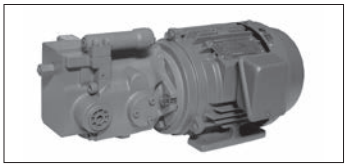
M Series Motor Pumps



Features

- These are motor pumps that integrate a V series piston pump and an electric motor in one body.

Nomenclature

- **Pressure compensator control**

※	–	M	※	※	A	※	※	–	※	※	–	※	※	–	※	※	–	※	※	E
1		2	3		4	5	15		17			12			16			18	19	20

- **Combination control (pressure feedback method)**

※	–	M	※	※	C	※	※	H	X	–	※	※	–	※	※	–	※	※	–	※	※	E
1		2	3		4	7	8	13	15		17			12			16			18	19	20

- **Combination control (solenoid operated method)**

※	–	M	※	※	C	※	※	J	※	X	–	※	※	–	※	※	–	※	※	–	※	※	E
1		2	3		4	7	8	13	14	15		17			12			16			18	19	20

- **Dual pressure control**

※	–	M	※	※	D	※	※	※	X	–	※	※	–	※	※	–	※	※	–	※	※	E
1		2	3		4	9	10	14	15		17			12			16			18	19	20

- **Power-match control**

※	–	M	※	※	SA	※	※	※	–	※	※	–	※	※	–	※	※	E
1		2	3		4	6	11	15		12			16			18	19	20

1 Applicable fluid code (Refer to Page B-1 for the applicable models)
No designation: Petroleum-based hydraulic fluid
W: Water-glycol hydraulic fluid F: Phosphate ester hydraulic fluid

2 Model No. M: M series motor pump

3 Pump capacity
8: V 8 (8.0 cm^3/rev) 15: V15 (14.8 cm^3/rev)
23: V23 (23.0 cm^3/rev) 38: V38 (37.7 cm^3/rev)

4 Control method I (Refer to Page B-1 for the applicable models)
A: Pressure compensator control C: Combination control
D: Dual pressure control SA: Power-match control

5 6 Pressure adjustment range
(See the pressure adjustment range table)

7 9 Low pressure adjustment range
(See the pressure adjustment range table)

8 10 High pressure adjustment range
(See the pressure adjustment range table)

11 FC valve differential pressure
A: 0.7 MPa { 7 kgf/cm^2} B: 1.4 MPa {14 kgf/cm^2}
C: 2.1 MPa {21 kgf/cm^2}

12 Motor output code (See the motor specification table)

13 Control method II
H: Pressure feedback method J: Solenoid operated method

14 Voltage code for the solenoid valve
A: AC 100 V (50/60 Hz), AC 110 V (60 Hz)
B: AC 200 V (50/60 Hz), AC 220 V (60 Hz)
N: DC 12 V P: DC 24 V

15 Piping direction (Refer to Page B-1 for the applicable models)
No designation: Axial port X: Side port
Y :Suction port: Flange
Discharge port: Taper pipe threads*2

16 Design No. (The design No. is subject to change)*1
60: Pump model M8 (50 when 12 Motor output code = 05)
100: Pump model M15
70: Pump model M23
80: Pump model M38

The design number has increased by 10 due to the motor high efficiency restrictions took effect in April 2015.

17 Control method III
(Refer to Page B-1 for the applicable models)
No designation: Without remote control system
RC: With remote control system

18 Voltage specifications*3
1: 200 V (50/60 Hz), 220 V (60 Hz)
4: 400 V (50/60 Hz), 440 V (60 Hz)

19 Terminal box position*3
No code: Top
R: Right

20 Paint color*3 E: Daikin standard colors

Note: *1 Refer to Pages B-11 to 17 for information on forward/backward compatibility.

*2 When "Y" is set for 15 Piping direction, the settings are as follows: 1 Applicable fluid code = No designation (petroleum based hydraulic oil), 4 Control method I = A, 5 Pressure adjustment range = 1, 12 Motor output code = 1, 2, 3, 5.

*3 This is only indicated for optional specifications (when 18 Voltage specifications is set to "4" or 19 Terminal box position is set to "R".)

Note: JR-G (T) 02 and JRP-G02 are recommended for the relief valve of the remote control system. If the vent port is blocked, the pressure compensator does not function and the pump operates at a fixed pressure.

Models and pressure adjustment range table

● Pressure compensator control (4 = A)

5 Pressure adjustment range

Code	Pressure adjustment range MPa {kgf/cm²}	Without remote control system				With remote control system		
		M8	M15	M23	M38	M15	M23	M38
1	0.8 to 7 { 8 to 70}	✓	✓	✓	✓	-	–	–
2	1.5 to 14 {15 to 140}	–	✓	✓	✓	–	–	–
3	1.5 to 21 {15 to 210}	–	–	–	–	✓	–	–
3	3.5 to 21 {35 to 210}	–	✓	✓	✓	–	–	–
4	1.5 to 25 {15 to 250}	–	–	–	–	–	✓	✓
4	3.5 to 25 {35 to 250}	–	–	–	–	–	–	–

● Combination control [4 = C, 13 = H (pressure feedback method) or 13 = J (solenoid operated method)]

7 Low pressure adjustment range

Code	Pressure adjustment range MPa {kgf/cm²}	Pressure feedback method			Solenoid operated method		
		M15	M23	M38	M15	M23	M38
1	1.5 to 7 {15 to 70}	–	–	–	✓	✓	✓
1	2.5 to 7 {25 to 70}	✓	✓	✓	–	–	–
2	1.5 to 14 {15 to 140}	–	–	–	✓	✓	✓
2	2.5 to 14 {25 to 140}	✓	✓	✓	–	–	–

8 High pressure adjustment range

Code	Pressure adjustment range MPa {kgf/cm²}	Without remote control system						With remote control system					
		Pressure feedback method			Solenoid operated method			Pressure feedback method			Solenoid operated method		
		M15	M23	M38	M15	M23	M38	M15	M23	M38	M15	M23	M38
1	1.5 to 7 {15 to 70}	–	–	–	✓	✓	✓	–	–	–	–	–	–
1	2.5 to 7 {25 to 70}	✓	✓	✓	–	–	–	–	–	–	–	–	–
2	1.5 to 14 {15 to 140}	–	–	–	✓	✓	✓	–	–	–	–	–	–
2	2.5 to 14 {25 to 140}	✓	✓	✓	–	–	–	–	–	–	–	–	–
3	3.5 to 21 {35 to 210}	✓	✓	✓	✓	✓	✓	✓	–	–	✓	–	–
4	3.5 to 25 {35 to 250}	–	–	–	–	–	–	–	✓	✓	–	✓	✓

● Dual pressure control (4 = D)

9 Low pressure adjustment range

Code	Pressure adjustment range MPa {kgf/cm²}	M15	M23	M38
1	1.5 to 7 {15 to 70}	✓	✓	✓
2	1.5 to 14 {15 to 140}	✓	✓	✓

Note: If both low and high pressure adjustment ranges are the 1st pattern, the pressure adjustment range becomes 0.8 to 7 MPa {8 to 70 kgf/cm²}.

