

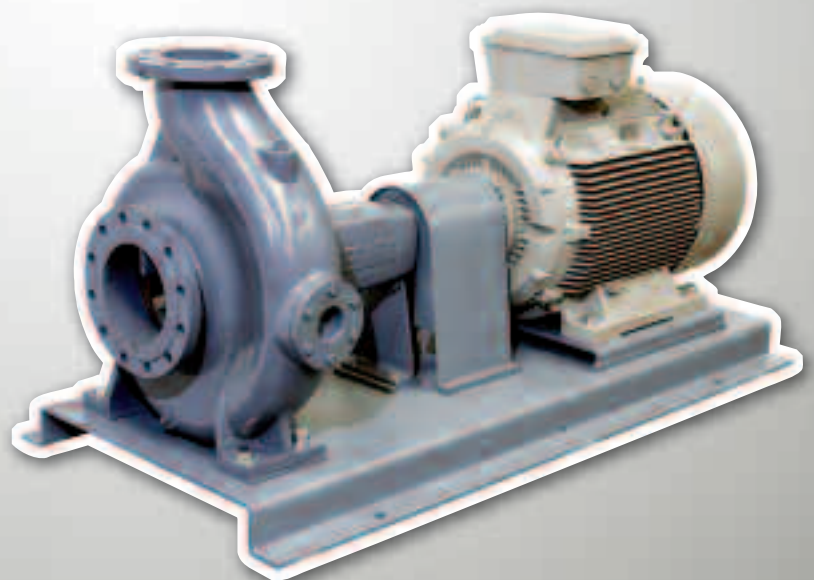


EBARA

FHA

END SUCTION VOLUTE PUMP (DIN 24256)

50 Hz



END SUCTION VOLUTE PUMPS

in cast iron



End suction volute pump in cast iron.

APPLICATIONS

- Water supply
- Fire-Fighting systems
- Hot and cold water supply
- Industrial use
- Swimming pool
- Sprinkling
- Air conditioning systems

TECHNICAL DETAILS

- Easy removal and maintenance, BPO (Back Pull Out) system allows all rotating elements to be removed without disconnecting suction and discharge pipework
- Top centerline discharge, foot support under casing for maximum resistance to misalignment and distortion from pipe loads
- Non-overload design to ensure stable performance for all applications

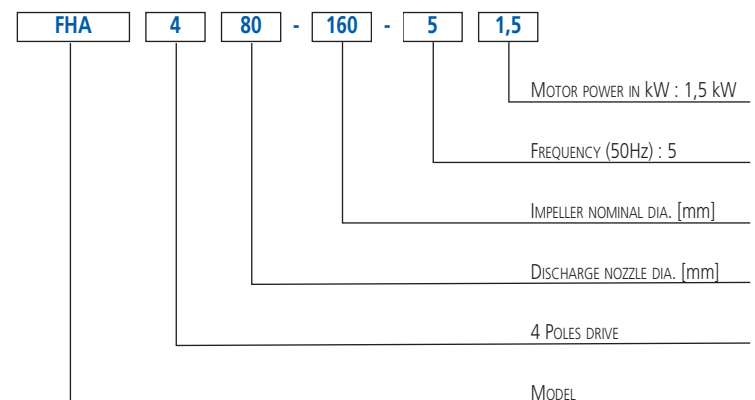
TECHNICAL DATA

- Maximum working pressure: 16 bar
- Temperature of the liquid:
 - from 0°C to +80°C (standard)
 - from -20°C to +120°C (on request)
- DIN PN16 suction and discharge connection
- Various supplier for motors

MATERIALS

- Casing in cast iron
- Impeller in bronze
- Shaft in AISI 403
- Mechanical seal in Ceramic/Carbon/NBR

IDENTIFICATION CODE





FHA

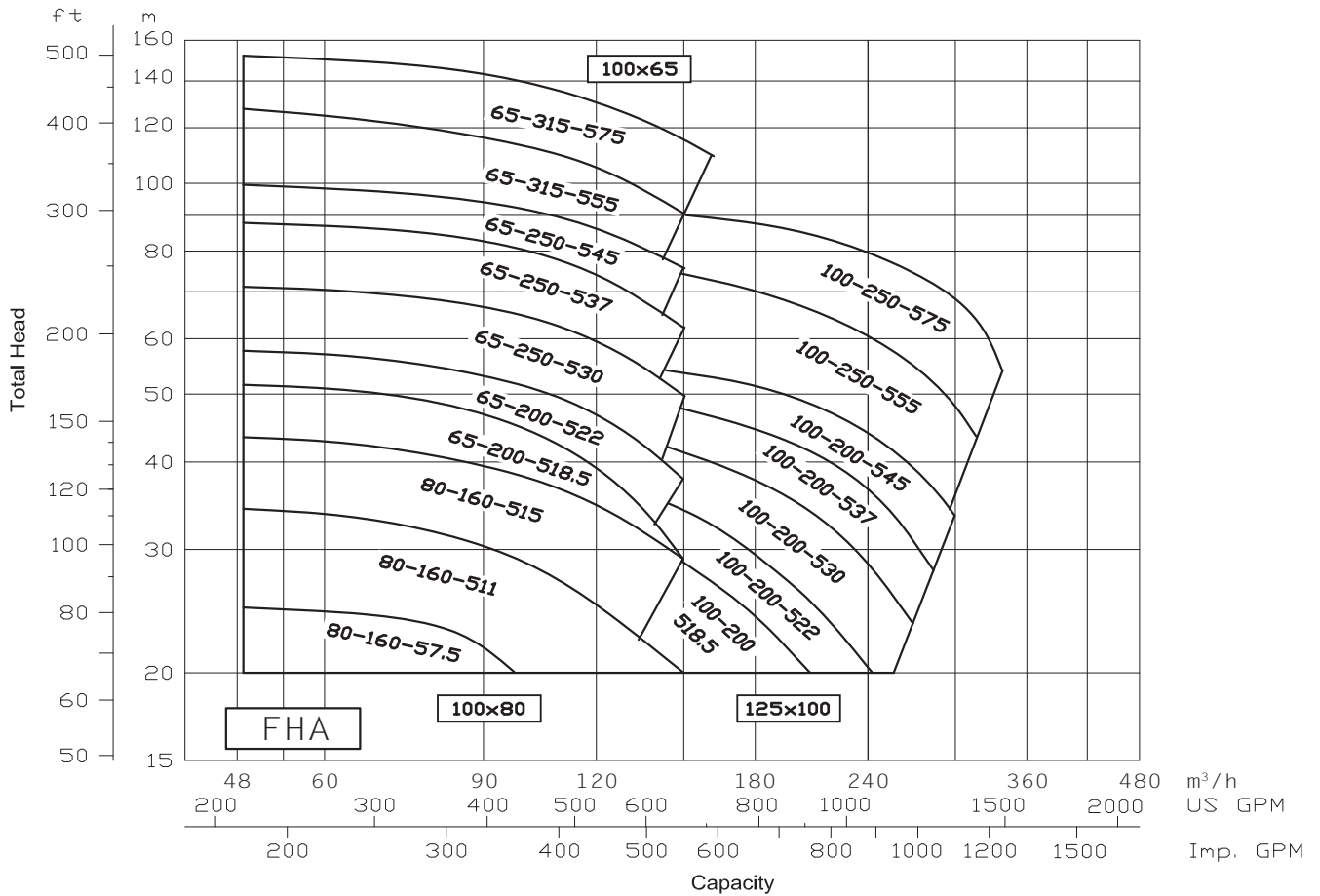
END SUCTION VOLUTE PUMPS

in cast iron

2 Poles

FHA PERFORMANCE CHART

at 3000 min⁻¹ (according to ISO 9906 Attachment A)





FHA

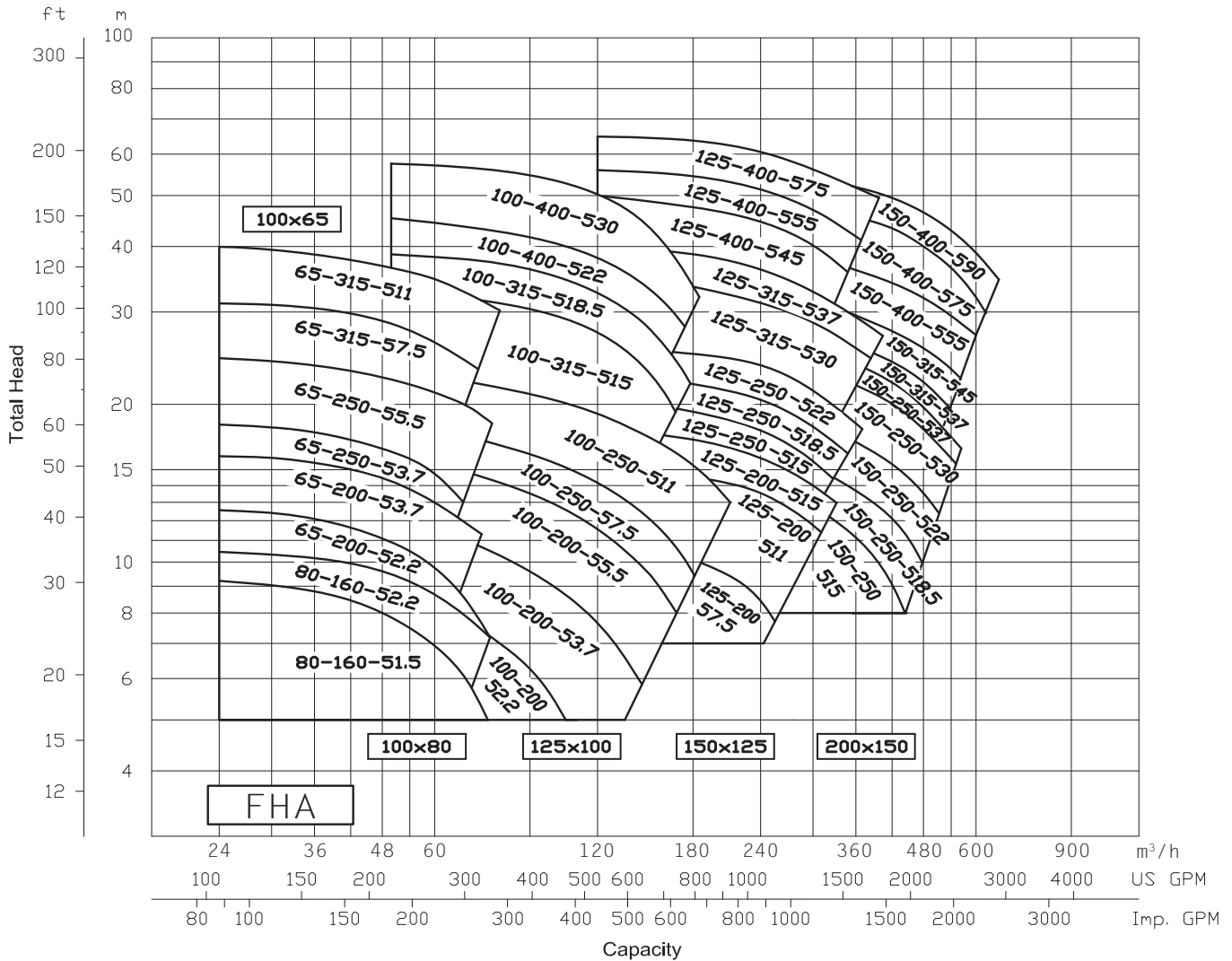
END SUCTION VOLUTE PUMPS

in cast iron

4 Poles

FHA PERFORMANCE CHART

at 1500 min⁻¹ (according to ISO 9906 Attachment A)

