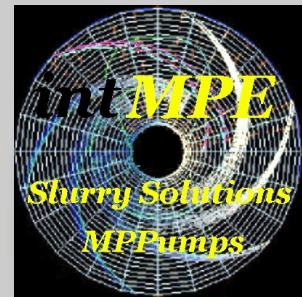
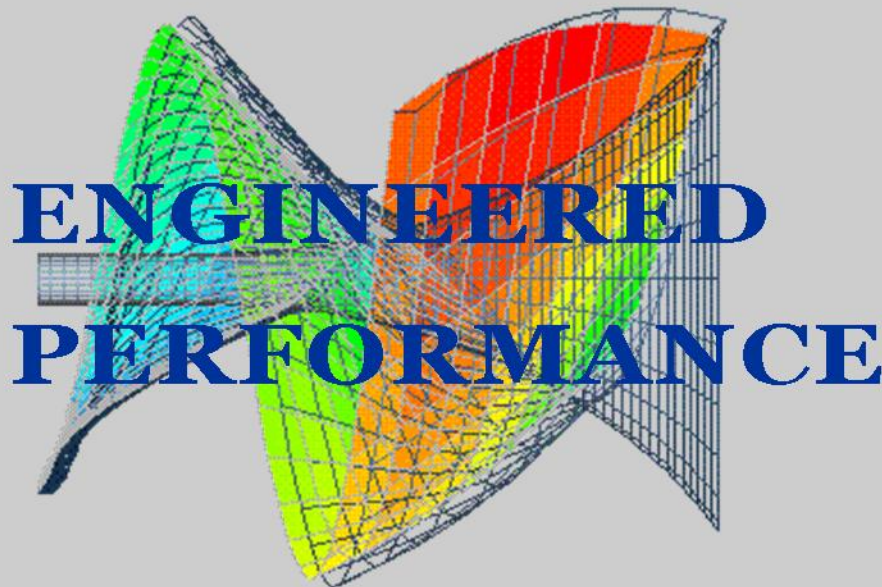


intMPE



International Mineral Processing Equipment



ENGINEERED
PERFORMANCE

Industrial Series

API-610 & ANSI B73.1M



intMPE

International Mineral Processing Equipment
A Division of Canamera Enterprises Inc.



INTMPE MPBFP SERIES MULTI-STAGE HIGH PRESSURE PUMPS



General Description

MPBFP pumps are a revised product of the older TSW pumps that have been used in the Nuclear Industry for many years. The new series intMPE pumps take advantage of anti-cavitation designs, high efficiency and reasonable construction practices through modern foundry casting technology.

MPBFP pumps are a single-suction multistage sectional type centrifugal pump. Its flow ranges are from 15m³/h to 190 m³/h. Total head from 20m to 247m. The pumps used for delivering clean water with temperature below 80 °C as well as liquids similar to water in physical and chemical properties between 5-9 ph. They are used primarily in Power Industries, municipal drain water, supply in factories, mine water and gland water.

The intMPE MPBFP pump size range is from 50mm (2" to 6") 150mm

Typical Model meaning:

75 MPBFP × 9

75 = Inlet diameter (mm);

MP = Mineral Processing;

B = Multi Stage

F = Single suction impeller;

