

Oilgear

HYDRAULIC VANE PUMP



1. Hydraulic Fluid

- Use hydraulic fluid with the viscosity of ISO VG46-68 (with viscosity index of more than 70kgf/cm² anti-wear hydraulic fluid of ISO VG46-68 is recommendable.)
- Consult the manufacturer in case noninflammable fluid (phosphate-ester, water-glycol, fatty ester, water in oil emulsion, etc) is used.
- Use clean fluid without foreign bodies or water. Whitened fluid indicates aeration and brown fluid deterioration.

2. Viscosity and Temperature of Fluid

- Viscosity: 20-500CST
- Temperature: 0°C-60°C

3. Suction Pressure

- Suction pressure must be within $-0.3 \sim +0.3\text{kgf/cm}^2$
- (Specify high suction pressure shaft seal if pump is used at suction pressure higher than $+0.3\text{kgf/cm}^2$)

4. Filtration

- Fit a filter of 150 mesh or above in suction line. A $20\mu\text{m}$ in-line filter in delivery line or a magnet filter will extend pump life.

5. Installation and Alignment

- Mount pump on a base with sufficient rigidity.
- Pump must be so mounted that the suction port may be on either side or upper position.
- Eccentricity between shafts of pump and motor must be less than 0.05mm by using flexible coupling such as chain coupling. Avoid radial force on pump shaft.
- Coupling must go in and out on pump shaft smoothly.

6. Piping

- Use piping flanges.
- Piping size of suction line must be chosen to allow fluid flow of less than 1.5m/sec and suction pressure less than -0.3kgf/cm^2 piping must be as short as possible.
- Avoid push-or pull-force when using steel pipe.

7. Initial Start-Up

- For good lubrication between moving and stationary elements, pour fluid into the pump before use.
- To purge air in pump body, be sure to operate pump by an inching start (on and off) at unload.

8. Rotating Direction

- Clockwise (seen from shaft end) is standard. Counter clockwise optional.
- Check rotation direction by a moment start-up of motor.

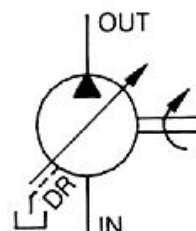
9. Maximum Pressure

- Operation at maximum pressure must not exceed 1/3 of one cycle and 20 seconds.

10. Consult the manufacturer if disassembly is required.



SYMBOL



FEATURES

- VPVC series offer design engineer another opportunity to design circuits with high efficiency.
- Built-in compensator control automatically adjusts pump delivery to system volume requirements at selected pressures. System relief valve is not needed. Horsepower waste is reduced and heat generated is much less than fixed displacement pumps.
- Volume control adjustment is standard which permits user to vary maximum pump output.

HOW TO ORDER

VPVC - F12 - A1 - 20

DESIGN NUMBER

PRESSURE RANGE

- 1: 8-18/KGF/CM² (120-250PSI)
- 2: 14-35KGF/CM² (200-500PSI)
- 3: 30-70KGF/CM² (430-1000PSI)

SHARP CUT-OFF TYPE

DISPLACEMENT: (NOMINAL NO-LOAD DELIVERY AT 1800RPM)

- 12: 12LPM (3.2GPM)
- 20: 20LPM (5.3GPM)