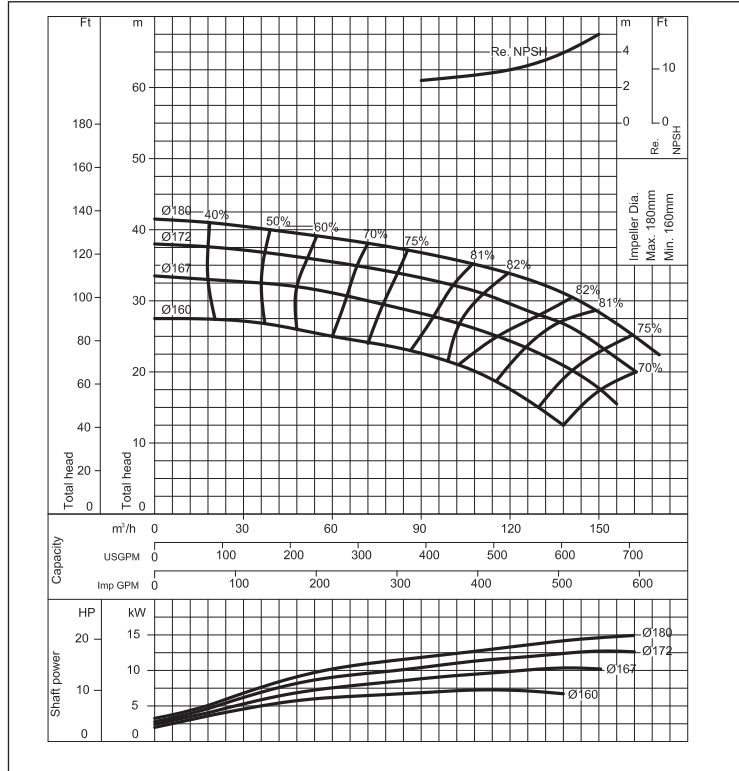


END SUCTION VOLUTE PUMPS in cast iron

PERFORMANCE CURVES FHA 80-160

(according to ISO 9906 Attachment A)

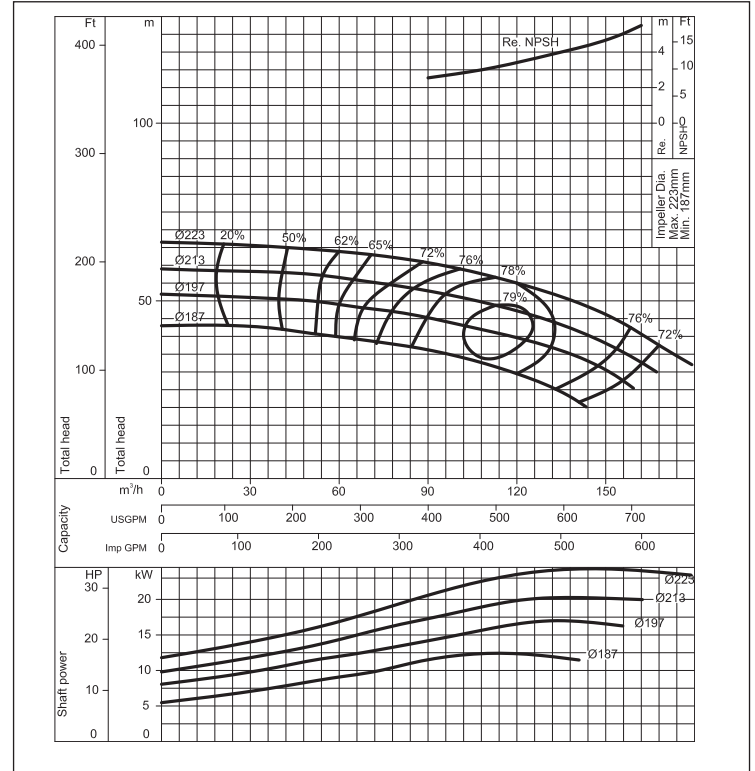
2 Poles



PERFORMANCE CURVES FHA 65-200

(according to ISO 9906 Attachment A)

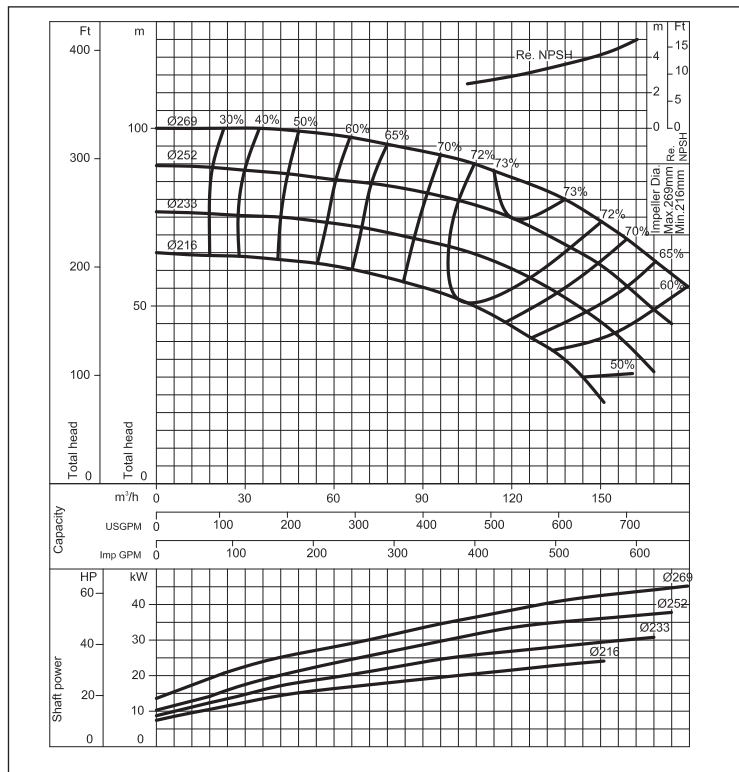
2 Poles



PERFORMANCE CURVES FHA 65-250

(according to ISO 9906 Attachment A)

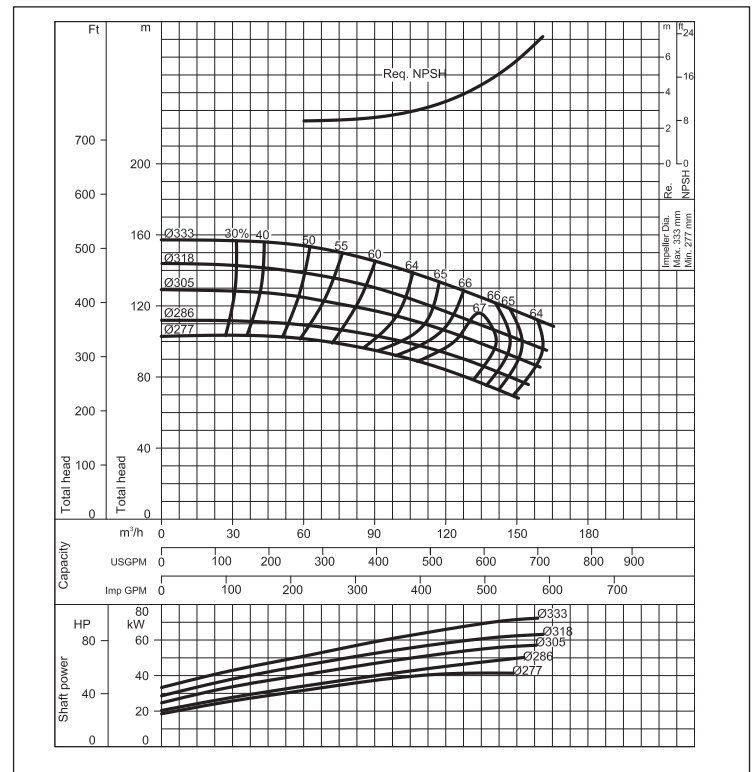
2 Poles



PERFORMANCE CURVES FHA 65-315

(according to ISO 9906 Attachment A)

2 Poles



END SUCTION VOLUTE PUMPS in cast iron

PERFORMANCE CURVES FHA 100-200

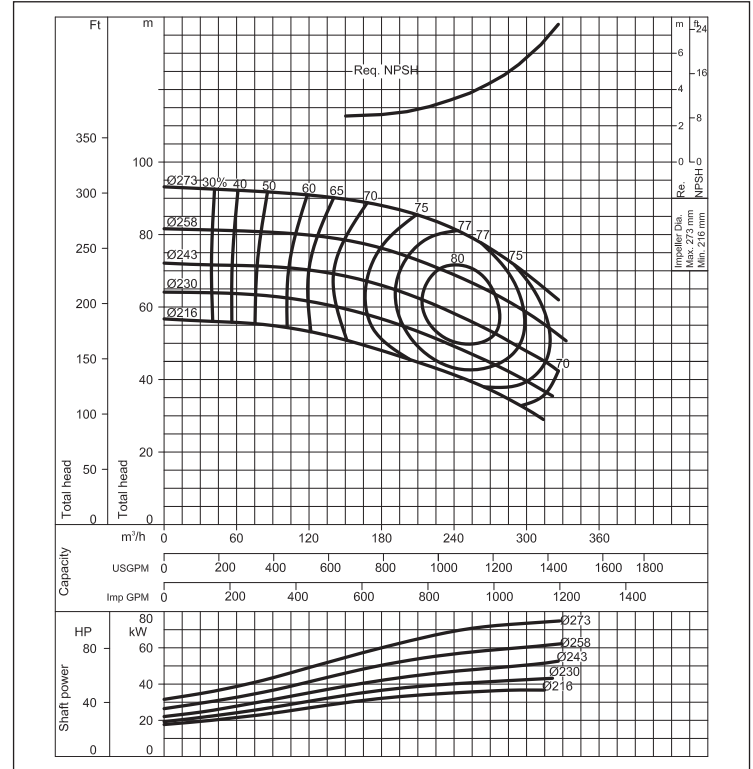
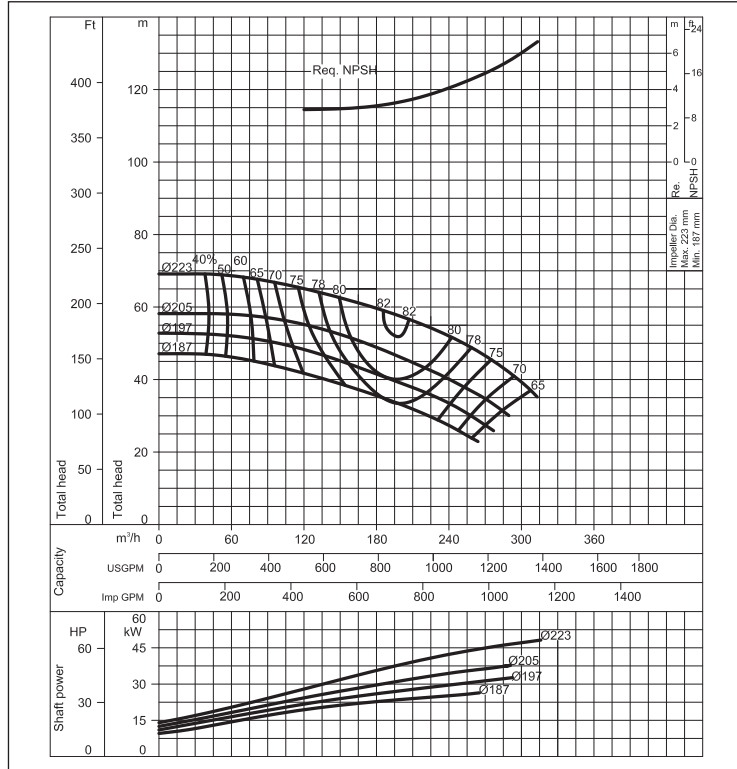
(according to ISO 9906 Attachment A)

2 Poles

PERFORMANCE CURVES FHA 100-250

(according to ISO 9906 Attachment A)

