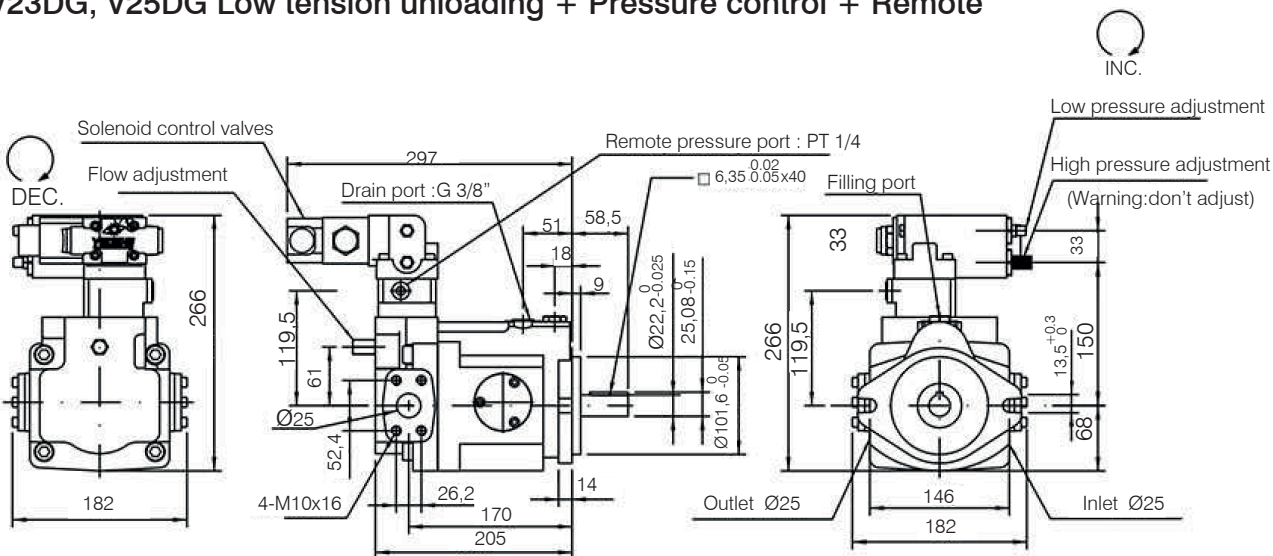
V23CR, V25CR 2-stage pressure & Flow control + Low tension unloading



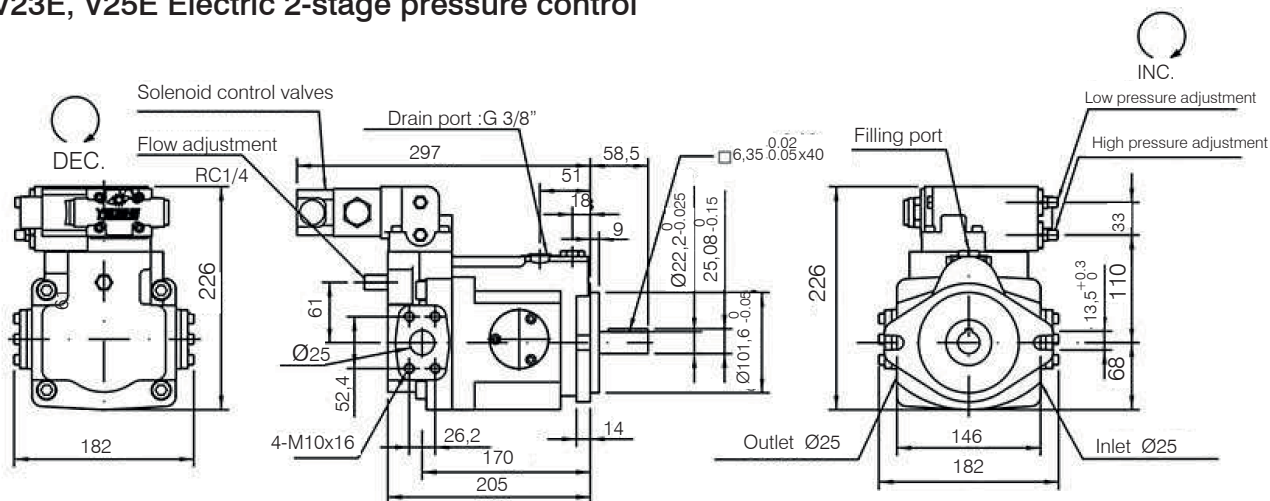
V23D, V25D Low tension unloading + Pressure control



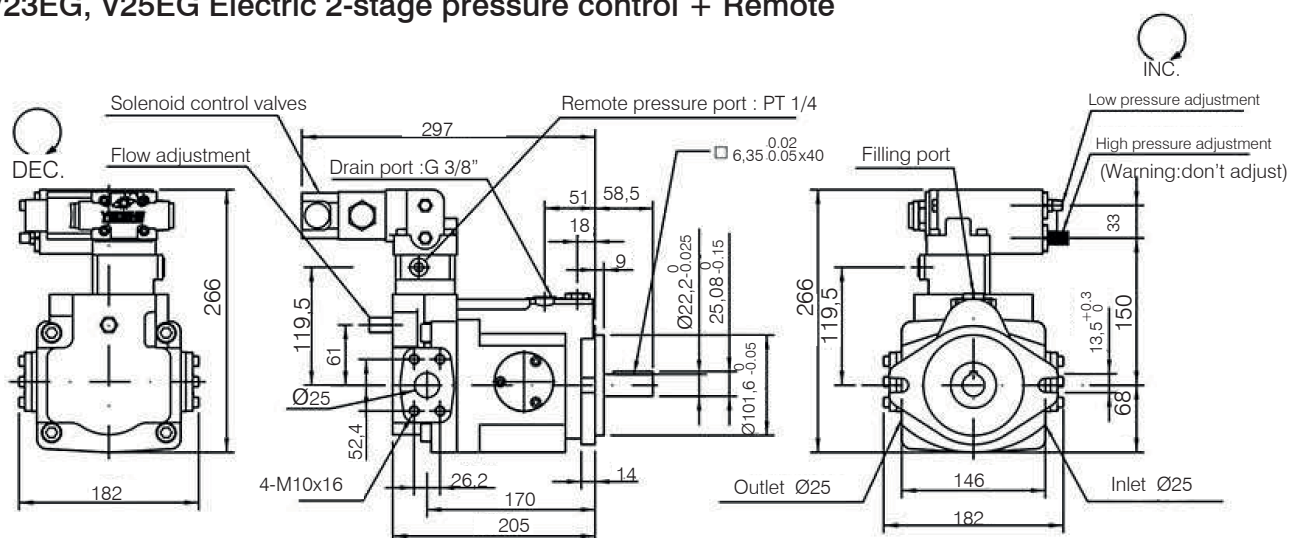
V23DG, V25DG Low tension unloading + Pressure control + Remote



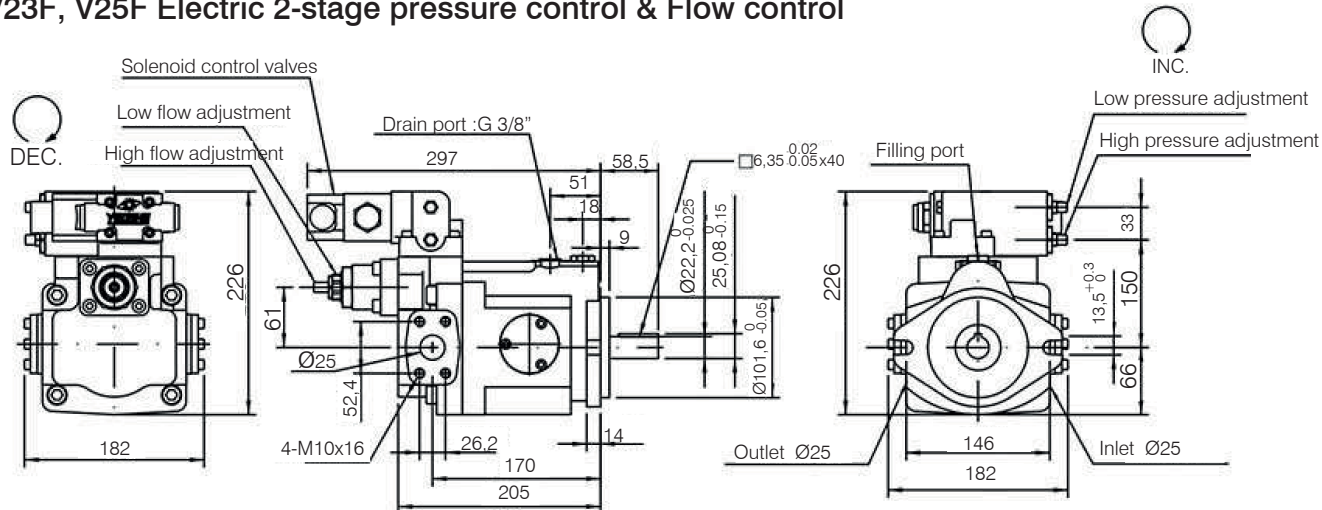
V23E, V25E Electric 2-stage pressure control



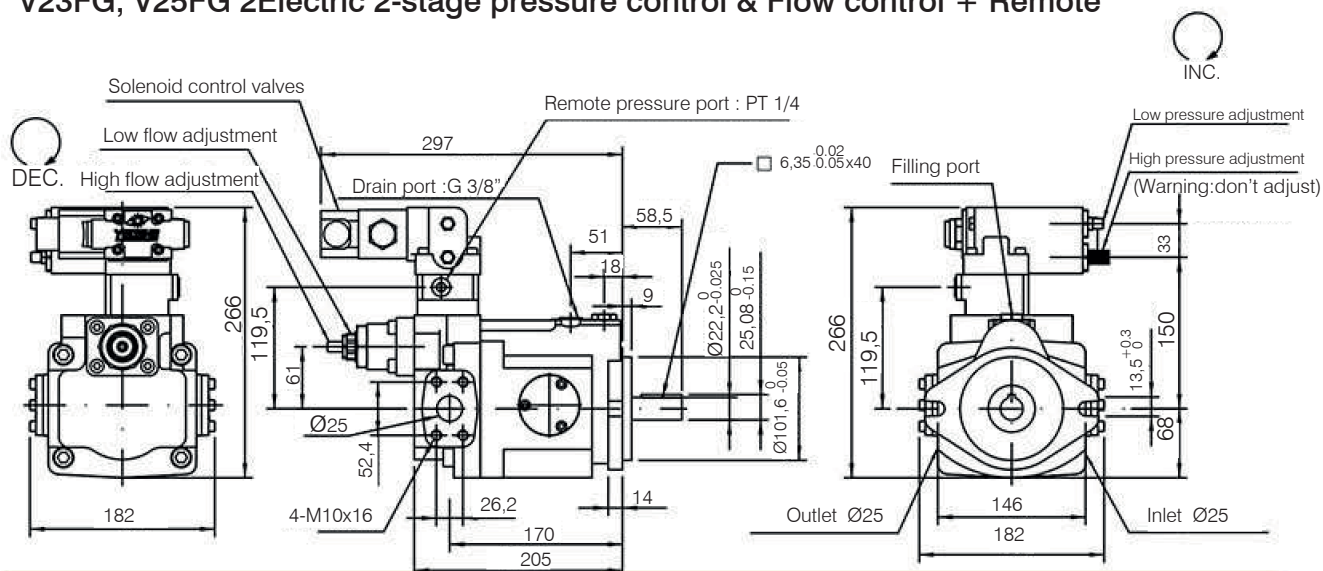
V23EG, V25EG Electric 2-stage pressure control + Remote



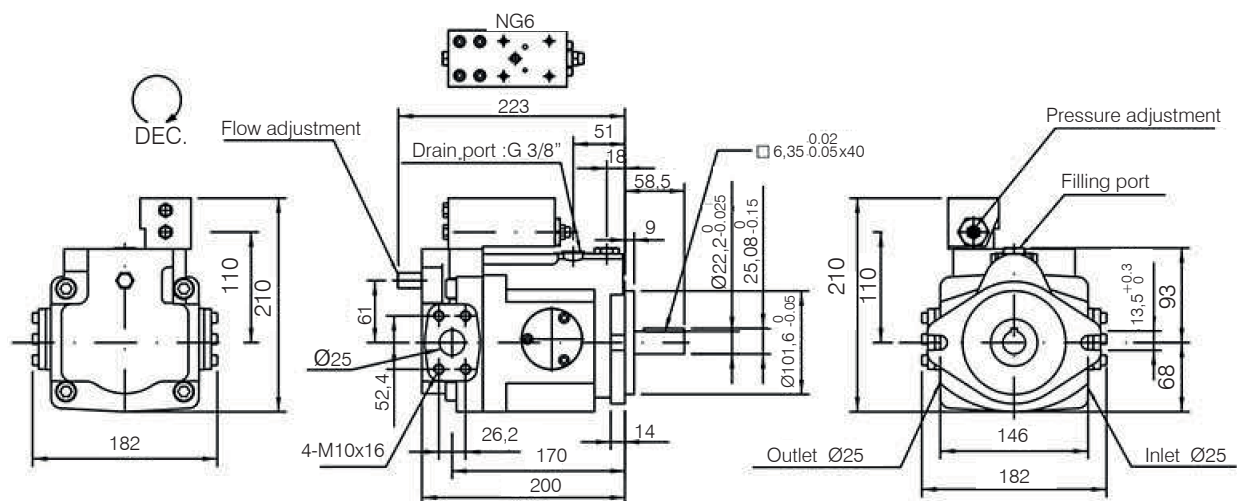
V23F, V25F Electric 2-stage pressure control & Flow control



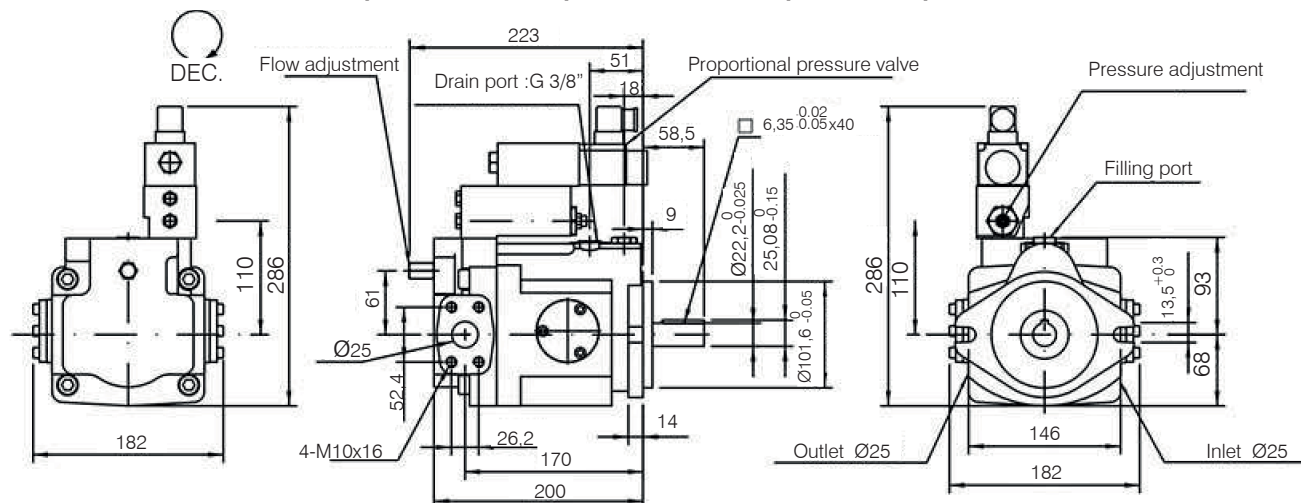
V23FG, V25FG 2Electric 2-stage pressure control & Flow control + Remote



