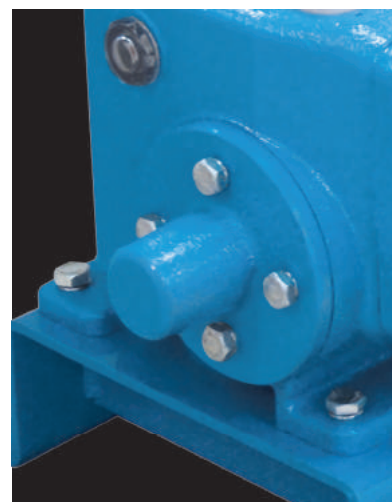
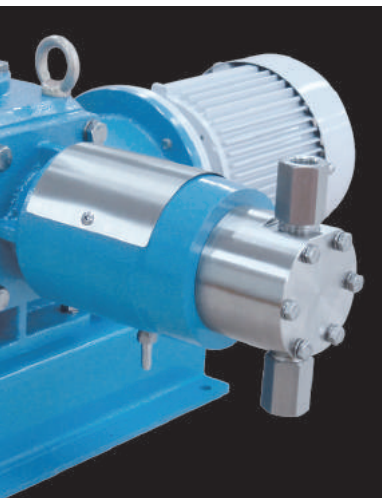




Crank Type Plunger Metering Pumps



CKP Series
KEMPION

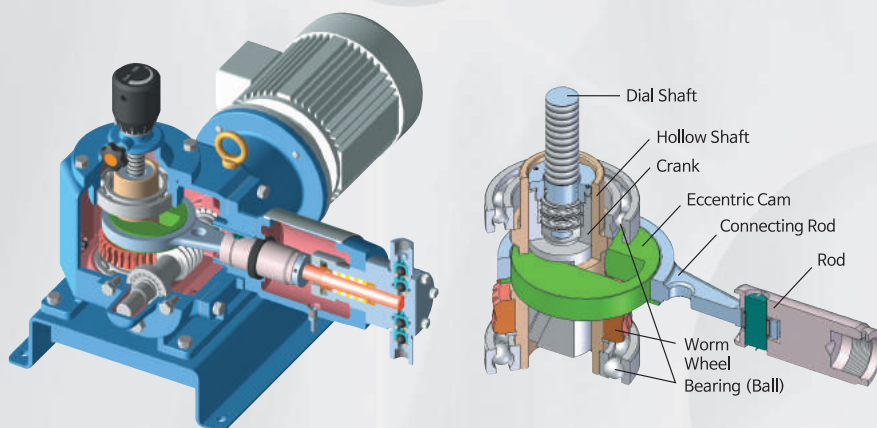
CRANK TYPE PLUNGER Metering Pumps



■ Features and Applications

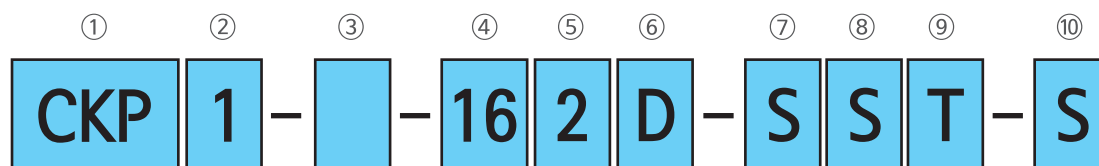
- Precise and stable constant discharge flow rate guaranteed with positive return crank drive mechanism.
- Precise adjustable injection applicable up to maximum 350bar pressure & maximum 11,000mL discharge rate (660L/h).
- Below $\pm 0.5\%$ FS precision, straightness and $\pm 2\%$ FS repeatability guaranteed at 10~100% of stroke length.
- 0~100°C of liquid temperature under operation at ambient temperature of 0~40°C.
- Sealed-up construction provided allowing discharge by flowing the liquid leaked from packing to piping system.
- Variety of motor mounting applicable with coupling connection.
- Diversified fittings (plunger diameter, reduction ratio) with combination of simplex·duplex·triplex operation applicable.
- Outstanding durability under long continuous operation proved.
- Automatic flow rate control applicable with BLDC Motor & Driver (Number of strokes) and Servo Unit (stroke length).
- Requirements of PI (American Petroleum Institute) 675 Standard complied.
- Applicable to various water treatment and chemical processes requiring high precision quantitative flow rate or operation under high pressure.

