

# PRIMEROYAL<sup>®</sup> N dosing pump

- Hydraulically actuated diaphragm liquid end • Packed plunger liquid end
- Flow rate up to 8928 l/h • Pressure up to 500 bar

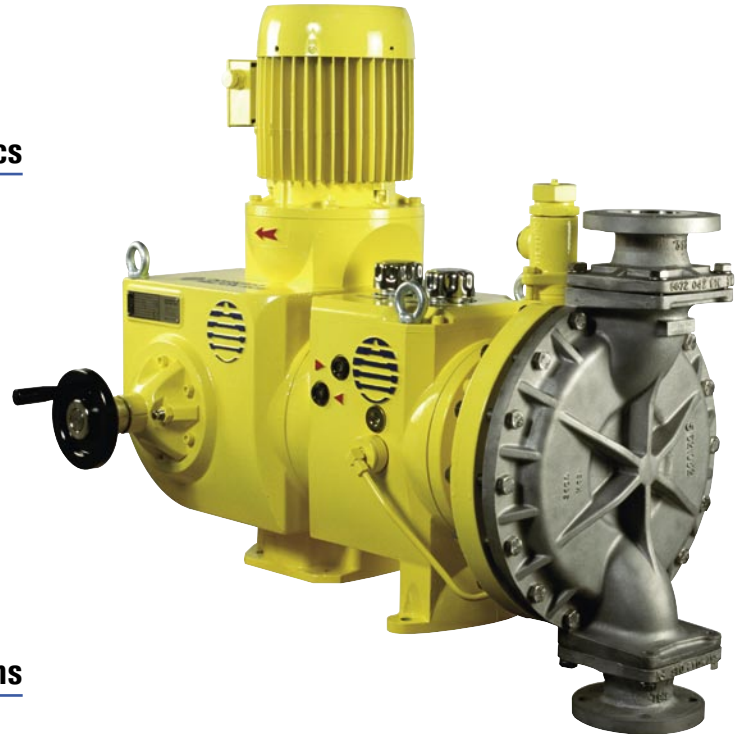


## Main mechanical characteristics

- Reciprocating dosing pump with variable stroke length
- Stroke adjustment while running or stopped
- Fixed stroke version available
- Multiplexing capability up to 2x3 heads
- Maximum stroke length: 63 mm
- Stroke speeds at 50 Hz - 1000 rpm: 64 and 78 spm
- Stroke speeds at 50 Hz - 1500 rpm: 96, 117, 149 and 175 spm
- Design end load: 2000 daN

## Main liquid end configurations

- 316L stainless steel packed plunger ("N")
- Metallic diaphragm (single or double) ("M")
- 316L stainless steel ("H") or plastic ("P") with PTFE diaphragm ("HPD" patented design, life currently exceeding 20,000 hours)
- Special designs available (special materials, remote head, triple heating diaphragm, ...)



*PRIMEROYAL<sup>®</sup> N dosing pump, Simplex version equipped with a diaphragm liquid end*

## Main electrical characteristics

- Motor power supply: 400 V - 50 Hz - 3 phase as standard. Other voltages/frequencies on request
- Servo-motor: 3 phase
- Electric equipment for non hazardous or hazardous area, large variety of protection and insulation
- Conforming to European standards, Nema motors available

