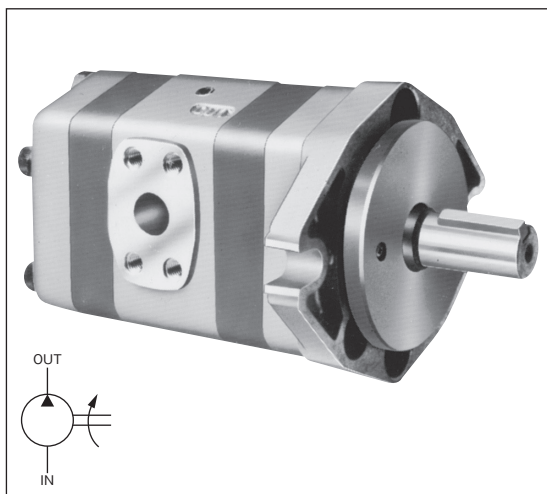


INTERNAL GEAR TWO-STAGE PUMP (TCP*T)

A

PUMPS AND MOTORS



■Features

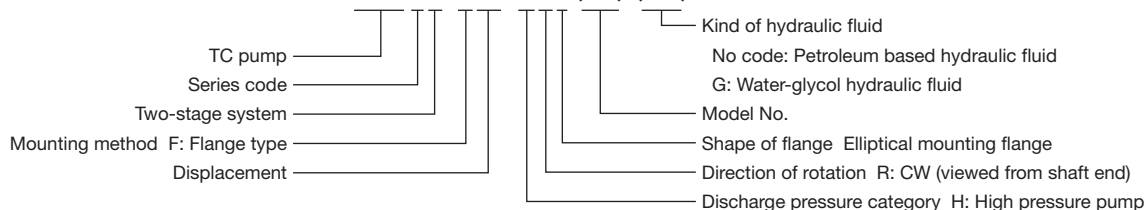
This internal gear pump has two single pump units being connected in series and raises pressure in two steps for adaptation to high-pressure applications.

⚠ Cautions on use Please read the Operating Manual carefully to ensure correct usage.

- The standard direction of rotation is to right (CW) viewed from shaft end.
- It is not possible to change the direction of rotation on the same pump.
- When changing from the flange type to the foot type, use an optional foot kit which is sold as single parts. Refer to "About foot", A-64 page.
- When using water-glycol hydraulic fluid, specify "G" at the end of model designation. The maximum revolving speed, however, becomes 1,200 min⁻¹. For brand names of water-glycol hydraulic fluid, please consult us."
- Use the wear-resistant type for the hydraulic fluid.
- Please read the "Cautions on Using Pumps and Motors", A-2 and A-3 pages.

■Description of the model designation

TCP3T-F16-HR1 (-B) (-G)



■Specifications

1,800min⁻¹, 37mm³/s

Model	Capacity (Nominal)	Displacement (cm ³ /rev)	Pressure (MPa)		Discharge rate (L/min)							
			Rated	Max.	0.5MPa	3.5MPa	7MPa	10.5MPa	14MPa	17.5MPa	21MPa	25MPa
TCP2T-F5-HR1-B	5	5.5	25	30	10.2	10	9.8	9.6	9.4	9.1	8.6	7.6
TCP2T-F6.3-HR1-B	6.3	6.9			12.7	12.5	12.3	12	11.8	11.4	10.9	9.8
TCP2T-F8-HR1-B	8	8.8			16	15.8	15.6	15.4	15	14.6	13.9	12.6
TCP2T-F10-HR1-B	10	11.0			19.8	19.7	19.5	19	18.8	18.5	18	16.5
TCP3T-F12.5-HR1-B	12.5	13.7	25	30	24.3	24	23.6	23	22.5	21.9	21.2	19.6
TCP3T-F16-HR1-B	16	17.3			31	30.8	30.2	29.8	29.3	28.5	27.5	25
TCP3T-F20-HR1-B	20	22.1			39.5	39.2	38.8	38.2	37.7	36.9	36.3	33.4
TCP3T-F25-HR1-B	25	27.4			48.5	48.3	47.5	47	46.5	45.7	44.2	41.5
TCP4T-F31.5-HR1	31.5	35.2	25	30	61.5	61	59.5	58.2	57	55.6	53.3	49
TCP4T-F40-HR1	40	44.9			78	77	76	74.5	73	71.8	69	63
TCP4T-F50-HR1	50	54.6			96	95	94	92.5	90.9	89	86.5	81
TCP5T-F63-HR1-A	63	62.2	25	30	112.3	110.3	108.7	106.1	103.9	101.4	98.2	92.1
TCP5T-F80-HR1-A	80	79.3			143.0	140.8	138.4	135.9	133.2	130.1	125.8	117.9
TCP5T-F100-HR1-A	100	99.1			178.6	176.8	173.9	170.2	166.9	163.0	157.9	148.3
TCP5T-F125-HR1-A	125	127.5			229.7	226.8	223.0	218.9	214.8	209.8	203.1	191.8

