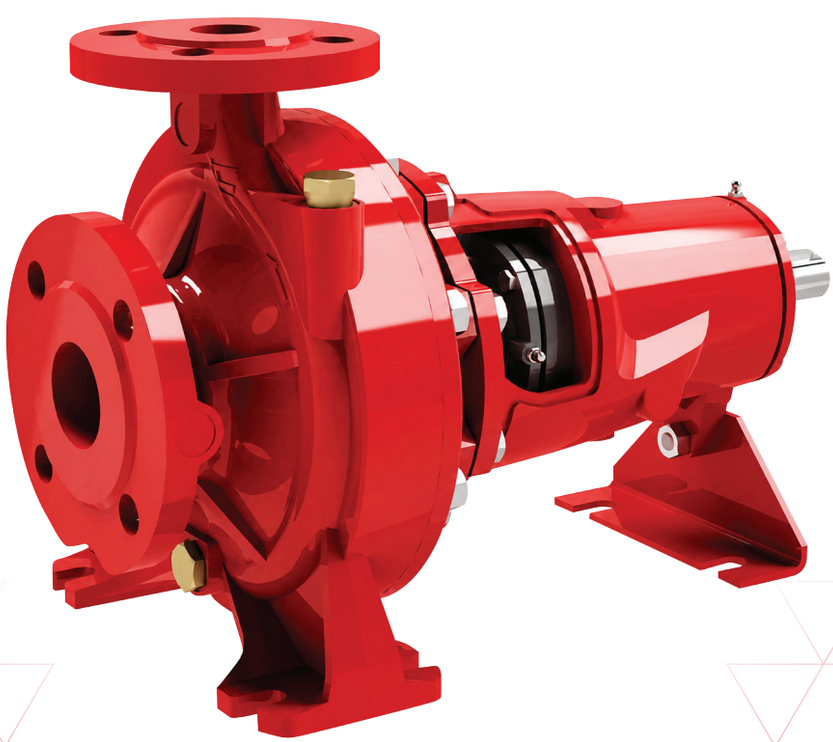
METTA

MF

END-SUCTION
CENTRIFUGAL PUMPS
IN COMPLIANCE WITH STANDARDS
EN 12845 &
EN 12259-12



PRODUCT TECHNICAL GUIDE

MF – CENTRIFUGAL PUMPS

Construction

• End-suction centrifugal pumps compliant with EN 733, EN 12845 and EN 12259-12 standards.
• Back Pull-Out construction, for simple and quick dismantling and reassembly.
• Connections: PN 10-16 flanges EN 1092-2 (PN 10 for DN 200).

Shaft sealing

• Standardized mechanical seal in accordance with ISO 3069.

Applications

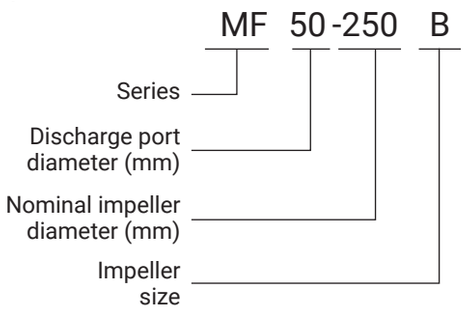
• For clean liquids without solids, not chemically aggressive to pump materials (solids content up to 0.2%)
• For fire protection applications. EN 12845, EN 12259-12.

Operating Conditions

• Liquid temperature from -10 °C to +90 °C.
• Ambient temperature up to 40 °C.
• Total suction lift up to 7 m.
• Maximum permissible working pressure up to 16 bar (10 bar for NF 40-250; NF 100-250).

