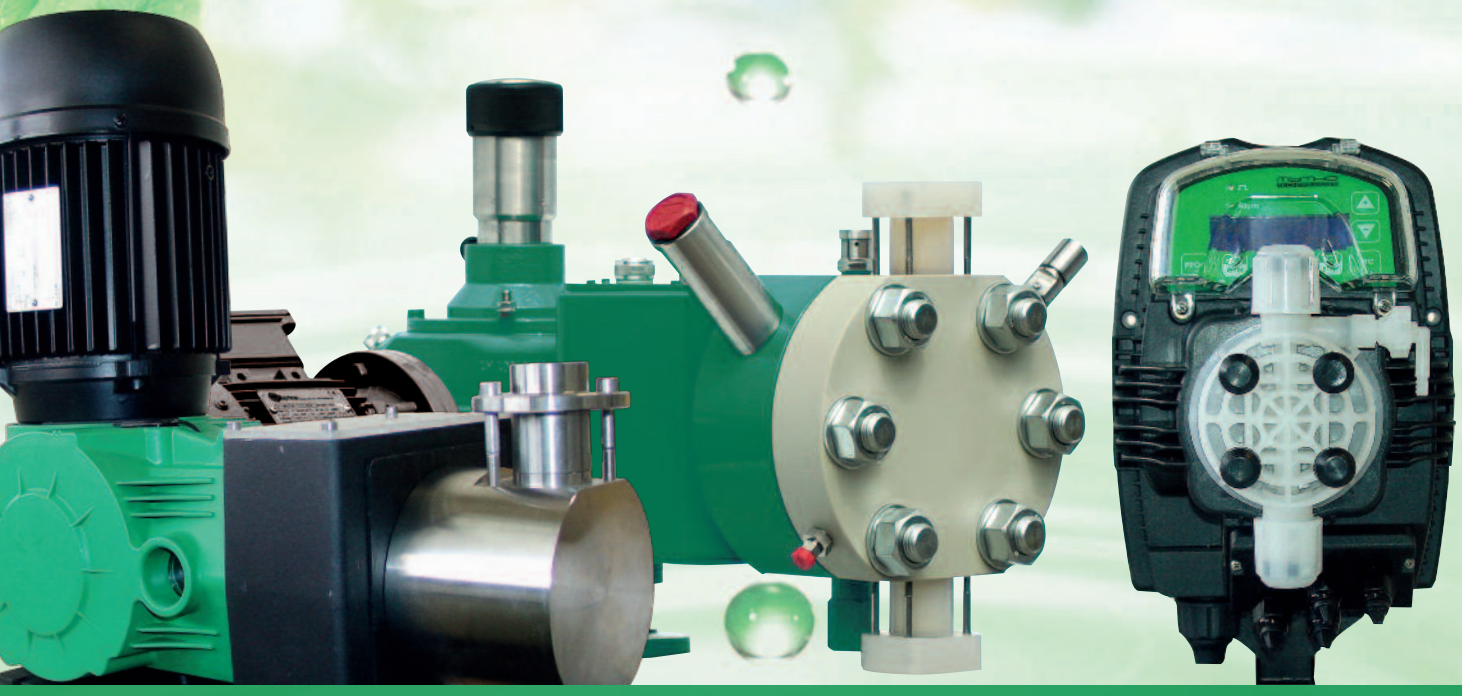
MYTHO TECHNOLOGIES



WATER TREATMENT & INDUSTRIAL APPLICATIONS

Products Overview

H *Series*

Analogue Version

Digital Version

Solenoid dosing pumps

Clever

Just 5 Models, Just PVDF, All functions in one pump

- 4 models that cover 0.4 to 110 l/h with an output pressure up to 20 Bar
- 1 Casing allows skids to be pre-constructed, as the fixing points remain constant, and the pumps can be selected on confirmation of the dosing flow
- Inventory Reduction
- Reduce spares stock holding

Compatible

PVDF pump head and ceramic ball valve as standard

- PVDF is suitable for almost all chemical used in the Industrial, Waste Water Treatment and potableWater applications
- The use of Ceramic balls as standard improves the pumping reliability and the chemical compatibility of the whole liquid end
- Full chemical compatibility

Reliable

Long life diaphragm tested to give 5 years working life

- The advanced design and manufacturing process allows the diaphragm to have a unique life expectancy
- Made of pure solid PTFE, the diaphragm is compatible with most chemicals
- The diaphragm has been tested over a period of 5 years giving superior results
- Routine diaphragm replacement is no longer a requirement
- Reduced maintenance
- Full chemical compatibility

Steady Dosing Performance

Stabilized Multi Power Supply 100÷240 Vac 50/60 Hz with reduced consumption

- Reduced power consumption as the solenoid only draws the required power to activate the pump, based on the working conditions
- Stable dosing performance: improve pump efficiency as performance is not affected by power supply fluctuations
- Reduce inventory holding

Intuitive programming

A new concept of programming menu

- Programming menu are self explanatory and available in 5 languages
- Intelligent Display, once a function is selected the pump will only display the parameters to set, which are linked to the selected function
- Reduced programming time

Code

HL	30	N	H	H	0	000

Optional

Code	Description
000	Standard

Seals

Code	Materials
0	FPM
1	EPDM

Installation Kit

Code	Materials
P	PVC
H	PVDF

Pump head material

Code	Pump head	Connections	Balls	Diaphragm
H	PVDF		Ceramic	PTFE

Power supply

Code		
N	100 ÷ 240 Vac	50-60 Hz
O	24 ÷ 48 Vac (just for HS and HLersion)	

Model

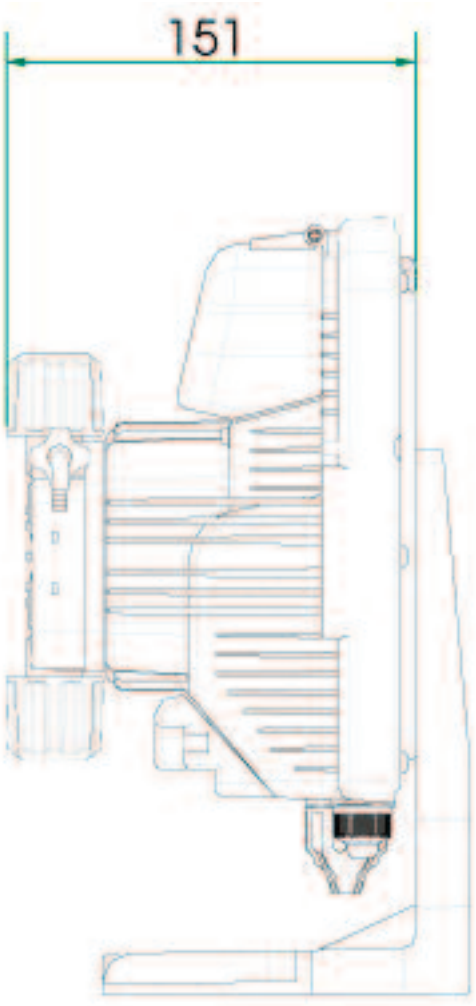
Code	Pressure [bar]	Flow rate [l/h]	Fequency max [stroke./min]	Stroke capacity [cc/stroke]	Ø Connections IN / OUT [mm]	Consumption [W]
10	20	0.4	120	0,06	4 / 6 suc. 4 / 7 dis.	12,2
	16	0.8		0,11		
	10	1.2		0,16		
	6	1.5		0,21		
20	20	2.5	120	0,35	4 / 6 suc. 4 / 7 dis.	12,0
	18	3		0,42		
30	12	4	160	0,42	4 / 6	12,2
	10	5		0,52		
	8	6		0,63		
	2	8		0,83		
40	12	7	300	0,39	4 / 6	23,9
	10	10		0,55		
	5	15		0,83		
	1	18		1		
50	5	20	300	1,11	8 / 12	22,2
	4	32		1,78		
	2	62		3,44		
	0,1	110		6,11		

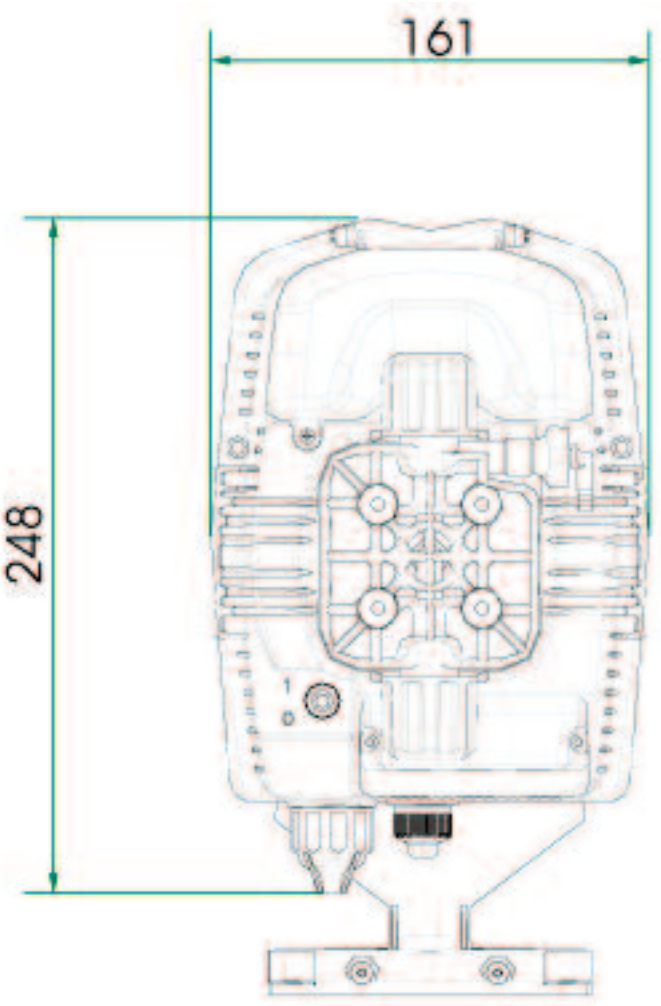
Version

Code	Interface	Description
HS	Analogue	Analogue dosing pump with constant flow rate manually adjustable
HL		Analogue dosing pump with constant flow rate manually adjustable
HP		Analogue dosing pump with constant flow rate manually adjustable, with proportional flow rate according to an external analog (4÷20 mA) or digital signal (water meter)
HG	Digital	Digital dosing pump with constant flow rate manually adjustable, with proportional flow rate according to an external analog (4÷20 mA) or digital signal (water meter)
HR		Digital dosing pump with pH/Redox control meter on board
HK		Digital dosing pump with constant flow rate or timed

Technical Features

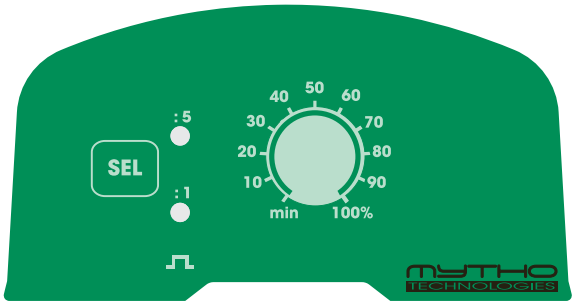
- Casing made of PP reinforced with glass fibre
- IP 65 rated
- PTFE diaphragm
- Level control input
- Priming valve
- Complete standard installation kit composed by: foot filter and injection valve, PVC suction tube, PE delivery tube and fixing bracket





Analogue Version

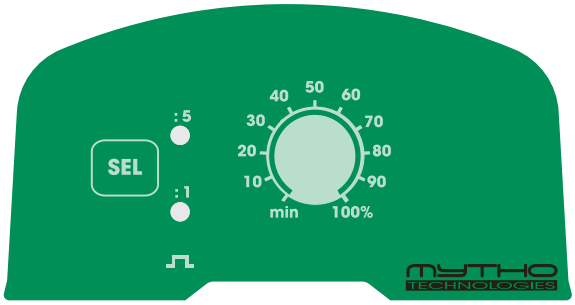
HS costant dosage



Analogue dosing pump with constant flow rate manually adjustable by control dial on the front panel, two frequency range (0÷20% or 0÷100%), Power-ON led indicator

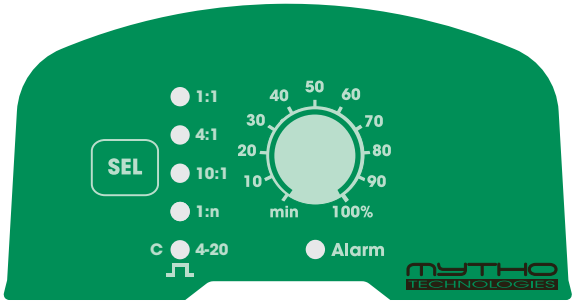
Without level control input and fixing bracket

HL costant dosage



Analogue dosing pump with constant flow rate manually adjustable by control dial on the front panel, two frequency range (0÷20% or 0÷100%), Power-ON led indicator

HP proportional dosage

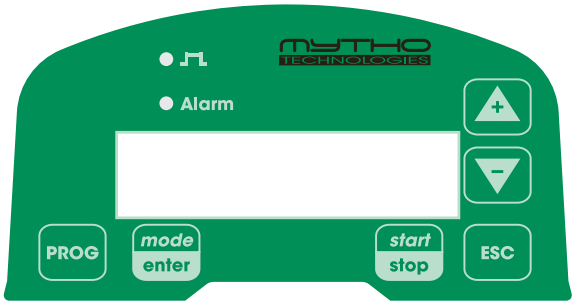


Analogue dosing pump with constant flow rate manually adjustable, proportional flow rate according to an external analogue (4÷20 mA) or digital pulse signal (e.g. from water meter).

