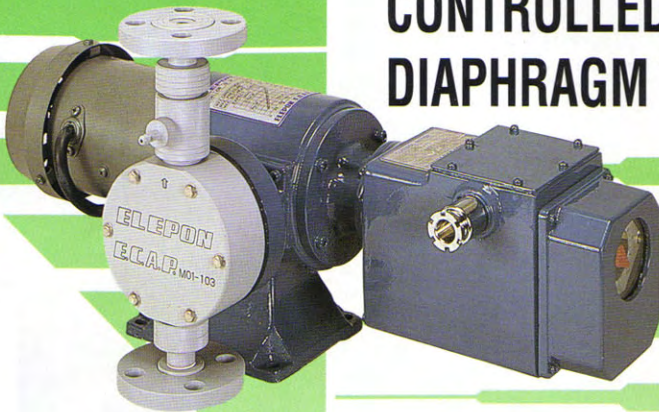
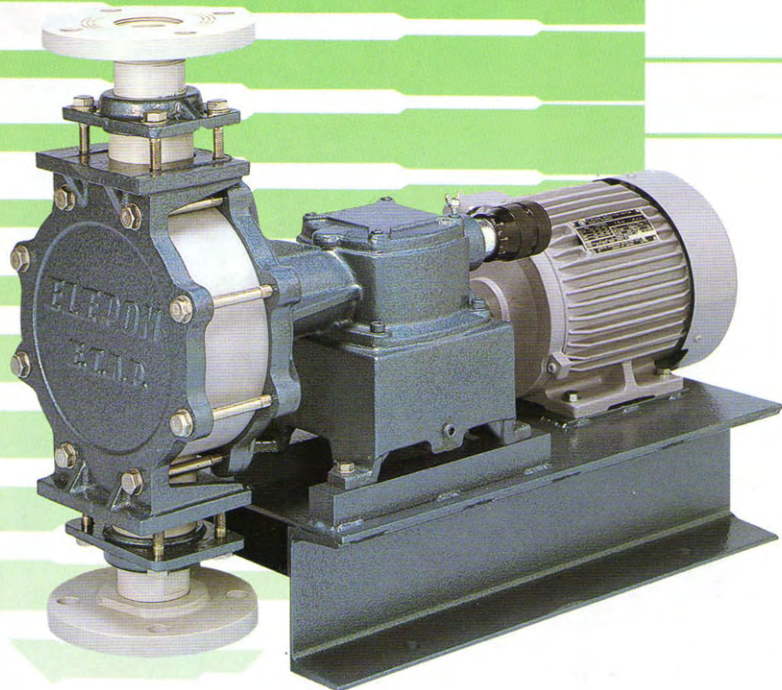
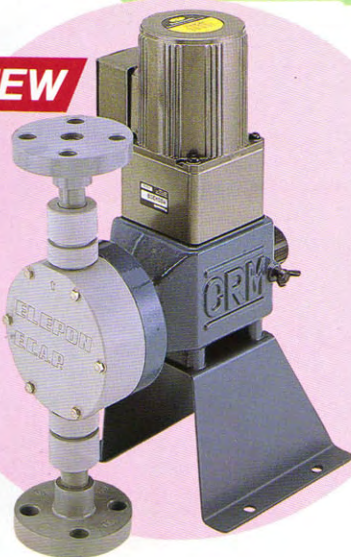


**ELEPON® FEEDER SERIES
CONTROLLED VOLUME
DIAPHRAGM TYPE METERING PUMPS**

**CR-N
CRM**



NEW



ELEPON E.C.A.P. CORPORATION

THE MOST RELIABLE AND ECONOMIC TYPE METERING PUMPS

CR-N CRM SERIES

Elephon Feeder CR-N and CRM series direct acting diaphragm metering pumps make full use of technical expertise we have built up past many years. Designed for versatile, safe, low-cost operation, these pumps are used for variably controlled injection of chemicals being used in treatment of factory discharge, waste water, water supply, sewage systems etc. They are also used as process pumps, providing variably controlled injection transfer industries, such as chemicals, dyes, paper, foodstuffs, pharmaceuticals etc.

HIGH RESISTANCE TO CHEMICALS AND CORROSION

Pumps Head, Connector – PVC (Standard), Acrylic Resin, Stainless Steel, PVDF

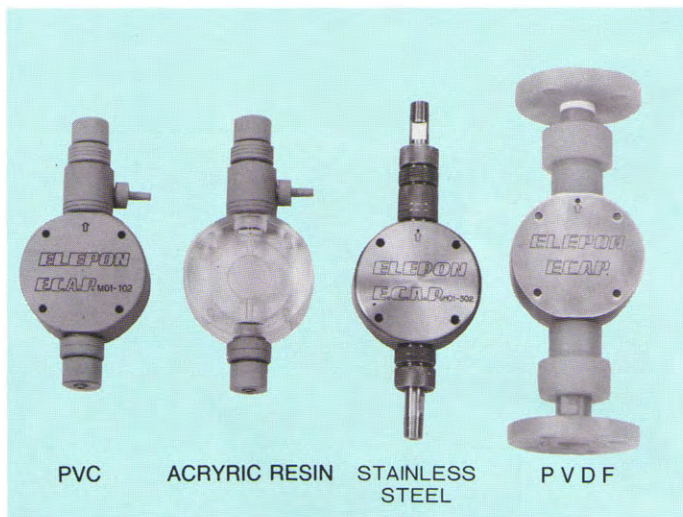
Diaphragm – PTFE (Standard)

Ball Valve – Ceramics (Standard), Stainless Steel, PTFE

O-Ring – Viton (Standard), PTFE

You can select materials meet for pumping liquids.

Standard pump material is PVC.



APPLICABLE TO HIGH VISCOUS AND SLURRY LIQUID

Standard models can usually handle liquids of viscosity up to 300mPa.s. Pumps with high viscosity specifications can handle up to 2000mPa.s. Slurry liquids (for example 10% caustic lime) also can be transferred/injected.

UNION HOLDER

VALVE CASING

BALL VALVE

FRONT PLATE

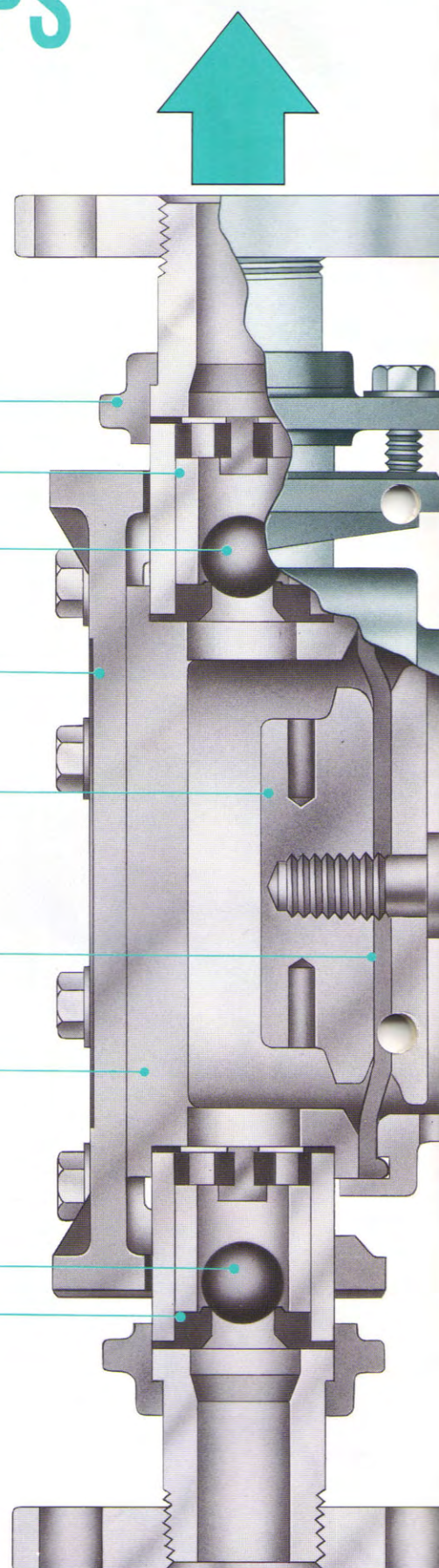
DIAPHRAGM
LOCK NUT

DIAPHRAGM

PUMP HEAD

BALL VALVE

VALVE SEAT



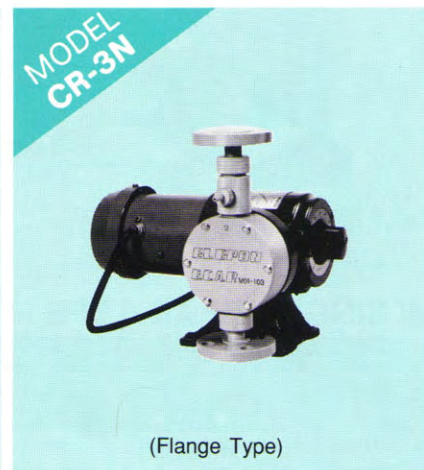
CAL DIAPHRAGM

EASE OF HANDLING AND MAINTENANCE

Each pump consists of assemblies of independently unitized components to make the entire part compact, simple and easy to maintain and inspect.