2 Poles



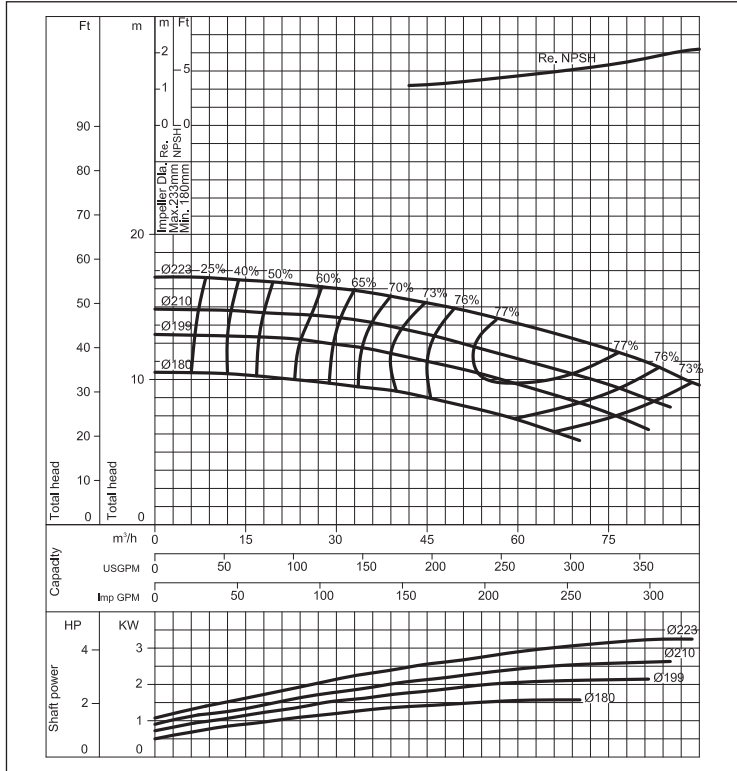
END SUCTION VOLUTE PUMPS

in cast iron

PERFORMANCE CURVES FHA 65-200

(according to ISO 9906 Attachment A)

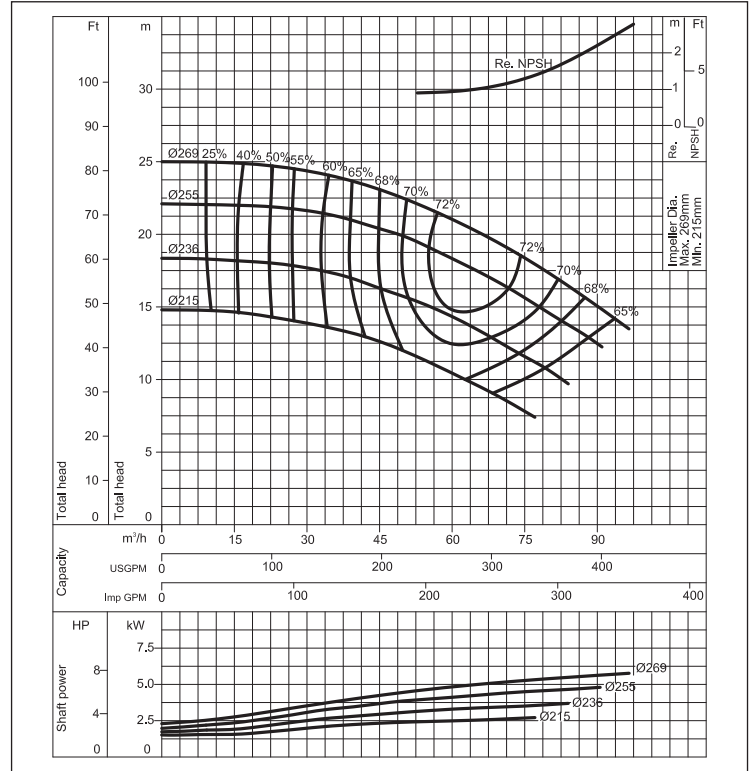
4 Poles



PERFORMANCE CURVES FHA 65-250

(according to ISO 9906 Attachment A)

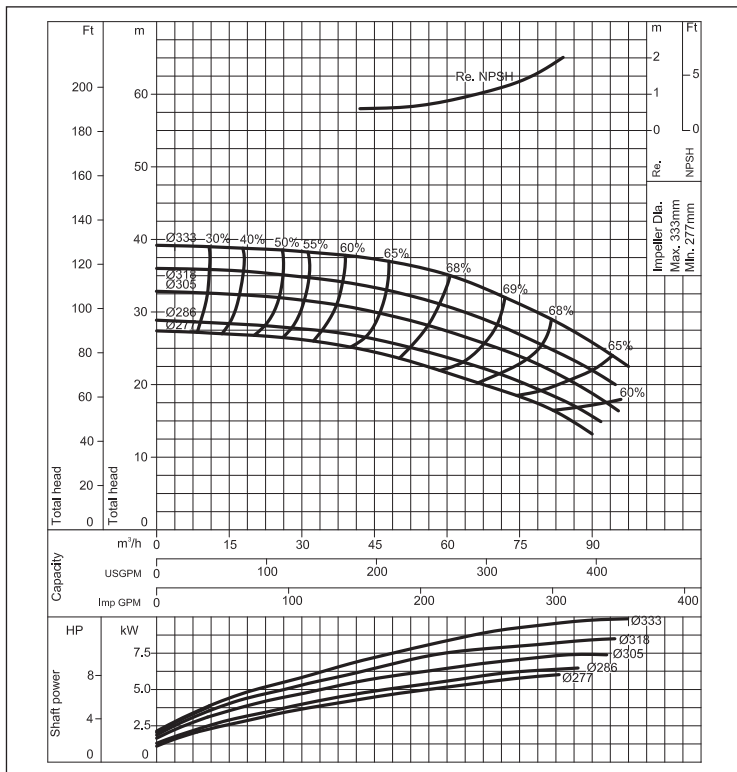
4 Poles



PERFORMANCE CURVES FHA 65-315

(according to ISO 9906 Attachment A)

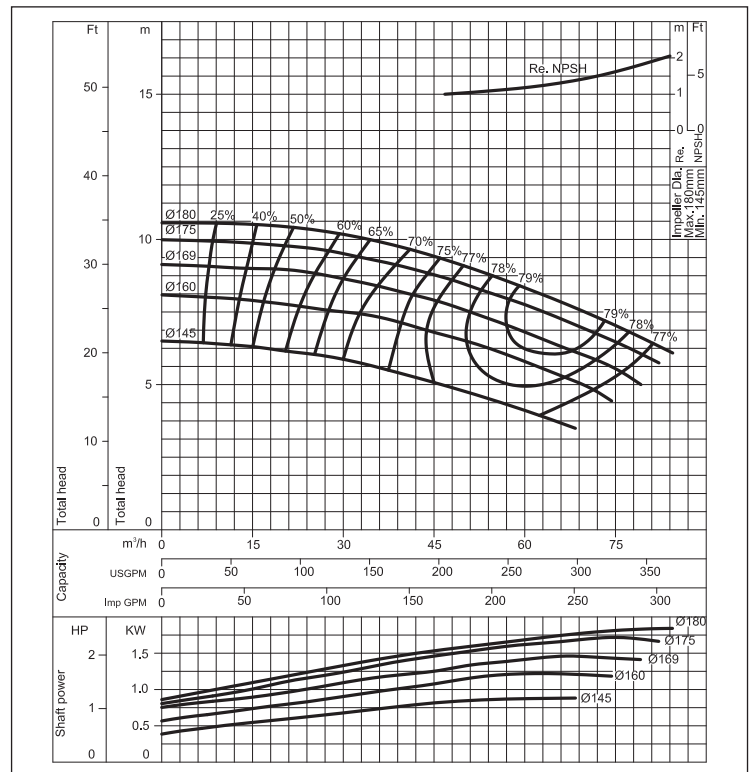
4 Poles



PERFORMANCE CURVES FHA 80-160

(according to ISO 9906 Attachment A)

4 Poles



END SUCTION VOLUTE PUMPS in cast iron

PERFORMANCE CURVES FHA 100-200

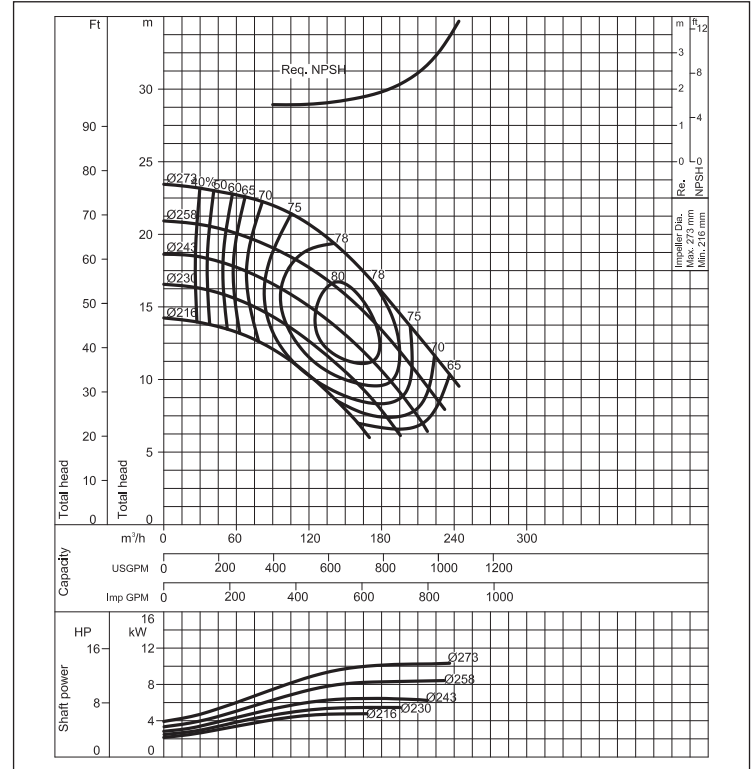
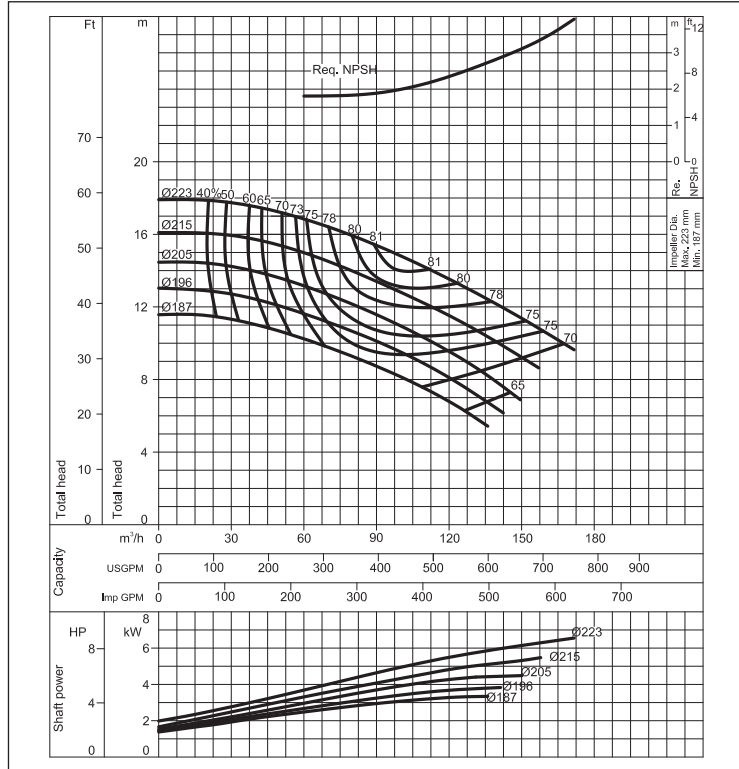
(according to ISO 9906 Attachment A)

4 Poles

PERFORMANCE CURVES FHA 100-250

(according to ISO 9906 Attachment A)

