

LEWA ecoflow®

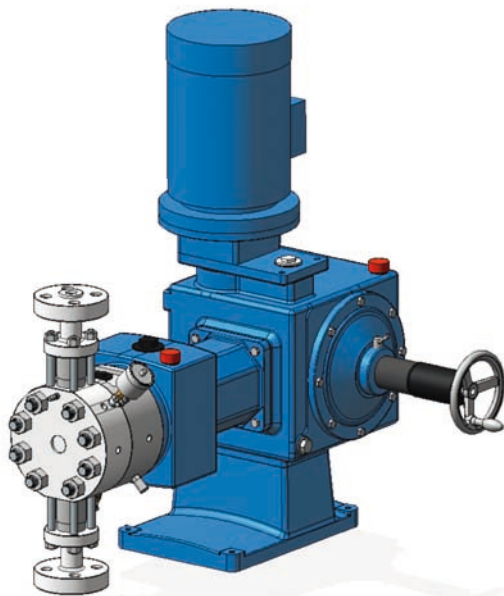
Variable eccentric pump drive

Type LDF

- Drive units
- Process pumps

Performance

Pressure	up to 400 bar
Flow rate	up to 3,9m³/h per pump head
Temperature	up to 150°C



Customer advantages

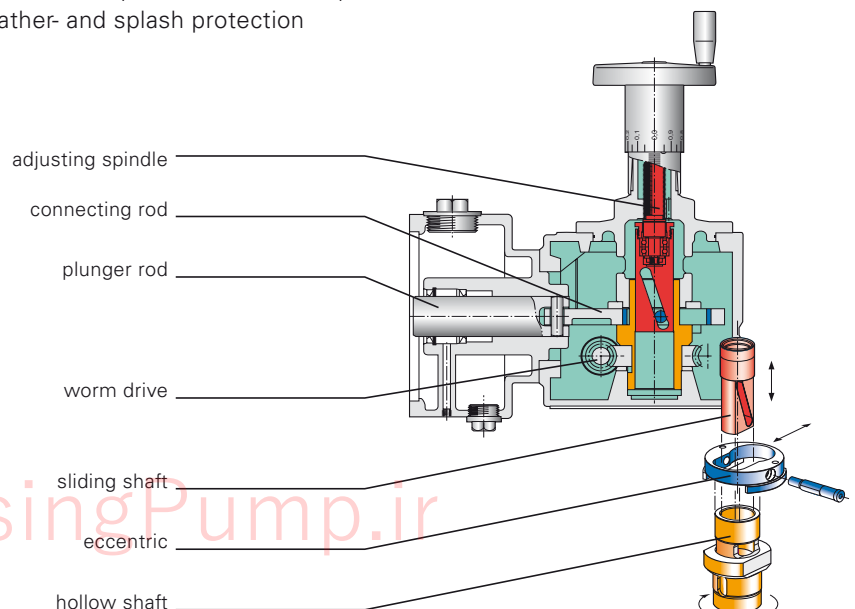
- **Rod thrust:** 24,5 kN
- **Stroke length:** 55 mm
- **Stroke adjustment:** available with fixed stroke length or with stroke length adjustment. Setting of stroke length is carried out manually or electrically
- **Linear stroke adjustment** in steps of 0,05 mm via hand wheel while pump is stopped or in operation. Proven variable eccentric drive principle, that means stroke length is adjusted where it arises: at the eccentric
- **Multiplex drive units** also in different frame sizes with motor mounted horizontally. Common oil bath without radial shaft seal ring between the drive units (thus less wear parts)
- **Harmonic plunger motion** also at partial stroke
- **API 675 specification** is met
- **Differing stroke rates** make it possible to meet requirements for different fluids and process conditions
- **Long life** due to solid construction, best materials, oil bath lubrication, weather- and splash protection

■ Simple operation, easy maintenance

- **Pump head types:** initially only diaphragm pump heads can be mounted
- **Drive:** three phase motor, frequency inverter possible
- **Attachable instruments:** contactor

Method of operation

The drive shaft turns the **eccentric** via the **worm gear** and the **hollow shaft**. The **connecting rod** converts the rotary motion of the eccentric into a reciprocating motion of the **plunger rod**. The stroke length for the displacer movement is set (with the pump stopped or in operation) through radial shifting of the **eccentric**. For this the **sliding shaft** is axially shifted via the **adjusting spindle**. The axial movement of the sliding shaft is converted into a radial movement of the **eccentric** via the skew-slotted groove in the **hollow shaft**.