Type key

Example: MF 50-250B

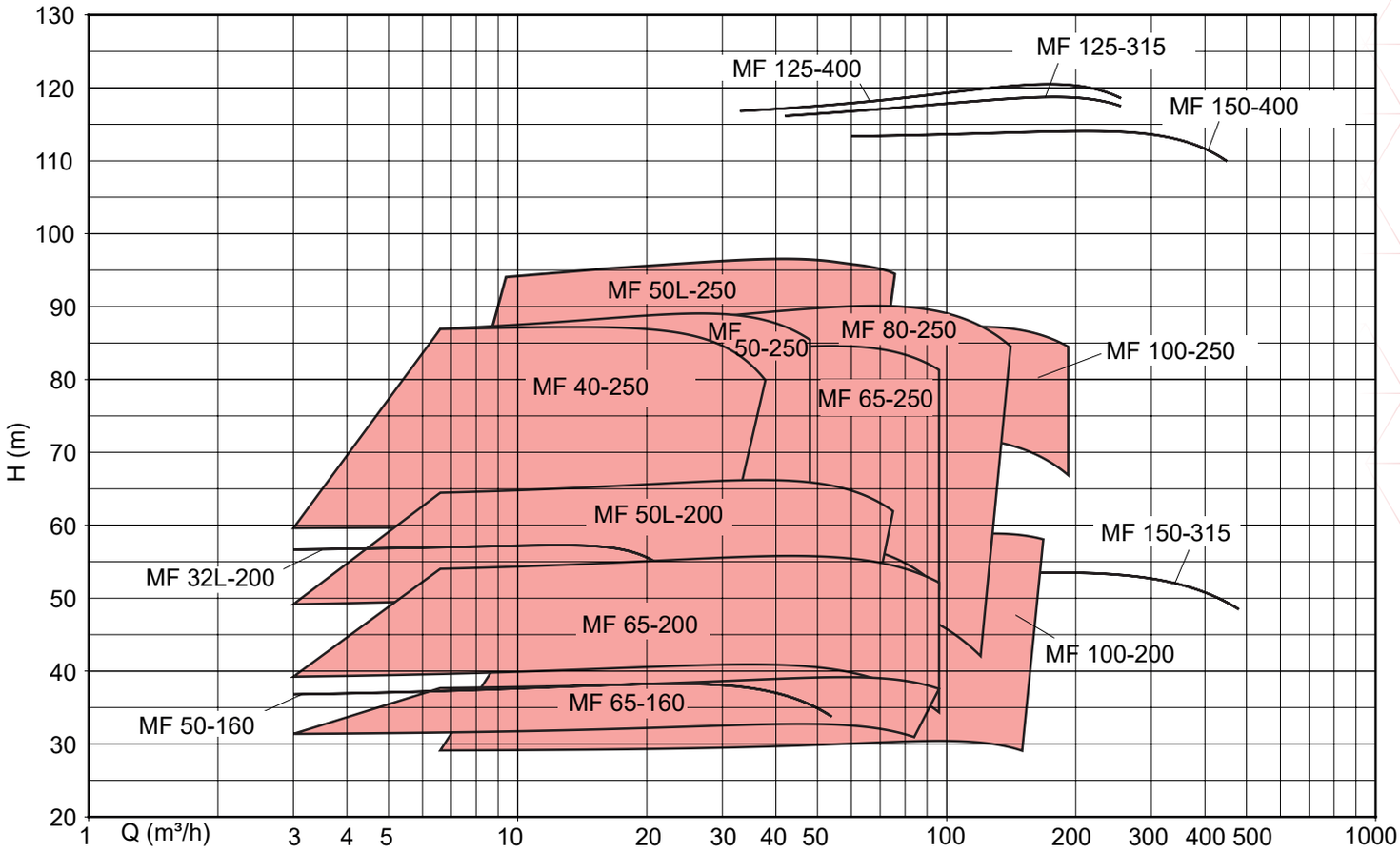


MAXIMUM ROTATION SPEED

TYPE	RPM
MF 32L-200A	2900
MF 40-250C	2900
MF 40-250B	2900
MF 40-250A	2900
MF 50-160A	2900
MF 50L-200C	2900
MF 50L-200B	2900
MF 50L-200A	2900
MF 50-250C	2900
MF 50-250B	2900
MF 50-250A	2900
MF 50-250S	2900
MF 50L-250C	2900
MF 50L-250B	2900
MF 50L-250A	2900
MF 65-160B	2900
MF 65-160A	2900
MF 65-200C	2900
MF 65-200B	2900
MF 65-200A	2900
MF 65-250C	2900
MF 65-250B	2900
MF 65-250A	2900
MF 80-250E	2900
MF 80-250D	2900
MF 80-250C	2900
MF 80-250B	2900
MF 80-250A	2900
MF 100-200E	2900
MF 100-200D	2900
MF 100-200B	2900
MF 100-200A	2900
MF 100-250B	2900
MF 100-250A	2900
MF 125-315A	2640
MF 125-400A	2103
MF 150-315S	1840
MF 150-400S	2045

MATERIALS

Components	Materials
Pump casing	Cast Iron GJL 250 EN 1561 (PN 10)
	Cast Iron GJS 400-15 EN 1563 (PN 16)
Casing cover	Cast Iron GJL 200 EN 1561
Wear Ring	Bronze CC493K EN 1982
Impeller (MF 32–MF 80)	Stainless Steel 1.4408 EN 10088 (AISI 316)
Impeller (MF 100–MF 150)	Bronze CC480K EN 1982
Shaft	Stainless Steel 1.4401 EN 10088 (AISI 316)
Shaft sealing	Carbon – Ceramic – NBR

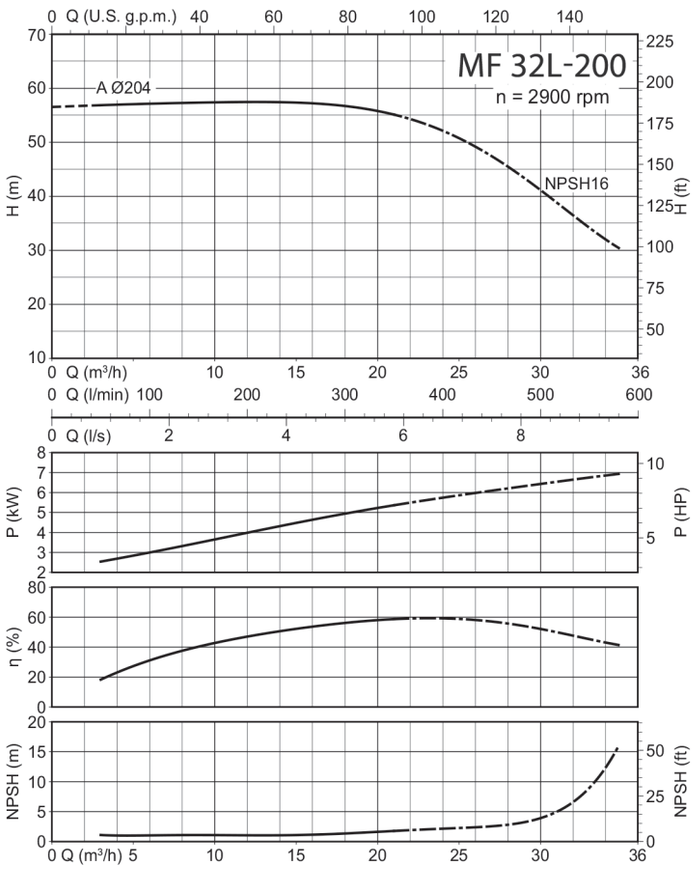

H (m)
Q (m³/h)
130
120
110
100
90
80
70
60
50
40
30
20
1
3
4
5
10
20
30
40
50
100
200
300
400
500
1000
MF 125-315
MF 125-400
MF 150-400
MF 50L-250
MF 50-250
MF 80-250
MF 100-250
MF 40-250
MF 65-250
MF 50L-200
MF 150-315
MF 32L-200
MF 65-200
MF 100-200
MF 65-160
MF 50-160

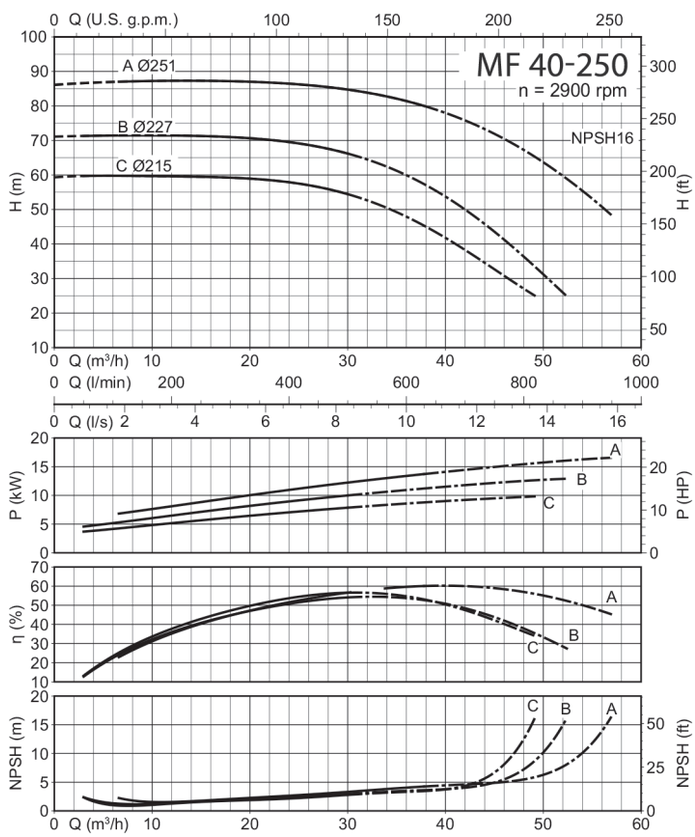
Performance Data

Performance in Accordance with Standard EN ISO 9906:2012

Type	RPM	kW	HP	Ø (mm)	0 l/min	50	110	160	180	200	220	250	280	315	350
					0 m³/h	3	6.6	9.6	10.8	12	13.2	15	16.8	18.9	21
MF 32L-200A	2900	7.5	10	204	56.3	56.7	57	57.2	57.2	57.3	57.3	57.1	56.9	56.2	54.9

Type	RPM	kW	HP	Ø (mm)	0 l/min	50	110	160	180	200	220	250	280	315	350	400	450	500	550	630
					0 m³/h	3	6.6	9.6	10.8	12	13.2	15	16.8	18.9	21	24	27	30	33	37.8
MF 40-250C	2900	11	15	215	59.2	59.6	59.7	59.6	59.5	59.5	59.5	59.4	59.2	59	58.6	57.8	56.4	54.3	-	-
MF 40-250B	2900	15	20	227	71	71.2	71.3	71.4	71.3	71.3	71.3	71.2	71	70.7	70.3	69.4	68.1	66.1	-	-
MF 40-250A	2900	18.5	25	251	86	-	86.9	87.1	87.1	87.2	87.2	87.2	87.1	87	86.8	86.3	85.6	84.6	83.2	79.9