4 Poles



PERFORMANCE CURVES FHA 100-315

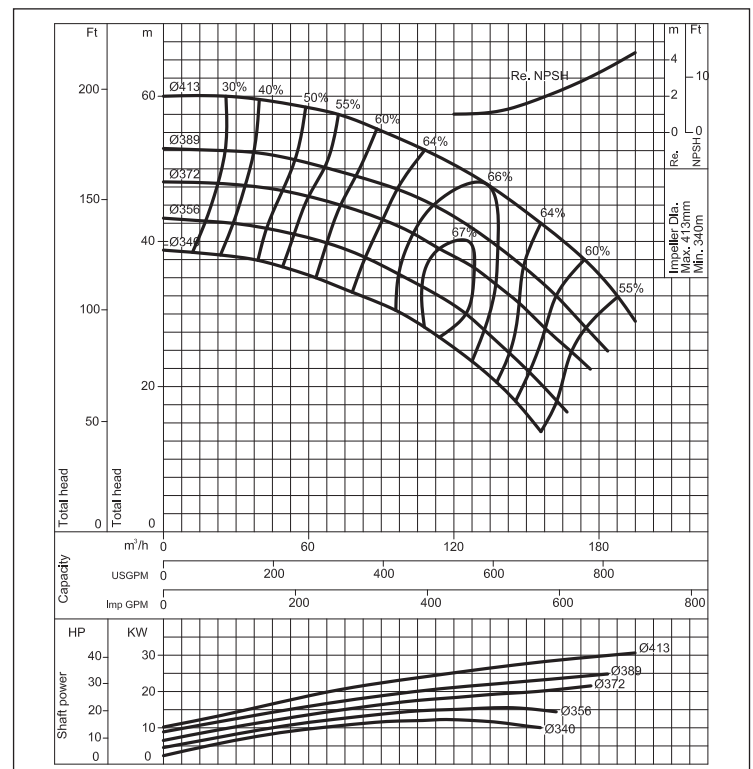
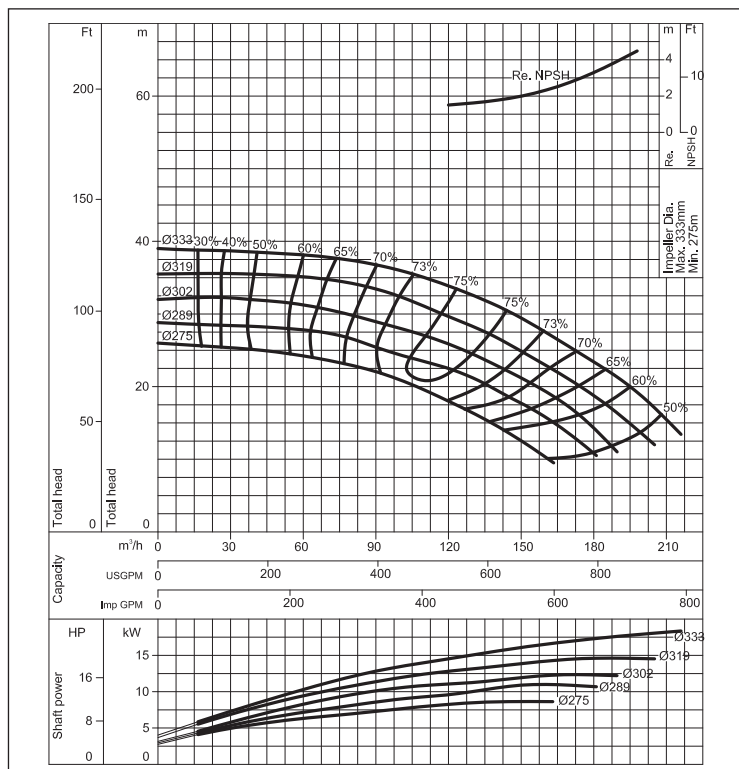
(according to ISO 9906 Attachment A)

4 Poles

PERFORMANCE CURVES FHA 100-400

(according to ISO 9906 Attachment A)

4 Poles



END SUCTION VOLUTE PUMPS

in cast iron

PERFORMANCE CURVES FHA 125-200

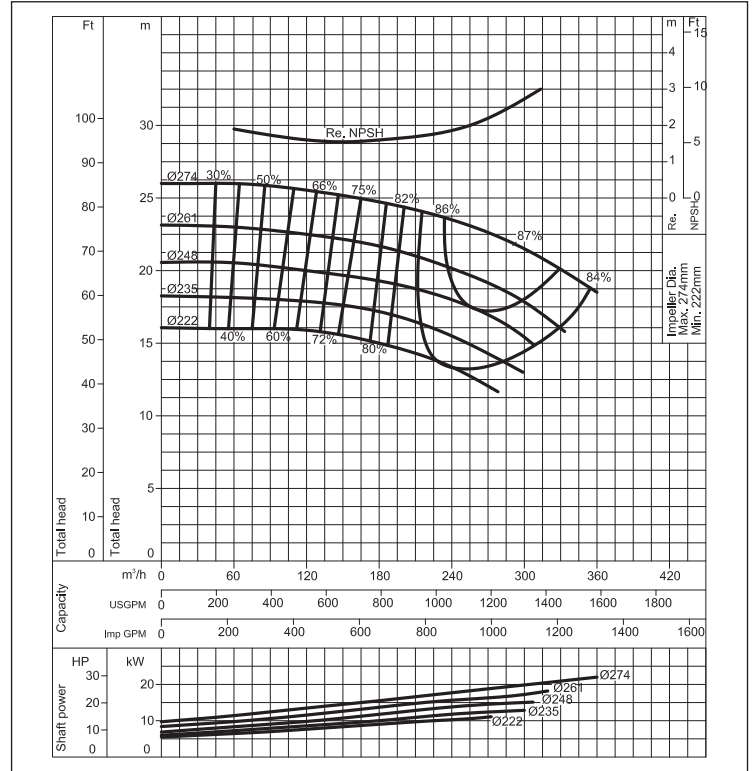
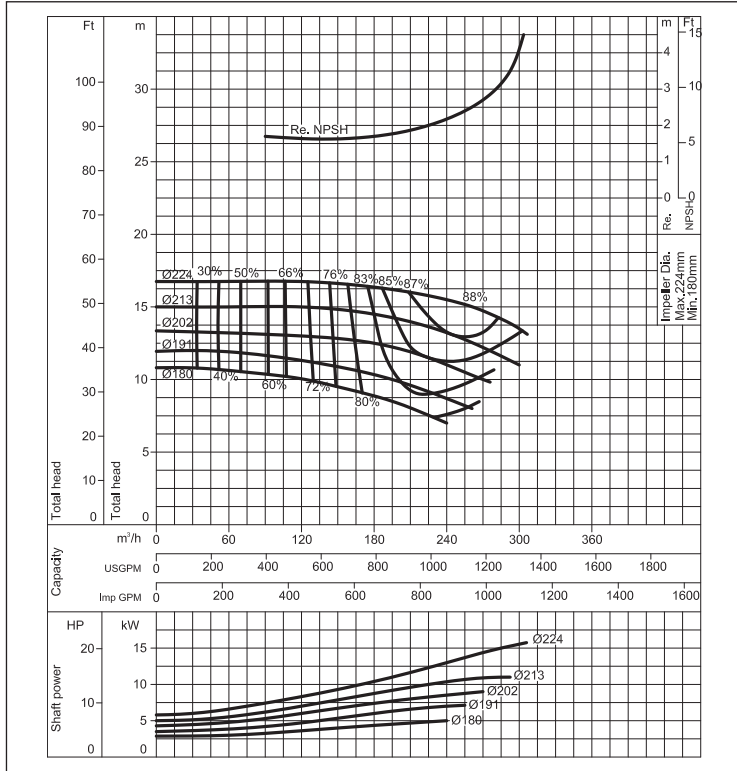
(according to ISO 9906 Attachment A)

4 Poles

PERFORMANCE CURVES FHA 125-250

(according to ISO 9906 Attachment A)

4 Poles



PERFORMANCE CURVES FHA 125-315

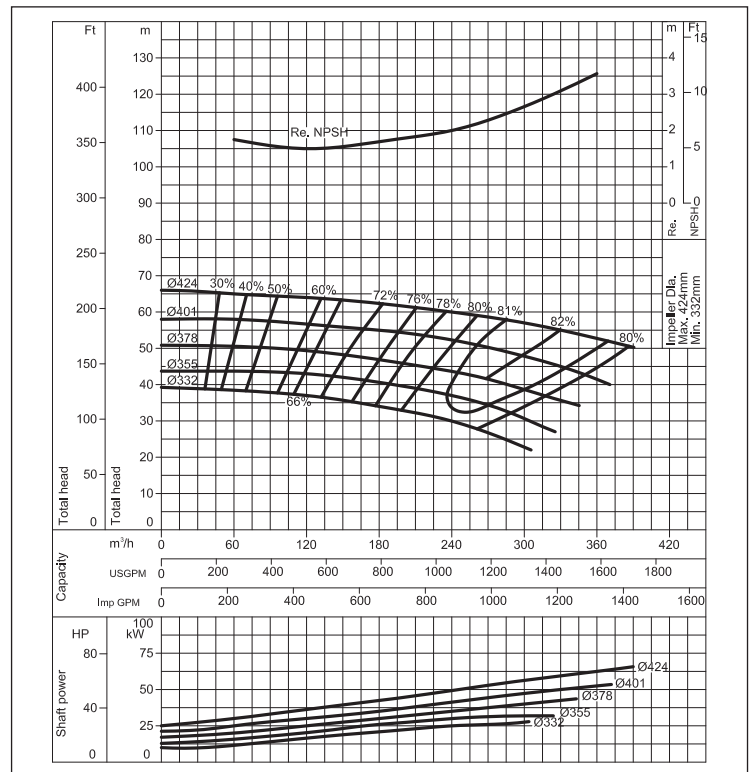
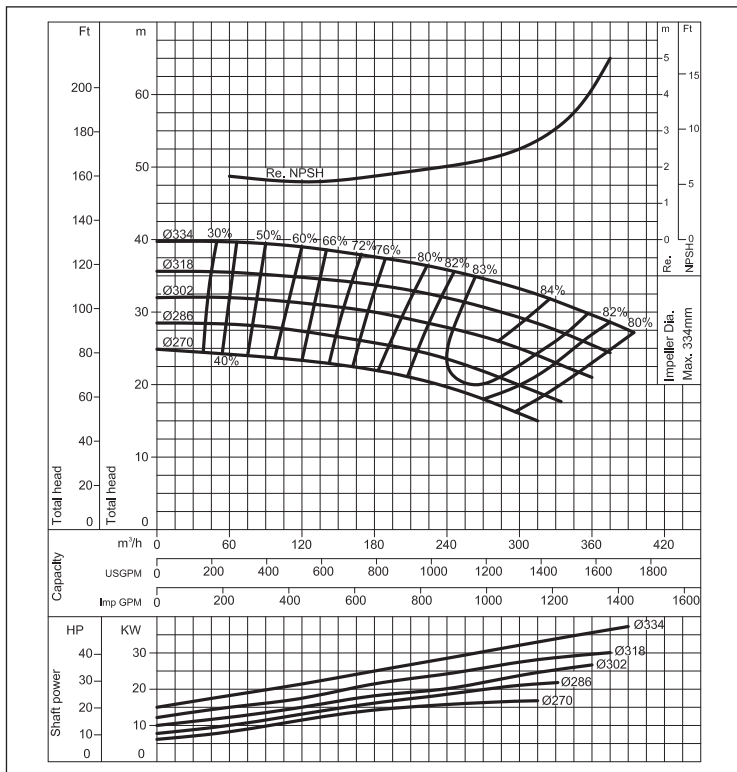
(according to ISO 9906 Attachment A)

4 Poles

PERFORMANCE CURVES FHA 125-400

(according to ISO 9906 Attachment A)

