

SPECIFICATIONS

1,800 min⁻¹ 37 mm²/s

Type	Nominal Displacement	Displacement (cm ³ /rev)	Pressure (MPa)		Discharge Rate (L/min)						Input (kW)						Speed (min ⁻¹)		
			Rating	Max.	0.5 MPa	3.5 MPa	7 MPa	10.5 MPa	14 MPa	17.5 MPa	0.5 MPa	3.5 MPa	7 MPa	10.5 MPa	14 MPa	17.5 MPa	Rating	Max.	Min.
TCP2-*5-MR1- XB	5	5.5	17.5	21	10.1	10.0	9.9	9.6	9.3	8.5	0.2	0.7	1.3	1.9	2.4	3.0	1,800	4,000	800
TCP2-*6.3-MR1- XB	6.3	6.9			12.5	12.4	12.2	11.9	11.4	10.6	0.2	0.9	1.6	2.4	3.1	3.8			
TCP2-*8-MR1- XB	8	8.8			15.9	15.8	15.7	15.4	14.8	13.6	0.3	1.1	2.0	3.0	3.9	4.8			
TCP2-*10-MR1- XB	10	11.0			19.9	19.7	19.4	19.0	18.4	17.0	0.4	1.4	2.5	3.7	4.8	6.0			
TCP3-*12.5-MR1- B	12.5	13.7	17.5	21	24.4	24.0	23.5	22.9	22.0	20.5	0.5	1.8	3.2	4.7	6.1	7.5	1,800	3,000	800
TCP3-*16-MR1- B	16	17.3			31.0	30.6	30.0	29.3	28.3	26.7	0.7	2.3	4.0	5.8	7.6	9.4			
TCP3-*20-MR1- B	20	22.1			39.4	38.7	38.0	37.2	36.0	34.0	0.9	2.9	5.2	7.4	9.7	12.0			
TCP3-*25-MR1- B	25	27.4			48.6	48.0	47.5	46.4	44.7	41.4	1.1	3.4	6.2	9.1	12.0	14.8			
TCP4-*31.5-MR1	31.5	35.2	17.5	21	61.5	60.5	59.3	57.8	55.5	51.5	1.2	4.3	8.0	11.7	15.4	19.0	1,800	3,000	800
TCP4-*40-MR1	40	44.9			78.3	77.0	75.5	73.5	71.8	66.5	1.5	5.5	10.1	14.9	19.7	24.2		2,800	
TCP4-*50-MR1	50	54.6			95.7	93.9	91.9	89.5	86.2	80.9	1.8	6.6	12.2	18.1	23.8	29.4		2,500	
TCP5-*63-MR1-A	63	62.2	17.5	21	112.3	109.1	106.6	103.1	98.8	92.1	2.1	7.7	14.0	20.6	27.0	33.5	1,800	2,400	600
TCP5-*80-MR1-A	80	79.3			142.9	139.7	135.9	131.8	126.3	117.9	2.5	9.7	17.9	26.3	34.8	43.2		2,100	
TCP5-*100-MR1-A	100	99.1			178.6	174.9	169.9	164.6	157.9	148.3	3.0	12.0	22.4	33.1	43.8	54.5		1,800	
TCP5-*125-MR1-A	125	127.5			229.7	224.6	218.2	211.6	203.3	191.8	3.4	15.3	28.8	42.8	56.7	70.7		1,800	

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.

