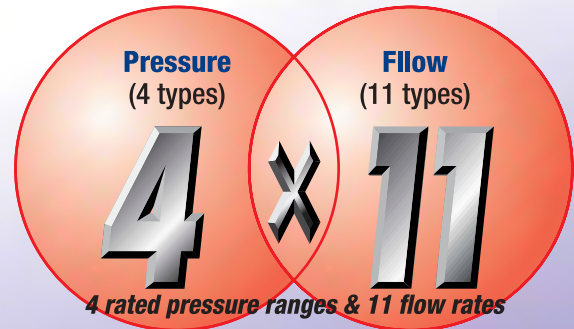


CQTM high-pressure water-base coolant pumps make quiet operation noise.

Broad ranges and many different varieties support;

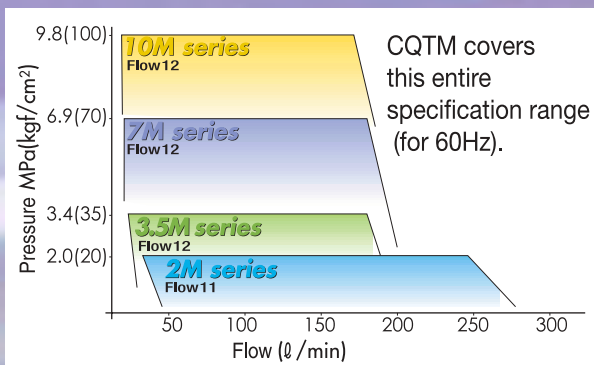
Flexible Choices to your needs



High Pressure Coolant features;

- Speedier machining and more efficient boring (Better productivity)
- More accurate dimension & surface by keeping workpieces cool
- Longer tool life by keeping tools cool
- Finely powdered cutting chip for easy disposal

Four types of pressure series enable you to select the most economical pump to your desired pressure. Additionally each pressure type has 11 to 12 levels of discharge volume. These varieties facilitate your selection of more appropriate discharge volume. Least waste of delivery volume, thus least waste of energy.



Surprisingly Low noise and Dramatically Low Ripples

As special internal gears slightly change the enclosed volume, our coolant pumps are ear-friendly with only small pressure ripples and faint level of operation noise.

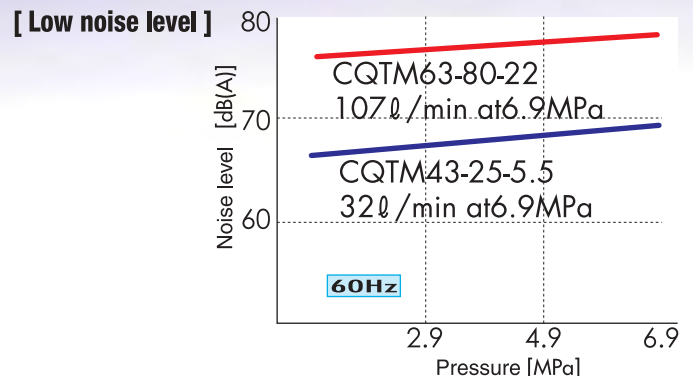
- Noise = 69dB(A): (6.9MPa × 30 l/min) + 5.5 kW with motor
The noise level does not go up with pressure. (See the graph below.)
- Ripples = 3%: 3% to operation pressure ($\Delta P = 3P/100$)
"Dampener" is not necessary.

Energy-saving

The "energy-saving" coolant pumps reduce running costs by cutting the power consumption and also improve the machining precision by stabilizing the coolant temperature. In addition to the energy efficient functions, CQTM's wide pump lineup can cut unnecessary discharge volume.

● Variable rotation by inverters also contributes to energy-saving.

With variable rpm, CQTM can deliver the volume proportional to the rotating speed. Motor rpm control by inverters can adjust the discharge volume corresponding to dimension or number of the nozzles.



For 1.5-2 MPa system,
Little energy loss,
stable pressure,
super-short length,
good self-priming performance.

2M series
2.0MPa(20kgf/cm²)

For 3 MPa system,
most economical pump.

3.5M series
3.4MPa(35kgf/cm²)

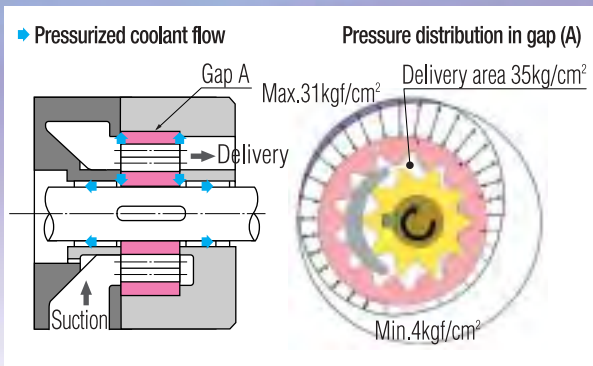
For over 5 MPa system,
low-noise, maintenance-free, and space-saving.

7M series
6.9MPa(70kgf/cm²)

10M series
9.8MPa(100kgf/cm²)

High Durability and Maintenance-free

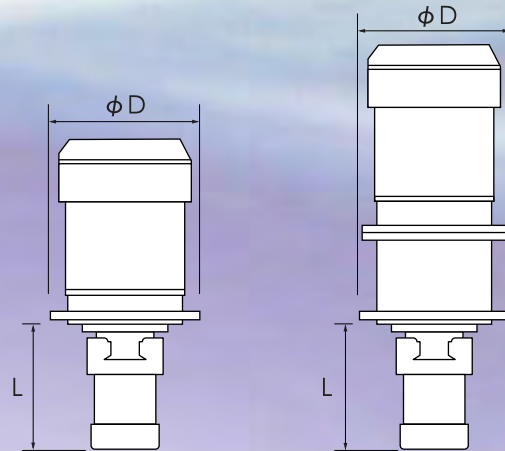
In addition to the simple structure, high-pressure coolant fluid becomes an automatic lubricant for sliding surface between parts, thereby allowing no contact, and even no wear using the coolant filtered through 20 ~ 30 μm.



Space-saving

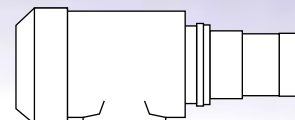
Pumps have an advantage of being directly coupled with motors, thus require only motor flange-sized area (D) for installing on coolant tanks.

Pump length (L) is short and suitable for most type of tanks.



D... Shall installation place required.

L... Shallow tank can accommodate pump.



Horizontal type is also available.

*Pomp can be installed any direction.