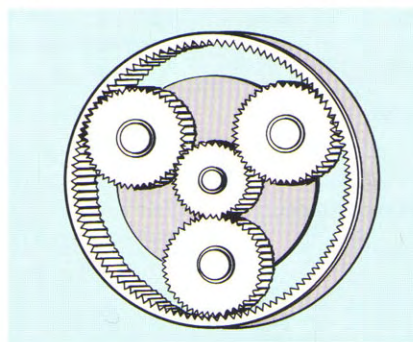
(Hose Type)



(Flange Type)

DULABILITY*

The driving sections are designed and built to provide high structural strength and high driving power. A double reduction mechanism consisting of planetary gears is incorporated for small capacity pumps of 100W and a worm gear reducer is incorporated for large capacity pumps of 200W or larger capacities. Much higher performance is obtained by these mechanisms in long-time continuous operation.



DOUBLE REDUCTION MECHANISM WITH PLANETARY GEARS

APPLICATIONS:

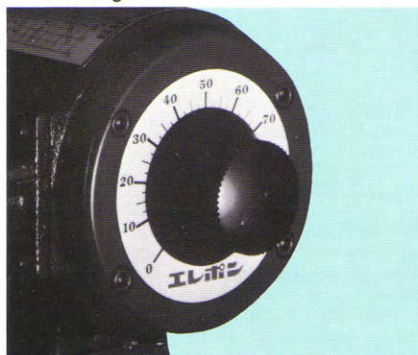
Feeding at manufacturing processes, experimental plants and laboratories of:

- 1) Sodium hypochlorite for chlorine disinfection.
- 2) Chemicals for waste water treatment.
- 3) Chemicals for water treatment.
- 4) Food additives, colorants and preservatives
- 5) Boiler water treatment agents.
- 6) Slime control agents, defoaming agents and colors at paper mills.
- 7) Liquid fertilizers at vegetation plants.

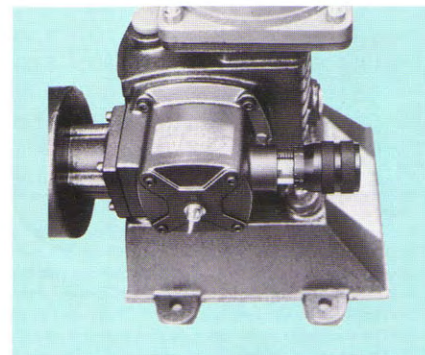
CONTROL OF DISCHARGE VOLUME

The control dial permits stepless setting of discharge volume for 0 up to 100% no matter whether the pump is in or not in operation. With types larger than CR-4N, the discharge capacity can be controlled precisely without errors with the micrometer type control.

* The use of the pump between 10% and 100% is best recommended to obtain stable discharge.

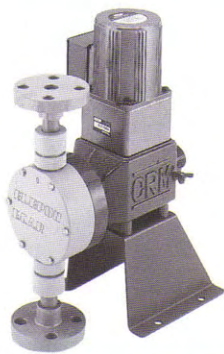


DIAL TYPE



MICROMETER TYPE

AVAILABLE IN A VARIETY OF TYPES AND CAPACITIES TO CHOOSE FROM VARIETY



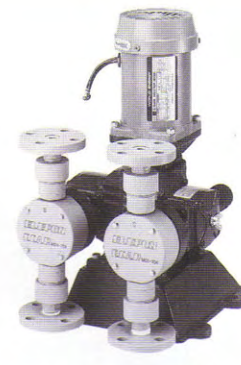
NEW Model CRM Series
(Flange Type)



Model CR-2
(Hose Type)



Model CR-3N
(Flange Type)



Model CR-4DN
(Double Head Type)

◆ SINGLE HEAD TYPE

Model	Capacity (mℓ/min)		Max. Discharge Pressure (MPa)	Motor	Pump Size			Weight kg (P V C)	Suction Head
	50Hz	60Hz			PVC/Acrylics	Stainless steel	P V D F		
★ ※ CRM-02	2 ~ 20	2.4 ~ 24	1.0	1-phase 100V 1-phase 200V 3-phase 200V 25W	φ4 × φ9 hose	—	—	6.5	~1.0m
★ ※ CRM-04	4 ~ 40	4.8 ~ 48	1.0		JIS 10K 13A flange	—	—	6.5	
★ ※ CRM-12	12 ~ 120	14 ~ 140	1.0		φ6 × φ11 hose	—	—	7.5	
★ ※ CRM-24	24 ~ 240	28 ~ 280	0.7		JIS 10K 13A flange	—	—	7.5	
★ NEW ※ CRM-70	64 ~ 640	76 ~ 760	0.5	1-phase 100V 1-phase 200V 3-phase 200V 40W	φ15 × φ22 hose JIS 10K 15A flange	—	—	10.0	~1.0m
★ NEW ※ CRM-140	110 ~ 1,100	140 ~ 1,400	0.5			—	—	10.0	
※ CR-1N	6 ~ 60	7 ~ 75	1.3	1-phase 100V 3-phase 200V 0.1kW	φ6 × φ11 hose	PT 3/8"	φ8 × φ10 PTFE hose	16.5	~1.5m
CR-1-2N	14 ~ 140	17 ~ 170	1.3			PT 3/8"	φ8 × φ10 PTFE hose	16.5	
※ CR-2N	27 ~ 270	33 ~ 330	1.0			PT 3/8"	φ8 × φ10 PTFE hose	17	
CR-2-2N	68 ~ 680	82 ~ 820	1.0		JIS 10K 13A flange	PT 3/8"	φ8 × φ10 PTFE hose	17.5	
※ CR-3N	100 ~ 1,000	120 ~ 1,200	0.7		JIS 10K 15A flange	PT 1/2"	JIS 10K 15A flange	18	
CR-3-2N	160 ~ 1,600	190 ~ 1,900	0.7			PT 1/2"	JIS 10K 15A flange	18	
※ CR-4N	210 ~ 2,100	250 ~ 2,500	0.5		JIS 10K 20A flange	PT 3/4"	JIS 10K 20A flange	25.5	
※ CR-5N	260 ~ 2,600	310 ~ 3,100	0.5			PT 3/4"	JIS 10K 20A flange	28.5	
※ CR-6N	500 ~ 5,000	600 ~ 6,000	0.3	3-phase 200V 0.4kW	JIS 10K 25A flange	PT 1"	JIS 10K 25A flange	34	~1.0m
★ ※ CR-10aN	1,000 ~ 10,500	1,200 ~ 12,500	0.5	3-phase 200V	JIS 10K 40A flange	←	—	85	
★ ※ CR-20aN	2,000 ~ 20,500	2,400 ~ 24,400	0.3	0.75kW outdoor type	JIS 10K 50A flange	←	—	100	
★ ※ CR-30aN	3,000 ~ 30,000	3,600 ~ 36,000	0.3	3-phase 200V 1.5kW outdoor type	JIS 10K 65A flange	←	—	100	

※ As to CR-10aN, 20aN and 30aN for high viscosity use (upto 2000mPa.S), (b) type shall be selected. In this case, its discharge volume shall be reduced to 2/3.

