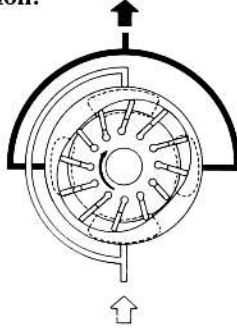


# Fixed displacement vane pumps

As the rotor with vane plates enclosed in the double eccentric cam ring rotates, the vane plates closely contact with the cam ring inside on their edge to form the chamber of transportation of fluid oil and deliver it from IN port to OUT port for pumping operation.



## • Features

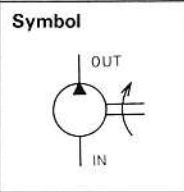
1. Its pressure-balancing construction reduces load onto the bearings, which assures long service life.
2. Simple construction eases the maintenance.
3. Its special cam ring can handle the fire retardant hydraulic fluid.
4. Easy cartridge replacement.

## Series HVP-F ※ 1



## • Model coding

HVP - F C 1 - L 39 R - A - (G)



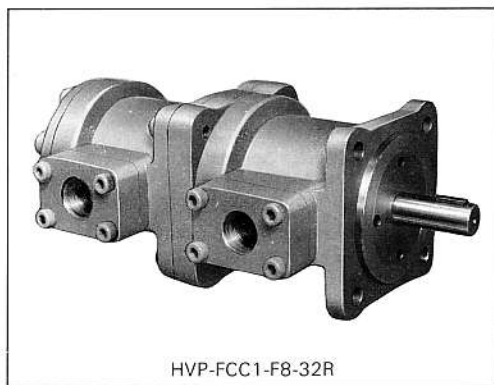
- Design No.
- Vane pump
- Fixed displacement
- Series designation
- Rated pressure 7MPa 1,000 psi
- Mounting L: Foot type  
F: Flange type
- Displacement (cm<sup>3</sup>/rev)
- Rotation (viewed from shaft end)  
R: Clockwise (standard)  
L: Anticlockwise
- Hydraulic fluid  
No code: Petroleum fluid  
G: Water-glycolic fluid

## • Specifications

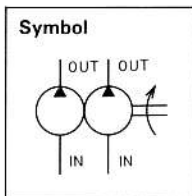
(FA1 & FE1: at 1,200min<sup>-1</sup> FC1: at 1,800min<sup>-1</sup>, oil viscosity: 20mm<sup>2</sup>/s)

Model	Displacement cm <sup>3</sup> /rev in <sup>3</sup> /rev	Pressure		Delivery						Input			Speed min <sup>-1</sup>				
		Rated MPa psi	Max. MPa psi	0.5MPa 71psi ℓ /min gpm	3.5MPa 500psi ℓ /min gpm	7MPa 1,000psi ℓ /min gpm	0.5MPa 71psi ℓ /min gpm	3.5MPa 500psi ℓ /min gpm	7MPa 1,000psi ℓ /min gpm	Rate	Max.	Min.					
HVF-FA1-※ 2R-A	2.3 0.14	7 1,000	7 1,000	2.8 0.73	2.2 0.58	1.6 0.42	0.12 0.16	0.37 0.49	0.67 0.89	1,800	1,800	900					
HVP-FA1-※ 5R-A	4.3 0.26			5.1 1.35	4.4 1.16	3.6 0.95	0.14 0.18	0.51 0.68	0.87 1.16								
HVF-FA1-※ 8R-A	7.3 0.44			8.6 2.27	7.8 2.06	6.9 1.82	0.16 0.21	0.71 0.95	1.36 1.82								
HVF-FA1-※ 11R-A	10.9 0.66			12.7 3.35	11.5 3.03	10.2 2.69	0.21 0.28	1.0 1.30	1.91 2.56								
HVP-FC1-※ 5R-A	5.0 0.30	7 1,000	7 1,000	8.5 2.24	7.8 2.06	6.9 1.82	0.3 0.40	1.0 1.34	1.9 2.54	1,800	1,800	600					
HVP-FC1-※ 8R-A	7.6 0.46			13.1 3.46	12.1 3.19	11.0 2.90	0.3 0.40	1.3 1.74	2.3 3.08								
HVP-FC1-※ 11R-A	11.2 0.68			19.4 5.12	18.2 4.80	16.7 4.41	0.4 0.53	1.8 2.41	3.3 4.42								
HVP-FC1-※ 14R-A	14.3 0.87			24.8 6.55	23.6 6.23	22.3 5.89	0.4 0.53	2.0 2.68	3.8 5.09								
HVP-FC1-※ 17R-A	17.6 1.07			30.5 8.05	29.1 7.68	27.4 7.23	0.6 0.80	2.4 3.21	4.5 6.03								
HVP-FC1-※ 21R-A	20.9 1.27			36.4 9.61	35.2 9.29	33.7 8.90	0.6 0.80	2.8 3.75	5.3 7.10								
HVP-FC1-※ 26R-A	26.5 1.61			46.2 12.20	44.8 11.38	43.1 11.38	0.8 1.07	3.4 4.55	6.5 8.71								
HVP-FC1-※ 32R-A	32.1 1.95			56.3 14.87	54.5 14.39	52.3 13.81	0.9 1.20	4.1 5.49	8.0 10.72								
HVP-FC1-※ 39R-A	36.9 2.25			64.8 17.12	62.7 16.56	60.1 15.87	1.1 1.47	4.9 6.57	9.3 12.47								
HVP-FE1-※ 50R-A	49.2 3.0			7 1,000	7 1,000	57.4 15.16	54.5 14.39	51.1 13.5	1.2 1.60				4.5 7.37	8.4 14.34	1,200	1,800	600
HVP-FE1-※ 60R-A	63.5 3.87					73.9 19.52	70.9 18.73	67.4 17.80	1.5 2.01				5.6 9.11	10.5 17.56			
HVP-FE1-※ 75R-A	77.0 4.69					89.6 23.67	86.4 22.82	82.7 21.84	1.9 2.54				6.7 10.32	12.7 17.03			
HVP-FE1-※ 85R-A	83.2 5.07	96.8 25.57	93.3 24.64			89.3 23.59	2.0 2.68	7.3 11.66	13.9 18.63								
HVP-FE1-※ 95R-A	95.5 5.82	111.2 29.37	107.2 28.32			102.5 27.08	2.2 2.95	8.2 13.54	15.6 20.91								
HVP-FE1-※ 108R-A	103.7 6.32	120.6 31.86	116.8 30.85			112.4 29.69	2.4 3.21	8.8 15.01	16.8 22.52								
HVP-FE1-※ 120R-A	119.1 7.26	138.4 36.56	134.1 35.42			129.1 35.42	2.7 3.62	10.1 17.03	19.2 25.74								