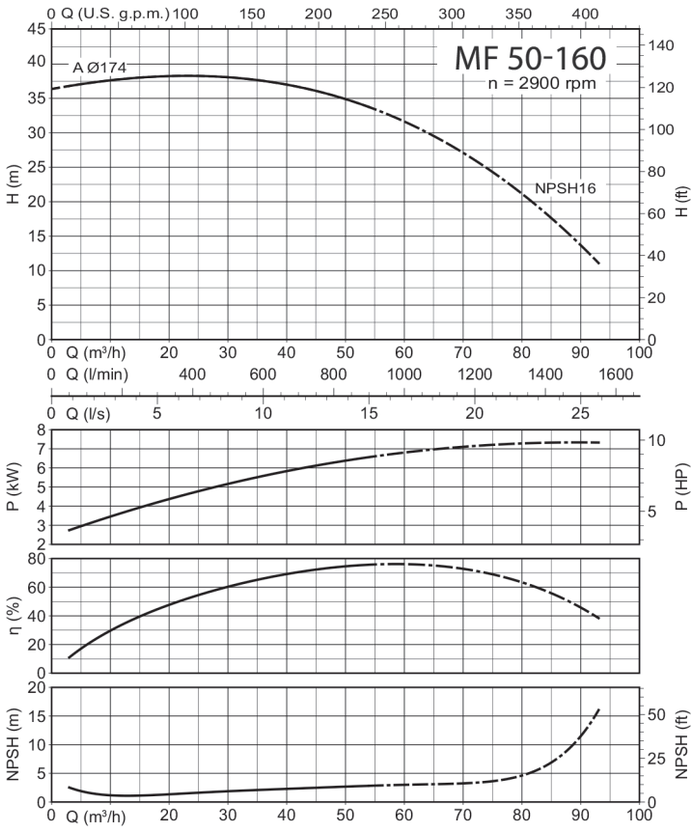


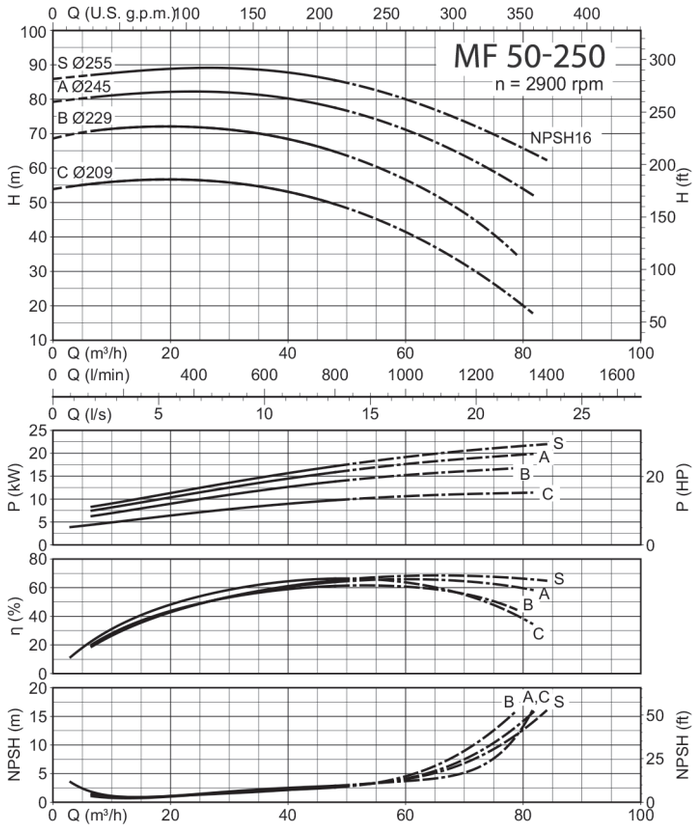


NPSH16r

Performance data valid for liquids with density ρ = 1 kg/dm³ and kinematic viscosity v = 1mm²/sec.

Type	RPM	kW	HP	Ø (mm)	0 l/min	50	110	160	220	280	350	400	450	500	550	630	700	800	900
					0 m³/h	3	6.6	9.6	13.2	16.8	21	24	27	30	33	37.8	42	48	54
MF 50-160A	2900	7.5	10	174	36.4	36.8	37.3	37.6	37.9	38.1	38.3	38.3	38.2	38.1	37.8	37.3	36.7	35.4	33.7
MF 50-250C	2900	11	15	209	53.8	54.6	55.3	55.9	56.3	56.6	56.6	56.5	56.2	55.7	55.1	53.8	52.3	49.4	-
MF 50-250B	2900	18.5	25	229	68.5	-	70.7	71.3	71.7	72	72	71.9	71.6	71.1	70.5	69.1	67.6	64.7	-
MF 50-250A	2900	22	30	245	79.2	-	80.5	81	81.5	81.9	82.1	82.2	82.1	81.9	81.5	80.7	79.6	77.5	-
MF 50-250S	2900	22	30	255	85.8	-	87	87.5	88	88.5	88.8	89	89.1	89	88.8	88.1	87.2	85.4	-