◆ DOUBLE HEAD TYPE (The flow rates below are dual)

Model	Capacity (mℓ/min)		Max. Discharge Pressure (MPa)	Motor	Pump Size			Weight kg (P V C)	Suction Head
	50Hz	60Hz			PVC/Acrylics	Stainless steel	P V D F		
CR-1DN	12 ~ 120	15 ~ 150	1.3	1-phase 100V 3-phase 200V 0.1kW	φ6 × φ11 hose	PT 3/8"	φ8 × φ10 PTFE hose	22.5	~1.5m
CR-1D-2N	28 ~ 280	34 ~ 340	1.3			PT 3/8"	φ8 × φ10 PTFE hose	22.5	
CR-2DN	54 ~ 540	66 ~ 660	1.0			PT 3/8"	φ8 × φ10 PTFE hose	23.5	
CR-2D-2N	136 ~ 1,360	164 ~ 1,640	1.0		JIS 10K 13A flange	PT 3/8"	φ8 × φ10 PTFE hose	24.5	
CR-3DN	200 ~ 2,000	240 ~ 2,400	0.7		JIS 10K 15A flange	PT 1/2"	JIS 10K 15A flange	25.5	
※ CR-4DN	210 ~ 2,100	250 ~ 2,500	0.5	3-phase 200V 0.2kW	JIS 10K 20A flange	PT 3/4"	JIS 10K 20A flange	30	~1.5m
※ CR-5DN	420 ~ 4,200	500 ~ 5,000	0.5			PT 3/4"	JIS 10K 20A flange	30.5	
※ CR-6DN	520 ~ 5,200	620 ~ 6,200	0.5			PT 3/4"	JIS 10K 20A flange	33.5	
※ CR-10DN	1,000 ~ 10,000	1,200 ~ 12,000	0.3	3-phase 200V 0.4kW	JIS 10K 25A flange	PT 1"	JIS 10K 25A flange	38	~1.0m
★ CR-40DN	4,100 ~ 41,000	5,000 ~ 50,000	0.3		JIS 10K 50A flange	←	—	145	
★ CR-60DN	5,800 ~ 58,000	7,000 ~ 70,000	0.3	1.5kW outdoor type	JIS 10K 65A flange	←	—	155	

Note:

1 Standard types (CR-1N to CR-10DN) have totally-enclosed fan-cooled indoor type motors. We also have outdoor, eG3, d2G4 and variable voltage motors for options.

2 We also have three-throw types CR-1TN to CR-3TN, which discharge three times as much as single-throw types CR-1N to CR-3N.

3 We have standard types (up to 300mPa.s) and high viscosity types (up to 2,000 mPa.s). Please specify when you place your order.

4 Contact us when you use slurry. Ten-percent slaked lime solution can be also transferred.

5 Working temperature is 0 to 50°C (PVC) or 0 to 80°C (Stainless Steel, PVDF).

6 The connecting pipe aperture and standard specifications are so described above. We can change them according to your needs.

7 The above capacity is measured at 0.05 MPa discharge pressure with clean water at room temperature.

8 We provide standard performance curve sheets based on rigid experimentation, if requested.

9 We can supply the products marked with ※(PVC-made standard types) off the shelf, if required.

3 10 The acryl material is not available for the model marked with ★.

FULL-AUTOMATIC PROPORTIONAL CONTROL SYSTEMS ARE ALSO AVAILABLE

Chemicals Feed Pumps of Series CRA-N of fully automatic proportional control systems are designed to feed chemical solutions fully automatically and proportionally at precise flow rates in response to output signals from various controllers.

MODEL CRA-N SERVO CONTROL SYSTEM



CRA-3N

APPLICATIONS

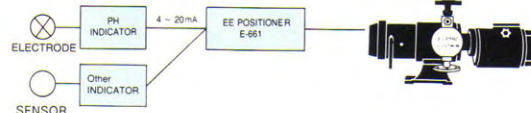
- Combination with thermometers, pressure gages, flowmeters, liquid level gages and other control devices.
- Combination with analysis apparatus for laboratory use and (PH meters and ORP meters).
- Process analysis apparatus.
- Combination with analysis apparatus for laboratory use and precision measuring instruments.
- Combination with various other measuring instruments and analysis apparatus.

EXAMPLES OF USES

① AUTO & MANUAL REMOTE CONTROL.



② OUTPUT SIGNAL AUTOMATIC CONTROL.



FEATURES

- Full – automatic operation
- Continuous control
- Wide range of application possible by adding controller.
- Positive response to input signals allows stable operation.
- Stable discharge rate is ensured by use of ELEPON's reliable CR-N type feeder. You can control the discharge (0% to 100%) manually during operation and stops. With CRA series you can control the quantity of flow automatically using electric signals from automatic controllers.

SERVO CONTROL TYPE CRA Series Specification

Model	Capacity (mL/min)		Max. Discharge Pressure (Mpa)	Servo Control Motor Spec.	E.E. Positioner	Weight kg (PVC)
	50Hz	60Hz				
CRA-1N	0~60	0~75	1.3	1-phase AC 100V 50/60Hz 6W	MODEL E-660, E-661 Input signal 4 ~ 20mA DC	20
CRA-1-2N	0~140	0~170	1.3			20
CRA-2N	0~270	0~330	1.0			20.5
CRA-2-2N	0~680	0~820	1.0			21.0
CRA-3N	0~1,000	0~1,200	0.7			21.5
CRA-3-2N	0~1,600	0~1,900	0.7			21.5
CRA-4N	0~2,100	0~2,500	0.5			30.5
CRA-5N	0~2,600	0~3,100	0.5			33.5
CRA-6N	0~5,000	0~6,000	0.3			39.0
CRA-10aN	0~10,500	0~12,500	0.5			95
CRA-20aN	0~20,500	0~24,400	0.3			105
CRA-30aN	0~30,000	0~36,000	0.3			120

STANDARD MATERIALS FOR WETTING PARTS

Material	PVC	Acrylics	Stainless Steel (SUS-304)	PVDF
Parts Name				
Pump head	PVC	Acrylics	Stainless Steel (SUS-304)	PVDF
Diaphragm lock nut	PVC	PVC	Stainless Steel (SUS-304)	PVDF
Suction and discharge connectors	PVC	PVC	Stainless Steel (SUS-304)	PVDF
Diaphragm	PTFE	PTFE	PTFE	PTFE
Ball valve	Ceramics	Ceramics	Stainless Steel (SUS-316)	PTFE
O-ring	Viton	Viton	PTFE	PTFE

※PVC material only for CRM-series.

● SUS-304 is the standard. If you require SUS-316, please specify.

STANDARD ACCESSORIES (Material: PVC)

Parts Name Model	Braid hose	Strainer	Reducer oil	Injection port
CRM-02 CRM-04	φ4×φ9 ×3m 1 pce	1 pce	—	1 pce
CRM-12 CRM-24	φ6×φ11×4m 1pce			
CR-1N CR-1-2N CR-2N				
CRM-70 CRM-2-2N CRM-140 CR-3N CR-3-2N	—	1 pce	—	—
CR-(4DN) CR-4N (5DN) CR-5N (6DN)	—	1 pce (2 pce)	0.3ℓ	—
CR-6N (10DN)	—	1 pce (2 pce)	0.3ℓ	—
CR-10aN CR-20aN (40DN) CR-30aN (60DN)	—	—	0.5ℓ (1.0ℓ)	—

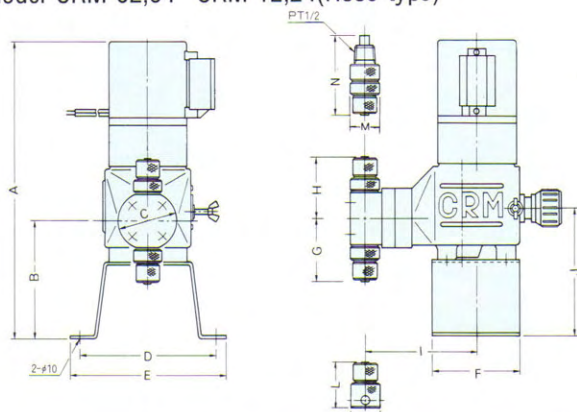
※With the flange-type CRM-02 through CRM-04, and also with the flange-type CR-1N through CR-2N, the strainer is the only standard accessory.