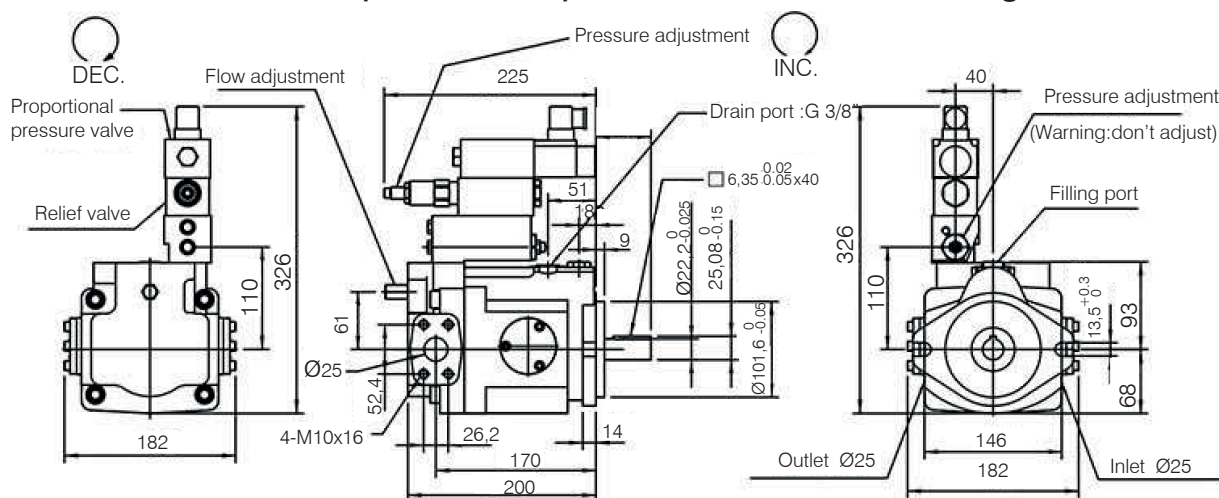
V23GM, V25GM Remote pressure compensator with NG6 interface



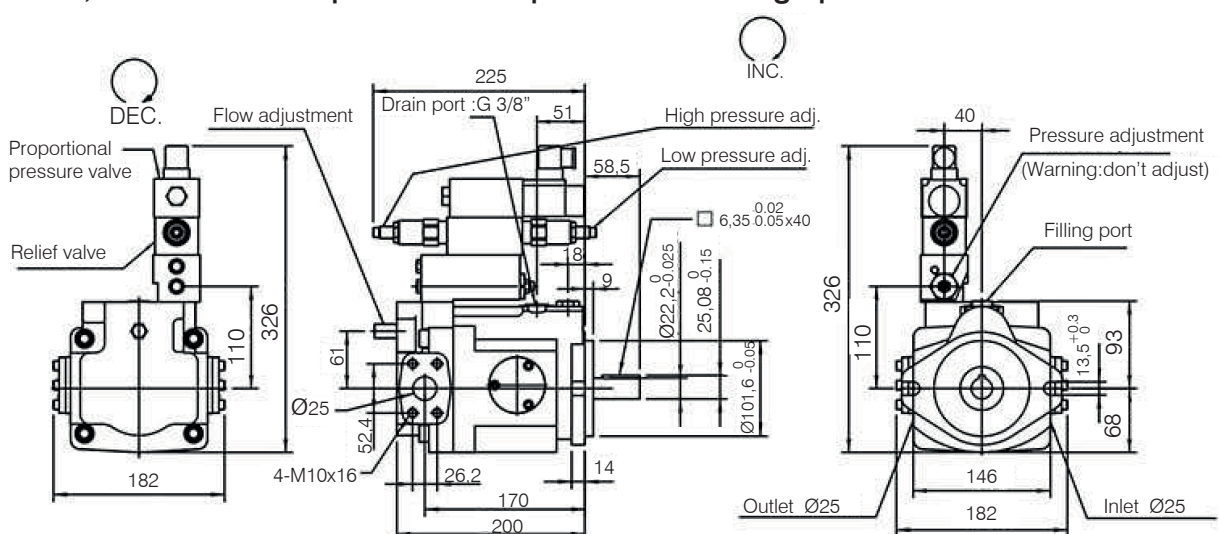
V23GJ, V25GJ Remote pressure compensator + Proportional pressure valve



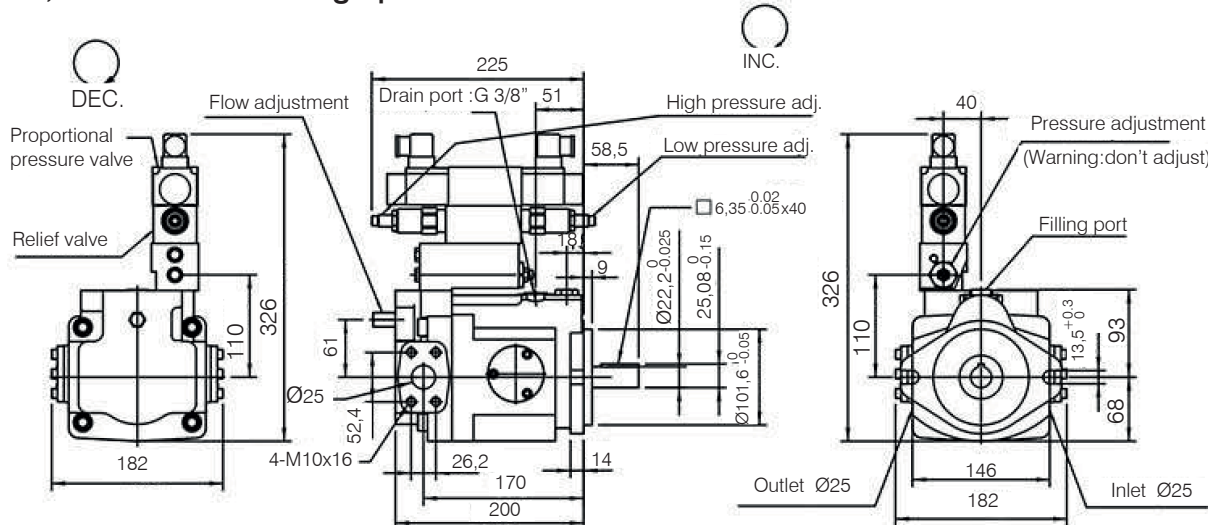
V23GR, V25GR Remote pressure compensator + Electrical unloading



V23GB, V25GB Remote pressure compensator + 2-stage pressure control

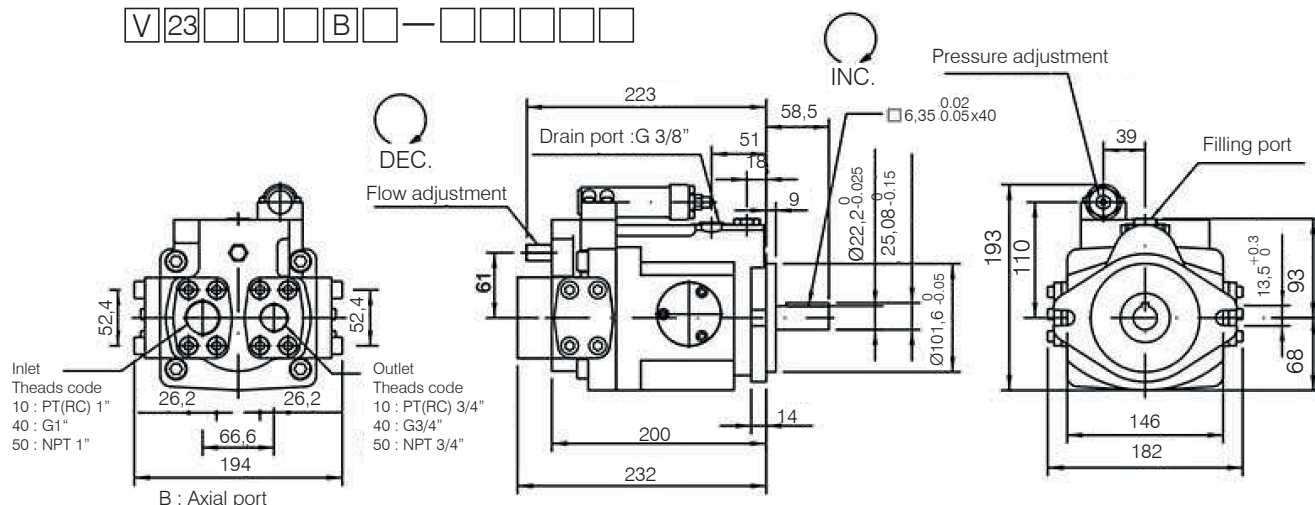


V23F, V25F Electric 2-stage pressure control & Flow control

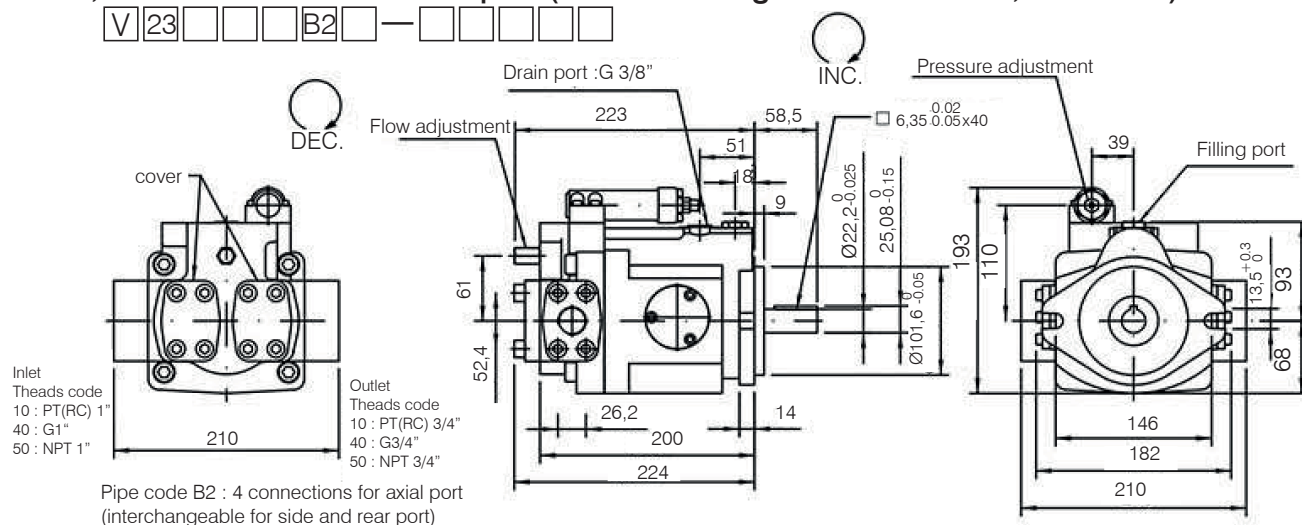


V Series
Dimension
V23, V25 Rear port (Please flowing order code no.6, add "B")

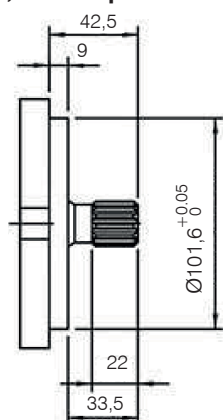
V 23 □ □ □ B □ — □ □ □ □ □ □


V23, V25 Connections for rear port (Please flowing order code no.6, add "B2")

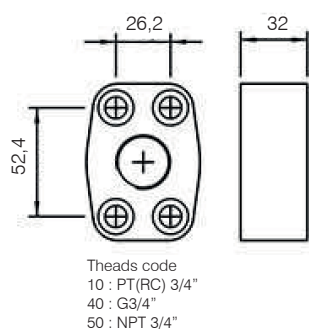
V 23 □ □ □ B2 □ — □ □ □ □ □ □



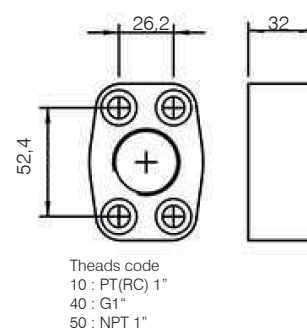
Type	A	B	C	CG	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HQ
○ Thru drive option	○	○									○	○	○	○		