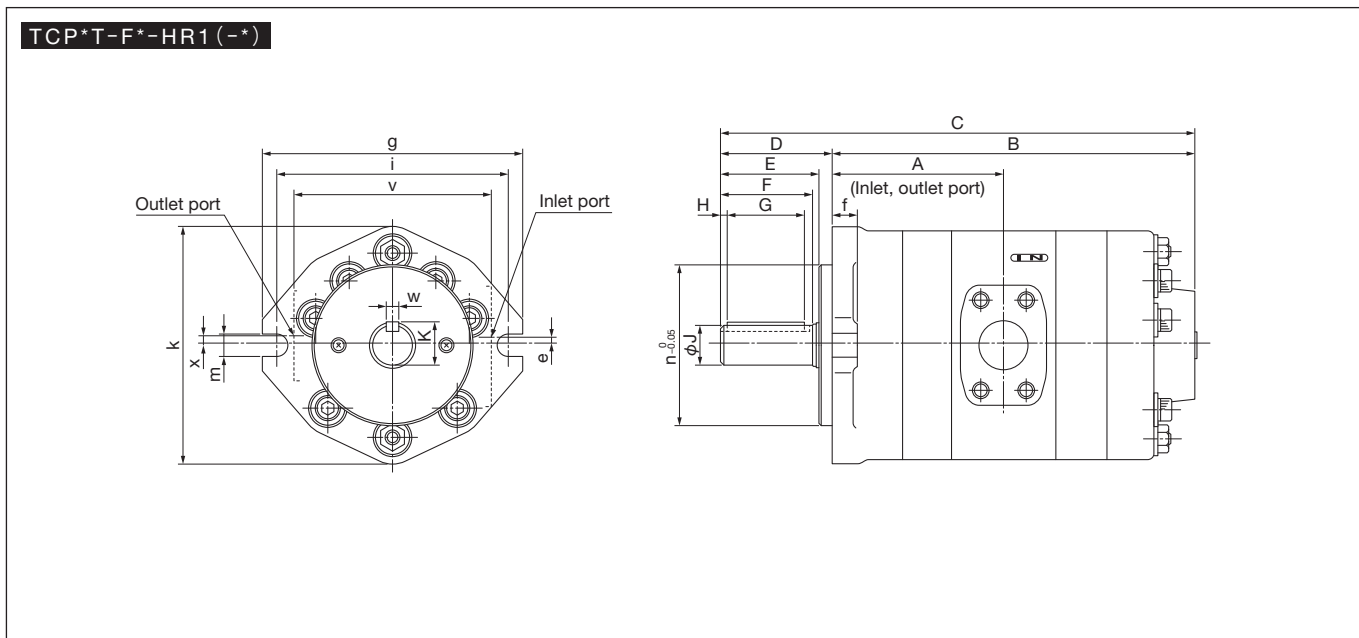
Model	Input (kW)								Rotating speed (min ⁻¹)		
	0.5MPa	3.5MPa	7MPa	10.5MPa	14MPa	17.5MPa	21MPa	25MPa	Rated	Max.	Lowest
TCP2T-F5-HR1-B	0.22	0.74	1.37	2	2.61	3.23	3.85	4.57	1,800	4,000	
TCP2T-F6.3-HR1-B	0.31	1	1.78	2.55	3.33	4.11	4.9	5.8			
TCP2T-F8-HR1-B	0.39	1.2	2.2	3.2	4.2	5.2	6.2	7.3			
TCP2T-F10-HR1-B	0.5	1.6	2.8	4	5.2	6.4	7.6	9			
TCP3T-F12.5-HR1-B	0.6	1.9	3.4	5	6.5	8.1	9.6	11.4	1,800	3,000	800
TCP3T-F16-HR1-B	0.8	2.5	4.4	6.4	8.3	10.3	12.2	14.6			
TCP3T-F20-HR1-B	1.1	3.1	5.6	8	10.5	12.8	15.3	18.1			
TCP3T-F25-HR1-B	1.3	3.7	6.7	9.8	12.7	15.8	18.9	22.4			
TCP4T-F31.5-HR1	1.5	4.7	8.5	12.5	16.3	20.3	24.2	28.6	1,800	3,000	
TCP4T-F40-HR1	2.3	6.4	11.2	16.1	20.9	26	30.8	36.2			
TCP4T-F50-HR1	2.6	7.5	13.4	19.5	25.3	31.2	37.4	44.1			
TCP5T-F63-HR1-A	2.1	7.7	14.0	20.6	27.0	33.5	40.0	47.4	1,800	2,400	600
TCP5T-F80-HR1-A	2.5	9.7	17.9	26.3	34.8	43.2	51.6	61.3			
TCP5T-F100-HR1-A	3.0	12.0	22.4	33.1	43.8	54.5	65.2	77.5			
TCP5T-F125-HR1-A	3.4	15.3	28.8	42.8	56.7	70.7	84.7	100.7			