F: FLANGE MOUNTING TYPE

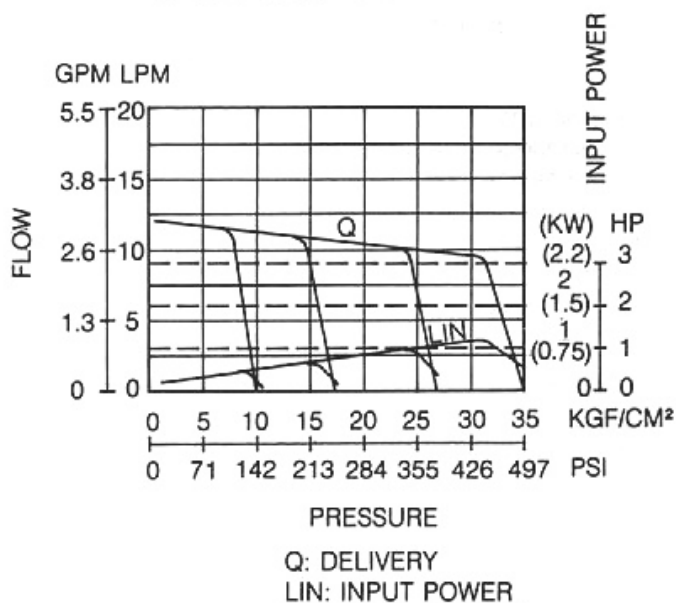
VARIABLE DISPLACEMENT VANE PUMP

SPECIFICATIONS

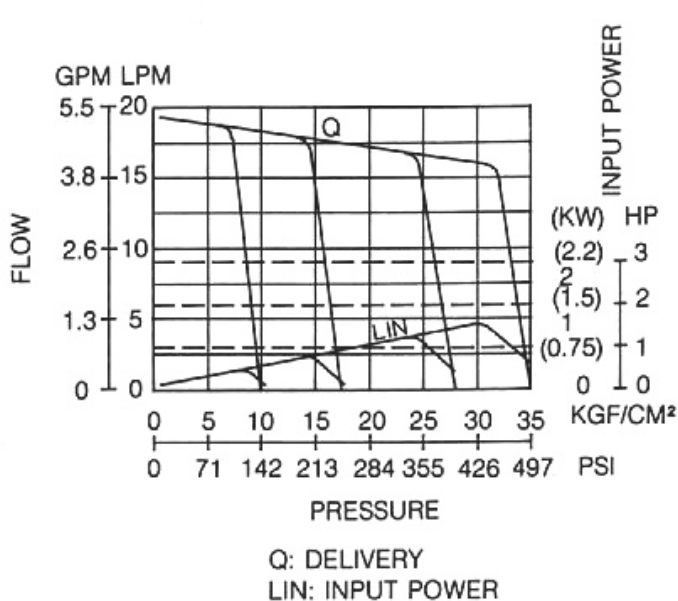
MODEL	DELIVERY AT UNLOADING LPM (GPM)		PRESSURE ADJ. RANGE KGF/CM ² (PSI)	SPEED OF ROTATION (RPM)		MAX. SET PRESSURE KGF/CM ² (PSI)	WEIGHT kgs (lbs)
	1800 RPM	1500 RPM		MAX.	MIN.		
VPVC-F12-A1-02	12 (3.17)	10 (2.64)	10 - 20 (142 - 284)	1800	800	20 (284)	5 (11)
VPVC-F12-A2-02			15 - 35 (213 - 498)			35 (498)	
VPVC-F12-A3-02			50 - 70 (711 - 995)			70 (995)	
VPVC-F20-A1-02	20 (5.28)	17 (4.49)	10 - 20 (142 - 284)	1800	800	20 (284)	5 (11)
VPVC-F20-A2-02			15' - 35 (213 - 498)			35 (498)	
VPVC-F20-A3-02			50 - 70 (711 - 995)			70 (995)	