ALL MODELS ARE EASY TO ASSEMBLE AND COMPACT

DIMENSIONAL DIAGRAMS AND TABLES (PVC STANDARD TYPE)

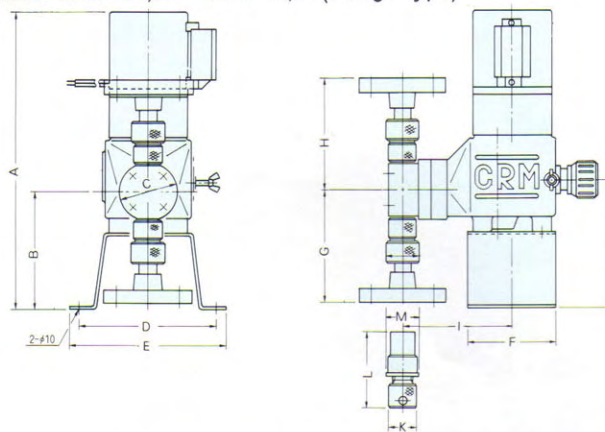
※ For servo controlling CRA series and the dimension of options, ask for the drawing.

Model CRM-02;04 CRM-12;24(Hose type)



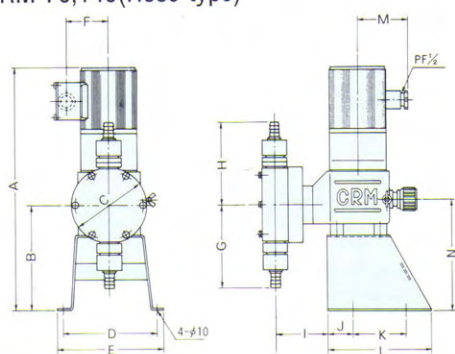
Model	Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	N
C R M-02-04		302	120	φ60	P.C140	160	90	62.5	62.5	113.5	128.5	φ30	45	φ30	80.5
C R M-12-24		302	120	φ90	P.C140	160	90	83	83	126	128.5	φ35	50	φ35	85

Model CRM-02;04 CRM-12;24(Flange type)



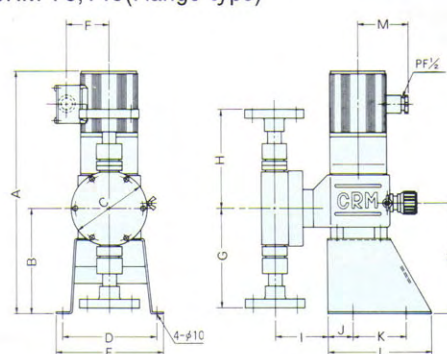
Model	Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M
C R M-02-04		302	120	φ60	P.C140	160	90	116.5	116.5	113.5	128.5	φ30	76	φ34
C R M-12-24		302	120	φ90	P.C140	160	90	132	132	126	128.5	φ35	83	φ34

Model CRM-70;140(Hose type)



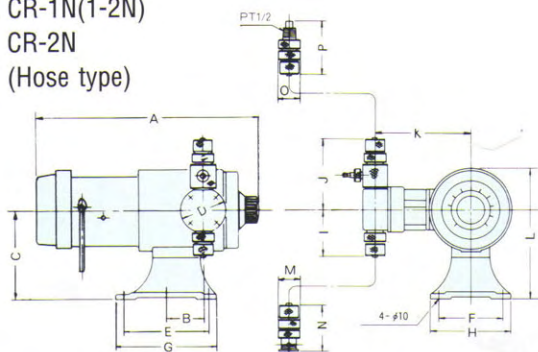
Model	Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	N
C R M-70-140		388	168	φ120	P.C150	170	67.5	133	133	85	40	P.C85	165	80	177

Model CRM-70;140(Flange type)



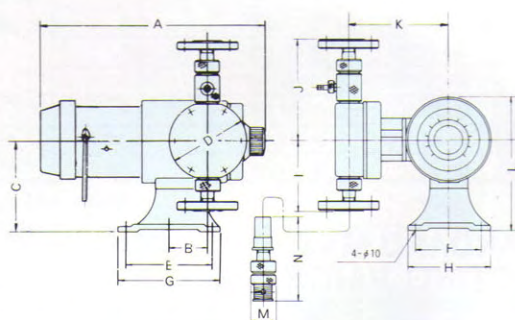
Model	Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	N
C R M-70-140		388	168	φ120	P.C150	170	67.5	159	159	85	40	P.C85	165	(80)	177

Model CR-1N(1-2N)
CR-2N
(Hose type)



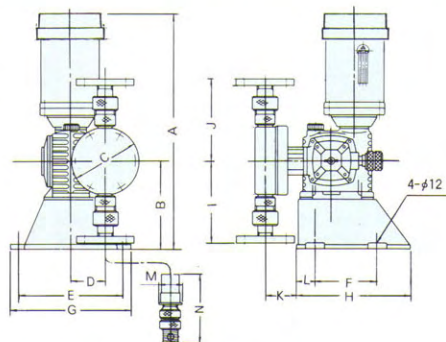
Model	Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
C R-1 N		352	61	139	φ70	134	104	158	126	72	115	152	203	φ35	74	φ35	85
C R-2 N		352	61	139	φ100	134	104	158	126	87	131	152	203	φ35	74	φ35	85

Model CR-2-2N;CR-3N(3-2N)(Flange type)



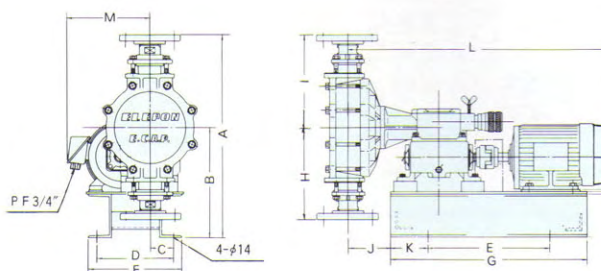
Model	Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	N
C R-2-2 N		352	61	139	φ100	134	104	158	126	98	142	152	203	φ35	116
C R-3 N		352	61	139	φ120	134	104	158	126	113	161	154.5	203	φ40	132

Model
CR-4N
-5N
-6N



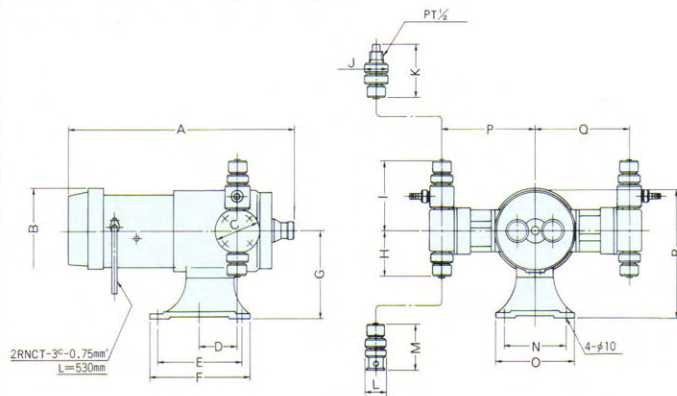
Model	Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	N
C R-4 N		463	165	φ120	75	226	133	262	240	150	150	66	45	φ42	140
C R-5 N		487	165	φ120	75	226	133	262	240	150	150	66	45	φ42	140
C R-6 N		513	191	φ148	75	226	133	262	250	180	180	66	45	φ52	155

Model CR-10aN;20aN;30aN



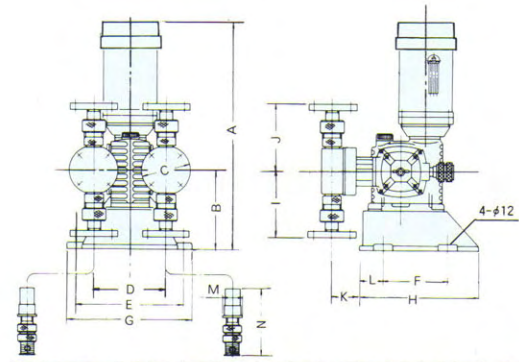
Model	Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M
C R-1 0 a N		483	276	65.5	P.C220	P.C350	270	522	207	207	118	86	670	232
C R-2 0 a N		548	301	65.5	P.C220	P.C350	270	522	247	247	123	86	675	232
C R-3 0 a N		572	311	65.5	P.C220	P.C350	270	562	261	261	123	106	729	246