10 High pressure adjustment range

Code	Pressure adjustment range MPa {kgf/cm²}	Without remote control system			With remote control system		
		M15	M23	M38	M15	M23	M38
1	1.5 to 7 {15 to 70}	✓	✓	✓	–	–	–
2	1.5 to 14 {15 to 140}	✓	✓	✓	–	–	–
3	3.5 to 21 {35 to 210}	✓	✓	✓	✓	–	–
4	3.5 to 25 {35 to 250}	–	–	–	–	✓	✓

● Power-match control (4 = SA)

6 Pressure adjustment range

Code	Pressure adjustment range MPa {kgf/cm²}	M15	M23	M38
1	0.8 to 7 { 8 to 70}	✓	✓	✓
2	1.5 to 14 {15 to 140}	✓	✓	✓
3	3.5 to 21 {35 to 210}	✓	✓	✓

12: Motor output and specifications

Code	Output (kW) (Number of poles: 4P)	Motor rated ampere (A)			Motor starting current (A)			Applicable model			
		200 V (50 Hz)	200 V (60 Hz)	220 V (60 Hz)	200V (50Hz)	200V (60Hz)	220V (60Hz)	M8	M15	M23	M38
05	0.4	2.2	2.0	2.0	11.1	10.7	11.8	✓	–	–	–
1	0.75	4.2 (3.8)*1	3.6 (3.4)*1	3.6 (3.4)*1	28 (27.3)*1	25 (23.8)*1	28 (26.2)*1	✓	✓	–	–
2	1.5	6.8	6.4	6.0	46.6	41	45.1	✓	✓	–	–
3	2.2	10.6	9.4	9.2	96	81	89.1	–	✓	✓	✓
5	3.7	15.6	14.6	13.8	134	118	130	–	✓	✓	✓
7	5.5	23.4	21.4	20.6	200	166	183	–	–	✓	✓
10	7.5	30.8	28.6	27.4	264	218	240	–	–	–	✓

Note: *1 If terminal box position is set to "R", the value in parentheses ( ) applies.

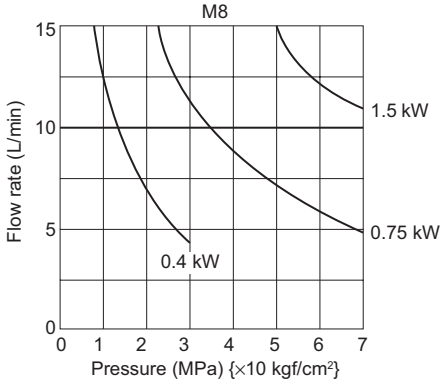
● Electric wiring

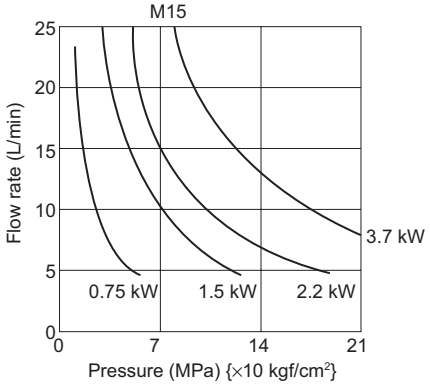
○ Connect the power cable such that the phases at the pump motor and power supply sides are as shown to the right.
Check that the pressure rises at the pressure gauge.
If the motor rotates in the reverse direction, switch the connection between two phases among the three to correct the direction of rotation.

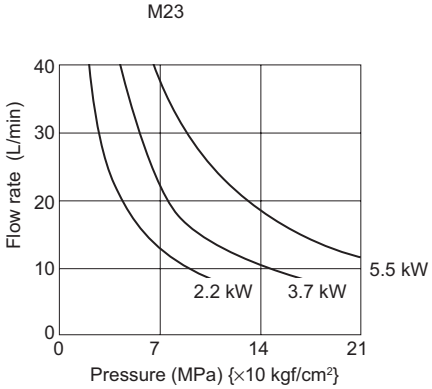
Motor side U—R, V—S, W—T Power supply side

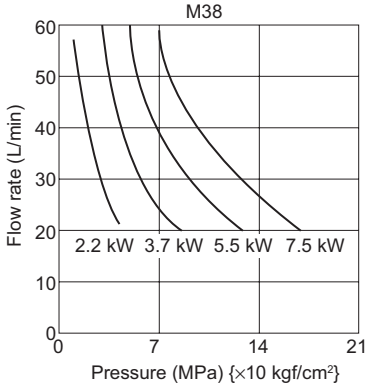
○ Be sure to connect the ground terminal.
○ Install a no-fuse breaker on the main power supply. In addition, install an earth leakage breaker.
○ Products with outputs of 0.75 kW and greater are ones that comply with premium efficiency (IE3), and they tend to have a higher starting current value than products with the old design (IE1).
Depending on the model, the starting current will be up from a few percent to 50%, so pay attention to the design of the power supply system when replacing products of the old design.

Motor output characteristics selection curves





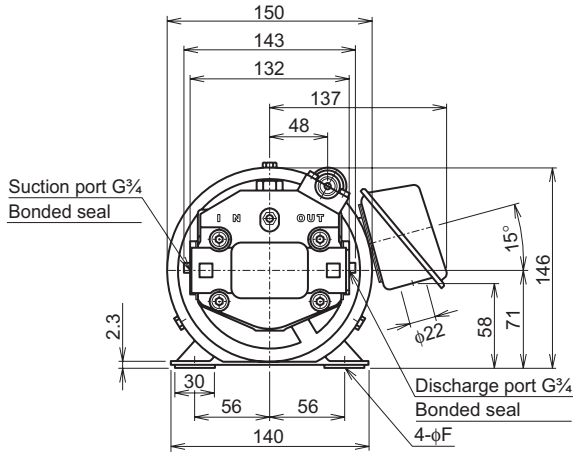


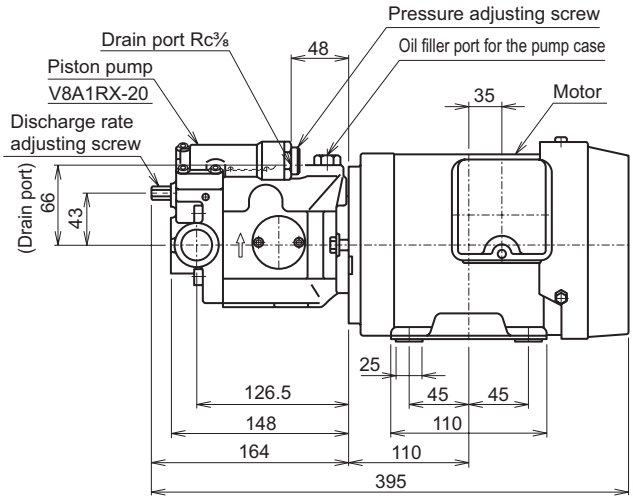


○ Products with outputs of 0.75 kW and greater are ones that comply with premium efficiency (IE3), and have 1 to 2% greater flow rate than products with the old design (IE1), so pay attention to the change in speed when replacing products of the old design.