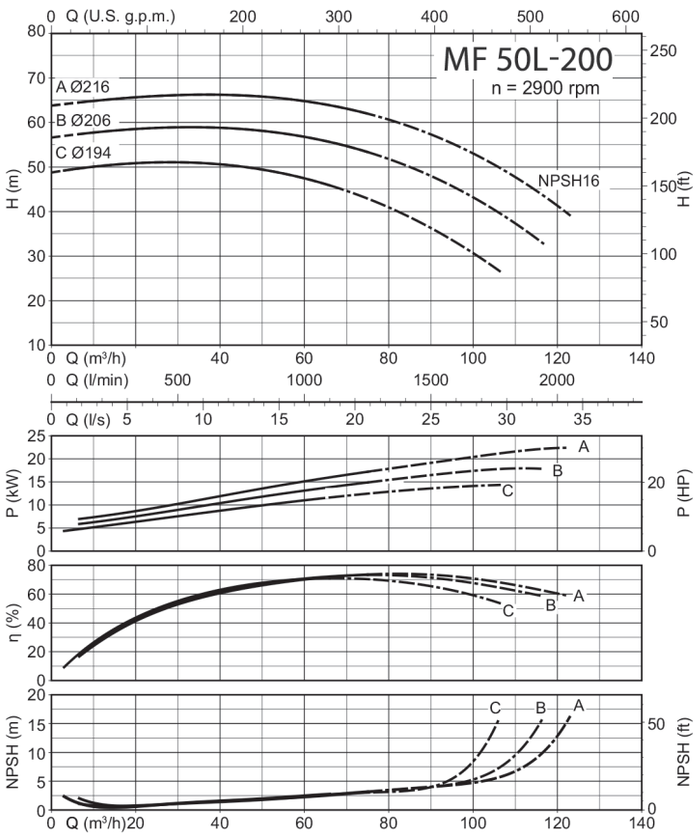


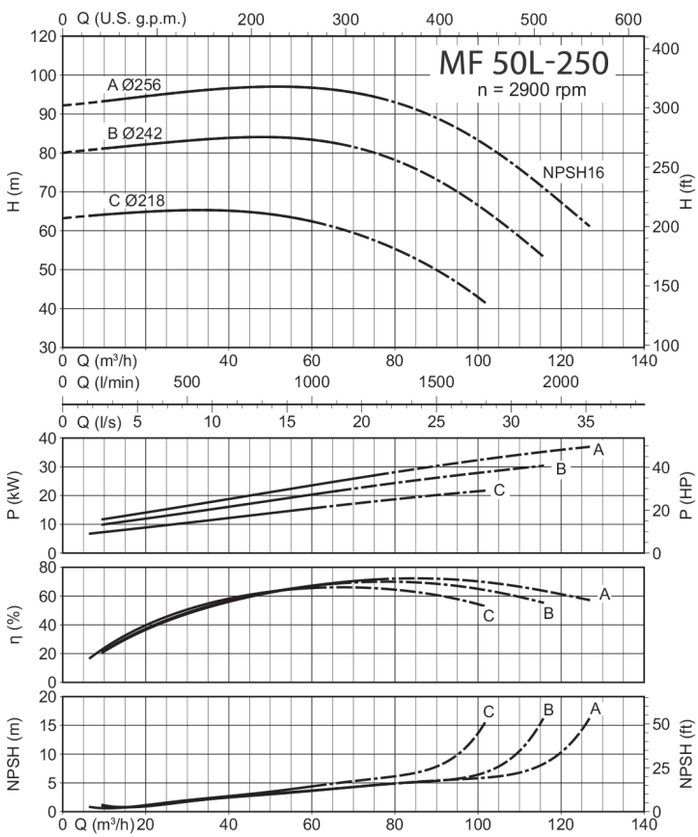


NPSH16r

Performance data valid for liquids with density ρ = 1 kg/dm³ and kinematic viscosity v = 1mm²/sec.

Type	RPM	kW	HP	Ø (mm)	0 l/min	50	110	160	220	280	350	400	450	500	550	630	700	800	900	1000	1100	1250
					0 m³/h	3	6.6	9.6	13.2	16.8	21	24	27	30	33	37.8	42	48	54	60	66	75
MF 50L-200C	2900	15	20	194	48.7	49.2	49.6	50	50.3	50.6	50.9	51	51	51	51	50.7	50.4	49.7	48.7	47.4	45.8	-
MF 50L-200B	2900	18.5	25	206	56.7	-	57.4	57.7	58	58.3	58.6	58.7	58.8	58.9	58.9	58.8	58.7	58.3	57.6	56.7	55.6	53.3
MF 50L-200A	2900	22	30	216	63.7	-	64.5	64.8	65.1	65.4	65.7	65.9	66	66.1	66.2	66.2	66.1	65.9	65.4	64.8	63.8	61.9
MF 50L-250C	2900	22	30	218	63.1	-	63.8	64	64.3	64.6	64.8	65	65.1	65.2	65.2	65.1	64.9	64.4	63.5	62.3	-	-
MF 50L-250B	2900	30	40	242	79.9	-	-	81	81.4	81.8	82.2	82.5	82.8	83	83.3	83.6	83.9	84	83.8	83.3	82.3	-
MF 50L-250A	2900	37	50	256	92.1	-	-	93.2	93.6	94.1	94.6	95	95.3	95.6	95.9	96.4	96.6	96.9	96.9	96.7	96	94.3

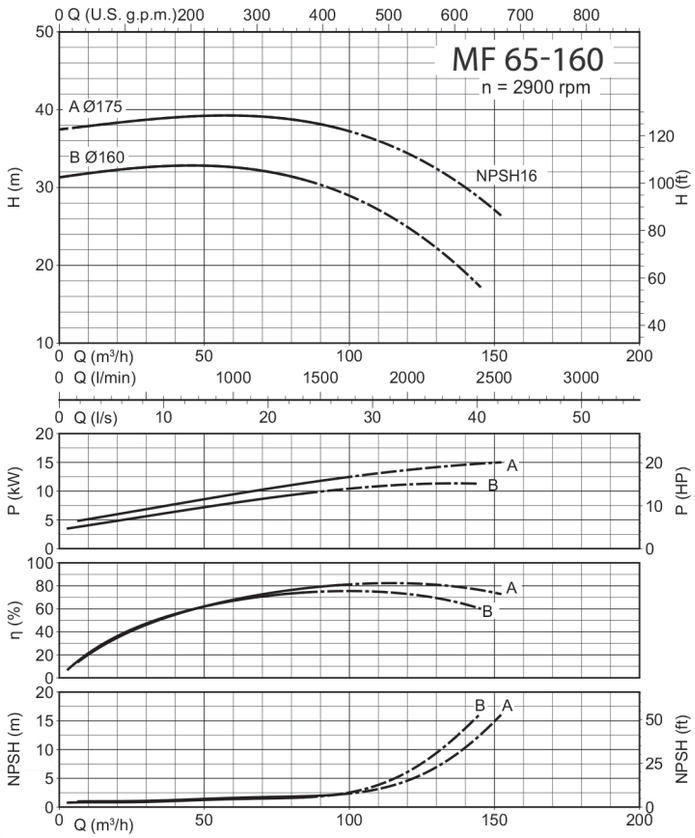


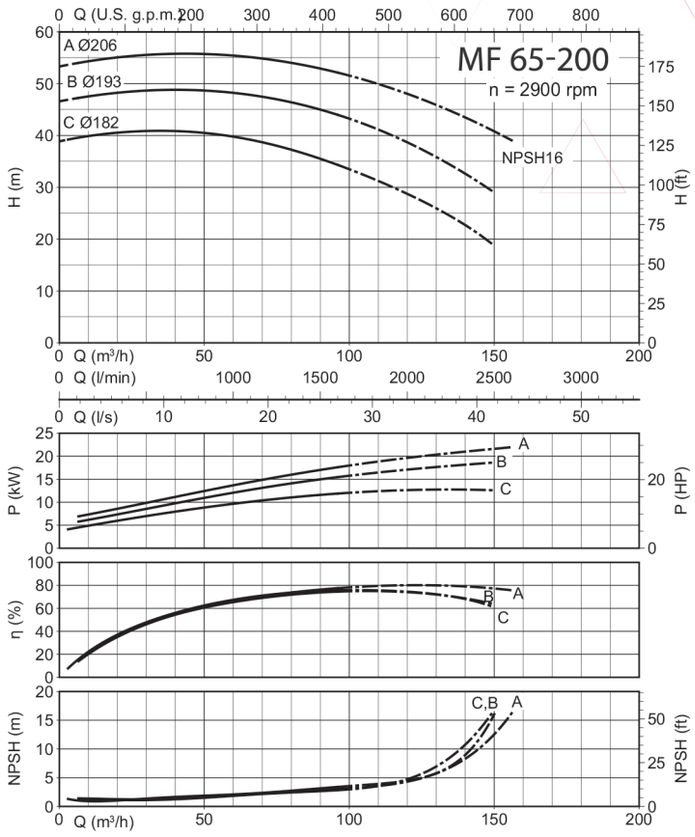


NPSH16r

Performance data valid for liquids with density ρ = 1 kg/dm³ and kinematic viscosity v = 1mm²/sec.

