



ISO 9001

E-WHA

METERING PUMPS

BUILT-IN AIR CHAMBER DIAPHRAGM TYPE

 **JM SERIES**



 **JMD SERIES**



E-WHA CHEMICAL FEEDER CO., LTD.

FEATURES

**Flow rate up to 21,600cc/min.
Pressure up to 10kgf/cm²**

With mechanically actuated diaphragm



■ LOW-PULSATION METERING PUMP

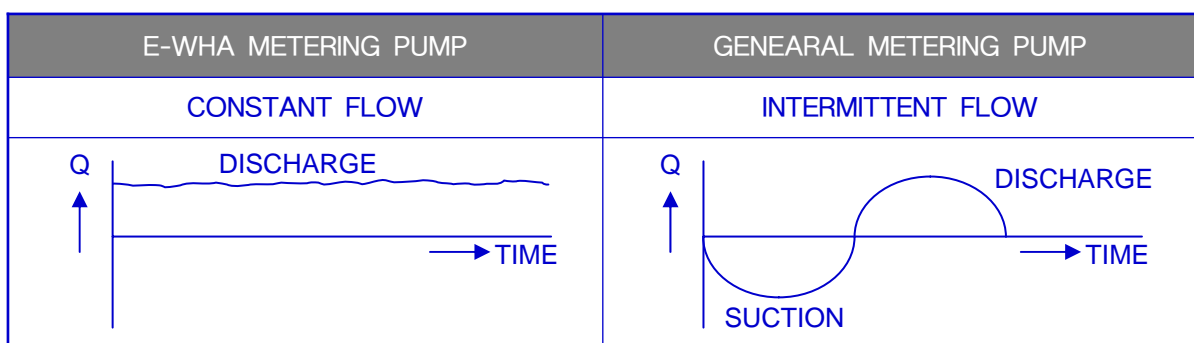
- The built-in air-chamber is preventing pulsation, pipe vibration, leakages and noise.
- Designed to eliminate any damage to pipe and pipe connection. No additional installation is required to prevent pulsation.
- Low installation cost due to small hose and pipe connection.

■ COMPLETE RANGE

- Wide range of JM/JMD series ensures the optimum solution for the requirements.
- Wide choice of liquid end with various material : PVC, 304SS/316SS/316LSS, PTFE, PVDF etc.
- Optional explosion-proof motor.

■ CONSTANT DISCHARGE FLOW

- A stable discharge flow is maintained and hardly affected by the property of liquid or pressure fluctuations.



FEATURES

■ MAIN TECHNICAL CHARACTERISTICS

- PTFE diaphragm
- Mechanically actuated diaphragm
- Variable eccentric stroke adjustment
- Simplex version (Optional Duplex or Triplex version)
- Max. temperature of service liquid : PVC 40°C, Stainless steel & PTFE 80°C
- Flow adjustment from 0 to 100% during operation or paused.
- Flow adjustment accuracy : $\pm 1.5\%$
- Maximum suction lift : 2.0 m water

■ HIGH DURABILITY

- The drive unit is oil bath type and a sufficient durability is guaranteed in long and continuous operation .

■ DRAIN VALVE INSTALLED

- The drain valve installed on the pump head allows for self flushing and easy maintenance and maximum safety.

■ SIMPLE INSTALLATION & MAINTENANCE

- Easy access to main parts
- Lubrication by oil bath
- Base with mounting holes
- No special tools are required.

■ ACCESSORIES

- Safety valve, back pressure valve, check valve and strainer etc.
- Accessories can optimize the performances of JM and JMD series.

JM / JMD SERIES

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APPLICATION

JM and JMD series are applicable to all conventional liquids.

- Acids : hydrochloric acid, sulphuric acid, nitric acid, hydrofluoric acid etc.
- Bases : caustic soda, ammonia, sodium bicarbonate, trisodium phosphate etc.
- Chlorinated products : hypochlorite solutions, chlorine dioxide etc.
- Cosgulants : aluminum sulphate, ferric chloride etc.
- Other products : hydrazine, amines, potassium permanganate, detergents, fertilizers etc.

MODEL NAME

JM D 3000 P C F D 23
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

- ① ■ SERIES NAME : BUILT-IN AIR CHAMBER, DIAPHRAGM TYPE METERING PUMP
- ② ■ HEAD NUMBER - D = DOUBLE HEAD(DUPLEX)
- NO = SINGLE HEAD
- ③ ■ MAXIMUM FLOW RATE - 3000=3,000 cc/min. CLASS
- 60L=60×1000=60,000 cc/min CLASS
- ④ ■ LIQUID END MATERIAL
- P=PVC, S4=SUS304, S6=SUS316, SL=SUS316L, K=PVDF, T=PTFE
- ⑤ ■ MATERIALS OF CHECK BALL - C=CERAMICS, S4=SUS304, S6=SUS316
- ⑥ ■ INLET / OUTLET CONNECTION - F = FLANGE TYPE, H = HOSE TYPE
- ⑦ ■ DRAIN VALVE(OPTION) - D = INSTALLED DRAIN VALVE
- NO SPELL = NOT INSTALLED DRAIN VALVE
- ⑧ ■ MOTOR SPECIFICATION - 23 = 3PHASE 220V, 33 = PHASE 380V,
43 = PHASE 440V

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LIQUID END MATERIAL (STANDARD)

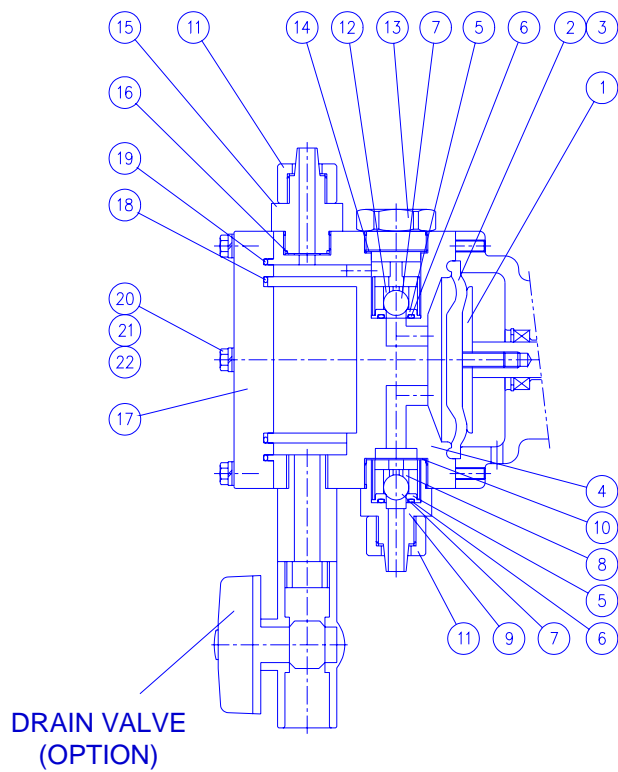
HEAD PARTS	P.V.C	SUS304	SUS316	PTFE	PVDF
DIAPHRAGM	PTFE + EPDM				
CHECK BALL	CERAMICS	SUS304	SUS316	CERAMICS	
BALL SEAT	P.V.C	SUS304	SUS316	PTFE	PVDF
BALL GUIDE	P.V.C	SUS304	SUS316	PTFE	PVDF
O-RING, GASKET	VITON / PTFE			PTFE	PTFE