PERFORMANCE CURVES

VPVC-F12-A*-02



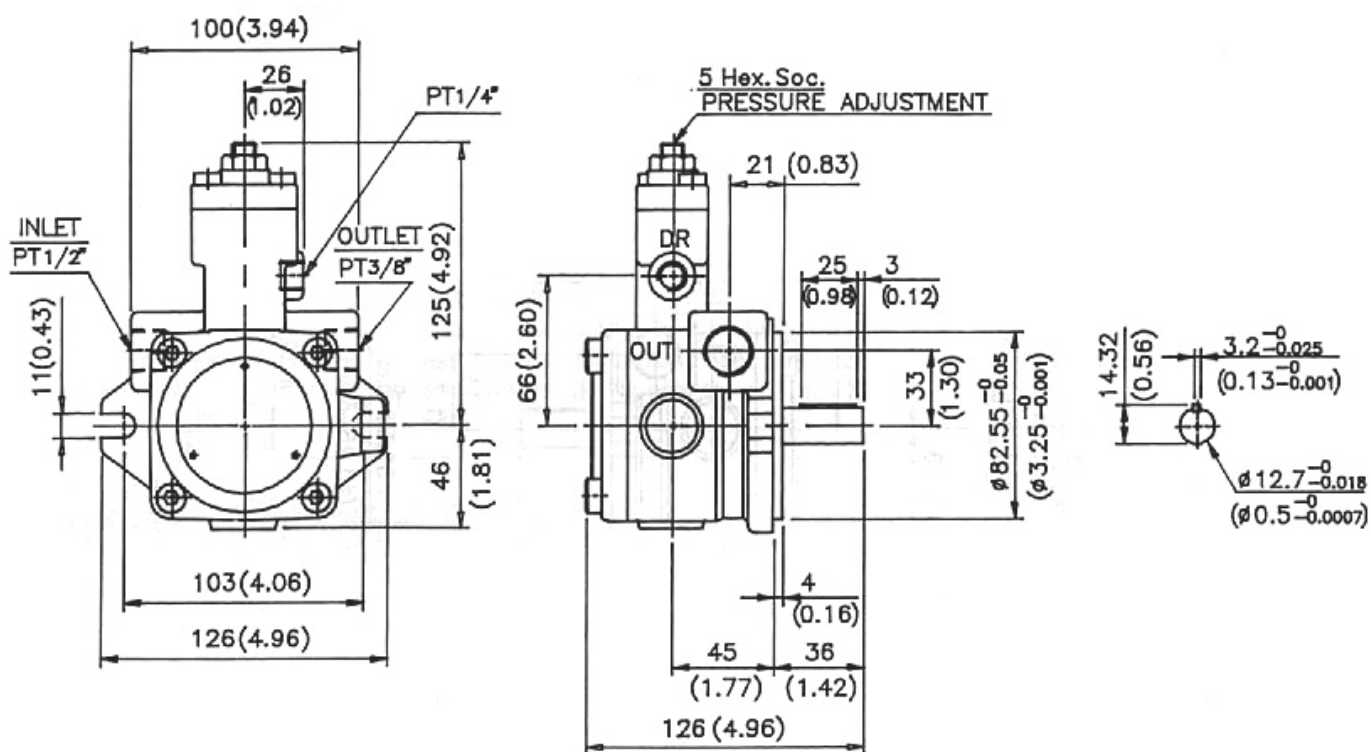
VPVC-F20-A*-02



INSTALLATION DIMENSIONS

UNIT: mm (inch)

