

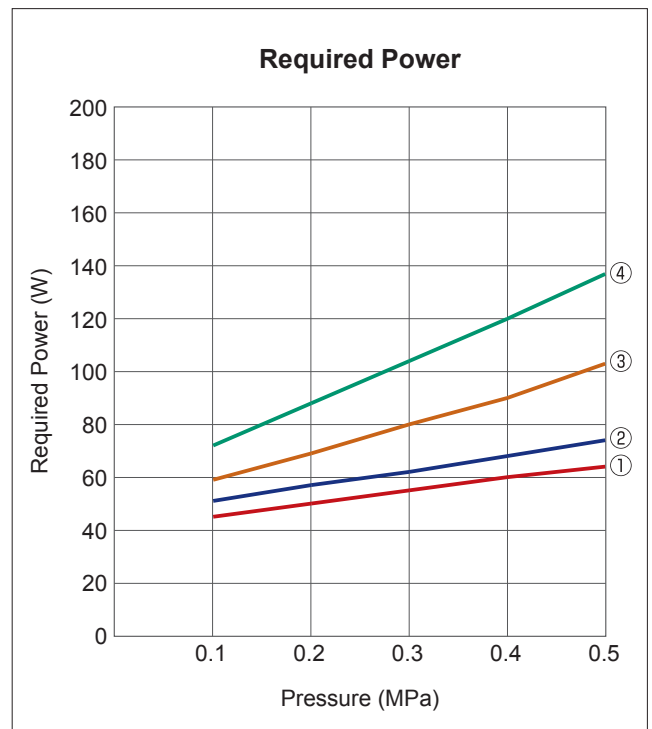
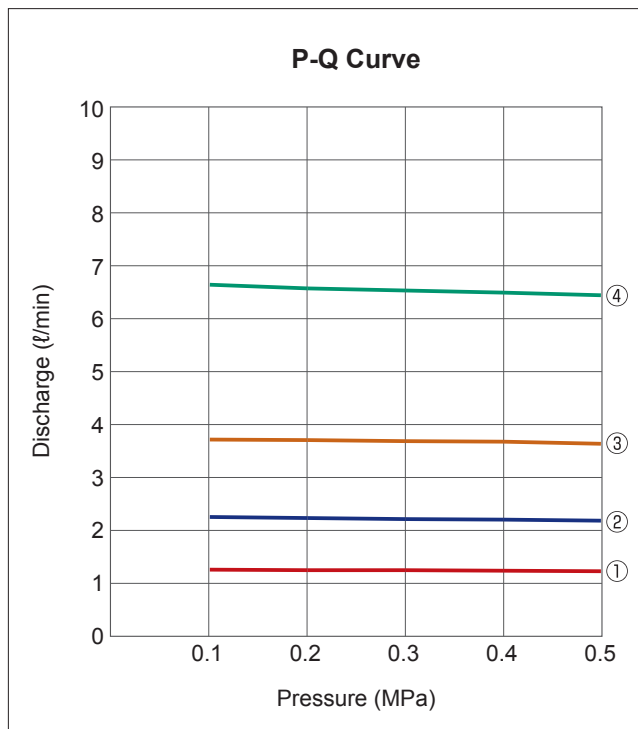
1A/1MA Performance Curve

Test Oil: ISO-VG46 Oil Temperature: 40C (Average)

Note: As the temperature of oil drops in winter, the viscosity also increases and so does the required power. So please be careful as you may not be able to operate the pump near the rated pressure.