JM / JMD SERIES

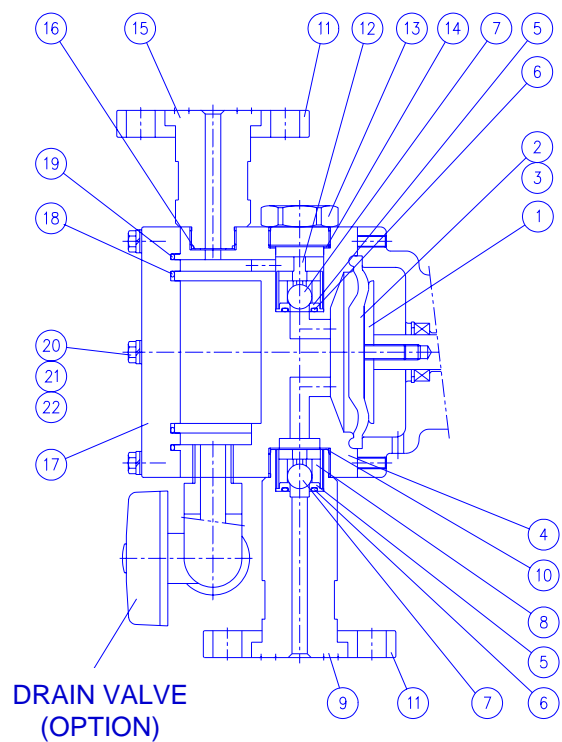
LIQUID END CONSTRUCTION

■ MODEL : **JM25~8000**

■ MATERIAL : **PVC / PVDF / PTFE**



■ HOSE TYPE ■



■ FLANGE TYPE ■

NO.	PARTS NAME	NO.	PARTS NAME	NO.	PARTS NAME	NO.	PARTS NAME
1	PUSH PLATE	2	DIAPHRAGM	3	FRICION SHEET	4	PUMP HEAD
5	BALL SEAT	6	O-RING	7	CHECK BALL	8	SUC. BALL GUIDE
9	SUC. CONNECTOR	10	GASKET	11	UNION NUT/FLANGE	12	DIS. BALL GUIDE
13	HEAD CAP	14	GASKET	15	DIS. CONNECTOR	16	GASKET
17	HEAD COVER	18	O-RING	19	O-RING	20	HEX. BOLT
21	SPRING WASHER	22	PLANE WASHER				

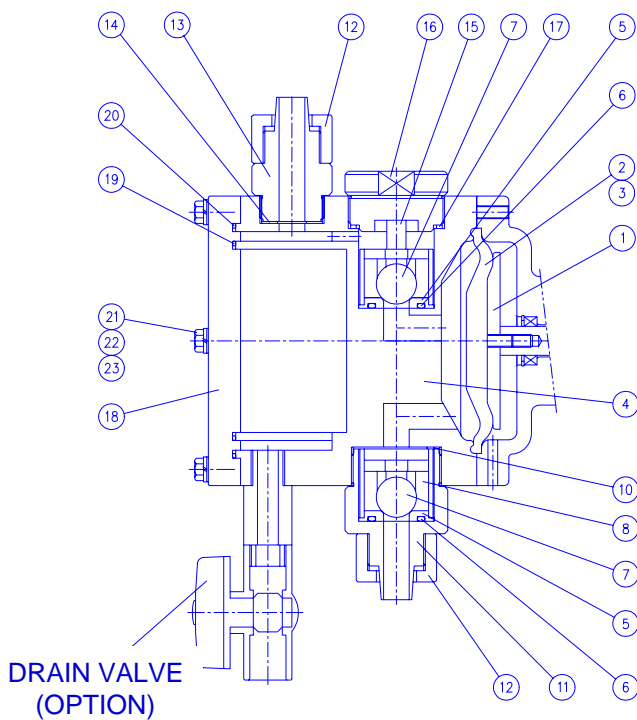
JM / JMD SERIES



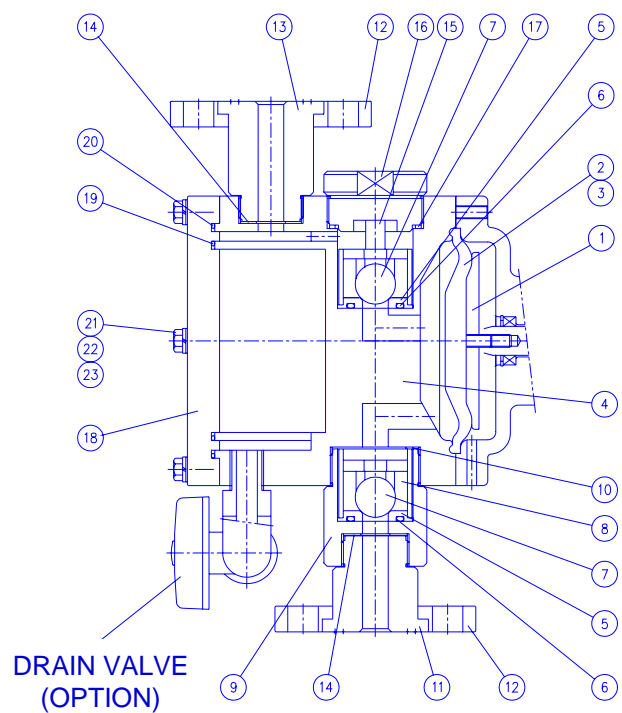
LIQUID END CONSTRUCTION

MODEL : JM10L

MATERIAL : PVC / PVDF / PTFE



HOSE TYPE



FLANGE TYPE

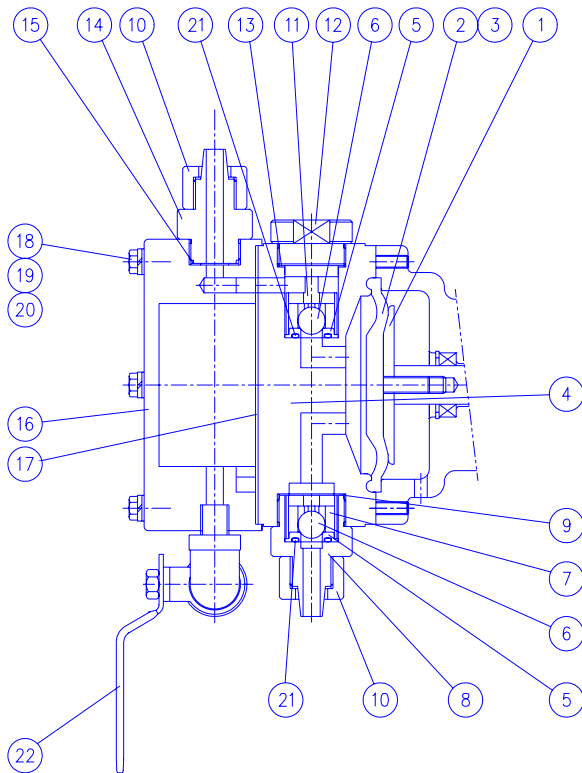
NO.	PARTS NAME	NO.	PARTS NAME	NO.	PARTS NAME	NO.	PARTS NAME
1	PUSH PLATE	2	DIAPHRAGM	3	FRICITION SHEET	4	PUMP HEAD
5	BALL SEAT	6	O-RING	7	CHECK BALL	8	SUC. BALL GUIDE
9	NO.2 SUC. CONNECTOR	10	GASKET	11	SUC. CONNECTOR	12	UNION NUT/FLANGE
13	DIS. CONNECTOR	14	GASKET	15	DIS. BALL GUIDE	16	HEAD CAP
17	GASKET	18	HEAD COVER	19	O-RING	20	O-RING
21	HEX. BOLT	22	SPRING WASHER	23	PLANE WASHER		

