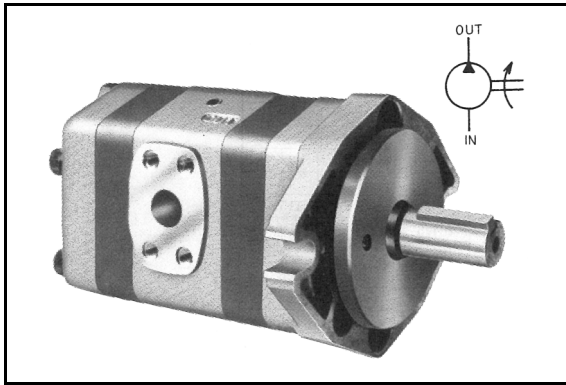


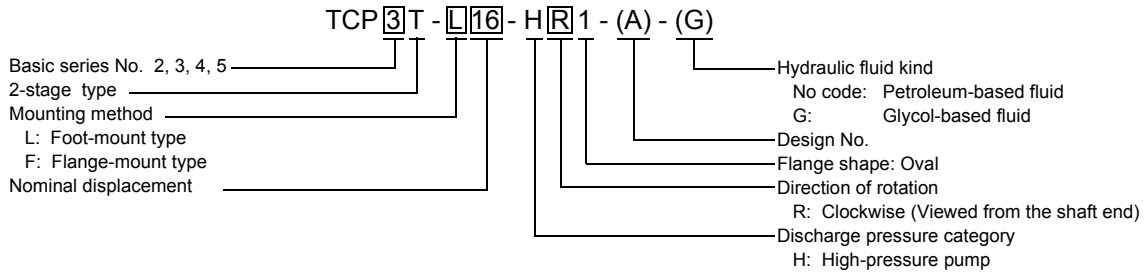
INTERNAL GEAR PUMP (TWO-STAGE PUMP)



The TC series pump, in which two single pumps are assembled serially in two stages in one housing, enables operation at a maximum discharge pressure of 30 MPa.

- It is not possible to change the direction of rotation.
- The mount type can be changed from the flange-mount type to the foot-mount type by attaching the foot.
- When water-glycol fluid is used, specify "G" at the end of model designation. In this case, the maximum speed is 1,200 min⁻¹. Please consult us about the applicable brand of water-glycol fluid.
- The permissible operating ambient temperature range is from 0 to 60°C.
- The pump can be used for R&O type and abrasion-resistant type hydraulic fluid applications.
- When connecting a shaft, use a flexible coupling and connection must be made to that radial and thrust load are not exerted to the pump shaft. Do not apply shock to the pump shaft by tapping the shaft end when mounting/removing a coupling or a pump. Inadequate shock will cause seizure of pump and short pump life. Never drive the pump shaft using a belt.

MODEL DESIGNATION



SPECIFICATIONS

1,800 min⁻¹ 37 mm²/s

Model	Nominal Displacement	Displacement (cm ³ /rev)	Pressure (MPa)		Discharge Rate (L/min)							
			Rating	Max.	0.5 MPa	3.5 MPa	7 MPa	10.5 MPa	14 MPa	17.5 MPa	21 MPa	25 MPa
TCP2T-*5-HR1-A	5	5.5	25	30	10.2	10	9.8	9.6	9.4	9.1	8.6	7.6
TCP2T-*6.3-HR1-A	6.3	6.9			12.7	12.5	12.3	12	11.8	11.4	10.9	9.8
TCP2T-*8-HR1-A	8	8.8			16	15.8	15.6	15.4	15	14.6	13.9	12.6
TCP2T-*10-HR1-A	10	11.0	25	30	19.8	19.7	19.5	19	18.8	18.5	18	16.5
TCP3T-*12.5-HR1	12.5	13.7			24.3	24	23.6	23	22.5	21.9	21.2	19.6
TCP3T-*16-HR1	16	17.3			31	30.8	30.2	29.8	29.3	28.5	27.5	25
TCP3T-*20-HR1	20	22.1	25	30	39.5	39.2	38.8	38.2	37.7	36.9	36.3	33.4
TCP3T-*25-HR1	25	27.4			48.5	48.3	47.5	47	46.5	45.7	44.2	41.5
TCP4T-*31.5-HR1	31.5	35.2			61.5	61	59.5	58.2	57	55.6	53.3	49
TCP4T-*40-HR1	40	44.9	25	30	78	77	76	74.5	73	71.8	69	63
TCP4T-*50-HR1	50	54.6			96	95	94	92.5	90.9	89	86.5	81
TCP5T-*63-HR1-A	63	62.2			112.3	110.3	108.7	106.1	103.9	101.4	98.2	92.1
TCP5T-*80-HR1-A	80	79.3	25	30	143.0	140.8	138.4	135.9	133.2	130.1	125.8	117.9
TCP5T-*100-HR1-A	100	99.1			178.6	176.8	173.9	170.2	166.9	163.0	157.9	148.3
TCP5T-*125-HR1-A	125	127.5			229.7	226.8	223.0	218.9	214.8	209.8	203.1	191.8