External dimension diagram

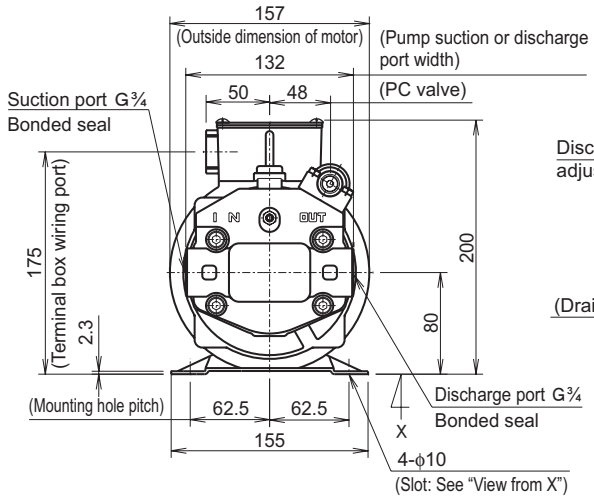
M8A1X-05-50

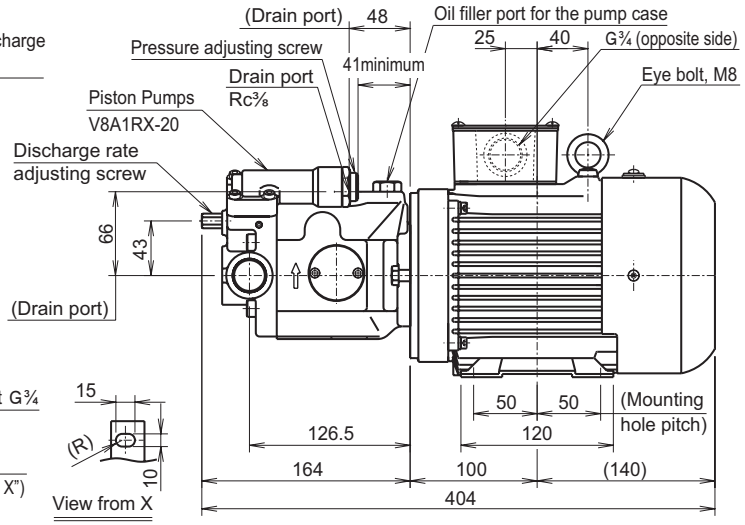




Mass 18 kg

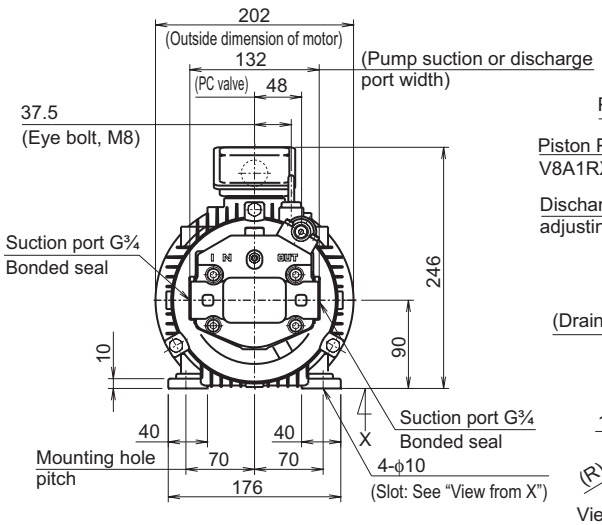
M8A1X-1-60

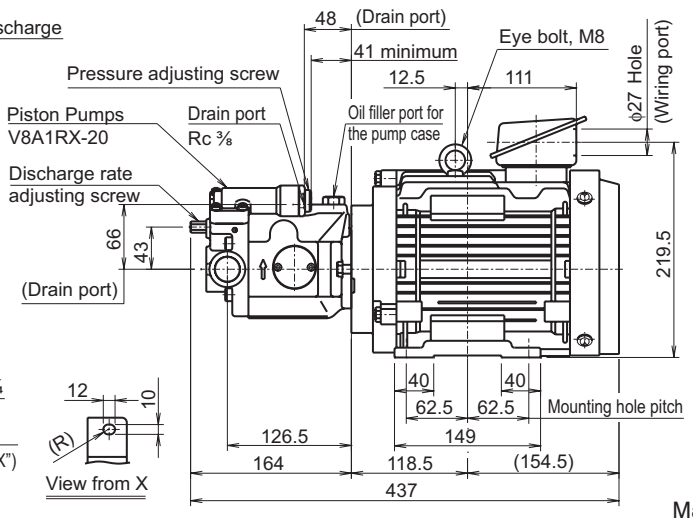




Mass 22 kg

M8A1X-2-60

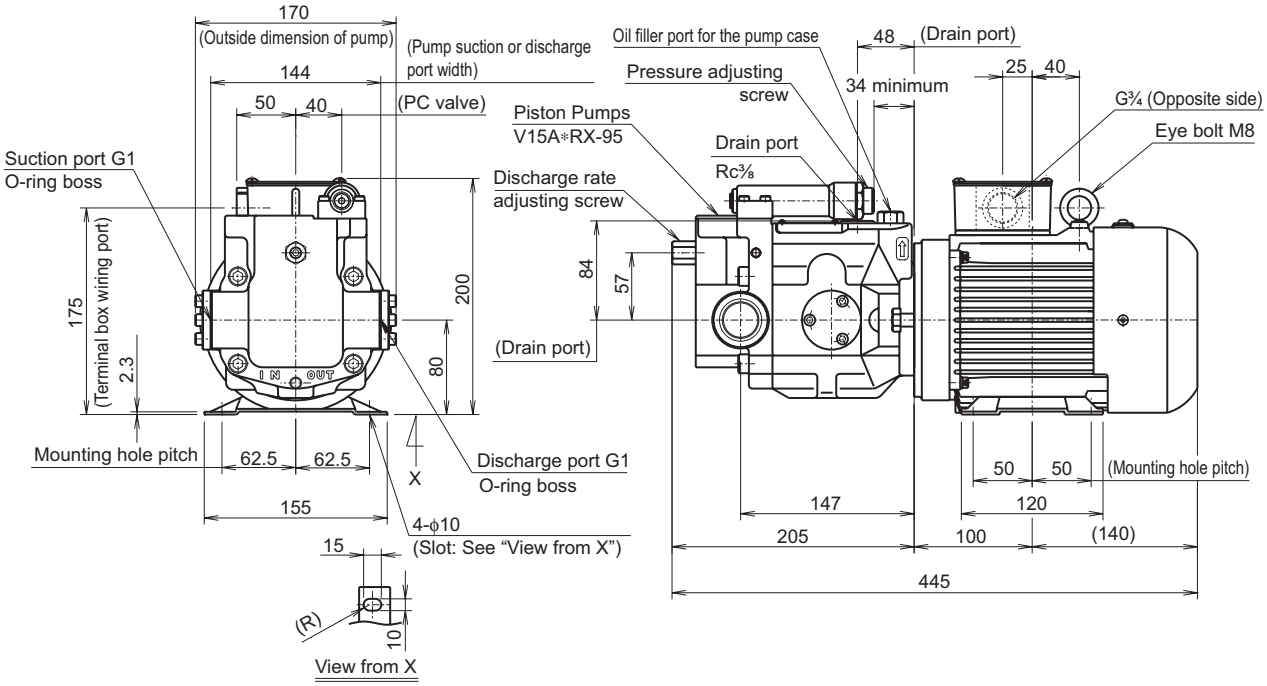




Mass 32 kg

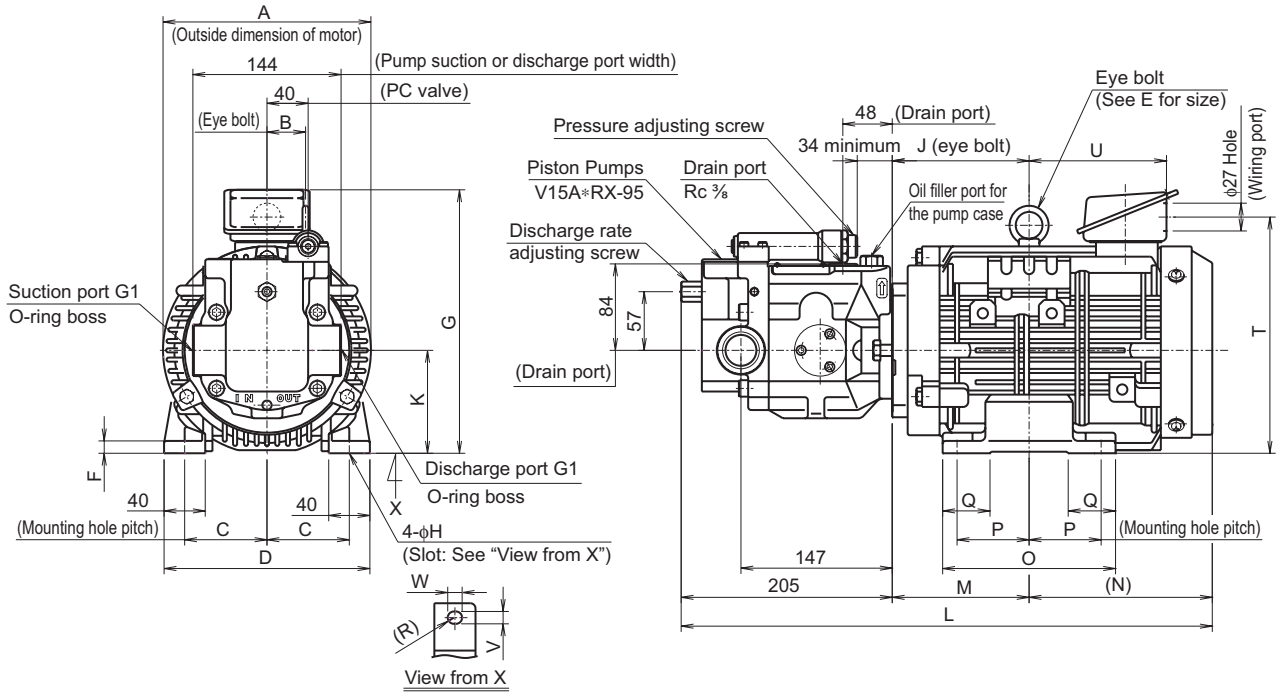
External dimension diagram

M15A※X-1-100



Mass 29 kg

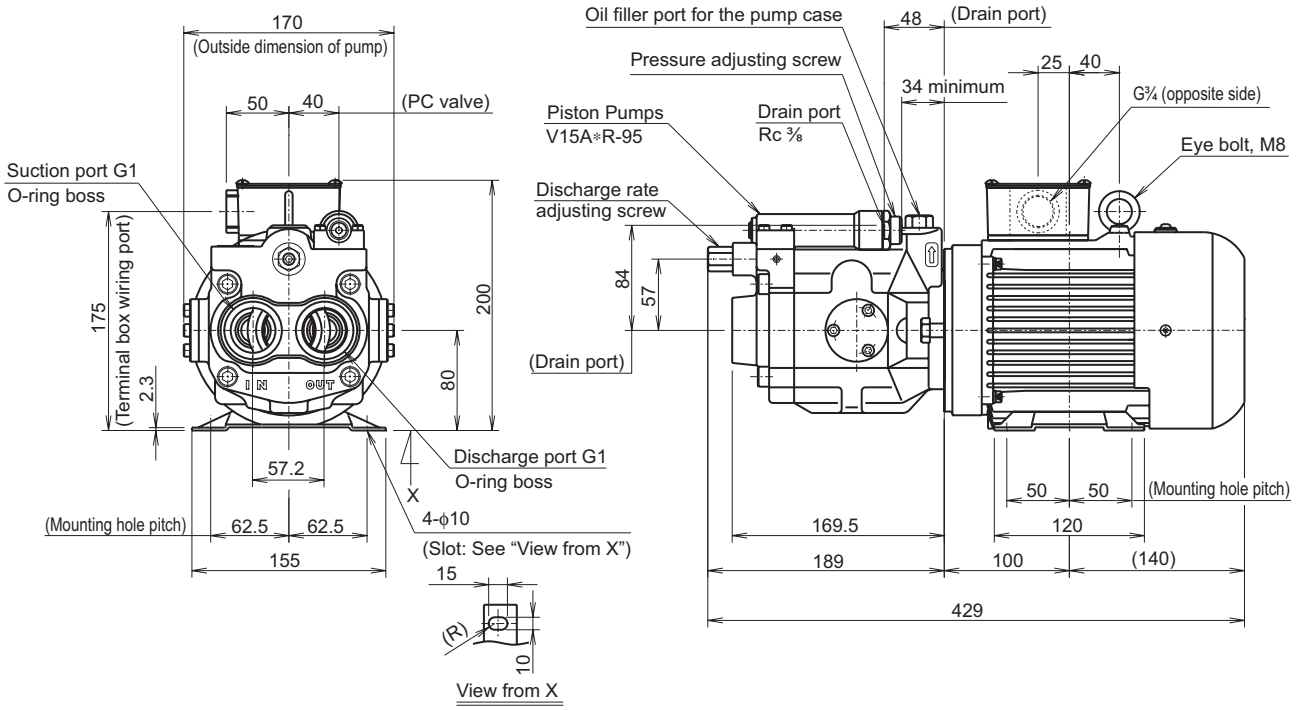
M15A※X-※-100



Motor pump model code	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	T	U	V	W	Motor output (kW)	Mass (kg)
M15A※X-2-100	202	37.5	70	176	M8	10	246	10	106	90	478	118.5	154.5	149	62.5	40	219.5	111	10	12	1.5	38
M15A※X-3-100	202	37.5	80	200	M10	12	256	12	133	100	516	133	178	168	70	46	229.5	134.5	12	14	2.2	48
M15A※X-5-100	243	47	95	220	M10	12	298.5	12	140	112	531	140	186	168	70	44	263.5	137	12	14	3.7	57