JM / JMD SERIES

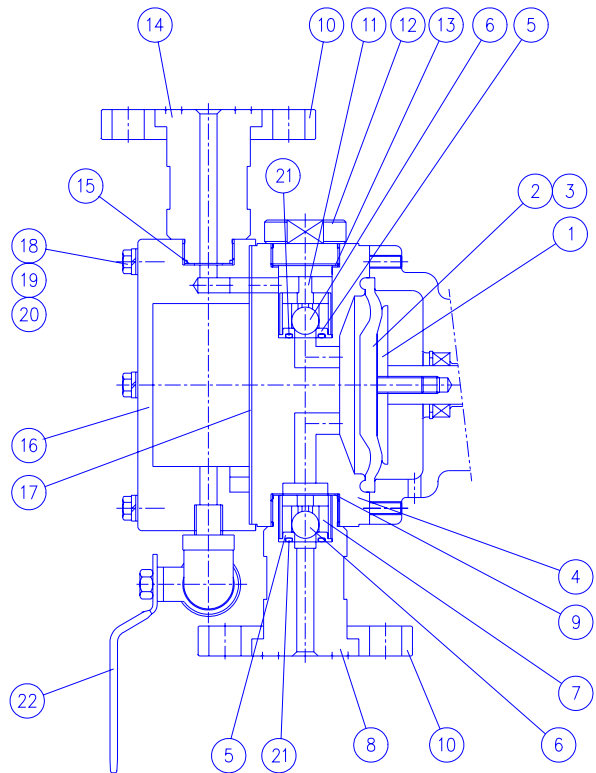
LIQUID END CONSTRUCTION

■ MODEL : **JM25~8000**

■ MATERIAL : **STAINLESS STEEL**



■ HOSE TYPE ■



■ FLANGE TYPE ■

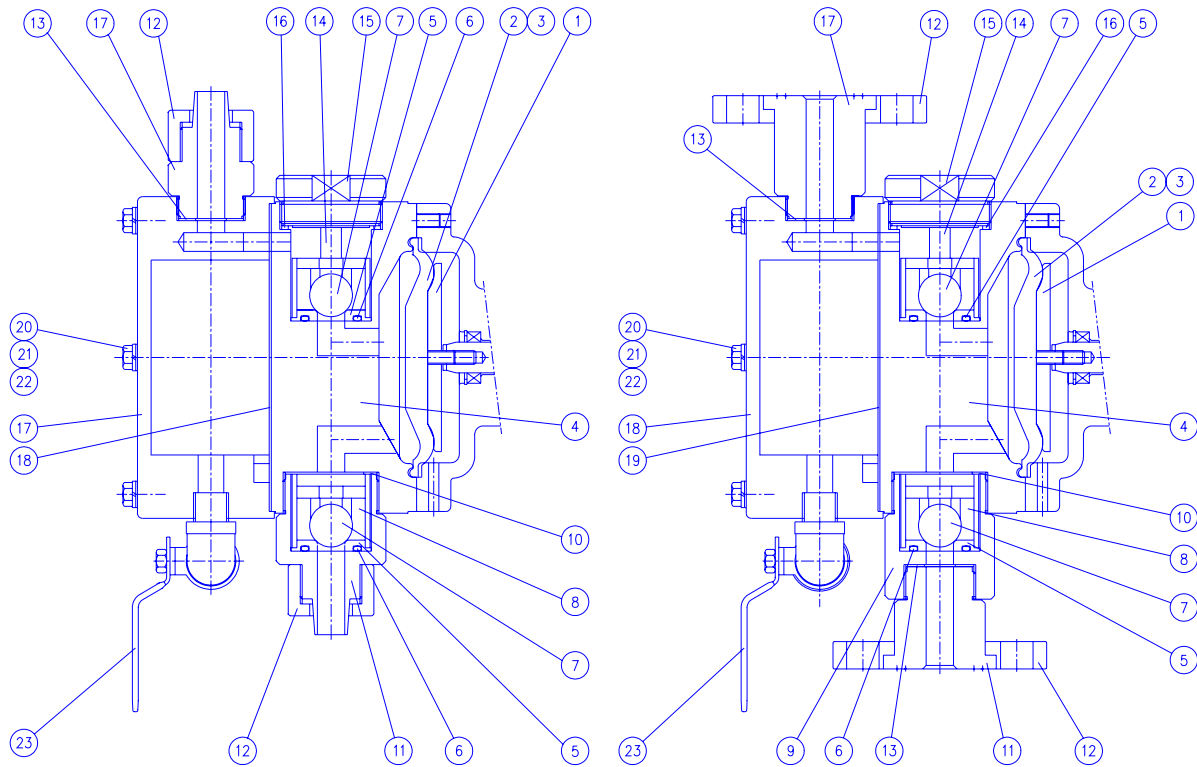
NO.	PARTS NAME	NO.	PARTS NAME	NO.	PARTS NAME	NO.	PARTS NAME
1	PUSH PLATE	2	DIAPHRAGM	3	FRICITION SHEET	4	PUMP HEAD
5	BALL SEAT	6	O-RING	7	CHECK BALL	8	SUC. CONNECTOR
9	GASKET	10	UNION NUT/FLANGE	11	DIS. BALL GUIDE	12	HEAD CAP
13	GASKET	14	DIS. CONNECTOR	15	GASKET	16	HEAD CHAMBER
17	GASKET	18	HEX. BOLT	19	SPRING WASHER	20	PLANE WASHER
21	GASKET	22	DRAIN VALVE				

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LIQUID END CONSTRUCTION

■ MODEL : **JM10L**

■ MATERIAL : **STAINLESS STEEL**



■ HOSE TYPE ■

■ FLANGE TYPE ■

NO.	PARTS NAME	NO.	PARTS NAME	NO.	PARTS NAME	NO.	PARTS NAME
1	PUSH PLATE	2	DIAPHRAGM	3	FRICITION SHEET	4	PUMP HEAD
5	BALL SEAT	6	O-RING	7	CHECK BALL	8	SUC. BALL GUIDE
9	NO.2 SUC. CONNECTOR	10	GASKET	11	SUC. CONNECTOR	12	UNION NUT/FLANGE
13	GASKET	14	DIS. BALL GUIDE	15	HEAD CAP	16	GASKET
17	DIS. CONNECTOR	18	HEAD CHAMBER	19	GASKET	20	HEX. BOLT
21	SPRING WASHER	22	PLANE WASHER	23	DRAIN VALVE		