Type	RPM	kW	HP	Ø (mm)	0 l/min	50	110	160	220	280	350	400	500	630	700	800	900	1000	1100	1250	1400	1600
					0 m³/h	3	6.6	9.6	13.2	16.8	21	24	30	37.8	42	48	54	60	66	75	84	96
MF 65-160B	2900	11	15	160	31.2	31.4	31.6	31.7	31.9	32.1	32.2	32.3	32.5	32.7	32.7	32.7	32.7	32.5	32.3	31.7	30.9	-
MF 65-160A	2900	15	20	175	37.4	-	37.7	37.8	38	38.1	38.3	38.4	38.6	38.9	39	39.1	39.2	39.2	39.1	38.9	38.5	37.5
MF 65-200C	2900	15	20	182	38.9	39.2	39.6	39.9	40.1	40.4	40.6	40.7	40.9	40.9	40.8	40.6	40.3	39.8	39.2	38	36.6	34.3
MF 65-200B	2900	18.5	25	193	46.6	-	47.3	47.5	47.8	48.1	48.3	48.5	48.7	48.8	48.8	48.7	48.5	48.2	47.8	47	45.9	44
MF 65-200A	2900	22	30	206	53.3	-	54	54.3	54.6	54.9	55.1	55.3	55.6	55.8	55.8	55.8	55.6	55.4	55.1	54.5	53.6	52.1

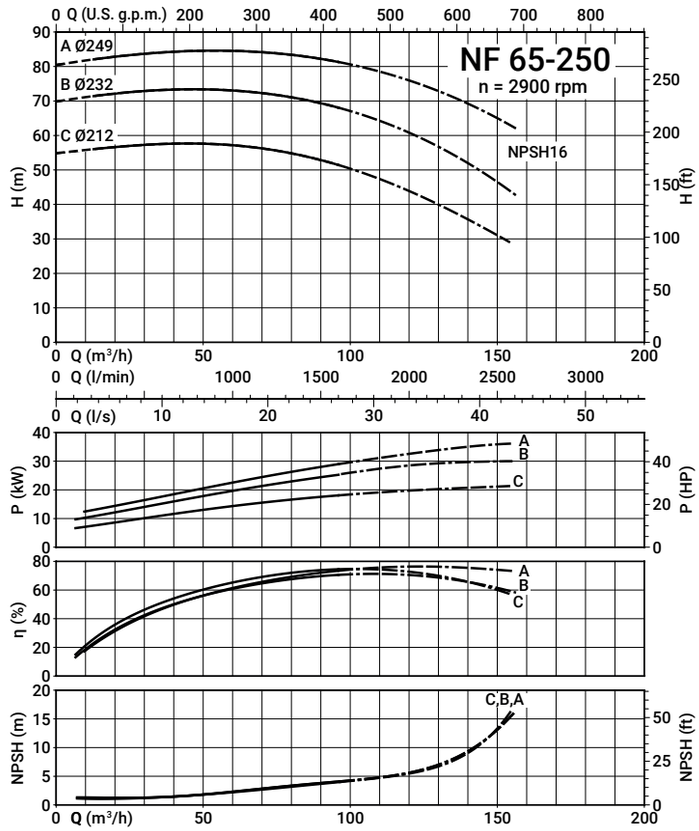




NPSH16r

Performance data valid for liquids with density ρ = 1 kg/dm³ and kinematic viscosity v = 1mm²/sec.

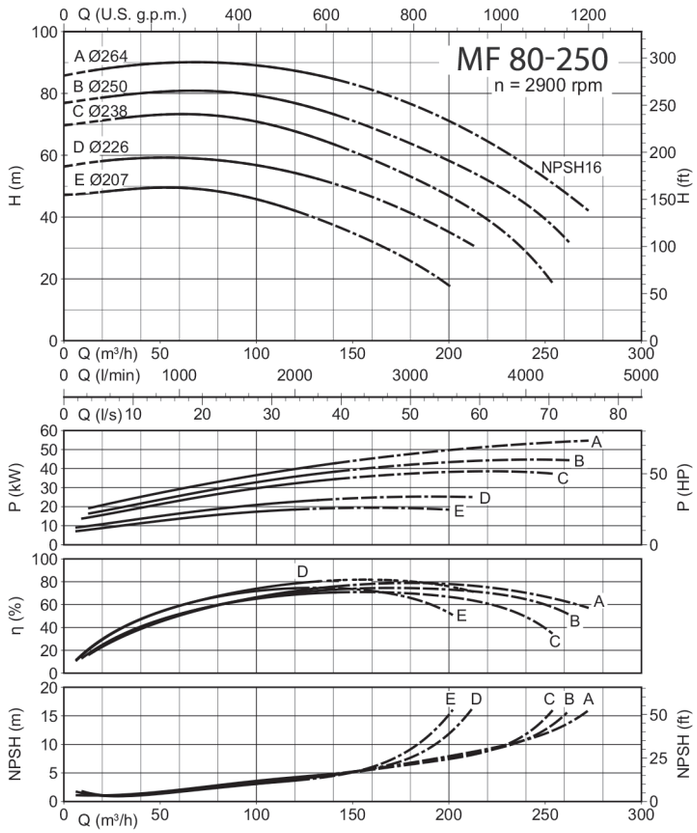
Type	RPM	kW	HP	Ø (mm)	0 l/min	50	110	160	220	280	350	400	500	630	700	800	900	1000	1100	1250	1400	1600
					0 m³/h	3	6.6	9.6	13.2	16.8	21	24	30	37.8	42	48	54	60	66	75	84	96
MF 65-250C	2900	22	30	212	54.9	-	55.5	55.8	56.1	56.4	56.7	56.9	57.3	57.6	57.7	57.6	57.5	57.2	56.7	55.6	54.1	51.4
MF 65-250B	2900	30	40	232	69.8	-	70.7	71.1	71.5	71.8	72.2	72.5	72.9	73.2	73.4	73.4	73.3	73	72.6	71.7	70.4	68.1
MF 65-250A	2900	37	50	249	80.4	-	-	81.7	82.1	82.5	82.9	83.2	83.7	84.2	84.4	84.5	84.6	84.5	84.4	83.8	83	81.3



NPSH16r

Performance data valid for liquids with density ρ = 1 kg/dm³ and kinematic viscosity v = 1mm²/sec.