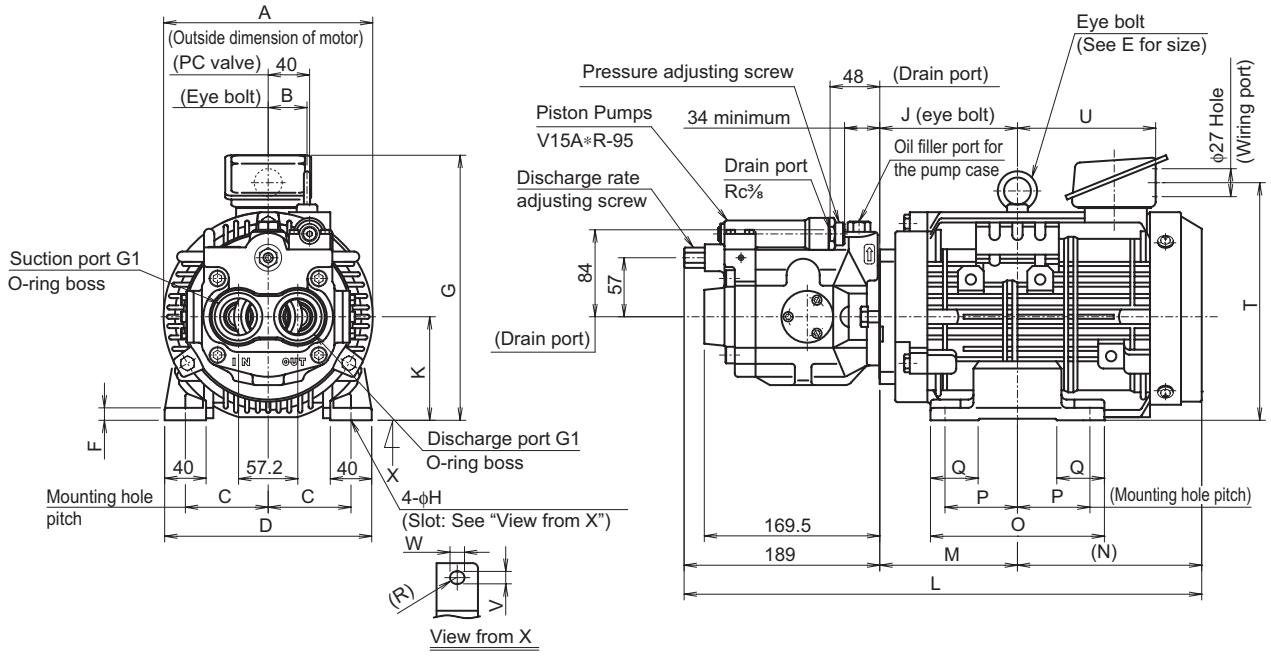
External dimension diagram

M15A※-1-100



Mass 26 kg

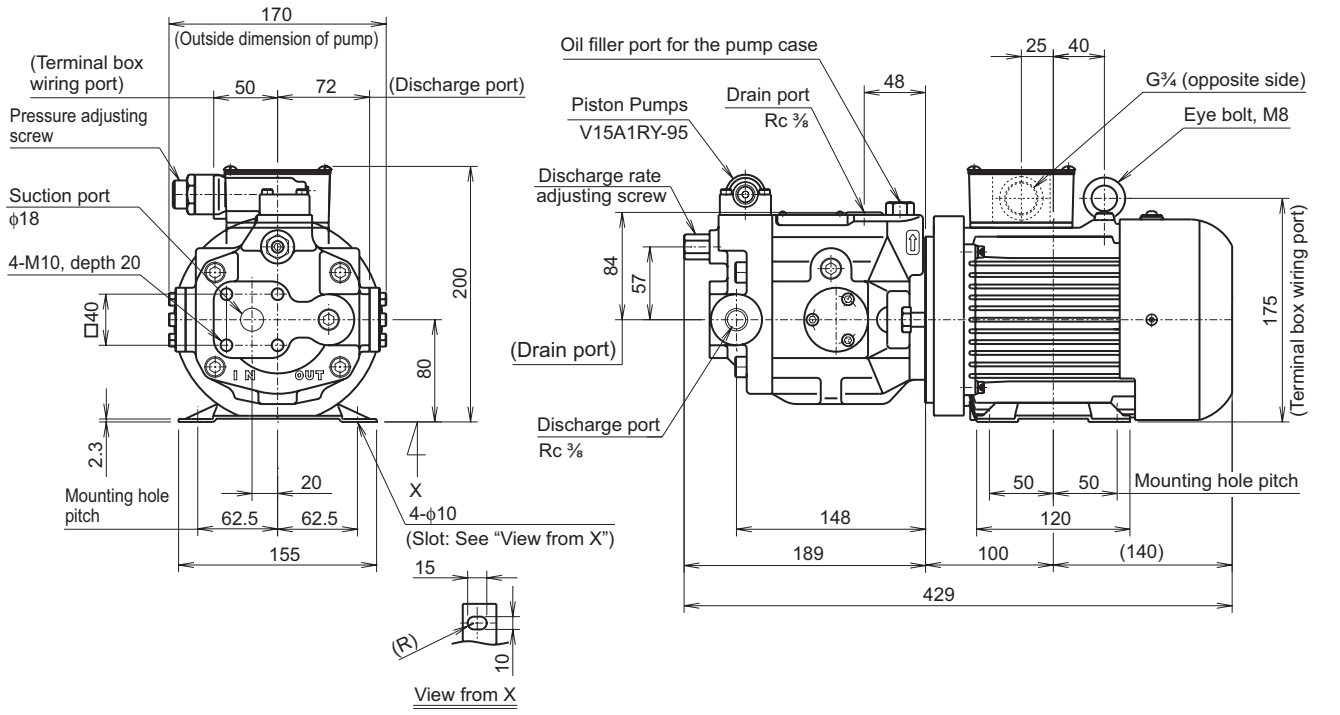
M15A※-※-100



Motor pump model code	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	T	U	V	W	Motor output (kW)	Mass (kg)
M15A※-2-100	202	37.5	70	176	M8	10	246	10	106	90	462	118.5	154.5	149	62.5	40	219.5	111	10	12	1.5	36
M15A※-3-100	202	37.5	80	200	M10	12	256	12	133	100	500	133	178	168	70	46	229.5	134.5	12	14	2.2	46
M15A※-5-100	243	47	95	220	M10	12	298.5	12	140	112	515	140	186	168	70	44	263.5	137	12	14	3.7	55