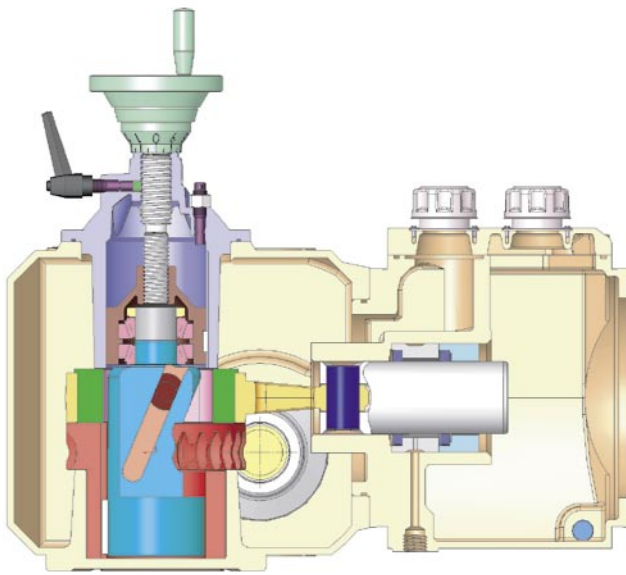


*PRIMEROYAL<sup>®</sup> N dosing pump - Triplex version with fixed stroke*

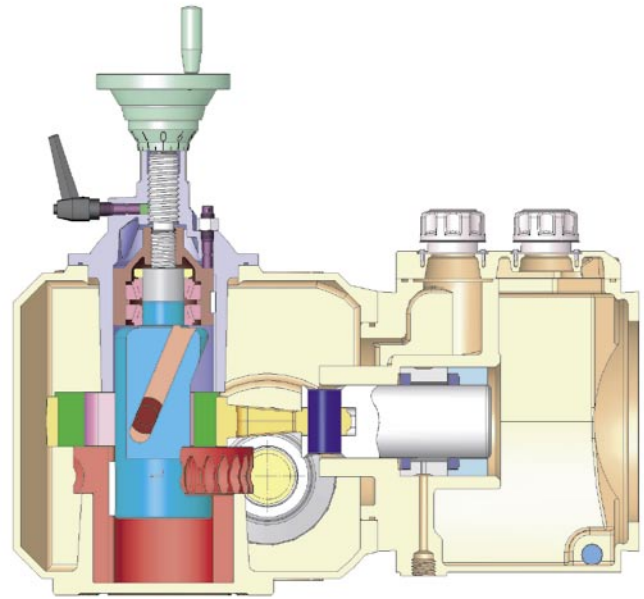
## Options

- Double diaphragm
- Diaphragm failure detection
- Cooling/heating jacket
- Food grade design
- Slurry configuration
- Spring loaded valves
- Double check valves
- Flat valves

## Principle



Stroke adjusted to 0%



Stroke adjusted to 100%

## Performance

- Conformity to API 675 for adjustable stroke version
- Conformity to API 674 for fixed stroke version
- In accordance with ATEX CE EX II 2G/D c T3 or T4 on request

### 316L stainless steel packed plunger liquid end ("N")

Ø Plunger (mm)	Swept volume (cm <sup>3</sup> )	Stroke speed max. (spm) Motor speed 1500 rpm	Flow rate max. (l/h)		Pressure max. (bar)	Connections
			10 bar	P. max.		
20	19,79	175	199	159	500	1/2" - VV1m
25	30,92	175	311	262	402	1/2" - VV1m
32	50,66	175	510	462	244	1" - VV1m
40	79,16	175	798	751	155	1" - VV1m
50	123,70	175	1246	1201	99	1" - VV1m
63	196,38	175	1979	1937	62	1 1/2" - VV1m
80	316,67	175	3192	3156	38	1 1/2" - VV1m
100	494,80	149	4246	4222	24	1 1/2" - VV1m
125	773,12	149	6635	6621	15	3" - VV3 - 150 lbs
145	1040,31	149	8928	8924	11	3" - VV3 - 150 lbs



## Metallic diaphragm liquid end ("M")

	Ø Plunger (mm)	Swept volume (cm <sup>3</sup> )	Ø Diaphragm (mm)	Stroke speed max. (spm) Motor speed 1500 rpm	Flow rate max. (l/h)		Pressure max. (bar)	Connections
					10 bar	P. max.		
Single diaphragm	16	12,66	162	175	122	86	500	1/2" - VV1m
	18	16,03	182	175	154	108	500	1" - VV1m
	20	19,79	212	175	191	134	500	1" - VV1m
Double diaphragm	16	12,66	162	175	122	80	350	1/2" - VV1m
	18	16,03	182	175	154	101	350	1" - VV1m
	20	19,79	212	175	191	126	350	1" - VV1m

## HPD diaphragm and metallic liquid end ("H")

Ø Plunger (mm)	Swept volume (cm <sup>3</sup> )	Ø Diaphragm (mm)	Stroke speed max. (spm) Motor speed 1500 rpm	Flow rate max. (l/h)		Pressure max. (bar)	Connections
				10 bar	P. max.		
25	30,92	106	149	262	155	300	1/2" - VV1m
32	50,66	166	149	430	383	87	1" - VV1m
32	50,66	168	175	505	378	248	1" - VV1m
40	79,16	166	149	672	599	87	1" - VV1m
40	79,16	168	175	789	694	159	1" - VV1m
50	123,70	166	149	1050	936	87	1" - VV1m
50	123,70	168	175	1233	1143	101	1 1/2" - VV1m
55	149,67	166	149	1271	1137	84	1" - VV1m
55	149,67	168	175	1493	1404	84	1 1/2" - VV1m
63	196,38	266	175	1958	1889	35	1 1/2" - VV1m
63	196,38	168	175	1958	1873	64	1 1/2" - VV1m
80	316,67	266	175	3158	3029	35	1 1/2" - VV1m
90	400,78	266	149	3403	3302	31	1 1/2" - VV1m
100	494,80	266	149	4202	4113	25	1 1/2" - VV1m
125	773,12	366	149	6427	6002	16	3" - VV3 - 150 lbs
145	1040,31	366	149	8649	8458	12	3" - VV3 - 150 lbs