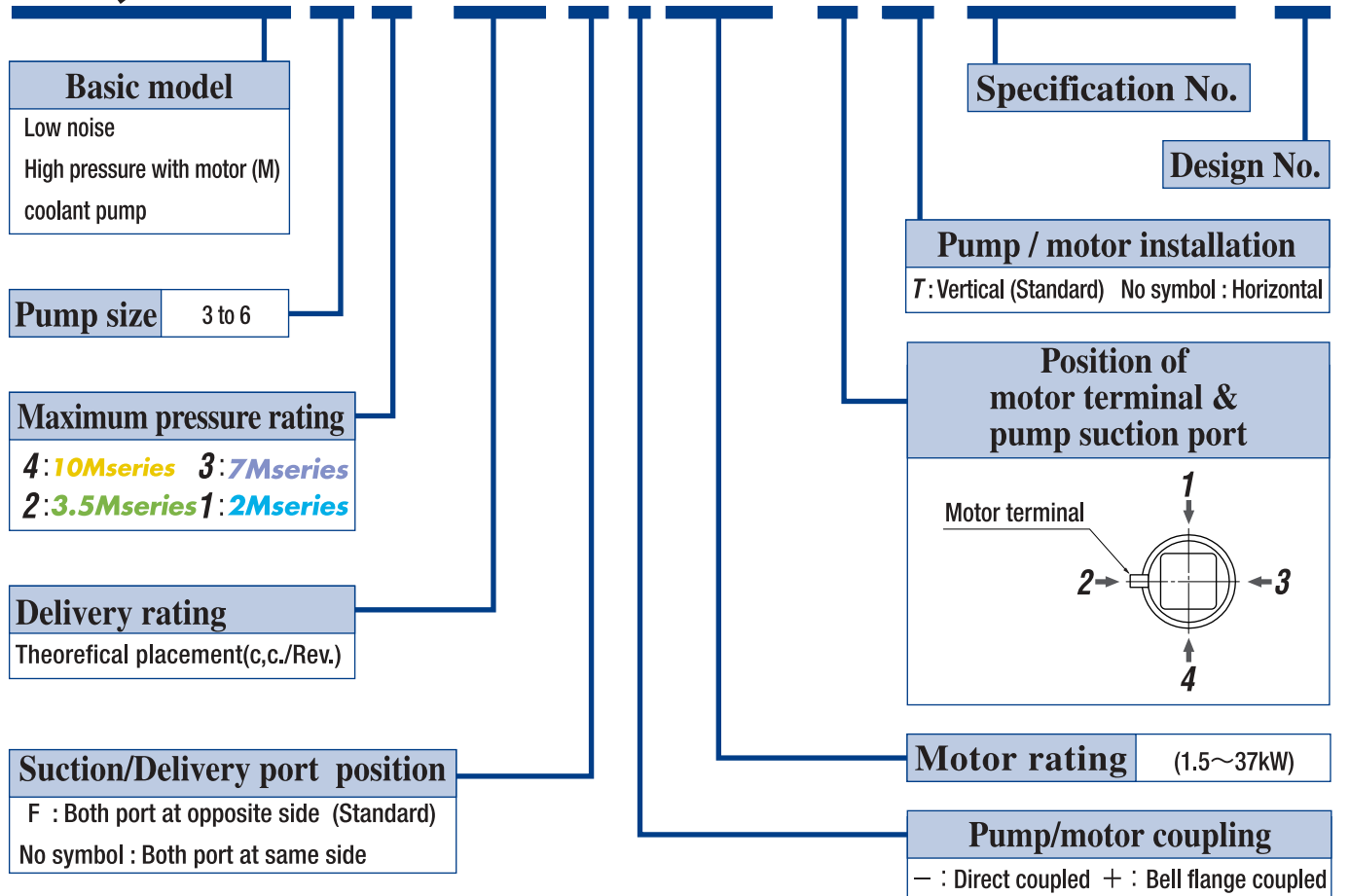
In this catalogue;

1. Vertical units are mainly introduced. We also available "horizontal unit" and "pumps". Please ask us for outline dimensional drawings as may be needed.
2. Please see page 4 about non water-base (oil-base) coolant.
3. Please contact us in need of foreign affair on pump/motor.



Model Number Of Pumps

CQTM43-25F-5.5-1-T-S*-E***



The model number in the pump performance data tables and charts in this catalogue is described as CQT43-25 for above model.

Pump Lineup

pressure (max.) Delivery (ℓ/min)			2M series 2.0MPa (20kgf/cm ²)	3.5M series 3.4MPa (35kgf/cm ²)	7M series 6.9MPa (70kgf/cm ²)	10M series 9.8MPa (100kgf/cm ²)	Remarks
	50Hz	60Hz					
6	10			CQT32-10	CQT33-10	CQT34-10	Middle-sized
10	14			-12.5	-12.5	-12.5	
13	18			-16	-16	-16	
17	25	CQT31-20	CQT42-20	CQT43-20	CQT44-20		Water-base and non water-base coolant
25	32	-25	-25	-25	-25		
32	43	-31.5	-31.5	-31.5	-31.5		
38	49	CQT41-40	CQT52-40	CQT53-40	CQT54-40		Large-sized
53	68	-50	-50	-50	-50		
71	89	-63	-63	-63	-63		
84	107	CQT51-80	CQT62-80	CQT63-80	CQT64-80		Water-base and non water-base coolant
112	141	-100	-100	-100	-100		
144	180	-125	-125	-125	-125		
193	235	CQT61-160					
248	—	-200					

Note) The above discharge volumes are rough readings at the maximum pressure of each pump with non water-base coolant. Please refer to performance data table for details.

Non water-base (oil-base) coolant

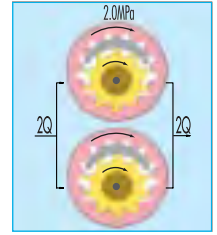
CQT pump can be used also with Non water-base coolant fluid. Maximum operation pressure can be as high as on the table below.

series	2M series	3.5M series	7M series	10M series	
Max. operation pressure with oil-base coolant	2.5MPa (25kgf/cm ²)	4.9MPa (50kgf/cm ²)	9.8MPa (100kgf/cm ²)	14.7MPa (150kgf/cm ²)	

● Performance information for pumps with non water-base coolant
As Delivery rating volume or other detailed information is not included in this catalogue, please let us know the viscosity (cSt) of your oil-base coolant.

2M series (20kgf/cm²)

For 1.5 - 2 MPa (15 - 20 kgf/cm²) system; Little energy loss, stable pressure, super-short leg, and good self-priming performance

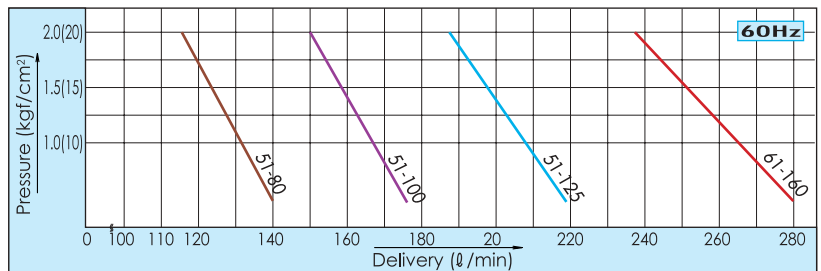
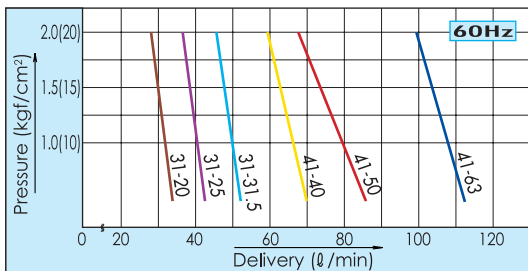
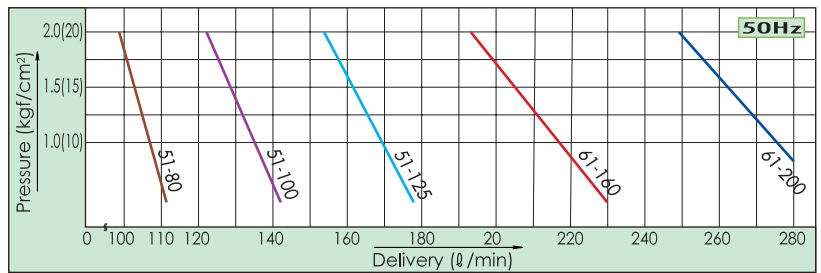
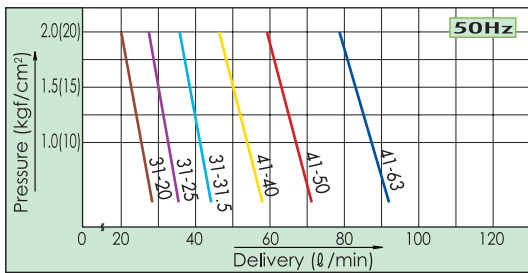