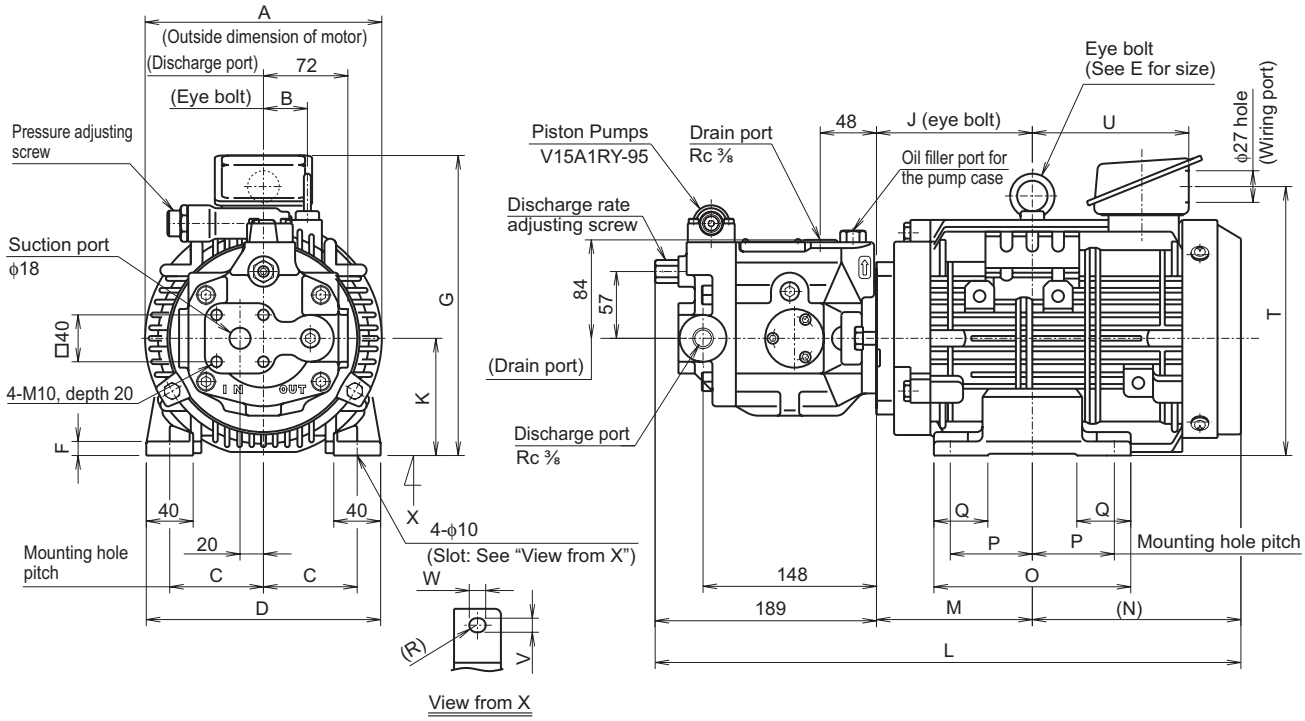
External dimension diagram

M15A1Y-1-100



Mass 28 kg

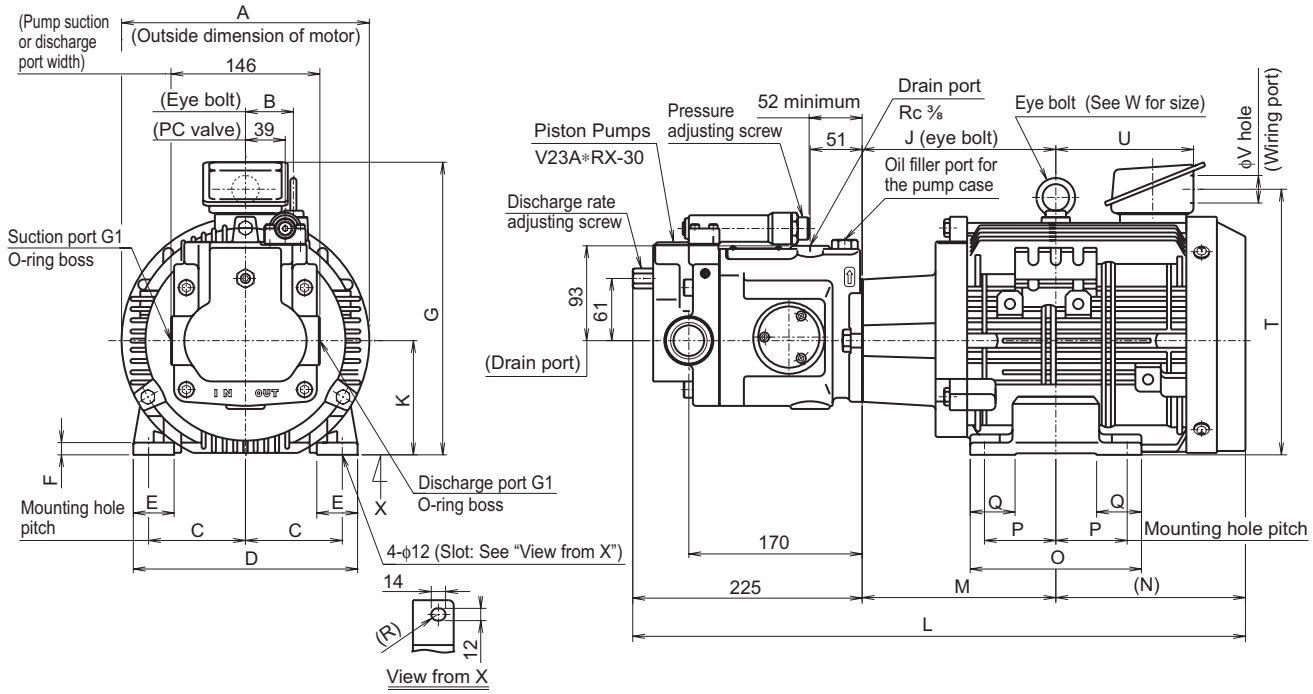
M15A1Y-※-100



Motor pump model code	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	T	U	V	W	Motor output (kW)	Mass (kg)
M15A1Y-2-100	202	37.5	70	176	M8	10	246	10	106	90	462	118.5	154.5	149	62.5	40	219.5	111	10	12	1.5	38
M15A1Y-3-100	202	37.5	80	200	M10	12	256	12	133	100	500	133	178	168	70	46	229.5	134.5	12	14	2.2	46