- Control dial (percentage and "n" value in multiplication mode)
- 6 position adjustable switch:
  - 3 in division mode (1, 4, 10 = n)
  - 1 in multiplication mode (n=1)
  - 1 for proportional 4÷20 mA signal
  - 1 for constant functionality
- "pacing" function adjustable by dip switch

Digital Version

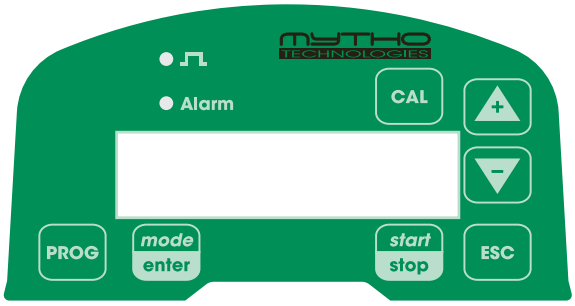
HG proportional dosage



Digital dosing pump with constant flow rate manually adjustable, proportional flow rate according to an external analog (4÷20 mA) or digital pulse signal (e.g. from water meter).

This digital version of the HP, includes additonal characteristics: Timer function, ppm dosing, statistics, password and On/Off input (remote switch)

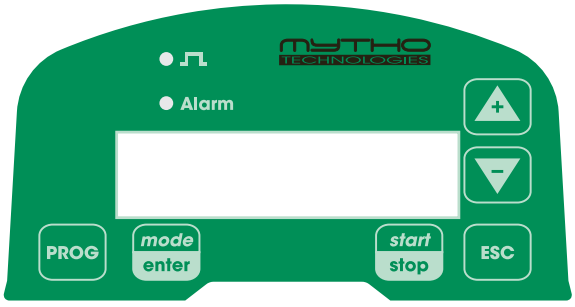
HR proportional dosage



Digital dosing pump with pH/Redox control meter built in.

- Digital interface for constant or proportional dosing, depending on the measured pH or Rx value
- PT100 probe input for thermal compensation
- Repetition alarm relay
- Input On-Off for remote control
- 4÷20 mA output for measure transmission

HK timed dosage



Digital dosing pump with constant flow rate manually adjustable, or timer control.

- Programmable timed relay

The **Kronos**

Peristaltic dosing pump driven stepper motor

The feed chemical is conveyed by means of the rotor squeezing on the hose. No valves are needed for this. This ensures gentle handling of the metered media. The housing is made from shock-proof and chemical resistant PPE with IP65 protection degree. It is equipped with several inputs for metering configuration.

The stepper motor means that metering is infinitely adjustable.

Typical applications are in processes where only a low discharge pressure is required, such as in the metering of chemicals into galvanic baths, in clarification tanks or for metering conditioning agents into swimming pools (flocculants, activated carbon and chemicals). The perfect choise to dose degasing liquid without the needs of "special" accessories.

Features

DOSING
– By stepper motor technology
– Safely **up to 15 l/h** and **up to 6 bar**
– Suitable firmware micro dosing
– Minimum dosing note 2 ml/h continuos

MOTORS
– Accurate, reliable and ultra quiet <35 db
– Direct coupling

TUBING
– **seko**FLEX
– **seko**MED
– **seko**Extra
– **seko**TECH [High pressure, large chemical compatibility]
– **seko**ForT [Suitable for chemical containing solvents]

MODE
FULL MODE – kronos FM pump has multi-function setting there are six (6) different configuration:
– Manual Mode (Constant dosing)
– mA Mode (Proportional dosing)
– PPM Mode (Concentration dosing)
– 1:N Mode (Speed up dosing)
– N:1 Mode (Speed down dosing)
– Batch Mode (Setting dosing)

FULL FULL MODE – kronos FF pump has multiLfunction setting there are seven (7) different configuration, as following:
– Manual Mode (Constant dosing)
– 0÷10 Volt Mode (Proportional dosing)
– 4÷20 mA Mode (Proportional dosing)
– PPM Mode (Concentration dosing)
– 1:N Mode (Speed up dosing)
– N:1 Mode (Speed down dosing)
– Batch Mode (Setting dosing)

CONDUCTIVITY MODE – kronos CR pump has a conductivity measure integrated with two (2) different configuration:
– Manual Mode (Constant dosing)
– Conductivity Mode (SetPoint Dosing)
– Range 100÷15000 µS with accuracy 1%
– Conductivity probe K1 (C1)

INDUCTIVITY MODE – kronos IR pump has a conductivity measure integrated with s two (2) different configuration:
– Manual Mode (Constant dosing)
– Conductivity Mode (SetPoint Dosing)
– Range 200 ÷ 50.000 µS with accuracy 1%
– Inductivity probe

Products Line

Model	Nominal Pressure	Flow Rate	Minimun Flow Rate	Tubes	Tubes internal diameter
kronos50 FM02	3 bar	2 l/h	2 ml/h	**seko**Extra	3 mm
kronos50 FM10	2 bar	10 l/h	10 ml/h	**seko**MED	6 mm
kronos50 FM15	-	15 l/h	15 ml/h	Santoprene	6 mm
kronos50cc FM02H	6 bar	2 l/h	2 ml/h	**seko**TECH	6 mm
kronos50cc FM08H	3 bar	8 l/h	8 ml/h	**seko**TECH	3 mm
kronos50tt FM02T	3 bar	2 l/h	2 ml/h	**seko**ForT	3 mm
kronos50 FF10	2 bar	10 l/h	10 ml/h	**seko**MED	6 mm
kronos50 CR10	2 bar	10 l/h	10 ml/h	**seko**MED	6 mm
kronos50 IR10	2 bar	10 l/h	10 ml/h	**seko**MED	6 mm

R1 Plunger piston metering pumps

FEATURES

Flow rate	from 1,5 to 304 l/h
Max. pressure	20 bar
Stroke rate	58 • 78 • 116 strokes/minute
Piston diameter	from 6 to 89 mm
Motor	0,18 • 0,25 Kw standard (IP 55)
Stroke length	15 mm

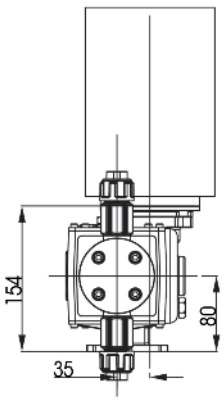
Model	Piston diameter	Strokes/min	Flow rate l/h	Max pressure				Connections		3phases Motor kW
				bar		psi				
				AISI 316	PVC	AISI 316	PVC	AISI 316	PVC	
R1B006U	6	58	1,5	20	10	290	145	1/4" G F	1/4" G F	0,18
R1B006V		78	2							
R1B006X		116	3							
R1B011U	11	58	5	20	10	290	145	1/4" G F	1/4" G F	0,18
R1B011V		78	6,5							
R1B011X		116	10							
R1B017U	17	58	11	20	10	290	145	3/8" G F	3/8" G F	0,18
R1B017V		78	15							
R1B017X		116	22							
R1B025U	25	58	25	20	10	290	145	3/8" G F	3/8" G F	0,18
R1B025V		78	32							
R1B025X		116	50							
R1B030U	30	58	35	20	10	290	145	3/8" G F	3/8" G F	0,25
R1B030V		78	45							
R1B030X		116	70							
R1B038U	38	58	55	17	10	246,5	145	3/8" G F	3/8" G F	0,25
R1B038V		78	73							
R1B038X		116	110							
R1B048U	48	58	85	10	10	145	145	1/2" G F	1/2" G F	0,25
R1B048V		78	114							
R1B048X		116	170							
R1B054U	54	58	110	8	8	116	116	1/2" G F	1/2" G F	0,25
R1B054V		78	145							
R1B054X		116	220							
R1B064U	64	58	152	6	4	87	58	3/4" G F	3/4" G F	0,25
R1B064V		78	204							
R1B064X		116	304							

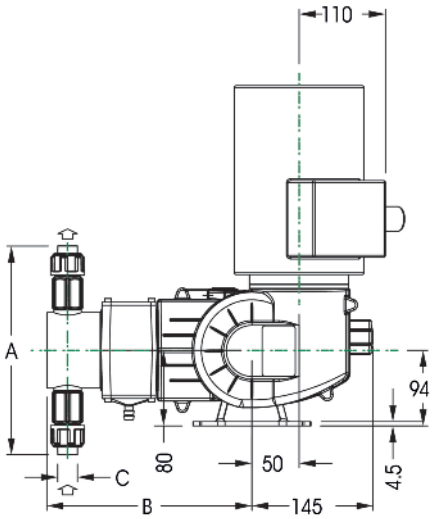
LIQUID END
SS 316 or PVC pump head (standard).

SS 316 OR CERAMIC PISTON
The material in contact with the liquid to be dosed are listed in the "pump head materials" table (special materials may be supplied on request).

MAX DOSAGE TEMPERATURE
- SS 316 pump head: 40° C
- PP pump head: 40° C

FLOW RATE ADJUSTMENT
Every pump can be equipped with an electric actuator which accepts a 4÷20 mA.





Piston diameter	AISI 316 L				PVC			
	A	B	C	? ext. hea	A	B	C	? ext. hea
6	120	210	1/4 G F	68	157	216	1/4 G F	80
11	120	210	1/4 G F	68	157	216	1/4 G F	80
17	120	210	3/8" G F	68	147	216	3/8" G F	80
25	120	215	3/8" G F	68	147	225	3/8" G F	80
30	120	215	3/8" G F	68	147	225	3/8" G F	80
38	160	227	3/8" G F	88	168	235	3/8" G F	100
48	160	227	1/2" G F	88	196	240	1/2" G F	100
54	173	229	1/2" G F	108	216	240	1/2" G F	120
64	202	238	3/4" G F	108	222	250	3/4" G F	120

Pump Head materials

	STANDARD		ON REQUEST		
	AA	PV	AE	PA	PE
PUMP HEAD	AISI 316	PVC	AISI 316	PVC	PVC
PISTON	AISI 316	Ceramic	Ceramic	Ceramic	Ceramic
PISTON SEAL	FPM	FPM	EPDM	FPM	EPDM
VALVES	AISI 316	Ceramic	AISI 316	AISI 316	Ceramic
VALVE SEATS	AISI 316	PVC	AISI 316	AISI 316	PTFE

Code

R	Model [R= Piston • D=Diaphragm]
1	Mechanism type [1 • 2]
B	Stroke length [B=15mm]
064	Piston diameter [from 6 to 89 mm]
X	Strokes/min [U=58 • V=78 • X=116]
PV	Pump Head materials [see table above]
B4	Motor type
0	Adjustement stroke [0 = Manual • L = Linear]
000	Optional

R2 Plunger piston metering pumps

FEATURES

Flow rate	from 40 to 1000 l/h
Max. pressure	20 bar
Stroke rate	58 • 78 • 116 strokes/minute
Piston diameter	from 6 to 89 mm
Motor	0,25 • 0,37 • 0,55 • 0,75 Kw standard (IP 55)
Stroke length	25 mm