Model CR-1DN;2DN(Hose type)



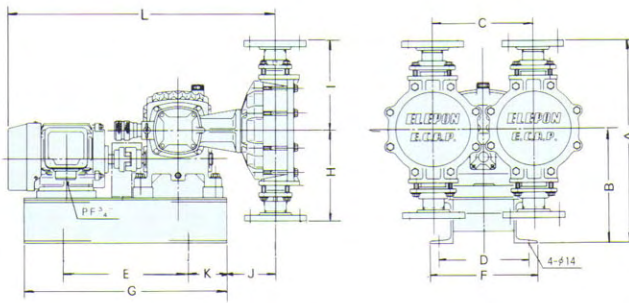
Model	Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
CR-1 DN		352	φ135	φ70	61	134	158	139	72	115	φ35	85	φ35	74	104	126	152	152	203
CR-2 DN		352	φ135	φ100	61	134	158	139	87	131	φ35	85	φ35	74	104	126	152	152	203

Model CR-4DN;5DN;6DN;10DN



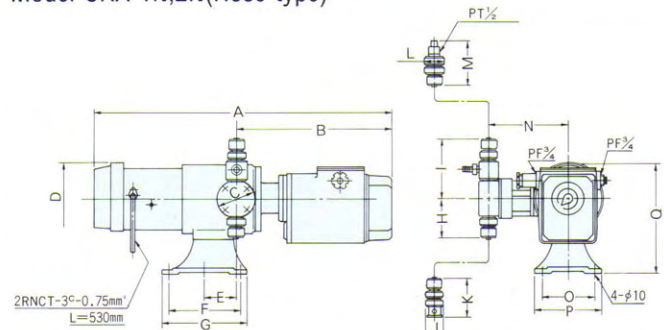
Model	Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	N
CR-4 DN		463	165	φ100	150	226	133	262	240	140	140	66	45	φ42	140
CR-5 DN		463	165	φ120	150	226	133	262	240	150	150	66	45	φ42	140
CR-6 DN		487	165	φ120	150	226	133	262	240	150	150	66	45	φ42	140
CR-10 DN		513	191	φ148	150	226	133	262	250	180	180	66	45	φ52	155

Model CR-40DN;60DN



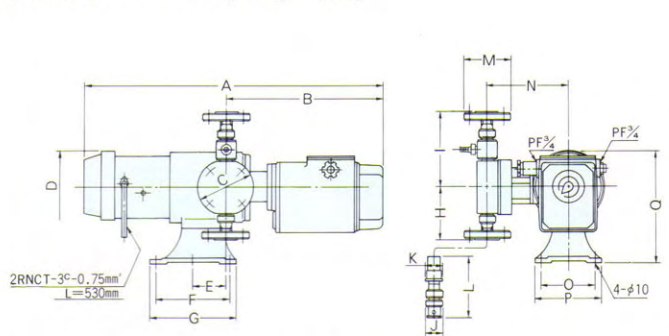
Model	Symbol	A	B	C	D	E	F	G	H	I	J	K	L
CR-40 DN		568	321	280	P.C270	P.C350	320	567	247	122	108.5	729	
CR-60 DN		582	321	280	P.C270	P.C350	320	567	261	122	108.5	729	

Model CRA-1N;2N(Hose type)



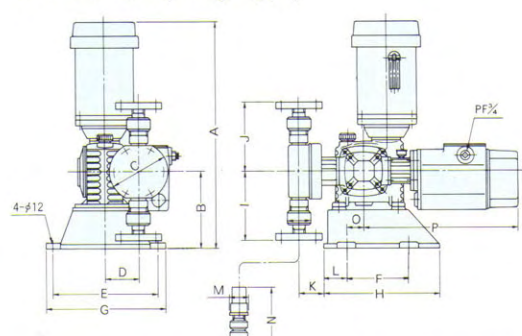
Model	Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
CRA-1 N		560	290	φ70	φ135	61	134	158	72	115	φ35	74	φ35	85	152	104	126	203
CRA-2 N		560	290	φ100	φ135	61	134	158	87	131	φ35	74	φ35	85	152	104	126	203

Model CRA-2-2N;3N(Flange type)



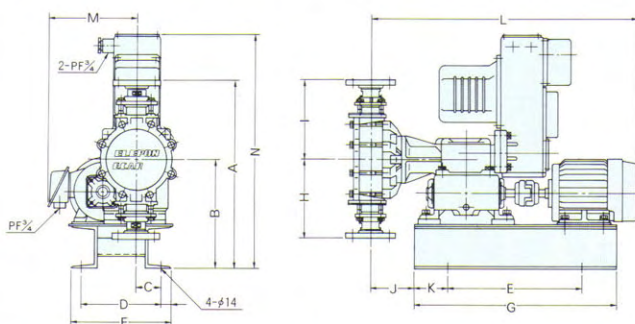
Model	Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
CRA-2-2 N		560	290	φ100	φ135	61	134	158	98	142	φ35	φ34	116	φ90	152	104	126	203
CRA-3 N		560	290	φ120	φ135	61	134	158	113	161	φ40	φ34	132	φ95	154.5	104	126	203

Model CRA-4N;5N;6N(Flange type)



Model	Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
CRA-4 N		463	165	φ120	75	226	133	262	240	150	150	66	45	φ42	140	35	327
CRA-5 N		487	165	φ120	75	226	133	262	240	150	150	66	45	φ42	140	35	327
CRA-6 N		513	191	φ148	75	226	133	262	250	180	180	66	45	φ52	155	35	327

Model CRA-10aN;20aN;30aN



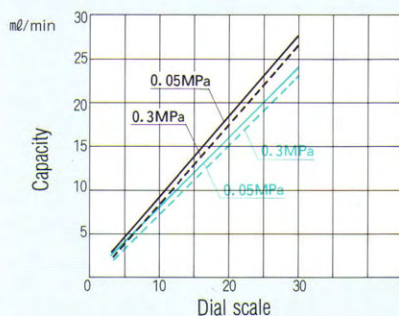
Model	Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	N
CRA-10a N		483	276	65.5	P.C220	P.C350	270	522	207	207	118	86	695	232	587
CRA-20a N		548	301	65.5	P.C220	P.C350	270	522	247	247	123	86	700	232	612
CRA-30a N		572	311	65.5	P.C220	P.C350	270	562	261	261	123	106	754	246	622

PERFORMANCE CURVES

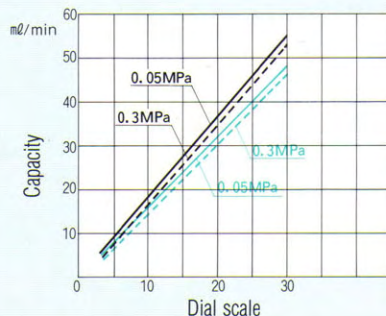
■ The standard performance curves represented in these graphs have been obtained through very rigorous testing procedures. Select the pump with the performance curve most closely suited to your needs.