1450 min⁻¹

① 10A ② 11A ③ 12A ④ 13A



Model	Item	Discharge (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
TOP-10A		1.24	1.23	1.23	1.22	1.21	45	50	55	60	64
TOP-11A		2.24	2.22	2.20	2.19	2.17	51	57	62	68	74
TOP-12A		3.71	3.70	3.68	3.67	3.63	59	69	80	90	103
TOP-13A		6.65	6.58	6.54	6.50	6.45	72	88	104	120	137

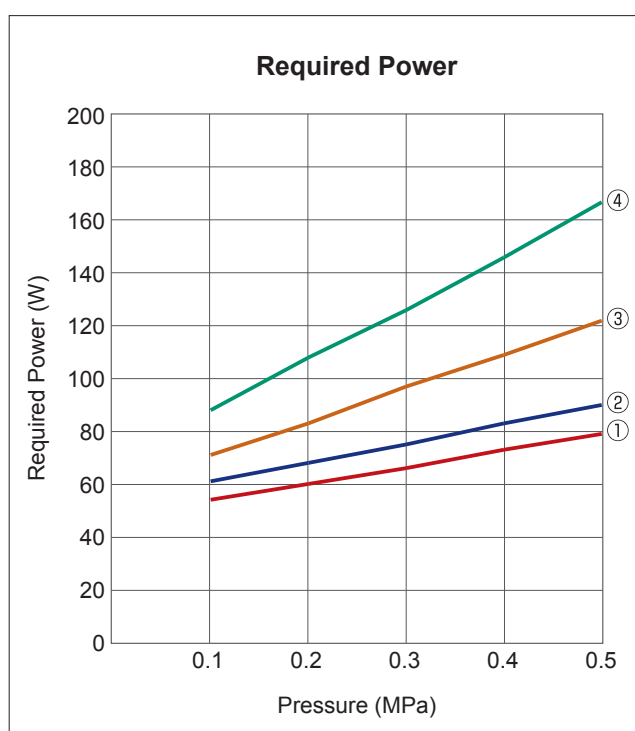
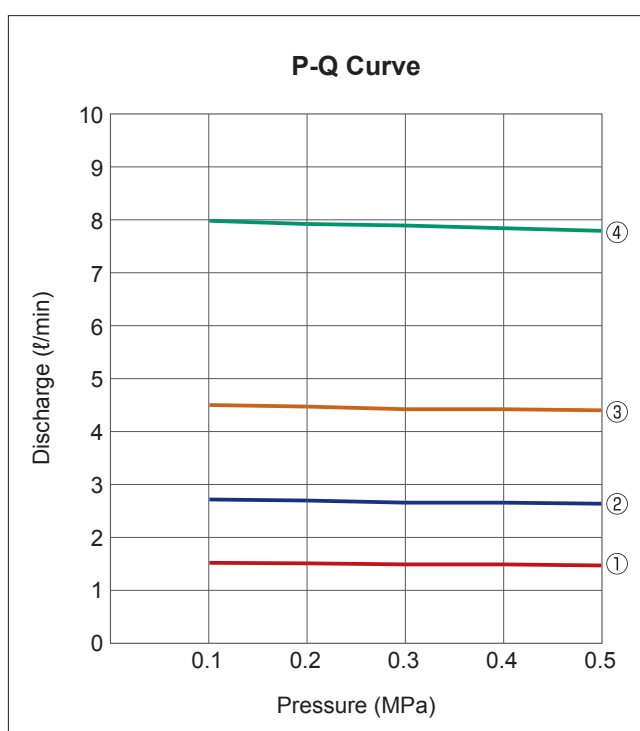
Any disassembly or alteration of the product will void the warranty.

Test Oil: ISO-VG46 Oil Temperature: 40C (Average)

Note: As the temperature of oil drops in winter, the viscosity also increases and so does the required power. So please be careful as you may not be able to operate the pump near the rated pressure.

1750 min⁻¹

① 10A ② 11A ③ 12A ④ 13A



Model	Item	Discharge (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
TOP-10A		1.51	1.50	1.48	1.48	1.46	54	60	66	73	79
TOP-11A		2.71	2.69	2.65	2.65	2.63	61	68	75	83	90
TOP-12A		4.50	4.47	4.42	4.42	4.40	71	83	97	109	122
TOP-13A		7.99	7.98	7.85	7.85	7.80	88	108	126	146	167