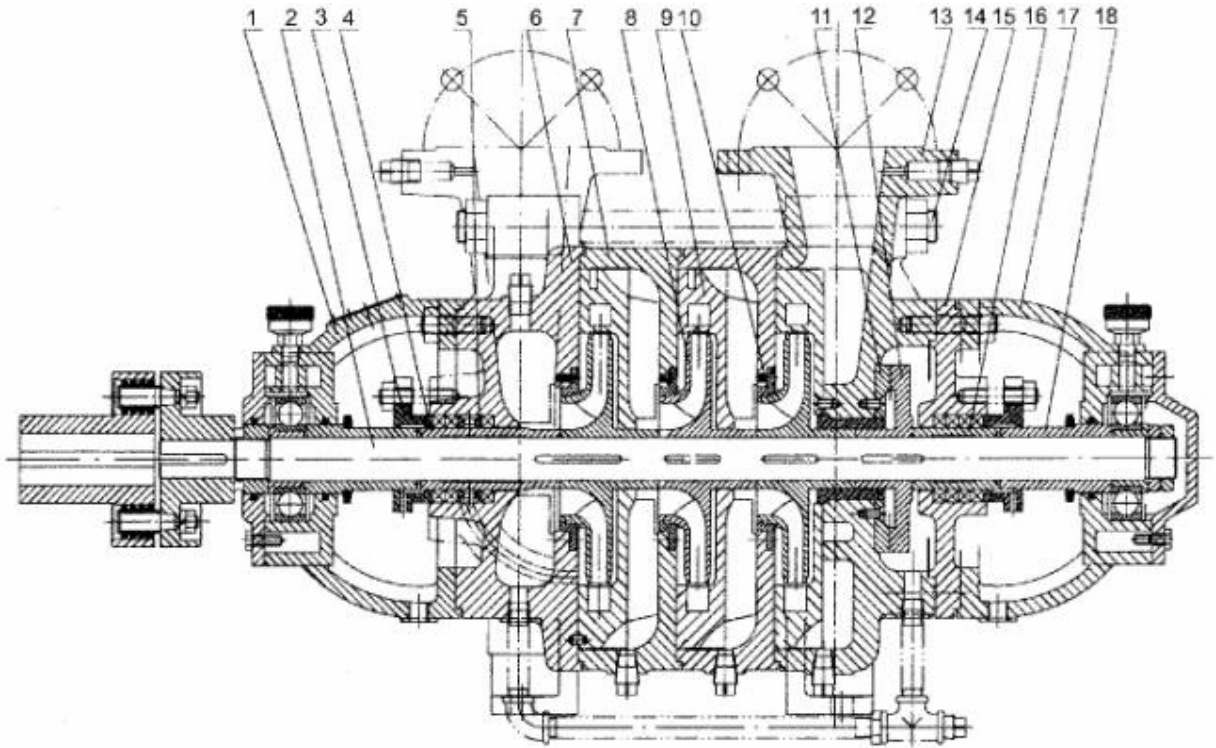
T = Temperature of liquid delivered can't be more than 80 degree C.

G = Revision 1;

J = Mechanical seal;

9 = Number of impellers (stages);

Construction



1. Left Bearing Component

2. Shaft

3. Packing Gland

4. Left Sleeve

5. Packing Ring

6. Suction Casing

7. Stage Casing

8. Impeller

9. Guide Blade

10. Packing Ring

11. Equilibrium Ring

12. Balancing Drum

13. Discharge Casing

14. Tightening Bolt

15. Tail-hood

16. Right Sleeve

17. Right Bearing Component

18. Bearing Spacer Sleeve

Construction Specification

intMPE MPBFP series pumps have a horizontal inlet while the outlet is vertical. Stages depend on required head.

The segmental ring part of pump consists of suction casing, middle body, guide blade, tail-hood and bearing part, etc.

The rotor is composed of shaft, impeller and balancing drum, etc. It is supported at its two ends by roller radial thrust bearings.

The interfaces between the suction casing, middle body and discharge casing are sealed with paper gaskets by tightening bolts. In order to prevent water from entering the bearing housings, two rubber water deflectors are on the shaft. Meanwhile O-rings are superimposed between shaft sleeves.

Both ends of the shaft adopt either oil-impregnated asbestos packing or mechanical seal according to customer requirements. Liquid leakage for packed pumps should be kept in drops by adjusting bolts on packing gland properly.

MPBFP pumps are driven by motor directly through elastic coupling.

Pump runs clockwise while looking from the end of coupling.

INTMPE MPBFP SERIES BOILER SINGLE SUCTION MULTI STAGE PUMP PERFORMANCE

Model	No.Of Stage	Speed (r/min)	Flow (m³/h)	Head (m)	Power(kW)		Efficiency (%)	(NPSH) _r (m)
					Shaft	Motor		
MBFP6-25	3	2950	3.75	76.5	2.37	4.0	33	2
			6.3	75	2.86		45	2
			7.5	73.5	3.19		47	2.5
	4		3.75	102	3.16	5.5	33	2
			6.3	100	3.81		45	2
			7.5	98	4.26		47	2.5
	5		3.75	127.5	3.95	5.5	33	2
			6.3	125	4.77		45	2
			7.5	122.5	5.32		47	2.5
	6		3.75	153	4.73	7.5	33	2
			6.3	150	5.72		45	2
			7.5	147	6.39		47	2.5
7	3.75	178.5	5.52	7.5	33	2		
	6.3	175	6.67		45	2		
	7.5	171.5	7.45		47	2.5		
8	3.75	204	6.31	11	33	2		
	6.3	200	7.63		45	2		
	7.5	196	8.52		47	2.5		
9	3.75	229.5	7.1	11	33	2		
	6.3	225	8.58		45	2		
	7.5	220.5	9.58		47	2.5		
10	3.75	255	7.89	15	33	2		
	6.3	250	9.53		45	2		
	7.5	245	10.65		47	2.5		
11	3.75	280.5	8.68	15	33	2		
	6.3	275	10.5		45	2		
	7.5	269.5	11.71		47	2.5		
12	3.75	306	9.47	15	33	2		
	6.3	300	11.44		45	2		
	7.5	294	12.78		47	2.5		
MBFP12-25	3	2950	7.5	84.6	3.93	5.5	44	2
			12.5	75	4.73		54	2
			15	69	5.32		53	2.5
	4		7.5	112.8	5.24	7.5	44	2
			12.5	100	6.3		54	2
			15	92	7.09		53	2.5
	5		7.5	141	6.55	11	44	2
			12.5	125	7.88		54	2
			15	115	8.89		53	2.5
	6		7.5	169.2	7.85	15	44	2
			12.5	150	9.46		54	2
			15	138	10.64		53	2.5
7	7.5	197.5	9.16	15	44	2		
	12.5	175	11.0		54	2		
	15	161	12.41		53	2.5		
8	7.5	225.6	10.41	15	44	2		
	12.5	200	12.61		54	2		
	15	184	14.18		53	2.5		
9	7.5	253.8	11.78	18.5	44	2		
	12.5	225	14.18		54	2		
	15	207	15.95		53	2.5		

