# EKO-TRADING CO., LIMITED Metering Pumps



Order Code						
1		DFD	Manual operation			
	Cariaa	DM	Analogue operation, current signal (4-20 mA)			
	Series	DP	Pulse operation			
		DC	RS485 Communication protocol operation			

2	Control	R	Length adjustment of manual stroke
	mode	Ν	None



5	Model	M/HX/NX/GX/ LC/EX/LM/X
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6 Materia pum			Pump head	Diaphragm	Valve seat	Valve ball	Seal ring
		PPV	PP	PTFE	PTFE	Ceramic	FKM
	Material of pump	PVT	PVC	PTFE	PTFE	Ceramic	FKM
		SST	SS316	PTFE	SS316	SS316	FKM
		PTFE	PTFE	PTFE	PTFE	Ceramic	

7 Power mode		А	230V 50Hz (power line: 1.5 m)	
	Power mode	В	115V 50Hz (power line: 1.5 m)	
		С	Special requirement, specified otherwise	

1	2	3	4	5	6	7
DFD	R	02	07	М	PPV	А

#### **Order Code**

#### \* EXAMPLE:

Max. lift: 7kg; capacity: 12L/h; 230V 50Hz, PVC pump head, current signal control stroke frequency; no more change stroke length manually, so that the selected type is DM-N-12-07-X-PVT-A



#### **DFD Series Solenoid Metering Pump**



#### FUNCTIONAL CHARACTERISTICS

- Quick and simplified manual operation mode
- Press keys are used to control start and stop of the pump and set the stroke frequency (spm); setting range of stroke frequency is from 1 (spm) to the maximum frequency value; whenever the pump is running or stops, the flow can be adjusted
- Flow range of 1-55L/h and maximum pressure is 20Bar
- Five flow stages are optional and more accurate and controllable
- Current working frequency is digitally displayed
- · Equipped with a liquid level switch interface



# **TECHNICAL CHARACTERISTICS**

DFD-M							
Model	Capacity (L/h)	Maximum pressure (Bar)	Frequency strokes number/1'	Power (W)			
DFD-01-07-M	1	7	120	30			
DFD-02-07-M	2	7	120	30			
DFD-03-07-M	3	7	120	30			
DFD-06-05-M	6	5	180	40			
DFD-09-03-M	9	3	180	40			
Weight: 2.4kg: Suction: 3r	n: Voltage: 220V 50Hz: Size	2: A		<u>.</u>			



## **DFD Series Solenoid Metering Pump**

# **TECHNICAL CHARACTERISTICS**

DFD-HX							
Model	Capacity (L/h)	Maximum pressure (Bar)	Frequency strokes number/1'	Power (W)			
DFD-02-20-HX	2	20	180	40			
DFD-05-12-HX	5	12	180	40			
DFD-06-07-HX	6	7	180	40			
DFD-10-05-HX	10	5	200	40			
DFD-20-01-HX	20	1	200	40			
Weight: 2,4kg; Suction: 3n	n; Voltage: 220V 50Hz; Size	e: A					

DFD-NX Capacity Frequency strokes Power Maximum pressure Model (L/h) number/1' (Bar) (W) DFD-09-07-NX 9 7 200 40 7 DFD-12-07-NX 12 40 200 DFD-15-04-NX 15 200 40 4 DFD-20-03-NX 20 3 200 40 DFD-25-02-NX 200 40 25 2 Weight: 3,2kg; Suction: 3m; Voltage: 220V 50Hz; Size: B

DFD-GX							
Model	Capacity (L/h)	Maximum pressure (Bar)	Frequency strokes number/1'	Power (W)			
DFD-06-16-GX	6	16	200	60			
DFD-23-05-GX	23	5	200	60			
DFD-33-03-GX	33	3	200	60			
DFD-55-0.1-GX	55	0,1	240	40			
Weight: 3,8kg; Suction: 3m; Voltage: 220V 50Hz; Size: C							