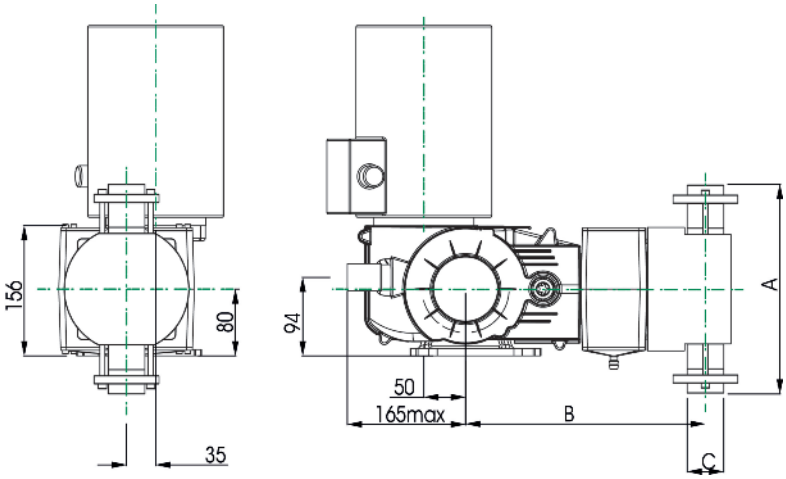
Model	Piston diameter	Strokes/min	Flow rate l/h	Max pressure				Connections		3phases Motor kW
				bar		psi				
				AISI 316	PVC	AISI 316	PVC	AISI 316	PVC	
R2A025U	25	58	40	20	10	290	145	3/8" G F	3/8" G F	0,25
R2A025V		78	53							
R2A025X		116	80							
R2A030U	30	58	55	20	10	290	145	3/8" G F	3/8" G F	0,25
R2A030V		78	75							
R2A030X		116	112							
R2A038U	38	58	90	20	10	290	145	1/2" G F	3/8" G F	0,37
R2A038V		78	120							
R2A038X		116	180							
R2A048U	48	58	140	20	10	290	145	1/2" G F	1/2" G F	0,55
R2A048V		78	190							
R2A048X		116	284							
R2A054U	54	58	180	15	10	217,5	145	1/2" G F	1/2" G F	0,55
R2A054V		78	242							
R2A054X		116	365							
R2A064U	64	58	250	10	10	145	145	3/4" G F	3/4" G F	0,75
R2A064V		78	335							
R2A064X		116	505							
R2A076U	76	58	365	7	7	101,5	101,5	1" G F	1" G F	0,75
R2A076V		78	485							
R2A076X		116	730							
R2A089U	89	58	495	5	5	72,5	72,5	1" G F	1" G F	0,75
R2A089V		78	660							
R2A089X		116	1000							

LIQUID END
SS 316 or PVC pump head (standard).

SS 316 OR CERAMIC PISTON
The material in contact with the liquid to be dosed are listed in the "pump head materials" table (special materials may be supplied on request).

MAX DOSAGE TEMPERATURE
- SS 316 pump head: 40° C
- PP pump head: 40° C

FLOW RATE ADJUSTMENT
Every pump can be equipped with an electric actuator which accepts a 4÷20 mA.



Piston diameter	AISI 316 L				PVC			
	A	B	C	? ext. hea	A	B	C	? ext. hea
25	120	258	3/8" G F	68	147	258	3/8" G F	80
30	120	258	3/8" G F	68	147	258	3/8" G F	80
38	160	268	1/2" G F	88	168	268	1/2" G F	100
48	160	268	1/2" G F	88	196	268	1/2" G F	100
54	173	268	1/2" G F	108	216	268	1/2" G F	120
64	202	273	3/4" G F	108	222	273	3/4" G F	120
76	238	288	1" G F	138	244	288	1" G F	148
89	252	288	1" G F	150	256	288	1" G F	160

Pump Head materials

	STANDARD		ON REQUEST		
	AA	PV	AE	PA	PE
PUMP HEAD	AISI 316	PVC	AISI 316	PVC	PVC
PISTON	AISI 316	Ceramic	Ceramic	Ceramic	Ceramic
PISTON SEAL	FPM	FPM	EPDM	FPM	EPDM
VALVES	AISI 316	Ceramic	AISI 316	AISI 316	Ceramic
VALVE SEATS	AISI 316	PVC	AISI 316	AISI 316	PTFE

Code

R	Model [R= Piston • D=Diaphragm]
2	Mechanism type [1 • 2]
A	Stroke length [A=25mm]
089	Piston diameter [from 6 to 89 mm]
V	Strokes/min [U=58 • V=78 • X=116]
PV	Pump Head materials [see table above]
E4	Motor type
0	Adjustement stroke [0 = Manual • L = Linear]
000	Optional

D1 Mechanical diaphragm metering pumps

FEATURES

Flow rate	from 5,5 to 500 l/h
Max. pressure	10 bar
Stroke rate	41 • 58 • 82 • 116 strokes/minute
Diaphragm diameter	from 64 to 165 mm
Motor	0,18 • 0,25 • 0,37 Kw standard (IP 55)
Stroke length	2 mm • 4 mm • 6 mm

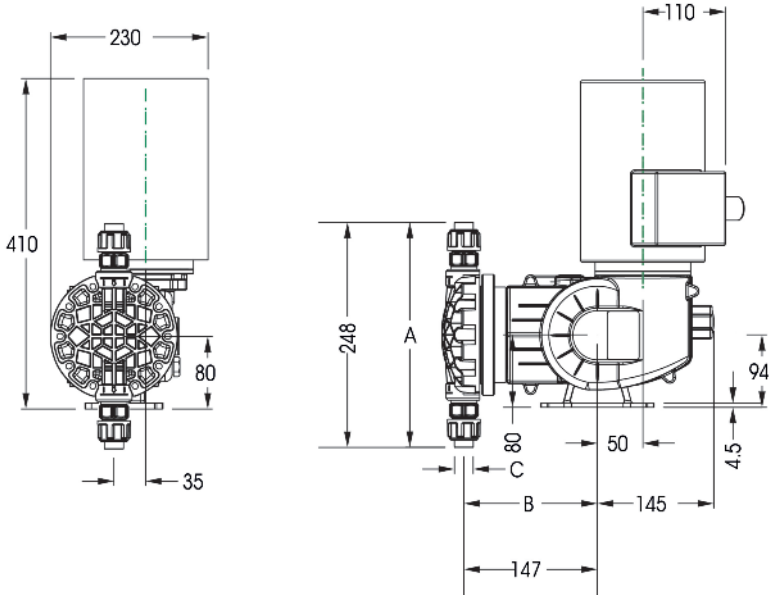
Model	Diaphragm diameter	Stroke length (mm)	Strokes/min	Flow rate l/h	Max pressure				Connections		3phases Motor kW
					bar		psi				
					AISI 316	PP	AISI 316	PP	AISI 316	PP	
D1E064U	64	2	58	5,5	10	10	145	145	1/4" G F	1/4" G F	0,18
D1E064V			78	8							
D1E064X			116	11							
D1E094U	94	2	58	20	10	10	145	145	3/8" G F	3/8" G F	0,25
D1E094V			78	26							
D1E094X			116	40							
D1D108U	108	4	58	60	10	10	145	145	3/8" G F	3/8" G F	0,37
D1D108V			78	80							
D1D108X			116	120							
D1C138U	138	6	58	155	7	7	101,5	101,5	3/4" G F	3/4" G F	0,37
D1C138V			78	220							
D1C138X			116	310					1" G F	1" G F	
D1C165U	165	6	58	230	5	5	72,5	72,5	1" G F	1" G F	0,37
D1C165V			78	330							
D1C165X			116	500	3	3	43,5	43,5			

LIQUID END
SS 316 or PP liquid end (standard).

DIAPHRAGM IN PTFE
The material in contact with the liquid to be dosed are listed in the "pump head materials" table (special materials may be supplied on request).

MAX DOSAGE TEMPERATURE
- SS 316 pump head: 40° C
- PP pump head: 40° C

FLOW RATE ADJUSTMENT
Every pump can be equipped with an electric actuator which accepts a 4÷20 mA.



Diaphragm diameter	AISI 316 L				PVC			
	A	B	C	? ext. hea	A	B	C	? ext. hea
64	208	149	1/4" G F	98	150	144	1/4" G F	98
94	236	144	3/8" G F	117	172	146	3/8" G F	120
108	248	144	3/8" G F	131	212	146	3/8" G F	140
138	347	158	3/8" G F 1" G F	160	258	157	3/8" G F 1" G F	170
165	377	160	1" G F	193	296	157	1" G F	190

Pump Head materials

	STANDARD			ON REQUEST
	AA	PV	PP	FF
PUMP HEAD	AISI 316	PVC	PP	PVDF
DIAPHRAGM	PTFE	PTFE	PTFE	PTFE
VALVES	AISI 316	Ceramic	Ceramic	Ceramic
VALVE SEATS	AISI 316	PTFE	PTFE	PVDF

Code

D	Model [R= Piston • D=Diaphragm]
1	Mechanism type [1 • 2 • M]
E	Stroke length [E= 2mm • D=4mm • C=6mm]
064	Diaphragm diameter [from 64 to 165 mm]
U	Strokes/min [U=58 • V=78 • X=116]
PP	Pump Head materials [see table above]
A4	Motor type
0	Adjustement stroke [0 = Manual • L = Linear]
000	Optional

DM Mechanical diaphragm metering pumps

FEATURES

Flow rate	from 15 to 60 l/h
Max. pressure	5 bar
Stroke rate	58 • 78 • 116 strokes/minute
Diaphragm diameter	50 mm
Motor	0,09 kw standard (IP 55)
Stroke length	5 mm

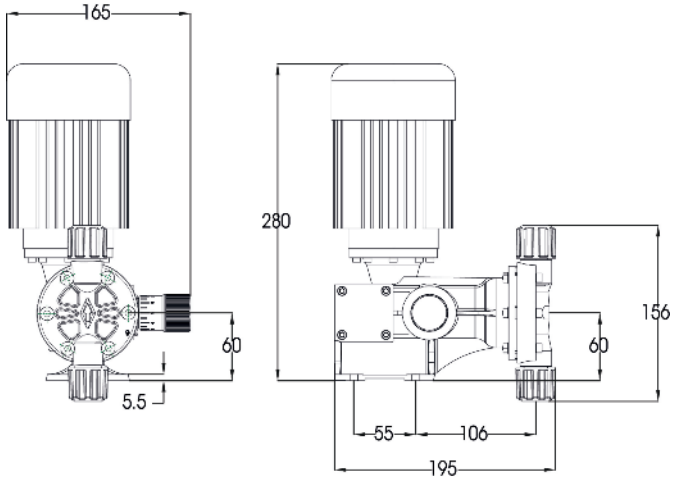
Model	Diaphragm diameter	Strokes/min	Flow rate l/h	Max pressure		Connections		3phases Motor kW
				bar	psi	AISI 316	PP	
DMF050T	50	41	15	5	72,5	1/2" G M	3/4" G M 1/2" G M	0,09
DMF050U		58	20					
DMF050W		82	30					
DMF050X		116	42					
DMF050Y		164	60					

Pump Head materials

	STANDARD			ON REQUEST
	AA	PV	PP	FF
PUMP HEAD	AISI 316	PVC	PP	PVDF
DIAPHRAGM	PTFE	PTFE	PTFE	PTFE
VALVES	AISI 316	Ceramic	Ceramic	Ceramic
VALVE SEATS	AISI 316	PTFE	PTFE	PVDF

Code

D	Model [R= Piston • D=Diaphragm]
M	Mechanism type [1 • M]
F	Stroke length [F=5mm]
050	Diaphragm diameter
Y	Strokes/min [T=41 • U=58 • W=82 • X=116 • Y=164]
PP	Pump Head materials [see table above]
A4	Motor type
0	Adjustement stroke [0 = Manual • L = Linear]
000	Optional



M *Series*

Hydraulic double diaphragm metering pump in AISI 316L stainless steel

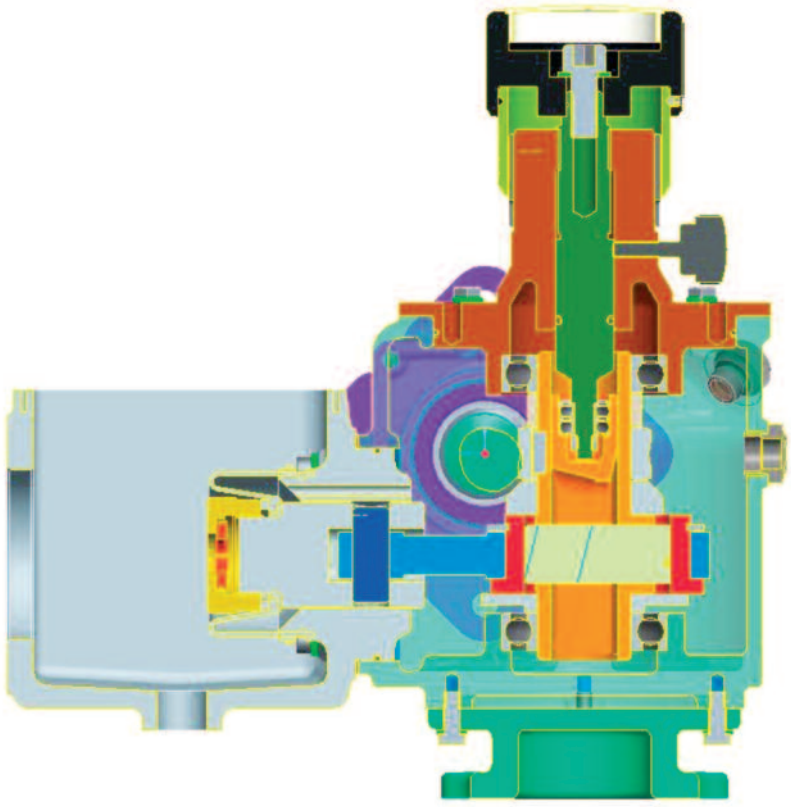
A line of plunger and hydraulic double diaphragm metering pumps designed according to the **API 675 standards**. Their possibility of construction with various materials allows these metering pumps to satisfy every liquid dosing and mixing application. Furthermore, their complete compliance with the **ATEX** standards even allows for these pumps to be installed in hazardous areas.