# Series HVP-F ※※



HVP-FCC1-F8-32R

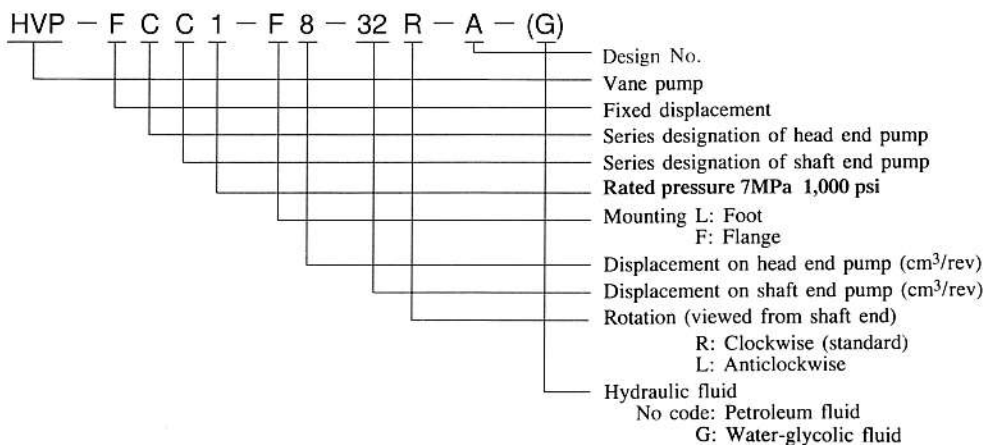


## ● Feature

Composed of two single pumps(HVP-FC1 or HVP-FE1 series) assembled in tandem driven by a single motor, this double pumps serves to operate actuators in two independent circuits or combine the discharge from two pumps to operate a single actuator

The pump with the larger displacement is normally assembled on the shaft end side.

## ● Model coding



## ● Specifications

Model		Displacement (*1)				Pressure		Speed min <sup>-1</sup>						
		Min.		Max.		Rated MPa psi	Max. MPa psi	Rated	Max.	Min.				
Foot type	Flange type	cm <sup>3</sup> /rev	in <sup>3</sup> /rev	cm <sup>3</sup> /rev	in <sup>3</sup> /rev						MPa psi	MPa psi		
HVP-FCC1-L※-※R-A	HVP-FCC1-F※-※R-A	5 5	0.30 0.30	39 39	2.38 2.38	7 1,000	7 1,000	1,800	1,800	Min.				
HVP-FCE1-L※-※R-A	HVP-FCE1-F※-※R-A	5 50	0.30 3.05	39 120	2.38 7.32						1,200	1,500	1,800	1,500
HVP-FEE1-L※-※R-A	HVP-FEE1-F※-※R-A	50 50	3.05 3.05	120 120	7.32 7.32									

(Note) For the specifications, please refer to the relevant single pumps.

(\*1) The value in the upper side is the displacement of head end pump.

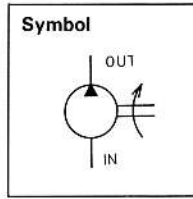
The value in the lower side is the displacement of shaft end pump.