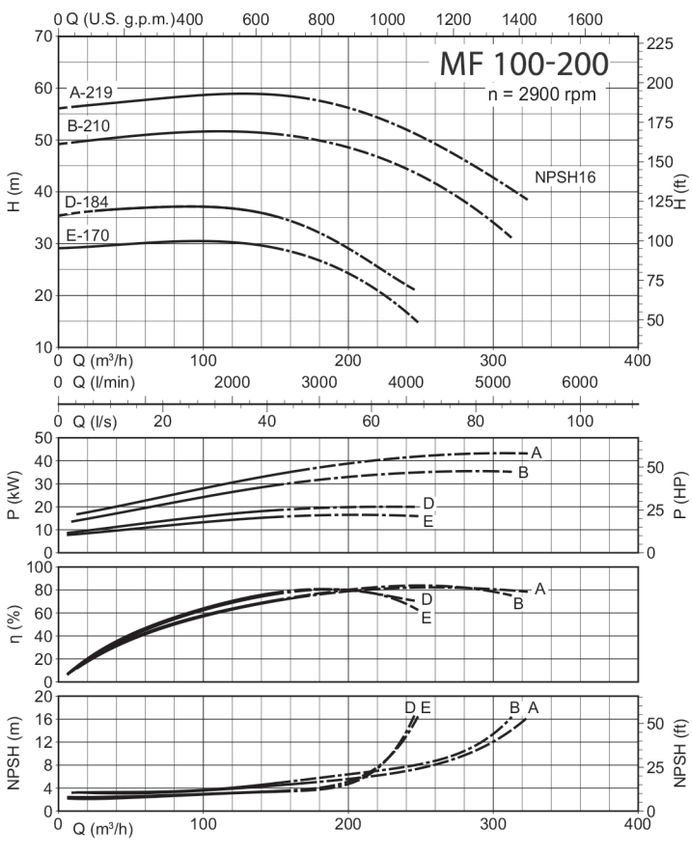
Type	RPM	kW	HP	Ø (mm)	0 l/min	110	160	220	350	550	700	900	1100	1250	1400	1600	1800	2000	2200	2350
					0 m³/h	6.6	9.6	13.2	21	33	42	54	66	75	84	96	108	120	132	141
MF 80-250E	2900	22	30	207	47.2	47.4	47.5	47.7	48.2	48.9	49.3	49.5	49.3	48.7	47.9	46.4	44.4	42.1	-	-
MF 80-250D	2900	30	40	226	56.3	57	57.3	57.6	58.2	58.8	59.1	59.2	59	58.7	58.2	57.2	55.9	54.3	52.3	-
MF 80-250C	2900	47	60	238	69.7	-	70.4	70.7	71.3	72.2	72.8	73.2	73.3	73	72.5	71.4	69.8	67.7	65.4	63.4
MF 80-250B	2900	45	60	250	76.9	-	-	78.1	78.7	79.6	80.2	80.7	80.9	80.8	80.5	79.7	78.5	76.9	74.8	73.1
MF 80-250A	2900	55	75	264	85.8	-	-	87.2	88	88.9	89.4	89.9	90.1	90.1	89.9	89.3	88.5	87.3	85.9	84.5

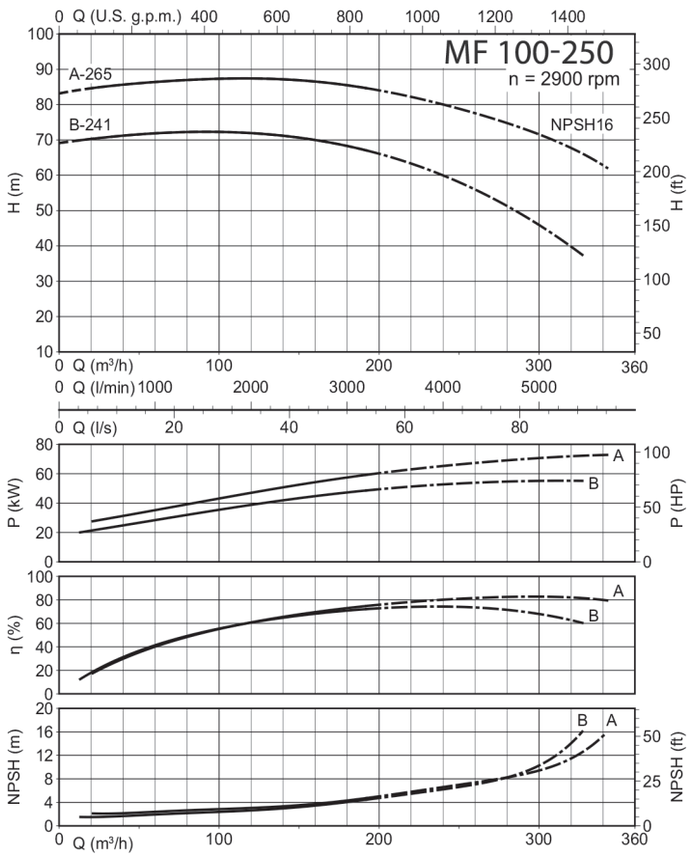


NPSH16r

Performance data valid for liquids with density ρ = 1 kg/dm³ and kinematic viscosity v = 1mm²/sec.

Type	RPM	kW	HP	Ø (mm)	0 l/min	110	160	220	350	550	700	900	1100	1250	1400	1600	1800	2000	2200	2350	2500	2800	3000	3200
					0 m³/h	6.6	9.6	13.2	21	33	42	54	66	75	84	96	108	120	132	141	150	168	180	192
MF 100-200E	2900	18.5	25	170	29	29.1	29.1	29.2	29.3	29.5	29.7	30	30.2	30.3	30.4	30.4	30.4	30.2	29.9	29.5	29.1	-	-	-
MF 100-200D	2900	22	30	184	35.3	35.6	35.8	35.9	36.1	36.4	36.6	36.8	36.9	37	37.1	37.1	37	36.7	36.3	35.8	35.2	-	-	-
MF 100-200B	2900	37	50	210	49.1	-	49.4	49.6	49.8	50.2	50.4	50.8	51.1	51.2	51.4	51.5	51.6	51.6	51.5	51.3	51.1	-	-	-
MF 100-200A	2900	45	60	219	56.1	-	-	56.4	56.6	56.9	57.2	57.5	57.8	58.1	58.3	58.5	58.7	58.8	58.9	58.8	58.6	58.1	-	-
MF 100-250B	2900	55	75	241	69	-	-	69.8	70.2	70.8	71.1	71.5	71.9	72	72.1	72.1	72	71.8	71.4	71	70.5	69.2	68.1	66.9
MF 100-250A	2900	75	100	265	83	-	-	-	84.5	85.2	85.6	86	86.4	86.7	86.9	87.1	87.2	87.2	87.1	87	86.7	86	85.3	84.5