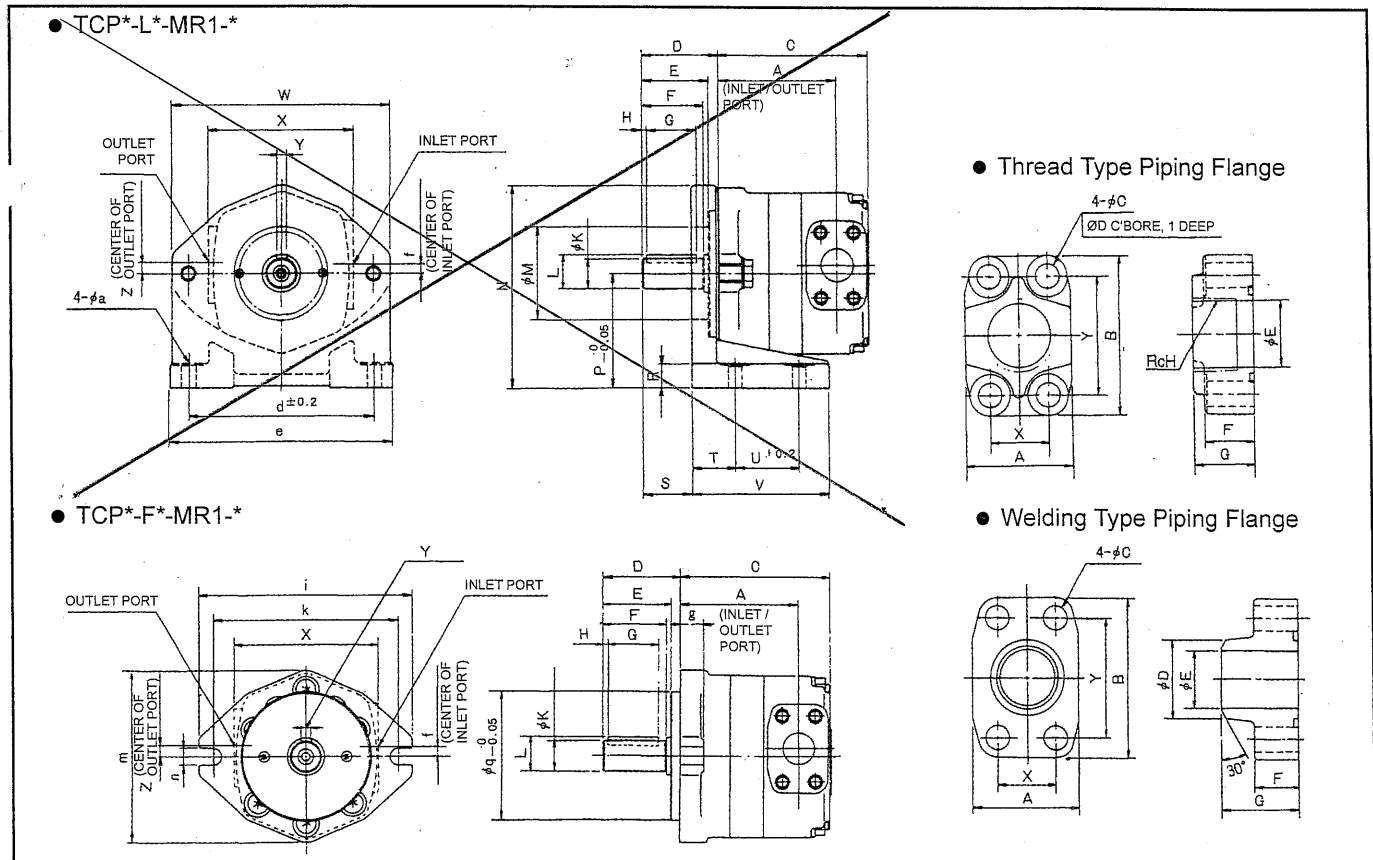
Type	Name		For TCP2	For TCP3	For TCP4	For TCP5
		For Thread Type	OUT side	FTCP-04PT	FTCP-06PT	FTCP-08PT
IN side			FTCP-06PT	FTCP-08PT	FTCP-12PT	FTCP-16PT
For Welding Type		OUT side	FTCP-04WE	FTCP-06WE	FTCP-08WE	FTCP-12WE
		IN side	FTCP-06WE	FTCP-08WE	FTCP-12WE	FTCP-16WE

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

NOTE 2: Bolts of strength category 12.9 according to JIS B1176 are used.

NOTE 3: The applicable standard for the O-ring is JIS B2401.