V23, V25 Splined shaft type

V23, V25 Inlet / Outlet

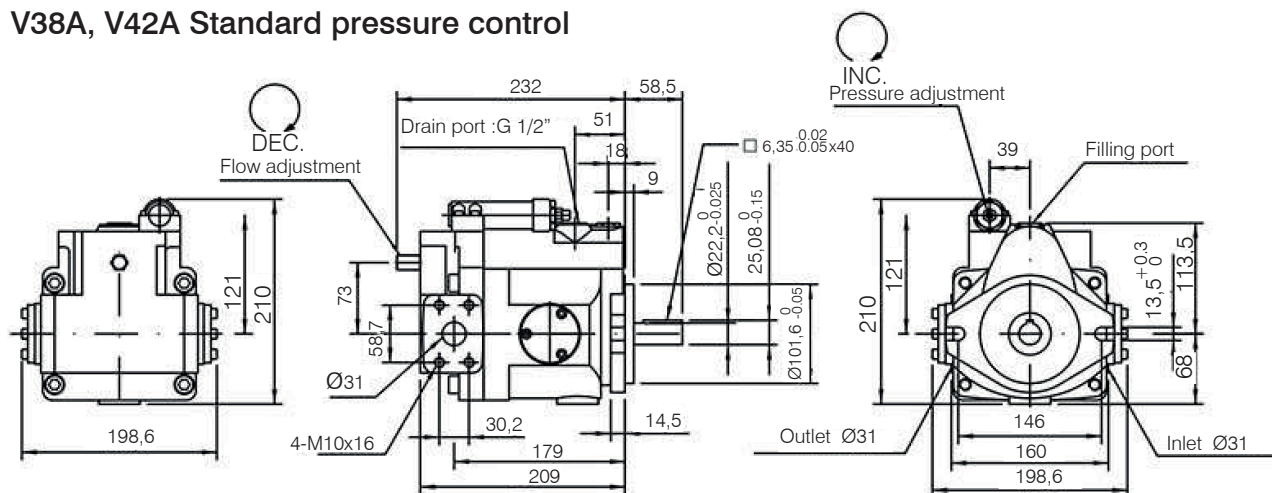
Outlet



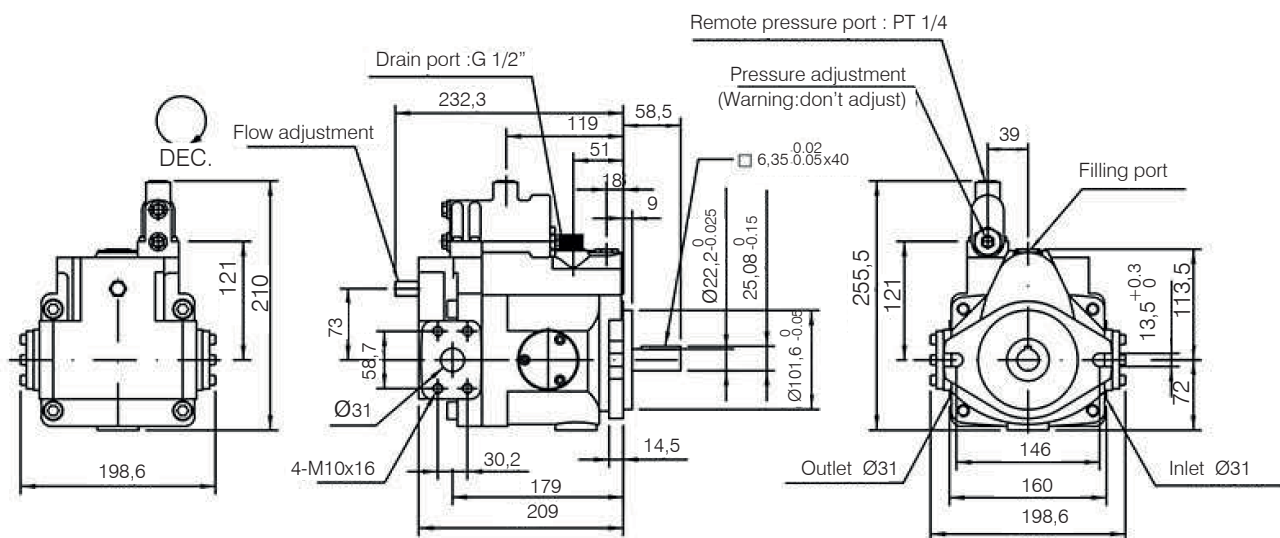
Inlet



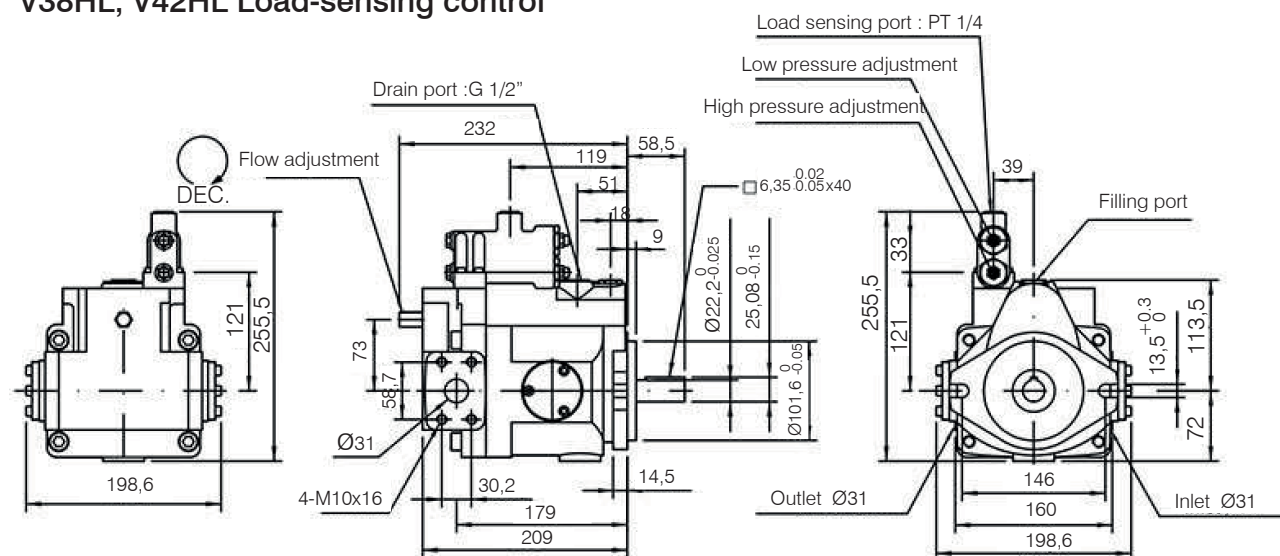
V38A, V42A Standard pressure control



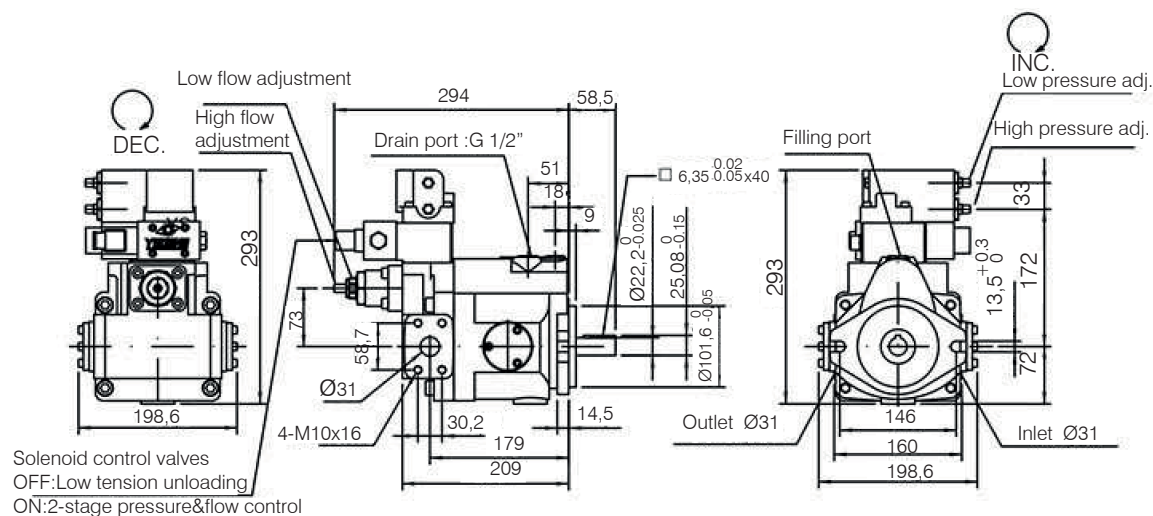
V38G, V42G Remote pressure control



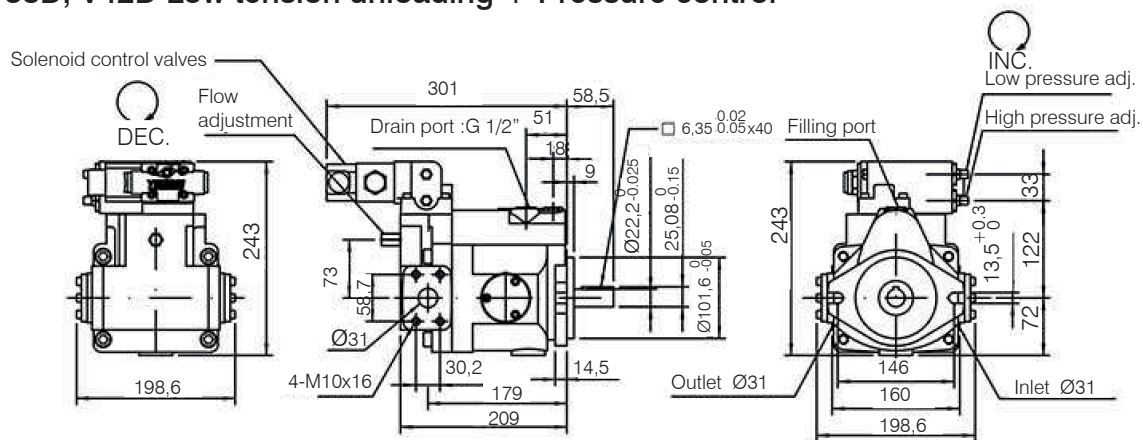
V38HL, V42HL Load-sensing control



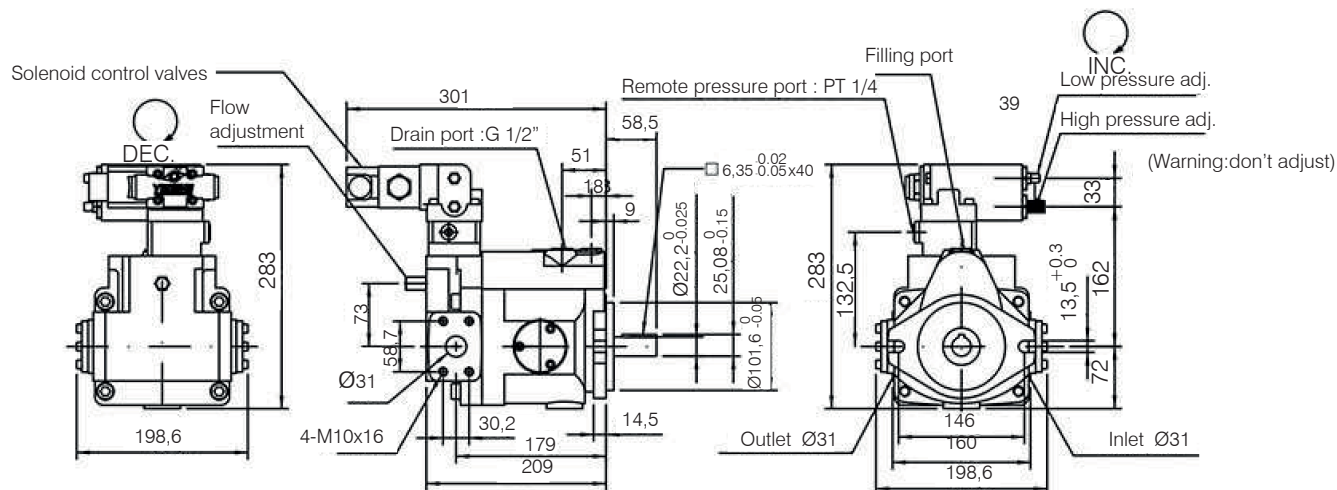
V38CR, V42CR 2-stage pressure & Flow control + Low tension unloading



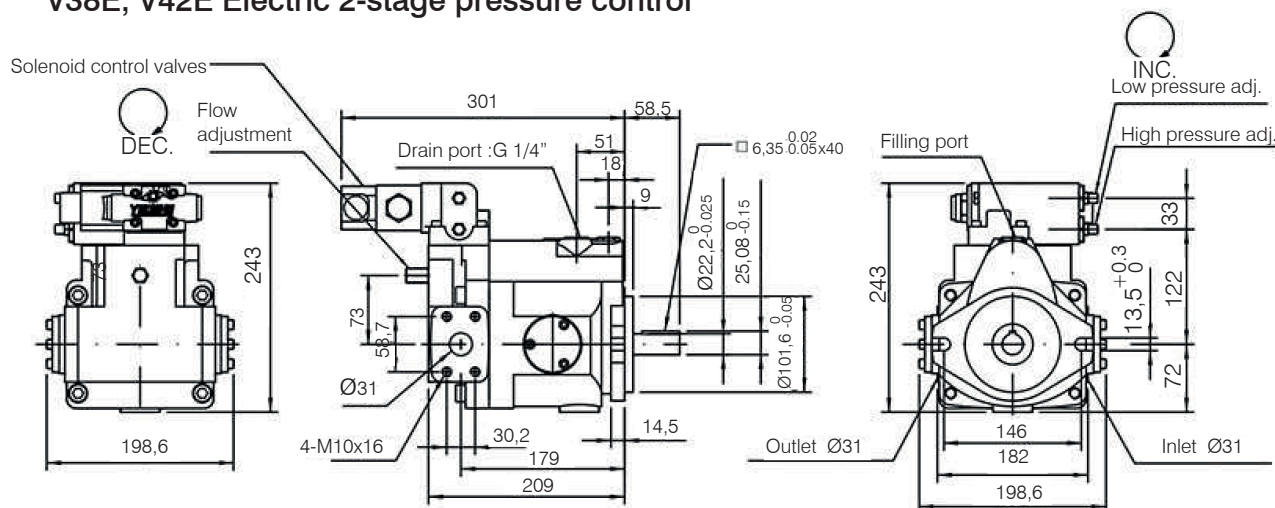
V38D, V42D Low tension unloading + Pressure control



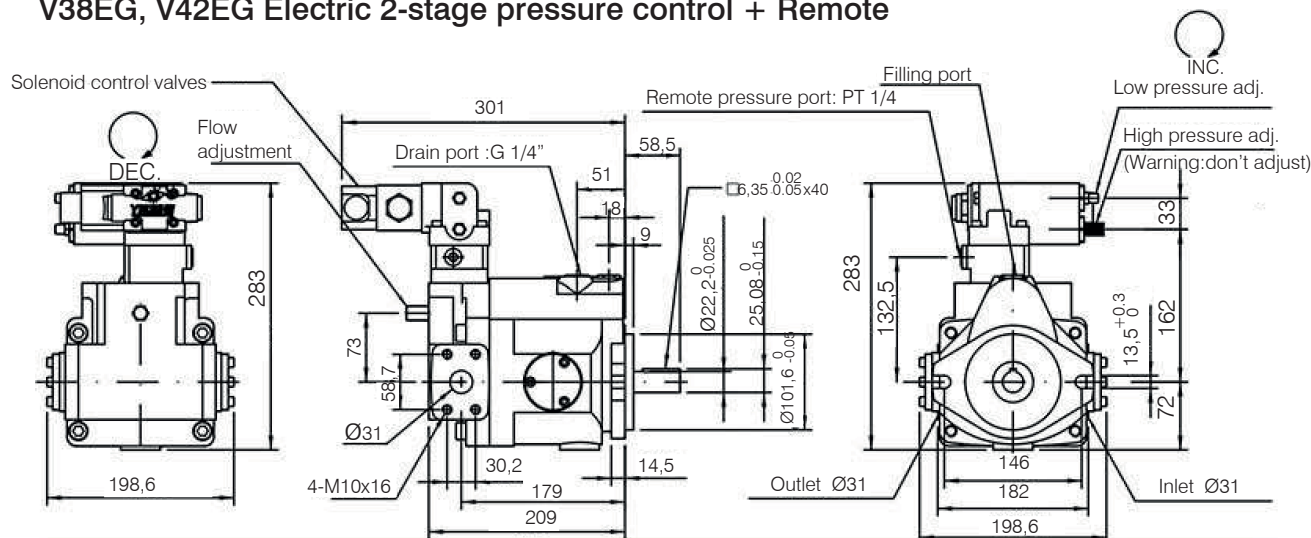
V38DG, V42DG Low tension unloading + Pressure control + Remote



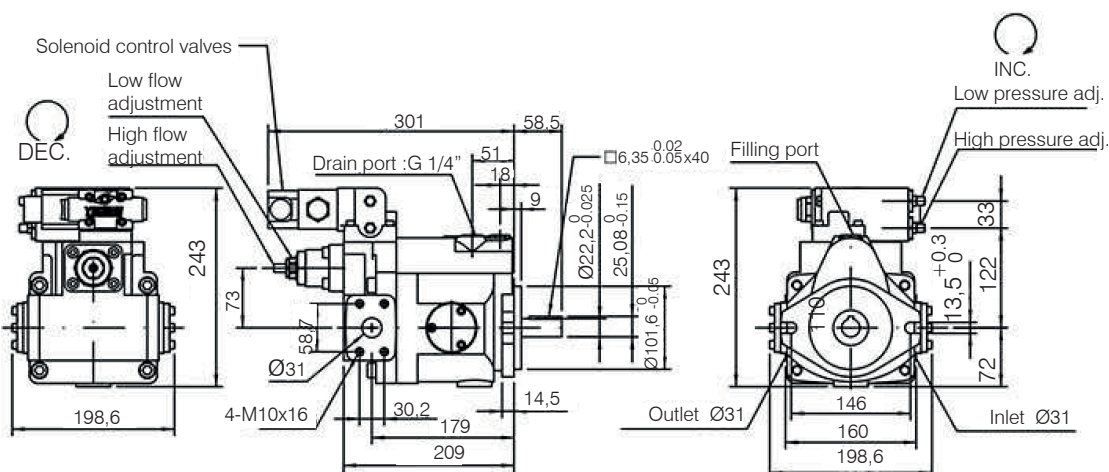
V38E, V42E Electric 2-stage pressure control



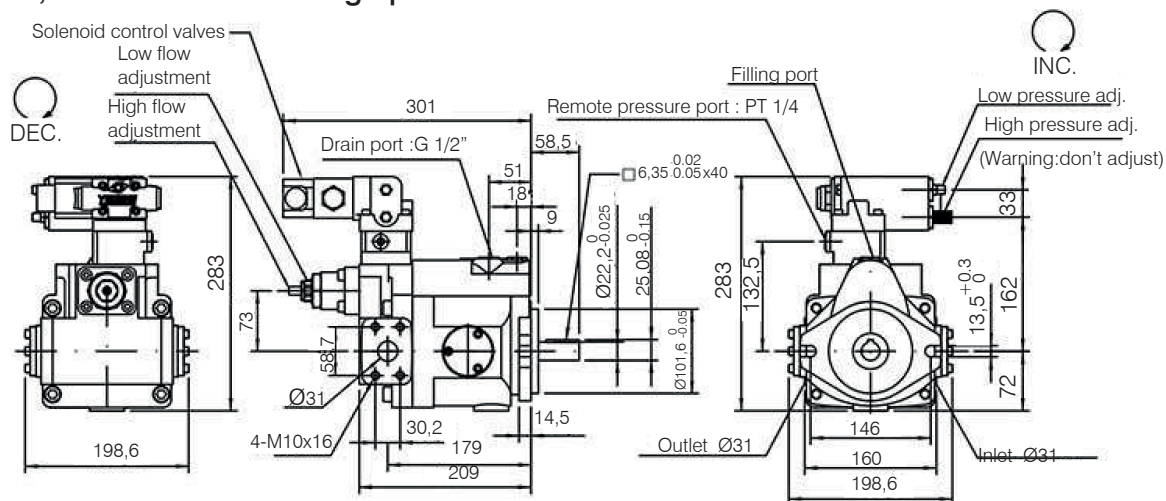
V38EG, V42EG Electric 2-stage pressure control + Remote