4 Poles





FHA

END SUCTION VOLUTE PUMPS

in cast iron

PERFORMANCE CURVES FHA 150-250

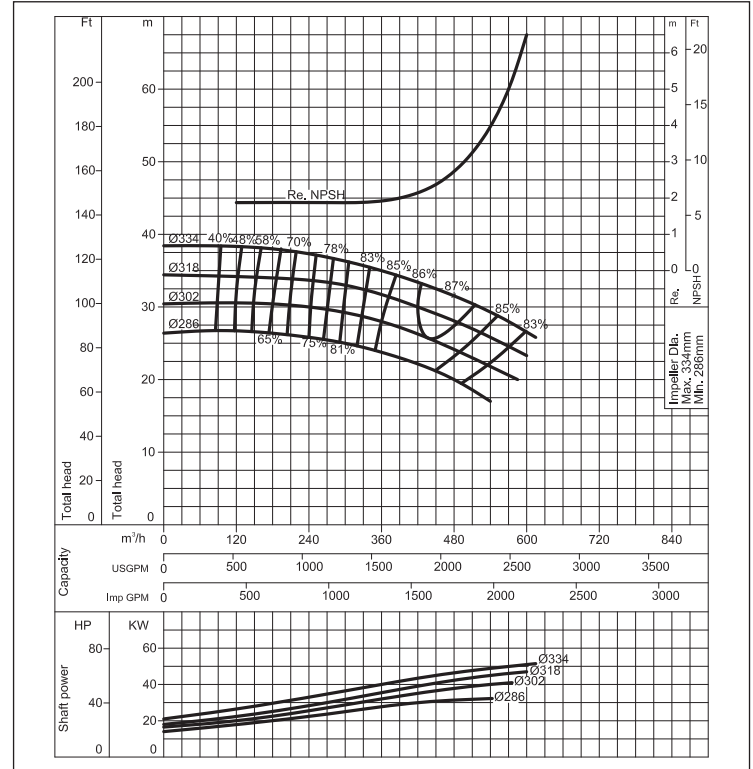
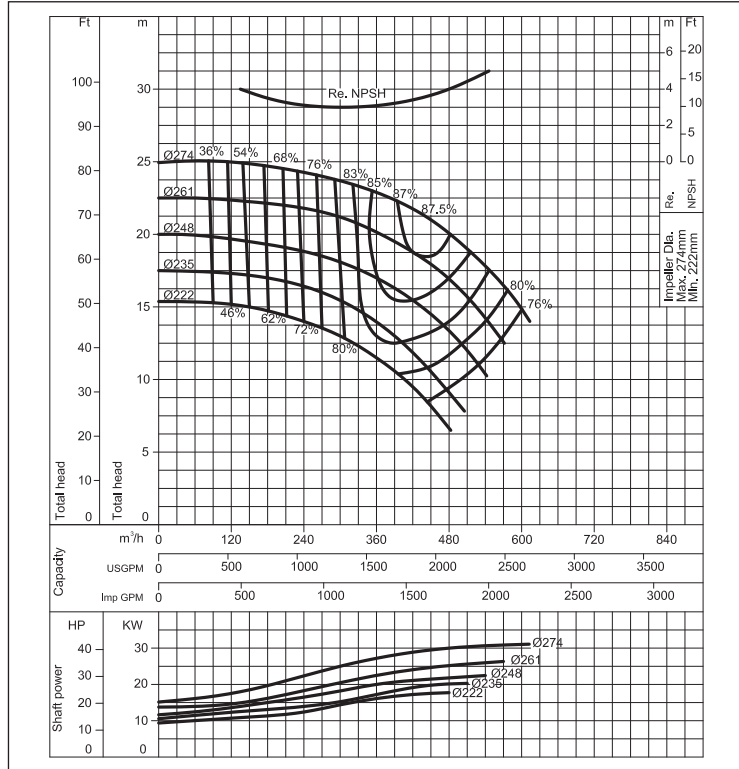
(according to ISO 9906 Attachment A)

4 Poles

PERFORMANCE CURVES FHA 150-315

(according to ISO 9906 Attachment A)

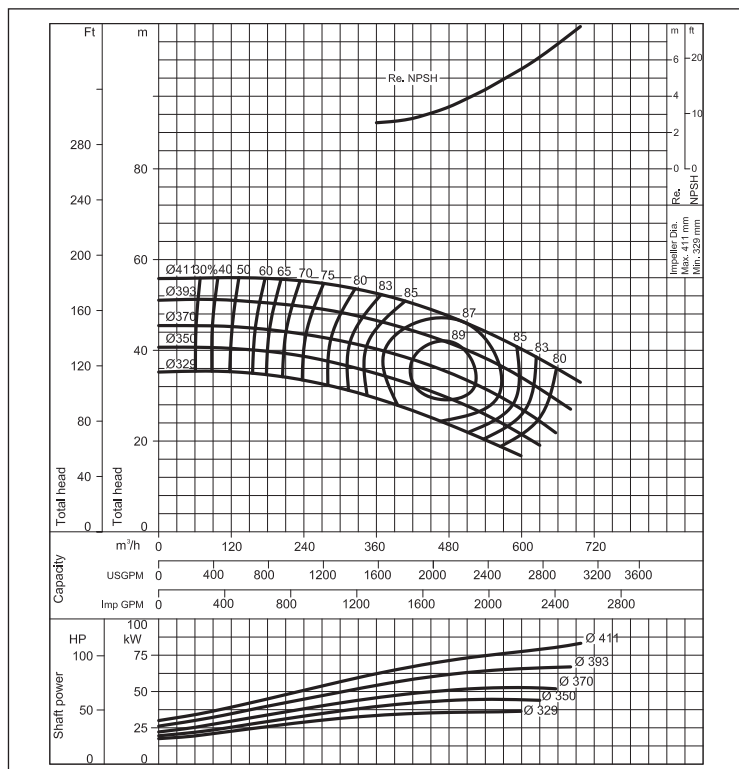
4 Poles



PERFORMANCE CURVES FHA 150-400

(according to ISO 9906 Attachment A)

4 Poles



END SUCTION VOLUTE PUMPS

in cast iron

DIMENSIONS - Bare shaft pump

Pump

Shaft End

Flange

DIMENSIONS TABLE

Flange DIN PN16 dimensions [mm]							
D	f	e	g	t1	t	n	h
65	185	145	122	3	20	4	18
80	200	160	138	3	22	8	18
100	220	180	158	3	24	8	18
125	250	210	188	3	26	8	18
150	285	240	212	3	26	8	22
200	340	295	268	3	30	12	22

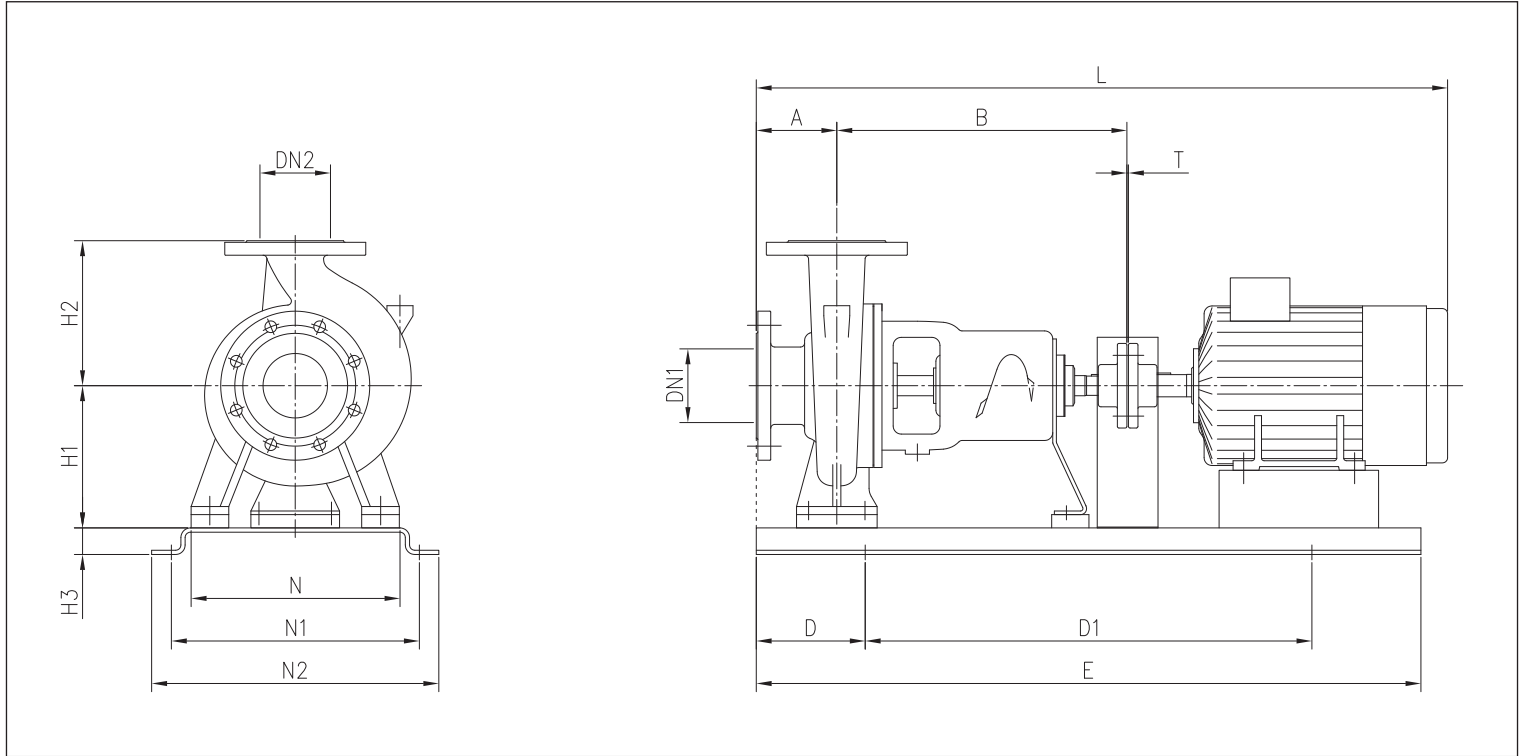
DIMENSIONS TABLE

Model	Size		Pump dimensions [mm]														Shaft dimensions [mm]				Weight [kg]	
	ø1	ø2	A	B	C	D	E	F	G	J	M	N	O	P	R	X	Z	T	Q	U		V
FHA 65-200	100	65	100	500	180	225	250	95	15	65	320	125	110	150	17	370	15	32	80	8	10	81,0
FHA 65-250	100	65	125	500	200	250	280	120	15	80	360	160	110	150	17	370	19	32	80	8	10	91,0
FHA 65-315	100	65	125	530	225	280	315	120	16	80	400	160	110	150	17	370	19	42	110	8	12	113,0
FHA 80-160	100	80	100	500	160	200	212	95	14	65	280	125	110	150	17	370	15	32	80	8	10	64,0
FHA 100-200	125	100	125	500	200	280	280	120	14	80	360	160	110	150	17	370	19	32	80	8	10	85,0
FHA 100-250	125	100	140	530	225	280	315	120	16	80	400	160	110	150	17	370	19	42	110	8	12	140,0
FHA 100-315	125	100	140	530	250	315	315	120	16	80	400	160	110	150	17	370	19	42	110	8	12	166,0
FHA 100-400	125	100	140	530	280	355	400	150	20	100	500	200	110	150	17	370	24	42	110	8	12	218,0
FHA 125-200	150	125	140	500	250	315	315	120	15	80	400	160	110	150	17	370	19	32	80	8	10	156,0
FHA 125-250	150	125	140	530	250	355	315	120	16	80	400	160	110	150	17	370	19	42	110	8	12	167,0
FHA 125-315	150	125	140	530	280	355	400	150	16	100	500	200	110	150	17	370	24	42	110	8	12	221,0
FHA 125-400	150	125	140	530	315	400	400	150	20	100	500	200	110	150	17	370	24	42	110	8	12	267,0
FHA 150-250	200	150	160	530	280	375	400	150	18	100	500	200	110	150	17	370	24	42	110	8	12	238,0
FHA 150-315	200	150	160	670	315	400	450	150	20	100	550	200	140	180	19	500	24	48	110	9	14	289,0
FHA 150-400	200	150	160	670	315	450	450	150	20	100	550	200	140	180	19	500	24	48	110	9	14	336,0