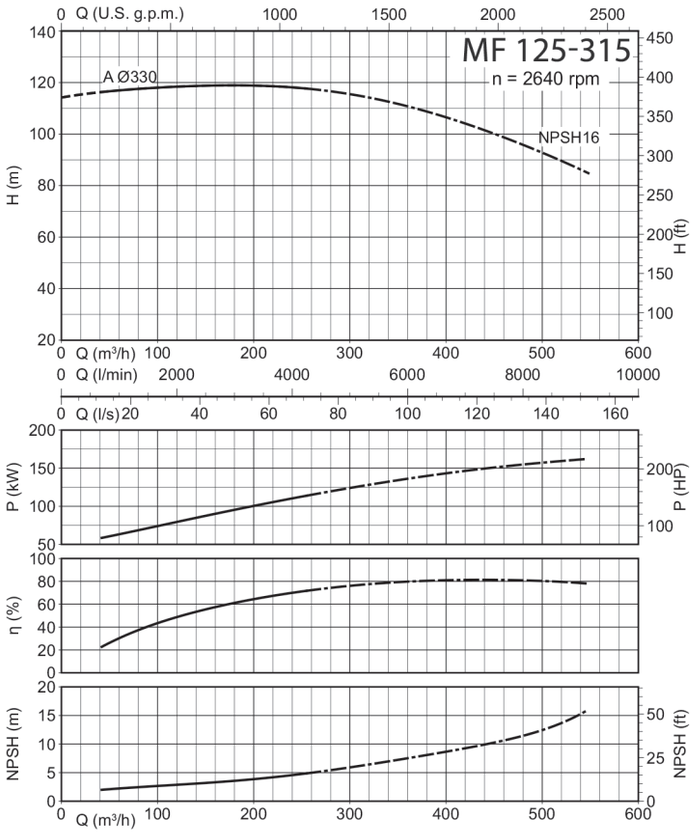


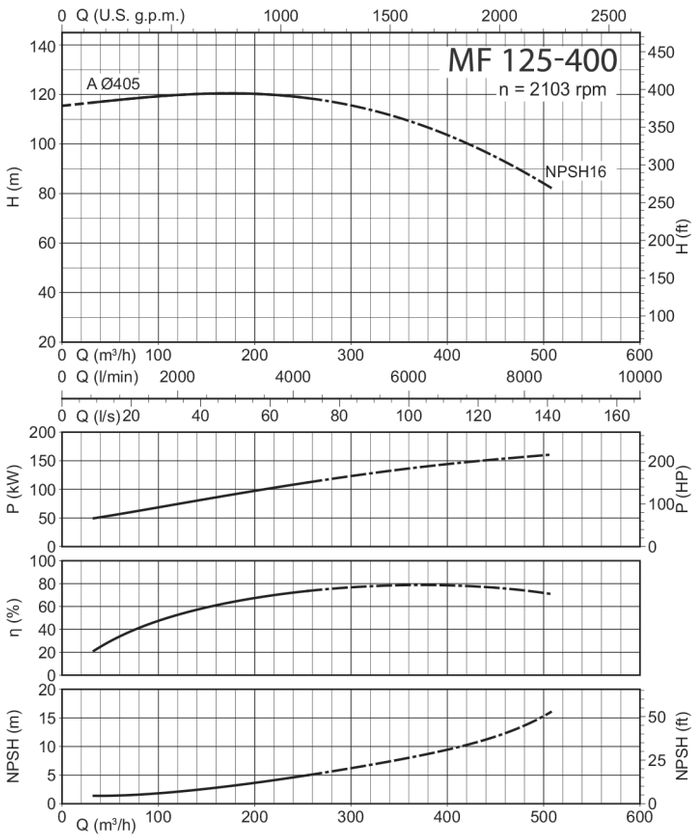


NPSH16r

Performance data valid for liquids with density ρ = 1 kg/dm³ and kinematic viscosity v = 1mm²/sec.

Type	RPM	kW	HP	Ø (mm)	0 l/min	550	700	900	1100	1250	1400	1800	2200	2500	3000	3500	4250
					0 m³/h	33	42	54	66	75	84	108	132	150	180	210	255
MF 125-315A	2640	160	215	330	114	-	116.1	116.6	117	117.2	117.5	118	118.4	118.6	118.7	118.5	117.5
MF 125-400A	2103	160	215	405	115.5	116.8	117.2	117.7	118.1	118.5	118.8	119.5	120.1	120.4	120.5	120.1	118.6

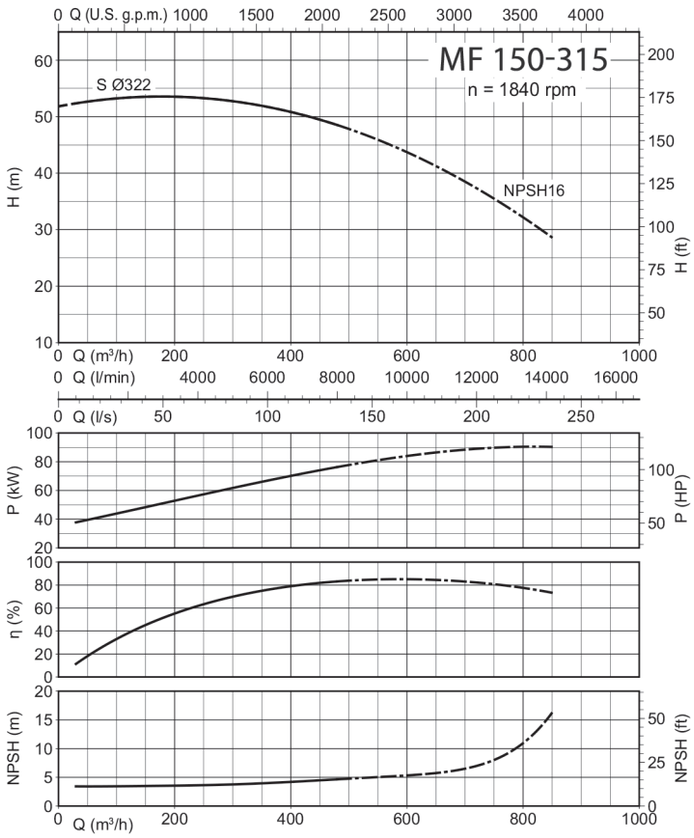


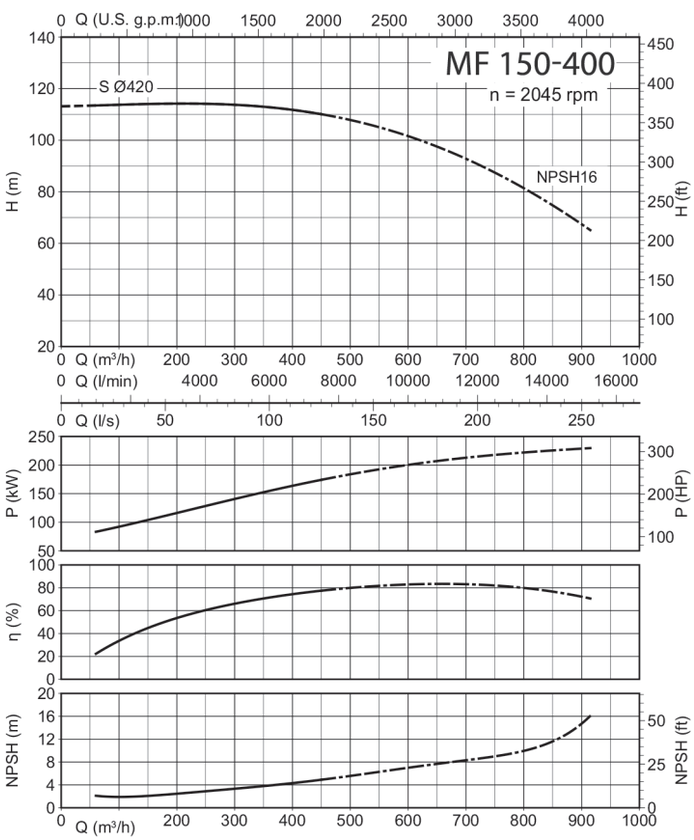


—·—·—·— NPSH16r

Performance data valid for liquids with density ρ = 1 kg/dm³ and kinematic viscosity v = 1mm²/sec.