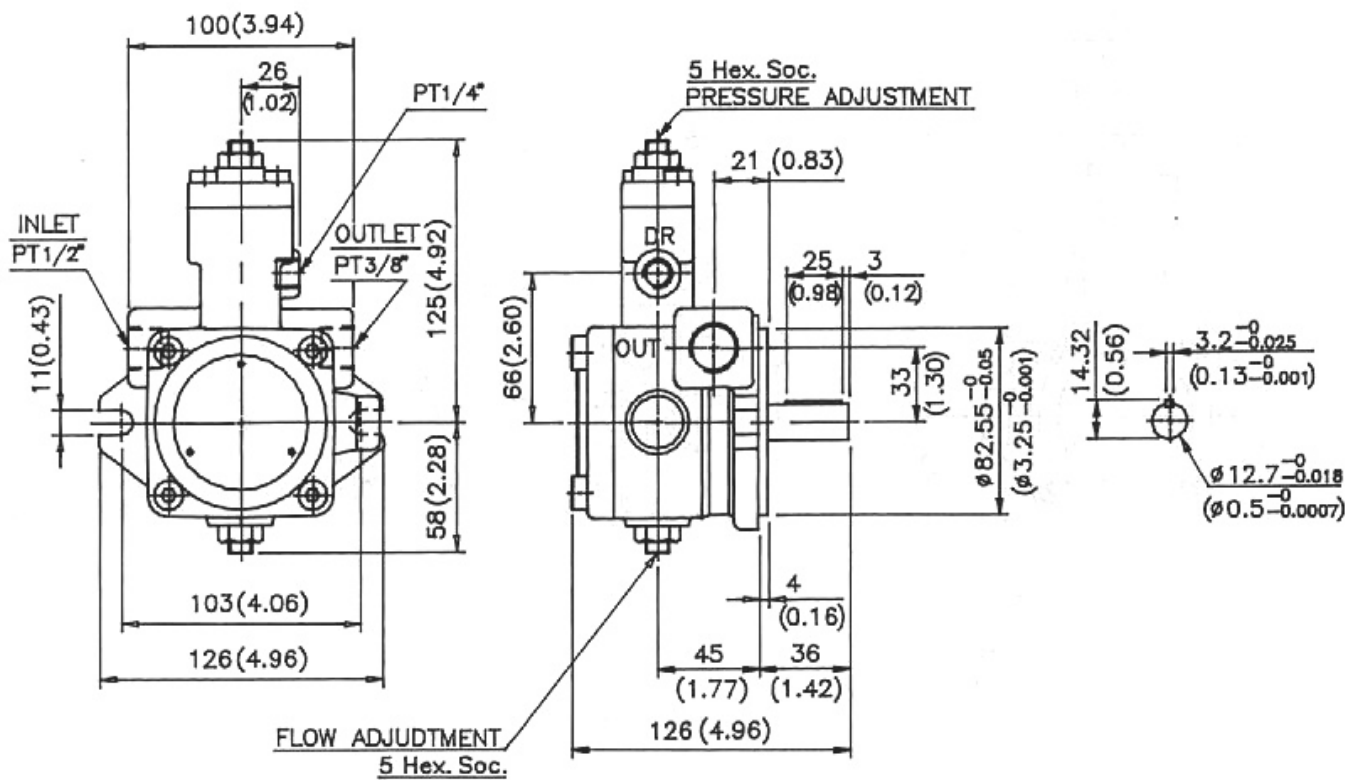
VPVC-F12-A※-02

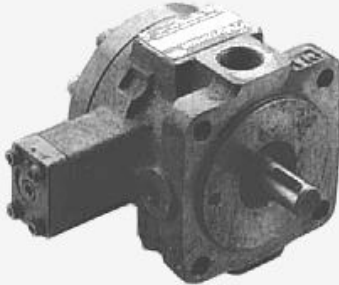


INSTALLATION DIMENSIONS

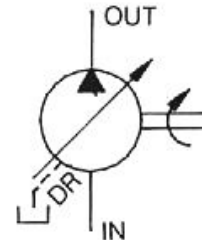
UNIT: mm (inch)

VPVC-F20-A※-02





SYMBOL



FEATURES

- VPVC series offer design engineer another opportunity to design circuits with high efficiency.
- Built-in compensator control automatically adjusts pump delivery to system volume requirements at selected pressures. System relief valve is not needed. Horsepower waste is reduced and heat generated is much less than fixed displacement pumps.
- Volume control adjustment is standard which permits user to vary maximum pump output.

HOW TO ORDER

VPVC – F30 – A1 – 02

DESIGN NUMBER

PRESSURE RANGE :

1: 8-18/KGF/CM² (120-250PSI)

2: 14-35KGF/CM² (200-500PSI)

3: 30-70KGF/CM² (430-1000PSI)

SHARP CUT-OFF TYPE

DISPLACEMENT: (NOMINAL NO-LOAD DELIVERY AT 1800RPM)

30: 30LPM (8.0GPM)

40: 40LPM (10.5GPM)

