TOP-1RA,2RA,3RD

Forward and reverse rotations are possible! *Trochoid Pumps* TOP-1RA, 2RA, 3RD

The positioning of the oil suction and discharge ports does not change regardless of whether the pump is revolving to the right or left. **The Trochoid pump uses a special loop ring for the Trochoid rotor and an additional 180°rotation in the rotation direction.** This ensures that the oil will flow in only one direction at all times regardless of whether the pump is turned in the forward or reverse direction.

■Model：1RA

■Specifications

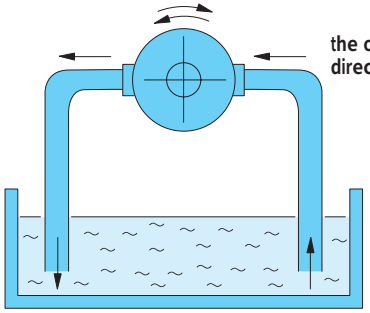
Item / Model	Theoretical Displacement cm^3/rev	Theoretical Discharge ℓ/min		Max. Discharge Pressure MPa	Max. Revolution min^{-1}	Approx. Weight kg
		1500min^{-1}	1800min^{-1}			
TOP-1RA-100	1.16	1.74	2.08	0.5	2000	1.0
TOP-1RA-200	1.80	2.70	3.24	0.5	2000	1.1
TOP-1RA-300	2.50	3.75	4.50	0.5	2000	1.2

○The above maximum discharge and maximum revolution values are for when using ISO-VG46 oil with an oil temperature of 40 ℃.

■Model

TOP - 1RA - 100 / 200 / 300

Regardless of whether the pump is turned to the right or left . . .



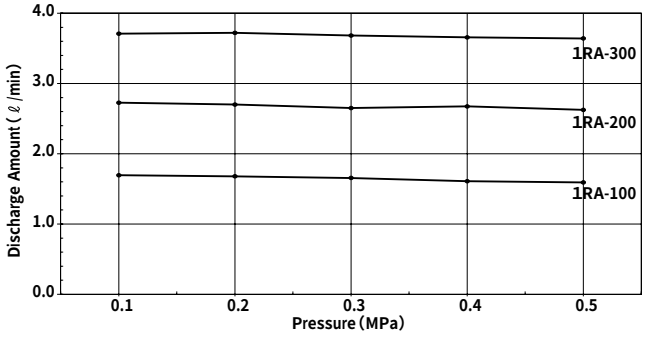
the oil flows in only one direction at all times.

■Performance Table

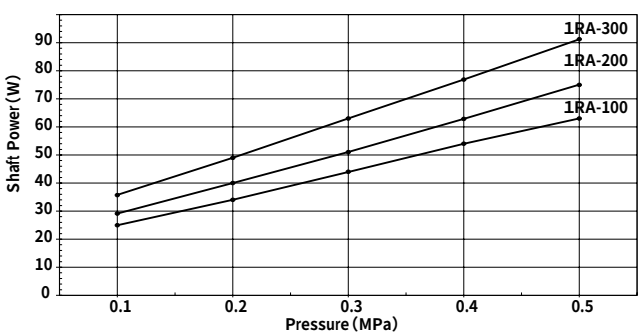
Test Conditions Oil: ISO-VG46 with a temperature of 40 ℃