Type	RPM	kW	HP	Ø (mm)	0 l/min	500	700	1000	1200	1400	1800	2200	2800	3500	4250	5000	5500	6000	6500	7000	7500	8000
					0 m³/h	30	42	60	72	84	108	132	168	210	255	300	330	360	390	420	450	480
MF 150-315S	1840	90	120	322	51.8	52.3	52.5	52.7	52.9	53	53.2	53.4	53.5	53.5	53.2	52.7	52.2	51.7	51	50.3	49.4	48.5
MF 150-400S	2045	250	335	420	113	-	-	113.3	113.4	113.5	113.7	113.8	114	114.1	114	113.6	113.2	112.6	111.9	111	109.9	-

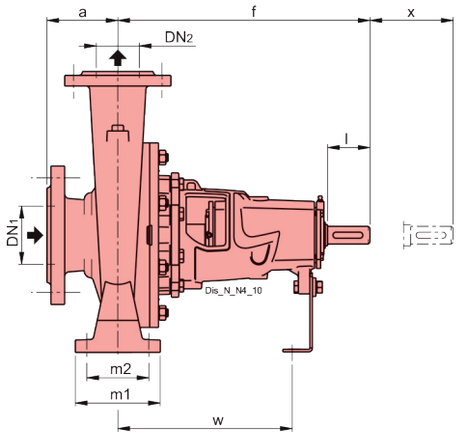


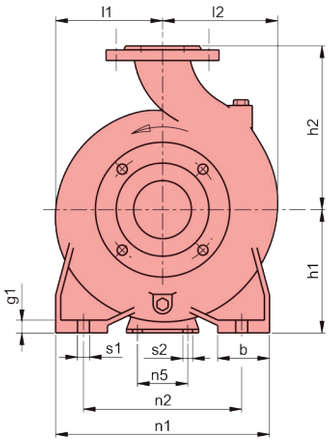


NPSH16r

Performance data valid for liquids with density ρ = 1 kg/dm³ and kinematic viscosity v = 1mm²/sec.

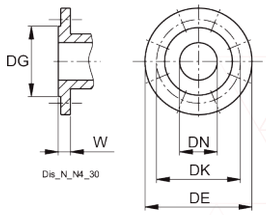
Dimensions and Weights





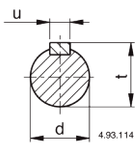
EN 1092-2 Flanges

PN 10-16 (DN 200: PN 10)



DN	DG	DK	DE	Holes		W
				N°	Ø	
32	76	100	140	4	19	18
40	84	110	150	4	19	18
50	99	125	165	4	19	20
65	118	145	185	4	19	20
80	132	160	200	8	19	22
100	156	180	220	8	19	24
125	184	210	250	8	19	24
150	211	240	285	8	23	26
200	266	295	340	8	23	30

Shaft Extension ISO 775 – Parallel Keyway 6604



mm			
d	l	u	t
24 j6	50	8	27
32 k6	80	10	35
42 k6	110	12	45

Type	kW	HP	DN1	DN2	a	b	d	h1	h2	f	n1	n2	n5	l1	l2	m1	m2	s1	s2	w	x	kg
MF 32L-200A	7.5	10	50	32	80	50	24	160	180	360	265	212	110	140	140	100	70	14	14	260	100	38
MF 40-250C	11	15	65	40	100	65	24	180	225	360	320	250	110	175	175	125	95	14	14	260	100	54
MF 40-250B	11	15	65	40	100	65	24	180	225	360	320	250	110	175	175	125	95	14	14	260	100	55
MF 40-250A	15	20	65	40	100	65	24	180	225	360	320	250	110	175	175	125	95	14	14	260	100	55
MF 50-160A	7.5	10	65	50	100	50	24	160	180	360	265	212	110	127	141	100	70	14	14	260	100	38
MF 50L-200C	15	20	65	50	100	50	24	160	200	360	265	212	110	140	153	100	70	14	14	260	100	44
MF 50L-200B	18.5	25	65	50	100	50	24	160	200	360	265	212	110	140	153	100	70	14	14	260	100	44
MF 50L-200A	22	30	65	50	100	50	24	160	200	360	265	212	110	140	153	100	70	14	14	260	100	45
MF 50-250C	11	15	65	50	100	65	24	180	225	360	320	250	110	175	175	125	95	14	14	260	100	56
MF 50-250B	15	20	65	50	100	65	24	180	225	360	320	250	110	175	175	125	95	14	14	260	100	56
MF 50-250A	18.5	25	65	50	100	65	24	180	225	360	320	250	110	175	175	125	95	14	14	260	100	57
MF 50-250S	22	30	65	50	100	65	24	180	225	360	320	250	110	175	175	125	95	14	14	260	100	57
MF 50L-250C	22	30	65	50	100	65	24	180	225	360	320	250	110	175	175	125	95	14	14	260	100	44
MF 50L-250B	30	40	65	50	100	65	24	180	225	360	320	250	110	175	175	125	95	14	14	260	100	56
MF 50L-250A	37	50	65	50	100	65	24	180	225	360	320	250	110	175	175	125	95	14	14	260	100	57
MF 65-160B	11	15	80	65	100	65	24	160	200	360	280	212	110	150	172	125	95	14	14	260	100	40
MF 65-160A	15	20	80	65	100	65	24	160	200	360	280	212	110	150	172	125	95	14	14	260	100	40
MF 65-200C	15	20	80	65	100	65	24	180	225	360	320	250	110	155	175	125	95	14	14	260	140	48
MF 65-200B	18.5	25	80	65	100	65	24	180	225	360	320	250	110	155	175	125	95	14	14	260	140	48
MF 65-200A	22	30	80	65	100	65	24	180	225	360	320	250	110	155	175	125	95	14	14	260	140	48
MF 65-250C	22	30	80	65	100	80	24	200	250	470	360	280	110	175	190	160	120	18	14	340	140	88
MF 65-250B	30	40	80	65	100	80	24	200	250	470	360	280	110	175	190	160	120	18	14	340	140	88
MF 65-250A	37	50	80	65	100	80	24	200	250	470	360	280	110	175	190	160	120	18	14	340	140	89
MF 80-250E	22	30	100	80	125	80	32	200	280	470	400	315	110	191	210	160	120	18	14	340	140	93
MF 80-250D	30	40	100	80	125	80	32	200	280	470	400	315	110	191	210	160	120	18	14	340	140	93
MF 80-250C	37	50	100	80	125	80	32	200	280	470	400	315	110	191	210	160	120	18	14	340	140	94
MF 80-250B	45	60	100	80	125	80	32	200	280	470	400	315	110	191	210	160	120	18	14	340	140	95
MF 80-250A	55	75	100	80	125	80	32	200	280	470	400	315	110	191	210	160	120	18	14	340	140	95
MF 100-200E	18.5	25	125	100	125	80	32	200	280	470	360	280	110	180	212	160	120	18	14	340	140	83
MF 100-200D	22	30	125	100	125	80	32	200	280	470	360	280	110	180	212	160	120	18	14	340	140	83
MF 100-200B	37	50	125	100	125	80	32	200	280	470	360	280	110	180	212	160	120	18	14	340	140	84
MF 100-200A	45	60	125	100	125	80	32	200	280	470	360	280	110	180	212	160	120	18	14	340	140	85
MF 100-250B	55	75	125	100	140	80	32	225	280	470	400	315	110	205	233	160	120	18	14	340	140	105
MF 100-250A	75	100	125	100	140	80	32	225	280	470	400	315	110	205	233	160	120	18	14	340	140	106
MF 125-315A	160	215	150	125	140	100	42	280	355	530	500	400	110	247	278	200	150	22	14	370	140	183
MF 125-400A	160	215	150	125	140	100	42	315	400	530	500	400	110	280	305	200	150	22	14	370	140	217
MF 150-315S	90	120	200	150	160	100	42	280	400	530	550	450	110	256	307	200	150	22	14	370	140	211
MF 150-400S	250	335	200	150	160	100	42	315	450	530	550	450	110	295	328	200	150	22	14	370	140	259

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