Model	No.Of Stage	Speed (r/min)	Flow (m³/h)	Head (m)	Power(kW)		Efficiency (%)	(NPSH)r (m)
					Shaft	Motor		
MBFP12-25	10		7.5	282	13.09	18.5	44	2
			12.5	250	15.76		54	2
			15	230	17.73		53	2.5
	11		7.5	310.2	14.4	22	44	2
			12.5	275	17.34		54	2
			15	253	19.5		53	2.5
	12		7.5	338.4	15.7	22	44	2
			12.5	300	18.9		54	2
			15	276	21.3		53	2.5
MBFP12-50	3	2950	7.5	162	8.8	18.5	37.8	2
			12.5	150	10.6		48	2
			15	139.5	11.9		48	2.5
	4		7.5	216	11.7	22	37.8	2
			12.5	200	14.1		48	2
			15	186	15.9		48	2.5
	5		7.5	270	14.6	30	37.8	2
			12.5	250	17.7		48	2
			15	232.5	19.8		48	2.5
	6		7.5	324	17.6	30	37.8	2
			12.5	300	21.3		48	2
			15	279	23.7		48	2.5
7	7.5	378	20.4	37	37.8	2		
	12.5	350	24.8		48	2		
	15	325.5	27.7		48	2.5		
8	7.5	432	23.3	37	37.8	2		
	12.5	400	28.4		48	2		
	15	372	31.7		48	2.5		
9	7.5	468	26.3	45	37.8	2		
	12.5	450	31.9		48	2		
	15	418.5	35.7		48	2.5		
10	7.5	540	29.2	45	37.8	2		
	12.5	500	35.5		48	2		
	15	465	39.6		48	2.5		
11	7.5	594	32.1	55	37.8	2		
	12.5	550	39.0		48	2		
	15	511.5	43.5		48	2.5		
12	7.5	648	35.0	75	37.8	2		
	12.5	600	42.6		48	2		
	15	558	47.8		48	2.5		
MBFP25-30	3	2950	15	102	8.33	15	50	2.2
			25	90	9.88		62	2.2
			30	82.5	10.7		63	2.6
	4		15	136	11.1	18.5	50	2.2
			25	120	13.1		62	2.2
			30	110	14.26		63	2.6
	5		15	170	13.89	22	50	2.2
			25	150	16.47		62	2.2
			30	137.5	17.83		63	2.6
	6		15	204	16.67	30	50	2.2
			25	180	19.17		62	2.2
			30	165	21.4		63	2.6

