Hydraulic Diaphragm Metering Pump Orlita® Evolution 2

Maximum process reliability and flexibility

Capacity range of single pump: 6 – 900 l/h; 400 – 11 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 position control protects against operating faults (e. g. no damage in the event of a blockage on the suction or discharge side)
- Metering reproducibility is better than ± 1% within the 10 – 100% stroke length range under defined conditions and with correct installation
- Continuous bleeding of the hydraulic oil chamber ensures reliable operation

Excellent flexibility:

- The modular compact construction with single and multiple pump versions allows for a wide range of applications, also for multiple pump systems, whereas up to 5 metering units, even with different pump capacities, can be combined.
- 7 different gear ratios are available
- Power end configuration ideal for installation in any position (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

Hydraulic Diaphragm Metering Pump Orlita®
Evolution 2

Maximum process reliability and flexibility

ProMinent®

Technical data for EF2a single pump 50 Hz SST

Plunger Ø	Stroke volume	Theoretical pump capacity in l/h at strokes/min (50 Hz)							Max. pressure	Efficiency at	Efficiency at	Standard type of valve
		73 [2]	97 [3]	116 [4]	145 [5]	165 [6]	181 [7]	201 [8]				
mm	ml/stroke	l/h	l/h	l/h	l/h	l/h	l/h	l/h	bar	100% pressure	50% pressure	
12	1.70	7	10	12	15	17	18	21	400	0.69	0.82	DN 3
14	2.31	10	13	16	20	22	25	28	351	0.35	0.67	DN 6
17	3.40	15	20	24	30	34	37	41	238	0.60	0.79	DN 6
21	5.20	23	30	36	45	51	56	53	156	0.75	0.85	DN 10
25	7.36	32	43	51	64	73	80	89	110	0.83	0.89	DN 10
29	9.91	43	58	69	86	98	108	120	82	0.90	0.93	DN 10
32	12.06	53	70	84	105	119	131	145	67	0.76	0.87	DN 10
38	17.01	75	99	118	148	168	185	205	48	0.87	0.92	DN 10
44	22.81	100	133	159	198	226	248	275	36	0.90	0.94	DN 16
50	29.45	129	171	205	256	292	320	355	28	0.91	0.95	DN 16
58	39.63	174	231	276	345	392	430	478	20	0.93	0.96	DN 16
70	57.73	253	336	402	502	572	627	696	14	0.94	0.96	DN 20

Technical data for EF2a single pump 60 Hz SST

Plunger Ø	Stroke volume	Theoretical pump capacity in l/h at strokes/min (50 Hz)					Max. pressure	Efficiency at	Efficiency at	Standard type of valve
		88 [2]	117 [3]	140 [4]	175 [5]	199 [6]				
mm	ml/ stroke	l/h	l/h	l/h	l/h	l/h	bar	100% pressure	50% pressure	
12	1.70	9	12	14	18	20	400	0.69	0.82	DN 3
14	2.31	12	16	19	24	28	351	0.35	0.67	DN 6
17	3.40	18	24	29	36	41	238	0.60	0.79	DN 6
21	5.20	27	37	44	55	62	156	0.75	0.85	DN 10
25	7.36	39	52	62	77	88	110	0.83	0.89	DN 10
29	9.91	52	70	83	104	118	82	0.90	0.93	DN 10
32	12.06	64	85	101	127	144	67	0.76	0.87	DN 10
38	17.01	90	119	143	179	203	48	0.87	0.92	DN 10
44	22.81	120	160	192	240	272	36	0.90	0.94	DN 16
50	29.45	155	207	247	309	352	28	0.91	0.95	DN 16
58	39.63	209	278	333	416	473	20	0.93	0.96	DN 16
70	57.73	305	405	485	606	689	14	0.94	0.96	DN 20

Hydraulic Diaphragm Metering Pump Orlita ®
Evolution 2

Maximum process reliability and flexibility

ProMinent®

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 3 – DN 10

	Suction/ pressure connector	Valve/head seal	Valve ball	Valve seat	Valve housing	Clamp ring
DN 3 (double ball)	Stainless steel 1.4404	Stainless steel 1.4404	Al_2O_3 ceramic	Stainless steel 1.4404	Stainless steel 1.4404	Hastelloy C4
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_2O_3 ceramic	Stainless steel 1.4404	Stainless steel 1.4404	Hastelloy C4

Plate valve DN 16 - DN 20

	Suction/pressure connector	Valve/head seal	Valve plate	Valve seat	Valve housing
DN 16/DN 20	Stainless steel 1.4404	Stainless steel 1.4571	Stainless steel 1.4462	Stainless steel 1.4404	Stainless steel 1.4404

- **SYDNEY OFFICE**
  Unit 4, 4 Narabang Way,
  BELROSE NSW 2085
  P 02 9450 0995
  sales@prominentfluid.com.au
- **QUEENSLAND OFFICE**
  Unit 1, 68 Murdoch Circuit,
  ACACIA RIDGE QLD 4110
  P 07 3213 1900
  pfcqld@prominentfluid.com.au
- **VICTORIA OFFICE**
  Unit 1/21-22 National Drive
  HALLAM VIC 3803
  P 03 8795 7430
  pfcvic@prominentfluid.com.au
- **WESTERN AUSTRALIA OFFICE**
  2/158 Francisco Street
  BELMONT WA 6104
  pfcwa@prominentfluid.com.au