F: FLANGE MOUNTING TYPE

VARIABLE DISPLACEMENT VANE PUMP

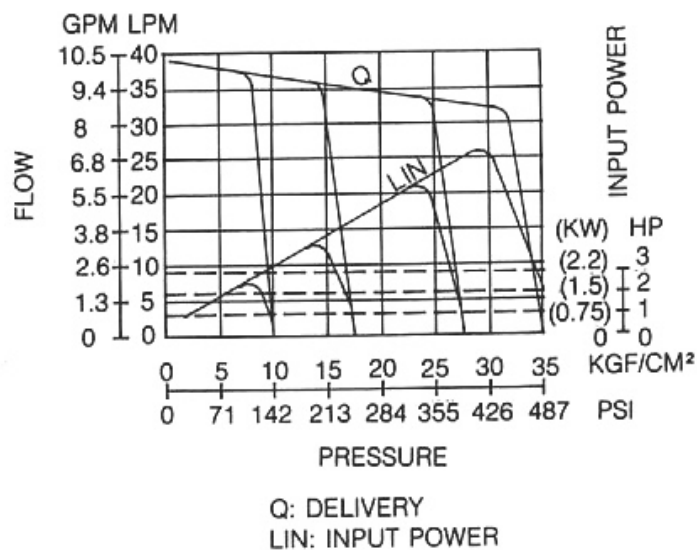
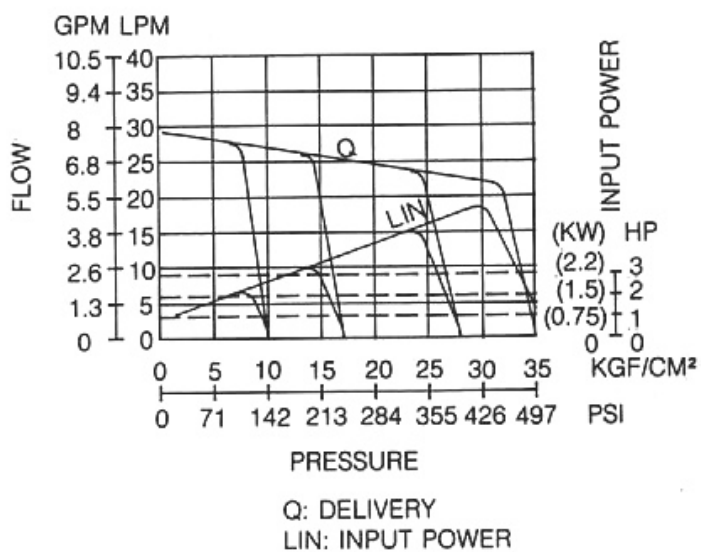
SPECIFICATIONS

MODEL	DELIVERY AT UNLOADING LPM(GPM)		PRESSURE ADJ. RANGE KGF/CM ² (PSI)	SPEED OF ROTATION(RPM)		MAX. SET PRESSURE KGF/CM ² (PSI)	WEIGHT kgs (lbs)
	1800 RPM	1500 RPM		MAX.	MIN.		
VPVC-F30-A1-02	30 (7.93)	25 (6.6)	10 - 20 (142 - 284)	1800	800	20 (284)	9 (20)
VPVC-F30-A2-02			15 - 35 (213 - 498)			35 (498)	
VPVC-F30-A3-02			50 - 70 (711 - 995)			70 (995)	
VPVC-F40-A1-02	40 (10.57)	35 (9.25)	10 - 20 (142 - 284)	1800	800	20 (284)	9 (20)
VPVC-F40-A2-02			15 - 35 (213 - 498)			35 (498)	
VPVC-F40-A3-02			50 - 70 (711 - 995)			70 (995)	