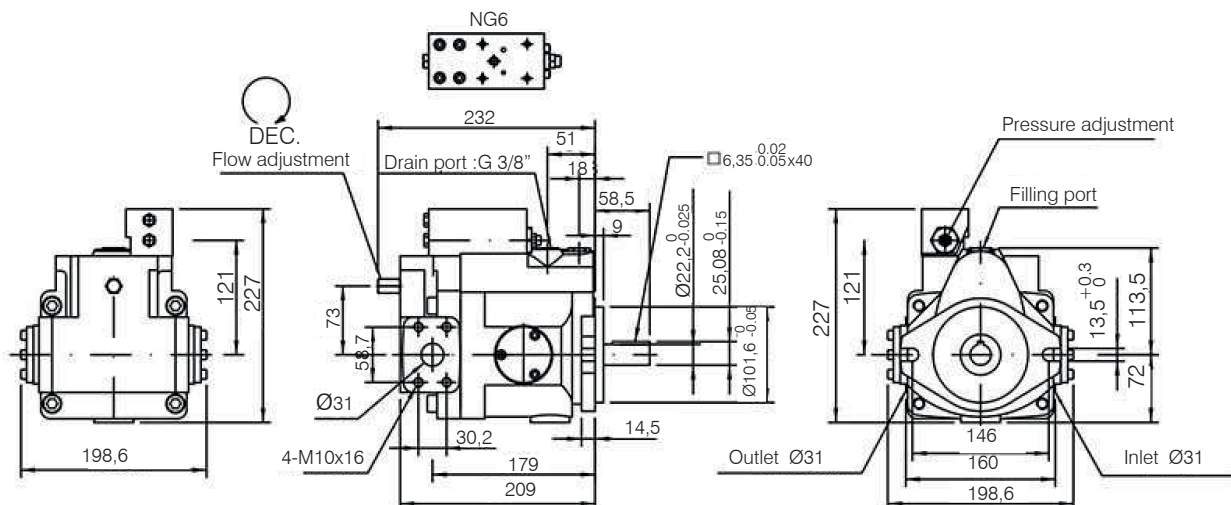
V38F, V42F Electric 2-stage pressure control & Flow control



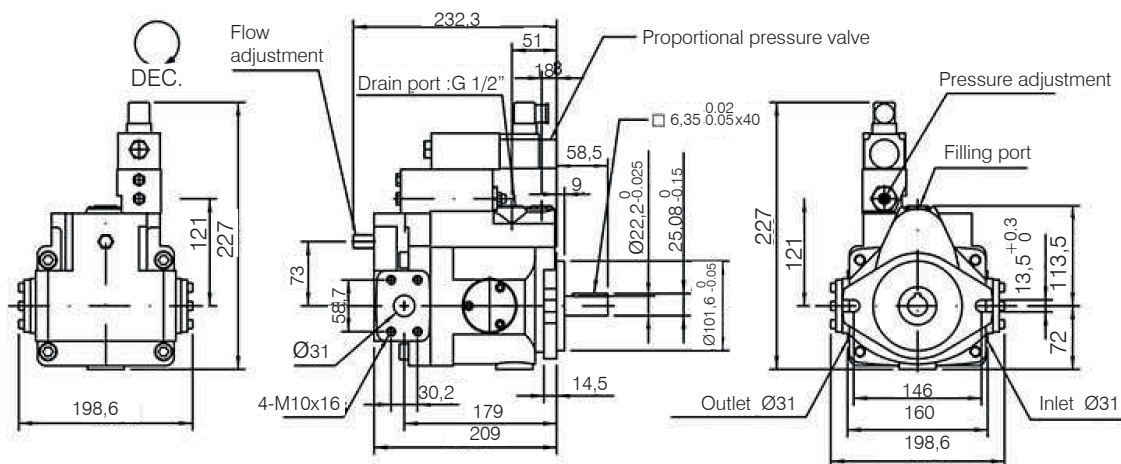
V38FG, V42FG Electric 2-stage pressure & Flow control + Remote



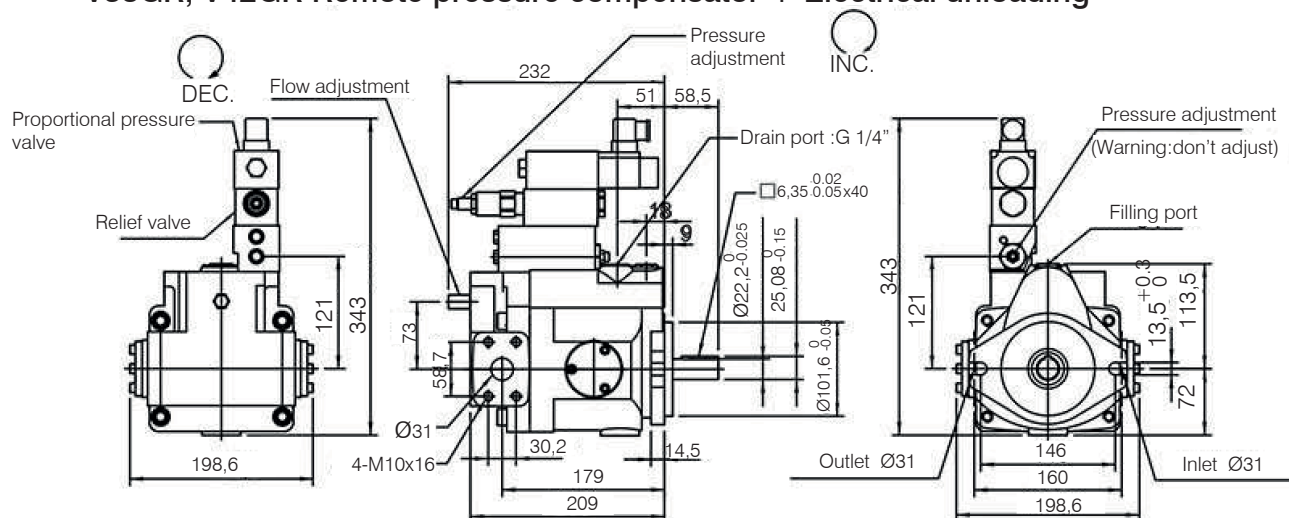
V38GM, V42GM Remote pressure compensator with NG6 interface



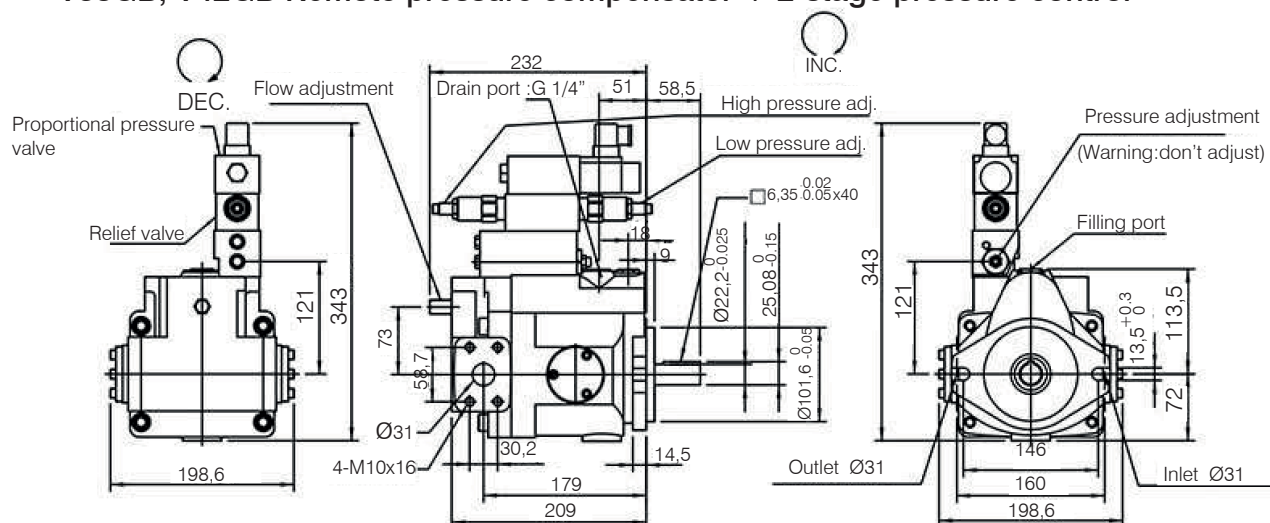
V38GJ, V42GJ Remote pressure compensator + Proportional pressure valve



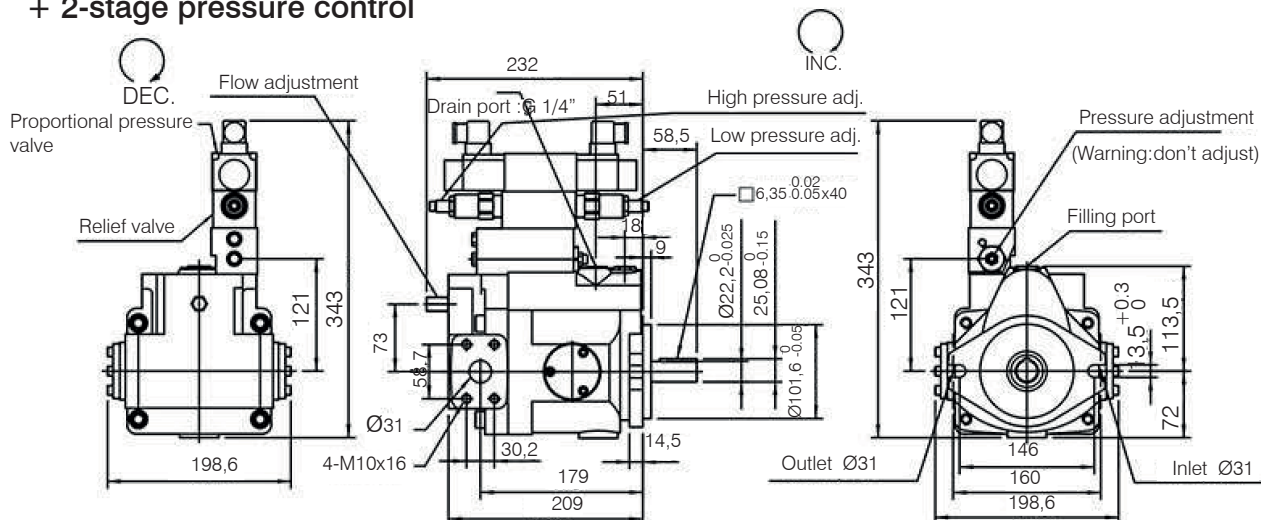
V38GR, V42GR Remote pressure compensator + Electrical unloading



V38GB, V42GB Remote pressure compensator + 2-stage pressure control



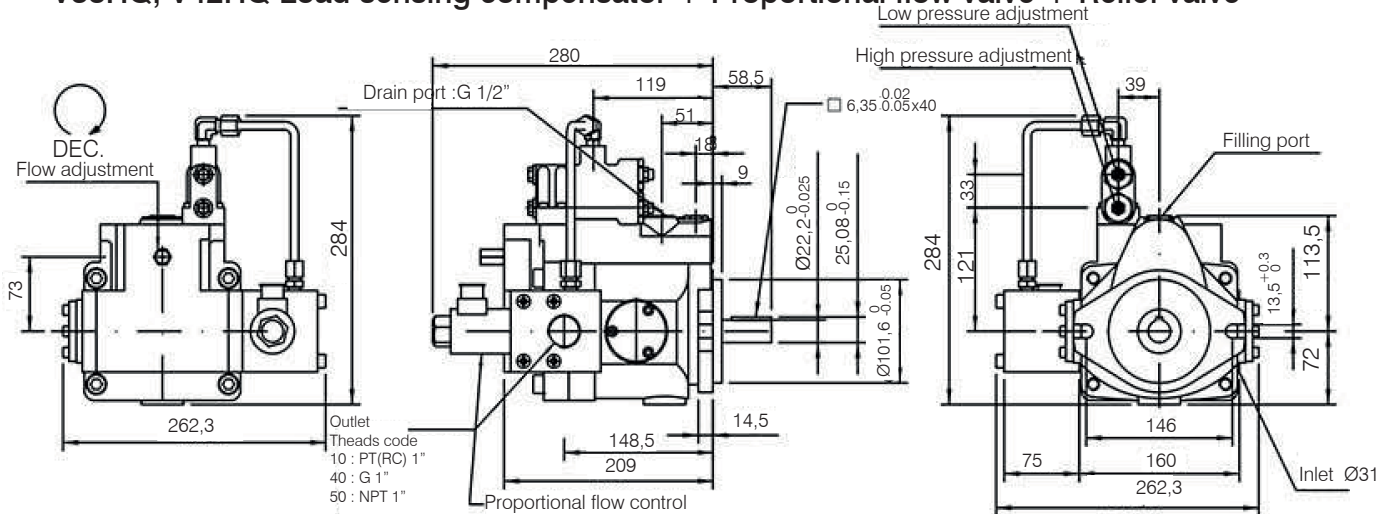
V3GC, V4GC Remote pressure compensator + Electrical unloading + 2-stage pressure control



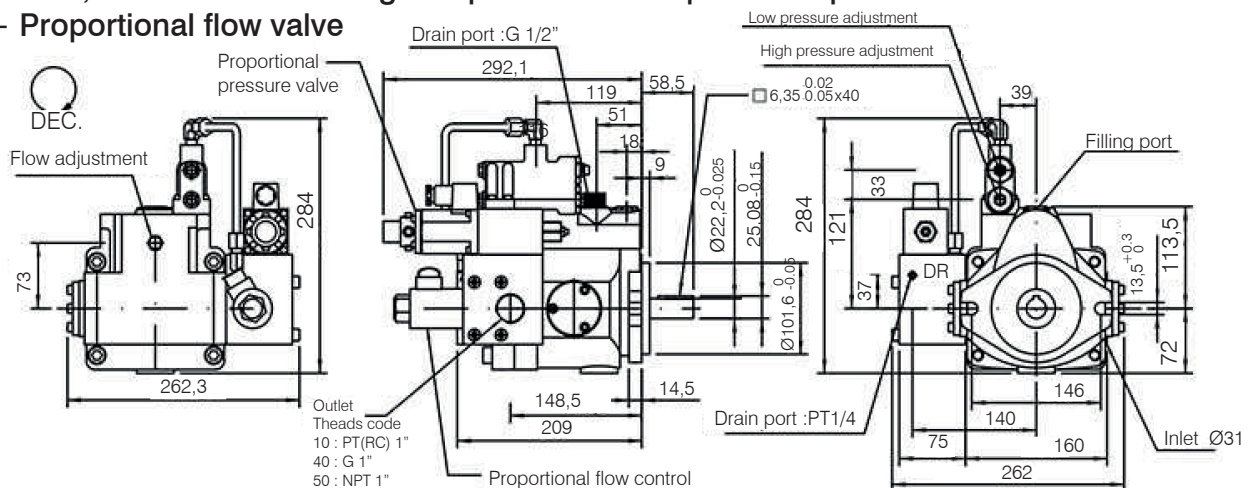
V Series

Dimension

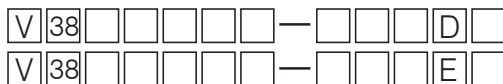
V38HQ, V42HQ Load sensing compensator + Proportional flow valve + Relief valve



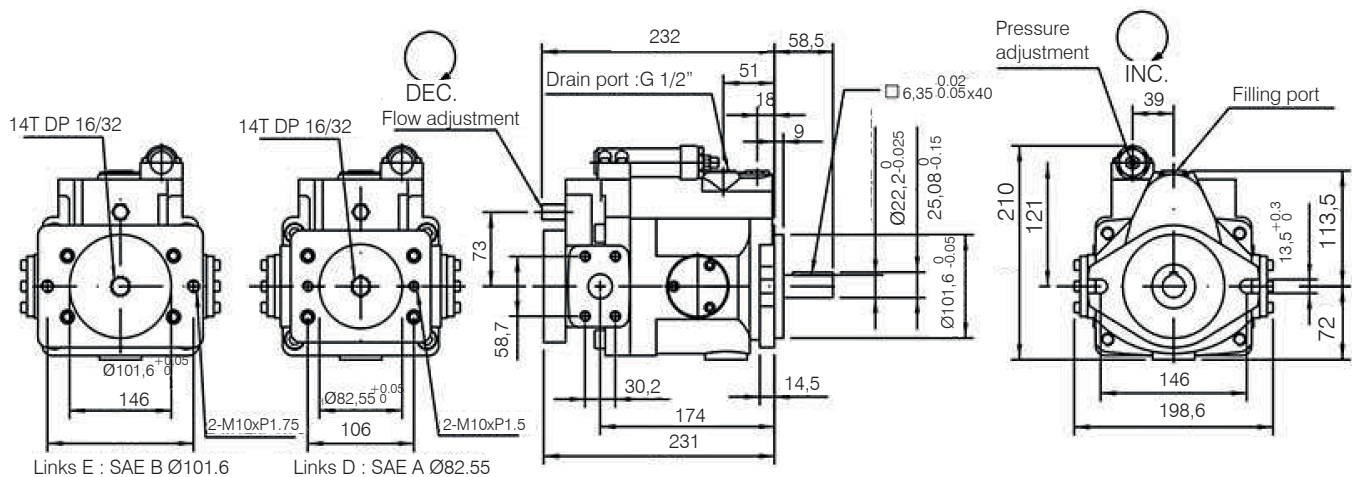
V38HK, V42HK Load sensing compensator + Proportional pressure valve
+ Proportional flow valve