# **DFD Series Solenoid Metering Pump**

# **TECHNICAL CHARACTERISTICS**

DFD-EX							
Model	Capacity (L/h)	Maximum pressure (Bar)	Frequency strokes number/1'	Power (W)			
DFD-28-07-EX	28	7	240	60			
DFD-50-03-EX	50	3	300	60			
Weight: 3,8kg; Suction: 3m; Voltage: 220V 50Hz; Size: D							

DFD-X							
Model	Capacity (L/h)	Maximum pressure (Bar)	Frequency strokes number/1'	Power (W)			
DFD-06-16-X	2	16	120	65			
DFD-06-07-X	6	7	120	65			
DFD-09-07-X	9	7	120	65			
DFD-12-07-X	12	7	120	65			
DFD-15-03-X	15	3	120	65			
DFD-20-03-X	20	3	160	65			
Weight: 3.8kg: Suction: 3r	n: Voltage: 220V 50Hz: Size			·			



#### **DP Series Solenoid Metering Pump**

## FUNCTIONAL CHARACTERISTICS



- · Manual control, adjustment by Up and Down keys
- Remote automatic control mode: pulse signal
- Proportional dosing is adjusted by external impulse signal and optional modes are frequency division and frequency multiplication; the frequency division mode is used when input impulse frequency is greater than maximum working frequency of the dosing pump; the frequency multiplication mode is used when impu; se frequency is smaller than maximum working frequency of the dosing pump
- Current working frequency is digitally displayed
- Equipped with a liquid level switch interface

## **TECHNICAL CHARACTERISTICS**

Model	Capacity (L/h)	Maximum pressure (Bar)	Frequency strokes number/1'	Power (W)	Weight (Kg)	Size
DP-02-07-LM	2	7	120	30	3,2	В
DP-03-07-LM	3	7	120	30	3,2	В
DP-06-05-LM	6	5	140	30	3,2	В
DP-09-03-LM	9	3	160	30	3,2	В
DP-02-16-X	2	16	120	65	3,8	С
DP-06-07-X	6	7	120	65	3,8	С
DP-09-07-X	9	7	120	65	3,8	С
DP-12-07-X	12	7	120	65	3,8	С
DP-15-03-X	15	3	120	65	3,8	С
DP-20-03-X	20	3	160	65	3,8	С
DP-30-03-X	30	3	160	65	4,5	E
DP-50-02-X	50	2	160	65	4,5	E
Suction: 2m; Volta	ae: 220V 50Hz					

#### **DP Series Solenoid Metering Pump**

#### DIMENSIONS





## PULSE SIGNAL CONTROL

1. The impulse signals (square wave or dry contact signals) that any instruments directly sends out can be received.

2. DP pump has both manual control and automatic control mode. In manual mode, stroke frequency of the pump can be adjusted by means of a control button, no matter whether the pump is running or in stop state.

3. In automatic mode, two control modes can be set, named frequency division control and frequency multiplication control.



4. In the frequency division mode, when input impulse number is larger than maximum working frequency, the pump should be set as the frequency division mode. According to user's set, the pump identifyand receive the impulse signal, then dose chemicals in proportion.

5. In the frequency multiplication mode, when input impulse number is far less than maximum working frequency of the pump, the pump should be set as the frequency multiplication mode and the pump identify and receive the impulse signal, then dose chemicals in proportion depending on user's set, but when the received impulse interval is less than the interval time of the corresponding pump output, the signal received later will be stored (the pump could still work even though no signal received at this moment), the pump will not stop untill it is consumed completely.

#### **DM Series Solenoid Metering Pump**

#### FUNCTIONAL CHARACTERISTICS



- Manual control, adjustment by Up and Down keys
- Remote automatic control mode: analogue signal, current signal (0/4-20mA)
- Stroke frequency (spm) can be set proportionally controlled within 4-20mA and adjusted in direct and inverse proportions; analogue signals are directly connected into the dosing pump without extra control instrument
- Current working frequency is digitally displayed
- Equipped with a liquid level switch interface