Performance Table

min ⁻¹ (r.p.m)	Model No.		Delivery (ℓ/min)						Power input (kW)					
			0.5MPa (5kgf/cm ²)	1.0MPa (10kgf/cm ²)	1.3MPa (13kgf/cm ²)	1.5MPa (15kgf/cm ²)	1.8MPa (18kgf/cm ²)	2.0MPa (20kgf/cm ²)	0.5MPa (5kgf/cm ²)	1.0MPa (10kgf/cm ²)	1.3MPa (13kgf/cm ²)	1.5MPa (15kgf/cm ²)	1.8MPa (18kgf/cm ²)	2.0MPa (20kgf/cm ²)
1500 [50Hz]	CQT31	- 20	28	25	23	23	21	20	0.5	0.8	0.9	1.0	1.2	1.3
		- 25	35	32	31	30	28	27	0.6	0.9	1.1	1.3	1.5	1.6
		- 31.5	44	41	39	38	36	35	0.8	1.2	1.4	1.6	1.9	2.0
	CQT41	- 40	57	53	51	50	47	46	0.8	1.4	1.7	1.9	2.3	2.5
		- 50	71	67	65	63	61	59	1.2	1.8	2.2	2.5	2.9	3.1
		- 63	92	88	85	83	80	78	1.5	2.3	2.8	3.1	3.6	3.9
	CQT51	- 80	114	107	103	101	97	94	1.9	2.9	3.5	3.9	4.5	4.9
		-100	144	137	133	130	125	122	2.3	3.6	4.4	4.9	5.7	6.2
		-125	178	169	165	162	157	154	2.9	4.4	5.4	6.0	6.9	7.6
	CQT61	-160	228	217	210	206	198	193	3.7	5.7	6.9	7.7	8.9	9.7
		-200	289	275	267	261	253	248	4.6	7.1	8.6	9.6	11.1	12.1
	1800 [60Hz]	CQT31	- 20	34	31	30	29	28	27	0.6	1.0	1.1	1.3	1.5
- 25			43	40	39	38	36	35	0.8	1.2	1.4	1.6	1.8	2.0
- 31.5			53	50	49	48	46	45	1.0	1.5	1.8	2.0	2.3	2.5
CQT41		- 40	70	66	64	62	60	59	1.2	1.8	2.2	2.4	2.8	3.0
		- 50	87	83	81	79	77	76	1.5	2.3	2.8	3.1	3.6	3.9
		- 63	112	108	106	104	102	99	1.9	2.9	3.5	3.9	4.5	4.9
CQT51		- 80	137	130	126	123	118	115	2.4	3.6	4.4	4.9	5.6	6.1
		-100	174	166	161	157	152	149	3.0	4.5	5.5	6.1	7.0	7.6
		-125	215	206	201	197	192	188	3.7	5.6	6.7	7.5	8.6	9.4
CQT61		-160	275	262	254	249	241	236	4.7	7.1	8.6	9.5	10.9	11.9

Using water-base coolant. Please contact us for the data using non water-base.

Performance Chart



The pump types shown in the above chart are all CQT.

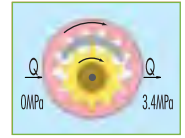
Pump/Motor Combination

Model No.	Delivery (ℓ/min)		Motor(kW)							
	50Hz	60Hz	0.75	1.5	2.2	3.7	5.5	7.5	11	15
CQT31-※	20~34	27~45	△	○	○	○				
CQT41-※	46~78	59~99			○	○	○			
CQT51-※	94~154	115~188				△	○	○		
CQT61-※	193~248	236					○	○	○	○

- Indicates standard combinations.
- Several combinations in color show direct coupled type.
- △ Indicates optional production type.

3.5M series (35 kgf/cm²)

For 3 MPa (30 kgf/cm²) system;
Most economical pump can be selected

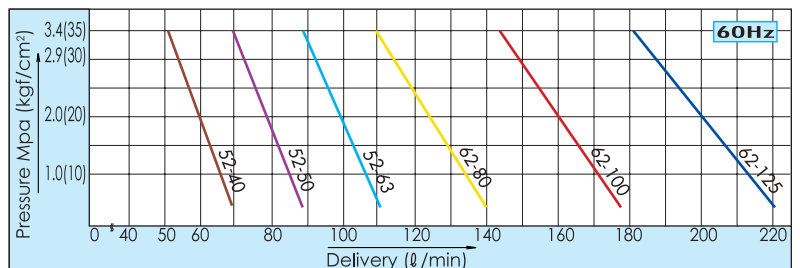
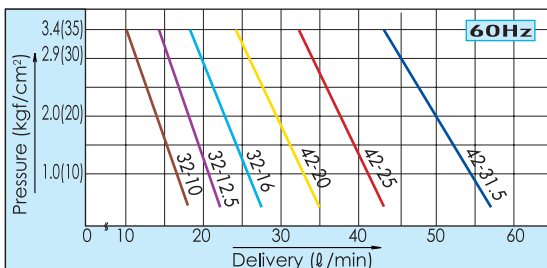
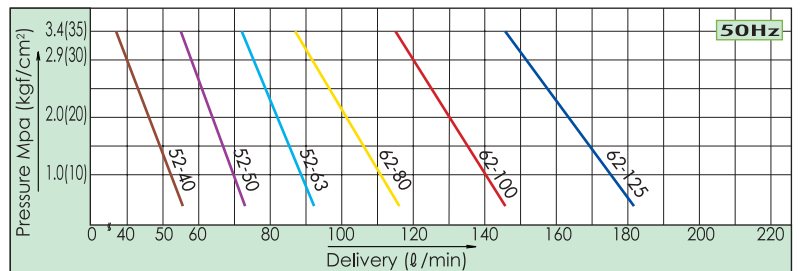
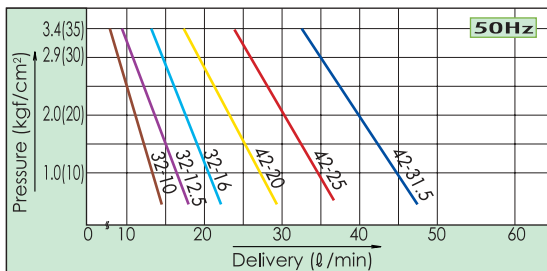


Performance Table

min ⁻¹ (r.p.m)	Model No.		Delivery (ℓ/min)					Power input (kW)				
			1.0MPa (10kgf/cm ²)	2.0MPa (20kgf/cm ²)	2.5MPa (25kgf/cm ²)	2.9MPa (30kgf/cm ²)	3.4MPa (35kgf/cm ²)	1.0MPa (10kgf/cm ²)	2.0MPa (20kgf/cm ²)	2.5MPa (25kgf/cm ²)	2.9MPa (30kgf/cm ²)	3.4MPa (35kgf/cm ²)
1500 [50Hz]	CQT32	- 10	13	10	9	8	6	0.4	0.6	0.8	0.9	1.0
		- 12.5	16	14	12	11	9	0.5	0.8	1.0	1.1	1.3
		- 16	20	17	16	15	14	0.6	1.0	1.2	1.4	1.6
	CQT42	- 20	27	23	21	19	17	0.7	1.3	1.5	1.8	2.0
		- 25	34	30	28	26	24	0.9	1.6	1.9	2.2	2.5
		- 31.5	44	39	37	35	32	1.2	2.0	2.4	2.8	3.2
	CQT52	- 40	53	48	45	42	39	1.4	2.4	2.9	3.4	3.9
		- 50	70	64	61	58	55	1.8	3.1	3.7	4.4	5.0
		- 63	89	82	79	76	72	2.3	3.9	4.7	5.5	6.3
	CQT62	- 80	110	101	96	91	86	2.8	4.9	5.9	6.9	7.9
		-100	141	130	125	119	114	3.6	6.1	7.4	8.6	9.9
		-125	175	164	158	152	146	4.4	7.5	9.1	10.6	12.1
1800 [60Hz]	CQT32	- 10	16	13	12	11	10	0.5	0.8	0.9	1.1	1.2
		- 12.5	20	17	16	15	14	0.6	1.0	1.2	1.4	1.6
		- 16	25	22	21	20	19	0.7	1.2	1.4	1.7	1.9
	CQT42	- 20	33	30	28	26	24	0.9	1.6	1.9	2.2	2.5
		- 25	41	38	36	34	32	1.1	1.9	2.3	2.7	3.1
		- 31.5	54	50	47	45	43	1.5	2.5	2.9	3.4	3.9
	CQT52	- 40	65	59	57	54	51	1.8	3.0	3.6	4.2	4.8
		- 50	85	79	75	72	69	2.3	3.8	4.6	5.3	6.1
		- 63	107	101	97	94	90	2.8	4.8	5.7	6.7	7.7
	CQT62	- 80	134	124	119	114	109	3.6	6.0	7.2	8.4	9.6
		-100	171	160	154	149	143	4.5	7.5	9.0	10.5	12.1
		-125	212	200	193	187	181	5.5	9.3	11.1	13.0	14.8

Using water-base coolant. Please contact us for the data using non water-base.