V38, V42 Thru drive (SAE A Ø82.55, code D)
Thru dirve (SAE B Ø101.6, code E)

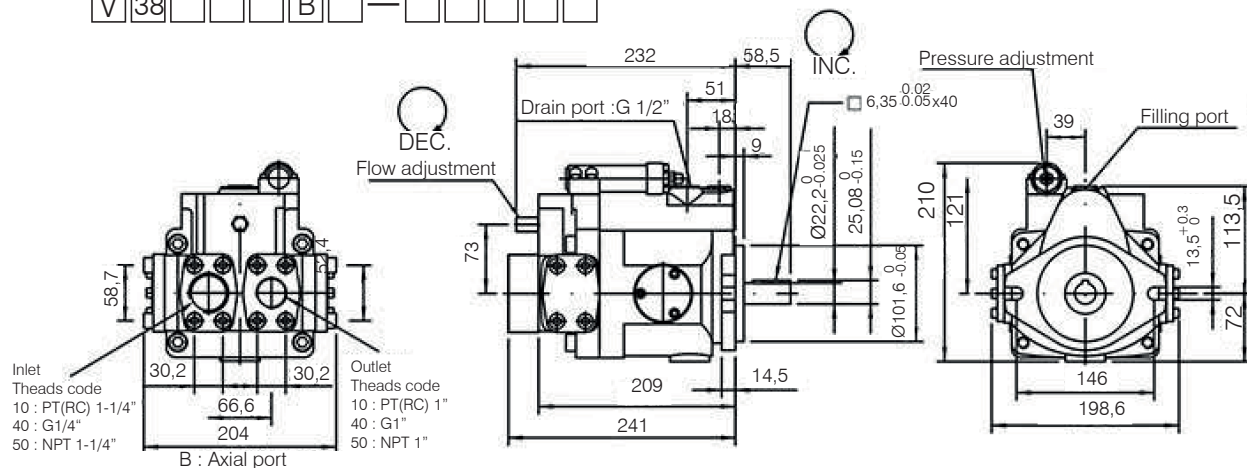


Type	A	B	C	CG	CR	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HQ
○Thru drive option	○					○	○	○	○			○	○	○	○	○	○

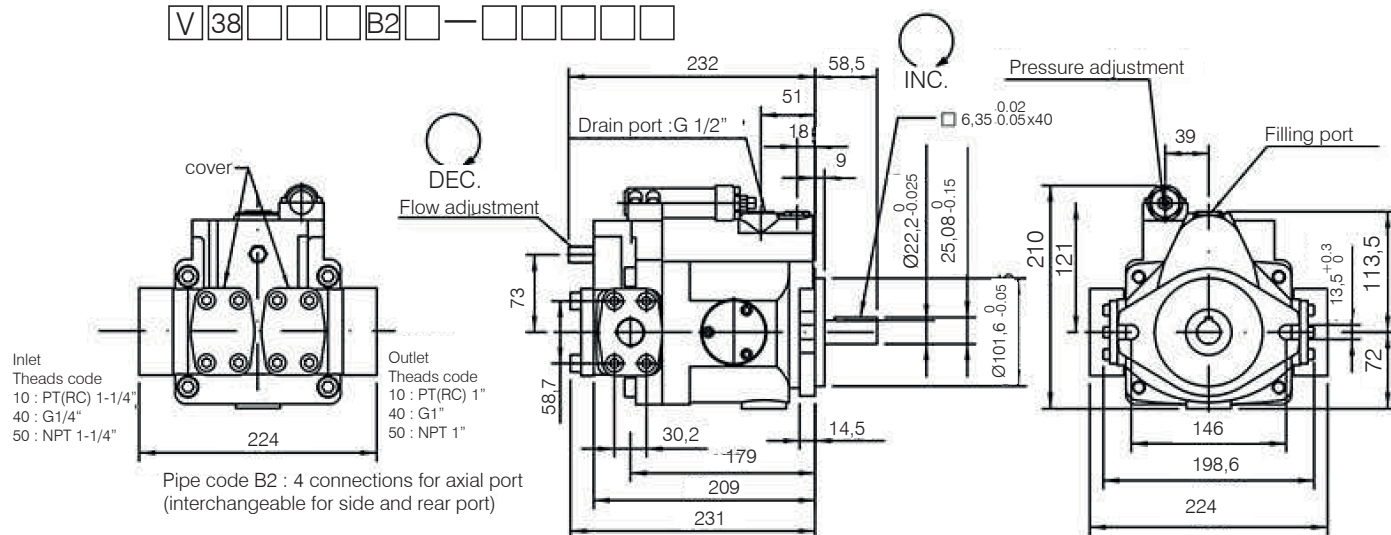


V Series
Dimension
V38, V42 Rear port (Please flowing order code no.6, add "B")

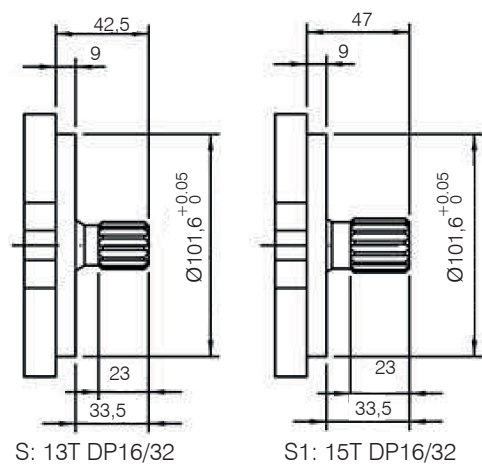
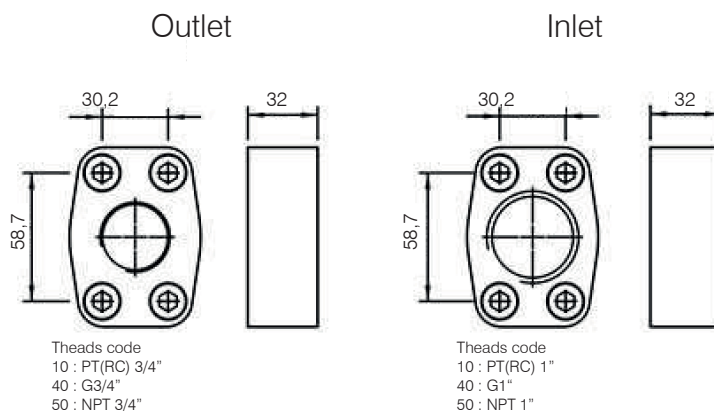
V 38 [] [] [] [] B [] — [] [] [] [] []


V38, V42 Connections for rear port (Please flowing order code no.6, add "B2")

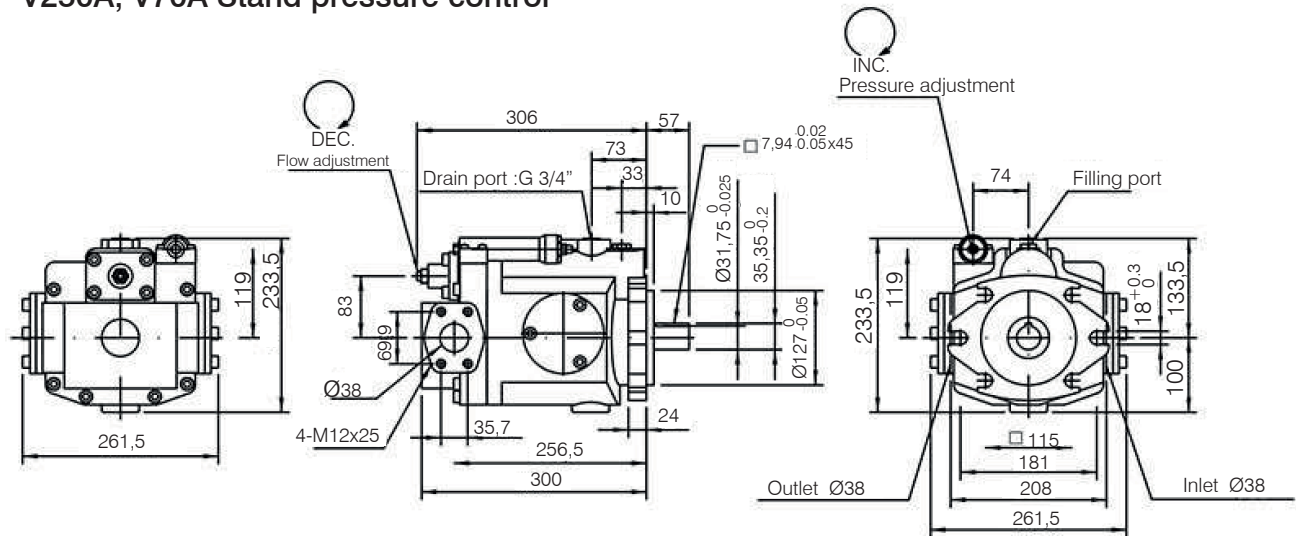
V 38 [] [] [] [] B2 [] — [] [] [] [] []



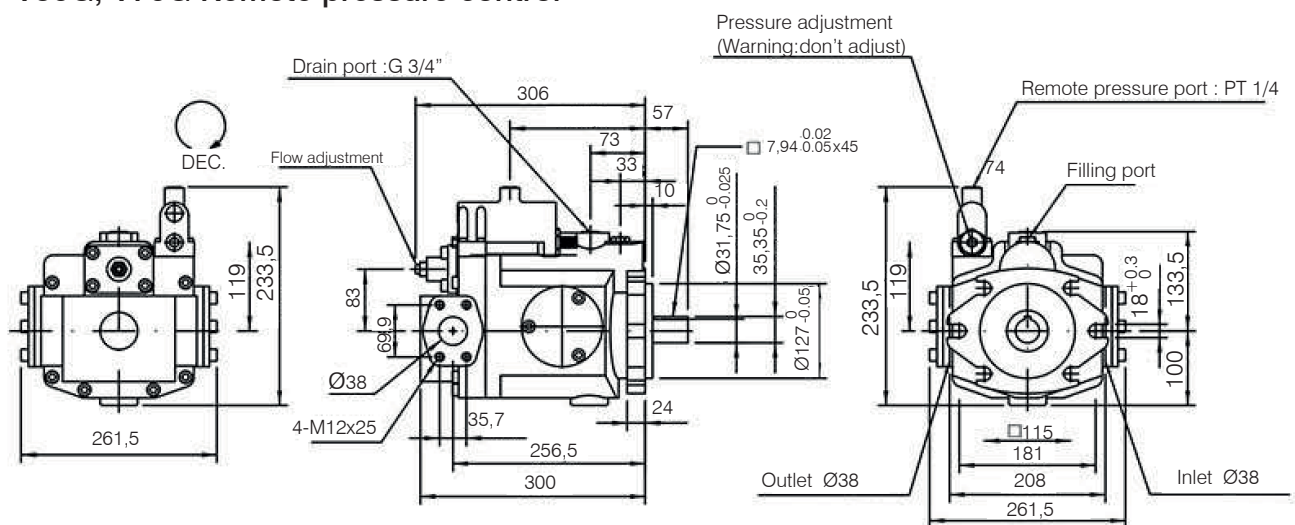
Type	A	B	C	CG	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HQ
Thru drive option																

V38, V42 Splined shaft type

V38, V42 Inlet / Outlet


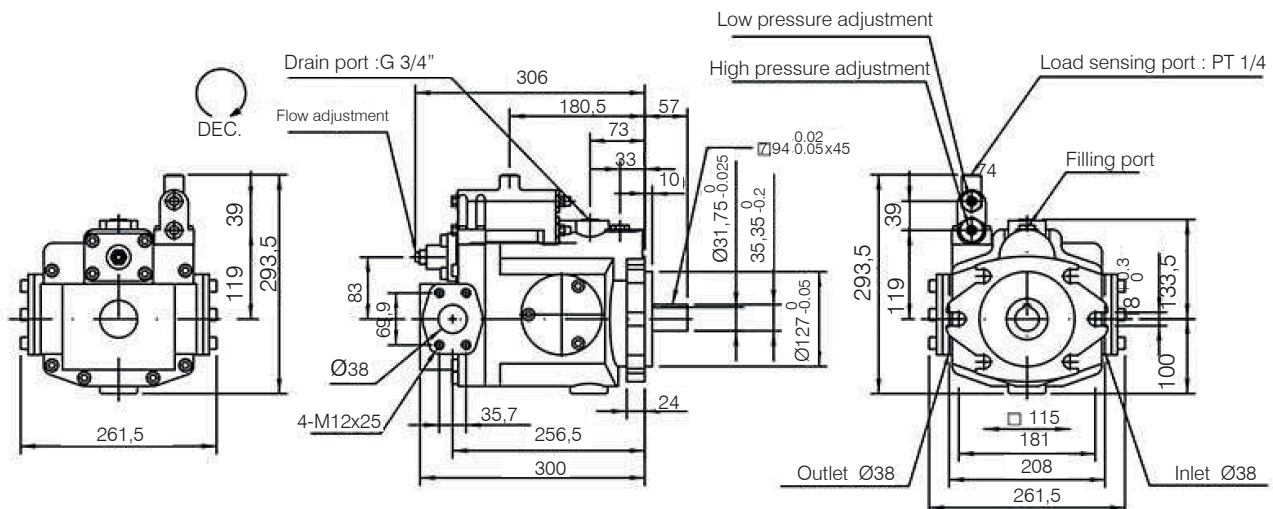
V250A, V70A Stand pressure control



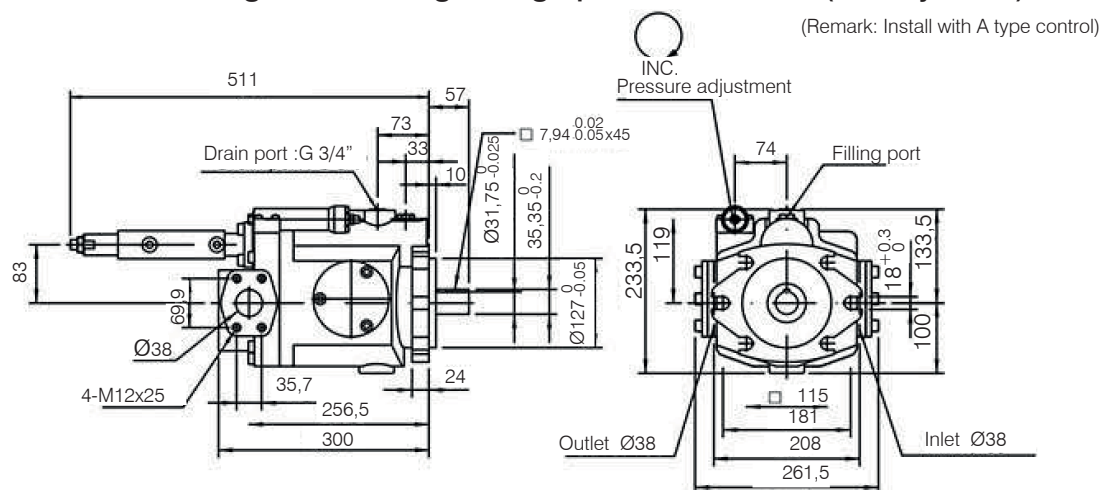
V50G, V70G Remote pressure control



V50HL, V70HL Load-sensing control

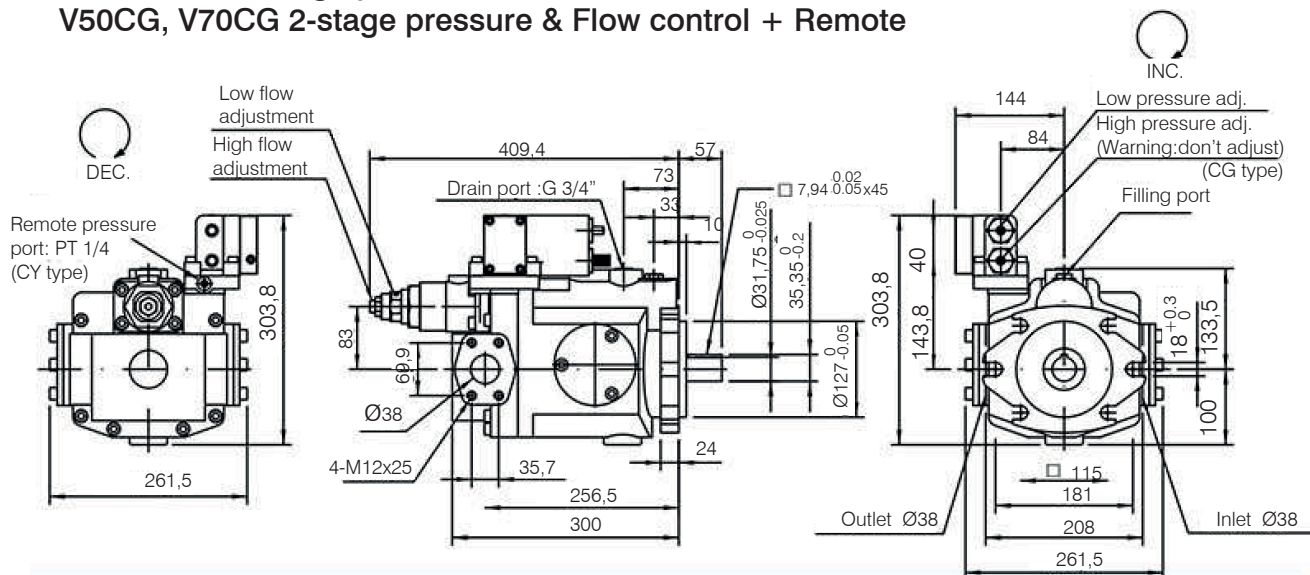


V50B, V70B Multi-stage flow & Single-stage pressure control (with cylinder)