TABLE OF THE PERFORMANCE OF MODEL MPBFP SINGLE-SUCTION MULTI-STAGE BOILER FEED PUMPS

Model	No.Of Stage	Speed (r/min)	Flow (m³/h)	Head (m)	Power(kW)		Efficiency (%)	(NPSH) (m)
					Shaft	Motor		
MBFP25-30	7	2950	15	238	19.44	30	50	2.2
			25	210	23.1		62	2.2
			30	192.5	24.96		63	2.6
	8		15	272	22.22	37	50	2.2
			25	240	26.4		62	2.2
			30	220	28.53		63	2.6
	9		15	306	25	37	50	2.2
			25	270	29.65		62	2.2
			30	247.5	32.1		63	2.6
	10		15	340	27.8	45	50	2.2
			25	300	32.9		62	2.2
			30	275	35.7		63	2.6
MBFP25-50	3	2950	15	154.5	15.78	22	40	2.5
			25	150	18.91		54	2.8
			30	144	20.64		57	3.2
	4		15	206	21.04	30	40	2.5
			25	200	25.22		54	2.8
			30	192	27.5		57	3.2
	5		15	257.5	26.2	37	40	2.5
			25	250	31.52		54	2.8
			30	240	34.40		57	3.2
	6		15	309	31.56	45	40	2.5
			25	300	37.82		54	2.8
			30	288	41.28		57	3.2
	7		15	380.5	38.86	55	40	2.5
			25	350	44.1		54	2.8
			30	336	48.16		57	3.2
	8		15	412	42	75	40	2.5
			25	400	50.45		54	2.8
			30	384	55.04		57	3.2
	9		15	463.5	47.33	75	40	2.5
			25	450	56.74		54	2.8
			30	432	61.92		57	3.2
	10		15	515	52.59	75	40	2.5
			25	500	63.04		54	2.8
			30	480	68.8		57	3.2
	11		15	566	57.8	90	40	2.5
			25	550	69.3		54	2.8
			30	528	75.68		57	3.2
	12		15	618	63.11	110	40	2.5
			25	600	75.65		54	2.8
			30	576	82.56		57	3.2
MBFP25-80	5	2980	15	433.0	55.00	75.0	32	3.2
			25	400.0	60.50		45	3.5
			30	390.0	72.10		44	5
	6		15	519.6	66.00	90.0	32	3.2
			25	480.0	72.60		45	3.5
			30	468.0	86.52		44	5

Model	No.Of Stage	Speed (r/min)	Flow (m³/h)	Head (m)	Power(kW)		Efficiency (%)	(NPSH)r (m)
					Shaft	Motor		
MBFP25-80	7	2980	15	606.2	77.00	110.0	32	3.2
			25	560.0	84.70		45	3.5
			30	546.0	100.94		44	5
	8		15	692.8	88.00	132.0	32	3.2
			25	640.0	96.80		45	3.5
			30	624.0	115.36		44	5
	9		15	779.4	99.00	132.0	32	3.2
			25	720.0	108.90		45	3.5
			30	702.0	129.78		44	5
	10		15	866.0	110.00	160.0	32	3.2
			25	800.0	121.00		45	3.5
			30	780.0	144.20		44	5
11	15	952.6	121.00	200.0	32	3.2		
	25	880.0	133.10		45	3.5		
	30	858.0	158.62		44	5		
MBFP45-80	7	2950	36	585.2	114.8	180	50	3.9
			45	560.0	124.6		55	4
			62	477.4	143.5		56	5.5
	8		36	668.8	131.2	200	50	3.9
			45	640.0	142.4		55	4
			62	545.6	164.0		56	5.5
	9		36	752.4	147.6	220	50	3.9
			45	720.0	160.2		55	4
			62	613.8	184.5		56	5.5
	10		36	836.0	164.0	250	50	3.9
			45	800.0	178.0		55	4
			62	682.0	205.0		56	5.5
11	36	919.6	180.4	280	50	3.9		
	45	880.0	195.8		55	4		
	62	750.2	225.5		56	5.5		
12	36	1003.2	196.8	280	50	3.9		
	45	960.0	213.6		55	4		
	62	818.4	246.0		56	5.5		
MBFP46-30	3	2950	30	102	13.02	22	64	2.4
			46	90	16.11		70	3
			55	81	18.84		68	4.6
	4		30	136	17.36	30	64	2.4
			46	120	21.48		70	3
			55	108	23.79		68	4.6
	5		30	170	21.7	37	64	2.4
			46	150	26.85		70	3
			55	135	29.74		68	4.6
	6		30	204	26.04	37	64	2.4
			46	180	32.21		70	3
			55	162	35.68		68	4.6