■ **Pipe flange** Specify by selecting from this table.

Name		For TCP2T	For TCP3T	For TCP4T	For TCP5T	
Model	For screw	OUT side	FTCP-04PT	FTCP-06PT	FTCP-08PT	FTCP-12PT
		IN side	FHPP-06PT	FTCP-08PT	FTCP-12PT	FTCP-16PT
	For welding	OUT side	FTCP-04WE	FTCP-06WE	FTCP-08WE	FTCP-12WE
		IN side	FHPP-06WE	FTCP-08WE	FTCP-12WE	FTCP-16WE

- (Note)
1. This flange comes with mounting bolts and O-ring.
 2. For flange dimensions, see A-31 page.
 3. Where the pressure exceeds 21 MPa, use ones for welding.

■ **Outside dimensions**



■ **Dimension table**

Model	TCP2T				TCP3T				TCP4T				TCP5T			
	5	6.3	8	10	12.5	16	20	25	31.5	40	50	63	80	100	125	
Capacity (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	177	182	189	197	229	236	245	255	332	343	354	402	414	428	448	

Model	TCP2T	TCP3T	TCP4T	TCP5T
D	46	61.5	86	94
E	38.5	53.5	76	82
F	(41)	51.5	73	80
G	30	40	61	61
H	0	0	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

Model	TCP2T	TCP3T	TCP4T	TCP5T
W	4.76 ^{+0.024} _{+0.012}	8 ⁰ _{-0.036}	10 ⁰ _{-0.036}	10 ⁰ _{-0.036}
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
x	10	8	8	0
v	87	115	155	200

■ **Mass table**

Model	Mass (kg)
TCP2T-F5-HR1-B	3.7
TCP2T-F6.3-HR1-B	3.9
TCP2T-F8-HR1-B	4.1
TCP2T-F10-HR1-B	4.5
TCP3T-F12.5-HR1-B	7.5
TCP3T-F16-HR1-B	8.1
TCP3T-F20-HR1-B	8.7
TCP3T-F25-HR1-B	9.5
TCP4T-F31.5-HR1	19.1
TCP4T-F40-HR1	20.7
TCP4T-F50-HR1	22.3
TCP5T-F63-HR1-A	37.4
TCP5T-F80-HR1-A	40.8
TCP5T-F100-HR1-A	44.2
TCP5T-F125-HR1-A	48.6