Performance Chart



The pump types shown in the above chart are all CQT.

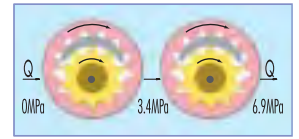
Pump/Motor Combination

Model No.	Delivery (ℓ/min)		Motor(kW)							
	50Hz	60Hz	0.75	1.5	2.2	3.7	5.5	7.5	11	15
CQT32-※	6~13	10~18	△	○	○					
CQT42-※	17~32	24~43		○	○	○				
CQT52-※	39~72	51~90				○	○			
CQT62-※	86~146	109~181					○	○	○	○

- Indicates standard combinations.
- Several combinations in color show direct coupled type.
- △ Indicates optional production type.

7M series (70kgf/cm²)

For 5 - 6.9 MPa (50 – 70 kgf/cm²) system;
Low-noise, space-saving

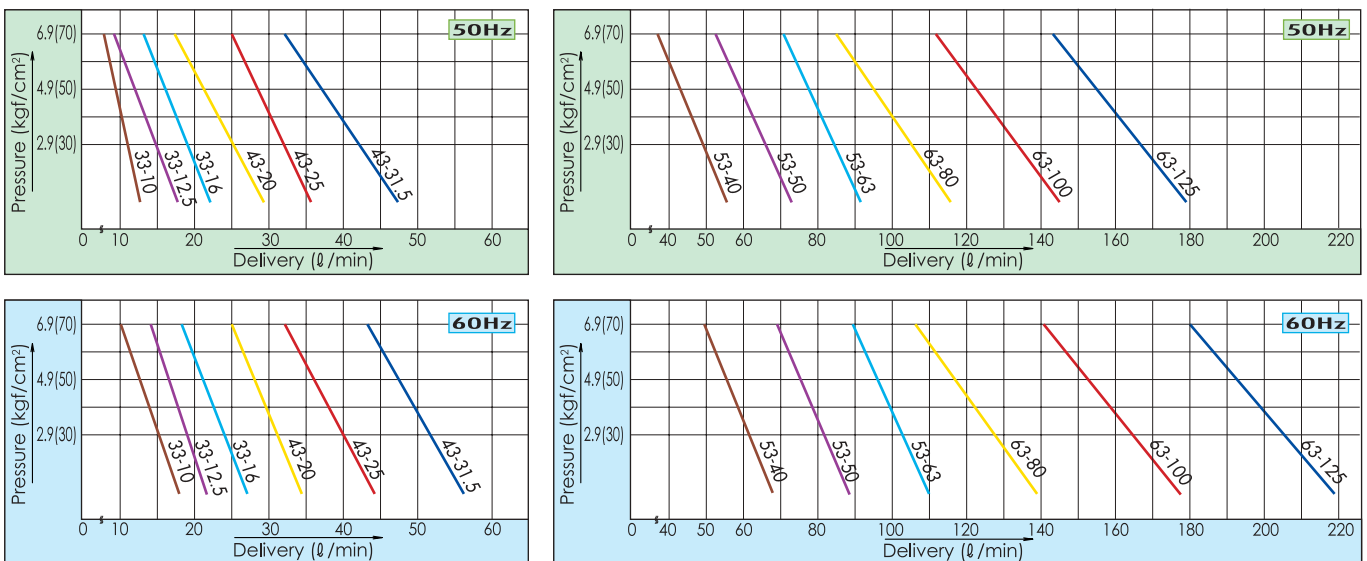


Performance Table

min ⁻¹ (r.p.m)	Model No.	Delivery (ℓ/min)						Power input (kW)						
		2.0MPa (20kgf/cm ²)	2.9MPa (30kgf/cm ²)	3.9MPa (40kgf/cm ²)	4.9MPa (50kgf/cm ²)	5.9MPa (60kgf/cm ²)	6.9MPa (70kgf/cm ²)	2.0MPa (20kgf/cm ²)	2.9MPa (30kgf/cm ²)	3.9MPa (40kgf/cm ²)	4.9MPa (50kgf/cm ²)	5.9MPa (60kgf/cm ²)	6.9MPa (70kgf/cm ²)	
1500 [50Hz]	CQT33	- 10	13	11	10	9	8	6	0.8	1.0	1.3	1.6	1.8	2.1
		- 12.5	16	15	14	13	11	10	1.0	1.3	1.6	2.0	2.3	2.6
		- 16	20	19	17	16	15	14	1.2	1.6	2.0	2.4	2.8	3.2
	CQT43	- 20	27	25	23	21	19	17	1.6	2.1	2.6	3.1	3.6	4.2
		- 25	34	32	30	28	26	25	1.9	2.6	3.2	3.9	4.5	5.1
		- 31.5	44	42	39	37	35	32	2.5	3.3	4.1	4.9	5.8	6.6
	CQT53	- 40	53	50	47	44	41	38	3.0	4.0	5.0	6.0	7.0	8.0
		- 50	69	66	63	59	56	53	3.8	5.1	6.4	7.7	8.9	10.2
		- 63	88	85	81	78	74	71	4.8	6.4	8.0	9.6	11.2	12.8
	CQT63	- 80	110	105	99	94	89	84	6.0	8.0	10.0	12.0	14.0	16.0
		-100	139	134	128	123	117	112	7.6	10.1	12.6	15.1	17.6	20.2
		-125	175	169	162	156	150	144	9.3	12.4	15.5	18.6	21.7	24.8
1800 [60Hz]	CQT33	- 10	16	15	13	12	11	10	1.0	1.3	1.6	1.9	2.2	2.5
		- 12.5	20	19	18	17	15	14	1.2	1.6	2.0	2.4	2.8	3.2
		- 16	25	24	22	21	20	19	1.5	2.0	2.5	3.0	3.5	3.9
	CQT43	- 20	33	31	29	28	26	25	2.0	2.6	3.2	3.9	4.5	5.1
		- 25	41	40	38	36	34	32	2.4	3.2	4.0	4.8	5.5	6.3
		- 31.5	54	52	50	47	45	43	3.1	4.1	5.1	6.1	7.1	8.1
	CQT53	- 40	64	61	58	55	52	49	3.8	5.0	6.2	7.4	8.6	9.8
		- 50	84	81	78	74	71	68	4.9	6.4	7.9	9.5	11.0	12.5
		- 63	107	103	100	96	92	89	6.1	8.0	9.9	11.8	13.8	15.7
	CQT63	- 80	133	128	123	117	112	107	7.7	10.1	12.5	14.9	17.3	19.7
		-100	170	164	159	153	147	141	9.6	12.6	15.7	18.7	21.7	24.7
		-125	211	205	199	192	186	180	11.8	15.6	19.3	23.0	26.7	30.4

Using water-base coolant. Please contact us for the data using non water-base.

Performance Chart



The pump types shown in the above chart are all CQT.