END SUCTION VOLUTE PUMPS

in cast iron

DIMENSIONS - Pump + motor



END SUCTION VOLUTE PUMPS

in cast iron

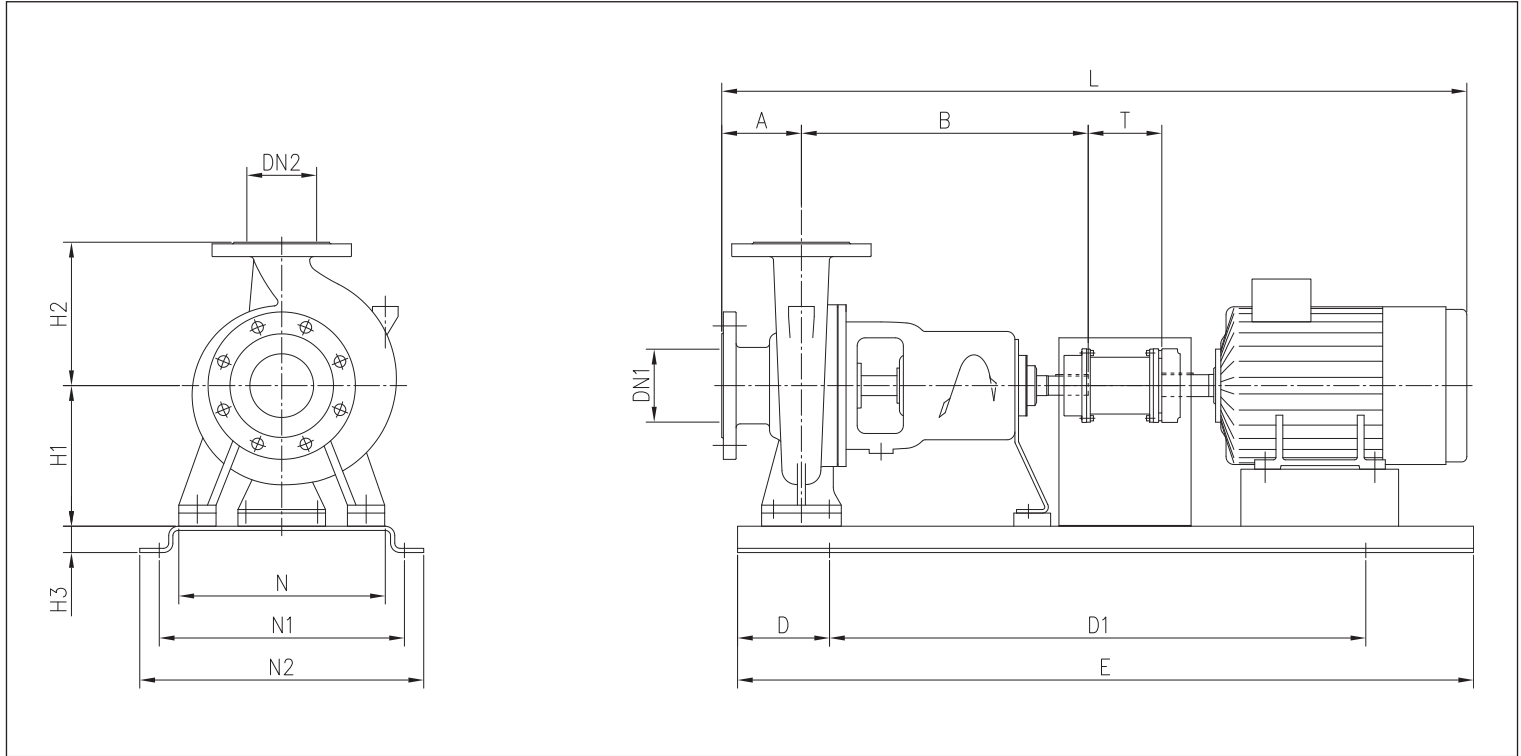
DIMENSIONS TABLE

Model	Motor		Lafert Size	Dimensions [mm]																			Weight [kg]			
	kW	4 Poles		2 Poles	DN1	DN2	A	B	D	D1	E	ØF	H1	H2	H3	H4	ØK	L	N	N1	N2	ØR		S	S1	T
FHA4 80-160	1,5	-	090L BA	100	80	100	500	190	740	1120	22,0	160	200	50	138	10,0	920	280	550	610	17,0	-	70	3	15,0	133,0
FHA4 80-160	2,2	-	100L AA	100	80	100	500	190	740	1120	22,0	160	200	50	145	11,0	969	280	550	610	17,0	-	60	3	15,0	139,0
FHA2 80-160	-	7,5	132S ZA	100	80	100	500	190	740	1120	22,0	160	200	50	195	12,0	1045	280	550	610	17,0	-	28	3	15,0	165,0
FHA2 80-160	-	11	160M YA	100	80	100	500	190	740	1120	22,0	160	200	50	238	14,0	1213	280	550	610	17,0	-	-	3	15,0	201,0
FHA2 80-160	-	15	160M ZA	100	80	100	500	190	740	1120	22,0	160	200	50	238	14,0	1213	280	550	610	17,0	-	-	3	15,0	217,0
FHA4 65-200	2,2	-	100L AA	100	65	100	500	190	740	1120	22,0	180	225	50	145	11,0	969	320	550	610	17,0	-	80	3	15,0	157,0
FHA4 65-200	4	-	112M AA	100	65	100	500	190	740	1120	22,0	180	225	50	161	12,5	991	320	550	610	17,0	-	68	3	15,0	165,0
FHA2 65-200	-	15	160M ZA	100	65	100	500	190	740	1120	22,0	180	225	50	238	14,0	1213	320	550	610	17,0	-	20	3	15,0	243,0
FHA2 65-200	-	18,5	160L ZA	100	65	100	500	190	740	1120	22,0	180	225	50	238	14,0	1257	320	550	610	17,0	-	20	3	15,0	244,0
FHA2 65-200	-	22	180M XA	100	65	100	500	190	740	1120	22,0	180	225	50	270	15,0	1273	320	550	610	17,0	-	-	3	15,0	304,0
FHA4 65-200	-	30	200L LA	100	65	100	500	230	940	1400	26,0	200	225	75	310	19,0	1374	320	550	610	17,0	20	-	4	15,0	396,0
FHA4 65-250	4	-	112M AA	100	65	125	500	190	740	1120	22,0	200	250	50	161	12,5	1016	360	550	610	17,0	-	88	3	19,0	177,0
FHA4 65-250	5,5	-	132S RA	100	65	125	500	190	740	1120	22,0	200	250	50	195	12,0	1070	360	550	610	17,0	-	68	3	19,0	202,0
FHA2 65-250	-	30	200L LA	100	65	125	500	230	940	1400	26,0	200	250	75	310	19,0	1399	360	550	610	17,0	-	-	4	19,0	406,0
FHA2 65-250	-	37	200L NA	100	65	125	500	230	940	1400	26,0	200	250	75	310	19,0	1399	360	550	610	17,0	-	-	4	19,0	424,0
FHA2 65-250	-	45	225M N	100	65	125	500	230	940	1400	26,0	225	250	75	335	19,0	1429	360	550	610	17,0	25	-	4	19,0	486,0
FHA4 65-315	5,5	-	132S RA	100	65	125	530	230	940	1400	26,0	225	280	75	195	12,0	1100	400	550	610	17,0	-	93	3	19,0	256,0
FHA4 65-315	7,5	-	132M TA	100	65	125	530	230	940	1400	26,0	225	280	75	195	12,0	1140	400	550	610	17,0	-	93	3	19,0	266,0
FHA4 65-315	11	-	160M ZA	100	65	125	530	230	940	1400	26,0	225	280	75	238	14,0	1268	400	550	610	17,0	-	65	3	19,0	312,0
FHA2 65-315	-	45	225M N	100	65	125	530	230	940	1400	26,0	225	280	75	335	19,0	1459	400	550	610	17,0	-	-	4	19,0	508,0
FHA2 65-315	-	55	250M N	100	65	125	530	230	940	1400	26,0	250	280	75	370	24,0	1569	400	670	730	17,0	25	-	4	19,0	597,0
FHA2 65-315	-	75	280S T	100	65	125	530	300	1200	1800	26,0	280	280	100	380	24,0	1619	400	670	730	17,0	55	-	4	19,0	760,0
FHA4 100-200	5,5	-	132S RA	125	100	125	500	190	740	1120	22,0	200	280	50	195	12,0	1070	360	550	610	17,0	-	68	3	19,0	196,0
FHA4 100-200	7,5	-	132M TA	125	100	125	500	190	740	1120	22,0	200	280	50	195	12,0	1110	360	550	610	17,0	-	68	3	19,0	206,0
FHA2 100-200	-	30	200L LA	125	100	125	500	230	940	1400	26,0	200	280	75	310	19,0	1399	360	550	610	17,0	-	-	4	19,0	400,0
FHA2 100-200	-	37	200L NA	125	100	125	500	230	940	1400	26,0	200	280	75	310	19,0	1399	360	550	610	17,0	-	-	4	19,0	418,0
FHA2 100-200	-	45	225M N	125	100	125	500	230	940	1400	26,0	225	280	75	335	19,0	1429	360	550	610	17,0	25	-	4	19,0	480,0
FHA2 100-200	-	55	250M N	125	100	125	500	230	940	1400	26,0	250	280	75	370	24,0	1539	360	670	730	17,0	50	-	4	19,0	569,0
FHA4 100-250	5,5	-	132S RA	125	100	140	530	190	740	1120	22,0	225	280	50	195	12,0	1115	400	550	610	17,0	-	93	3	19,0	252,0
FHA4 100-250	7,5	-	132M TA	125	100	140	530	190	740	1120	22,0	225	280	50	195	12,0	1155	400	550	610	17,0	-	93	3	19,0	262,0
FHA4 100-250	11	-	160M ZA	125	100	140	530	230	940	1400	26,0	225	280	75	238	14,0	1283	400	550	610	17,0	-	65	3	19,0	339,0
FHA2 100-250	-	45	225M N	125	100	140	530	230	940	1400	26,0	225	280	75	335	19,0	1474	400	550	610	17,0	-	-	4	19,0	535,0
FHA2 100-250	-	55	250M N	125	100	140	530	230	940	1400	26,0	250	280	75	370	24,0	1584	400	670	730	17,0	25	-	4	19,0	624,0
FHA2 100-250	-	75	280S T	125	100	140	530	300	1200	1800	26,0	280	280	100	380	24,0	1634	400	670	730	17,0	55	-	4	19,0	787,0
FHA4 100-315	15	-	160L ZA	125	100	140	530	230	940	1400	26,0	250	315	75	238	14,0	1327	400	550	610	17,0	-	90	3	19,0	372,0
FHA4 100-315	18,5	-	180M XA	125	100	140	530	230	940	1400	26,0	250	315	75	270	15,0	1343	400	550	610	17,0	-	70	3	19,0	433,0
FHA4 100-400	22	-	180L XA	125	100	140	530	230	940	1400	26,0	280	355	75	270	15,0	1383	500	670	730	17,0	-	100	3	24,0	518,0
FHA4 100-400	30	-	200L NA	125	100	140	530	230	940	1400	26,0	280	355	75	310	19,0	1444	500	670	730	17,0	-	80	4	24,0	590,0
FHA4 125-200	7,5	-	132M TA	150	125	140	500	190	740	1120	22,0	250	315	50	195	12,0	1125	400	550	610	17,0	-	118	3	19,0	279,0
FHA4 125-200	11	-	160M ZA	150	125	140	500	230	940	1400	26,0	250	315	75	238	14,0	1253	400	550	610	17,0	-	90	3	19,0	356,0
FHA4 125-200	15	-	160L ZA	150	125	140	500	230	940	1400	26,0	250	315	75	238	14,0	1297	400	550	610	17,0	-	90	3	19,0	362,0
FHA4 125-250	15	-	160L ZA	150	125	140	530	230	940	1400	26,0	250	355	75	238	14,0	1327	400	550	610	17,0	-	90	3	19,0	373,0
FHA4 125-250	18,5	-	180M XA	150	125	140	530	230	940	1400	26,0	250	355	75	270	15,0	1343	400	550	610	17,0	-	70	3	19,0	434,0
FHA4 125-250	22	-	180L XA	150	125	140	530	230	940	1400	26,0	250	355	75	270	15,0	1383	400	550	610	17,0	-	70	3	19,0	452,0
FHA4 125-315	22	-	180L XA	150	125	140	530	230	940	1400	26,0	280	355	75	270	15,0	1383	500	670	730	17,0	-	100	3	24,0	523,0
FHA4 125-315	30	-	200L NA	150	125	140	530	230	940	1400	26,0	280	355	75	310	19,0	1444	500	670	730	17,0	-	80	4	24,0	597,0
FHA4 125-315	37	-	225S N	150	125	140	530	230	940	1400	26,0	280	355	75	335	19,0	1479	500	670	730	17,0	-	55	4	24,0	634,0
FHA4 125-400	45	-	225M N	150	125	140	530	230	940	1400	26,0	315	400	75	335	19,0	1504	500	670	730	17,0	-	90	4	24,0	716,0
FHA4 125-400	55	-	250M N	150	125	140	530	300	1200	1800	26,0	315	400	100	370	24,0	1584	500	780	850	17,0	-	65	4	24,0	821,0
FHA4 125-400	75	-	280S T	150	125	140	530	300	1200	1800	26,0	315	400	100	380	24,0	1634	500	780	850	17,0	-	35	4	24,0	982,0
FHA4 150-250	18,5	-	180M XA	200	150	160	530	230	940	1400	26,0	280	375	75	270	15,0	1363	500	670	730	17,0	-	100	3	24,0	520,0
FHA4 150-250	22	-	180L XA	200	150	160	530	230	940	1400	26,0	280	375	75	270	15,0	1403	500	670	730	17,0	-	100	3	24,0	538,0
FHA4 150-250	30	-	200L NA	200	150	160	530	230	9																	