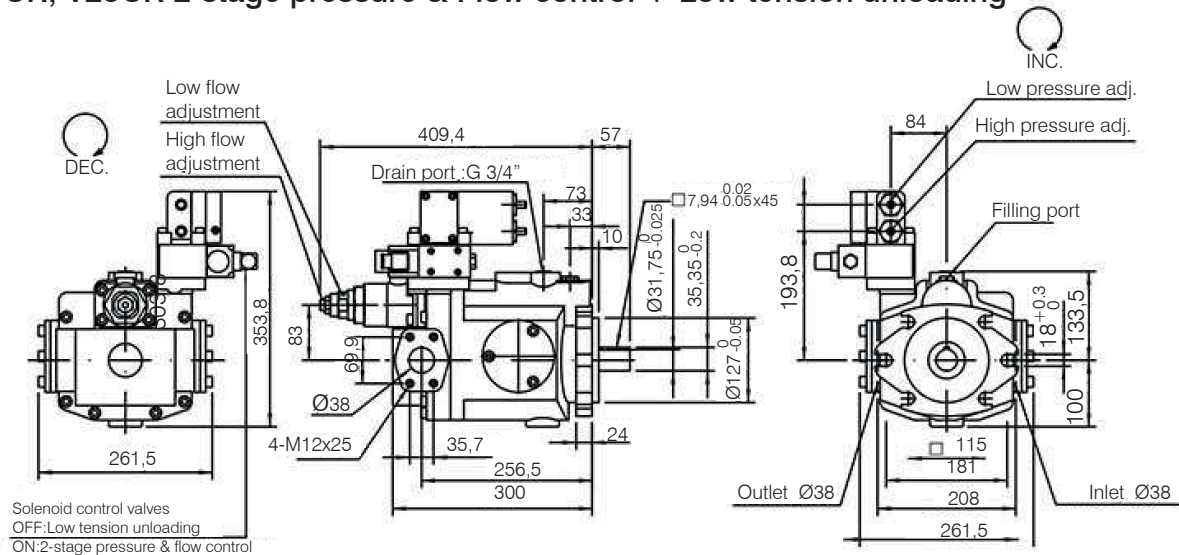


V50C, V70C 2-stage pressure & Flow control

V50CG, V70CG 2-stage pressure & Flow control + Remote



V23CR, V25CR 2-stage pressure & Flow control + Low tension unloading

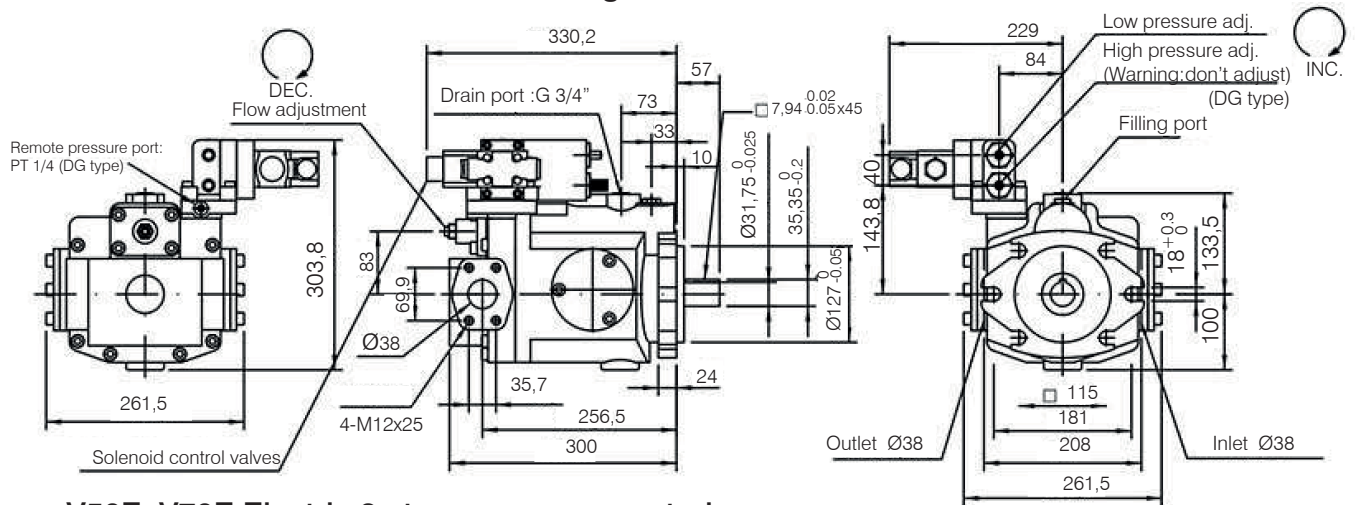


V Series

Dimension

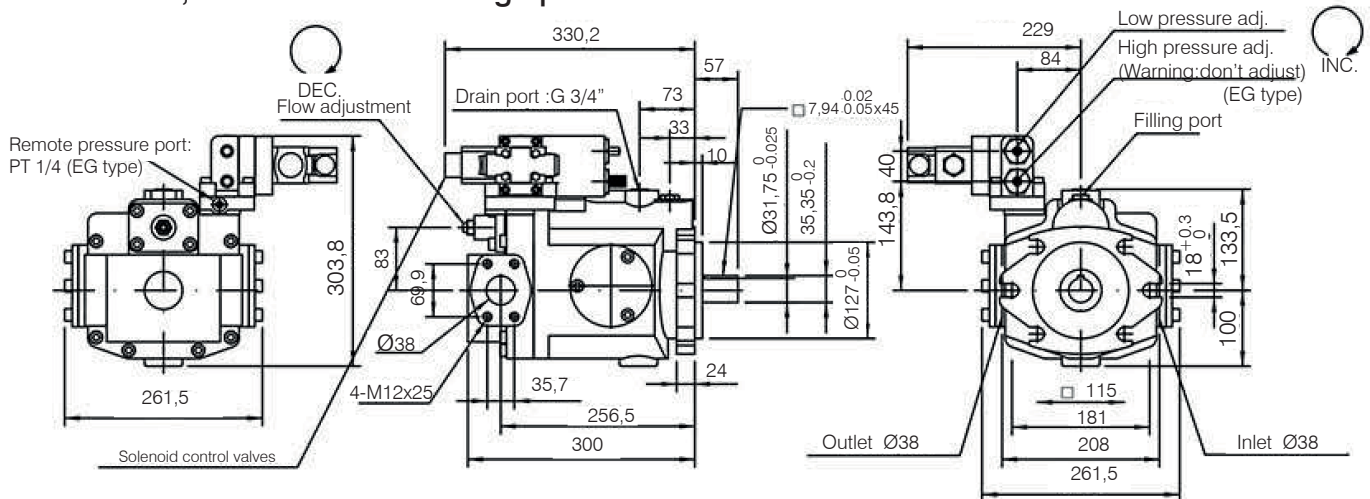
V50D, V70D Low tension unloading + Pressure control

V50DG, v70DG Low tension unloading + Pressure control + Remote



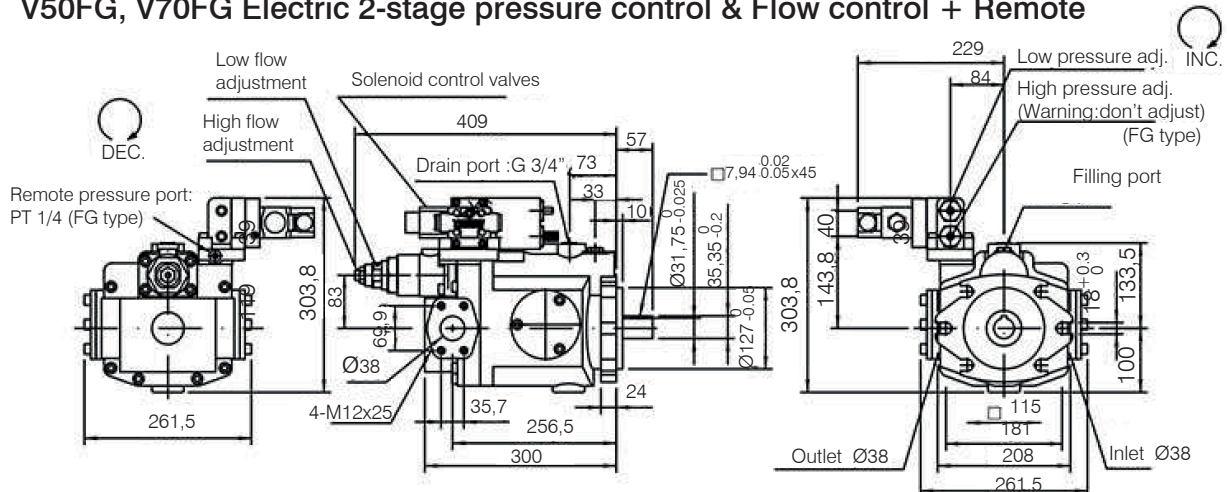
V50E, V70E Electric 2-stage pressure control

V50EG, V70EG Electric 2-stage pressure control + Remote

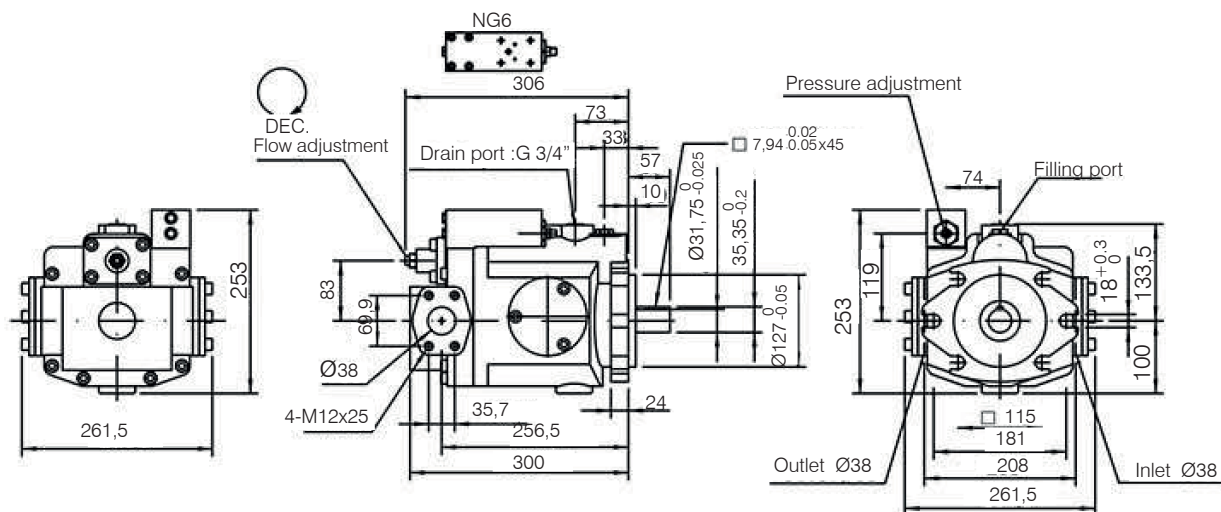


V50F, V70F Electric 2-stage pressure control & Flow control

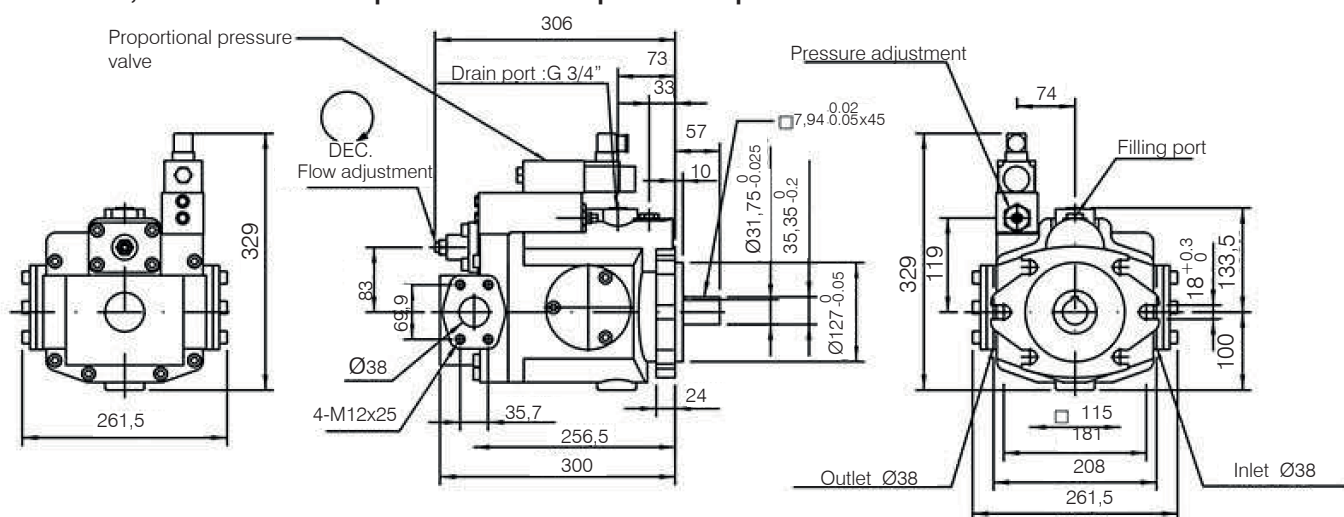
V50FG, V70FG Electric 2-stage pressure control & Flow control + Remote