Pump/Motor Combination

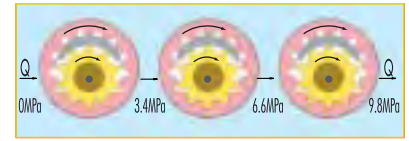
Model No.	Delivery (ℓ/min)		Motor(kW)									
	50Hz	60Hz	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30
CQT33-※	6~13	10~18	○	○	○	○						
CQT43-※	17~32	24~43			○	○	○					
CQT53-※	38~71	49~89				○	○	○				
CQT63-※	84~144	107~180					○	○	○	○	○	○

- Indicates standard combinations.
- Several combinations in color show direct coupled type.



10M series (100kgf/cm²)

For 9.8 MPa (100kgf/cm²) system;
Low-noise

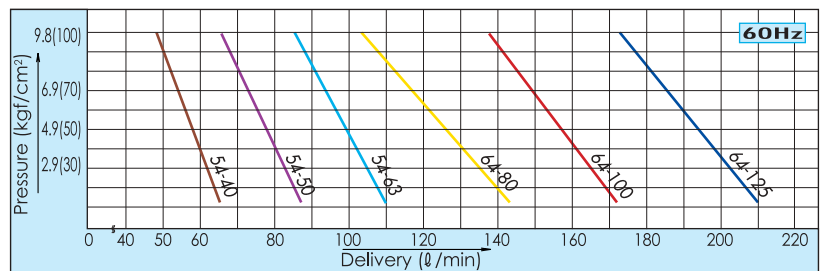
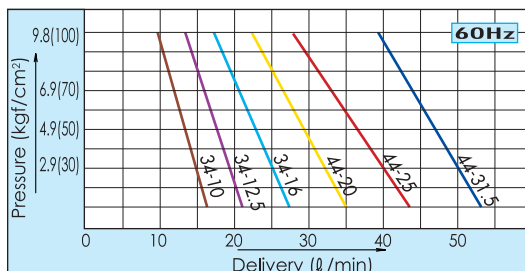
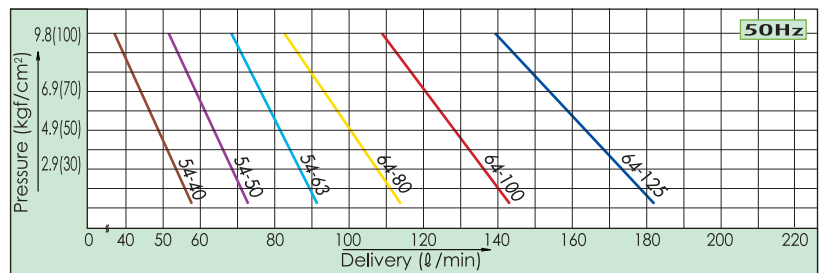
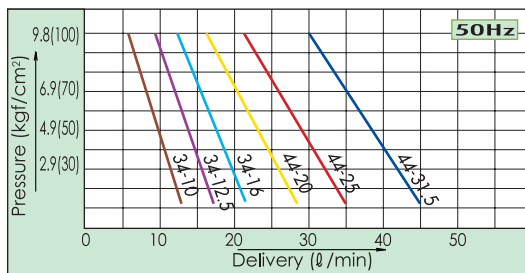


Performance Table

min ⁻¹ (r.p.m)	Model No.		Delivery (ℓ/min)						Power input (kW)					
			2.9MPa (30kgf/cm ²)	4.9MPa (50kgf/cm ²)	6.9MPa (70kgf/cm ²)	7.8MPa (80kgf/cm ²)	8.8MPa (90kgf/cm ²)	9.8MPa (100kgf/cm ²)	2.9MPa (30kgf/cm ²)	4.9MPa (50kgf/cm ²)	6.9MPa (70kgf/cm ²)	7.8MPa (80kgf/cm ²)	8.8MPa (90kgf/cm ²)	9.8MPa (100kgf/cm ²)
1500 [50Hz]	CQT34	- 10	12	10	9	8	7	6	1.2	1.7	2.2	2.5	2.7	3.0
		- 12.5	16	14	12	11	10	9	1.5	2.1	2.8	3.1	3.5	3.8
		- 16	20	17	15	14	13	12	1.8	2.6	3.4	3.9	4.3	4.7
	CQT44	- 20	26	23	20	19	17	16	2.4	3.4	4.5	5.0	5.5	5.9
		- 25	33	29	26	25	23	22	2.9	4.2	5.5	6.2	6.8	7.4
		- 31.5	42	39	35	33	32	30	3.8	5.4	7.1	7.9	8.7	9.5
	CQT54	- 40	53	48	44	42	40	38	4.5	6.5	8.5	9.5	10.5	11.5
		- 50	68	63	59	56	54	52	5.9	8.4	10.9	12.2	13.5	14.8
		- 63	87	82	77	74	71	68	7.4	10.5	13.7	15.4	17.0	18.6
	CQT64	- 80	107	100	93	89	85	82	9.2	13.2	17.3	19.3	21.3	23.3
		-100	136	128	120	116	112	108	11.6	16.6	21.7	24.2	26.7	29.2
		-125	174	162	150	147	143	139	14.3	20.5	26.7	29.7	32.8	36.0
1800 [60Hz]	CQT34	- 10	15	13	12	11	10	9	1.5	2.1	2.7	3.1	3.4	3.7
		- 12.5	20	18	16	15	14	13	1.9	2.8	3.5	3.9	4.3	4.6
		- 16	25	22	20	19	18	17	2.3	3.3	4.3	4.7	5.2	5.7
	CQT44	- 20	32	29	26	25	24	22	3.0	4.3	5.5	6.2	6.7	7.4
		- 25	40	37	34	32	30	28	3.7	5.3	6.8	7.6	8.4	9.1
		- 31.5	52	48	45	43	41	39	4.8	6.8	8.8	9.7	10.7	11.7
	CQT54	- 40	62	58	54	52	50	48	5.8	8.2	10.6	11.7	12.9	14.1
		- 50	83	78	73	71	68	66	7.5	10.5	13.6	15.1	16.6	18.2
		- 63	105	100	94	91	89	86	9.3	13.2	17.0	18.9	20.8	22.7
	CQT64	- 80	131	123	115	112	107	103	11.7	16.7	21.4	23.8	26.2	28.6
		-100	167	158	149	145	140	136	14.8	20.8	26.9	29.8	32.9	35.9
		-125	203	198	188	183	178	173	18.2	25.7	33.1	36.8	40.5	44.2

Using water-base coolant. Please contact us for the data using non water-base.

Performance Chart



The pump types shown in the above chart are all CQT.