END SUCTION VOLUTE PUMPS

in cast iron

DIMENSIONS - Pump + motor with spacer



END SUCTION VOLUTE PUMPS

in cast iron

DIMENSIONS TABLE

Model	Motor		Lafert Size	Dimensions [mm]																				Weight [kg]			
	4 Poles	2 Poles		DN1	DN2	A	B	D	D1	E	ØF	H1	H2	H3	H4	ØK	L	N	N1	N2	ØR	S	S1		T	ØZ	P
FHA4/S 80-160	1,5	-	090L BA	100	80	100	500	190	740	1120	22,0	160	200	50	138	10,0	1057	280	550	610	17,0	-	70	140	15,0	100	135,0
FHA4/S 80-160	2,2	-	100L AA	100	80	100	500	190	740	1120	22,0	160	200	50	145	11,0	1106	280	550	610	17,0	-	60	140	15,0	100	141,0
FHA2/S 80-160	-	7,5	132S ZA	100	80	100	500	230	940	1400	26,0	160	200	75	195	12,0	1182	280	550	610	17,0	-	28	140	15,0	100	198,0
FHA2/S 80-160	-	11	160M YA	100	80	100	500	230	940	1400	26,0	160	200	75	238	14,0	1350	280	550	610	17,0	-	-	140	15,0	100	234,0
FHA2/S 80-160	-	15	160M ZA	100	80	100	500	230	940	1400	26,0	160	200	75	238	14,0	1350	280	550	610	17,0	-	-	140	15,0	100	250,0
FHA4/S 65-200	2,2	-	100L AA	100	65	100	500	190	740	1120	22,0	180	225	50	145	11,0	1106	320	550	610	17,0	-	80	140	15,0	100	158,0
FHA4/S 65-200	4	-	112M AA	100	65	100	500	190	740	1120	22,0	180	225	50	161	12,5	1128	320	550	610	17,0	-	68	140	15,0	100	166,0
FHA2/S 65-200	-	15	160M ZA	100	65	100	500	230	940	1400	26,0	180	225	75	238	14,0	1350	320	550	610	17,0	-	20	140	15,0	100	276,0
FHA2/S 65-200	-	18,5	160L ZA	100	65	100	500	230	940	1400	26,0	180	225	75	238	14,0	1394	320	550	610	17,0	-	20	140	15,0	100	277,0
FHA2/S 65-200	-	22	180M XA	100	65	100	500	230	940	1400	26,0	180	225	75	270	15,0	1410	320	550	610	17,0	-	-	140	15,0	100	337,0
FHA2/S 65-200	-	30	200L LA	100	65	100	500	230	940	1400	26,0	200	225	75	310	19,0	1510	320	550	610	17,0	20	-	140	15,0	100	399,0
FHA4/S 65-250	4	-	112M AA	100	65	125	500	190	740	1120	22,0	200	250	50	161	12,5	1153	360	550	610	17,0	-	88	140	19,0	125	178,0
FHA4/S 65-250	5,5	-	132S RA	100	65	125	500	230	940	1400	26,0	200	250	75	195	12,0	1207	360	550	610	17,0	-	68	140	19,0	125	235,0
FHA2/S 65-250	-	30	200L LA	100	65	125	500	230	940	1400	26,0	200	250	75	310	19,0	1535	360	550	610	17,0	-	-	140	19,0	125	409,0
FHA2/S 65-250	-	37	200L NA	100	65	125	500	230	940	1400	26,0	200	250	75	310	19,0	1535	360	550	610	17,0	-	-	140	19,0	125	427,0
FHA2/S 65-250	-	45	225M N	100	65	125	500	230	940	1400	26,0	225	250	75	335	19,0	1565	360	550	610	17,0	25	-	140	19,0	125	489,0
FHA4/S 65-315	5,5	-	132S RA	100	65	125	530	230	940	1400	26,0	225	280	75	195	12,0	1237	400	550	610	17,0	-	93	140	19,0	125	258,0
FHA4/S 65-315	7,5	-	132M TA	100	65	125	530	230	940	1400	26,0	225	280	75	195	12,0	1277	400	550	610	17,0	-	93	140	19,0	125	268,0
FHA4/S 65-315	11	-	160M ZA	100	65	125	530	230	940	1400	26,0	225	280	75	238	14,0	1405	400	550	610	17,0	-	65	140	19,0	125	314,0
FHA2/S 65-315	-	45	225M N	100	65	125	530	300	1200	1800	26,0	225	280	100	335	19,0	1595	400	670	730	17,0	-	-	140	19,0	125	557,0
FHA2/S 65-315	-	55	250M N	100	65	125	530	300	1200	1800	26,0	250	280	100	370	24,0	1705	400	670	730	17,0	25	-	140	19,0	120	635,0
FHA2/S 65-315	-	75	280S T	100	65	125	530	300	1200	1800	26,0	280	280	100	380	24,0	1755	400	670	730	17,0	55	-	140	19,0	185	766,0
FHA4/S 100-200	5,5	-	132S RA	125	100	125	500	230	940	1400	26,0	200	280	75	195	12,0	1207	360	550	610	17,0	-	68	140	19,0	125	229,0
FHA4/S 100-200	7,5	-	132M TA	125	100	125	500	230	940	1400	26,0	200	280	75	195	12,0	1247	360	550	610	17,0	-	68	140	19,0	125	239,0
FHA2/S 100-200	-	30	200L LA	125	100	125	500	230	940	1400	26,0	200	280	75	310	19,0	1535	360	550	610	17,0	-	-	140	19,0	125	403,0
FHA2/S 100-200	-	37	200L NA	125	100	125	500	230	940	1400	26,0	200	280	75	310	19,0	1535	360	550	610	17,0	-	-	140	19,0	125	421,0
FHA2/S 100-200	-	45	225M N	125	100	125	500	230	940	1400	26,0	225	280	75	335	19,0	1565	360	550	610	17,0	25	-	140	19,0	125	483,0
FHA2/S 100-200	-	55	250M N	125	100	125	500	300	1200	1800	26,0	250	280	100	370	24,0	1675	360	670	730	17,0	50	-	140	19,0	125	607,0
FHA4/S 100-250	5,5	-	132S RA	125	100	140	530	230	940	1400	26,0	225	280	75	195	12,0	1252	400	550	610	17,0	-	93	140	19,0	140	285,0
FHA4/S 100-250	7,5	-	132M TA	125	100	140	530	230	940	1400	26,0	225	280	75	195	12,0	1292	400	550	610	17,0	-	93	140	19,0	140	295,0
FHA4/S 100-250	11	-	160M ZA	125	100	140	530	230	940	1400	26,0	225	280	75	238	14,0	1420	400	550	610	17,0	-	65	140	19,0	140	341,0
FHA2/S 100-250	-	45	225M N	125	100	140	530	300	1200	1800	26,0	225	280	100	335	19,0	1610	400	670	730	17,0	-	-	140	19,0	140	584,0
FHA2/S 100-250	-	55	250M N	125	100	140	530	300	1200	1800	26,0	250	280	100	370	24,0	1720	400	670	730	17,0	25	-	140	19,0	120	662,0
FHA2/S 100-250	-	75	280S T	125	100	140	530	300	1200	1800	26,0	280	280	100	380	24,0	1770	400	670	730	17,0	55	-	140	19,0	185	793,0
FHA4/S 100-315	15	-	160L ZA	125	100	140	530	230	940	1400	26,0	250	315	75	238	14,0	1464	400	550	610	17,0	-	90	140	19,0	140	374,0
FHA4/S 100-315	18,5	-	180M XA	125	100	140	530	230	940	1400	26,0	250	315	75	270	15,0	1480	400	550	610	17,0	-	70	140	19,0	140	436,0
FHA4/S 100-400	22	-	180L XA	125	100	140	530	230	940	1400	26,0	280	355	75	270	15,0	1520	500	670	730	17,0	-	100	140	24,0	140	520,0
FHA4/S 100-400	30	-	200L NA	125	100	140	530	300	1200	1800	26,0	280	355	100	310	19,0	1580	500	670	730	17,0	-	80	140	24,0	140	624,0
FHA4/S 125-200	7,5	-	132M TA	150	125	140	500	230	940	1400	26,0	250	315	75	195	12,0	1262	400	550	610	17,0	-	118	140	19,0	140	311,0
FHA4/S 125-200	11	-	160M ZA	150	125	140	500	230	940	1400	26,0	250	315	75	238	14,0	1390	400	550	610	17,0	-	90	140	19,0	140	358,0
FHA4/S 125-200	15	-	160L ZA	150	125	140	500	230	940	1400	26,0	250	315	75	238	14,0	1434	400	550	610	17,0	-	90	140	19,0	140	364,0
FHA4/S 125-250	15	-	160L ZA	150	125	140	530	230	940	1400	26,0	250	355	75	238	14,0	1464	400	550	610	17,0	-	90	140	19,0	140	374,0
FHA4/S 125-250	18,5	-	180M XA	150	125	140	530	230	940	1400	26,0	250	355	75	270	15,0	1480	400	550	610	17,0	-	70	140	19,0	140	437,0
FHA4/S 125-250	22	-	180L XA	150	125	140	530	230	940	1400	26,0	250	355	75	270	15,0	1520	400	550	610	17,0	-	70	140	19,0	140	455,0
FHA4/S 125-315	22	-	180L XA	150	125	140	530	230	940	1400	26,0	280	355	75	270	15,0	1520	500	670	730	17,0	-	100	140	24,0	140	525,0
FHA4/S 125-315	30	-	200L NA	150	125	140	530	300	1200	1800	26,0	280	355	100	310	19,0	1580	500	670	730	17,0	-	80	140	24,0	140	631,0
FHA4/S 125-315	37	-	225S N	150	125	140	530	300	1200	1800	26,0	280	355	100	335	19,0	1615	500	670	730	17,0	-	55	140	24,0	140	671,0
FHA4/S 125-400	45	-	225M N	150	125	140	530	300	1200	1800	26,0	315	400	100	335	19,0	1640	500	670	730	17,0	-	90	140	24,0	140	754,0
FHA4/S 125-400	55	-	250M N	150	125	140	530	300	1200	1800	26,0	315	400	100	370	24,0	1720	500	780	850	17,0	-	65	140	24,0	140	827,0
FHA4/S 125-400	75	-	280S T	150	125	140	530	300	1200	1800	26,0	315	400	100	380	24,0	1770	500	780	850	17,0	-	35	140			

