

ENR



End Suction Centrifugal Pump



motralec

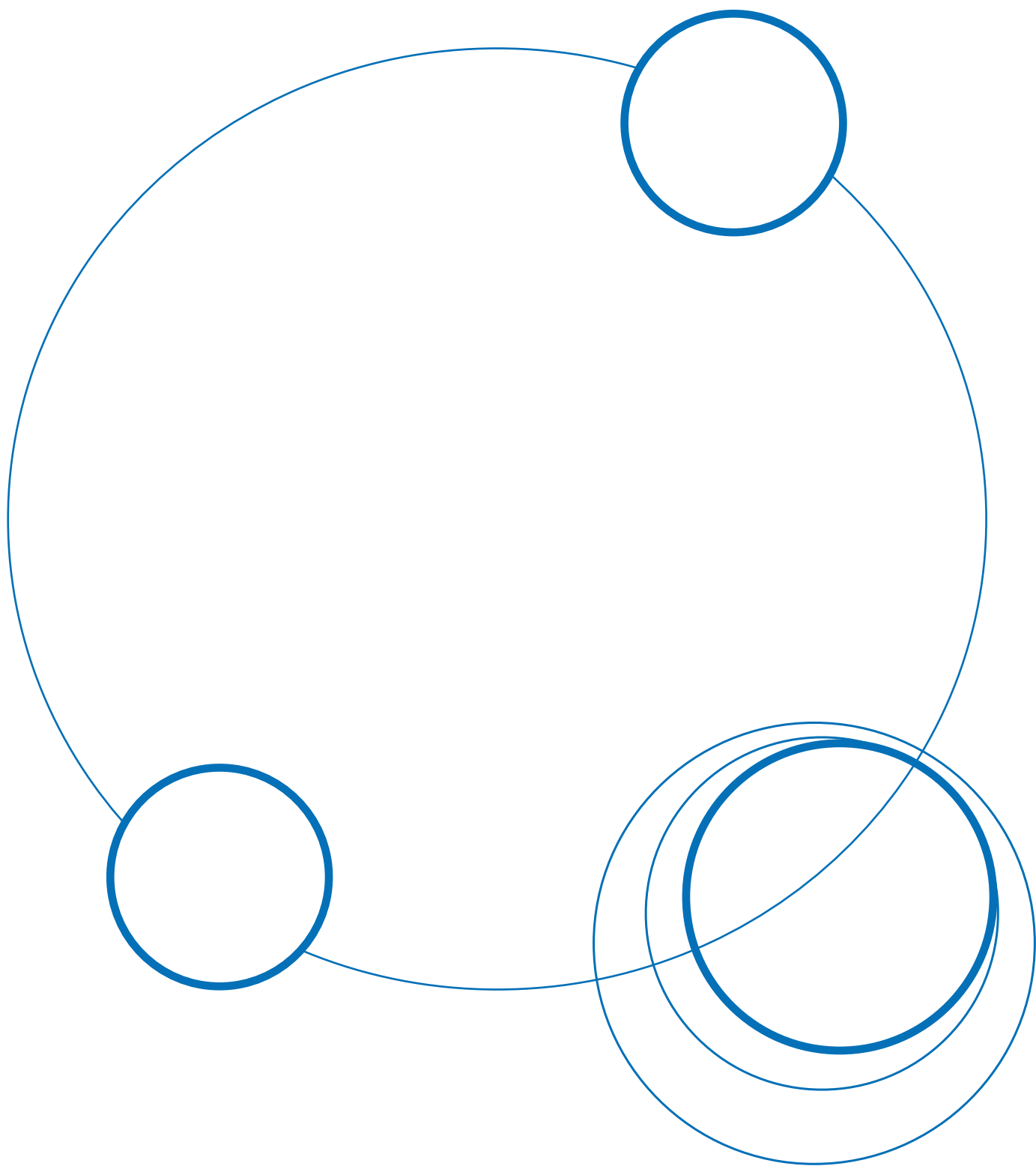
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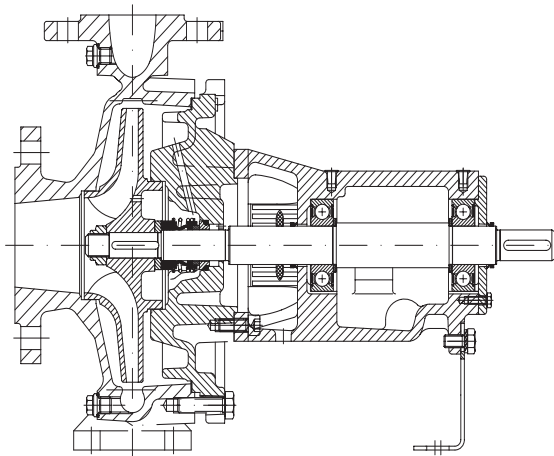
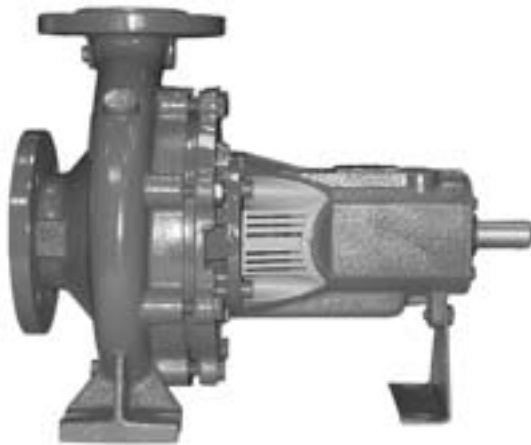
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Temporary