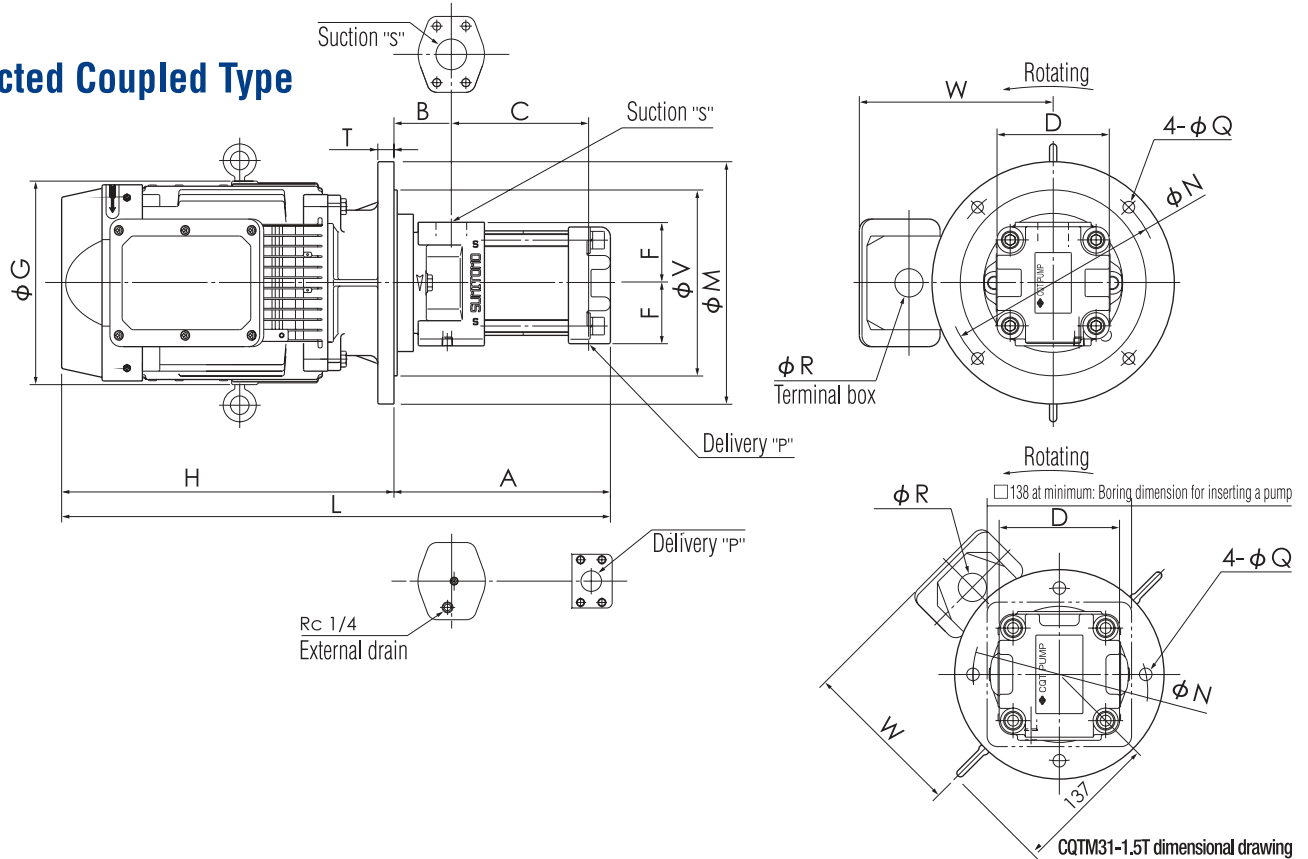
Pump/Motor Combination

Model No.	Delivery (ℓ/min)		Motor(kW)								
	50Hz	60Hz	3.7	5.5	7.5	11	15	18.5	22	30	37
CQT34-※	6~12	9~17	○	○	○	○	○	○	○	○	○
CQT44-※	16~30	22~39	○	○	○	○	○	○	○	○	○
CQT54-※	38~68	48~86	○	○	○	○	○	○	○	○	○
CQT64-※	82~139	103~173	○	○	○	○	○	○	○	○	○

- Indicates standard combinations.
- Several combinations in color show direct coupled type.
- ☆ Indicates possible combinations, however the dimensional information is not included in this catalogue. Please contact us for your request.

Dimensions **2M·3.5M·7M·10M** (common) series

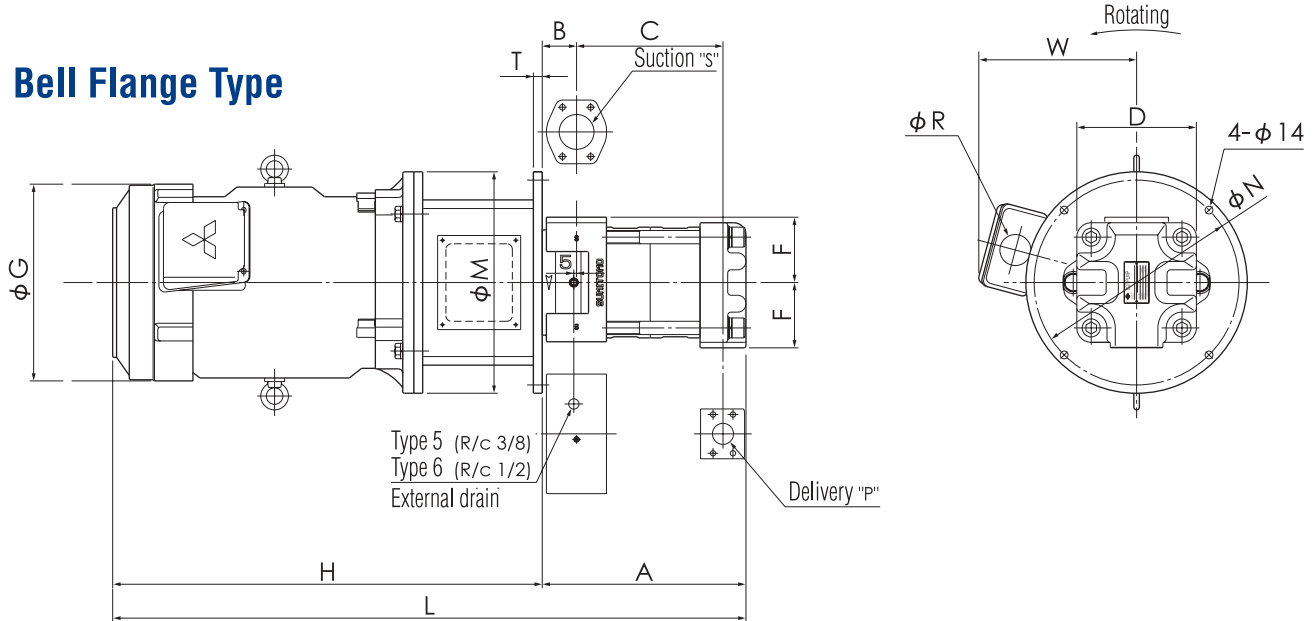
Directed Coupled Type



Model No.	A	B	C	D	F	G	H	L	M	N	Q	R	T	V	W	Weight	Suction (S)	Delivery (P)		
CQTM31-※	1.5T	199	63	115	115	60	198	282	481	200	165	12.0	27	12	□138	153	34	QG※-10	QG※-06	
	2.2T	186	50				311	311	497	250	215	14.5			180	38				
	3.7T	185	49				214	359	544	300	265	35			20	230	164			45
CQTM41-※	2.2T	244	76	141	139	75	198	311	555	250	215	14.5	27	12	φ185	153	51	QG※-12	QG※-08	
	3.7T	242	74				214	359	601	300	265	35			20	240	164			58
	5.5T	239	71				252	412	651	300	265	35			20	230	240			76
CQTM32-※	1.5T	178	63	94	115	60	198	282	460	200	165	12.0	27	12	□138	153	32	QG※-10	QG※-06	
	2.2T	165	50				311	311	476	250	215	14.5			180	37				
	3.7T	217	76				198	311	528	250	215	14.5			27	12	φ185			153
5.5T	212	71	214	359	574	300	265	35	20	230	164	56								
7.5T	212	71	252	412	624	300	265	35	20	230	240	73								
CQTM33-※	1.5T	223	63	139	115	60	198	282	505	200	165	12	27	12	□138	153	35	QG※-10	QG※-06	
	2.2T	210	50				311	311	521	250	215	14.5			180	39				
	3.7T	209	49				214	359	568	300	265	35			20	230	164			46
	5.5T	206	46				252	412	618	300	265	35			20	230	240			64
CQTM43-※	3.7T	271	74	170	139	75	214	359	630	250	215	14.5	27	12	φ185	164	58	QG※-12	QG※-08	
	5.5T	268	71				252	412	680	300	265	35			20	230	240			76
	7.5T	268					450	718	300	265	35	20			230	240	82			
CQTM34-※	3.7T	254	49	184	115	60	214	359	613	250	215	14.5	27	12	180	164	49	QG※-10	QG※-06	
	5.5T	251	46				252	412	663	300	265	35			20	230	240			67
	7.5T	251					450	701	300	265	35	20			230	240	73			
CQTM44-※	5.5T	324	71	226	139	75	252	412	736	300	265	14.5	35	20	230	240	79	QG※-12	QG※-08	
	7.5T	324					450	774	300	265	14.5	35			20	230	240			85

□φ: Boring dimension for inserting a pump.