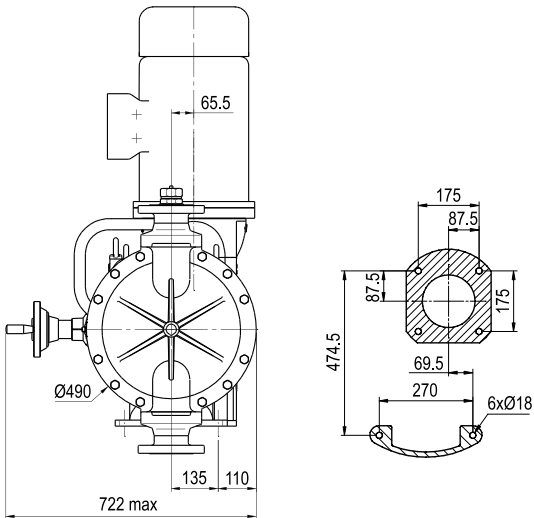
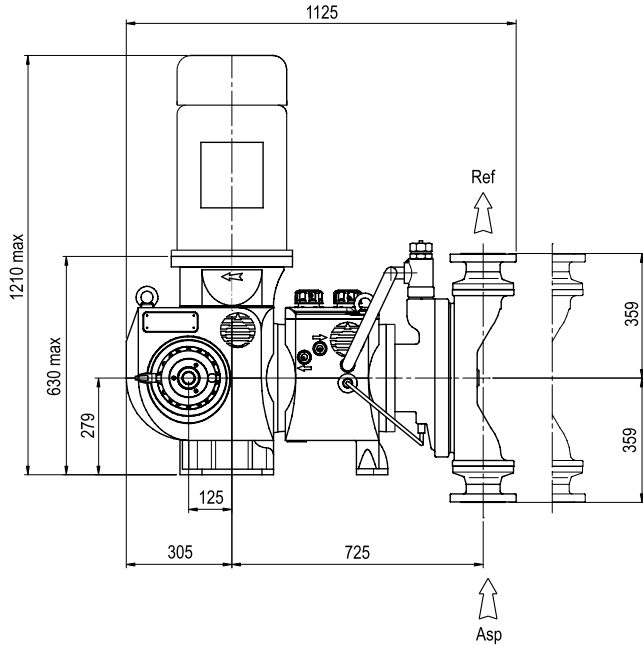
## HPD diaphragm and plastic liquid end ("P")

Ø Plunger (mm)	Swept volume (cm <sup>3</sup> )	Ø Diaphragm (mm)	Stroke speed max. (spm) Motor speed 1500 rpm	Flow rate max. (l/h) P. max.	Pressure max. (bar)	Connections
100	494,80	266	117	3299	10	1 1/2" - VV1f
125	773,12	366	117	5047	10	3" - VV3 - 150 lbs
145	1040,31	366	117	6791	10	3" - VV3 - 150 lbs

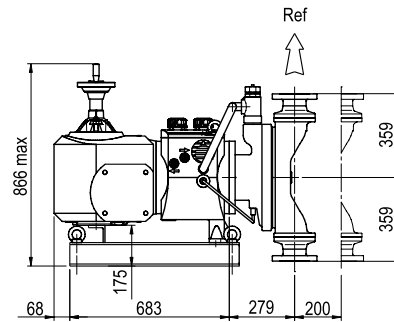
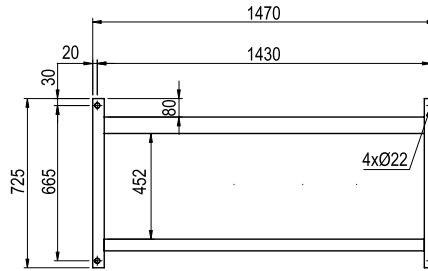
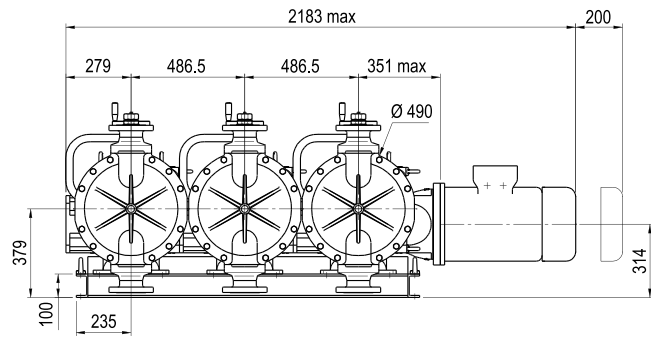
## General dimensions (in mm)

The general dimensions are given as an indication only.  
The dimensions given correspond to the maximum dimensions (largest liquid end, most powerful motor).

### Diaphragm liquid end simplex configuration



### Diaphragm liquid end triplex configuration



Caption: • Asp: suction  
• Ref: discharge  
↑ Asp

## Weight and packing

Version	Net Weight (*) kg	Gross Weight (*) kg	Packing (mm) (L x W x H)
PRIMEROYAL® N simplex	450	635	1380 x 880 x 1600

\*) Approximately



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