— 60Hz
— 50Hz

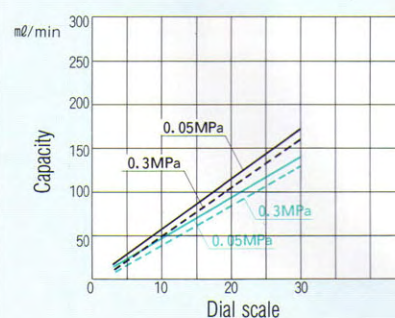
**Model
CRM-02**



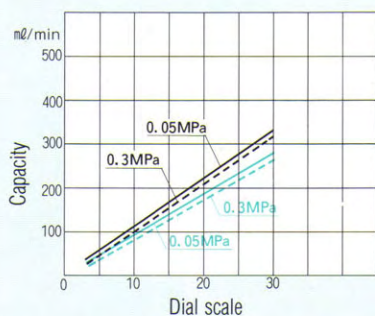
**Model
CRM-04**



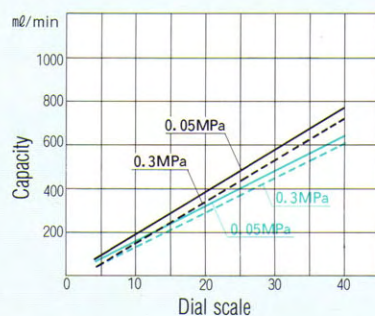
**Model
CRM-12**



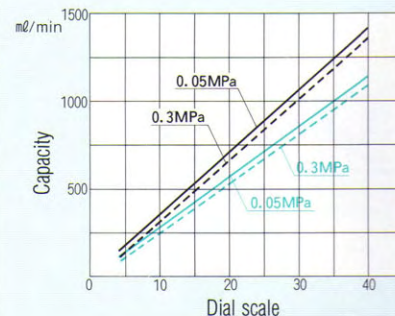
**Model
CRM-24**



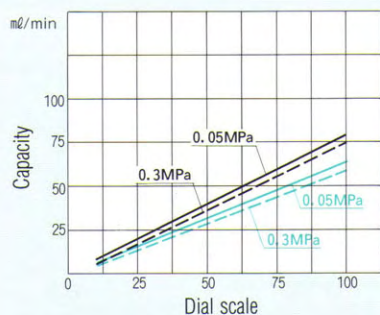
**Model
CRM-70**



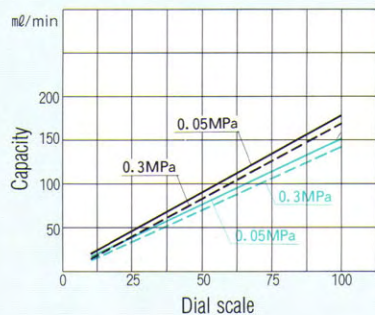
**Model
CRM-140**



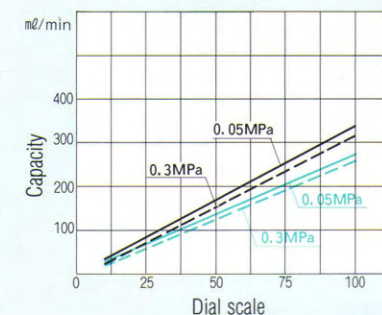
**Model
CR-1N**



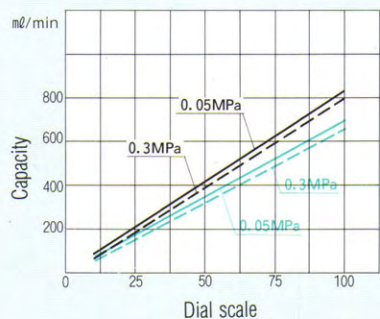
**Model
CR-1-2N**



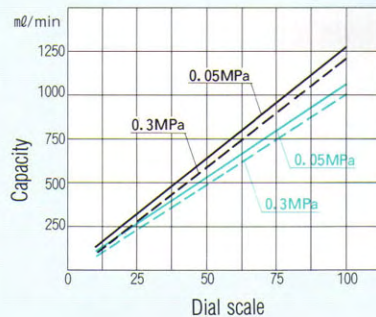
**Model
CR-2N**



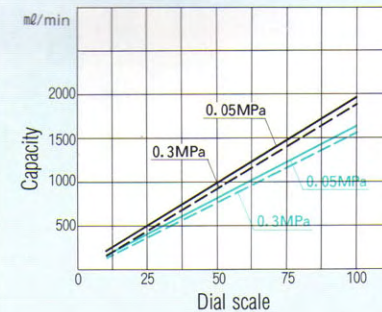
**Model
CR-2-2N**



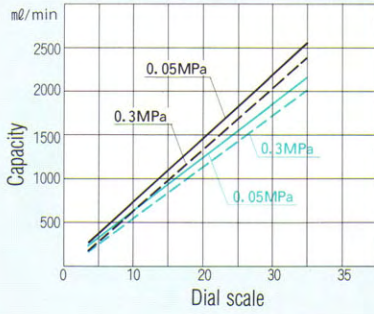
**Model
CR-3N**



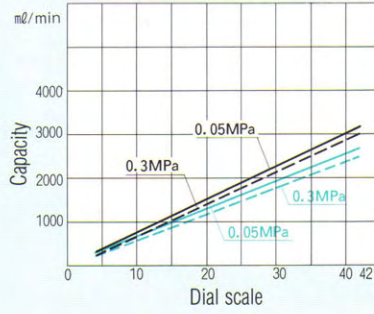
**Model
CR-3-2N**



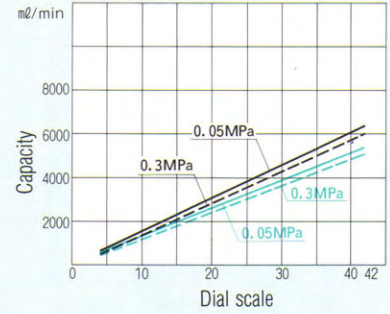
Model
CR-4N



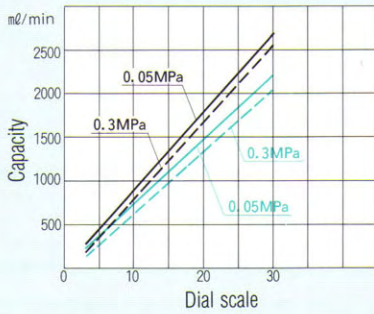
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CR-5N