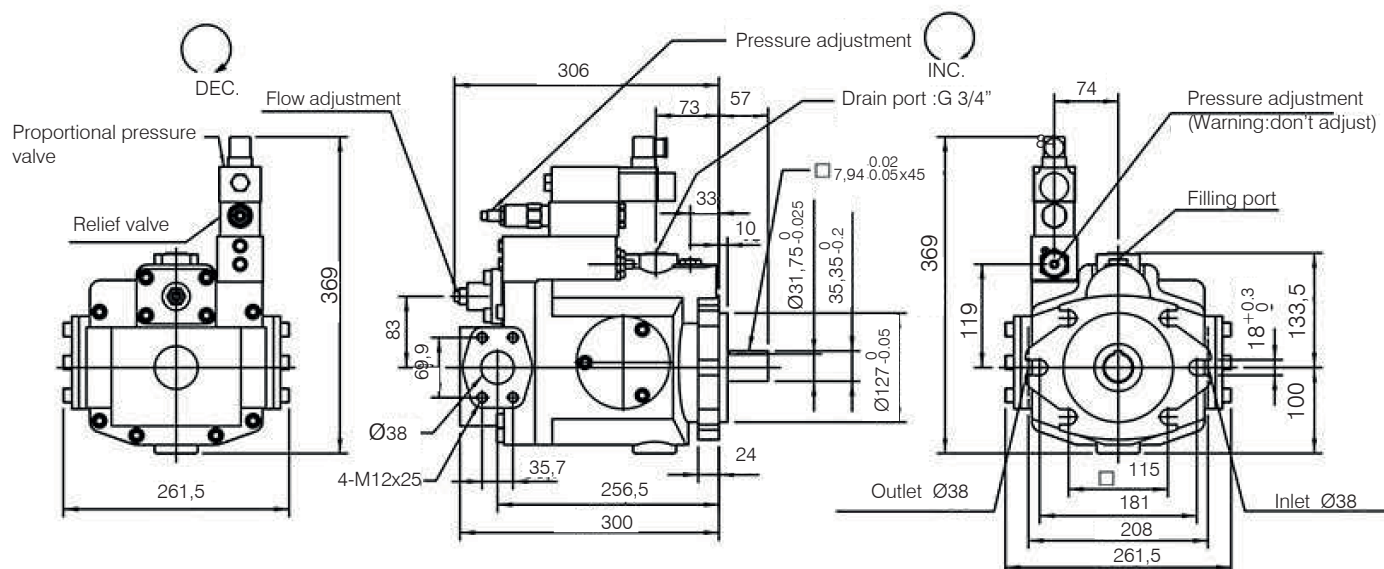
V50GM, V70GM Remote pressure compensator with NG6 interface



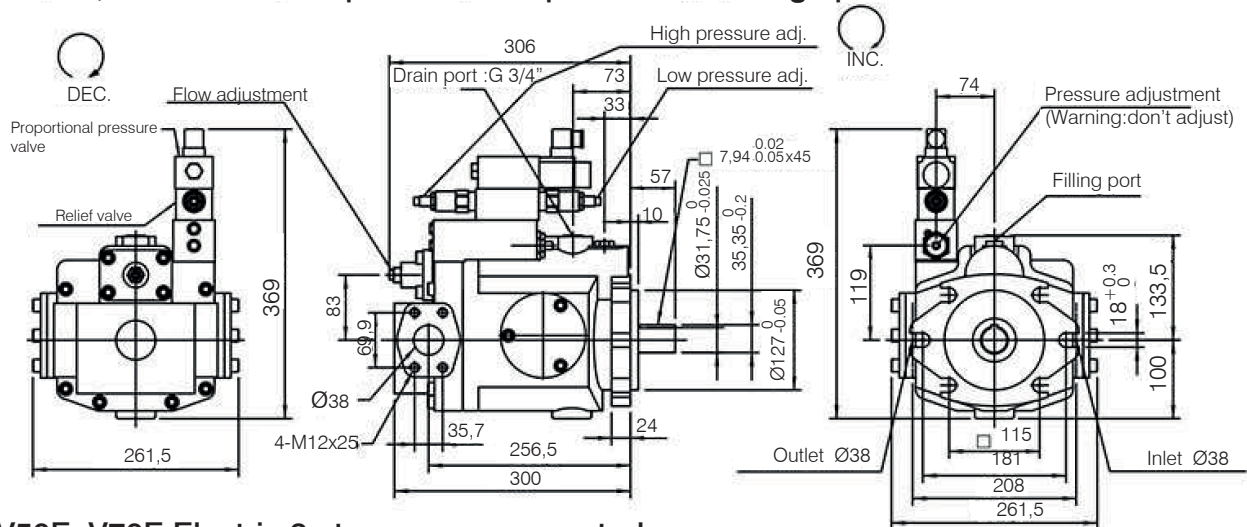
V50GJ, V70GJ Remote pressure + Proportional pressure valve



V23CR, V25CR 2-stage pressure & Flow control + Low tension unloading

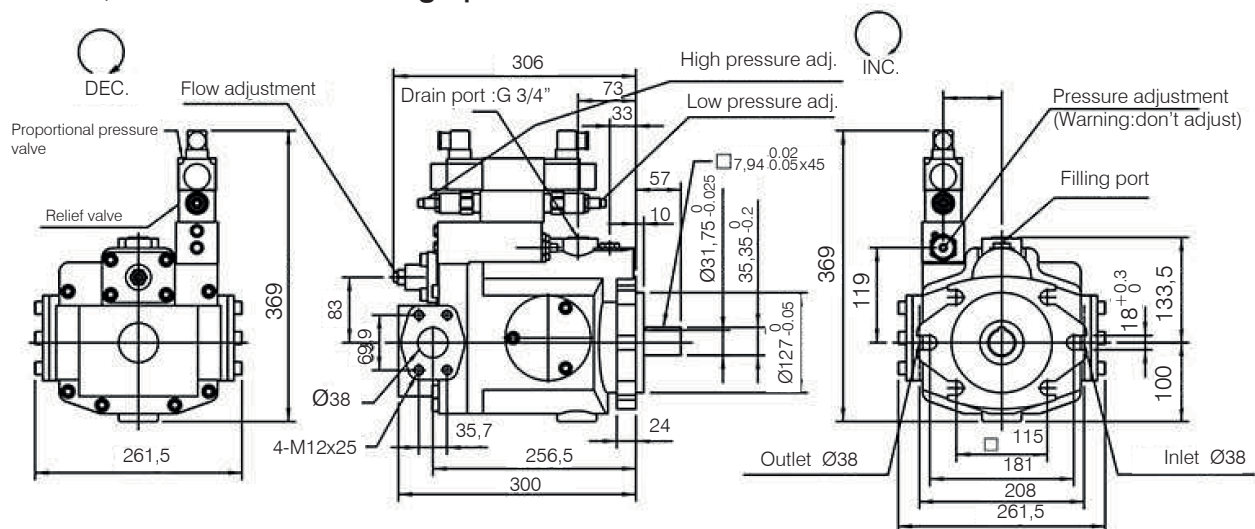


V50GB, V70GB Remote pressure compensator + 2-stage pressure control

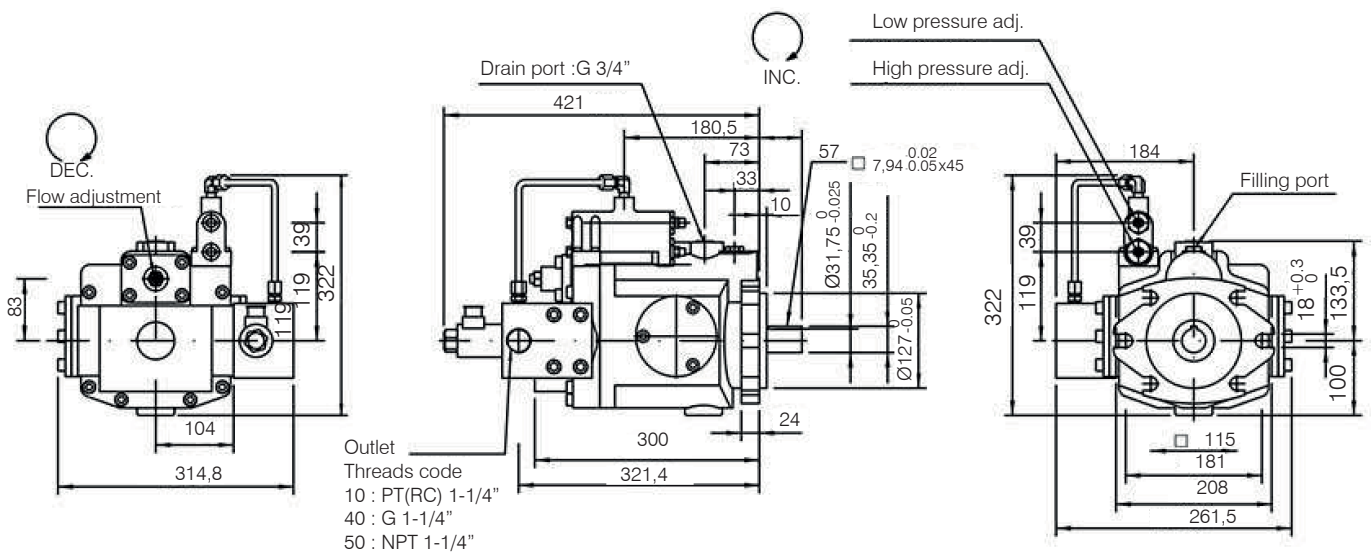


V50E, V70E Electric 2-stage pressure control

V50EG, V70EG Electric 2-stage pressure control + Remote



V50HQ, V70HQ Load sensing compensator + Proportional flow valve + Relief valve

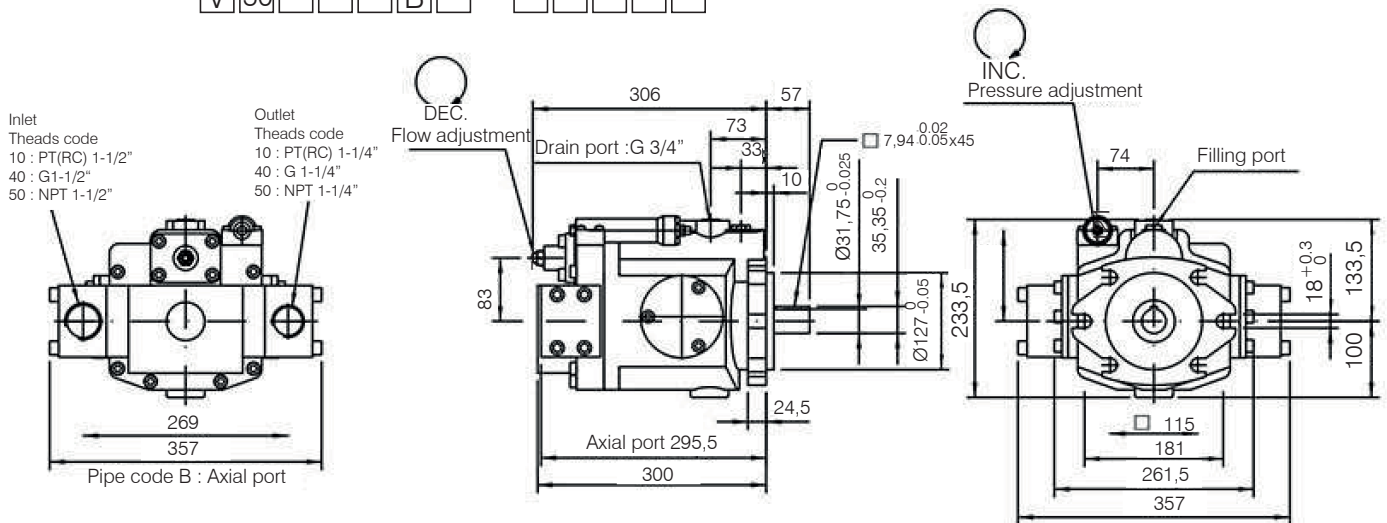


V Series

Dimension

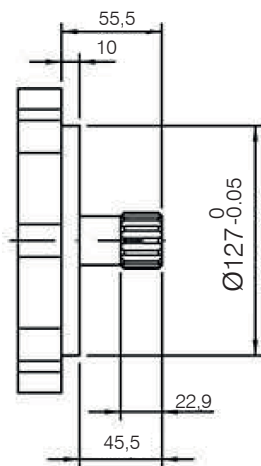
V50, V70 Rear port (Please following order code no.6 add "B")

V 50 — B —



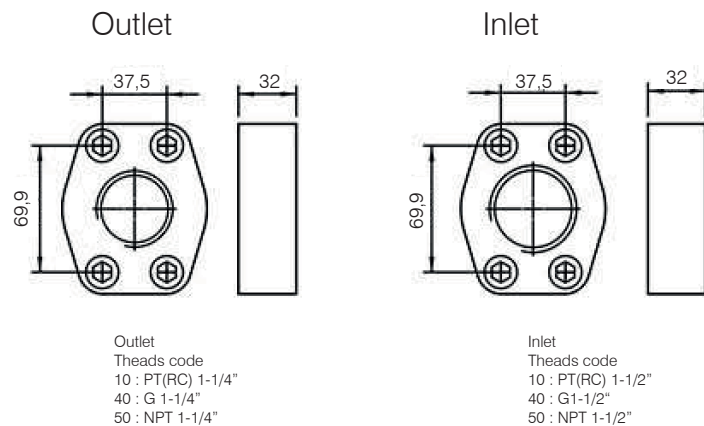
Type	A	B	C	CG	CR	D	DG	E	EG	F	FG	G	GJ	GM	HL	HK	HQ
○ Thru drive option	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		

V50, V70 Splined shaft type



S: 14T DP12/24

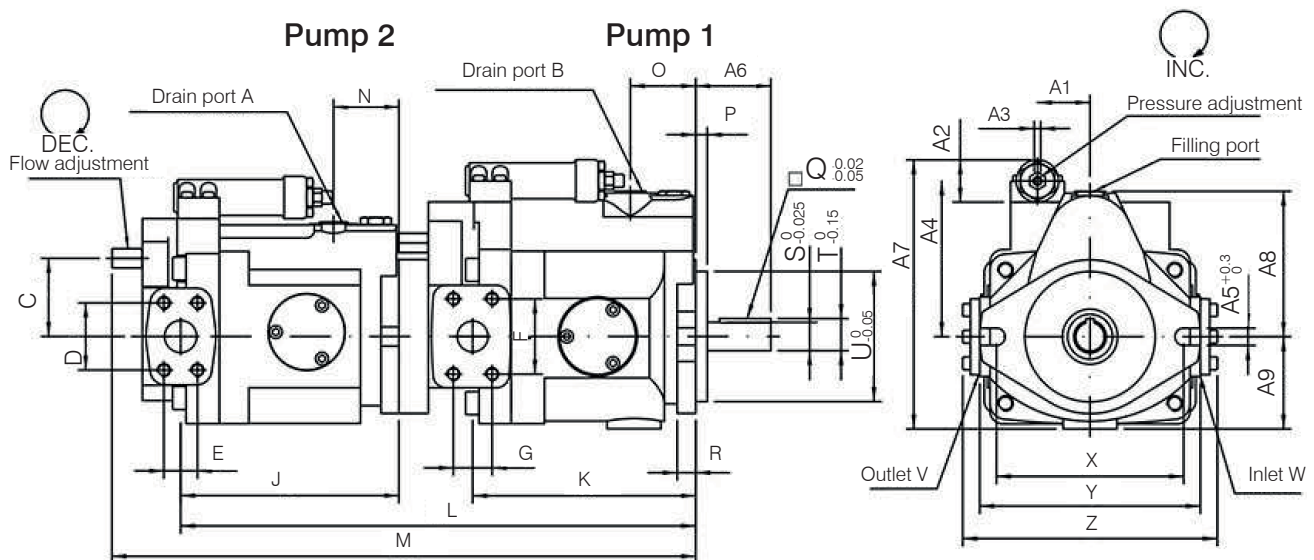
V50, V70 Inlet / Outlet



V Series

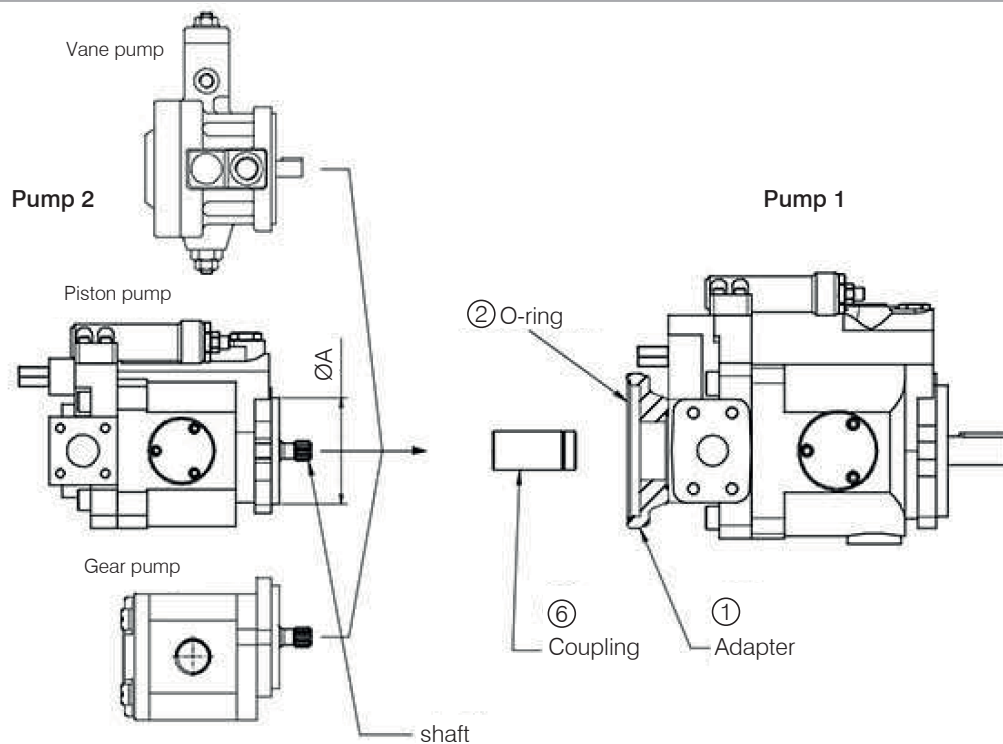
Pump combination

Pump 1	V15 (V18)	V23 (V25)	V23 (V25)	V38 (V42)	V38 (V42)	V38 (V42)	V50 (V70)	V50 (V70)	V50 (V70)
Pump 2	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	332	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
Q	4.7x32	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
A1	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	113.5	113.5	113.5
A9	60	68	68	72	72	72	100	100	100