■ Flow Rate Adjusting Operation Principle



The rotating motion with speed reduced by worm gear conveyed to the Hollow Shaft as the Eccentric Cam inserted into Hollow Shaft rotates is transferred to reciprocating motion through the Connecting Rod. Turning of Dial activates the up-down motion of Crank connected to the Dial Shaft allowing smooth sideway reciprocating motion of Eccentric Cam along the sloped grooving of Crank changing eccentric axis in turn allowing the adjustment of stroke length.

Model Code



① Pump Series	CKP : Crank driving plunger type metering pump		
② Pump Operation	1 : Simplex	2 : Duplex	3 : Triplex
③ Option	No Mark : Manual Operation A : BLDC Automatic Control B : SERVO Automatic Control		
④ Plunger Diameter	16 : 16mm		
⑤ Reduction Ratio	2 : 1/25	3 : 1/20	4 : 1/15
⑥ Drive	D : 1.5kW Motor		
⑦ Liquid End Material	S : Standard (STS316)	X : Special	
⑧ Packing	S : Standard (Packing Gland)	X : Special	
⑨ Connection	T : Thread	F : Flange	X : Special
⑩ Power Supply	S : 3Ø 60Hz 220/380V	A : 3Ø 60Hz 440V	X : Special

Specification

Model	Max. capacity [mL/min, (L/h)]		Max. discharge pressure (bar)	Stroke frequency (SPM)		Plunger Diameter (mm)	Connection		Weight (kg) Thread/Flange
	50Hz	60Hz		50Hz	60Hz		Thread	Flange	
CKP-162D	370 (22.2)	445 (26.7)	350	58	70	16	Rc1/2	-	90
CKP-163D	465 (27.9)	560 (33.6)	350	72	87				
CKP-164D	620 (37.2)	745 (44.7)	270	96	116				
CKP-222D	715 (42.9)	860 (51.6)	225	58	70	22	Rc3/4	63K20A	91
CKP-223D	905 (54.3)	1,090 (65.4)	185	72	87				
CKP-224D	1,200 (72)	1,440 (86.4)	145	96	116				
CKP-302D	1,350 (81)	1,620 (97.2)	120	58	70	30	Rc3/4	40K20A	93/97
CKP-303D	1,700 (102)	2,050 (123)	100	72	87				
CKP-304D	2,250 (135)	2,700 (162)	78	96	116				
CKP-402D	2,400 (144)	2,900 (174)	68	58	70	40	R1	20K25A	95/98
CKP-403D	3,000 (180)	3,650 (219)	55	72	87				
CKP-404D	4,000 (240)	4,850 (291)	42	96	116				
CKP-502D	3,750 (225)	4,550 (273)	44	58	70	50	R1	20K25A	95/98
CKP-503D	4,750 (285)	5,700 (342)	36	72	87				
CKP-504D	6,250 (375)	7,550 (453)	28	96	116				
CKP-602D	5,500 (330)	6,600 (396)	30	58	70	60	R1	20K25A	96/98
CKP-603D	6,850 (411)	8,250 (495)	25	72	87				
CKP-604D	9,150 (549)	11,000 (660)	19	96	116				

Note) 1. Max. capacity is tested under the following conditions

- Temperature : Ambient
- Liquid : Portable water
- Discharge pressure : Max. discharge pressure

2. The effective flow control range is 10~100% stroke length. The metering accuracy is within $\pm 0.5\%$ FS.
The linearity is within $\pm 2\%$ FS.