Model	Input (kW)								Speed (min ⁻¹)		
	0.5 MPa	3.5 MPa	7 MPa	10.5 MPa	14 MPa	17.5 MPa	21 MPa	25 MPa	Rating	Max.	Min.
TCP2T-*5-HR1-A	0.22	0.74	1.37	2	2.61	3.23	3.85	4.57	1,800	4,000	800
TCP2T-*6.3-HR1-A	0.31	1	1.78	2.55	3.33	4.11	4.9	5.8			
TCP2T-*8-HR1-A	0.39	1.2	2.2	3.2	4.2	5.2	6.2	7.3			
TCP2T-*10-HR1-A	0.5	1.6	2.8	4	5.2	6.4	7.6	9	1,800	3,000	
TCP3T-*12.5-HR1	0.6	1.9	3.4	5	6.5	8.1	9.6	11.4			
TCP3T-*16-HR1	0.8	2.5	4.4	6.4	8.3	10.3	12.2	14.6			
TCP3T-*20-HR1	1.1	3.1	5.6	8	10.5	12.8	15.3	18.1	1,800	2,800	
TCP3T-*25-HR1	1.3	3.7	6.7	9.8	12.7	15.8	18.9	22.4			
TCP4T-*31.5-HR1	1.5	4.7	8.5	12.5	16.3	20.3	24.2	28.6			
TCP4T-*40-HR1	2.3	6.4	11.2	16.1	20.9	26	30.8	36.2	1,800	2,500	
TCP4T-*50-HR1	2.6	7.5	13.4	19.5	25.3	31.2	37.4	44.1			
TCP5T-*63-HR1-A	2.1	7.7	14.0	20.6	27.0	33.5	40.0	47.4			
TCP5T-*80-HR1-A	2.5	9.7	17.9	26.3	34.8	43.2	51.6	61.3	1,800	2,400	
TCP5T-*100-HR1-A	3.0	12.0	22.4	33.1	43.8	54.5	65.2	77.5			
TCP5T-*125-HR1-A	3.4	15.3	28.8	42.8	56.7	70.7	84.7	100.7			

NOTE: The symbol "*" in the Model column indicates the mounting method - L for foot-mount and F for flange-mount.

PIPING FLANGE

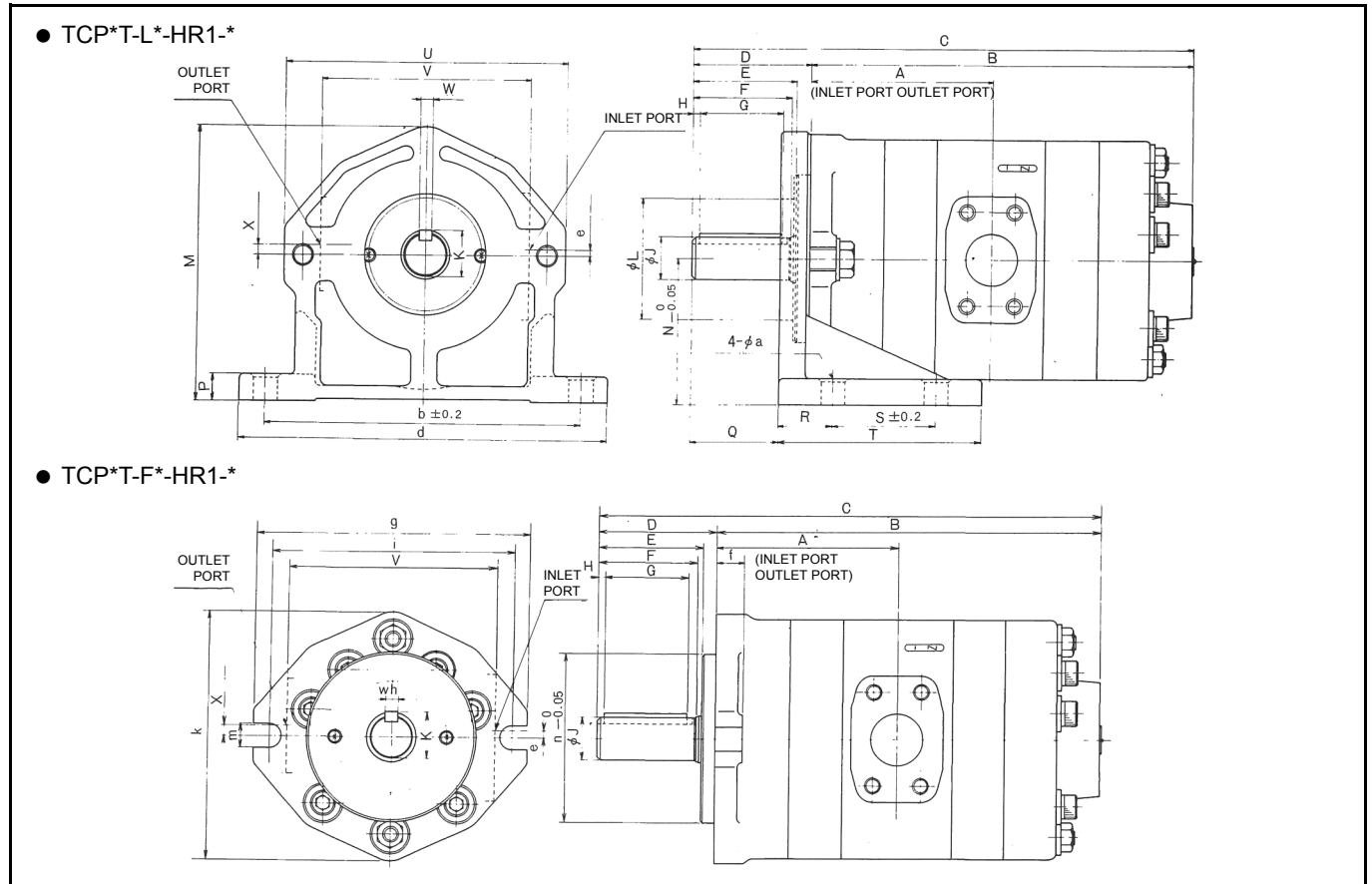
Specify the flange separately by selecting one from the following table.