Bell Flange Type



Model No.	A	B	C	D	F	G	H	L	M	N	R	T	W	Weight	Suction (S)	Delivery (P)	
CQTM51-※	5.5T	225	53	170	170	93	266	589	844	350	320	27	13	194	120	QG※-16	QG※-10
	7.5T							627	882						126		
CQTM61-※	5.5T	323	62	217	216	118	266	589	912	400	370	27	16	194	176	QG※-20	QG※-12
	7.5T							627	950						186		
	11.0T						312	693	1013	210							
	15.0T						733	1053	263	230							
CQTM52-※	3.7T	221	53	136	170	93	266	523	744	350	320	27	13	177	QG※-16	QG※-10	
	5.5T							589	810					115			
	7.5T							627	848					125			
CQTM62-※	5.5T	281	62	175	216	118	266	589	867	400	370	27	16	194	160	QG※-20	QG※-12
	7.5T							627	905						170		
	11.0T						312	693	971	195							
	15.0T						733	1011	263	215							
CQTM53-※	5.5T	291	53	206	170	93	266	589	880	350	320	27	13	194	125	QG※-16	QG※-10
	7.5T							627	918						135		
	11.0T						312	693	984	165							
	15.0T						733	1024	263	185							
CQTM63-※	11.0T	371	62	265	216	118	312	693	1061	400	370	56	16	263	220	QG※-20	QG※-12
	15.0T							733	1101						240		
	18.5T						356	776	1144	280							
	30.0T						814	1182	285	295	325						
CQTM44-※	11.0T	300	47	226	139	75	312	669	969	350	320	56	13	263	145	QG※-16	QG※-10
CQTM54-※	11.0T	361	53	276	170	93	312	693	1098	350	320	56	13	263	195	QG※-16	QG※-10
	15.0T							733	356						776		
	18.5T						356	776	1137	285	240						
CQTM64-※	30.0T	458	62	355	216	118	356	814	1272	400	370	56	16	285	350	QG※-20	QG※-12
	37.0T						399	957	1415					348	420		

Dimensions **2M·3.5M·7M·10M** (common) series

Piping Flange (Not included in pump package)

Model Number

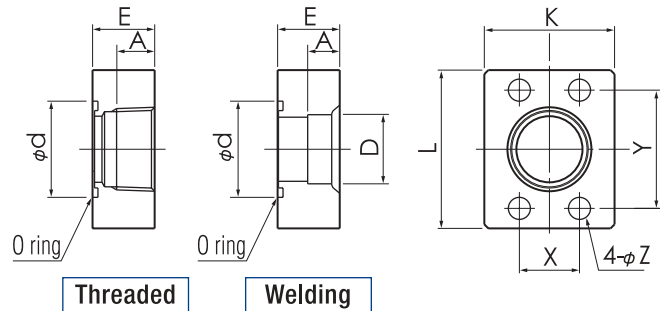
QG T-12 ※ -A

Basic model
CQT piping flange

Design No.

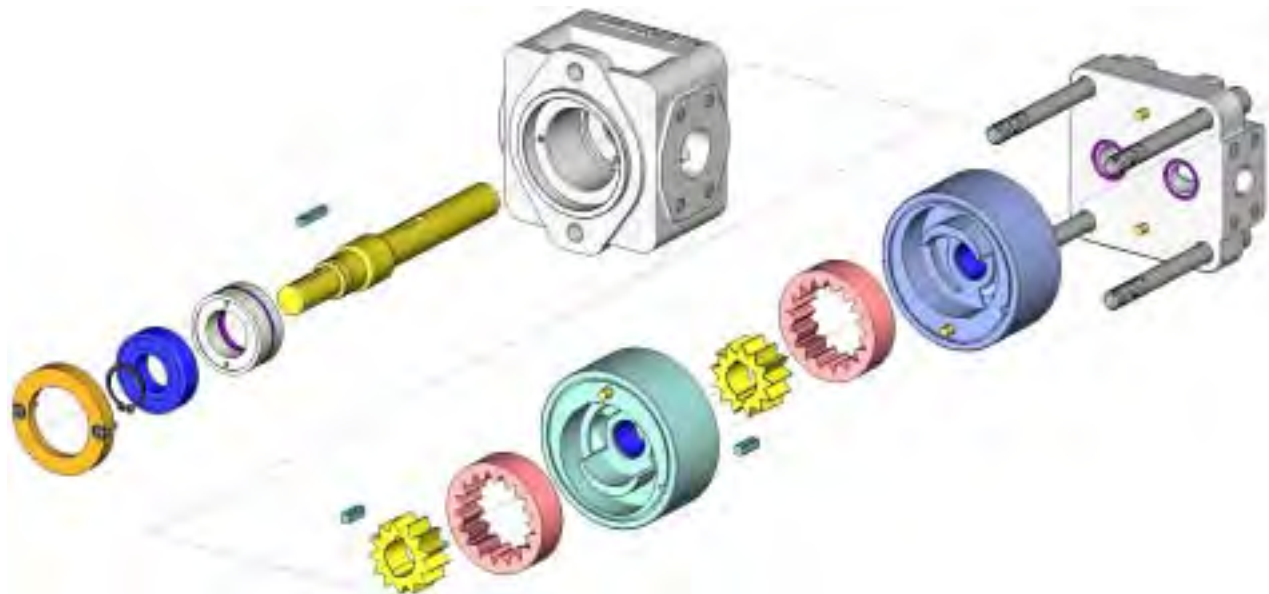
Option

Type T: Threaded W: Welding **Piping size** 04~20



Piping flange No.	Size	A		d		D		E	K	L	X	Y	Z	O ring JISB2401	Mounting bolt JISB1176
		T	W	T	W	T	W								
QG※-04	1/2"	17.2	11	12.5	12	RC1/2	φ17.8	21	38	54	17.5	38	9	-1BP22A	M8×35
QG※-06	3/4"	19.2	12	20	16	RC3/4	φ22.2	24	50	65	22	48	11	-1BP28	M10×40
QG※-08	1"	23.2	14	25	20	RC1	φ27.7	31		70	26	52		-1BP34	M10×50
QG※-10	1 1/4"	25.5	16	32	25	RC1 1/4	φ34.5	37	65	79	30	59	13	-1BP42	M12×50
QG※-12	1 1/2"		18	38	32	RC1 1/2	φ43.2		75	94	36	70		-1BP50	
QG※-16	2"	29.8	20	50	40	RC2	φ49.1	37	85	100	43	78	13	-1BP60	M12×50
QG※-20	2 1/2"	33.5	22	63	50	RC2 1/2	φ61.1		100	110	51	89		-1BP70	

T: Thread type W: Welding type



Instructions

Please read carefully and understand the “Product Manual” before you use this product.

● Instructions for designing, installation and piping

1. Top panel of tank: Please make sure the pump insertion area and panel thickness does not hamper a flange as shown in Figure A.
2. External drain: Please choose joints and pipes with proper inner diameters to accommodate 0.03 MPa (0.3 kgf/cm²) or less back pressure. (See dimension “a” in Figure A) Please adjust the height of drain pipe outlet below the fluid level in tank.
3. To make constant lubricant for shaft seal, please position the port of piping higher than port as showing Figure B, and make sure pump always filled with fluid.