JM / JMD SERIES

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SPECIFICATION (60Hz)

MODEL		JM25	JM50	JM100	JM300	JM500	JM1000	JM2000	
FLOWRATE	cc/min.	25	50	150	360	600	1,200	2,200	
PRESSURE	Kgf/cm ²	10	10	10	7	5	5	5	
STROKE RATE	spm	57	111						
CONNECTION	HOSE	Φ6					Φ10		
	FLANGE	KS 10K 15A							
MOTOR	AC 3PHASE 220/380V, 440V, 0.4kW F CLASS								
	Exe II T4, Exed II BT4, 0.4kW								

MODEL		JM3000	JM4000	JM5000	JM6000	JM8000	JM10L
FLOWRATE	cc/min.	3,300	4,300	5,000	6,000	8,000	10,800
PRESSURE	Kgf/cm ²	5	5	5	5	5	5
STROKE RATE	spm	111					
CONNECTION	HOSE	Φ10	Φ16				Φ19
	FLANGE	KS 10K 20A					KS 10K 25A
MOTOR	AC 3PHASE 220/380V, 440V, 0.4kW F CLASS						0.75kW F CLASS
	Exe II T4, Exed II BT4, 0.4kW						0.75kW

NOTE

1. All performance curves shown are for water @68°F/20°C and 1.0 S.G..
The performances are subject to change without notice.
2. Pumping Temperature Limit : PVC 0~40°C, STAINLESS STEEL/PTFE/PVDF 0~80°C
3. Slurry Limit : 100µm(0.1mm), Slurry Conteration Limit 10wt(%)
4. Suction Lift : 2m
5. Standard Painting Color : PANTONE 334C(MUNSELL NO. 2.5BG 5/10)

JM / JMD SERIES

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SPECIFICATION (50Hz)

MODEL		JM25	JM50	JM100	JM300	JM500	JM1000	JM2000	
FLOWRATE	cc/min.	20	40	125	300	430	1,000	1,800	
PRESSURE	Kgf/cm ²	10	10	10	7	5	5	5	
STROKE RATE	spm	48	97						
CONNECTION	HOSE	Φ6					Φ10		
	FLANGE	KS 10K 15A							
MOTOR	AC 3PHASE 220/380V, 440V, 0.4kW F CLASS								
	Exe II T4, Exed II BT4, 0.4kW								

MODEL		JM3000	JM4000	JM5000	JM6000	JM8000	JM10L
FLOWRATE	cc/min.	2,700	3,500	4,100	5,000	6,600	9,000
PRESSURE	Kgf/cm ²	5	5	5	5	5	5
STROKE RATE	spm	97					
CONNECTION	HOSE	Φ10	Φ16				Φ19
	FLANGE	KS 10K 20A					KS 10K 25A
MOTOR	AC 3PHASE 220/380V, 440V, 0.4kW F CLASS						0.75kW F CLASS
	Exe II T4, Exed II BT4, 0.4kW						0.75kW

NOTE

1. All performance curves shown are for water @68°F/20°C and 1.0 S.G..
The performances are subject to change without notice.
2. Pumping Temperature Limit : PVC 0~40°C, STAINLESS STEEL/PTFE/PVDF 0~80°C
3. Slurry Limit : 100µm(0.1mm), Slurry Conteration Limit 10wt(%)
4. Suction Lift : 2m
5. Standard Painting Color : PANTONE 334C(MUNSELL NO. 2.5BG 5/10)

JM / JMD SERIES

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SPECIFICATION (60Hz)

MODEL		JMD50	JMD100	JMD200	JMD600	JMD1000	JMD2000	JMD4000	
FLOWRATE	cc/min.	50	100	300	720	1,200	2,400	4,400	
PRESSURE	Kgf/cm ²	10	10	10	7	5	5	5	
STROKE RATE	spm	57	111						
CONNECTION	HOSE	Φ6					Φ10		
	FLANGE	KS 10K 15A							
MOTOR	AC 3PHASE 220/380V, 440V, 0.4kW F CLASS								
	Exe II T4, Exed II BT4, 0.4kW								

MODEL		JMD6000	JMD8000	JMD10L	JMD12L	JMD16L	JMD20L
FLOWRATE	cc/min.	6,600	8,600	10,000	12,000	16,000	21,600
PRESSURE	Kgf/cm ²	5	5	5	5	5	5
STROKE RATE	spm	111					
CONNECTION	HOSE	Φ10	Φ16				Φ19
	FLANGE	KS 10K 20A					KS 10K 25A
MOTOR	AC 3PHASE 220/380V, 440V, 0.4kW F CLASS						0.75kW F CLASS
	Exe II T4, Exed II BT4, 0.4kW						0.75kW

NOTE

1. All performance curves shown are for water @68°F/20°C and 1.0 S.G..
The performances are subject to change without notice.
2. Pumping Temperature Limit : PVC 0~40°C, STAINLESS STEEL/PTFE/PVDF 0~80°C
3. Slurry Limit : 100µm(0.1mm), Slurry Conteration Limit 10wt(%)
4. Suction Lift : 2m
5. Standard Painting Color : PANTONE 334C(MUNSELL NO. 2.5BG 5/10)

JM / JMD SERIES

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SPECIFICATION (50Hz)

MODEL		JMD50	JMD100	JMD200	JMD600	JMD1000	JMD2000	JMD4000	
FLOWRATE	cc/min.	40	80	250	600	860	2,000	3,600	
PRESSURE	Kgf/cm ²	10	10	10	7	5	5	5	
STROKE RATE	spm	48	97						
CONNECTION	HOSE	Φ6					Φ10		
	FLANGE	KS 10K 15A							
MOTOR		AC 3PHASE 220/380V, 440V, 0.4kW F CLASS							
		Exe II T4, Exed II BT4, 0.4kW							

MODEL		JMD6000	JMD8000	JMD10L	JMD12L	JMD16L	JMD20L
FLOWRATE	cc/min.	5,400	7,000	8,200	10,000	13,200	18,000
PRESSURE	Kgf/cm ²	5	5	5	5	5	5
STROKE RATE	spm	97					
CONNECTION	HOSE	Φ10	Φ16				Φ19
	FLANGE	KS 10K 20A					KS 10K 25A
MOTOR		AC 3PHASE 220/380V, 440V, 0.4kW F CLASS					0.75kW F CLASS
		Exe II T4, Exed II BT4, 0.4kW					0.75kW