## **TECHNICAL CHARACTERISTICS**

Model	Capacity (L/h)	Maximum pressure (Bar)	Frequency strokes number/1'	Power (W)	Weight (Kg)	Size
DM-02-07-LM	2	7	120	30	3,2	В
DM-03-07-LM	3	7	120	30	3,2	В
DM-06-05-LM	6	5	140	30	3,2	В
DM-09-03-LM	9	3	160	30	3,2	В
DM-02-16-X	2	16	120	65	3,8	С
DM-06-07-X	6	7	120	65	3,8	С
DM-09-07-X	9	7	120	65	3,8	С
DM-12-07-X	12	7	120	65	3,8	С
DM-15-03-X	15	3	120	65	3,8	С
DM-20-03-X	20	3	160	65	3,8	С
DM-30-03-X	30	3	160	65	4,5	E
Suction: 2m; Volta	ge: 220V 50Hz					

DM-GX									
Model	Capacity (L/h)	Maximum pressure (Bar)	Frequency strokes number/1'	Power (W)					
DM-06-16-GX	б	16	200	40					
DM-23-05-GX	23	5	200	40					
DM-33-03-GX	33	3	200	40					
DM-55-0.1-GX	55	0,1	200	40					
Weight: 3,8kg; Suction: 3n	Weight: 3,8kg; Suction: 3m; Voltage: 220V 50Hz; Size: C								

#### **DM Series Solenoid Metering Pump**

## **TECHNICAL CHARACTERISTICS**

	DM-EX									
Model	Capacity (L/h)	Maximum pressure (Bar)	Frequency strokes number/1'	Power (W)						
DM-28-07-EX	28	7	200	40						
DM-50-03-EX	50	3	200	40						
Weight: 3,8kg; Suction: 3r	Weight: 3,8kg; Suction: 3m; Voltage: 220V 50Hz; Size: D									

DIMENSIONS



#### CURRENT SIGNAL CONTROL (4-20mA)

1. Analog signal can be directly input into the dosing pump, without need of an extra control instrument.

2. DM pump has both manual control and automatic control modes. In manual mode, stroke frequency of the pump can be adjusted by means of a control button, no matter whether the pump is running or in stop state.

3. Set two points and theirs corresponding frequency within 4-20mA, so as to control dosage.

4. The mode could be set in direct and inverse proportions adjustment. This direct proportion means impulse frequency of a pump increases with increase of current signal; adjustment in inverse proportion: impulse frequency of a pump increases with decrease of current signal.



#### **DC Series Solenoid Metering Pump**

#### FUNCTIONAL CHARACTERISTICS



- · Manual control, adjustment by Up and Down keys
- Intelligent automatic control mode: RS485 communication protocol
- The communication with the upper computer can be achieved; online start and stop and control can be achieved; the pump is suitable for the high-automation production process under centralized control
- A touch screen can be provided and a symple control system can control at most 128 DC dosing pumps simultaneously, to achiev quick and simple control, without need of complicated control instruments; state parameter of dosing pump is visually displayed; time and personnel cost are saved
- Current working frequency is digitally displayed
- · Equipped with a liquid level switch interface

#### **TECHNICAL CHARACTERISTICS**

Model	Capacity (L/h)	Maximum pressure (Bar)	Frequency strokes number/1'	Power (W)	Weight (Kg)	Size
DC-02-07-L	2	7	120	30	3,8	С
DC-03-07-L	3	7	120	30	3,8	С
DC-06-05-L	6	5	140	30	3,8	С
DC-09-03-L	9	3	160	30	3,8	С
DC-02-16-X	2	16	120	65	3,8	С
DC-06-07-X	6	7	120	65	3,8	С
DC-09-07-X	9	7	120	65	3,8	С
DC-12-07-X	12	7	120	65	3,8	С
DC-15-03-X	15	3	120	65	3,8	С
DC-20-03-X	20	3	160	65	3,8	С
DC-30-03-X	30	3	160	65	4,5	E
DC-50-02-X	50	2	160	65	4,5	E
Suction: 2m; Volta	ge: 220V 50Hz			·	·	

#### **DC Series Solenoid Metering Pump**

## DIMENSIONS



## BATCH CONTROL OF DC PUMPS

1. Nice and decent look, easy to monitor.

Display screen replaces former old enclosure, bringing full feel of technology. Both working state and stroke frequency of pumps are easy to monitor.