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Performance data

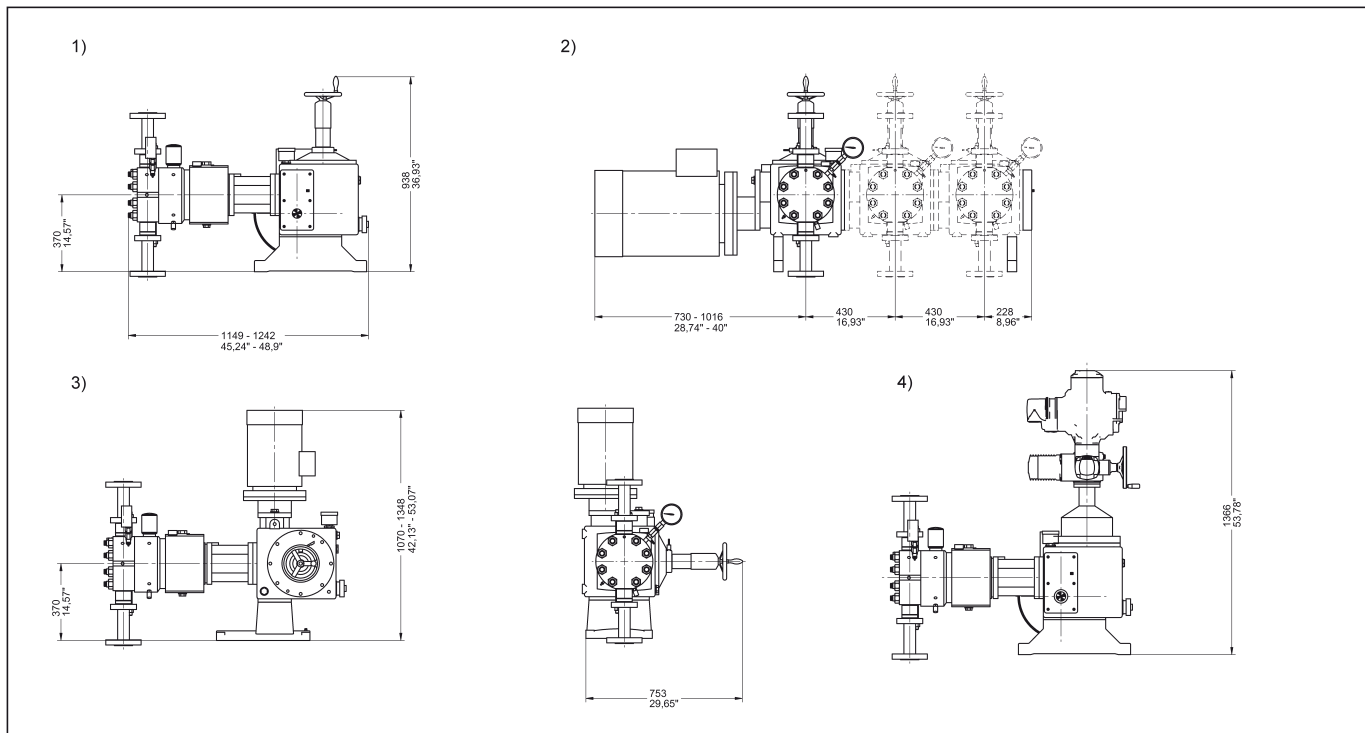
Standard plunger ø [mm]	Q _{theor.} [l/h] ¹⁾ Calc. flow rate per pump head at max. stroke length and stroke frequency n [min ⁻¹]					Permissible operating pressure of standard pump heads [barg]						
	72	113	141	170	225	Type	Diaphragm pump heads					
						Model ³⁾	M900					
						Material ²⁾	3					
25	116,6	183,0	228,4	275,4	364,5		497					
27	136,0	213,5	266,4	321,2	425,1		425					
30	167,9	263,6	328,9	396,5	524,8		344					
34	215,7	338,6	422,5	509,3	674,1		267					
38	269,5	422,9	527,7	636,2	842,1		214					
42	329,2	516,6	644,6	777,2	1029		174					
46	394,9	619,7	773,3	932,3	1234		145					
52	504,6	791,9	988,2	1191	1577		113					
58	627,8	985,2	1229	1482	1962		90,2					
66	812,9	1276	1592	1919	2540		69,1					
74	1022	1604	2001	2413	3193		54,5					
82	1255	1969	2457	2963	3921		43,9					

1) Q_{theor.} from stroke volume x stroke frequency. Q_{eff.} (= Q_{theor.} x η_F) is stated in technical data sheet. For multiplex pumps, determine total metered flow by multiplying by the number of pump heads

2) 2 = 13 % Cr steel; 3 = stainless steel CrNiMo 18/10/2; other materials, e.g. Hastelloy to special order

3) Standard pump head connections depending on pump head size: internal thread to DIN or NPT resp. flanges to DIN or ANSI

Dimensions



Drive units

- 1) Simplex drive unit with manual stroke adjustment/motor mounted horizontally
- 2) Multiplex drive unit with manual stroke adjustment/motor mounted horizontally
- 3) Simplex drive unit with manual stroke adjustment/motor mounted vertically
- 4) Simplex drive unit with electric stroke adjustment/motor mounted horizontally

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