

Hydraulic Diaphragm Metering Pump Orlita® Evolution 3

Maximum process reliability and flexibility.



Capacity range of single pump: 21 – 1,330 l/h, 400 – 18 bar

The Orlita® Evolution hydraulic diaphragm metering pump range of EF1a, EF2a, EF3a and EF4a form an integrated product range with stroke lengths of 15 to 40 mm. This covers the capacity range of

3 to 7,400 l/h at 400 – 10 bar. A wide range of drive versions is available, including some with ATEX certification for use in Zone 1 or Zone 2 areas at risk from explosion. The Orlita® Evolution product range is designed to comply with API 675.

Your benefits

Maximum process reliability:

- PTFE multi-layer diaphragm with integral diaphragm rupture warning system
- Integral hydraulic relief valve
- The new diaphragm layer control protects against impermissible operating statuses (e.g. no damage in the event of a blockage on the suction or discharge side)
- Continuous bleeding of the oil chamber ensures reliable operation

Excellent flexibility:

- The modular construction with single and multiple pump versions permits a wide range of applications. In multiple pump systems up to 5 metering units can be combined, including units with different pump capacities
- 7 different gear ratios are available; in single pumps the drive arrangement can be either vertical or horizontal
- Customised designs are available on request

Field of application

- Oil and gas industry
- Volume-proportional metering of chemicals/additives in the treatment of boiler feed water
- Metering of reactants and catalysts in the chemical industry
- Level-dependent metering of auxiliary agents in industrial production engineering, for instance hot wax metering in the production of adhesive strips

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Technical data for EF3a single pump 50 Hz SST

Plunger Ø mm	Stroke volume ml/stroke	Theoretical pump capacity in l/h at strokes/min (50 Hz)							Max. pressure bar	Efficiency at 100% press.	Efficiency at 50% press.	Standard type of valve
		73 [2] l/h	97 [3] l/h	116 [4] l/h	145 [5] l/h	165 [6] l/h	181 [7] l/h	201 [8] l/h				
17	5.67	24	32	39	49	56	61	68	352	0.68	0.83	DN 6
22	9.50	41	55	66	82	93	103	114	210	0.87	0.93	DN 6
25	12.27	53	71	85	106	121	133	148	163	0.86	0.92	DN 10
30	17.67	77	102	123	174	192	192	213	113	0.92	0.95	DN 10
34	22.70	99	132	158	197	225	247	274	88	0.90	0.94	DN 16
38	28.35	123	164	197	247	280	308	343	71	0.93	0.95	DN 16
44	38.01	165	220	265	331	376	413	459	53	0.95	0.97	DN 20
50	49.09	214	285	342	427	485	534	593	41	0.97	0.98	DN 20
58	66.05	287	383	460	575	653	718	798	30	0.98	0.99	DN 20
63	77.93	341	454	542	678	772	846	940	26	0.97	0.98	DN 25
70	96.21	419	558	670	837	951	1,046	1,163	21	0.98	0.98	DN 25
75	110.45	480	640	768	960	1,091	1,201	1,334	18	0.98	0.98	DN 25

Technical data for EF3a single pump 60 Hz SST

Plunger Ø mm	Stroke volume ml/stroke	Theoretical pump capacity in l/h at strokes/min (60 Hz)					Max. pressure bar	Efficiency at 100% press.	Efficiency at 50% press.	Standard type of valve
		88 [2] l/h	117 [3] l/h	140 [4] l/h	175 [5] l/h	199 [6] l/h				
17	5.67	29	39	47	59	67	352	0.68	0.83	DN 6
22	9.50	50	67	80	100	113	210	0.87	0.93	DN 6
25	12.27	64	86	103	129	146	163	0.86	0.92	DN 10
30	17.67	93	124	148	186	211	113	0.92	0.95	DN 10
34	22.70	120	159	191	238	271	88	0.90	0.94	DN 16
38	28.35	149	198	238	298	338	71	0.93	0.95	DN 16
44	38.01	200	266	319	399	454	53	0.95	0.97	DN 20
50	49.09	258	344	412	515	585	41	0.97	0.98	DN 20
58	66.05	347	462	555	694	788	30	0.98	0.99	DN 20
63	77.93	411	547	655	818	930	26	0.97	0.98	DN 25
70	96.21	505	673	808	1,010	1,148	21	0.98	0.98	DN 25
75	110.45	580	773	927	1,159	1,317	18	0.98	0.98	DN 25

Note: Abridged presentation of our complete product range. Other piston diameters (14 - 75 mm) on request

Materials in Contact With the Medium

Dosing head complete

Dosing head	Diaphragm retaining screw	Diaphragm
Stainless steel 1.4404	Stainless steel 1.4462	PTFE multi-layer diaphragm

Ball valve DN 6 – DN 10

	Suction/pressure connector	Valve/head seal	Valve ball	Valve seat	Valve housing	Clamp ring
DN 6 (double ball)	Stainless steel 1.4404	Stainless steel 1.4404	SIN ceramic	Stainless steel 1.4404	Stainless steel 1.4404	Hastelloy C4
DN 10 (single ball)	Stainless steel 1.4404	Stainless steel 1.4404	Al ₂ O ₃ ceramic	Stainless steel 1.4404	Stainless steel 1.4404	Hastelloy C4

Plate valve DN 16 – DN 25

	Suction/pressure connector	Valve/head seal	Valve plate	Valve seat	Valve housing
DN 16/DN 25	Stainless steel 1.4404	Stainless steel 1.4571	Stainless steel 1.4462	Stainless steel 1.4404	Stainless steel 1.4404

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