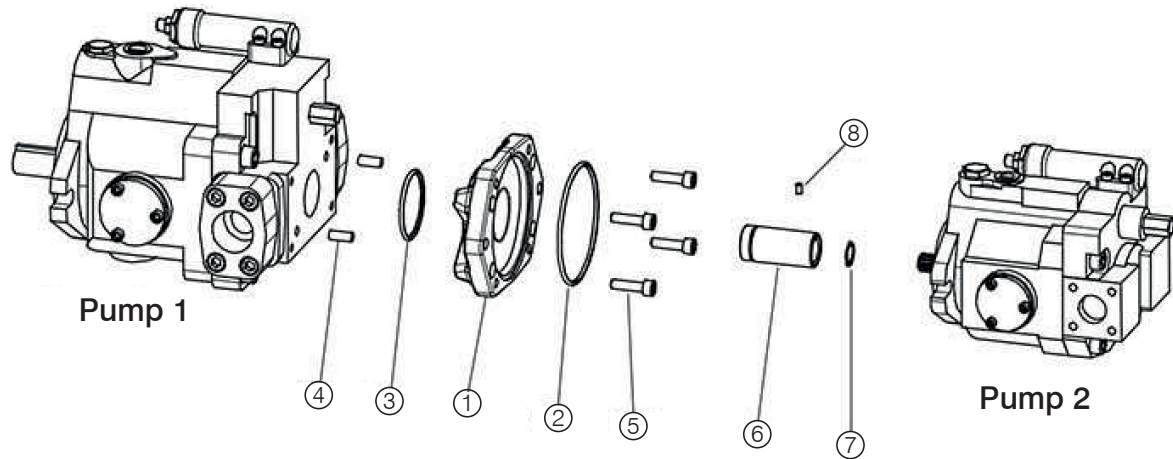
V Series

Pump combination - coupling



No	Pump 1		Pump 2		⑥ Coupling
	Model	Model	ØA	Shaft	
15-1	V15,V18	Piston pump: V15~18, AR16~22 Gear pump: HGP-3A	SAE Ø 82.55	9T 16/32 DP	COUP-V15+15
23-1	V23,V25	Piston pump: V15~18, AR16~22	SAE A Ø 82.559T Vane pump Ø95.02	9T 16/32 DP	COUP-V23-1
23-3A		Gear pump: HGP-3A		13T 16/32 DP	COUP-V23-3
23-5		Gear pump: HGP-3A		Cylindric Ø19.05*4.76	COUP-V23-5
23-6		Piston pump: V23~25 Vane pump: T6C		Cylindric Ø22.22*6.35 Cylindric Ø22.22*4.76	COUP-V23-6
23-3B	V38,V42	Vane pump: T6C Gear pump: HGP-3A Piston pump: F30,F40,PV2R1	SAE Ø 82.55 Vane Pump Ø95.02	13T 16/32 DP	COUP-V23-3
38-1				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 Vane pump: T6C Piston pump: PV-16~023 Vane pump: PV2R2	SAE B Ø 101.6 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 Ø 82.55 Vane pump Ø95.02	9T 16/32 DP	COUP-V70-1
70-3A				13T 16/32 DP	COUP-V70-3
70-5				Cylindric Ø19.05*4.76	COUP-V70-5
70-6		Piston pump: V23~25, V38~V42 Vane pump: T6C Piston pump: PV-16~023 Vane pump: PV2R2	SAE B Ø 101.6 Metric Ø100	Cylindric Ø22.22*6.35 Cylindric Ø22.22*4.76	COUP-V70-6
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

ØA	① Adapter	② O-ring
SAE Ø 82.55	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

V Series
Pump combination -coupling


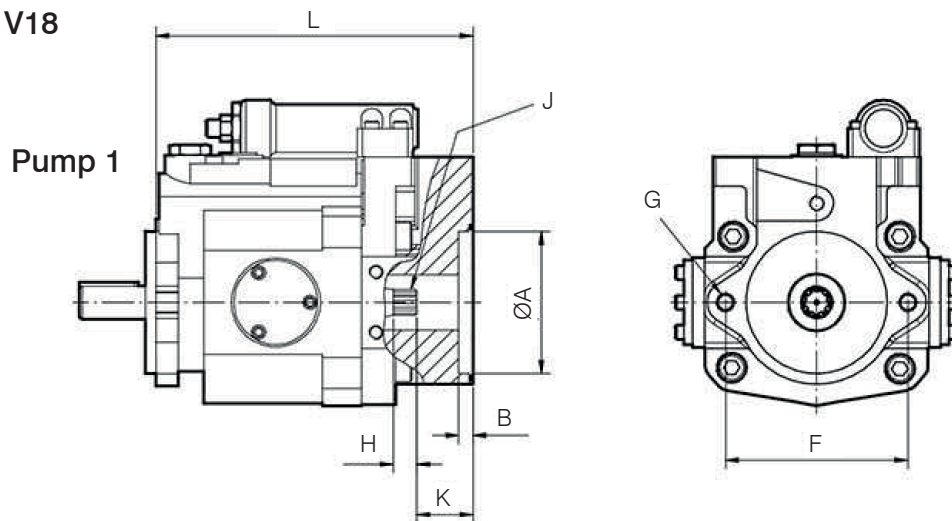
⑥ Coupling	⑦ Snap ring	Depending 2nd pump to use snap ring or not (●:with snap ring)			⑧ Screw
		vane pump: V15~18, AR16	Gear pump: HGP-3A	Vane pump: F30, F40	
COUP-V15+15	R13	●	●	●	--
COUP-V23-1	R13	●	●		--
COUP-V23-3	R20	●			--
COUP-V23-5	R20			●	M5x8
COUP-V23-6	--				M5x8
COUP-V38-1	R13	●	●		--
COUP-V38-3	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

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

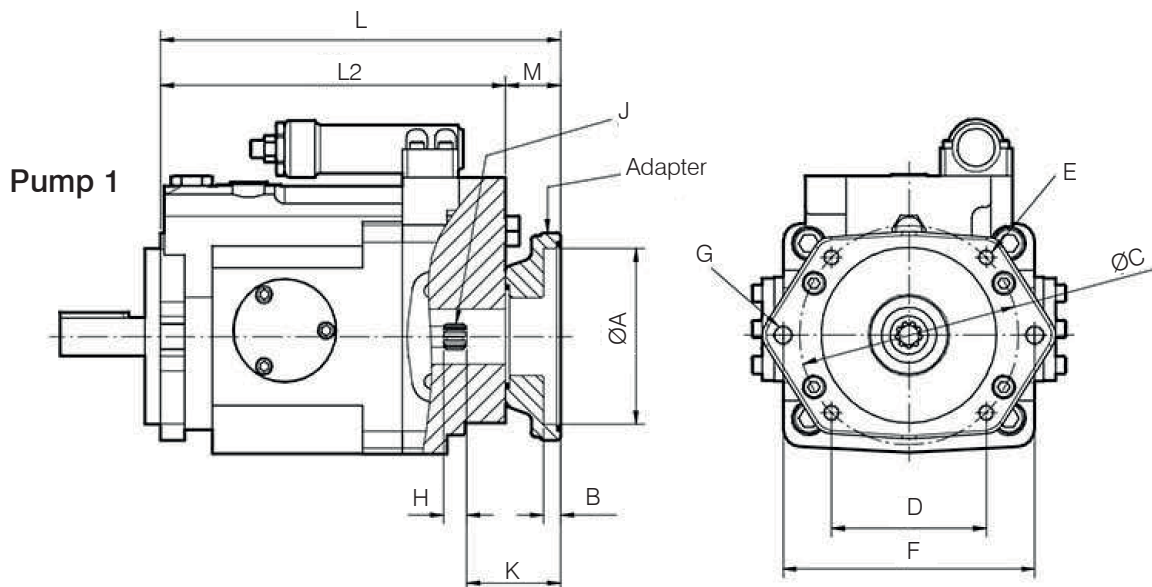
V Series

Pump combination - thru drive dimension

V15, V18



V23~V70



Model	2nd Pump	ØA	B	ØC	D	E	F	G
V15,V18	SAE A	Ø82.55	--	8.35	--	--	106.3	M10xP1.5
	SAE A	Ø82.55	Ø127	8.35	89.8	M10xP1.5	106.3	M10xP1.5
V23~V70	SAE A	Ø101.6	Ø127	10	89.8	M10xP1.5	146	M12xP1.75
	Metric	Ø100	Ø125	10	88.39	M10xP1.5	140	M12xP1.75
	Vane Pump	Ø95.2	--	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	64.4	22	13T 16/32 DP	32	332	300		

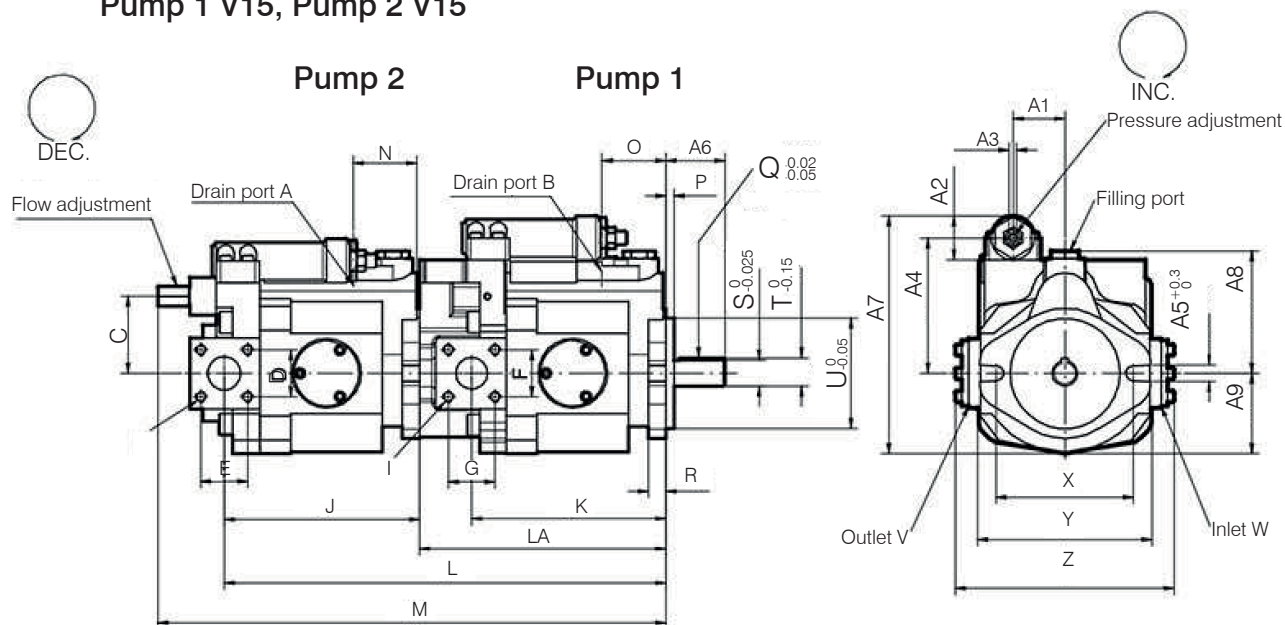
WINMAN product specifications are subject to change with prior notice.

V Series

Pump combination - thru drive dimension

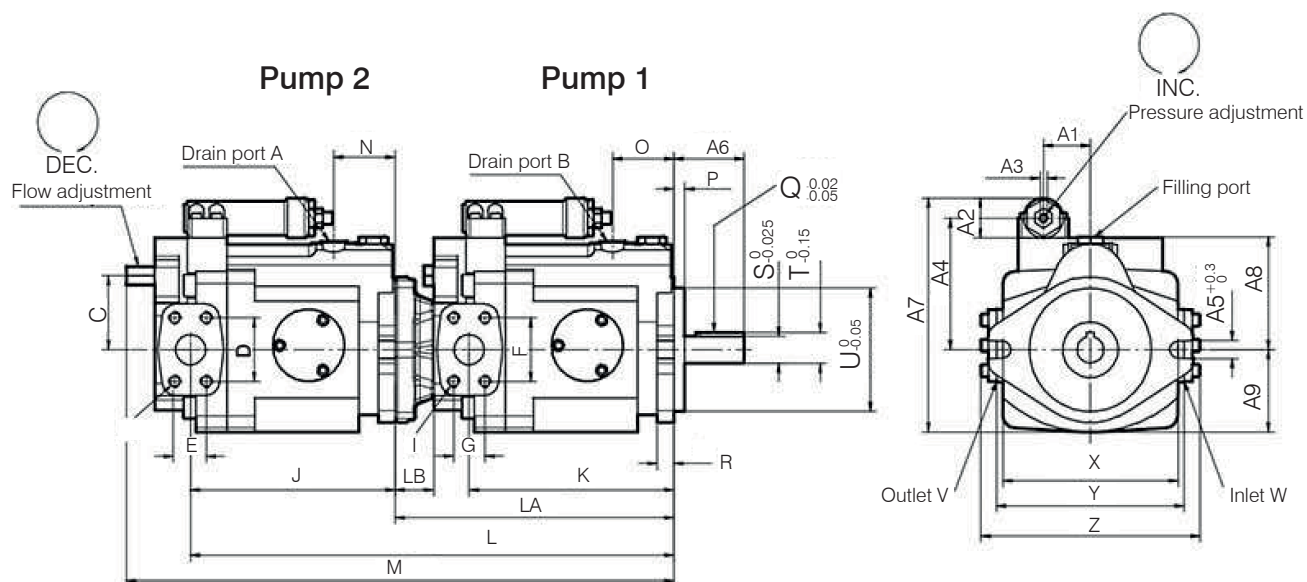
View A

Pump 1 V15, Pump 2 V15



View B

Pump 1 V23~V70, Pump 2 V15~V38



V Series

Pump combination - thru drive dimension

Pump 1	Pump 2	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
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

Pump 1	Pump 2	J	K	L	LA	LB	M	N	O	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	6.35x32	14	Ø22.22	25.08	Ø101.6
V23,V25	V23,V25	170	170	407	237	32	455	51	51	9	6.35x32	14	Ø22.22	25.08	Ø101.6
V38,V42	V15,V18	147	179	388	241	32	438	48	51	9	6.35x32	14.5	Ø22.22	25.08	Ø101.6
V38,V42	V23,V25	170	179	411	241	32	464	51	51	9	6.35x32	14.5	Ø22.22	25.08	Ø101.6
V38,V42	V38,V42	179	179	420	241	32	473	51	51	9	6.35x32	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

Pump 1	Pump 2	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	113.5	100
V50,V70	V23,V25	Ø38	Ø38	181	208	261.5	74	40	8	119	18	57	233.5	113.5	100
V50,V70	V38,V42	Ø38	Ø38	181	208	261.5	74	40	8	119	18	57	233.5	113.5	100