PERFORMANCE CURVES

VPVC-F30-A※-02

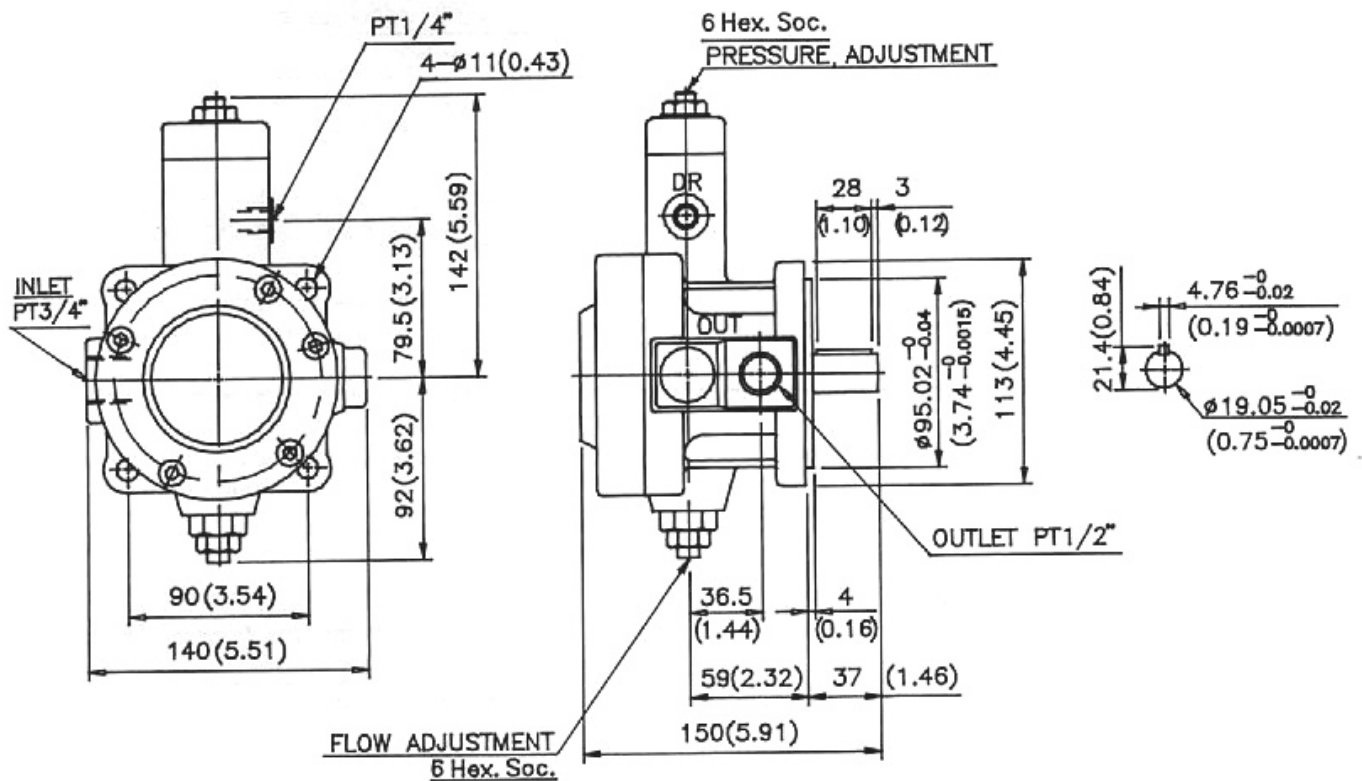
VPVC-F40-A※-02

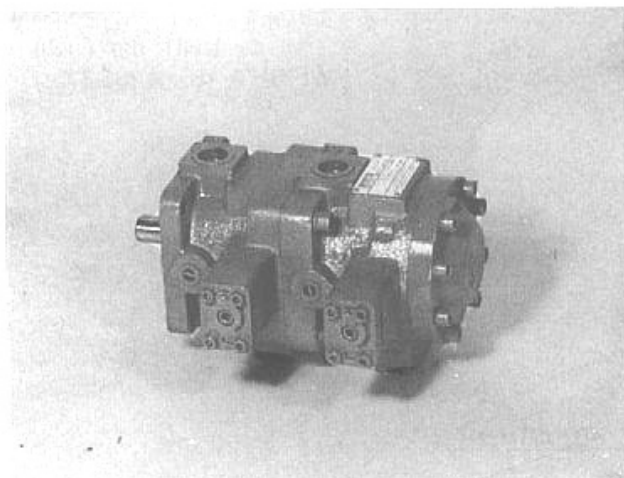


INSTALLATION DIMENSIONS

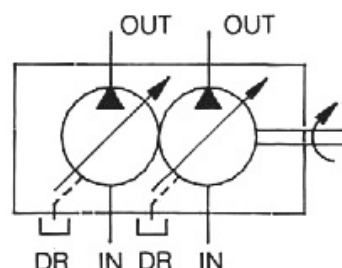
UNIT: mm (inch)