Mechanisms

Of a positive return typology and available in various sizes.

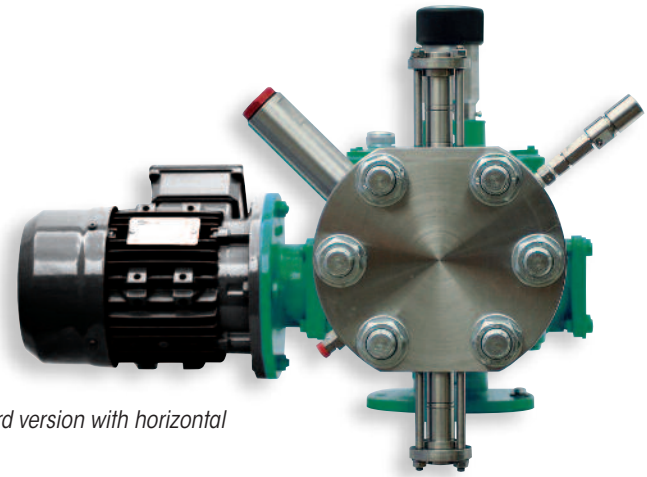
Main characteristics:

- Internal worm gearbox, oil bath lubricated with low noise emissions
- Rotating parts on bearings to minimise power consumption
- Each mechanism comes complete with an internal gearbox; pumps with different speeds (strokes/min) can therefore be joined, allowing for greater flexibility in selecting the pumps themselves
- High precision stroke adjustment, both manual and by means of an electric or pneumatic actuator or frequency converter.
- Accuracy within ± 1%

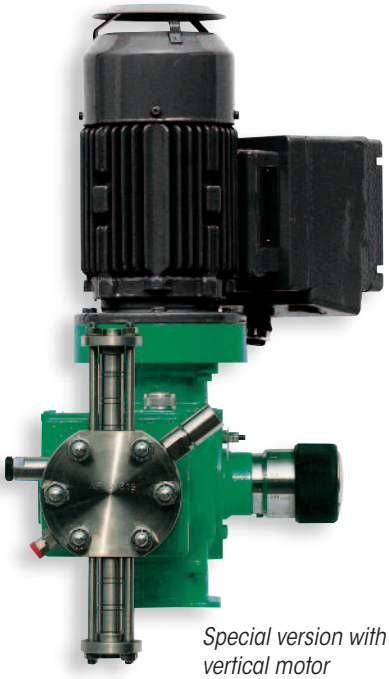


Flexibility

In the standard configuration, the motor is horizontally mounted on the right, but the pumps can also be furnished with the motor horizontally mounted on the left or vertically mounted, depending on the installation requirements



Standard version with horizontal motor

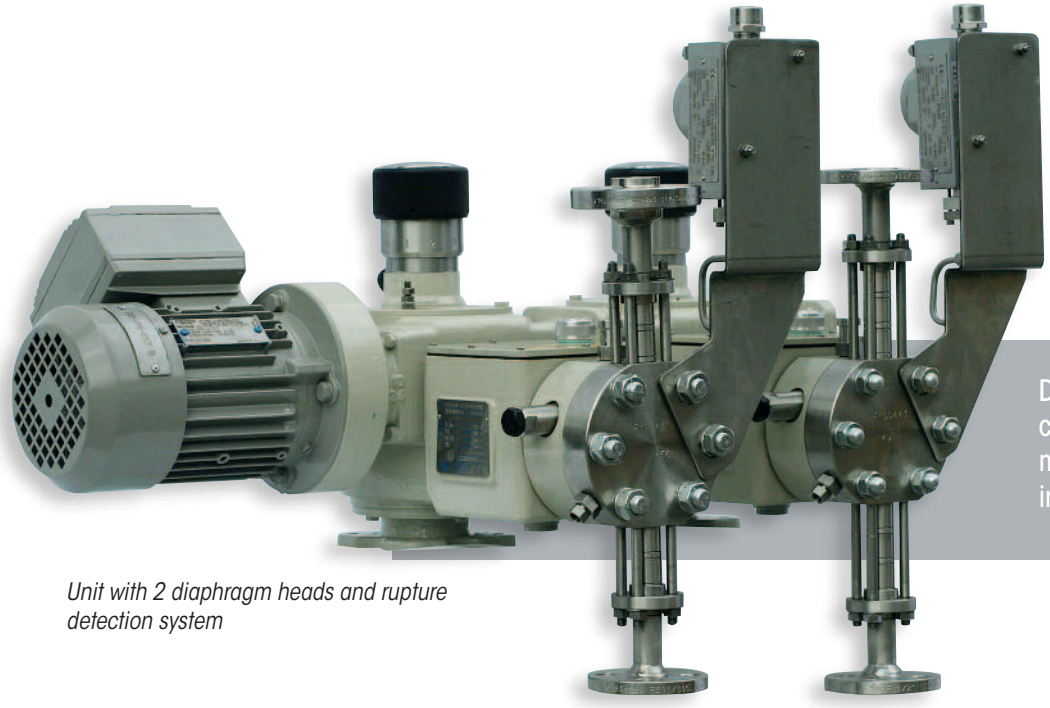


Special version with vertical motor

Modularity

All mechanisms, even of different sizes, can be easily combined to form metering units with certain significant construction advantages, simplifying assembly and installation.

- The mechanisms are coupled together using joints with no exposed parts; the result is a compact unit with a strong and properly-aligned connection which does not require the use of a special base
- Another advantage is the possibility of adding a pump to another existing pump just by performing a few simple coupling operations , even on site



Unit with 2 diaphragm heads and rupture detection system

Different size mechanisms can be coupled; casings are designed to maintain the same foot level, to allow installation on a flat support base

M *Series*

YN, TN, HN: Hydraulic double diaphragm heads

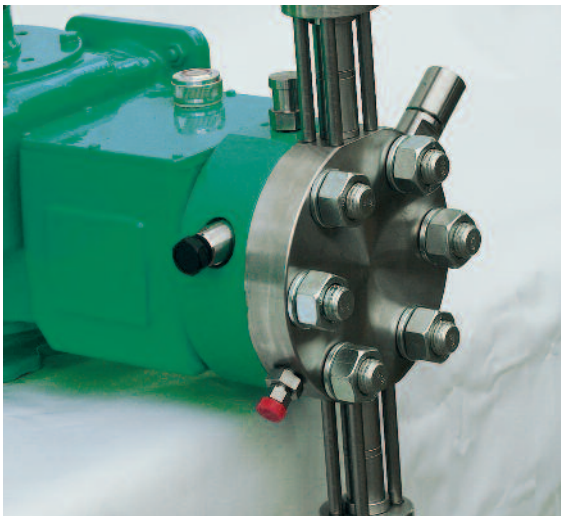
The ideal solution for applications requiring high levels of operational safety and reliability:

- Zero leakage; watertight construction for dosing toxic, corrosive and other hazardous liquids, for which the absence of leaks is fundamental
- Protection against external pollutants which could contaminate the liquid being pumped if using plunger pumps
- Double diaphragm, double protection; if one of the two diaphragms is damaged, the protection system immediately signals the anomaly; the pump is nevertheless permitted to continue to operate, thereby preventing immediate downtime
- Flexibility of use; the PTFE diaphragms are compatible with a vast assortment of liquids
- Flow rate modularity; the rated flow rate can be changed by simply replacing the plunger and the relevant seal cartridge
- Solid suspensions; the diaphragm's proper positioning is ensured by a mechanical system which does not require the use of perforated shields on the process side, thereby allowing for liquids containing solid suspensions to be pumped.
- Construction materials; the parts in the standard configuration that make contact with the liquid are made from AISI 316L stainless steel, PP and PVDF. Other materials available upon request.

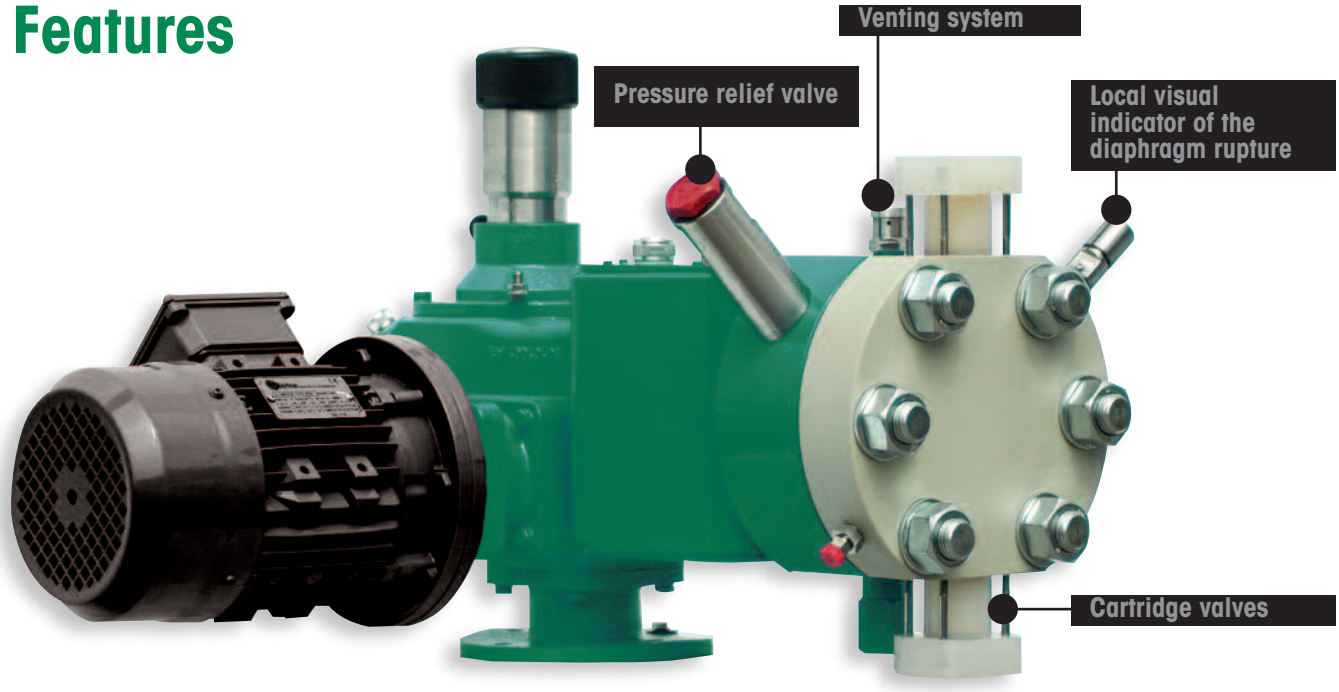
PN, KN: Plunger heads

The simplest and most suitable solution for dosing and transferring non-hazardous liquids; despite their design simplicity, PN and KN heads have certain special features which provide for extremely high performance

- Particularly precise plunger surface finishing, with increased hardness for a longer working life
- Perfect alignment of the plunger in the seal
- Adjustable seal predisposed for flushing or leakage recovery



Features



- **Pressure**
  up to 200 barg (higher upon request)

- **Flow rate**
  up to 2650 l/h with a single head

- **Fluid temperature**
  from -10 °C to 90 °C (from -40 °C to 150 °C upon request)

- **Contact materials**
  - AISI 316L
  - PP
  - PVDF
  - Special configurations available upon request

- **Venting system**
  Aside from guaranteeing automatic venting during operation, the venting system also facilitates the pump start-up by favouring the air purge by means of a manual action.