TABLE OF THE PERFORMANCE OF MODEL MPBFP SINGLE-SUCTION MULTI-STAGE BOILER FEED PUMPS

Model	No.Of Stage	Speed (r/min)	Flow (m³/h)	Head (m)	Power(kW)		Efficiency (%)	(NPSH) (m)
					Shaft	Motor		
MBFP46-30	7	2950	30	238	30.38	45	64	2.4
			46	210	37.58		70	3
			55	189	41.63		68	4.6
	8		30	274	34.72	55	64	2.4
			46	240	42.95		70	3
			55	216	47.58		68	4.6
	9		30	306	39.06	55	64	2.4
			46	270	48.32		70	3
			55	243	53.53		68	4.6
	10		30	340	43.3	75	64	2.4
			46	300	53.7		70	3
			55	270	59.5		68	4.6
MBFP46-50	3	2950	30	166.5	25.19	37	54	2.5
			46	150	29.83		63	2.8
			55	138	32.3		64	3.2
	4		30	222	33.59	45	54	2.5
			46	200	39.77		63	2.8
			55	184	43.06		64	3.2
	5		30	277.5	41.98	55	54	2.5
			46	250	49.71		63	2.8
			55	230	53.85		64	3.2
	6		30	333	50.38	75	54	2.5
			46	300	59.65		63	2.8
			55	276	64.59		64	3.2
	7		30	388.5	58.78	90	54	2.5
			46	350	69.6		63	2.8
			55	322	75.36		64	3.2
	8		30	440	67.18	90	54	2.5
			46	400	79.54		63	2.8
			55	368	86.12		64	3.2
	9		30	499.5	75.57	110	54	2.5
			46	450	89.48		63	2.8
			55	414	96.89		64	3.2
	10		30	555	83.97	132	54	2.5
			46	500	99.42		63	2.8
			55	460	107.66		64	3.2
	11		30	610.5	92.37	132	54	2.5
			46	550	109.36		63	2.8
			55	506	118.42		64	3.2
	12		30	666	100.8	132	54	2.5
			46	600	119.3		63	2.8
			55	552	129.2		64	3.2
MBFP85-45	2	2950	55	102	24.25	37	63	3.2
			85	90	28.94		72	4.2
			100	78	30.33		70	5.2
	3		55	153	36.38	55	63	3.2
			85	135	43.4		72	4.2
			100	117	45.52		70	5.2
	4		55	204	48.5	75	63	3.2
			85	180	57.87		72	4.2
			100	156	60.7		70	5.2