EXTERNAL DIMENSIONS



DIMENSION TABLE

Type	TCP2				TCP3				TCP4			TCP5			
	5	6.3	8	10	12.5	16	20	25	31.5	40	50	63	80	100	125
A	64	66.5	70	74	81	84.5	89	94	109	114.5	120	123	129	136	146
C	85	87.5	91	95	106	109.5	114	119	146	151.5	157	162	168	175	185
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			
K	19.05 ⁰ _{-0.021}				24 ^{+0.009} _{-0.004}				32 ^{+0.011} _{-0.005}			38 ^{+0.011} _{-0.005}			
L	21.25				27				35			41			
M	65				75				90			115			
N	125				162				204.5			258.2			
P	69.8				92.1				109.5			139.7			
R	15				20				20			26			
S	29.5				39.5				64			68			
T	28.5				35				40			45			
U	50.8				50.8				76.2			139.7			
V	96				110				150			210			
W	129				172				209			272			
X	87				115				155			200			
Y	4.76 ^{+0.024} _{+0.012}				8 ⁰ _{-0.036}				10 ⁰ _{-0.036}			10 ⁰ _{-0.036}			
Z	10				8				8			0			
a	11				11				18			20			
d	127				146				235			295.3			
e	155				176				276			338			
f	6				6				0			0			
g	14.5				18.5				20			34			
i	125				168				205			268			
k	106				146				181			229			
m	106				136				186			233			
n	11				14				18			22			
q	82.55				101.6				126.95			152.35			

MASS TABLE

Model	Mass (kg)	
	F-type	L-type
TCP2-*5-MR1-A	2.4	4.5
TCP2-*6.3-MR1-A	2.5	4.6
TCP2-*8-MR1-A	2.6	4.7
TCP2-*10-MR1-A	2.8	4.9
TCP3-*12.5-MR1	4.9	9.4
TCP3-*16-MR1	5.2	9.7
TCP3-*20-MR1	5.5	10.0
TCP3-*25-MR1	5.9	10.4
TCP4-*31.5-MR1	12.3	19.7
TCP4-*40-MR1	13.1	20.5
TCP4-*50-MR1	13.9	21.3
TCP5-*63-MR1-A	22.2	39.2
TCP5-*80-MR1-A	23.9	40.9
TCP5-*100MR1-A	25.6	42.6
TCP5-*125-MR1-A	27.8	44.8

THREAD-TYPE PIPING FLANGE DIMENSION TABLE

	FTCP-04PT	FTCP-06PT	FTCP-08PT	FTCP-12PT	FTCP-16PT
A	38	46	46	64	76
B	54	65	70	95	110.8
C	9	11	11	13	13
D	14	17.5	17.5	20	20
E	18	23.5	29.5	43.5	55.5
F	21	22	22	24	27
G	25	27	27	30	33
H	1/2	3/4	1	1 1/2	2
X	17.5	22.2	26.2	35.7	42.9
Y	38.1	47.6	52.4	69.8	77.8
Bolt	M8 × 35	M10 × 40	M10 × 40	M12 × 45	M12 × 50
O-ring	1AG25	1AG30	1AG35	1AG50	1AG63

NOTE 1: Bolts of strength category 12.9 according to JIS B1176 are used.

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

WELDING-TYPE PIPING FLANGE DIMENSION TABLE

	FTCP-04WE	FTCP-06WE	FTCP-08WE	FTCP-12WE	FTCP-16WE
A	38	46	46	64	76
B	54	65	70	95	110.8
C	9	11	11	13	13
D	21.7	27.2	34	48.6	60.5
E	12.7	19	25	38	51
F	20	21	21	23	25
G	33	36	36	40	42
X	17.5	22.2	26.2	35.7	42.9
Y	38.1	47.6	52.4	69.8	77.8
Bolt	M8 × 35	M10 × 40	M10 × 40	M12 × 45	M12 × 50
O-ring	1AG25	1AG25	1AG35	1AG45	1AG58



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2nd June, 2014 (Revised 23rd Oct., 2014)