2. Space saving, convenient installation.

The size of control unit is minimized. Only need to make holes in the enclosure of equipment and put the screen in, so the equipment installation is quick and easy.

3. Simple operation, quick control.

Pump start/stop and stroke frequency can be controlled by touch screen instead of adjusting by one side of pump, and the control response is quick and accurate.

## **APPLICATION CASES**

One-screen display, control and operation of four pumps





#### **DFD Series Double-adjustment Metering Pump**

## FUNCTIONAL CHARACTERISTICS



- Double-adjustment manual dosing pump: frequency adjustment and stroke adjustment are both optional.
- Current working frequency is digitally displayed and knob pointer indicates the percentage of stroke adjustment
- Recommended adjustable range of stroke length is 100-30% and accurate metering can be achieved by means of adjusting knob
- The pump is applicable when the impulse of chemical agent dosed in a pipeline has a strict requirement; when the stroke frequency of the pump can not be reduced, a double-adjustment pump can be used to achieve the process requirement by reducing the stroke length; there is a liquid level switch interface

## **TECHNICAL CHARACTERISTICS**

Model	Capacity (L/h)	Maximum pressure (Bar)	Frequency strokes number/1'	Power (W)
DFD-R-01-07-LM	1	7	120	30
DFD-R-02-07-LM	2	7	120	30
DFD-R-03-07-LM	3	7	120	30
DFD-R-06-05-LM	6	5	140	30
DFD-R-09-03-LM	9	3	160	30
Weight: 3,2kg; Suction: 2r	n; Voltage: 220V 50Hz; Size	e: F		

#### DIMENSIONS



## **Installation Fittings**

## **STANDARD FITTINGS**





2m PVC liquid inlet pipe

1.5m PE liquid outlet pipe



Sprave valve



Filter bottom valve



Size selection	Fitting name					
4*6/mm	Liquid inlat nia	Sprave valve	/			
6*9/mm	and liquid outlet pipe Three-piece connector Filter	/	External thread valve cover			
10*14/mm	bottom valve	Sprave valve	/			

# **OTHER OPTIONAL ACCESSORIES**



Nonadjustable back pressure valve



Adjustable back pressure valve



Injection/suction valve



External thread valve cover



Diaphragm

## Typical installation diagram





#### **Installation Fittings**

#### **STANDARD FITTINGS**

		NDJS
	1 Model	NDJL
		NDWS
1		NDWL
1		ND1000
		ND2000
		HND
		ND6000
2	Capacity	L/h

3 Pressure MPa

			Pump head	Diaphragm	Valve seat	Valve ball	Seal ring			
	Dosing	PVT	PVC	PTFE	PTFE	Ceramic	FKM			
4	head	PVDF	PVDF	PTFE	PTFE	Ceramic	FKM			
	material	SST	SS316	PTFE	SS316	SS316	FKM			
		PTFE	PTFE	PTFE	PTFE	Ceramic				
		٨	3ph 380V 50Hz/60Hz							
		A	Spri 300 v 30	112/00112						
	Electric	AVF	3ph 380V 50	Hz/60Hz & Varia	able frequency r	notor				
5	power	AEX	3ph 380V 50	Hz/60Hz & Expl	osion-proof mot	tor Exd II BT4				
	supply	В	230V 50Hz (	230V 50Hz (power line: 1.5 m)						
		С	Special requi	rement, specifie	ed otherwise					
6	Control	Н	Manual							
0	version		Electric strok	æ adjuster						
	1	2	3	4	5	6				
	NDWL	410	0.6	PPV	A	Н				

#### \* Example:

1. Maximum lift is 6kg, Capacity is 370L/h, 380V 50Hz, PVC pump head, 3PH 380V 50Hz, adjustment mode: electric stroke adjustment.

#### Selected model:

NDWL-410/0.6-PVT-A-I

2.Maximum lift is 6kg, Capacity is 370L/h, 380V 50Hz, PVDF pump head 3PH 380V 50Hz variable frequency motor adjustment mode: manual.