- **Mechanical refilling system**
  Maintains a constant level of the hydraulic fluid, thereby guaranteeing maximum precision and repeatability. Also maintains control over the deformation of the diaphragm, thereby increasing its duration.

- **Cartridge valves**
  In order to ensure maximum dosing precision, even for small flow rates, double and triple ball configurations are available with high precision seats. They can be replaced without disconnecting the pump from the pipelines. The metal gaskets for the AISI 316L stainless steel heads, and the FPM gaskets for those in plastic, guarantee maximum compatibility.

- **Pressure relief valve**
  Protects the pump against unwanted excess pressure.

- **Double diaphragm with rupture detector**
  In the event that one of the two diaphragms should rupture, the detector activates a local visual indicator or signal; in this emergency situation, the second diaphragm guarantees the pump's continued functionality and allows for the necessary maintenance intervention to be scheduled.

- **Separation of the hydraulic fluid from the mechanism's lubricant**
  The two fluids have independent and differentiated functions and are therefore kept separate.

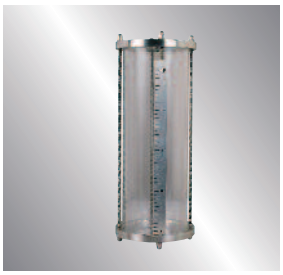
M *Series*

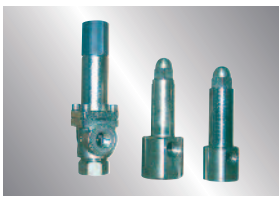
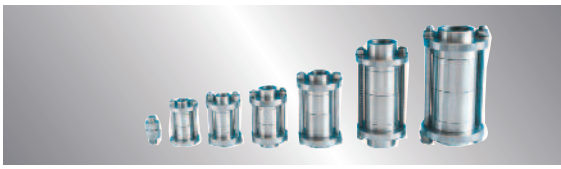
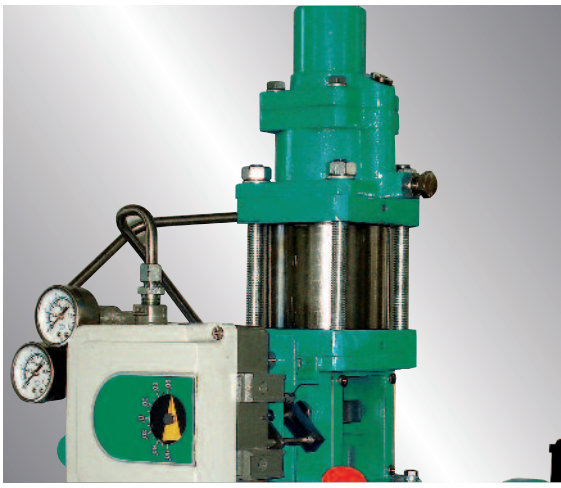
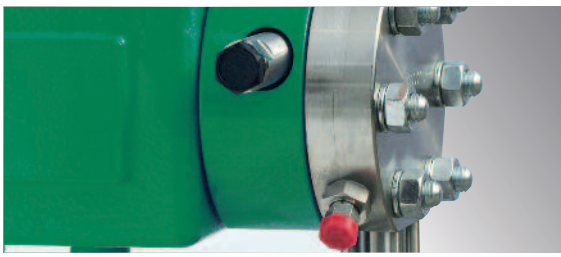
Options

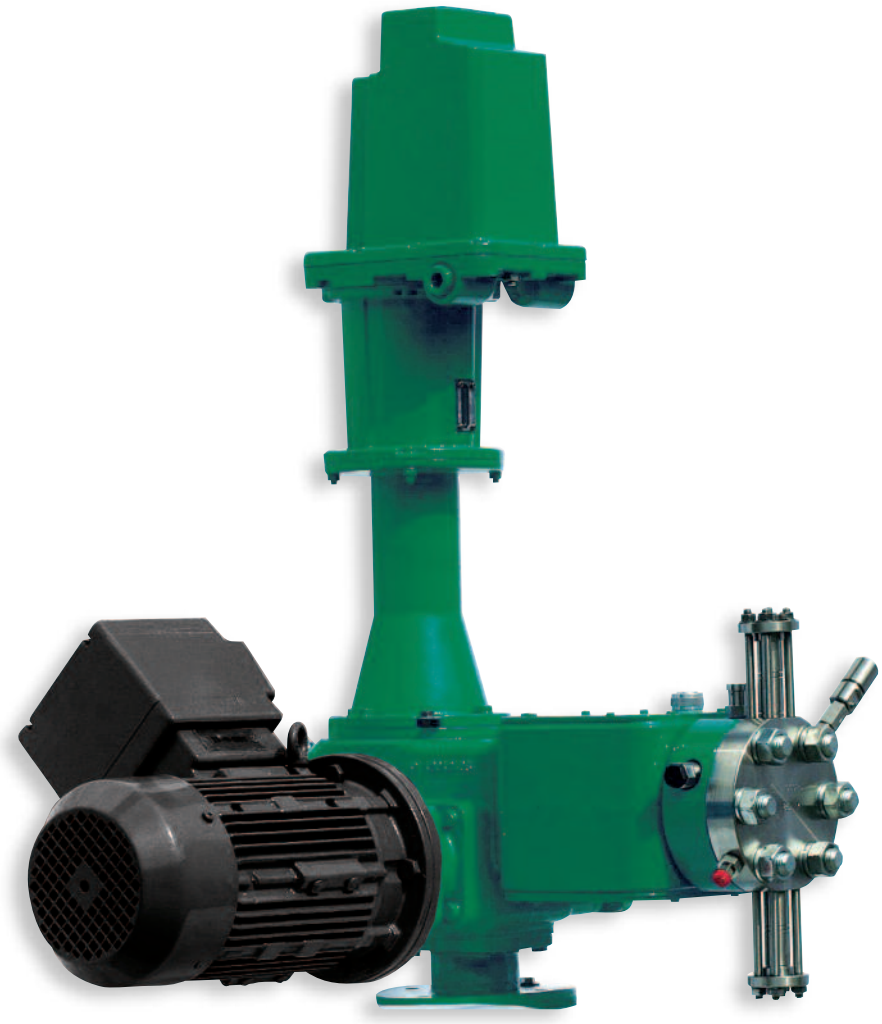
- Automatic, electric or pneumatic adjustment, or else by means of an inverter
- Flanged connections
- Heated or cooled heads
- Transmission of the diaphragm rupture signal

Accessories

- Flow rate calibrators
- Pulsation dampers
- Safety valves
- Back pressure valves



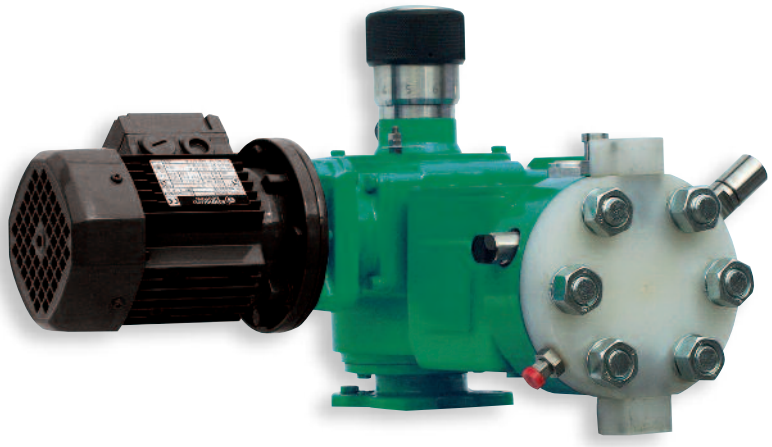


ATEX metering pump equipped with an electric actuator for flow rate adjustment

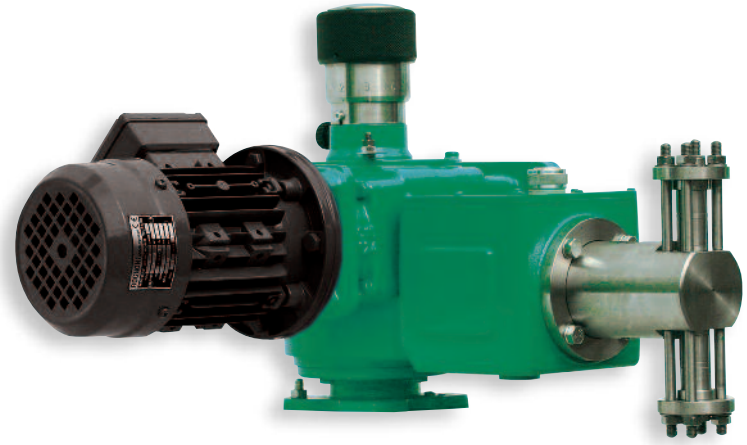
Applications

Industrial sectors

- Chemical
- Food & Beverages
- Detergents
- Power Generation
- Environment
- Oil & Gas
- Petrochemical
- Pharmaceutical
- Paper
- Textile



Double diaphragm metering pump with PVDF head



Plunger metering pump with AISI 316L stainless steel head














Accessories

Threaded water meters

The meters which we offer have high precision and sensitivity according to CEE standards. Their plastic and metallic parts, in particular those in contact with water, comply with current regulations and are subject to extensive checks and controls.

CB Series | CB4 4 pulse/lt | CB1 1 pulse/lt

- Single jet water meter
- Wet dial
- Roller reading
- Cold water up to 30 °C
- Max. connection 2" (50 mm)

HB Series | HB4 4 pulse/lt | HB1 1 pulse/lt

- Single jet water meter
- Wet dial
- Roller reading
- Hot water up to 90 °C
- Max. connection 1"1/2 (40 mm)

CN Series | CN4 4 pulse/lt | CN1 1 pulse/lt

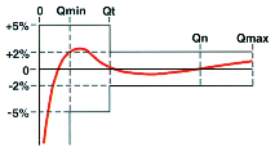
- Single jet water meter
- Wet dial
- Roller reading
- Cold water up to 30 °C
- Max. connection 1"1/2 (40 mm)
- Mounting for solenoid dosing pump

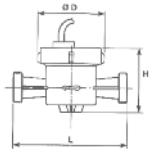
RBF Series

- Single jet water meter
- Wet dial
- Roller reading
- Cold water up to 30 °C
- Max. connection 1"1/2 (40 mm)

DR Series | DR1 1 pulse/lt

- Single jet water meter
- Dry dial
- Roller reading
- Cold water up to 30 °C
- Max. connection 2" (50 mm)





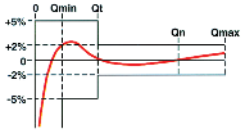
	Size	DN		13	20	25	30	40	50
		Inch		1/2	3/4	1	1 1/4	1 1/2	2
hydraulic data	Max flow (short period)	Qmax	m³/lt	3	5	7	10	20	30
	Nominal flow	Qn	m³/lt	1.5	2.5	3.5	5	10	15
	Min flow (accuracy ±5%)	Qmin	m³/lt	30	500	70	100	200	450
	Transition flow (accuracy ±2%)	Qt	m³/lt	120	200	280	400	800	3000
	Maximum reading		m³	10000	10000	10000	10000	10000	10000
dimension data	Length without adapters	L	mm	110	130	160	160	200	300
	Length with thread		mm	190	228	260	280	340	472
	Width	D1	mm	80	80	110	100	110	152
	Height	H	mm	90	90	120	120	130	200

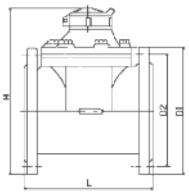
Flanged Water Meters

Woltmann Series

	WE 25	WE 50	WE 100	WE 250	WE 500	WE 1000
lt/pulse	25	50	100	250	500	1000
Connections DN (mm)	50	50	50	-	-	-
	65	65	65	-	-	-
	80	80	80	-	-	-
	100	100	-	-	-	-
	-	-	-	150	150	150

	Size	DN		50	65	80	100	150
		Inch		2	2 1/2	3	4	6
hydraulic data	Max flow (short period)	Qmax	m³/lt	30	50	80	120	300
	Portata con 0.1 bar di perdita carico		m³/lt	20	55	65	120	300
	Nominal flow	Qn	m³/lt	15	25	40	60	150
	Min flow (accuracy ±5%)	Qmin	m³/lt	1.2	3	3.2	4.8	12
	Transition flow (accuracy ±2%)	Qt	m³/lt	4.5	7.5	12	18	45
	Maximum reading		m³	10000	10000	10000	10000	10000
dimension data	Length	L	mm	200	200	200	250	300
	Width	D1	mm	165	185	200	220	285
	Height	H	mm	247	258	265	272	302
	Flange holes	Ø	mm	18	18	18	18	22
		N°		4	4	4	8	8
		D2	mm	125	145	160	180	240





Accessories

Tanks in polyethylene

Our tanks are designed to assemble dosing systems with mixers and motor driven pumps or solenoid dosing pumps. All are made from food-safe polyethylene, resistant to almost all chemicals normally encountered.