M15A1Y-5-100	243	47	95	220	M10	12	298.5	12	140	112	515	140	186	168	70	44	263.5	137	12	14	3.7	59

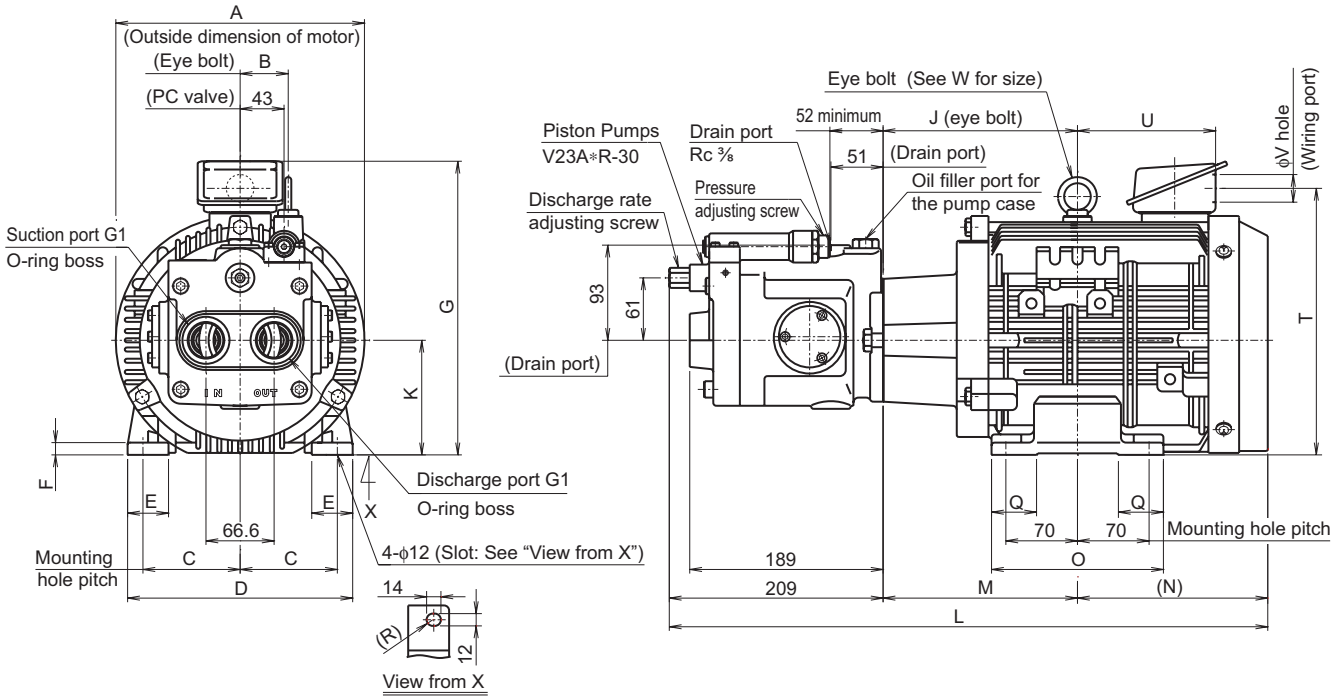
External dimension diagram

M23A※X-※-70



Motor pump model code	A	B	C	D	E	F	G	J	K	L	M	N	O	P	Q	T	U	V	W	Motor output (kW)	Mass (kg)
M23A※X-3-70	202	37.5	80	200	40	12	256	183	100	586	183	178	168	70	46	229.5	134.5	27	M10	2.2	57
M23A※X-5-70	243	47	95	220	40	12	298.5	190	112	601	190	186	168	70	44	263.5	137	27	M10	3.7	68
M23A※X-7-70	285	56.5	108	260	50	15	344	169.5	132	650.5	215	210.5	175	70	50	313.5	150	35	M12	5.5	90