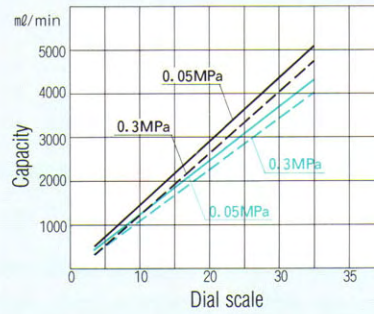
Model
CR-6N



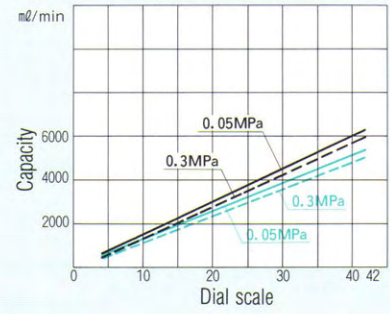
Model
CR-4DN



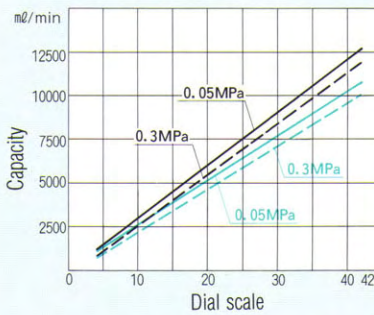
Model
CR-5DN



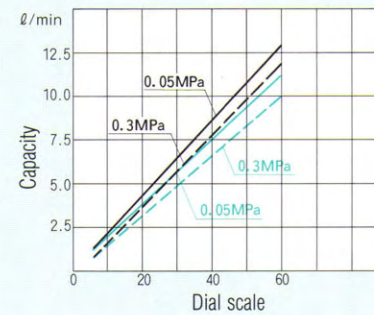
Model
CR-6DN



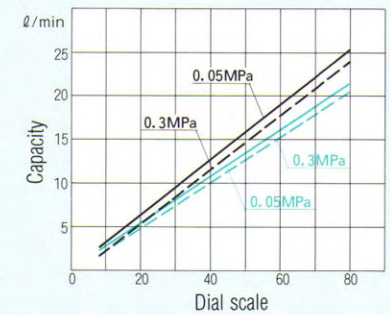
Model
CR-10DN



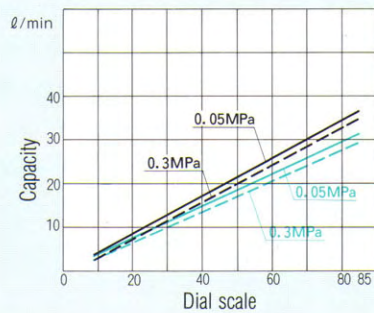
Model
CR-10aN



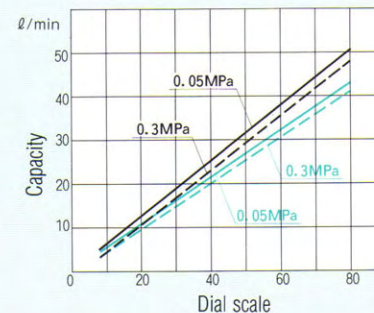
Model
CR-20aN



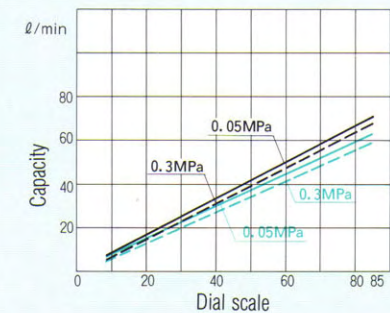
Model
CR-30aN



Model
CR-40DN

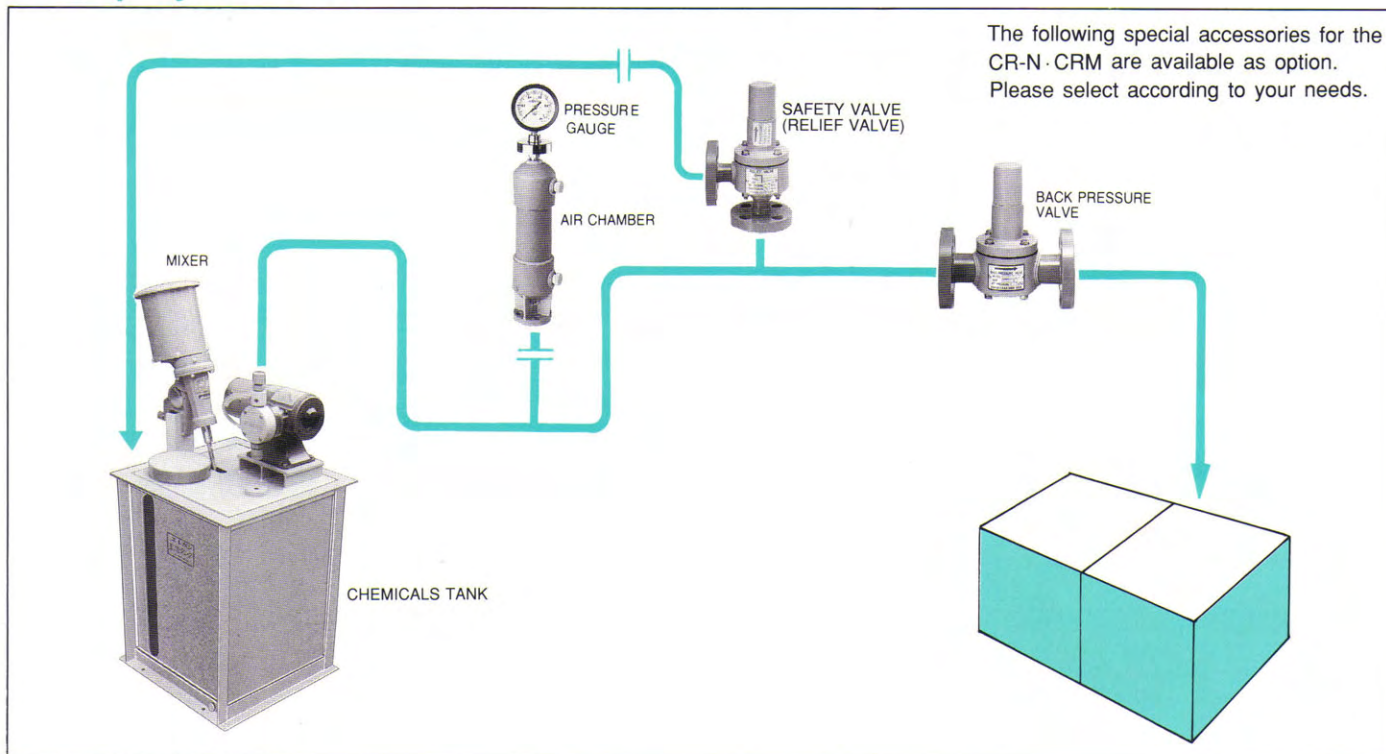


Model
CR-60DN

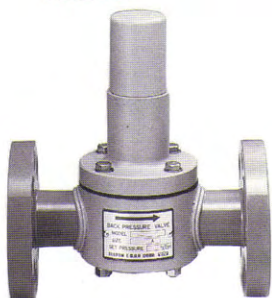


SPECIAL ATTACHMENTS FOR METERING PUMPS

● Pump System Flow



● SPECIFICATIONS OF THE BACK PRESSURE VALVE



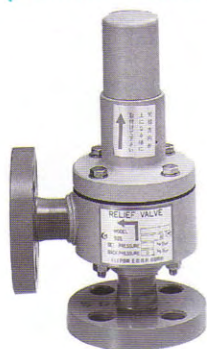
When used under the conditions as described below, a reciprocating continuous flow pump must be fitted with a back pressure valve on the discharge side.

(1) Reverse differential pressure.....When pressure on the intake side exceeds that on the discharge side, the pump's check valve has no checking effect in the discharge direction. Instead, the fluid is discharged as a result of its natural head.

(2) When differential pressure is 0.03 MPa or less.....With continuous flow pumps, when differential pressure is 0.03 MPa or less, overfeeding often occurs, and feeding volume is less precise. When such conditions are prevalent, discharge can be stabilized by installing a back pressure valve adjusted to a setting of 0.05 MPa or more.

Model	Material	Connecting Pipe Aperture	Maximum Amount of Discharge l/min	Range of Set Pressure (Standard setting pressure)	Adaptable Pumps
BP-04HK	PVC	$\phi 4 \times \phi 9$ hose	0.2	Fixed at 0.15MPa	CRM-02, 04
BP-06HK		$\phi 6 \times \phi 11$ hose	0.5	Fixed at 0.15MPa	CRM-12, 24 CR-1N, 1-2N, 2N
BP-13FK		JIS 10K 13A flange	1.0	Fixed at 0.15MPa	CRM-02, 04, 12, 24
BP-13FV				0.1 ~ 0.3MPa (0.15MPa)	CR-1N, 1-2N, CR-2N, 2-2N
BP-15FK		JIS 10K 15A flange	2.0	Fixed at 0.15MPa	CRM-70, 140
BP-15FV				0.1 ~ 0.3MPa (0.15MPa)	CR-3N, 3-2N
BP-20FV		JIS 10K 20A flange	6.0	0.1 ~ 0.3MPa (0.1MPa)	CR-4DN, 5DN, 6DN, 4N, 5N
BP-25FV	Stainless Steel	JIS 10K 25A flange	15.0	0.1 ~ 0.3MPa (0.1MPa)	CR-10DN, 6N
BP-40FV		JIS 10K 40A flange	40.0	0.1 ~ 0.3MPa (0.1MPa)	CR-10aN, 20aN, 30aN
BS-10NV		$\frac{3}{8}$ " Screwed type	1.0	0.1 ~ 0.3MPa (0.15MPa)	CRM-70, 40
BS-10FV		JIS 10K 10A flange		0.1 ~ 0.3MPa (0.15MPa)	CR-1N, 1-2N, CR-2N, 2-2N
BS-15NV		$\frac{1}{2}$ " Screwed type	2.0	0.1 ~ 0.3MPa (0.15MPa)	CR-3N, 3-2N
BS-15FV		JIS 10K 15A flange		0.1 ~ 0.3MPa (0.15MPa)	
BS-20NV		$\frac{3}{4}$ " Screwed type	6.0	0.1 ~ 0.3MPa (0.1MPa)	CR-4DN, 5DN, 6DN
BS-20FV		JIS 10K 20A flange		0.1 ~ 0.3MPa (0.1MPa)	CR-4N, 5N
BS-25NV		1" Screwed type	15.0	0.1 ~ 0.3MPa (0.1MPa)	CR-10DN, 6N
BS-25FV		JIS 10K 25A flange		0.1 ~ 0.3MPa (0.1MPa)	
BS-40NV		$1\frac{1}{2}$ " Screwed type	40.0	0.1 ~ 0.3MPa (0.1MPa)	CR-10aN, 20aN, 30aN
BS-40FV		JIS 10K 40A flange		0.1 ~ 0.3MPa (0.1MPa)	
BF-13FV	PVDF	JIS 10K 13A flange	1.0	0.1 ~ 0.3MPa (0.15MPa)	CRM-70, 40 CR-1N, 1-2N, CR-2N, 2-2N
BF-15FV		JIS 10K 15A flange	2.0	0.1 ~ 0.3MPa (0.15MPa)	CR-3N, 3-2N
BF-20FV		JIS 10K 20A flange	6.0	0.1 ~ 0.3MPa (0.1MPa)	CR-4DN, 5DN, 6DN CR-4N, 5N
BF-25FV		JIS 10K 25A flange	15.0	0.1 ~ 0.3MPa (0.1MPa)	CR-10DN, 6N

● SPECIFICATIONS OF THE SAFETY VALVE (RELIEF VALVE)



If a block valve is installed on the discharge line, or if pressure at the discharge side fluctuates, a safety valve must be installed.

