

Feature

The 3H pump is a large capacity pump for high pressure. The max. flow rates and discharge pressures are 117L/min or less and 4 MPa or less, respectively. This pump are widely used in hydraulic, lubrication and cooling applications. By operation in low rotations, the pump can feed liquid in viscosity exceeding 10,000 mm²/s. There are 4 models and many combinations of the rotation direction, the seal, the relief valve and the temperature range including the VH version.



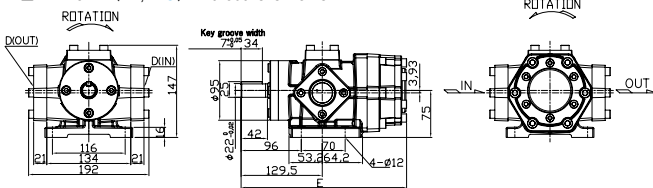
Model

FTP-	Model No.	Applications	Rotation direction	Seal material	Relief valve	Relief valve set pressure
	320	No mark: Standard	No mark: Clockwise	No mark: Standard (-5~80°C)	No mark: No valve	ex.
	330	WO: Bunker oil, Coolant Water	L: Counter clockwise	VF: Viton (R) for high temp. (120°C)	VB: With valve (Internal-return)	0.1: Set Pressure 0.1MPa (Spring No.1L)
	340			VH: Ultrahigh temp. (200°C)	VD: With valve (External-return)	0.5: Set Pressure 0.5MPa (Spring No.2L)
	350	PL: Liquid seal				1.0: Set Pressure 1.0MPa (Spring No.3L)
						2.0: Set Pressure 2.0MPa (Spring No.4L)

Model examples: FTP-330HL-VB0.1 (Counter-clockwise seen from the shaft end side) with relief valve (set pressure 0.1MPa)

Dimensional diagrams / Standard rotation (mm)

FTP-3**H (PL, WO) Without relief valve



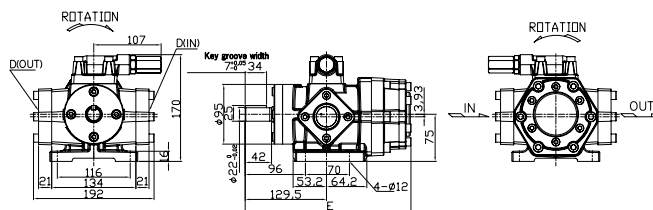
Standard and PL type

Model	D		E
	In	Out	
320H	Rc1	Rc1	264
330H	Rc1-1/4	Rc1	264
340H	Rc1-1/4	Rc1	264
350H	Rc1-1/4	Rc1	274

WO type

Model	D		E
	In	Out	
320H	Rc1-1/4	Rc1	264
330H	Rc1-1/4	Rc1	264
340H	Rc1-1/4	Rc1-1/4	264
350H	Rc1-1/4	Rc1-1/4	274

FTP-3**H-VB (PL, WO) With relief valve (Internal-return) (VB)



Spec

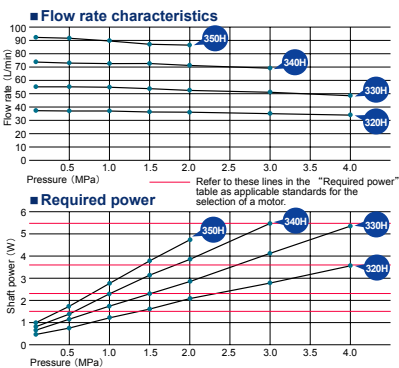
Model	Spec	Flow rate per. rev. (ml/rev)	Theoretical flow rate (L/min)		Max. discharge pressure (MPa)	Max. revolution (min ⁻¹)	Approx. weight Without valve/With valve (kg)
			1500min ⁻¹	1800min ⁻¹			
320H (VB)		26	39.0	46.8	4.0	1800	16.9/17.7
330H (VB)		39	58.5	70.2	4.0	1800	17.0/17.8
340H (VB)		52	78.0	93.6	3.0	1800	17.0/17.8
350H (VB)		65	97.5	117.0	2.0	1800	18.0/18.8

● The above max. discharge pressure and max. revolution are in combination with ISO-VG46 at 40°C. The rates vary depending on viscosity and temperature.

Performance

● Test conditions Oil: ISO-VG46 Oil temp.: 40°C

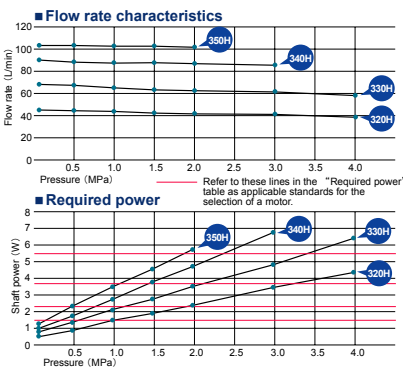
At 1,450 rotations (50Hz)



Model	Spec	Flow rate (L/min)								Required power (W)							
		Pressure (MPa)				Pressure (MPa)				Pressure (MPa)				Pressure (MPa)			
		0.1	0.5	1.0	1.5	2.0	3.0	4.0	0.1	0.5	1.0	1.5	2.0	3.0	4.0		
320H		37.2	36.9	36.5	36.2	35.7	34.9	33.5	30.45	0.78	1.20	1.60	2.02	2.83	3.64		
330H		55.5	55.1	54.3	53.2	52.2	50.6	49.0	0.64	1.12	1.72	2.31	2.91	4.10	5.30		
340H		74.6	73.9	73.0	72.1	71.2	69.5	-	0.80	1.45	2.25	3.10	3.90	5.50	-		
350H		92.1	91.2	90.0	88.8	87.6	-	1.00	1.77	2.78	3.79	4.74	-	-			

● The required power varies depending on viscosity, temp., etc.

At 1,750 rotations (60Hz)



Model	Spec	Flow rate (L/min)								Required power (W)							
		Pressure (MPa)				Pressure (MPa)				Pressure (MPa)				Pressure (MPa)			
		0.1	0.5	1.0	1.5	2.0	3.0	4.0	0.1	0.5	1.0	1.5	2.0	3.0	4.0		
320H		44.9	44.6	44.1	43.6	43.1	42.0	40.6	0.59	0.96	1.45	1.95	2.44	3.40	4.35		
330H		67.3	66.5	65.5	64.4	63.3	61.2	59.0	0.78	1.34	2.05	2.80	3.51	4.93	6.40		
340H		89.2	88.5	87.5	86.6	85.6	83.6	-	1.00	1.80	2.84	3.84	4.80	6.80	-		
350H		108.4	108.0	107.4	106.8	106.3	-	1.35	2.38	3.48	4.65	5.83	-	-			