Selected model: NDWL-410/0.6-PVDF-AVF-H

#### **NDJ Series Mechanical Metering Pump**

#### FUNCTIONAL CHARACTERISTICS



• Eccentric shaft is supported by bearings in front and rear and the cantilever shaft structure of the most of manufacturers on the market is abandoned; the speed reducing motor does not bear axial force and only transmits torque, and this extends the service life of speed reducing motor and makes the process more stable.

• Installation and maintenance are simple and convenient; grease is used for lubrication in the box body and grease is added conveniently, making maintenance easy.

Stroke length can be adjusted at will during running.

- PVC, PVDF, PTFE and SS316 materials pump head are applicable to dose different kinds of chemical liquid.
- The pure PTFE diaphragm that has a super-long service life guarantees the stability and safety of dosing.
- It can be directly installed on a dosing barrel and this is economical and convenient.

## **TECHNICAL CHARACTERISTICS**

Model	Capacity (I/h)	Maximum pressure (bar)	Stroke length (mm)	Diaphragm diameter (mm)	Pump speed (SPM)	Single-stroke flow (ml/stroke)	Motor power (W)
NDJS-40/1.0	40	10	5	90	87	9.7	60
NDJS-60/0.5	60	5	5	90	104	9.7	60
NDJS-75/0.5	75	5	5	90	130	9.7	60
NDJS-100/0.5	100	5	8	90	104	16.5	60
NDJS-130/0.5	130	5	8	90	130	16.5	60
NDJS-150/0.3	150	3	5	105	130	19.2	60
NDJL-70/1.0	70	10	8	90	87	13.4	90
NDJL-80/0.7	80	7	5	90	130	10.3	90
NDJL-105/0.7	105	7	8	90	104	16.8	90
NDJL-150/0.51	150	5	5	105	130	19.2	90

# **NDJ Series Mechanical Metering Pump**

## DIMENSIONS



								Internal size	
Model	Material	A	В	С	D	E	F	Thread size	Socket pipe size
	PVC	224	29	90	300	130	310	G1"	G1/2"-DN15
	PVDF	224	29	90	300	130	310	G1"	G1/2"-DN15
NDJS-40/1.0130/0.5	PTFE	178	6	90	300	130	310	G1"	-
	SS316	178	6	97	302	130	310	G1"	-
	PVC	239	42	90	300	137	310	G1"	G1/2"-DN15
	PVDF	224	29	90	300	130	310	G1"	G1/2"-DN15
NDJS-150/0.3	PTFE	193	14	90	300	137	310	G1"	-
	SS316	193	14	97	302	137	310	G1"	-
	PVC	224	29	90	300	130	325	G1"	G1/2"-DN15
	PVDF	224	29	90	300	130	310	G1"	G1/2"-DN15
NDJL 70/1.0105/0.7	PTFE	178	6	90	300	130	325	G1"	G1/2"-DN15
	SS316	178	6	97	302	130	325	G1"	-
	PVC	239	42	90	300	137	325	G1"	G1/2"-DN15
	PVDF	224	29	90	300	130	310	G1"	G1/2"-DN15
NDJL-150/0.5	PTFE	193	14	90	300	137	325	G1"	-
	SS316	193	14	97	302	137	325	G1"	-

#### **NDWS Series Mechanical Metering Pump**

#### FUNCTIONAL CHARACTERISTICS



• It is equipped with low pressure die-casting aluminum box with high strength, which ensures solidness and firmness, reduces the mass of the dosing pump and the weight of the overall equipment of later stage.

• The precise worm gear can make the transmission efficiency increase significantly, gain the same pressure displacement, make the motor power smaller and more energy-saving.

• High quality modified PTFE diaphragm manufacturing process can make the maximum pressure of mechanical diaphragm dosing pump reach 30 kg, and make the cost of dosing pump under 12-30 kg pressure system substantially decline.

• The pump head of PVC, PVDF, PTFE, SS316 materials complete series of is suitable for conveying various acids, alkali and salt solutions; nonleakage overflow structure can make sure that the process is stable and orderly.