NOTE

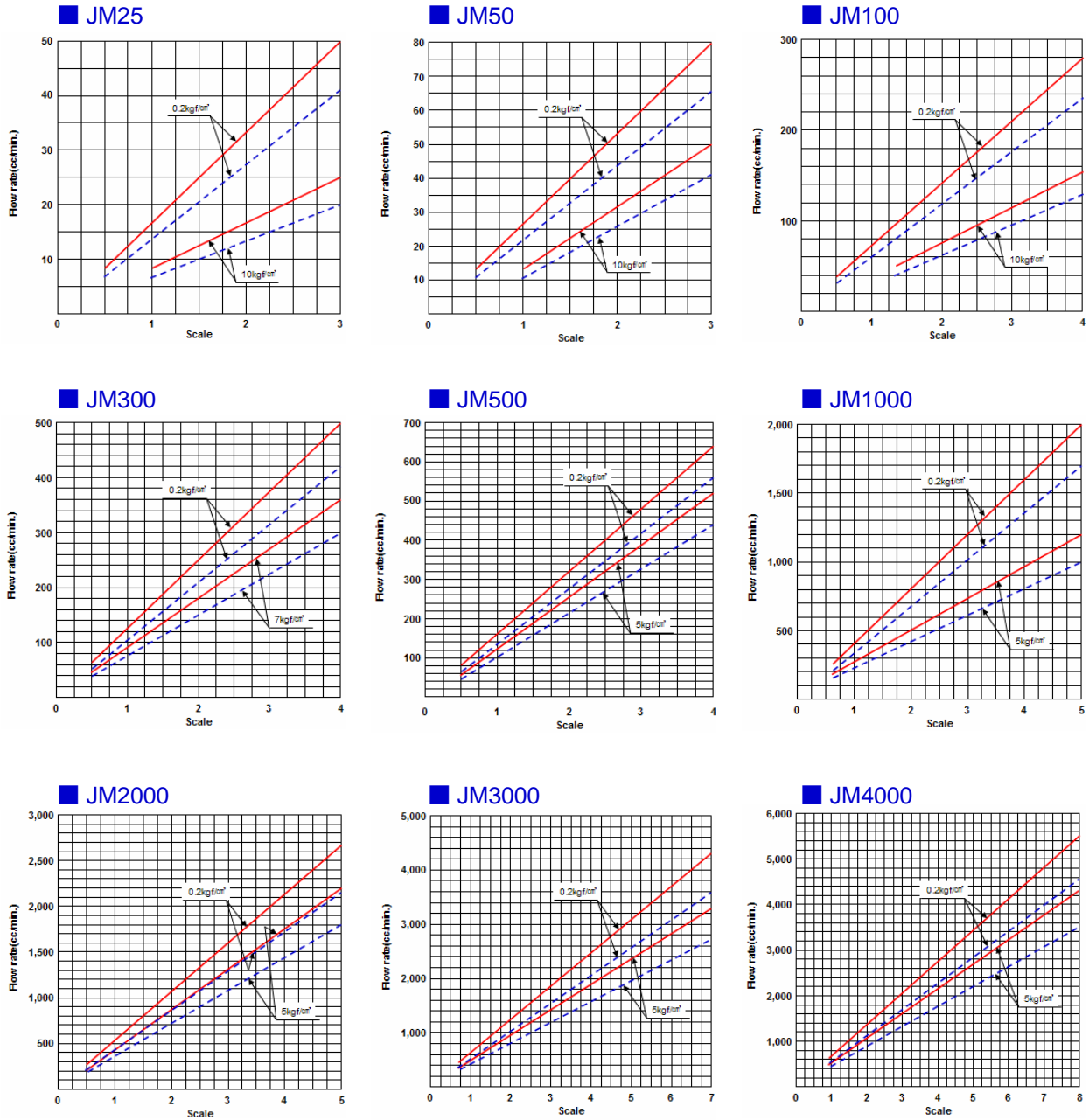
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3. Slurry Limit : 100µm(0.1mm), Slurry Conteration Limit 10wt(%)
4. Suction Lift : 2m
5. Standard Painting Color : PANTONE 334C(MUNSELL NO. 2.5BG 5/10)

JM / JMD SERIES



PERFORMANCE CURVE

— 60Hz
 - - - 50Hz



NOTE

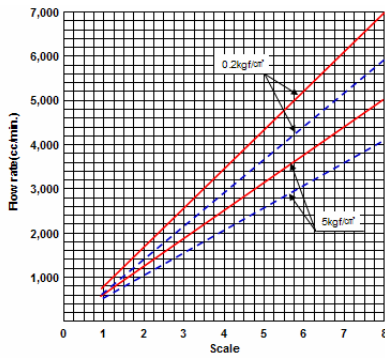
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 The performances are subject to change without notice.

JM / JMD SERIES

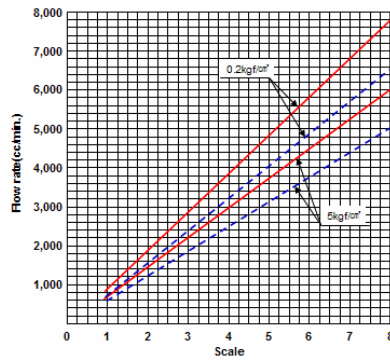


PERFORMANCE CURVE

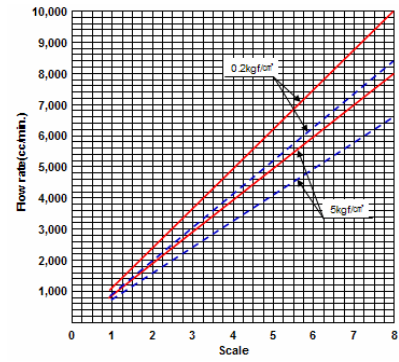
JM5000



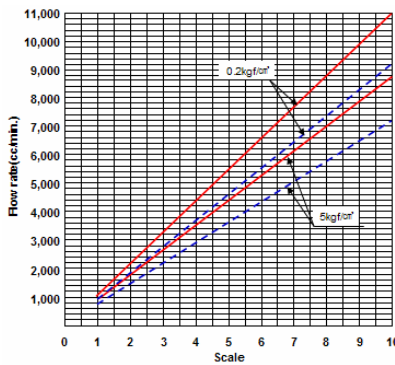
JM6000



JM8000



JM10L



NOTE

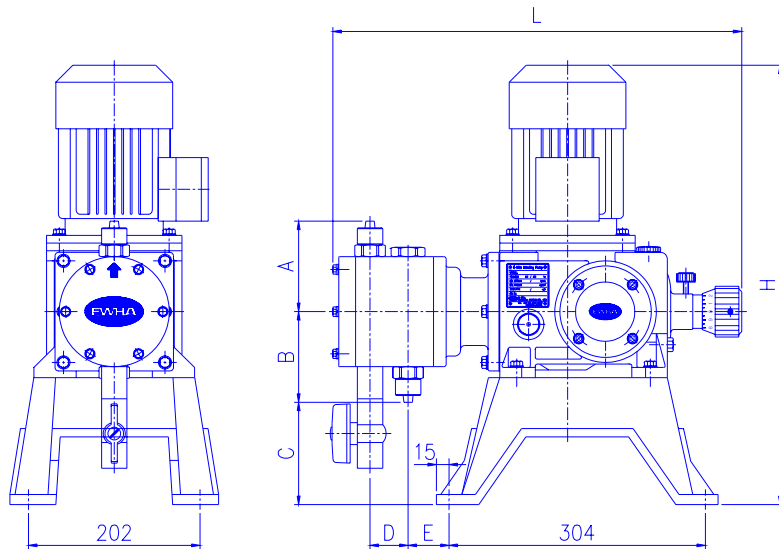
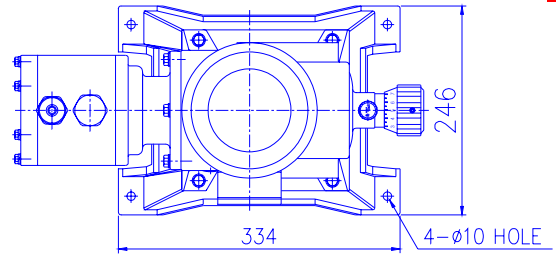
All performance curves shown are for water @68°F/20°C and 1.0 S.G..
The performances are subject to change without notice.