VPVC-F30/F40-A※-02





SYMBOL



FEATURES

- Two VPVC variable vane pumps built into one single body, with a common driving shaft, enable design engineer to use one single electric motor driving two independent pumps to produce two branches of oil flow with separately adjustable pressures.
- Pumps perform exactly same as single pump. For performance curves please refer to single VPVC pump (SEE PAGE 8).
- Direction of rotation is clockwise, as viewed from shaft end.
- The pump working at higher pressure should always be the one closer to the driving shaft so to ensure the double pumps with prolonged operating life.

HOW TO ORDER

VPVCC - F30 30 - A1A1 - 02

DESIGN NUMBER

PRESSURE RANGE

1: 8-18/KGF/CM² (120-250PSI)

2: 14-35KGF/CM² (200-500PSI)

3: 30-70KGF/CM² (430-1000PSI)

(AS GENERAL RULE LOW PRESSURE PUMP IS PLACED AT THE COVER SIDE AND HIGH PRESSURE PUMP AT THE SHAFT SIDE).

SHARP CUT-OFF TYPE

DISPLACEMENT: (NOMINAL NO-LOAD DELIVERY AT 1800RPM)

30LPM (8GPM)

40LPM (10.5GPM)

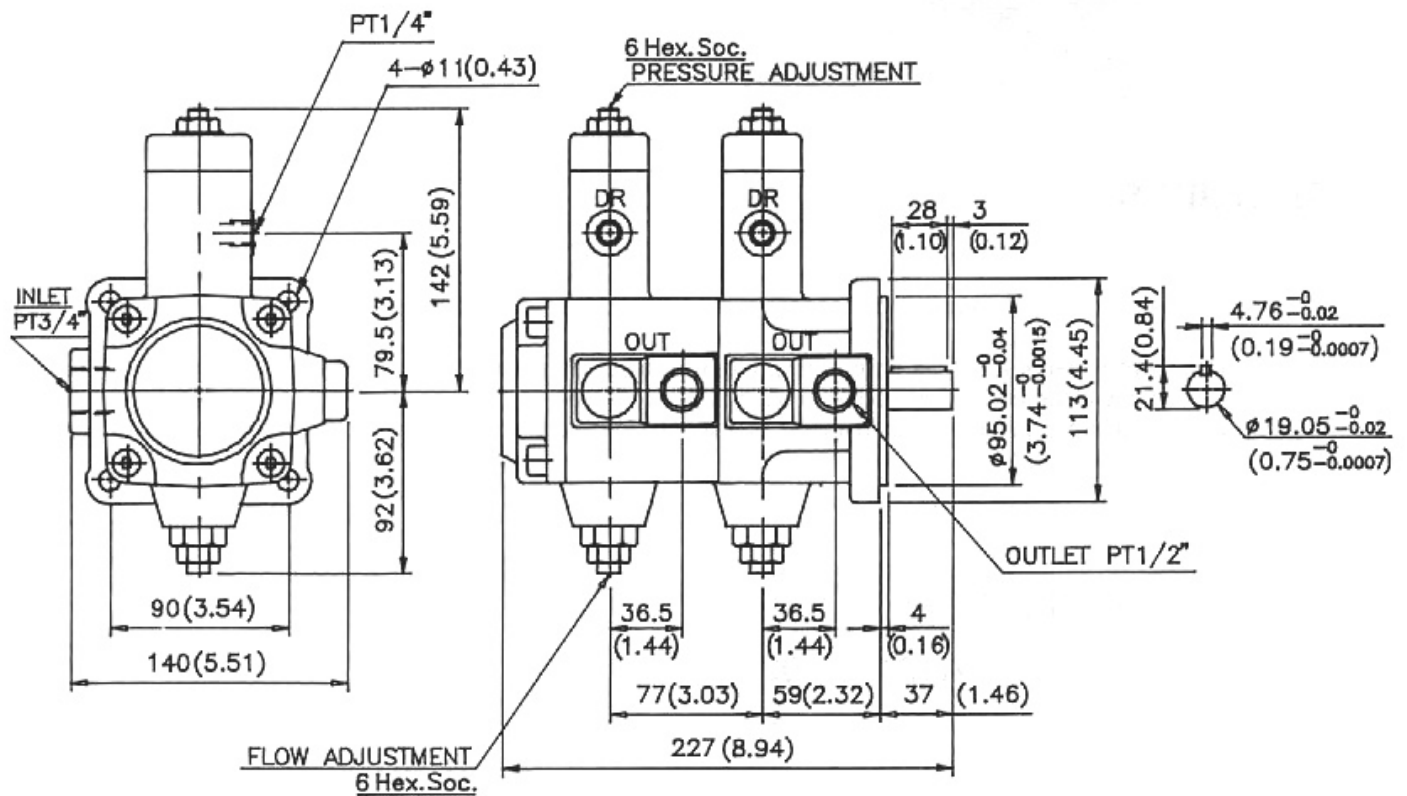
FLANGE MOUNTING TYPE

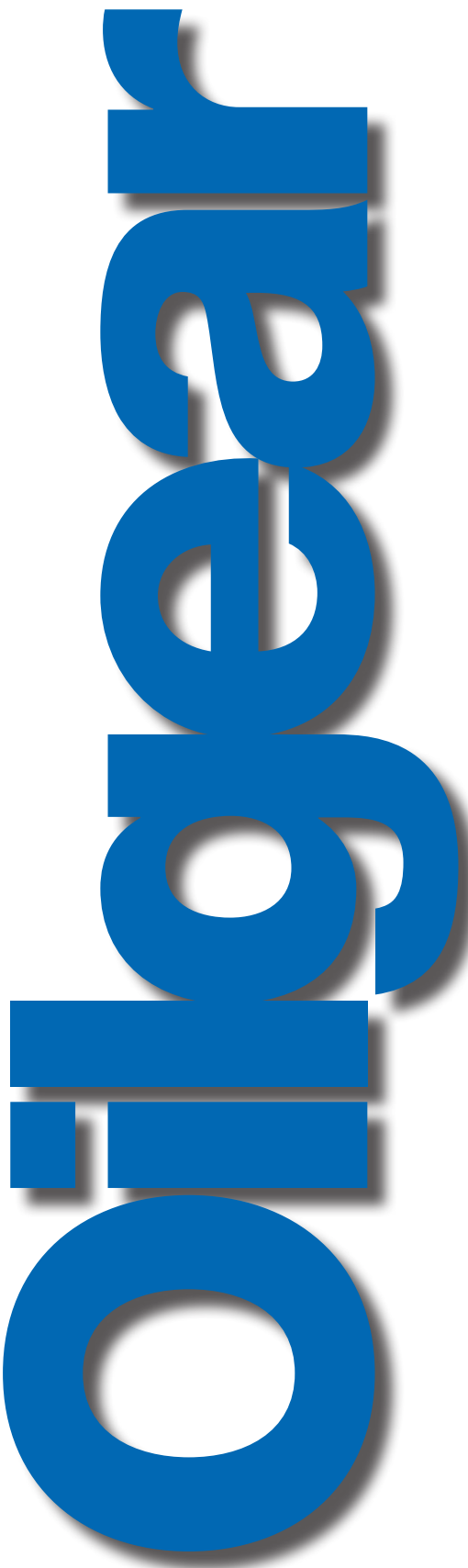
DOUBLE VARIABLE VANE PUMP

INSTALLATION DIMENSIONS

UNIT: mm (inch)
WEIGHT: 16 kgs (35.3 lbs)

VPVCC-F * * * * -A * A * -02





Sede Mundial

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Para obter informações adicionais sobre seu aplicativo ou sobre os produtos referenciados neste manual, entre em contato com a Oilgear mais próxima. Acesse o website da Oilgear para obter uma relação completa de nossos endereços.