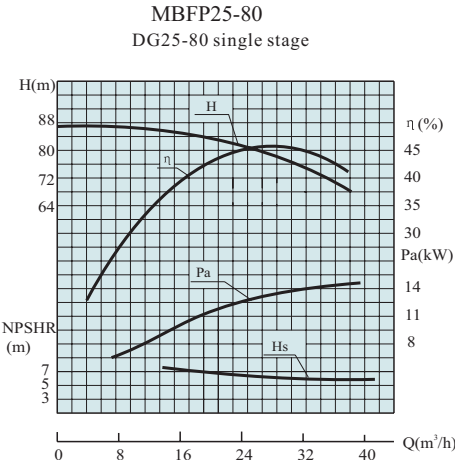
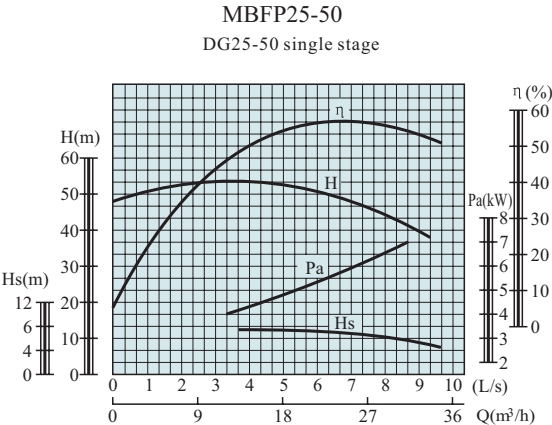
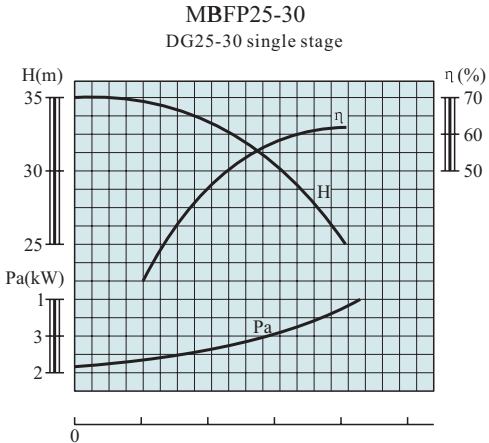
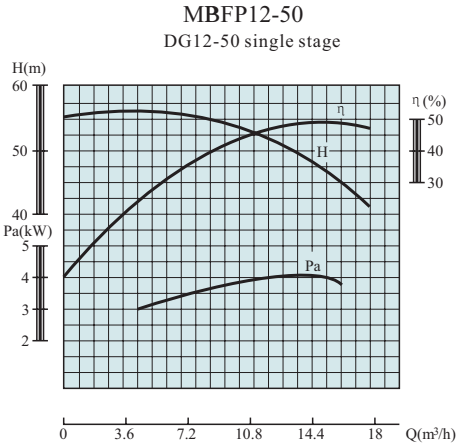
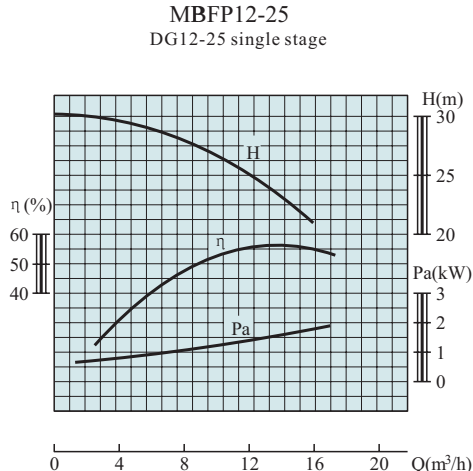
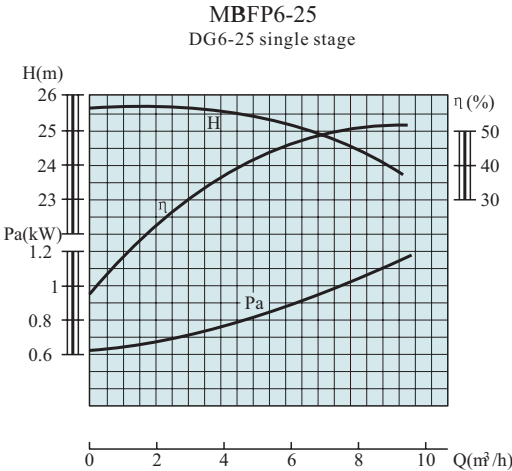
Model	No.Of Stage	Speed (r/min)	Flow (m³/h)	Head (m)	Power(kW)		Efficiency (%)	(NPSH)r (m)
					Shaft	Motor		
MBFP85-45	5	2950	55	255	60.63	90	63	3.2
			85	225	72.34		72	4.2
			100	195	75.86		70	5.2
	6		55	306	72.75	110	63	3.2
			85	270	86.81		72	4.2
			100	234	91.04		70	5.2
	7		55	357	84.88	132	63	3.2
			85	315	101.3		72	4.2
			100	273	106.2		70	5.2
	8		55	408	97	132	63	3.2
			85	360	115.7		72	4.2
			100	312	121.4		70	5.2
	9		55	459	109.1	160	63	3.2
			85	405	130.2		72	4.2
			100	351	136.6		70	5.2
MBFP85-67	3	2950	55	222	57.3	90	58	3.3
			85	201	68.4		68	4.0
			100	183	73.3		68	4.4
	4		55	296	76.4	110	58	3.3
			85	268	91.2		68	4.0
			100	244	97.7		68	4.4
	5		55	370	95.6	132	58	3.3
			85	335	114		68	4.0
			100	305	122.2		68	4.4
	6		55	444	114.7	160	58	3.3
			85	402	136.9		68	4.0
			100	366	146.6		68	4.4
	7		55	518	133.8	200	58	3.3
			85	469	159.6		68	4.0
			100	427	171		68	4.4
	8		55	592	152.9	220	58	3.3
			85	536	182.4		68	4.0
			100	488	195.4		68	4.4
	9		55	666	172	250	58	3.3
			85	603	205.2		68	4.0
			100	549	219.9		68	4.4
MBFP85-80	7	2950	54	616	170.9	250	53	4.5
			85	560	199.3		65	4.4
			108	490	218.4		66	5.3
	8		54	704	195.3	280	53	4.5
			85	640	227.8		65	4.4
			108	560	249.6		66	5.3
	9		54	792	219.8	355	53	4.5
			85	720	256.3		65	4.4
			108	630	280.7		66	5.3
	10		54	880	244.2	355	53	4.5
			85	800	284.8		65	4.4
			108	700	311.9		66	5.3