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DIMENSIONAL OUTLINE

- MODEL : JM25~JM10L
- CONNECTION : HOSE
- MATERIAL : PVC/PTFE/PVDF



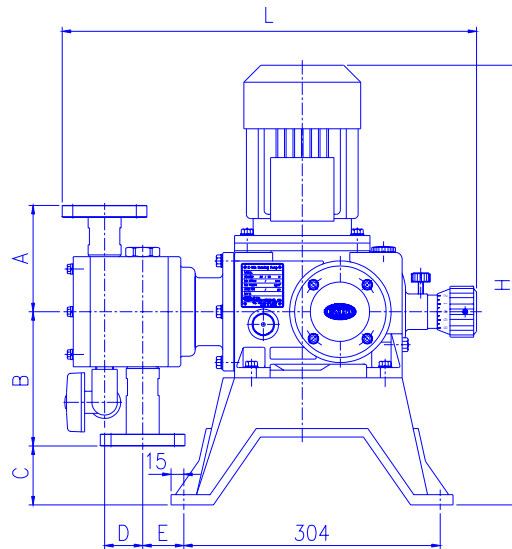
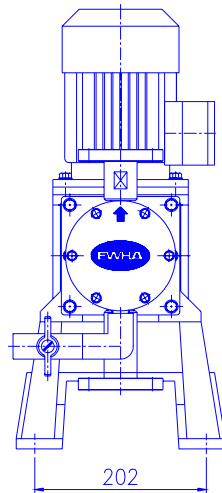
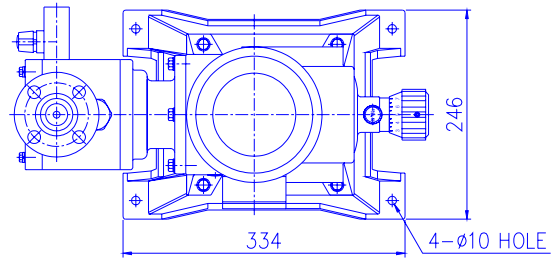
MODEL	A	B	C	D	E	L	H
JM25~100	74	74	154	40	43.5	474	519
JM300	84	84	144	40	48.5	479	519
JM500	84	84	144	40	48.5	479	519
JM1000	102	102	126	45	48.5	484	519
JM2000	107	107	121	45	48.5	484	519
JM3000	107	107	121	45	48.5	484	519
JM4000	130	130	98	65	81	545	519
JM5000	135	135	93	65	81	545	519
JM6000	140	140	88	65	81	545	519
JM8000	150	150	78	65	81	545	519
JM10L	151	161	67	65	91	566	585

JM / JMD SERIES

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DIMENSIONAL OUTLINE

- MODEL : JM25~JM10L
- CONNECTION : FLANGE
- MATERIAL : PVC/PTFE/PVDF



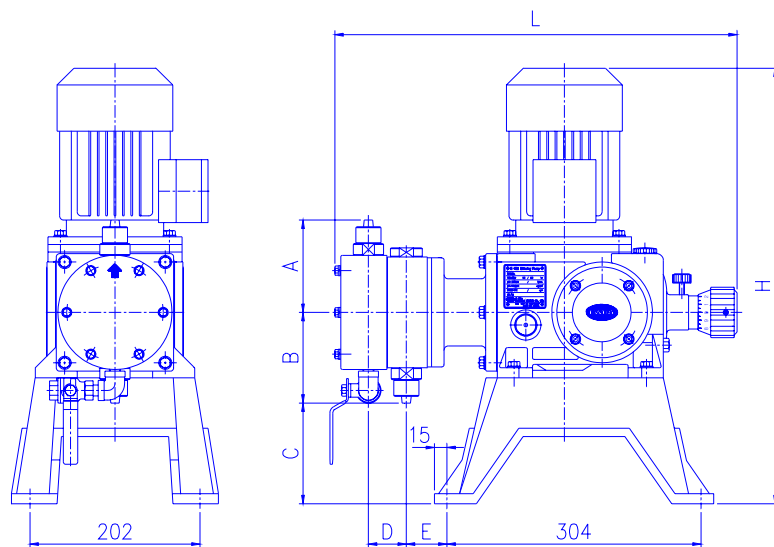
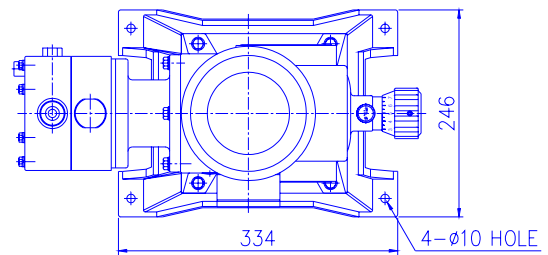
MODEL	A	B	B'	C	C'	D	E	L	H
JM25~100	95	125	97	103	131	40	43.5	477	519
JM300	105	135	107	93	121	40	48.5	482	519
JM500	105	135	107	93	121	40	48.5	482	519
JM1000	120	153	120	75	108	45	48.5	487	519
JM2000	125	158	125	70	103	45	48.5	487	519
JM3000	125	158	125	70	103	45	48.5	490	519
JM4000	145	145	145	83	83	65	81	545	519
JM5000	150	150	150	78	78	65	81	545	519
JM6000	155	155	155	73	73	65	81	545	519
JM8000	165	165	165	63	63	65	81	545	519
JM10L	149	181	181	47	47	65	91	568	585

※ B' AND C' ARE THE DIMENSION OF DRAIN VALVE INSTALLED.

JM / JMD SERIES

DIMENSIONAL OUTLINE

- MODEL : JM25~JM10L
- CONNECTION : HOSE
- MATERIAL : SUS304/SUS316/SUS316L

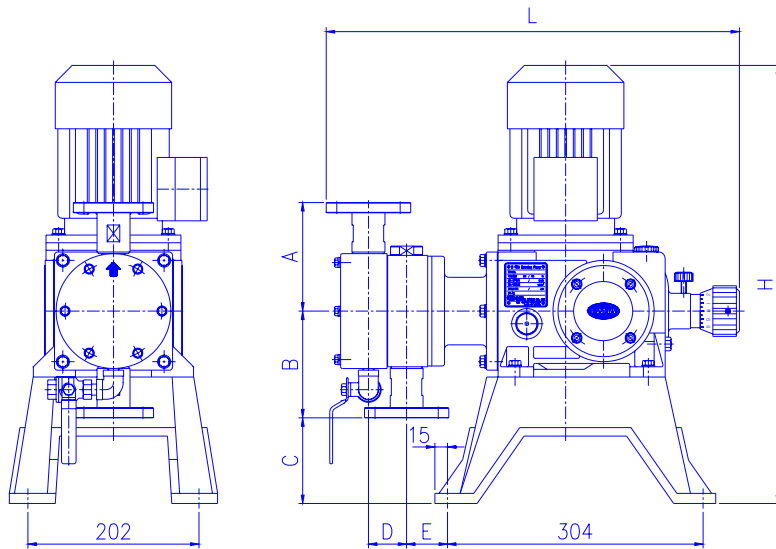
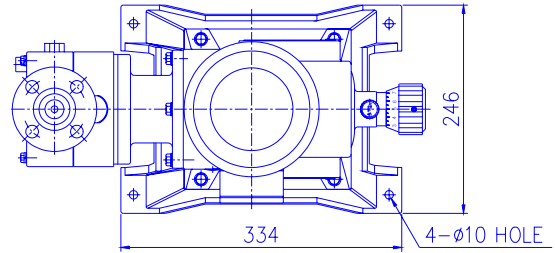