Models and Technical Features			
Tank Code	**Capacity (Lt)**	**Height (cm)**	**Diameter (cm)**
SER 50	50	45,5	40
SER 100	100	64	46
SER 250	250	87	59,5
SER 300	300	95	67
SER 500	500	118,5	76
SER 1000	1000	122	108,5

Reinforcement

Tank reinforcement made of PVC (20 mm thick) to be used to install mixers and motor driven pumps or solenoid dosing pumps on tanks SER series.

Models	
Code	**Tank**
SML 100	SER 100
SML 250	SER 250
SML 300	SER 300
SML 500	SER 500
SML 1000	SER 1000

Uncovered Tanks in Polyethylene

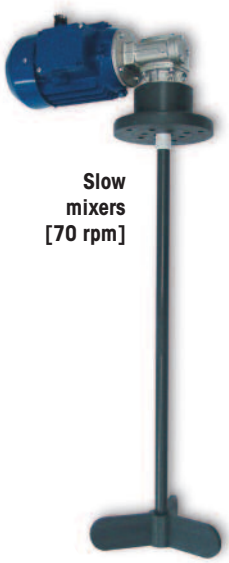
Designed to contain our tanks SER series

Models and Technical Features				
Code	**Tank**	**Capacity (Lt)**	**Height (cm)**	**Diameter (cm)**
T150	SER 100	150	75,5	51
T300	SER 250	300	87,5	67
T400	SER 300	400	99	72
T800	SER 500	800	120	90
T1500	SER 1000	1500	134	122

Mixers

Electric mixers three-phase (single-phase on request) and flange attachment. For tanks SER series.

Technical Features					
Body	**Shaft length (mm)**	**Propeller diameter (mm)**		**Motor (kW)**	SER Model
		Slow (70 rpm)	Fast (1400 rpm)		
PVC AISI 316	600	150	90	0,13	**100**
	800				**250**
	900	220			**300**
	1100				**500/1000**



Slow mixers [70 rpm]

Fast mixers [1400 rpm]

Accessories

Suction Devices

A suction filter is provided to protect pump valves from debris or particles that could obstruct the pump valve. Suction devices can also be supplied with integral level controls. These allow the use of alarms, and protect against the system running dry.

- **Easy to install**
- **Standard FPM seals (EPDM upon request)**
- **Made of PCV with clear PVC suction tubing**
- **All suction devices are provided with a foot filter**
- **All suction devices are provided with a non return valve**

Technical Features			
Dimensions (mm) Length x Ø	**Tube 4x6**	**Tube 8x12**	**Tank suitability**
450 x 22	?		SER 50
450 x 34		?	
650 x 22	?		SER 100
650 x 34		?	
900 x 22	?		SER 250
900 x 34		?	
1050 x 22	?		SER 300
1050 x 34		?	
1250 x 22	?		SER 500-1000
1250 x 34		?	

Pump head with automatic degassing valve

It allows to resume the right dosing without any intervention from the user, in case you meter some products generating gases.

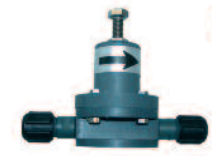
PVC body, FPM seals and Ceramic balls for the best chemical compatibility. **Bear in mind:** to be exclusively used combined with 603 and 800 series pumps

Technical Features

Max temperature of liquid product	40° C
Max flow rate reduction	20%

HY Series adjustables valves

Material	PVC
Max flow rate	50 l/h
Max pressure	10 bar
Connections	1/2" g.m., tube 8x12, tube 4x6
Diaphragm	FPM (standard) or EPDM (upon request)
Max temperature of liquid	35 °C



HYC backpressure valves

HYM Multi valve

HYS Safety valves

Accessories

Injection valves

Material	PVC
Max flow rate	50 l/h
Connections IN	1/2" g.m., tube 8x12, tube 4x6
Connections OUT	1/2" g.m.

Max working pressure 10 bar

Seals FPM (standard)
or EPDM (upon request)

Max temperature of liquid 35 °C

Multifunction valve

Multifunction valve acts as: a back pressure valve, an anti-siphoning valve, a safety valve, a priming valve, a delivery drain valve (for maintenance) . Multifunction valve is fitted directly on the delivery valve on the dosing pump.

Materials		Ø Connections
Valve body	**Diaphragm**	**IN/OUT [mm]**
PVC	PTFE	4/6(*)
PVDF		

Technical Features

Safety valve with pressure selection	6(*) - 12 bar
Back pressure valve with pressure	1.5 bar
Max temperature of liquid	40°C

(*) 6 bar type, supplied with 8/12 tube connections

Fixed / Adjustable backpressure valves

The accuracy of the solenoid pumps can be affected by the variation of delivery pressure, especially between 0 and 1 bar. Using the backpressure valve you can guarantee a constant dosing and avoid siphoning cases when metering in the tank. Moreover, dosing with a backpressure avoids to create siphoning phenomena of the pump.

Materiali		Ø Connessioni	
Corpo Valvola	**Membrana/ Tenute**	**IN**	**OUT**
PVDF	FPM	4/6 mm	3/8" G
	EPDM		1/2" G

Technical Features

Fixed Version
Backpressure 1,5 bar

Adjustable Version
Backpressure 0,5 ÷ 5 bar

Flow Sensor

In order to assess the actual dosing phase, the flow sensor can be used to detect the pump's pulsations during the delivery phase: the sensor can also be used to determine the actual dosing flow rate. This flow sensor is fitted directly on the delivery valve on the dosing pump.

Materials	
Body	**Seals**
PVC	PTFE
PVDF	

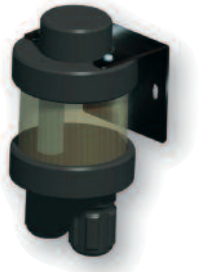
Technical Features
Max pressure 10 bar
Max temperature of liquid 40° C

Priming-aid

Priming problems may occur on dosing pumps with a low flow rate, and also in case of excessive suction heights in relation to the pump's capacity. This accessory is able to resolve these problems. Where possible it is fitted at the same height as the pump's intake valve and a short distance from it.

Materials		Ø Connessioni	Model
Body	**Seals**	**IN/OUT [mm]**	
PVC	FPM	4/6 - 8/12	300 ml

Technical Features
Max temperature of liquid 40° C



Accessories

Adjustable safety valves (SS316/PTFE)

Model	Flow rate l/h	Pressure (bar)		Connections BSP	CODE
		min	max		
VS1S	250	0	19	1/2" F	VS1S250019
		20	45		VS1S250045
		46	150		VS1S250150
VS2S	650	0	13	3/4" F	VS2S650013
		14	30		VS2S650030
		31	100		VS2S650100

Adjustable safety valves

Model (material)	Flow rate l/h	Pressure (bar)		Connections BSP	CODE
		min	max		
PRM-S (SS316)	300	0	5	3/8" F	PRM1S03005
	800			3/4" F	PRM2S08005
	1500			1" F	PRM3S15005
PRM-P (PVC)	300	0	5	3/8" F	PRM1P03005
	800			3/4" F	PRM2P08005
	1500			1" F	PRM3P15005

Backpressure valves (SS316)

Model (material)	Flow rate l/h	Pressure (bar)	Connections BSP	CODE
VZX-S-02	50	2	1/4" M	VZX1S00502
	100		1/4" F	VZX3S01002
	200		3/8" F	VZX4S02002
	420		1/2" F	VZX5S04202
	800		3/4" F	VZX6S08002
	1650		1" F	VZX7S16502

Adjustable Backpressure valves

Model (material)	Flow rate l/h	Pressure (bar)		Connections BSP	CODE
		min	max		
VSM-S (SS316)	300	0	5	3/8" F	VSM1S03005
	800			3/4" F	VSM2S08005
	1500			1" F	VSM3S15005
VSM-P (PVC)	300	0	5	3/8" F	VSM1S03005
	800			3/4" F	VSM2S08005
	1500			1" F	VSM3S15005

Accessories

"Y" Suction filters

Model (material)	Connections BSP	CODE
FYP (PVC)	3/8" F	FYP3240200
	1/2" F	FYP3230040
	3/4" F	FYP3230060
	1" F	FYP3230080
FYS (SS316)	3/8" F	FYS3240098
	1/2" F	FYS3240100
	3/4" F	FYS3240110
	1" F	FYS3240120

Pulsation bag HSTPVC series

Volume (L)	Pressure (bar)		Material		Connec. BSP	CODE
	max	standard	body	membr.		
0,04	10	5	PVC	FPM	3/8" F	HSTPVC004
0,1					1/2" F	HSTPVC01
0,35					1/2" F	HSTPVC035
0,7					1/2" F	HSTPVC07
1,5					1" F	HSTPVC15
2,3					1" F	HSTPVC23

Pulsation bag HSTX series

Volume (L)	Pressure (bar)		Material		Connec. BSP	CODE
	max	standard	body	membr.		
0,04	210	20	AISI 316	NBR	3/8" F	HSTX004
0,1					1/2" F	HSTX01
0,35					1/2" F	HSTX035
0,7					3/4" F	HSTX07
0,8					3/4" F	HSTX08
1,5					1" F	HSTX15
2,3					1" F	HSTX23

Fitting-Testing unit AR series

Pressure (bar)	CODE
6	AR10PM0006
12	AR11PM0012
40	AR01PM0040
60	AR02PM0060
100	AR03PM0100
160	AR04PM0160
250	AR05PM0250

Description

The preparer is a device designed for automatic continuous flow preparation of a polyelectrolyte solution, starting from the polyelectrolyte in powder form and water.

The polyelectrolyte powder is extracted from the storage hopper using a batching screw with variable speed, moving to the mixer nozzle water cone.

Because of gravity, the mixture obtained falls into the first preparation tank and then passes through the traps into the maturing and batching tanks.

These preparation and maturing tanks are equipped with stirrers, also present as a possible optional in the batching tanks.

The volume of the deposits and the continuous action of the stirrers ensures that a homogenous mixture is obtained and that the retention time is suitable for perfect dilution.

The electrical control panel ensures total system automation, guaranteeing correct preparation and the right batching.

Applications

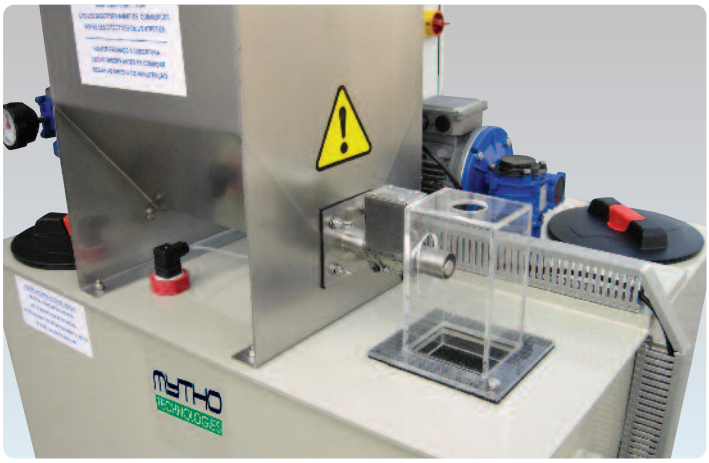
The use of polymers and flocculants considerably facilitates the processes of distinguishing between solid – liquid phases in the following example applications:

- Treating drinking and industrial processing water.
- Purifying waste water, in particular within physicochemical treatments.
- Treating sludge, in order to improve the performance of centrifuges and filter presses.
- Processes for the paper, chemical, petrochemical, mineral processing, canning industries etc.

