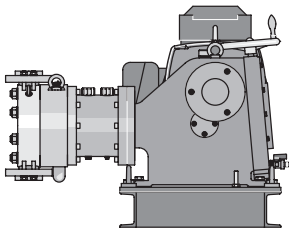


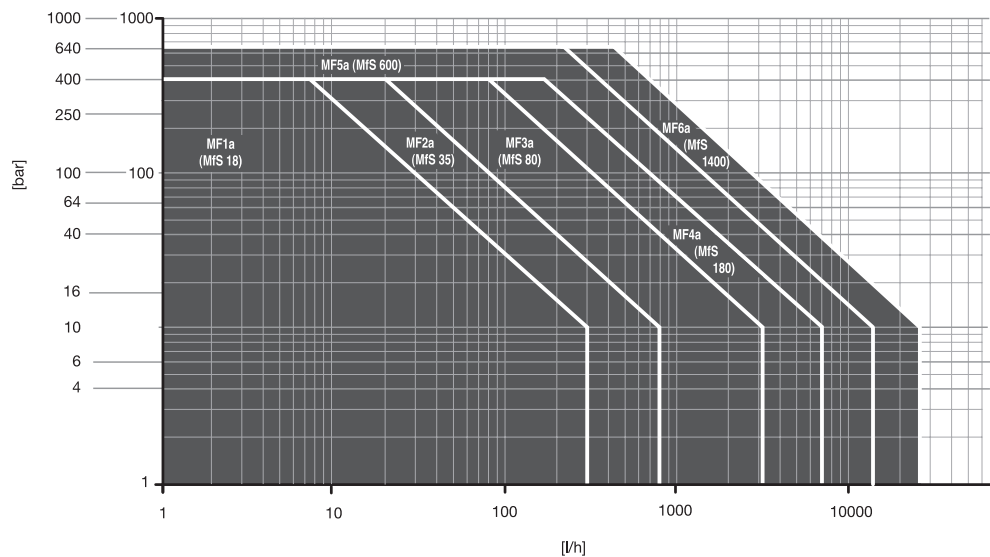
## 3.7 ORLITA® MF Hydraulic Diaphragm Metering Pumps

### 3.7.1 ORLITA® MF Hydraulic Diaphragm Pump



pk\_2\_121  
MFS 600-75

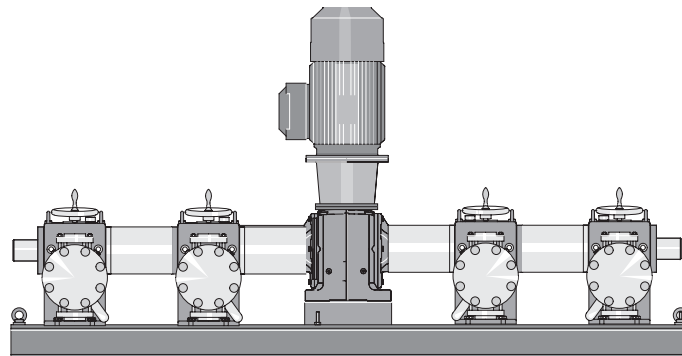
Dosing pumps in the ORLITA® MF product range are modular in construction and basically comprise drive mechanism, crank and liquid end as separate functional groups. The hydraulic diaphragm liquid end is equipped with a PTFE dual membrane system with integrated rupture indicator. An integrated pressure relief valve protects the pump from overload. Reproducible metering accuracy under defined conditions and adjusted installation is  $\pm 0.5\%$  in the 10-100% stroke length adjustment range.



pk\_2\_128  
Pressure [bar] as a function of metered quantity [l/h] at 50 Hz

#### Multiplexed Metering Pumps

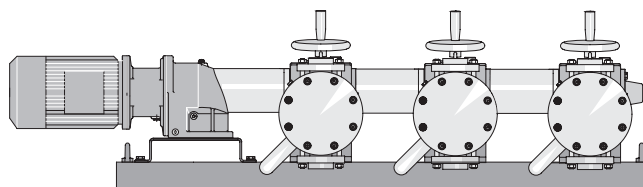
The ORLITA® MF range's modular construction enables variable combination of drives, motors and dosing heads e.g. quadruple MF dosing pumps with central drive.



pk\_2\_128  
Orlita multiplexed pump

#### Triplex Metering Pumps

In triplex dosing pumps, the pressure stroke of each dosing head occurs through 120° of crank travel. This results in a dosing flow free of pulsation without the use of elaborate pulsation dampers. This design of process diaphragm pump is preferred equipment in the chemical and petrochemical industries.