MODEL	A	B	C	D	E	L	H
JM25~100	77	75	153	40	43.5	467	519
JM300	87	85	143	40	43.5	467	519
JM500	87	85	143	40	43.5	467	519
JM1000	105	103	125	45	48.5	480	519
JM2000	110	108	120	45	48.5	480	519
JM3000	110	108	120	45	48.5	480	519
JM4000	134	132	96	65	81	536	519
JM5000	139	137	91	65	81	536	519
JM6000	144	142	86	65	81	536	519
JM8000	154	152	76	65	81	537	519
JM10L	155	162	66	70	91	562	585

JM / JMD SERIES

DIMENSIONAL OUTLINE

- MODEL : JM25~JM10L
- CONNECTION : FLANGE
- MATERIAL : SUS304/SUS316/SUS316L



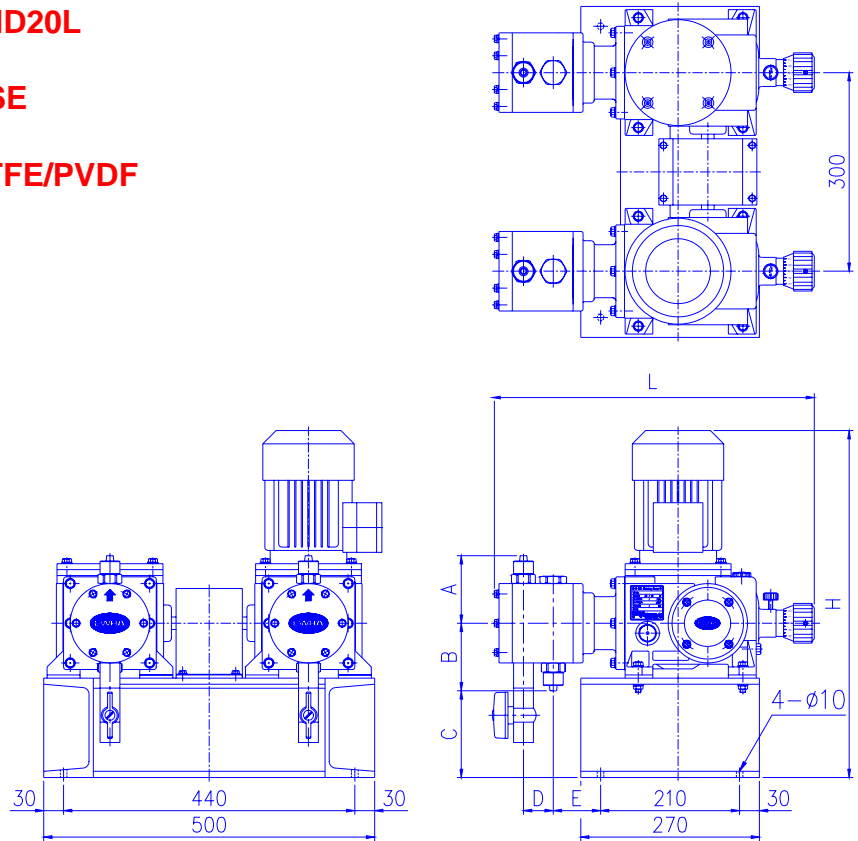
MODEL	A	B	C	D	E	L	H
JM25~100	98	98	130	40	43.5	477	519
JM300	109	109	120	40	43.5	478	519
JM500	109	109	120	40	43.5	478	519
JM1000	123	121	107	45	48.5	487	519
JM2000	128	126	102	45	48.5	487	519
JM3000	128	126	102	45	48.5	487	519
JM4000	148	146	82	65	81	545	519
JM5000	153	150	78	65	81	545	519
JM6000	159	156	72	65	81	545	519
JM8000	154	152	76	65	81	545	519
JM10L	153	182	46	70	91	573	585

JM / JMD SERIES

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DIMENSIONAL OUTLINE

- MODEL : JMD50~JMD20L
- CONNECTION : HOSE
- MATERIAL : PVC/PTFE/PVDF



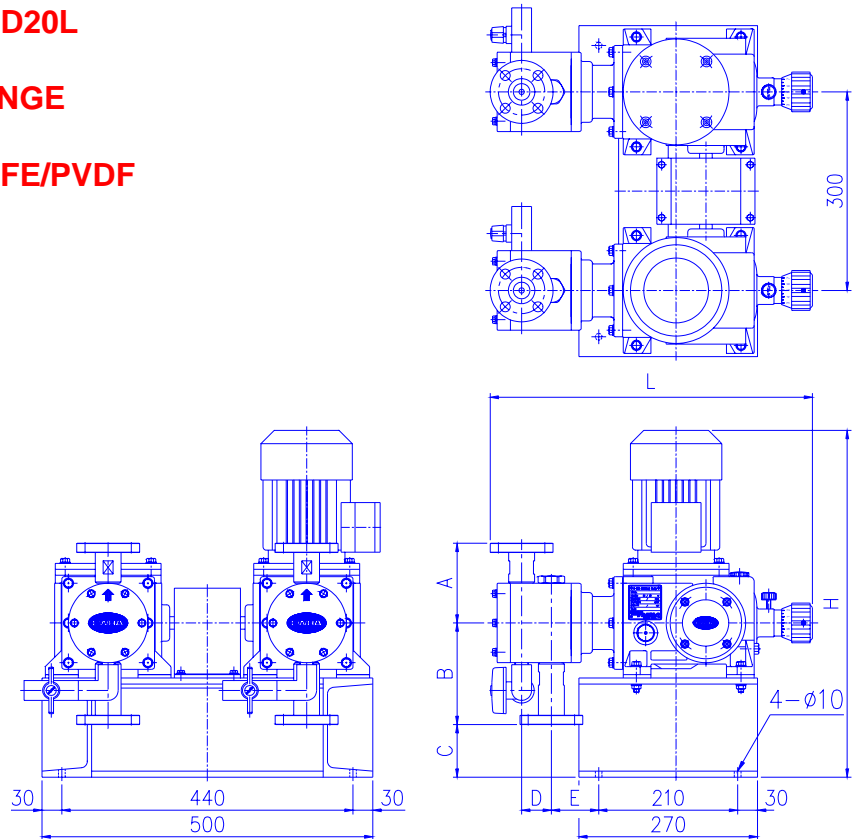
MODEL	A	B	C	D	E	L	H
JMD50~200	74	74	159	40	66.5	474	524
JMD600	84	84	149	40	71.5	479	524
JMD1000	84	84	149	40	71.5	479	524
JMD2000	102	102	131	45	71.5	484	524
JMD4000	107	107	126	45	71.5	484	524
JMD6000	107	107	126	45	71.5	484	524
JMD8000	130	130	103	65	104	545	524
JMD10L	135	135	98	65	104	545	524
JMD12L	140	140	93	65	104	545	524
JMD16L	150	150	83	65	104	545	524
JMD20L	151	161	72	65	114	566	590