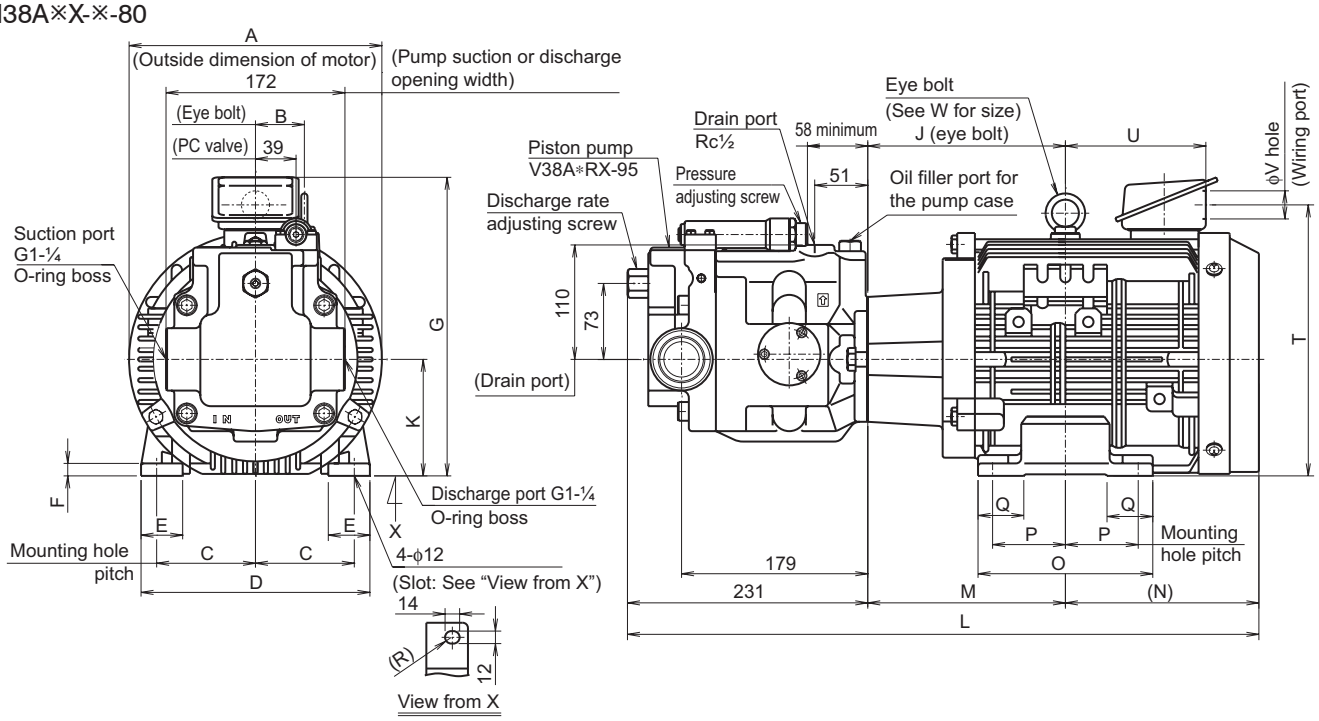
M23A※-※-70



Motor pump model code	A	B	C	D	E	F	G	J	K	L	M	N	O	Q	T	U	V	W	Motor output (kW)	Mass (kg)
M23A※-3-70	202	37.5	80	200	40	12	256	183	100	570	183	178	168	46	229.5	134.5	27	M10	2.2	53
M23A※-5-70	243	47	95	220	40	12	298.5	190	112	585	190	186	168	44	263.5	137	27	M10	3.7	64
M23A※-7-70	285	56.5	108	260	50	15	344	169.5	132	634.5	215	210.5	175	50	313.5	150	35	M12	5.5	86

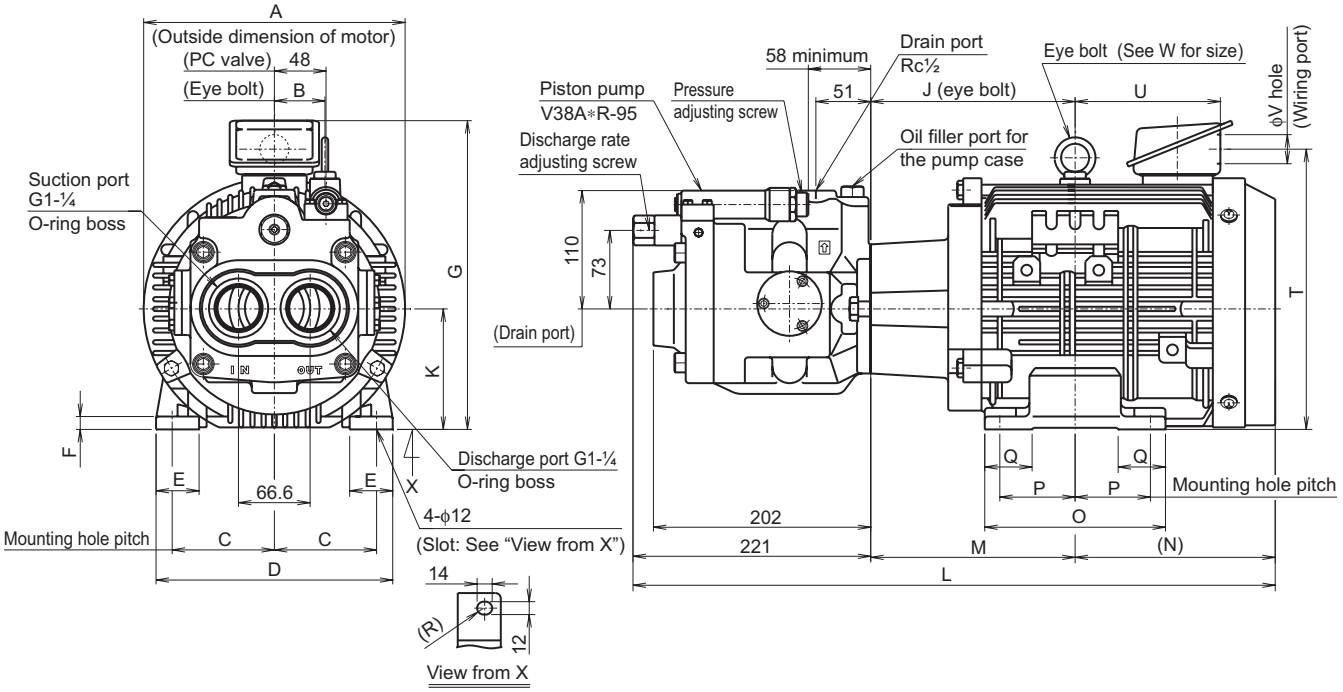
External dimension diagram

M38A※X-※-80



Motor pump model code	A	B	C	D	E	F	G	J	K	L	M	N	O	P	Q	T	U	V	W	Motor output (kW)	Mass (kg)
M38A※X-3-80	202	37.5	80	200	40	12	256	183	100	592	183	178	168	70	46	229.5	134.5	27	M10	2.2	61
M38A※X-5-80	243	47	95	220	40	12	298.5	190	112	607	190	186	168	70	44	263.5	137	27	M10	3.7	72
M38A※X-7-80	285	56.5	108	260	50	15	344	169.5	132	656.5	215	210.5	175	70	50	313.5	150	35	M12	5.5	94
M38A※X-10-80	285	56.5	108	260	50	15	344	207.5	132	694.5	234	229.5	213	89	50	313.5	169	35	M12	7.5	105

M38A※-※-80



Motor pump model code	A	B	C	D	E	F	G	J	K	L	M	N	O	P	Q	T	U	V	W	Motor output (kW)	Mass (kg)
M38A※-3-80	202	37.5	80	200	40	12	256	183	100	582	183	178	168	70	46	229.5	134.5	27	M10	2.2	59
M38A※-5-80	243	47	95	220	40	12	298.5	190	112	597	190	186	168	70	44	263.5	137	27	M10	3.7	70
M38A※-7-80	285	56.5	108	260	50	15	344	169.5	132	646.5	215	210.5	175	70	50	313.5	150	35	M12	5.5	92
M38A※-10-80	285	56.5	108	260	50	15	344	207.5	132	684.5	234	229.5	213	89	50	313.5	169	35	M12	7.5	103