Benefits

The use of automatic polyelectrolyte solution preparers gives the following results:

- Considerable savings in terms of the polymers and running costs.
- Precision in the preparation and batching stages, optimising the processes.
- Space savings and system centralisation.



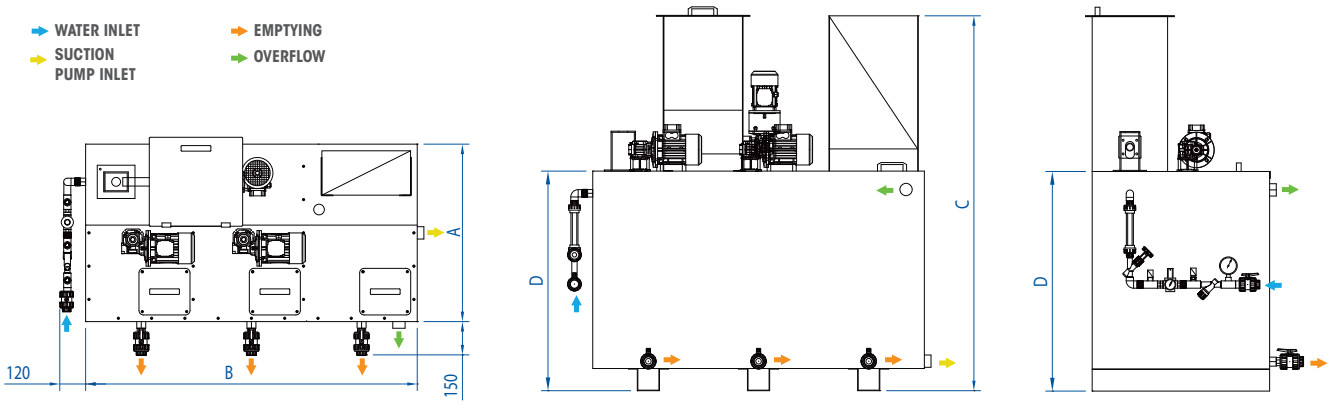
Construction characteristics of a standard system

- Automatic water supply system formed by a shut-off valve, filter, safety pressure switch, pressure gauge, pressure reducer, solenoid valve, control valve, flow meter and special dispensing nozzle.
- Deposits made entirely of stainless steel and PPH, with inspection covers and emptying valves for each compartment.
- Customised propellers, optimised to obtain a homogeneous mixture, made of stainless steel.
- Batching screw made entirely of stainless steel with batching adjustment using the precise speed variator.
- Electric protection and control panel, with built-in or touchscreen synoptic panel, designed for manual/automatic operation, equipped with emergency stop and wiring to all system components.
- Conductive level probes for high, low and very low levels with audible warning.

Optionals

- Automatic powder hopper loading.
- Minimum level probe in the powder hopper.
- Stirrer in the batching tank.
- Overflow probe.
- Prefabricated post-dilution systems. Heating resistor in the powder exhaust pipe.

Dimensions and characteristics of standard systems



Model	Flow Capacity	Volume	A	B	C	D	Water inlet	Suction Pump Inlet	Emptying	Overflow
	l/h	lts.	mm.	mm.	mm.	mm.	GAS	GAS	GAS	GAS
PL5	550	700	800	1.000	1.690	990	3/4″	1 1/2″	1″	1 1/2″
PL8	850	1080	800	1.500	1.690	990	3/4″	1 1/2″	1″	1 1/2″
PL11	1.100	1440	800	2.000	1.690	990	3/4″	1 1/2″	1″	1 1/2″
PL15	1.500	1800	800	2.500	1.690	990	3/4″	1 1/2″	1″	1 1/2″
PL20	2.000	2270	1.150	2.000	1.800	1.100	1″	2″	1″	2″
PL30	3.000	3400	1.150	3.000	1.800	1.100	1″	2″	1″	2″

All systems are equipped with three compartments except PL5, which only has two compartments. For higher or non-standard capacities, contact our technical department. The company reserves the right to make the necessary technical and production changes without prior notice. The images do not imply any contractual relationship.

An experienced and reliable partner for dosing and injection pump package solutions

Since 50 years MYTHO has linked its success to a wide range of industrial fields by supplying complete dosing pumps and packages throughout the world.

MYTHO develops its own projects to best solve metering and pumping problems relating to different fluid properties and plant operating conditions.

Committed to customer satisfaction

MYTHO, as a technological leader, partners each individual customer from the preliminary stage of the project through to the ordering, design, manufacturing and after sales technical assistance.

A team of skilled engineers, operating with sophisticated CAD stations, 3D modelling and FE software, currently provides for the design and engineering of systems according to the most demanding international standards, such as ASME, ANSI, BS and API as required by the customer project specifications.

A total engineering and comprehensive supply approach can be undertaken according to clients' requirements.

Organization and services

Components for the systems construction are purchased via our world-wide logistic platform as per the contract vendor list.

All pumps and controllers are produced by MYTHO to its own proprietary designs, covering a wide range of performances:

- Solenoid driven pumps with or without patented electronic stroke lenght regulation for flow rates up to 54 L/h and pressures up to 20 bar;
- Motor driven pumps plunger or mechanical membrane type with patented assisted return for flow rates up to 2000 L/h and pressures up to 20 bar;
- Plunger metering pumps (according to API 675) for flow rates up to 15000 L/h and pressures up to 2000 bar;
- Diaphragm metering pumps (according to API 675) for flow rates up to 15000 L/h and pressure up to 300 bar;
- Reciprocating Triplex process pumps (according to API 674) for flow rates up to 57000 L/h and pressures up to 1,150 bar.

MYTHO is currently operating according to UNI EN ISO 9001:2000 Quality System's audited and certified by DET NORSKE VERITAS (DNV).

Logistics

A network of subsidiaries, agents and distributors around the world completes the range of technical and commercial services provided in the most interesting areas for the industrial applications of the "packages" supplied by MYTHO.

Application areas

The main industrial application areas for the dosing/injection packages designed and produced by MYTHO are:

- Water treatment (municipalities, wastewater)
- Industrial sectors (steel, ceramics, food & beverages, detergents, paper, textile and pharmaceutical industries)
- Energy (boilers, desalination, cooling towers, environment)
- Petrochemical
- Oil & Gas (on-shore, off-shore, FPSO).

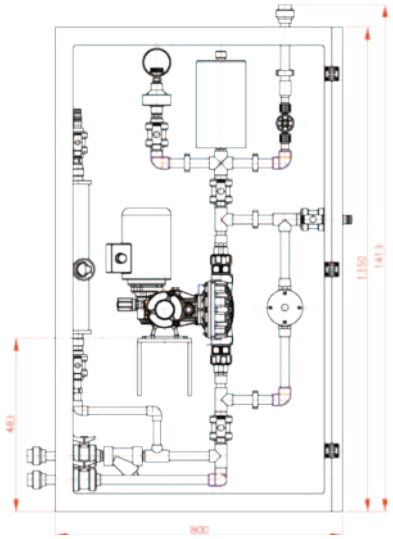





Advantages of Mytho chemical dosing/injection packages

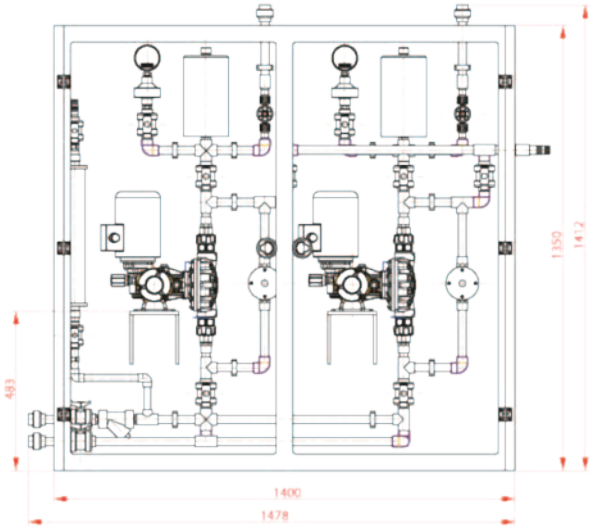
- Various working fluids with application from the water treatment to oil and gas area to the food industry
- Products designed, manufactured and commercialized by Mytho - Group in the entire world
- Design and execution of systems, from mechanical installations to electrical and automation systems and turnkey projects, carried out with professionalism
- Opening and targeting to new product development and collaborations
- The structure of the dosing systems involves essential elements in the operation: calibration pots, shut off valves, safety valves, pulsation dampers, instrumentation, etc
- Diversity on plant parameterization (different pressures and flow rates, adverse environmental conditions, marine environment, ATEX / NON ATEX environment etc)
- Safety of processes guaranteed through professional design programs, software and personnel
- Optional accessories: atomizers, instrumentation, custom connections, heating systems etc.
- Own maintenance service, prompt interventions, warranty of maintenance.

Dosing packages



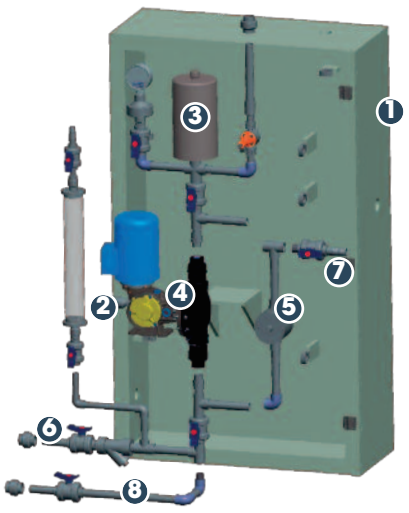
SCS111...

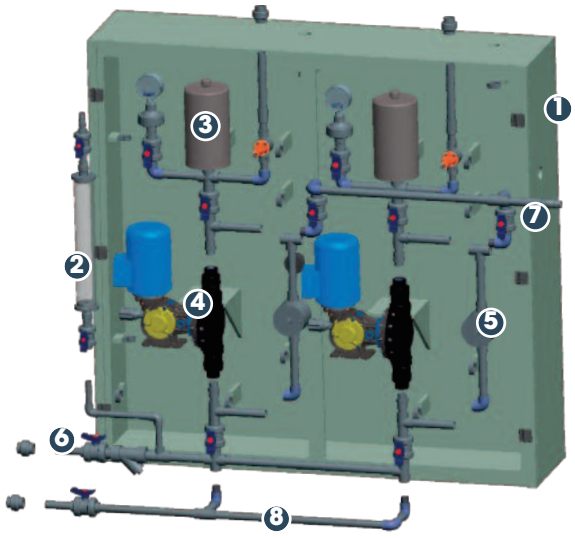
- 1 pump
- 1 suction line
- 1 delivery



SCS212...

- 2 pumps
- 1 suction line
- 2 deliveries

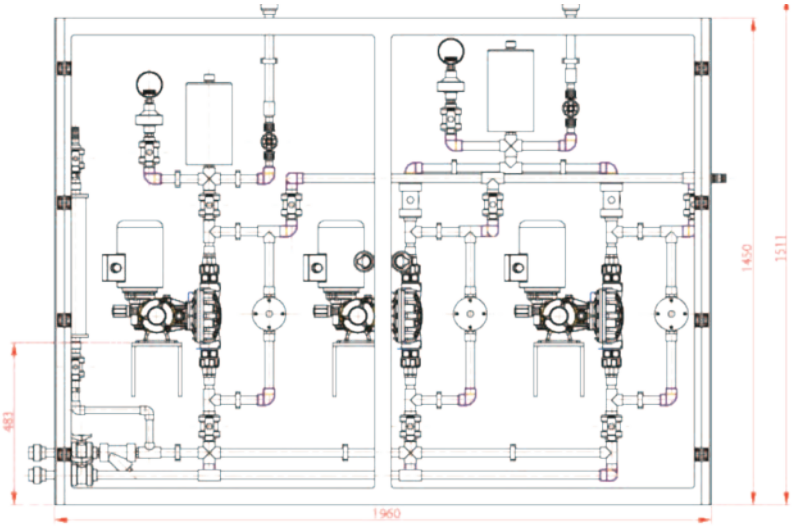




MYTHO METERING PUMPS

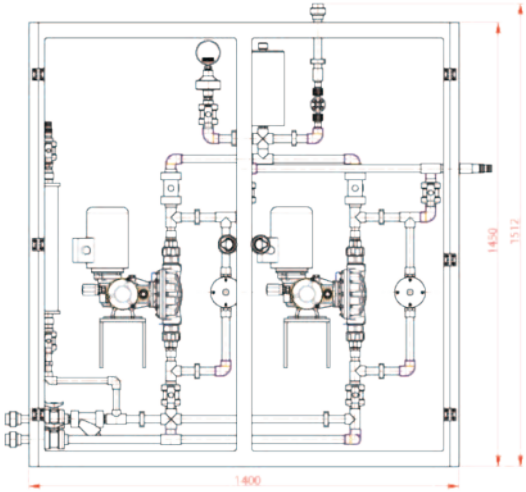
1. Box baseframe
2. Calibration pot
3. Discharge line
4. Mechanical Diaphragm Metering Pumps
5. Overpressure valve module
6. Suction line hydrostatic pressure
7. Washing discharge line
8. Suction washing line hydrostatic pressure