At 1,450 Rotations

●Flow Rate Characteristics

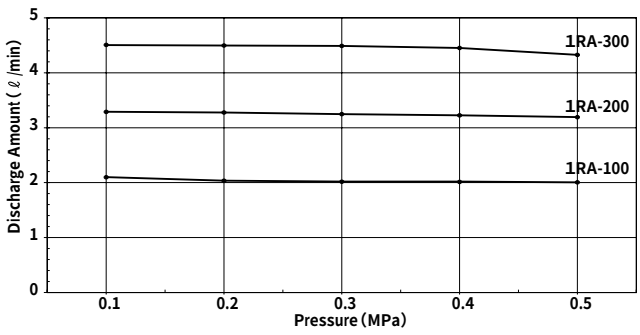


●Required Power

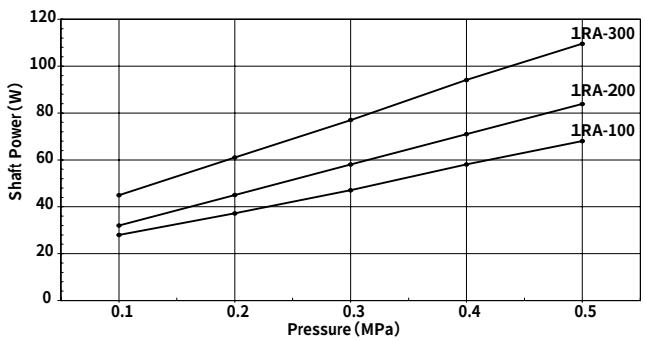


At 1,750 Rotations

●Flow Rate Characteristics



●Required Power



■Model：2RA

■Specifications

Item / Model	Theoretical Displacement cm^3/rev	Theoretical Discharge ℓ/min		Max. Discharge Pressure MPa	Max. Revolution min^{-1}	Approx. Weight kg
		1500min^{-1}	1800min^{-1}			
TOP-2RA-4C	4.0	6.0	7.2	0.5	2000	3.5
TOP-2RA-8C	8.0	12.0	14.4	0.5	2000	4.0
TOP-2RA-12C	12.0	18.0	21.6	0.5	1800	4.5

○The above maximum discharge and maximum revolution values are for when using ISO-VG46 oil with an oil temperature of 40 ℃.

■Model

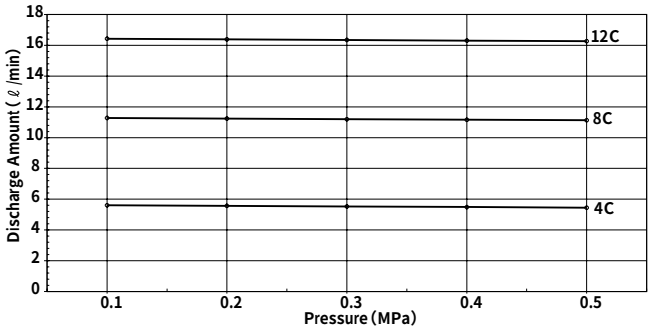
TOP - 2RA - 4C / 8C / 12C

■Performance Table

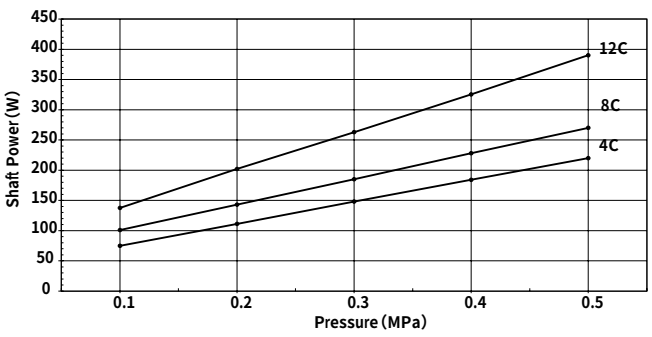
Test Conditions Oil: ISO-VG46 with a temperature of 40 ℃

At 1,450 Rotations

●Flow Rate Characteristics

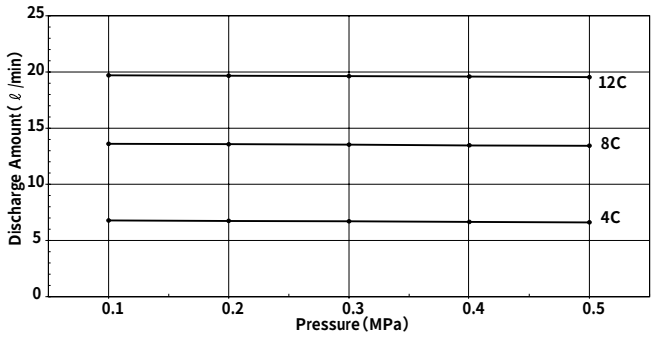


●Required Power

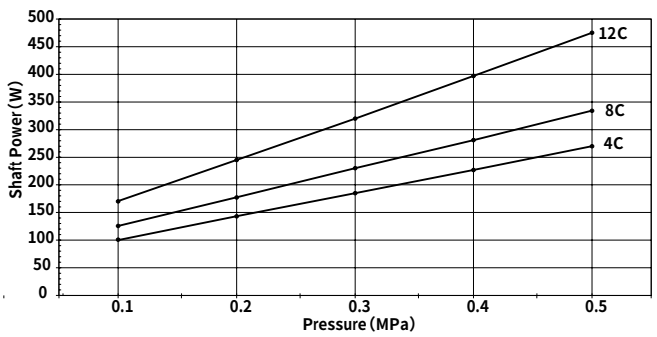


At 1,750 Rotations

●Flow Rate Characteristics



●Required Power



■Model：3RD

■Specifications

Item / Model	Theoretical Displacement cm^3/rev	Theoretical Discharge ℓ/min		Max. Discharge Pressure MPa	Max. Revolution min^{-1}	Approx. Weight kg
		1000min^{-1}	1200min^{-1}			
TOP-3RD-10T	13.0	13.0	15.6	0.5	1800	10.0
TOP-3RD-15T	19.5	19.5	23.4	0.5	1800	10.0
TOP-3RD-20T	26.0	26.0	31.2	0.5	1800	10.5
TOP-3RD-25T	32.5	32.5	39.0	0.5	1800	11.0
TOP-3RD-30T	39.0	39.0	46.8	0.5	1800	11.5

