

Feature

This 1A pump is a light, compact and inexpensive pump. The pump is ideal to transfer hydraulic oil and lubricant oil. The max. flow rate and discharge pressure are 8.1L/min and 0.5MPa, respectively. The max. temp. is as follows.

- The VF version (High Temp.) 120°C
- The WO version (Bunker oil, Coolant Water) 150°C
- The IME version (Dedicated Motor) 120°C

The set pressure of the VB (With relief valve) is usually 0.3MPa.

The rotation direction is counter-clockwise as seen from the end of the shaft.



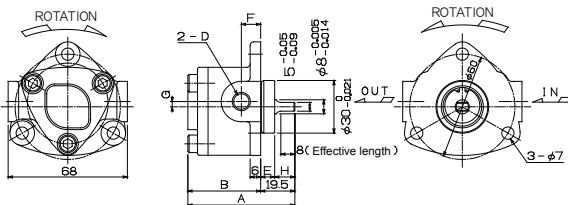
Model

FTP- <input type="checkbox"/> A	Model No.	Applications	Shaft end shape	Seal material	Relief valve
	10	No mark:Standard	No mark:Standard	No mark:Standard	No mark:No valve
	11	WO:Bunker oil,	(Plain shaft)	(-5~80°C)	VB:With valve
	12	Coolant water	M:Dedicated Motor	VF:Viton (R) for	
	13		(Shaft end with D cut)	high temp. (120°C)	

Model examples:  
 FTP-10AVF (High temp. ver.)  
 FTP-12A-VB (With relief valve)  
 FTP-13AM (Dedicated motor ver.)

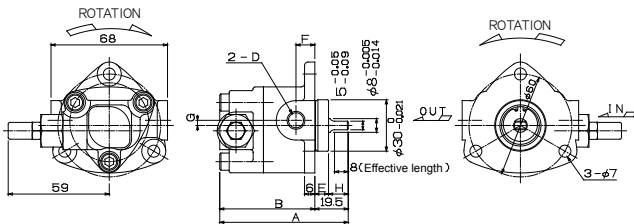
Dimensional diagrams (mm)

■ FTP-1\*A Without relief valve



Model	A	B	D	E	F	G	H
10A	55	35.5	Rc1/8	8	11	3	11.5
11A	55	35.5	Rc1/8	8	11	3	11.5
12A	61	41.5	Rc1/4	8	11	3	11.5
13A	76	56.5	Rc3/8	5	14	5.5	14.5
10A-VB	69	49.5	Rc1/8	8	11	3	11.5
11A-VB	69	49.5	Rc1/8	8	11	3	11.5
12A-VB	75	55.5	Rc1/4	8	11	3	11.5
13A-VB	90	70.5	Rc3/8	5	14	5.5	14.5

■ FTP-1\*A-VB With relief valve



Spec

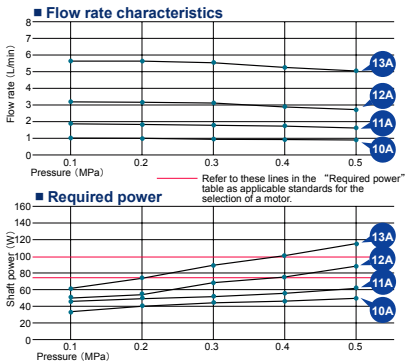
Model	Flow rate per. rev. (ml/rev)	Theoretical flow rate (L/min)		Max. discharge pressure (MPa)	Max. revolution (min <sup>-1</sup> )	Approx. weight Without valve/With valve (kg)
		1500min <sup>-1</sup>	1800min <sup>-1</sup>			
10A (VB)	0.8	1.2	1.4	0.5	3000	0.52/0.67
11A (VB)	1.5	2.2	2.7	0.5	2000	0.53/0.58
12A (VB)	2.5	3.7	4.5	0.5	1800	0.60/0.75
13A (VB)	4.5	6.7	8.1	0.5	1800	0.78/0.93

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

Performance

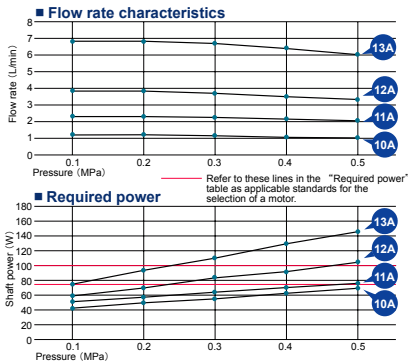
- Test conditions Oil:ISO-VG46 Oil temp.:40°C

At 1,450 rotations (50Hz)



Model	Flow rate (L/min)					Required power (W)				
	Pressure (MPa)					Pressure (MPa)				
	0.1	0.2	0.3	0.4	0.5	0.1	0.2	0.3	0.4	0.5
10A (VB)	1.01	1.01	0.98	0.93	0.89	37	41	45	49	52
11A (VB)	1.89	1.88	1.83	1.75	1.67	43	48	52	57	62
12A (VB)	3.17	3.16	3.08	2.93	2.79	50	59	68	77	88
13A (VB)	5.72	5.70	5.55	5.29	5.04	62	75	89	103	117

At 1,750 rotations (60Hz)



Model	Flow rate (L/min)					Required power (W)				
	Pressure (MPa)					Pressure (MPa)				
	0.1	0.2	0.3	0.4	0.5	0.1	0.2	0.3	0.4	0.5
10A (VB)	1.21	1.21	1.17	1.12	1.07	43	51	56	62	68
11A (VB)	2.28	2.27	2.21	2.11	2.01	51	57	63	70	76
12A (VB)	3.82	3.81	3.71	3.53	3.37	60	70	82	93	104
13A (VB)	6.90	6.88	6.70	6.38	6.08	77	94	110	128	146

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