- Can be equipped with electric stroke adjuster (4-20mA).
- Variable frequency motor and explosion-proof motor are optional.

#### **TECHNICAL CHARACTERISTICS**

Model	Capacity (I/h)	Maximum pressure (bar)	Stroke length (mm)	Diaphragm diameter (mm)	Pump speed (SPM)	Single-stroke flow (ml/stroke)	Motor power (W)
NDWS-8/1.6	8	16	2	48	118	1.13	180
NDWS-12/1.6	12	16	2	48	177	1.13	180
NDWS-18/1.6	18	16	2	60	118	2.54	180
NDWS-33/1.0	33	10	4	90	118	4.7	180
NDWS-68/1.0	68	10	6	90	118	9.6	180
NDWS-120/0.7	120	7	4	105	177	11	180
NDWS-143/0.6	143	6	б	105	118	20.1	180
NDWS-213/0.5	213	5	б	105	177	20.1	180
NDWS-258/0.4	258	4	10	105	118	36.4	180
NDWS-386/0.3	386	3	10	105	177	36.4	180

# NDWL Series Mechanical Metering Pump

## DIMENSIONS



NDWS-8/1.3~18/1.6

								Intern	al size
Model	Material	A	В	С	D	E	F	Thread size	Socket pipe size
	PVC	95	5	70	290	150		ole 6*9 Connections	G1/2"-DN15
	PVDF	105	10	75	285	150	Flexible		G1/2"-DN15
NDW3-0/1.010/1.0	PTFE	105	10	75	285	150	or Ø10*14		-
	SS316	105	10	75	285	150			-
	PVC	224	31	90	310	150	G1"	G1/2"-DN15	G1/2"-DN15
	PVDF	224	31	90	310	150	G1"	G1/2"-DN15	G1/2"-DN15
NDWS-33/1.068/1.0	PTFE	178	8	90	310	150	G1"	-	-
	SS316	178	8	97	310	150	G1"	-	-
	PVC	239	38	90	310	157.5	G1"	G1/2"-DN15	G1/2"-DN15
	PVDF	224	31	90	310	150	G1"	G1/2"-DN15	G1/2"-DN15
110110-120/0.7380/0.3	PTFE	193	18	90	310	157.5	G1"	-	G1/2"-DN15
	SS316	193	18	97	310	157.5	G1"	-	-

#### **NDWL Series Mechanical Metering Pump**

## FUNCTIONAL CHARACTERISTICS



• Eccentric shaft is supported by bearings in front and rear and the cantilever shaft structure of the most of manufacturers on the market is abandoned; the speed reducing motor does not bear axial force and only transmits torque, and this extends the service life of speed reducing motor and makes the process more stable.

- Installation and maintenance are simple and convenient; grease is used for lubrication in the box body and grease is added conveniently, making maintenance easy.
- Stroke length can be adjusted at will during running.
- PVC, PVDF, PTFE and SS316 materials pump head are applicable to dosing of different kinds of chemical liquid.
- The pure PTFE diaphragm that has a super-long service life guarantees the stability and safety of dosing.
- Can be equipped with electric stroke adjuster (4-20mA).
- Variable frequency motor and explosion-proof motor are optional.

#### **TECHNICAL CHARACTERISTICS**

Model	Capacity (I/h)	Maximum pressure (bar)	Stroke length (mm)	Diaphragm diameter (mm)	Pump speed (SPM)	Single-stroke flow (ml/stroke)	Motor power (W)
NDWL-275/0.7	275	7	8	120	118	38.7	370
NDWL-355/0.7	355	7	10	120	118	50	370
NDWL-410/0.6	410	6	8	120	177	38.7	370
NDWL-530/0.45	530	4.5	10	120	177	50	370

#### DIMENSIONS



					2	_		Internal size	
Model	Material	A	В	С	D	E	F	Thread size	Socket pipe size
	PVC	259	51	102.5	340	175	G1"	G1/2"-DN15	G1/2"-DN15
	PVDF	259	51	102.5	340	175	G1"	G1/2"-DN15	G1/2"-DN15
NDWL-275/0.7530/0.45	PTFE	213	28	102.5	340	175	G1"	-	-
	SS316	213	28	110	340	175	G1"	-	-

#### ND1000 Series Mechanical Metering Pump

#### FUNCTIONAL CHARACTERISTICS



• Motor-driven diaphragm assembly is of simple operation and easy maintenance that the pump head won't leak.