3. The standard joint flange indicates the discharge side. In case of the suction side is fixed KS10K flange.

4. The weight is based on the standard motor type.

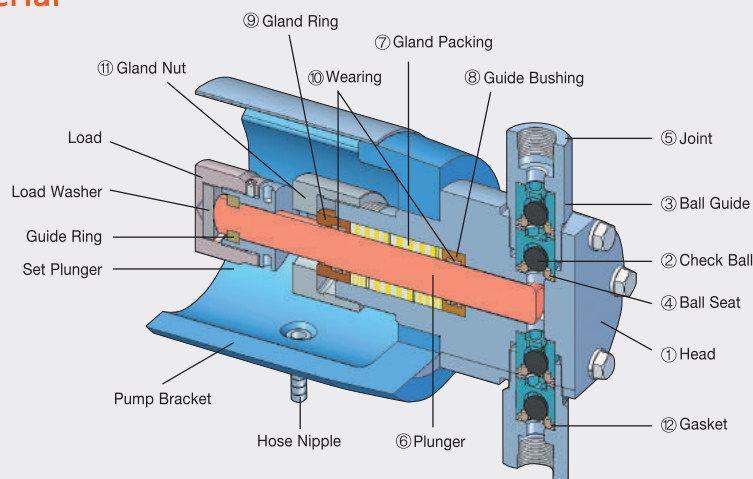
5. Self-priming capacity is 3m for $\varnothing 16 \sim \varnothing 22$ and 4m for $\varnothing 30 \sim \varnothing 60$ of the plunger diameters.

6. The limit of viscosity is 1,000mPas.

7. The Munsell No. of painting is 0.6PB 4.8/10.6 except motor. (The color of motor is manufacturer standard.)

8. The specifications on this catalogue may be revised for improvement without prior notice.

Liquid End Material

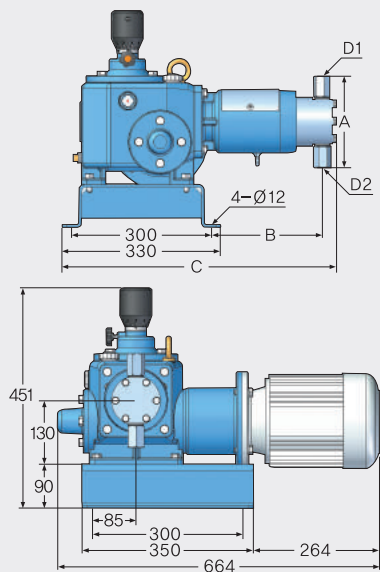


NO.	Parts Name	Material
①	Head	STS316
②	Check Ball	STS316
③	Ball Guide	STS316
④	Ball Seat	STS316
⑤	Joint	STS316
⑥	Plunger	STS316 + HCr

NO.	Parts Name	Material
⑦	Gland Packing	PTFE + ARAMID
⑧	Guide Bushing	STS316
⑨	Gland Ring	STS316
⑩	Wearing	PTFE + PI
⑪	Gland Nut	STS316
⑫	Gasket	PTFE

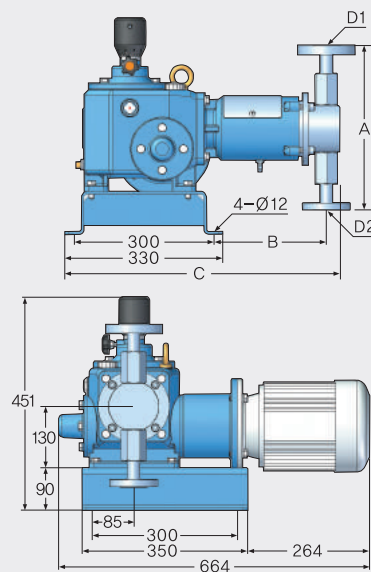
Dimension

● Thread Type



Model	A1	B	C	D1	D2
CKP-162D~164D	190	219	564	Rc1/2	Rc1/2
CKP-222D~224D	190	225	570	Rc1/2	Rc1/2
CKP-302D~304D	232	224	564	Rc3/4	Rc3/4
CKP-402D~404D	265	229	572	Rc3/4	Rc3/4
CKP-502D~504D	314	229	576	R1	R1
CKP-602D~604D	314	232	576	R1	R1

● Flange Type



Model	A1	B	C	D1	D2
CKP-302D~304D	302	224	607	60K20A	20K20A
CKP-402D~404D	347	229	604	40K20A	20K20A
CKP-502D~504D	328	229	607	20K25A	20K25A
CKP-602D~604D	328	232	610	20K25A	20K25A