○The above maximum discharge and maximum revolution values are for when using ISO-VG46 oil with an oil temperature of 40 ℃.

■Model

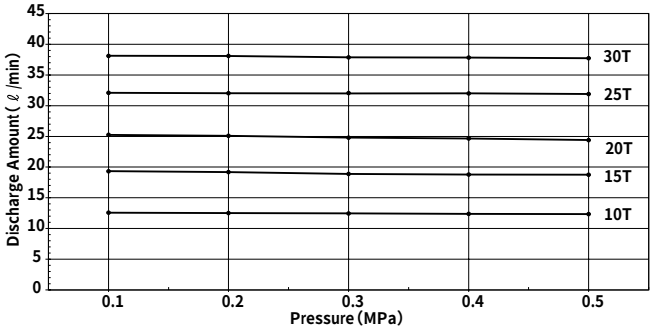
TOP - 3RD - 10T / 15T / 20T / 25T / 30T

■Performance Table

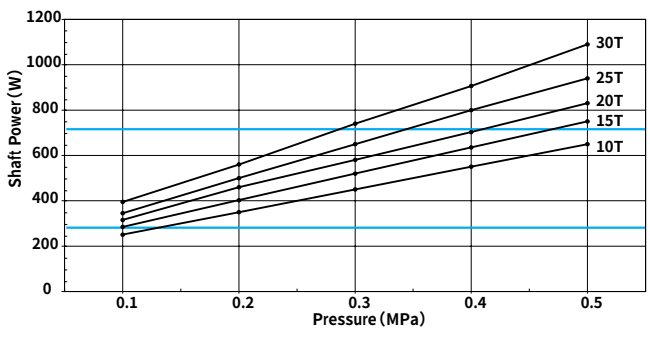
Test Conditions Oil: ISO-VG46 with a temperature of 40 ℃