Figure A

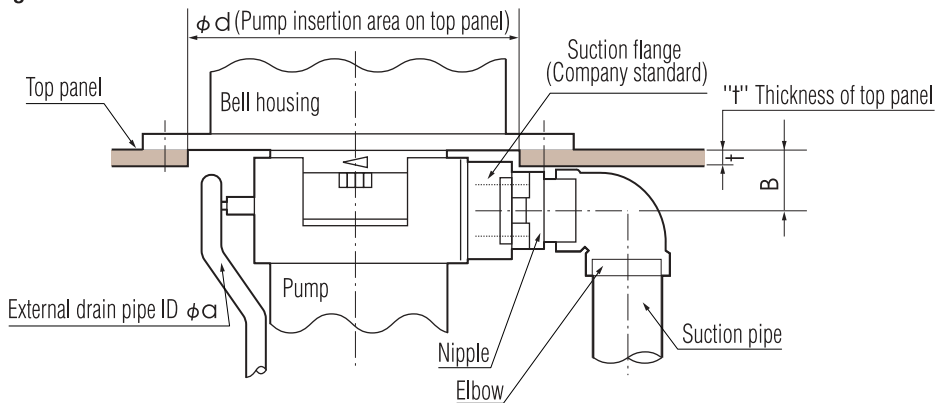
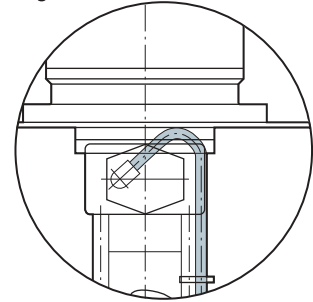
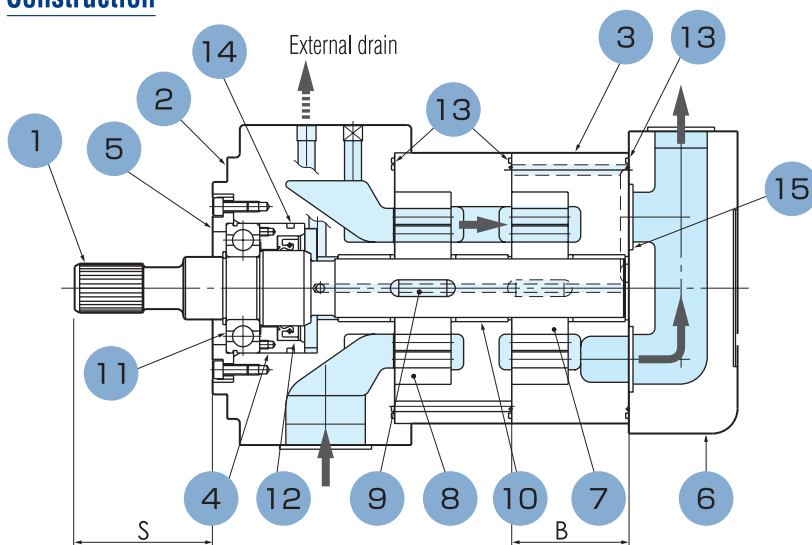


Figure B



	d	t	B	ID φa
Type 4	232 or less	9.5 or less	47	8 or more
Type 5	279 or less	10.5 or less	53	10 or more
Type 6	329 or less	12.0 or less	62	14 or more

Construction



No.	Qty	Part name
1	1	Shaft
2	1	Front cover
3	1	Gear housing
4	1	Seal housing
5	1	Bearing cover
6	1	End cover
7	2	Pinion gear
8	2	Ring gear
9	2	Key
10	3	Bearing
11	1	Ball bearing
12	1	Shaft seal
13	3	O ring
14	1	O ring
15	2	O ring

The above drawing and parts list show **7M Series**.

3.5M Series has the similar construction single stage without "B" block.

"S" portion of shaft in the above drawing is spline type.

However, for Bell-flange, "S" portion is key type.

Motor Current Value

● **Directly Coupled Type**

[Unit : A]

Capacity	Voltage / Frequency	With 100% load
1.5 kW	200V/50Hz	7.00
	200V/60Hz	6.20
	220V/60Hz	6.00
	380V/50Hz	3.70
2.2 kW	200V/50Hz	9.80
	200V/60Hz	8.90
	220V/60Hz	8.50
	380V/50Hz	5.20
3.7 kW	200V/50Hz	16.0
	200V/60Hz	14.8
	220V/60Hz	14.0
	380V/50Hz	8.50
5.5 kW	200V/50Hz	23.8
	200V/60Hz	21.0
	220V/60Hz	20.0
	380V/50Hz	12.5
7.5 kW	200V/50Hz	31.8
	200V/60Hz	28.2
	220V/60Hz	27.0
	380V/50Hz	16.7

● **Bell Flange Type**

[Unit : A]

Capacity	Voltage / Frequency	With 100% load
5.5 Kw	200V/50Hz	21.5
	200V/60Hz	20.6
	220V/60Hz	19.2
	380V/50Hz	11.1
7.5 Kw	200V/50Hz	28.7
	200V/60Hz	27.6
	220V/60Hz	25.5
	380V/50Hz	14.8
11.0 Kw	200V/50Hz	41.8
	200V/60Hz	39.7
	220V/60Hz	37.0
	380V/50Hz	21.4
15.0 Kw	200V/50Hz	55.4
	200V/60Hz	52.9
	220V/60Hz	49.3
	380V/50Hz	28.4
18.5 Kw	200V/50Hz	67.0
	200V/60Hz	65.1
	220V/60Hz	59.8
	380V/50Hz	34.7
22.0 Kw	200V/50Hz	80.2
	200V/60Hz	77.3
	220V/60Hz	71.6
	380V/50Hz	41.3
30.0 Kw	200V/50Hz	108.0
	200V/60Hz	104.0
	220V/60Hz	96.1
	380V/50Hz	55.7

Micron VS. Mesh Conversion Table

Mesh	150	170	200	250	270	300	500	600	800	1000	1450
Micron(μm)	100	88	75	60	53	50	30	25	20	15	10

Nozzle dia. VS. Pressure

[ℓ/min]

Nozzle dia. φx2	Nozzle outlet pressure MPa(kgf/cm ²)							
	6.9(70)	5.9(60)	4.9(50)	3.9(40)	2.9(30)	2.0(20)	1.5(15)	1.0(10)
0.5 x 2 points	2.3	2.1	1.9	1.7	1.5	1.2	1.1	0.9
1.0 x 2 points	9.2	8.5	7.7	6.9	6.0	4.9	4.2	3.5
1.2 x 2 points	13.2	12.2	11.2	10.0	8.6	7.1	6.1	5.0
1.4 x 2 points	18.0	16.6	15.2	13.6	11.8	9.6	8.3	6.8
1.6 x 2 points	23.5	21.7	19.8	17.7	15.4	12.5	10.9	8.9
1.8 x 2 points	29.7	27.5	25.1	22.5	19.4	15.9	13.7	11.2
2.0 x 2 points	36.7	33.9	31.0	27.7	24.0	19.6	17.0	13.9
2.5 x 2 points	57.3	53.0	48.4	43.3	37.5	30.6	26.5	21.7
3.0 x 2 points	82.5	76.4	69.7	62.4	54.0	44.1	38.2	31.2

Note) The above flow rate are calculated based on inlet pressure with no reference to pressure loss from pump to nozzle.

Instructions

Please read the “Product Manual” carefully and understand it completely before you use this product.

●Coolant fluid

1. In case of using water-soluble coolant, the fluid concentration should be 2% or more.

(Dilution ratio less than 50 times)

2. The cleanliness of coolant should be filtered by 20~30 μ m filter.

●Operating instructions

1. Make sure enough amount of coolant fluid is applied in the tank.

Before starting up, please check to see no foam in coolant fluid that might be generated by pouring.

2. Try activating the motor to check the rotating direction.

It should turn right (clockwise) when you view from the motor fan.

3. At initial testing or after pump change, inch the motor a couple of times (=activate the motor intermittently) in order to fill the pump with coolant fluid.

Activate the motor for 0.5 to 1 second each time for inching.

4. Please contact us for disassembly and re-assembly.

5. **E3P relief valve pressure is set to no load at a time of delivery. Please adjust the pressure to match the conditions for use.**

Turn the pressure adjustment screw to right (clockwise) to increase pressure.