Dosing packages



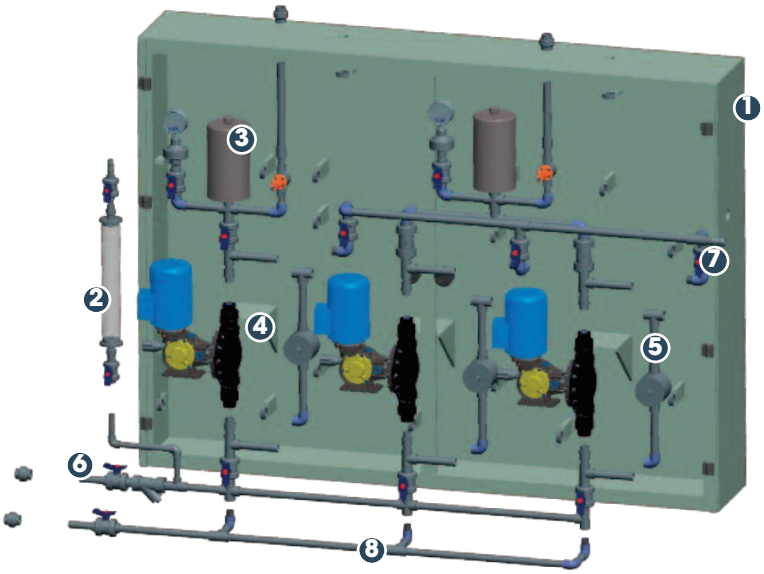
SCS312...

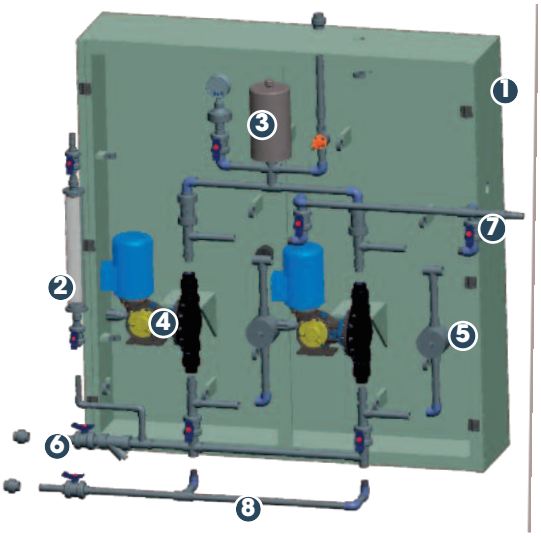
- 3 pumps
- 1 suction line
- 2 deliveries



SCS211...

- 2 pumps
- 1 suction line
- 1 delivery





MYTHO METERING PUMPS

1. Box baseframe
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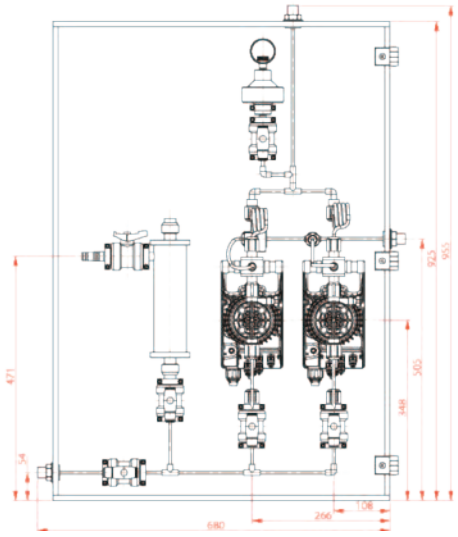
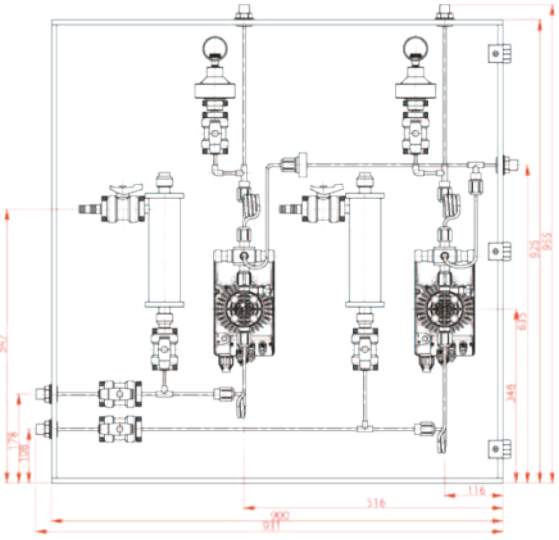
5. Overpressure valve module
6. Suction line hydrostatic pressure
7. Washing discharge line
8. Suction washing line hydrostatic pressure

Dosing packages



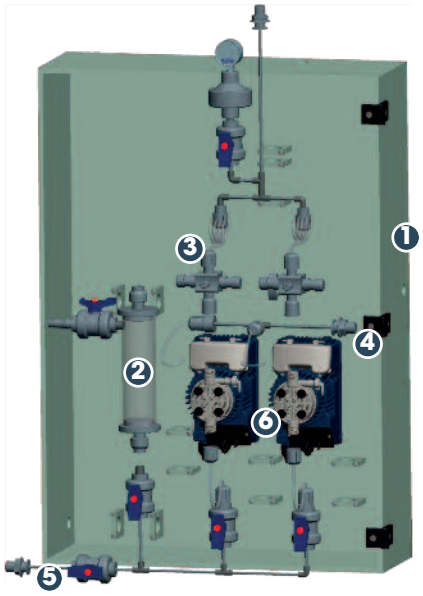
SCT211...

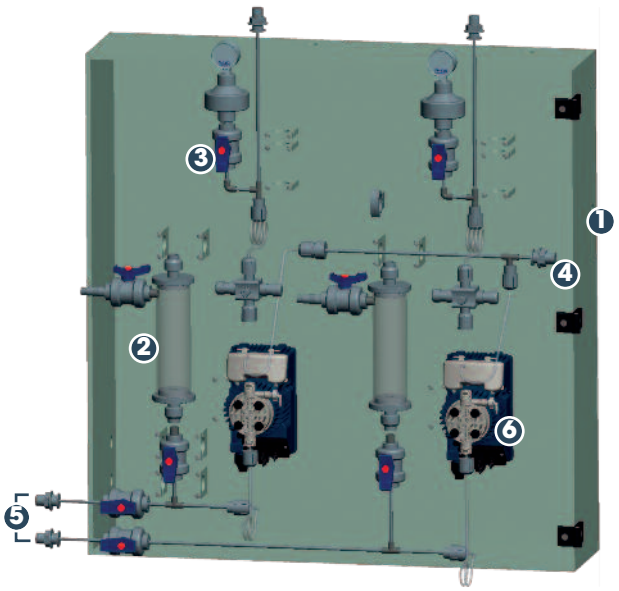
- 2 pumps
- 1 suction line
- 1 delivery



SCT222...

- 2 pumps
- 2 suction line
- 2 deliveries

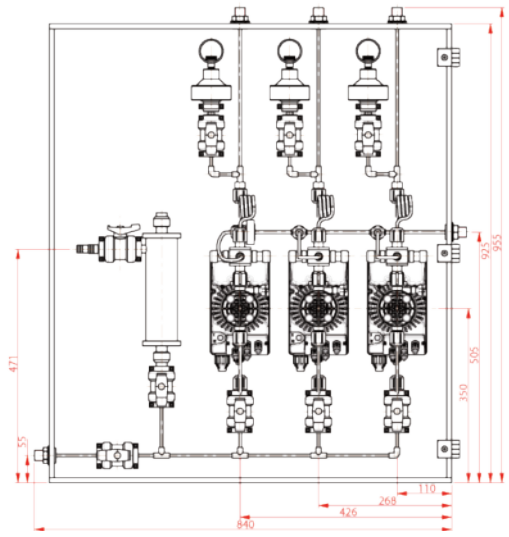




MYTHO METERING PUMPS

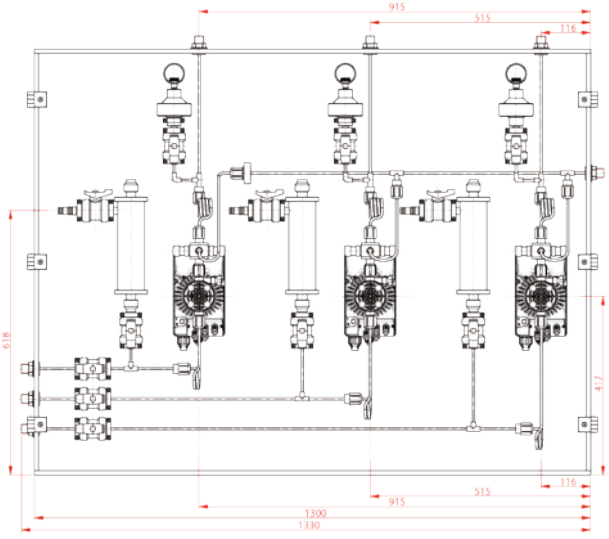
1. Box baseframe
2. Calibration pot
3. Discharge line
4. Multifunction valve discharge
5. Suction line hydrostatic pressure
6. Solenoid Dosing Metering Pumps

Dosing packages



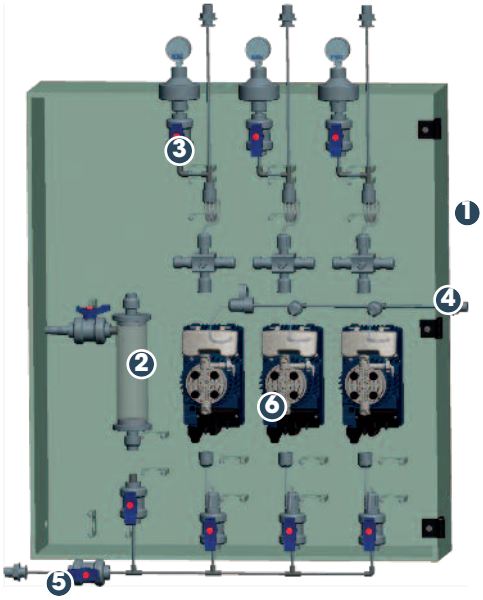
SCT311...

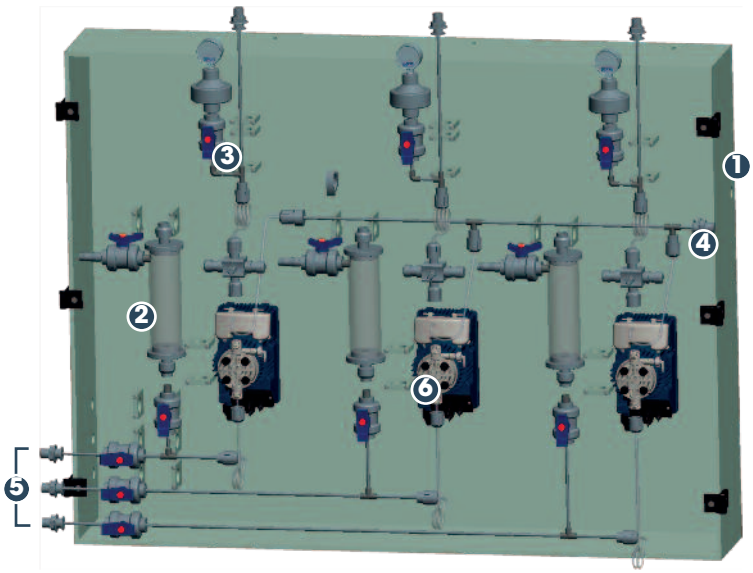
- 3 pumps
- 1 suction line
- 1 delivery



SCT333...

- 3 pump
- 3 suction line
- 3 deliveries





MYTHO METERING PUMPS

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3. Discharge line
4. Multifunction valve discharge
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6. Solenoid Dosing Metering Pumps

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