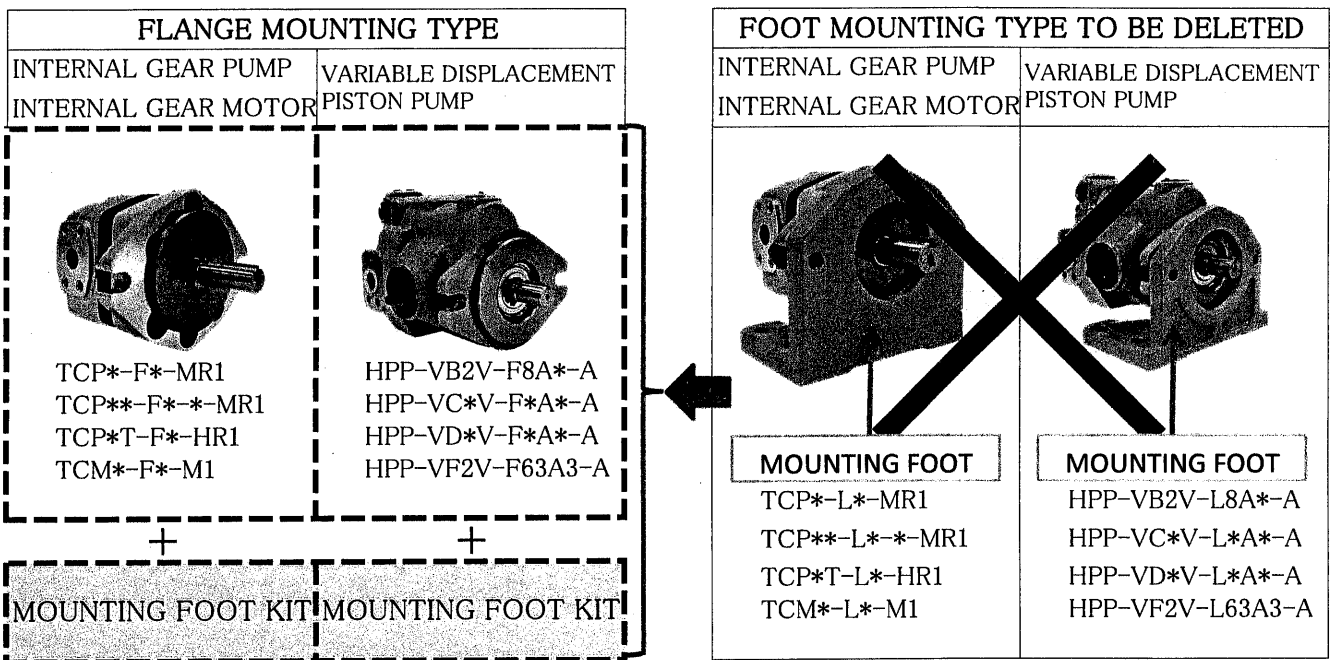
Dear our customers,

REF. DELETION OF MODEL CODING FOR FOOT MOUNTING TYPE

As you know well, we have been supplying piston pumps, internal gear pumps and internal gear motors in the form of "flange mounting type(F)" and "foot mounting type(L)" respectively. This time, we would like to inform you that, as of 1st June, 2014, we will supply "flange mounting type(F)" only, except for double piston pumps(HPP-VCC2V & HPP-VCF2V) in order to rationalize the number of model codings but in case of "foot mounting type(L)" needed, you will order "flange mounting type(F)" plus the additional item of foot kit so that you may assemble them into "foot mounting type(L)" at your side.

For further details, please kindly refer to the below-mentioned information or contact to us anytime.

- **SUBJECT ITEMS:** VARIABLE DISPLACEMENT PISTON PUMP (HPP)
INTERNAL GEAR PUMP (TCP) AND MOTOR (TCM)



■ **MOUNTING FOOT KIT: (REVISED PART)**

MODEL CODE FOR FOOT KIT	SUBJECT MODEL OF PUMP & MOTOR	TIGHTENING TORQUE FOR FOOT BOLTS	CONTENTS
LP02-10	TCP2, TCP※2, TCP2T, TCM2 HPP-VB2V, HPP-VC2V, HPP-VC3V	30~35Nm	FOOT 1 PCE. BOLT 2 PCS. WASHER 2 PCS.
LP04-10	TCP3, TCP※3, TCP3T, TCM3	40~50Nm	
LP04-20	HPP-VD2V, HPP-VD3V-F25		
LP04-30	HPP-VD3V-F40	65~75Nm	
LP06-10	TCP4, TCP※4, TCP4T, TCM4		
LP06-20	HPP-VF2V	45~55Nm	
LP08-10	TCP5, TCP※5, TCP5T, TCM5	120~135Nm	

■ **VALIDITY:** 1ST JUNE, 2014