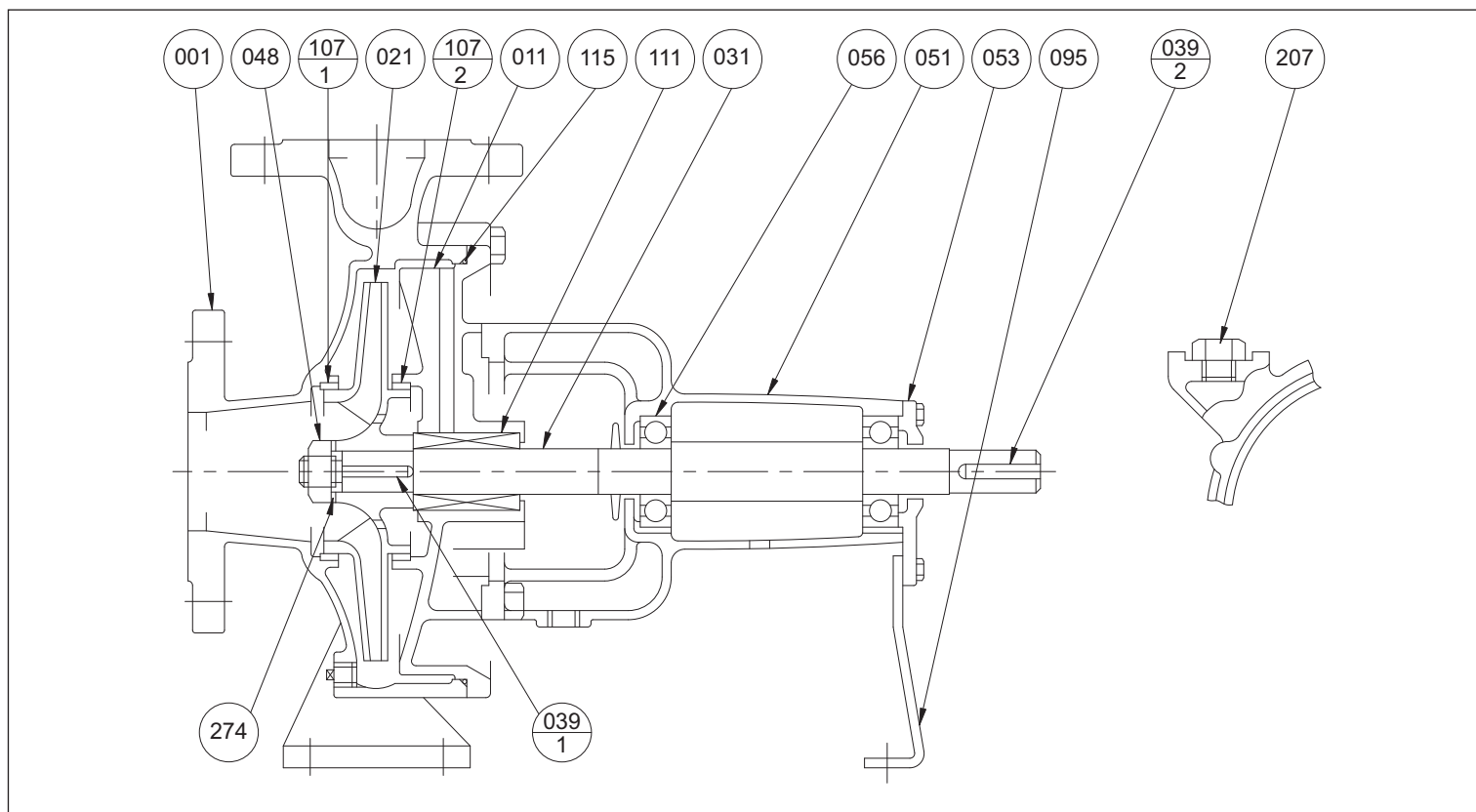
END SUCTION VOLUTE PUMPS

in cast iron

SPECIFICATIONS

Description	Standard		Optional	
	2 poles model	4 poles model	2 poles model	4 poles model
Liquid Name	Clean water, Light chemical treatment			
Temperature	0°C to +80 °C		-20°C to +120 °C	
Max. working pressure	16 bar (16.3 kgf/cm ²)			
Synchronous speed	3000 min ⁻¹	1500 min ⁻¹	3000 min ⁻¹	1500 min ⁻¹
Installation	Indoors		Outdoors	
Construction	Impeller	Enclosed		
	Shaft seal	Mechanical seal		Gland Packing
	Sealing	Self flushing		External flushing
	Bearing	Sealed ball bearing		Oil bath
Flange	Suction & Discharge		DIN PN-16	
	Casing	Cast Iron		Ductile Cast Iron (GJS400)
Material	Impeller	Bronze Casting (CAC406/BC6)		Cast iron; Ductile Cast Iron (GJS400)
	Shaft	403 Stainless steel		304; 316 Stainless steel
	Seal	Mechanical Seal: Ceramic/Carbon/NBR		Gland Packing : Teflon (PTFE) impregnated Mechanical Seal : SiC/SiC
	Bare shaft	-		Priming funnel ; valve; Companion Flange
Accessories	With motor	Common base, Coupling, Coupling guard		Priming funnel ; valve; Companion Flange

SECTIONAL VIEW



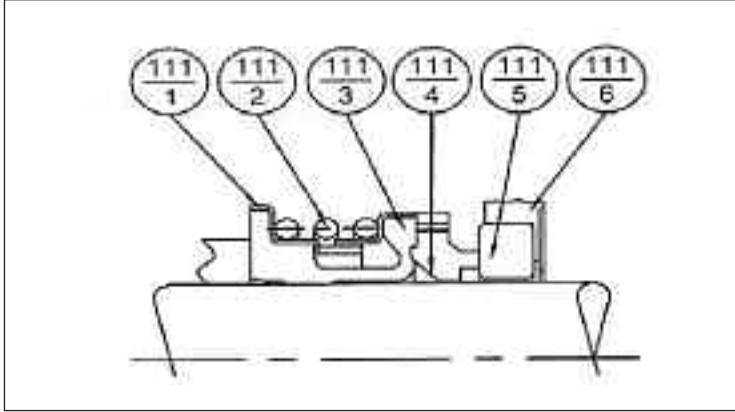
MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
001	Casing	Cast Iron	056	Ball Bearing	-
011	Casing Cover	Cast Iron	095	Stay	Steel
021	Impeller	Bronze	107-1	Casing Ring	Bronze
031	Shaft	Stainless Steel	107-2	Casing Ring	Bronze
039-1	Impeller Key	Steel	111	Mechanical Seal	Ceramic/Carbon/NBR
039-2	Key	Steel	115	O-Ring	NBR
048	Impeller Nut	Brass	207	Plug	Steel
051	Bearing Housing	Cast Iron	274	Impeller Nut Washer	Steel
053	Bearing Cover	Cast Iron			

END SUCTION VOLUTE PUMPS

in cast iron

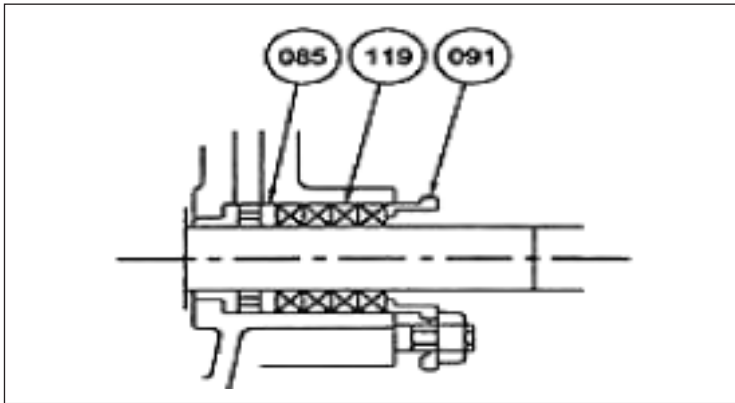
MECHANICAL SEAL standard



MATERIALS TABLE

Ref.	Name	Material
111-6	Cup Gasket	NBR
111-5	Mating Ring	Ceramic
111-4	Seal Ring	Carbon
111-3	Bellows	EPDM
111-2	Spring	Stainless Steel
111-1	Spring Holder	Stainless Steel

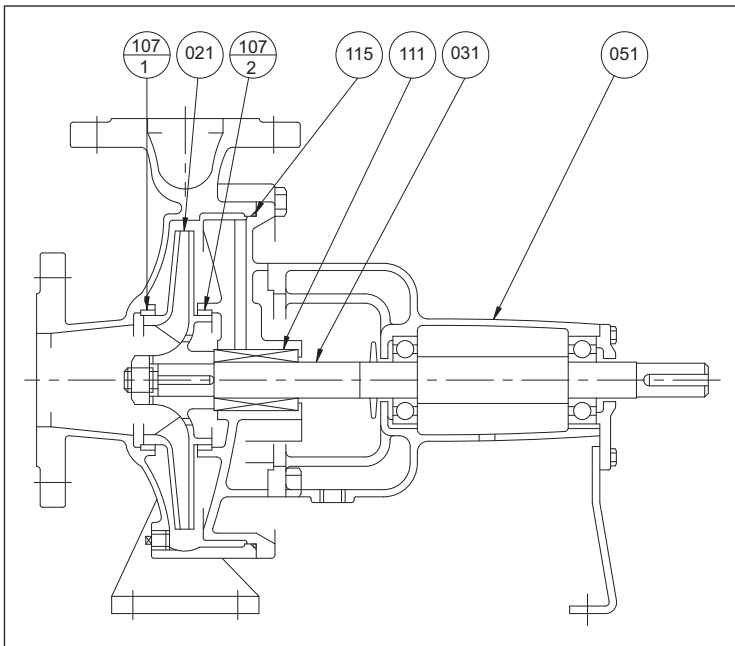
GLAND PACKING option



MATERIALS TABLE

Ref.	Name	Material
119	Gland Packing	Teflon Impregnated
091	Gland	Bronze
085	Lantern Ring	Bronze

SECTIONAL VIEW



SPARE PARTS

Recommended spare parts sock for 2 years' continus operation

Ref.	Name	Q.ty/Unit
Pumps with mechanical seals (standard):		
021	Impeller	1
031	Shaft	1
051	Ball bearing	2
107	Casing ring	2
111	Mechanical seal	1
115	O-Ring	1
Pumps with gland packing (optional):		
111	Gland packing	1



FHA

END SUCTION VOLUTE PUMPS

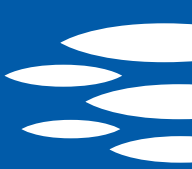
in cast iron

CHANGEABILITY CHART

Part name	Casing	Casing cover	Impeller	Shaft	Impeller key	Key	Impeller nut	Bearing housing	Bearing cover	Ball bearing	Stay	Casing ring	Mechanical seal	Casing gasket	Plug	Impeller nut wash
Model	001	011	021	031	039-1	039-2	048	051	053	056	095	107	111	115	207	274
FHA 65-200	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
FHA 65-250	2	2	2	1	1	1	1	1	1	1	1	1	1	2	1	1
FHA 65-315	3	3	3	2	1	2	2	2	2	2	2	1	2	3	1	2
FHA 80-160	4	4	4	3	2	1	3	1	1	1	1	2	3	4	1	3
FHA 100-200	5	5	5	1	1	1	1	1	1	1	1	3	1	1	1	1
FHA 100-250	6	6	6	2	3	2	2	2	2	2	2	3	2	2	1	2
FHA 100-315	7	7	7	4	1	2	1	2	2	2	2	4	3	3	1	4
FHA 100-400	8	8	8	5	4	2	2	2	2	2	2	4	2	5	1	5
FHA 125-200	9	9	9	1	1	1	1	1	1	1	1	4	1	1	2	1
FHA 125-250	10	10	10	4	1	2	1	2	2	2	2	5	2	2	2	4
FHA 125-315	11	11	11	5	4	2	2	2	2	2	2	6	3	3	2	5
FHA 125-400	12	12	12	5	4	2	2	2	2	2	2	6	2	4	2	5
FHA 150-250	13	13	13	5	4	2	2	2	2	2	2	7	2	2	2	5
FHA 150-315	14	14	14	6	5	3	4	3	3	3	3	8	4	3	2	6
FHA 150-400	15	15	15	6	5	3	4	3	3	3	3	8	4	5	2	6

The chart shows the part list (main parts) of FHA pumps, and each part is designated by a number. (1,2,3,...)

Parts designated by the same number and placed in the same column means that these parts are changeable among these pumps sizes.



FHA

END SUCTION VOLUTE PUMPS

in cast iron

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