JM / JMD SERIES

E-WHA

DIMENSIONAL OUTLINE

- MODEL : JMD50~JMD20L
- CONNECTION : FLANGE
- MATERIAL : PVC/PTFE/PVDF



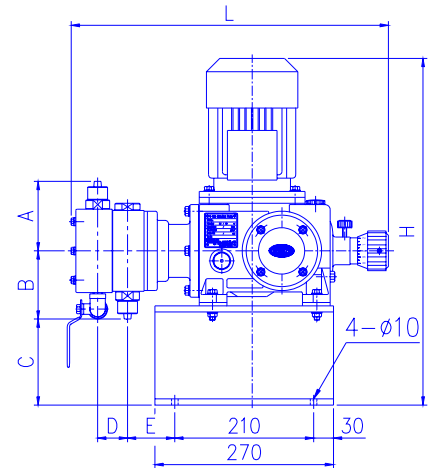
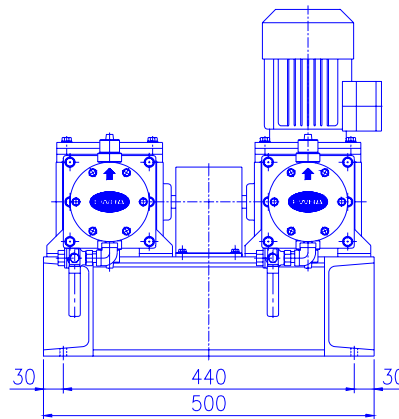
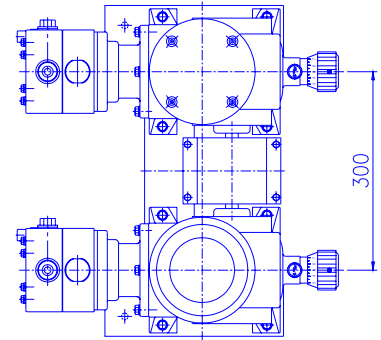
MODEL	A	B	B'	C	C'	D	E	L	H
JMD50~200	95	125	97	108	136	40	66.5	477	524
JMD600	105	135	107	98	126	40	71.5	482	524
JMD1000	105	135	107	98	126	40	71.5	482	524
JMD2000	120	153	120	80	113	45	71.5	487	524
JMD4000	125	158	125	75	108	45	71.5	487	524
JMD6000	125	158	125	75	108	45	71.5	490	524
JMD8000	145	145	145	88	88	65	104	545	524
JMD10L	150	150	150	83	83	65	104	545	524
JMD12L	155	155	155	78	78	65	104	545	524
JMD16L	165	165	165	68	68	65	104	545	524
JMD20L	149	181	181	52	52	65	114	568	590

JM / JMD SERIES

E-WHA

DIMENSIONAL OUTLINE

- MODEL : **JMD50~JMD20L**
- CONNECTION : **HOSE**
- MATERIAL : **SUS304/SUS316/SUS316L**



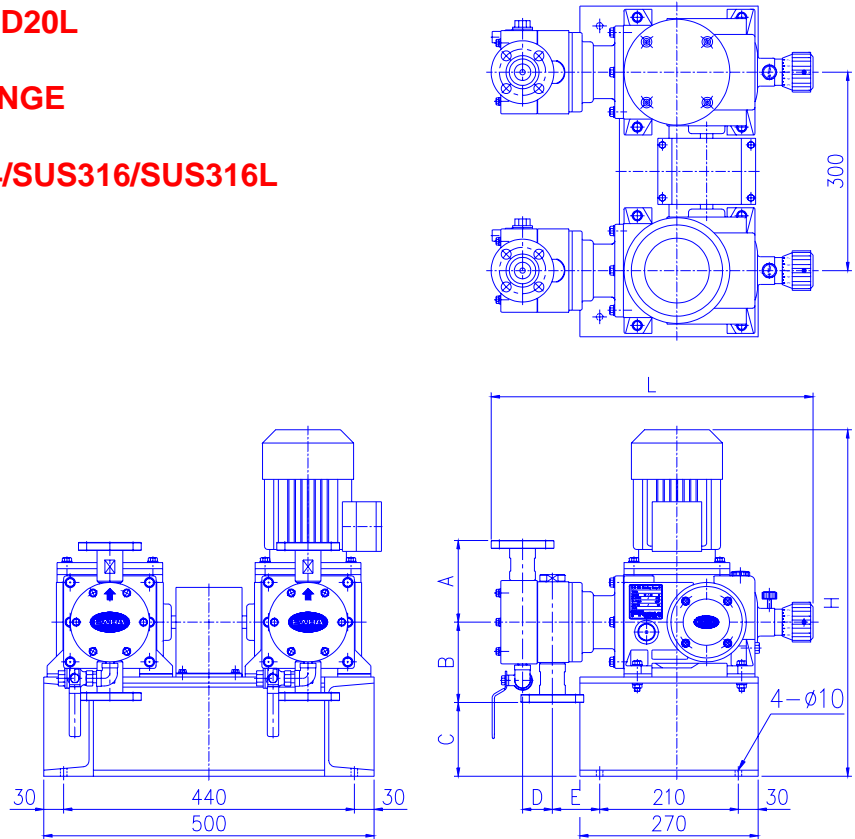
MODEL	A	B	C	D	E	L	H
JMD50~200	77	75	158	40	66.5	467	524
JMD600	87	85	148	40	66.5	467	524
JMD1000	87	85	148	40	66.5	467	524
JMD2000	105	103	130	45	71.5	480	524
JMD4000	110	108	125	45	71.5	480	524
JMD6000	110	108	125	45	71.5	480	524
JMD8000	134	132	101	65	104	536	524
JMD10L	139	137	96	65	104	536	524
JMD12L	144	142	91	65	104	536	524
JMD16L	154	152	81	65	104	537	524
JMD20L	155	162	71	70	114	562	590

JM / JMD SERIES

E-WHA

DIMENSIONAL OUTLINE

- MODEL : JMD50~JMD20L
- CONNECTION : FLANGE
- MATERIAL : SUS304/SUS316/SUS316L



MODEL	A	B	C	D	E	L	H
JMD50~200	98	98	135	40	66.5	477	524
JMD600	109	109	125	40	66.5	478	524
JMD1000	109	109	125	40	66.5	478	524
JMD2000	123	121	112	45	71.5	487	524
JMD4000	128	126	107	45	71.5	487	524
JMD6000	128	126	107	45	71.5	487	524
JMD8000	148	146	87	65	104	545	524
JMD10L	153	150	83	65	104	545	524
JMD12L	159	156	77	65	104	545	524
JMD16L	154	152	81	65	104	545	524
JMD20L	153	182	51	70	114	573	590



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