Model	Material	Connecting Pipe Aperture	Maximum Amount of Discharge l/min	Range of Set Pressure (Standard setting pressure)	Adaptable Pumps
RP-13FV	P V C	JIS 10K 13A flange	6.0	0.2 ~ 0.5MPa (0.3MPa)	CR-1N, 1-2N, 2N, 2-2N, 3N, 3-2N, 4DN, 5DN, 6DN, 4N, 5N, 6N, CRM
RP-20FV		JIS 10K 20A flange	25.0	0.2 ~ 0.5MPa (0.3MPa)	CR-10DN, 10aN, 20aN
RP-25FV		JIS 10K 25A flange	40.0	0.2 ~ 0.5MPa (0.3MPa)	CR-30aN
RS-10NV	Stainless Steel	3/8" Screwed type	6.0	0.2 ~ 0.5MPa (0.3MPa)	CR-1N, 1-2N, 2N, 2-2N, 3N, 3-2N, 4DN, 5DN, 6DN, 4N, 5N, 6N
RS-10FV		JIS 10K 10A flange			
RS-20NV		3/4" Screwed type	25.0	0.2 ~ 0.5MPa (0.3MPa)	CR-10DN, 10aN, 20aN
RS-20FV		JIS 10K 20A flange			
RS-25NV		1" Screwed type	40.0	0.2 ~ 0.5MPa (0.3MPa)	CR-30aN
RS-25FV		JIS 10K 25A flange			
RF-13FV	P V D F	JIS 10K 13A flange	6.0	0.2 ~ 0.5MPa (0.3MPa)	CR-1N, 1-2N, 2N, 2-2N, 3N, 3-2N, 4DN, 5DN, 6DN, 4N, 5N, 6N
RF-20FV		JIS 10K 20A flange	25.0	0.2 ~ 0.5MPa (0.3MPa)	CR-10DN, 10aN, 20aN
RF-25FV		JIS 10K 25A flange	40.0	0.2 ~ 0.5MPa (0.3MPa)	CR-30aN

● SPECIFICATIONS OF THE AIR CHAMBER



The drawback of reciprocating pumps is pulsation. When pulsation damping is needed, an air chamber must be installed.

Model	Material	Connecting Pipe Aperture	Adaptable pumps
APN-X10-13F	P V C	JIS 10K 13A flange	CR-1N ~ CR-2-2N, CRM-02, 04, 12, 24, 70, 140
APN-X15-15F	P V C	JIS 10K 15A flange	CR-3N, CR-3-2N, CRM-70,140
APN-Y30-20F	P V C	JIS 10K 20A flange	CR-4N ~ 5N, CR-4DN ~ 6DN
APN-Y40-25F	P V C	JIS 10K 25A flange	CR-6N, CR-10DN
AP-150-40F	P V C	JIS 10K 40A flange	CR-10aN
AP-200-50F	P V C	JIS 10K 50A flange	CR-20aN, CR-40DN
AP-200-65F	P V C	JIS 10K 65A flange	CR-30aN, CR-60DN
AS-50-10N	Stainless Steel	PT 3/8" screwed type	CR-1N ~ CR-2-2N
AS-50-10F	Stainless Steel	JIS 10K 10A flange	
AS-80-15N	Stainless Steel	PT 1/2" screwed type	CR-3N, CR-3-2N
AS-80-15F	Stainless Steel	JIS 10K 15A flange	
AS-100-20N	Stainless Steel	PT 3/4" screwed type	CR-4N ~ 5N, CR-4DN ~ 6DN
AS-100-20F	Stainless Steel	JIS 10K 20A flange	
AS-150-25N	Stainless Steel	PT 1" screwed type	CR-6N, CR-10DN
AS-150-25F	Stainless Steel	JIS 10K 25A flange	
AS-150-40F	Stainless Steel	JIS 10K 40A flange	CR-10aN
AS-200-50F	Stainless Steel	JIS 10K 50A flange	CR-20aN, CR-40DN
AS-200-65F	Stainless Steel	JIS 10K 65A flange	CR-30aN, CR-60DN
AF-50-13F	P V D F	JIS 10K 13A flange	CR-1N ~ CR-2-2N
AF-80-15F	P V D F	JIS 10K 15A flange	CR-3N, CR-3-2N
AF-100-20F	P V D F	JIS 10K 20A flange	CR-4N ~ 5N, CR-4DN ~ 6DN
AF-100-25F	P V D F	JIS 10K 25A flange	CR-6N, CR-10DN

※ Note: Pressure gauge is optional.

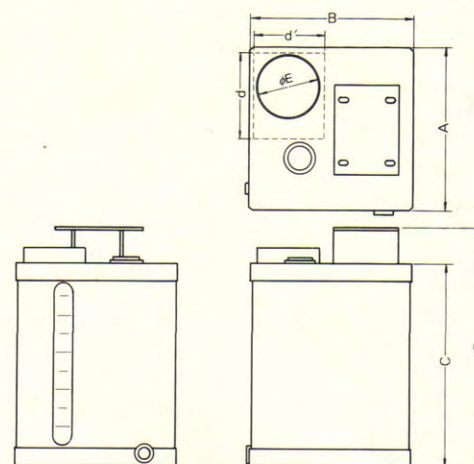
CHEMICAL TANKS FOR METERING PUMPS

●Polyvinylchloride tanks



■ FEATURES

These light, sanitary polyvinylchloride tanks boast superb strength and corrosion resistance, and offer features to meet your every need. They can also be fitted with such equipment as continuous injection pumps or agitators, which makes them extremely versatile. Ranging in capacity from 50 to 1000 liters, you can use them any way you like!



■ SPECIFICATION

Volume	Series	A	B	C	D	E	Thickness	Weight (kg)
50ℓ		360	360	460	540	φ131	3	8
100ℓ		440	440	610	690	φ154	4	14
200ℓ		500	500	930	1010	φ154	4	24
300ℓ		600	600	970	1050	φ154	5	34
500ℓ		740	740	1010	1090	d×d' 300×200	5	46
1000ℓ		1066	1066	1010	1090	d×d' 400×300	6	97

※Custom-made tanks can be also supplied upon request.

●Polyethylene tanks

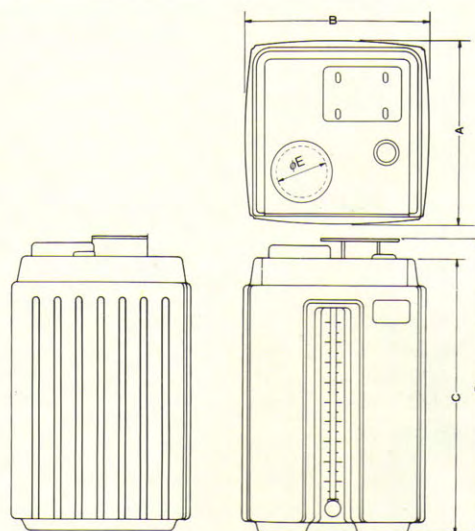


■ FEATURES

These polyethylene tanks are highly resistant to chemicals and impact, and stand up well to adverse conditions. In addition, they also have a thoroughly established reputation for excellent corrosion resistance.

Metering pump mount included

Comes with mount for model CR-N and CP pumps etc.



■ SPECIFICATION

Volume	Series	A	B	C	D	E	Weight (kg)
50ℓ		380	380	570	610	φ 137	5
100ℓ		460	460	700	740	φ 137	9

Note : Any specifications are subject to change for improvement without pre-notice.