• The operation is smooth and steady, and the noise is much low.

• The high precision and high strength transmission components can make the dosing pump efficiently output, at the same time, its maintenance cost is ultra-low.

- High quality modified PTFE diaphragm assembly can greatly improve the life span of the diaphragm, making it not easy to become a wearing part.
- PVC, PVDF, PTFE and SS316 materials pump head are applicable to dose different kinds of chemical liquids.
- Can be equipped with electric stroke adjuster (4-20mA).
- Variable frequency motor and explosion-proof motor are optional.

## **TECHNICAL CHARACTERISTICS**

Model	Capacity (I/h)	Maximum pressure (bar)	Stroke length (mm)	Diaphragm diameter (mm)	Pump speed (SPM)	Single-stroke flow (ml/stroke)	Motor power (W)
ND1000- 660/0.5	660	5	10	160	118	93	750
ND1000-1000/0.4	1000	4	10	160	177	93	750
ND1000- 1200/0.3	1200	3	12	160	177	113	750

## DIMENSIONS



Model	Material	А	В	С	D	E	Internal size
	PVC	340	90	120	370	197	G2-1/4" DN40
	PVDF	340	90	120	370	197	G2-1/4" DN40
ND1000-000/0.51200/0.3	PTFE	340	90	120	370	197	G2-1/4" DN40
	SS316	340	95	125	370	197	G2-1/4" DN40

#### ND2000 Series Mechanical Metering Pump

#### FUNCTIONAL CHARACTERISTICS



- The high-strength casting aluminum box body is used and it is sturdy and durable, and moreover, total weight is reduced greatly.
- The motor directly drives the eccentric shaft and the spring return structure is used; the structure is simple and stable and easy to maintain.
- The damping sliding bar structure is applied to overcome the vital shortcomings: large pipe shock, excessive mechanical vibration, parts damage, poor flow linearity and high noise, arising from invalid eccentric travel.
- High-quality modified PTFE diaphragm assembly is durable and the lift of dosing pump is greatly increased.
- PVC, PVDF, PTFE and SS316 materials pump head are applicable to dose different kinds of chemical liquids.
- Can be equipped with electric stroke adjuster (4-20mA).
- Variable frequency motor and explosion-proof motor are optional.

## **TECHNICAL CHARACTERISTICS**

Model	Capacity (I/h)	Maximum pressure (bar)	Stroke length (mm)	Diaphragm diameter (mm)	Pump speed (SPM)	Single-stroke flow (ml/stroke)	Motor power (W)
ND2000-500/1.0	500	10	8	155	200	42	750
ND2000-700/0.9	700	9	10	155	200	58	750
ND2000-1000/0.6	1000	б	12	160	200	83	750
ND2000-1300/0.4	1300	4	14	160	200	108	750
ND2000-1600/0.3	1600	3	15	160	200	135	750
ND2000-2000/0.3	2000	3	16	160	200	166	750

# ND2000 Series Mechanical Metering Pump

# DIMENSIONS



Model	Material	А	В	С	D	Internal size
	PVC	340	51	102.5	340	G2-1/4" DN40
	PVDF	340	51	102.5	340	G2-1/4" DN40
ND2000-500/1.01000/0.6	PTFE	340	28	102.5	340	G2-1/4" DN40
	SS316	340	28	110	340	G2-1/4" DN40
	PVC	460	120	140	580	G2-1/4" DN40
ND2000-1300/0.42000/0.3	PVDF	460	120	140	580	G2-1/4" DN40
	PTFE	460	120	140	580	G2-1/4" DN40
	SS316	460	90	147	580	G2-1/4" DN40

#### **HND Series Mechanical Metering Pump**

## FUNCTIONAL CHARACTERISTICS



• The diaphragm is mechanically driven and spring returned, and the structure is simple and easy to maintain.