TABLE OF THE PERFORMANCE OF MODEL MPBFP SINGLE-SUCTION MULTI-STAGE BOILER FEED PUMPS

Model	No.Of Stage	Speed (r/min)	Flow (m³/h)	Head (m)	Power(kW)		Efficiency (%)	(NPSH) _r (m)
					Shaft	Motor		
MPBFP85-80	11	2950	54	968	268.6	400	53	4.5
			85	880	313.2		65	4.4
			108	770	343		66	5.3
	12		54	1056	293	450	53	4.5
			85	960	341.7		65	4.4
			108	840	374.3		66	5.3
MPBFP150-100	6	2950	120	630	307	450	67	3.4
			150	600	353		70	4.8
			180	540	368		72	5.5
	7		120	735	359	500	67	3.4
			150	700	412		70	4.8
			180	630	429		72	5.5
	8		120	840	410	630	67	3.4
			150	800	470		70	4.8
			180	720	491		72	5.5
	9		120	945	461	630	67	3.4
			150	900	518		70	4.8
			180	810	552		72	5.5
	10		120	1050	512	800	67	3.4
			150	1000	588		70	4.8
			180	900	613		72	5.5
MPBFP155-67	3	2950	100	228	97.0	132	64	3.2
			155	201	114.7		74	5.0
			185	177	123.9		72	6.6
	4		100	304	129.3	200	64	3.2
			155	268	152.9		74	5.0
			185	236	165.1		72	6.6
	5		100	380	161.6	220	64	3.2
			155	355	191.1		74	5.0
			185	295	206.4		72	6.6
	6		100	456	194	280	64	3.2
			155	402	229.3		74	5.0
			185	354	247.7		72	6.6
	7		100	532	226.3	315	64	3.2
			155	469	267.5		74	5.0
			185	413	289		72	6.6
	8		100	608	258.6	355	64	3.2
			155	536	305.7		74	5.0
			185	472	330.3		72	6.6
	9		100	684	290.9	400	64	3.2
			155	603	344		74	5.0
			185	531	371.6		72	6.6

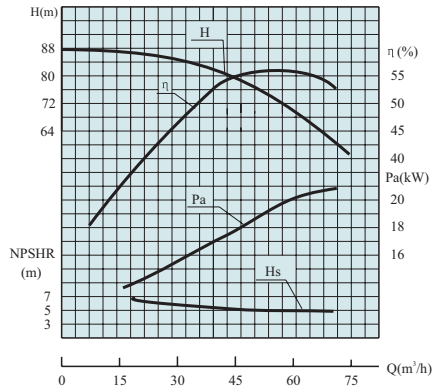
Model	No.Of Stage	Speed (r/min)	Flow (m³/h)	Head (m)	Power(kW)		Efficiency (%)	(NPSH) _r (m)
					Shaft	Motor		
MBFP280-100	4	2950	250	420.0	386.4	450	74	5.1
			280	400.0	396.0		77	5.6
			300	392.0	416.0		77	5.9
	5		250	525.0	483.0	630	74	5.1
			280	500.0	495.0		77	5.6
			300	490.0	520.0		77	5.9
	6		250	630.0	579.6	710	74	5.1
			280	600.0	594.0		77	5.6
			300	588.0	624.0		77	5.9
	7		250	735.0	676.2	800	74	5.1
			280	700.0	693.0		77	5.6
			300	686.0	728.0		77	5.9
	8		250	840.0	772.8	1000	74	5.1
			280	800.0	792.0		77	5.6
			300	784.0	832.0		77	5.9
	9		250	945.0	869.4	1120	74	5.1
			280	900.0	891.0		77	5.6
			300	882.0	936.0		77	5.9
	10		250	1050.0	966.0	1250	74	5.1
			280	1000.0	990.0		77	5.6
			300	980.0	1040.0		77	5.9