Name		For TCP2T	For TCP3T	For TCP4T	For TCP5T
Type	For Thread Type	OUT side	FTCP-04PT	FTCP-06PT	FTCP-08PT
		IN side	FTCP-06PT	FTCP-08PT	FTCP-12PT
	For Welding Type	OUT side	FTCP-04WE	FTCP-06WE	FTCP-08WE
		IN side	FTCP-06WE	FTCP-08WE	FTCP-12WE

NOTE 1: The flange comes with bolts and an O-ring.

NOTE 2: The applicable standard for the O-ring is JIS B2401.

EXTERNAL DIMENSIONS



DIMENSION TABLE

Type	TCP2T				TCP3T				TCP4T			TCP5T			
Displacement (cm ³ /rev)	5	6.3	8	10	12.5	16	20	25	31.5	40	50	63	80	100	125
A	64	66.5	70	74	82	85.5	90	95	115.5	121	126.5	144	150	157	167
B	131	136	143	151	167.5	174.5	183.5	193.5	246	257	268	308	320	334	354
C	175.5	180.5	187.5	195.5	229	236	245	255	332	343	354	402	414	428	448
D	44.5				61.5				86			94			
E	37				53.5				76			82			
F	35.5				49.5				73			80			
G	30				40				61			61			
H	2				3.5				5			8			
J	19.05 ⁰ _{-0.021}				24 ^{+0.009} _{-0.004}				32 ^{+0.011} _{-0.005}			38 ^{+0.011} _{-0.005}			
K	21.25				27				35			41			
L	65				75				90			115			
M	125				162				204.5			258.2			
N	69.8				92.1				109.5			139.7			
P	15				20				20			26			
Q	29.5				39.5				64			68			
R	28.5				35				40			45			
S	50.8				50.8				76.2			139.7			
T	96				110				150			210			
U	129				172				213			272			
V	87				115				155			200			
W	4.76 ^{+0.024} _{+0.012}				8 ⁰ _{-0.036}				10 ⁰ _{-0.036}			10 ⁰ _{-0.036}			
X	10				8				8			0			
a	11				11				18			20			
b	127				146				235			295.3			
d	155				176				276			338			
e	6				6				0			0			
f	14.5				18.5				20			34			
g	125				168				205			268			
i	106				146				181			229			
k	106				136				186			233			
m	11				14				18			22			
n	82.55				101.6				126.95			152.35			

MASS TABLE

Model	Mass (kg)	
	F-type	L-type
TCP2T-*5-HR1-A	3.7	5.8
TCP2T-*6.3-HR1-A	3.9	6
TCP2T-*8-HR1-A	4.1	6.2
TCP2T-*10-HR1-A	4.5	6.6
TCP3T-*12.5-HR1	7.5	12
TCP3T-*16-HR1	8.1	12.6
TCP3T-*20-HR1	8.7	13.2
TCP3T-*25-HR1	9.5	14
TCP4T-*31.5-HR1	19.1	26.5
TCP4T-*40-HR1	20.7	28.1
TCP4T-*50-HR1	22.3	29.7
TCP5T-*63-HR1-A	37.4	54.4
TCP5T-*80-HR1-A	40.8	57.8
TCP5T-*100-HR1-A	44.2	61.2
TCP5T-*125-HR1-A	48.6	65.6