# Series HVP-FC2



## • Model coding

HVP - F C 2 - F 35 R



- Vane pump
  - Fixed displacement
  - Series designation
  - Rated pressure  
2: 14MPa 2,000 psi
  - Mounting L: Foot type  
F: Flange type
  - Displacement (cm<sup>3</sup>/rev)
  - Rotation (viewed from shaft end)  
R: Clockwise (standard)  
L: Anticlockwise
- Standard model is also available for water glycolic fluid at max. speed 1,200 min<sup>-1</sup>

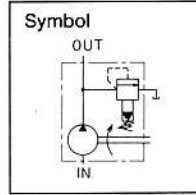
(1,200min<sup>-1</sup> oil viscosity: 20)

## • Specifications

Model	Displacement cm <sup>3</sup> /rev in <sup>3</sup> /rev		Pressure		Delivery						Input				Speed min <sup>-1</sup>						
			Rated MPa psi	Max. MPa psi	0.5MPa 71 psi		7MPa 1,000 psi		14MPa 2,000 psi		0.5MPa 71 psi		7MPa 1,000 psi		14MPa 2,000 psi		Rated	Max.	Min.		
					ℓ /min	gpm	ℓ /min	gpm	ℓ /min	gpm	kW	HP	kW	HP	kW	HP					
HVP-FC2-#17R-A	17	1.04	14	2,000	14	2,000	19.5	5.6	17.6	4.66	16.5	4.36	0.3	0.4	2.2	3.0	4.9	6.3	1,800	1,800	950
HVP-FC2-#25R-A	25	1.52					29.0	7.67	27.0	7.14	25.0	6.61	0.4	0.5	3.8	5.1	7.3	9.7			
HVP-FC2-#35R-A	35	2.13					40.5	10.7	39.0	10.3	35.0	9.26	0.5	0.5	5.0	6.7	9.8	13.1			
HVP-FC2-#50R-A	50	3.05					59.0	15.6	55.0	14.5	51.0	13.49	0.6	0.8	8.0	10.7	14.0	18.7			

# Series HVP-QA1

Equipped with relief valve to obtain constant delivery pressure by adjusting its pressure.

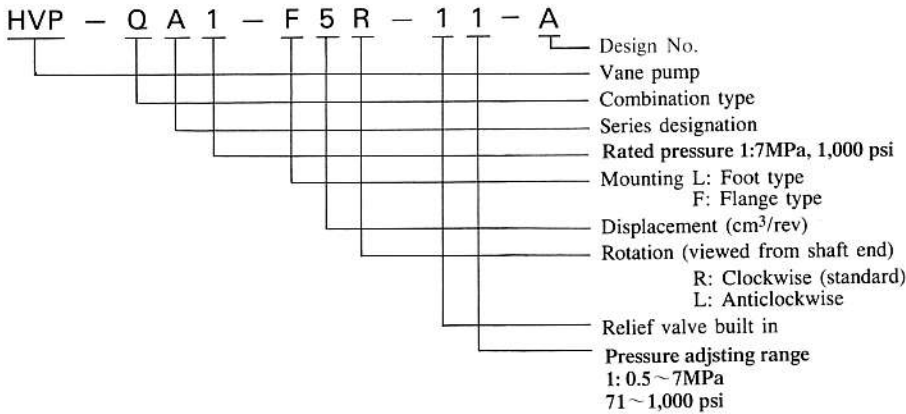


This combination vane pump is a vane pump of the HVP-FA1 series equipped with an internal relief valve. The discharging pressure can be adjusted by the relief valve.

### • Features

1. The pump and relief valve are united in a single unit for the compactness and saving piping work.
  2. Small size and light weight.
  3. Hydraulic balance ensures reducing axial load, longer life and greater economy.
  4. With its excellence in cavitation characteristics, the pump reduces the noise even when working at the high speed.
  5. Intake and discharge ports are independent, permitting to position each of them at every 90°.
- Rotation to the right (clockwise) is standard (viewed from the shaft end).
  - Placement of the intake port on the left and the discharge port on the right (as viewed from the shaft end) is standard.

### • Model coding



### • Specifications

Model		Displacement		Pressure		Speed min <sup>-1</sup>		
Foot type	Flange type	cm <sup>3</sup> /rev	in <sup>3</sup> /rev	Rated MPa psi	Max. MPa psi	Rated	Max.	Min.
HVP-QA1-L 2R-11-A	HVP-QAL-F 2R-11-A	2	0.12	7 1,000	7 1,000	1,800	1,800	900
HVP-QA1-L 5R-11-A	HVP-QA1-F 5R-11-A	5	0.30					
HVP-QA1-L 8R-11-A	HVP-QA1-F 8R-11-A	8	0.48					
HVP-QA1-L11R-11-A	HVP-QA1-F11R-11-A	11	0.66					

(Note) For the specifications of the pumps, please refer to the HVP-FA1 series.