pk\_2\_129  
Triplex pump

### 3.7 ORLITA® MF Hydraulic Diaphragm Metering Pumps

#### 3.7.2 ORLITA® MfS 18 (MF1a) Hydraulic Diaphragm Pump

Technical Data MfS 18 Single Pump 50 Hz

Plunger Ø mm	Stroke Volume cm³/stroke	Pump capacity Q <sub>th</sub> in l/h per head at stroke rate n in 1/min Identcode specification: [3 to 7]					Max. pressure p bar	Efficiency WG at		Standard type of valve	Standard connection, Suction/Discharge side DIN/ISO	
		70 [3]	88 [4]	108 [5]	140 [6]	200 [7]		100 % pressure	50 % pressure			
7	0.58	2.4	3.0	3.7	4.8	6.9	400.0	0.50	0.70	DKu* DN 3	G1/4 internal	1/4" FNPT
8	0.75	3.2	4.0	4.9	6.3	9.0	348.0	0.55	0.72	DKu* DN 3	G1/4 internal	1/4" FNPT
10	1.18	4.9	6.2	7.6	9.9	14.1	222.0	0.67	0.79	Ke*** DN 6	G3/8 internal	1/4" FNPT
12	1.70	7.1	9.0	11.0	14.3	20.4	154.0	0.84	0.88	Ke*** DN 6	G3/8 internal	1/4" FNPT
16	3.02	12.7	15.9	19.5	25.3	36.2	87.0	0.86	0.88	Ke*** DN 6	G3/8 internal	1/4" FNPT
20	4.71	19.8	24.9	30.5	39.6	56.5	55.0	0.88	0.89	Ke*** DN 6	G3/8 internal	1/4" FNPT
22	5.70	23.9	30.1	36.9	47.9	68.4	46.0	0.88	0.89	Ke*** DN 10/ DN 6	G3/8 internal	1/2"x1/4" FNPT
25	7.36	30.9	38.9	47.7	61.9	88.4	35.0	0.89	0.89	Ke*** DN 10	G3/8 internal	1/2" FNPT
27	8.59	36.1	45.3	55.7	72.1	103.1	30.0	0.89	0.89	Ke*** DN 10	G3/8 internal	1/2" FNPT
30	10.60	44.5	56.0	68.7	89.1	127.2	24.0	0.89	0.89	Ke*** DN 10	DN 10 PN 40	1/2" #300RF
36	15.27	64.1	80.6	98.9	128.3	183.2	17.0	0.89	0.89	Ke*** DN 16	DN 15 PN 40	3/4" #150RF
40	18.85	79.2	99.5	122.1	158.3	226.2	13.0	0.89	0.89	Ke*** DN 16	DN 15 PN 40	3/4" #150RF
44	22.81	95.8	120.4	147.8	191.6	273.7	11.0	0.89	0.90	Ke*** DN 16	DN 15 PN 40	3/4" #150RF
50	29.45	123.7	155.5	190.9	247.4	353.4	8.0	0.89	0.90	Ke*** DN 16	DN 15 PN 40	3/4" #150RF
65	49.77	209.1	262.8	322.5	418.1	597.3	5.0	0.90	0.90	Ke*** DN 16/ DN 25	DN 15/25 PN 40	3/4"x1" #150RF

Technical Data MfS 18 Single Pump 60 Hz

Plunger Ø mm	Stroke Volume cm³/stroke	Pump capacity Q <sub>th</sub> in l/h per head at stroke rate n in 1/min Identcode specification: [2 to 6]					Max. pressure bar	Efficiency WG at		Standard type of valve	Standard connection, Suction/Discharge side DIN/ISO	
		67 [2]	87 [3]	106 [4]	130 [5]	168 [6]		100 % pressure	50 % pressure			
7	0.58	2.3	3.0	3.7	4.5	5.8	400.0	0.50	0.70	DKu* DN 3	G1/4 internal	1/4" FNPT
8	0.75	3.0	3.9	4.8	5.9	7.6	348.0	0.55	0.72	DKu* DN 3	G1/4 internal	1/4" FNPT
10	1.18	4.7	6.1	7.5	9.2	11.9	222.0	0.67	0.79	Ke*** DN 6	G3/8 internal	1/4" FNPT
12	1.70	6.8	8.9	10.8	13.2	17.1	154.0	0.84	0.88	Ke*** DN 6	G3/8 internal	1/4" FNPT
16	3.02	12.1	15.7	19.2	23.5	30.4	87.0	0.86	0.88	Ke*** DN 6	G3/8 internal	1/4" FNPT
20	4.71	18.9	24.6	30.0	36.8	47.5	55.0	0.88	0.89	Ke*** DN 6	G3/8 internal	1/4" FNPT
22	5.70	22.9	29.8	36.3	44.5	57.5	46.0	0.88	0.89	Ke*** DN 10/ DN 6	G3/8 internal	1/2"x1/4" FNPT
25	7.36	29.6	38.4	46.8	57.4	74.2	35.0	0.89	0.89	Ke*** DN 10	G3/8 internal	1/2" FNPT
27	8.59	34.5	44.8	54.6	67.0	86.6	30.0	0.89	0.89	Ke*** DN 10	G3/8 internal	1/2" FNPT
30	10.60	42.6	55.3	67.4	82.7	106.9	24.0	0.89	0.89	Ke*** DN 10	DN 10 PN 40	1/2" #300RF
36	15.27	61.4	79.7	97.1	119.1	153.9	17.0	0.89	0.89	Ke*** DN 16	DN 15 PN 40	3/4" #150RF
40	18.85	75.8	98.4	119.9	147.0	190.0	13.0	0.89	0.89	Ke*** DN 16	DN 15 PN 40	3/4" #150RF
44	22.81	91.7	119.1	145.1	177.9	229.9	11.0	0.89	0.90	Ke*** DN 16	DN 15 PN 40	3/4" #150RF
50	29.45	118.4	153.7	187.3	229.7	296.9	8.0	0.89	0.90	Ke*** DN 16	DN 15 PN 40	3/4" #150RF
65	49.77	200.1	259.8	316.6	388.2	501.7	5.0	0.90	0.90	Ke*** DN 16/ DN 25	DN 15/25 PN 40	3/4"x1" #150RF

\* Double ball

\*\*\* Cone

- Note:**
- Further variants on request
  - In layouts conforming to API a power reserve of at least 10% must be allowed for
  - All hydraulic performance data are based on water at 20 °C