At 1,000 Rotations

●Flow Rate Characteristics

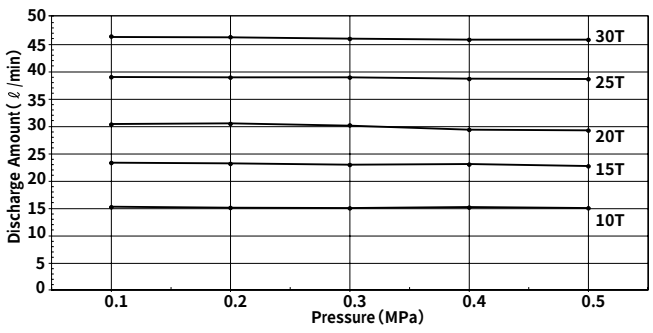


●Required Power

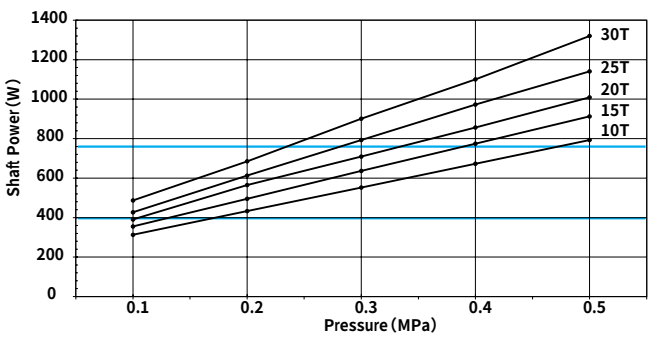


At 1,200 Rotations

●Flow Rate Characteristics



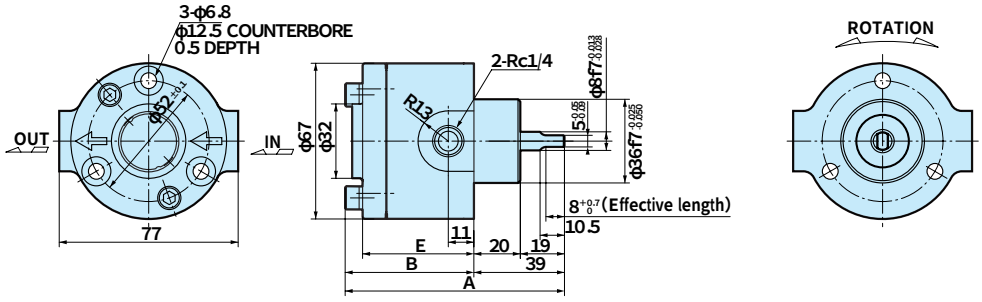
●Required Power



■Dimensional Diagrams

○Be sure to check the Nippon Oil Pump homepage for the most up-to-date diagrams and dimensions.

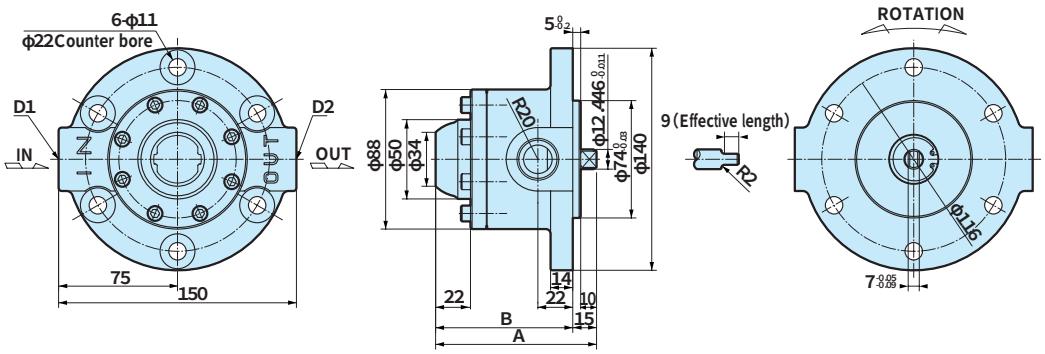
Model : TOP-1RA



Dimensions

Model \ Item	A	B	E
1RA-100	86.5	47.5	40
1RA-200	90.5	51.5	44
1RA-300	94.5	55.5	48

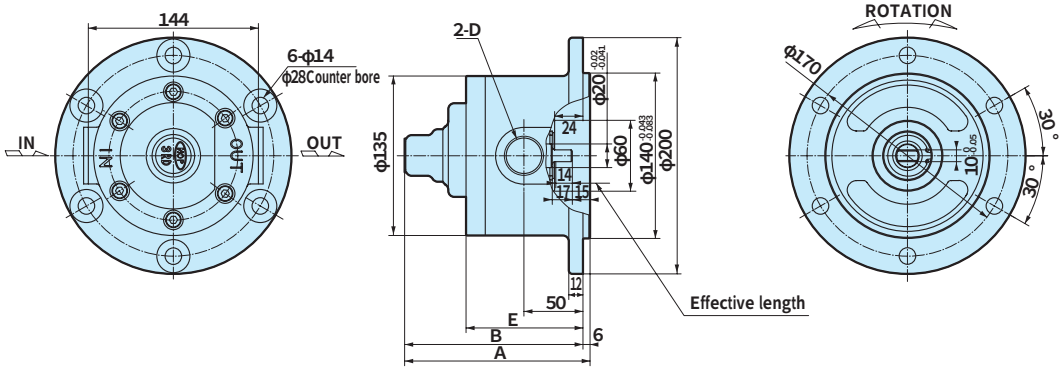
Model : TOP-2RA



Dimensions

Model \ Item	A	E	D1	D2
2RA-4C	92	77	Rc1/2	Rc3/8
2RA-8C	102	87	Rc3/4	Rc1/2
2RA-12C	112	97	Rc3/4	Rc3/4

Model : TOP-3RD



Dimensions

Model \ Item	A	B	D	E
3RD-10T	147	141	Rc1/2	89
3RD-15T	152	146	Rc1/2	94
3RD-20T	157	151	Rc3/4	99
3RD-25T	162	156	Rc3/4	104
3RD-30T	167	161	Rc1	109

⚠ CAUTION

※The use of low-speed rotations and liquids with high viscosity could result in poor pump operations.
※Applying a thrust load or radial load to the pump shaft could result in poor pump operations.
※When using a check valve, be sure to install it on the pump discharge side. If a check valve is installed on the pump suction side, pressure will be applied to the oil seal during reverse rotation, which could result in leaks.