• High-quality modified diaphragm assembly with maximum pressure of 30 Bar can replace low pressure hydraulic diaphragm dosing pumps in a part of application places, greatly reducing the user's initial input cost.

• In the post-maintenance, because there is no hydraulic oil chamber and other hydraulic assemblies, the maintenance become very simple. As the high-quality modified PTFE diaphragm assembly is applied, extending the service life of the diaphragm and reducing the post-maintenance cost greatly.

• Application of damping sliding bar makes the dosing pump run smoothly, with extremely low noise.

• PTFE elastic component and one-way valve are optional and the highviscosity corrosive liquid can be conveyed; outlet end has back pressure.

- It can be matched with electric stroke adjuster (4-20mA).
- Variable frequency motor and explosion-proof motor are optional.

## **TECHNICAL CHARACTERISTICS**

Model	Capacity (I/h)	Maximum pressure (bar)	Stroke length (mm)	Diaphragm diameter (mm)	Pump speed (SPM)	Single-stroke flow (ml/stroke)	Motor power (W)
HND-47/3.0	47	30	4	90	118	6.6	370
HND-70/2.0	70	20	4	90	177	6.6	370
HND-115/1.8	115	18	6	105	118	16.2	550
HND-135/1.6	135	16	7	105	118	19	550
HND-160/1.2	160	12	8	105	118	22.6	550

# DIMENSIONS





Model	Material	А	В	С	D	E	Internal size
NND-47/3.070/2.0	SS316	178	10	105	334	157	G1"
NND-115/1.8160/1.2	SS316	193	18	105	335	166	G1"

# ND6000 Series Mechanical Metering Pump

# **TECHNICAL CHARACTERISTICS**

Model	Capacity (I/h)	Maximum pressure (bar)	Stroke length (mm)	Diaphragm diameter (mm)	Pump speed (SPM)	Single- stroke flow (ml/stroke)	Motor power (kW)	Interface size
ND6000-2000/0.9	2000	9	16	160	200	166	1.5	DN50
ND6000-3000/0.6	3000	6	16	240	200	252	1.5	DN50
ND6000-4000/0.6	4000	6	18	240	200	334	1.5	DN50
ND6000-5000/0.4	5000	4	20	240	200	410	1.5	DN50
ND6000-6000/0.3	6000	3	24	240	200	500	1.5	DN50

# DIMENSIONS



# TYPICAL INSTALLATION DIAGRAM





#### **Electric Stroke Adjuster**

#### FUNCTIONAL CHARACTERISTICS



• The adjuster can be both manual operation and current signal control.

• In manual mode, stroke length of dosing pump can be accurately set and displayed via the operation panel of the adjuster. With error compensation function, the adjuster overcomes the error between actual displacement and its set value directly caused by the random change of stroke length of dosing pump because traditional knob adjuster doesn't have the self-lock function.

• The return-to-zero operation in the functions, simply and effectively calibrates the accuracy of electric stroke adjuster, making dosing more accurate.

• In the analog signal (4-20mA) control mode, dosing in direct proportion or in inverse proportion can be achieved according to the user requirements. And the stroke length of dosing pump could be adjusted in real time, further, accurately modify the displacement of dosing pump.

• Modular interface design can customize a linkage to change the dosing pumps that only allow variable frequency adjustment into the dosing pumps of which stroke length can be adjusted intelligently.

Model	A	В	С	D	E	F
NDWS-33/1.0-68/1.0	445	170	8	90	73	205
NDWS-117/0.7-386/0.3	455	170	8	90	73	205
NDWL-275/0.7-530/0.45	470	170	8	90	73	222
ND1000-660/0.5-1200/0.3	515	170	8	90	73	273
ND2000-500/1.0-2000/0.3	702	182	16	2	88	262
HND-47/3.0-70/2.0	470	170	8	90	73	222
HND-115/1.8-160/1.2	490	170	8	90	73	245

#### DIMENSIONS



## PUMPS AND ADJUSTER SIZE