INTMPE MPBFP SERIES MULT-STATE PUMP CURVES

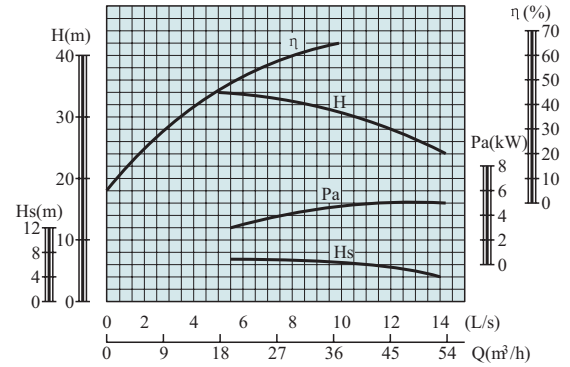


PERFORMANCE CURVE FIGURES

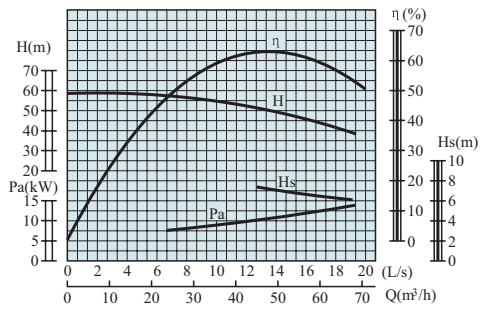
MPBFP45-80
DG45-80 single stage



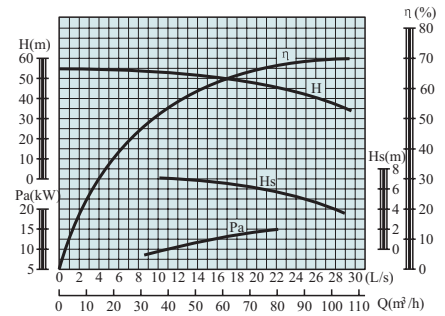
MPBFP46-30
DG46-30 single stage



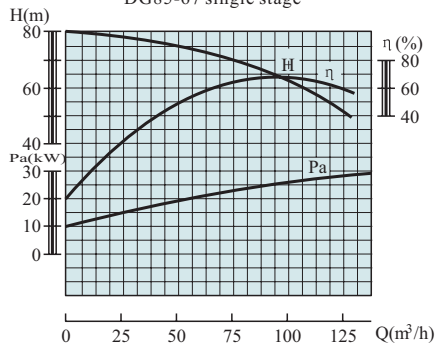
MPBFP46-50
DG46-50 single stage



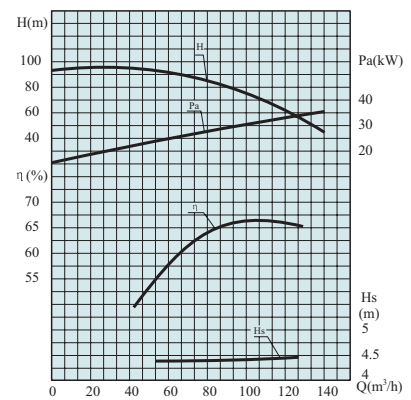
MPBFP85-45
DG85-45 single stage



MPBFP85-67
DG85-67 single stage

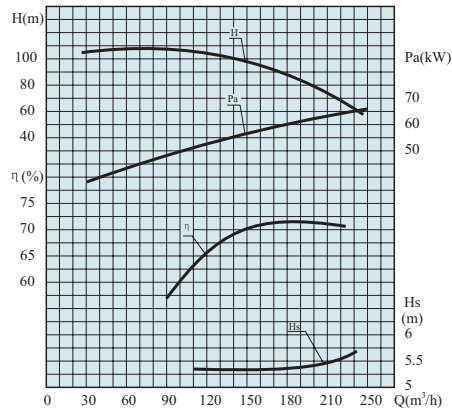


MPBFP85-80
DG85-80 single stage

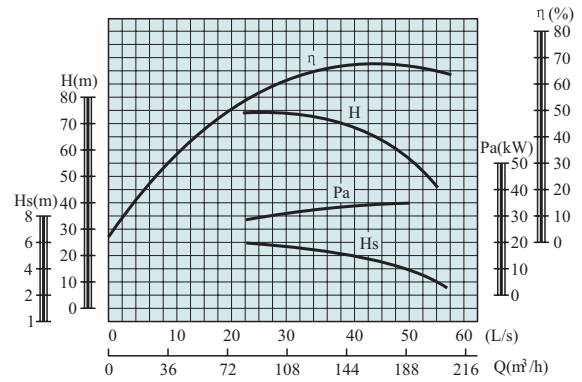


PERFORMANCE CURVE FIGURES

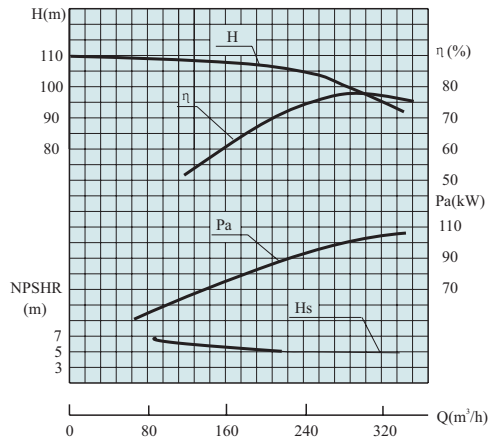
MPBFP150-100
DG150-100 single stage



MPBFP155-67
DG155-67 single stage



MPBFP280-100
DG280-100 single stage



Note: Each curve shows the performance of a single (1) stage. When multiple stages are used, the flow is the same but discharge head and shaft power are increased. To calculate multiply by the number of stages, e.g. multiplied by 2 in case of 2 stages, by 3 in case of 3 stages, and so on.