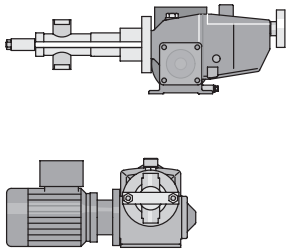
3.14 ProMinent® ORLITA® DR Plunger Metering Pumps

3.14.1 ORLITA® DR Valve-Free Plunger Metering Pump



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Valve-free metering plunger head. The valve-free plunger liquid end functions by means of the oscillating and rotating plunger action. The suction and discharge sides are opened and closed by the plunger itself. The pump therefore needs no valves and can be operated over a wide stroke rate range.

This principle enables precise metering of highly viscous liquids which may contain even large solids.

The pump head is made of stainless steel. Plungers and cylinders are given a wear-resistant surface finish.

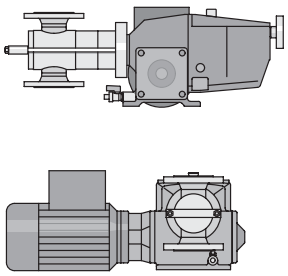
Depending on the application the pump head is also available in other high performance materials.

The clearance between the plunger and the cylinder, which is responsible for the seal, depends on the viscosity of the liquid.

The lantern on the rear head end can be used as a collector for leaked fluid or can be used to add flushing, lubrication or sealing agent. The lantern is sealed with elastomer sealing lips. The feed direction depends on the installation position of the plunger.

The backlash effect can be adjusted by turning the head around its longitudinal axis.

Pump type	Plunger Ø	Stroke Volume	Capacity (theo.)in l/h at strokes/min 50 Hz)			Max. pressure
	mm	cm³/ stroke	56	75	112	bar
DR 15/	5	0.29	1.0	1.3	2.0	100.0
	7	0.58	1.9	2.6	3.9	400.0
	12	1.70	5.7	7.6	11.4	159.0
	18	3.82	12.8	17.2	25.7	70.0
	25	7.36	24.7	33.1	49.5	36.0
	36	15.27	51.3	68.7	103.0	17.0
	50	29.45	99.0	133.0	198.0	9.0
	70	57.73	194.0	260.0	388.0	4.0



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Pump type	Plunger Ø	Stroke Volume	Capacity (theo.)in l/h at strokes/min 50 Hz				Max. pressure
	mm	cm³/ stroke	56	75	112	140	bar
DR 150/	12	3.62	12.2	16.3	24.3	30.4	400.0
	18	8.14	27.4	36.6	54.7	68.4	400.0
	25	15.71	52.8	71.0	105.6	131.9	250.0
	36	32.57	109.4	146.6	218.9	273.6	147.0
	50	62.83	211.1	282.7	422.2	527.8	76.0
	70	123.15	413.8	554.2	827.6	1,034.5	38.0
	90	203.58	684.0	916.1	1,368.0	1,710.0	23.0
	120	361.91	1,216.0	1,628.6	2,432.1	3,040.1	13.0
	140	492.60	1,655.1	2,216.7	3,310.3	4,137.9	9.0

Note: All performance specifications referred to 50 Hz motor frequency.

Other versions available on request.