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DESCRIPTION

Single-stage end suction centrifugal pump. Volute pump casing with cast pump feet. Bearing support with foot. Axial suction and radial discharge upwards. Totally enclosed radial impeller. Hydraulic balance by means of wearing ring and balancing holes. Lifetime lubricated ball bearings. Mechanical shaft seal according to DIN 24960 (Gland packing optional).

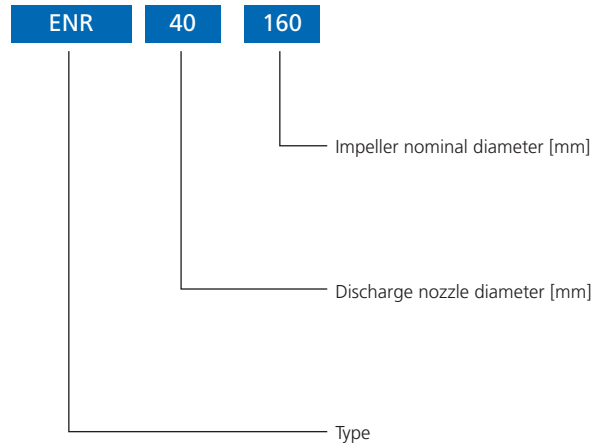
APPLICATIONS

- Water supply duties for municipalities and industries.
- Irrigation.
- Drainage clean water.
- Heating and air conditioning.
- Hot and chilled water.
- Fresh and sea water.
- Fire protection.

TECHNICAL PECULIARITIES

The ENR pump is designed for pumping clean water according with EN 733 (DIN 24255), plus 19 additional sizes. The design of the pump allows the complete drive unit to be withdrawn from the casing without disturbing the attached pipe work. If a spacer type coupling is used, it is also unnecessary to disconnect the motor. The range covers 50 sizes with only 5 different bearing brackets.

IDENTIFICATIONAL CODE



SPECIFICATIONS

PUMP AND MOTOR

Range	Maximum speed	3600 rpm	
	Maximum capacity	2.000 m ³ /h	
	Maximum pressure	150 m	
Fluids	Characteristics	Clean fluids	
	Maximum temperature	-20°C ~ +120°C	+120°C ~ +170°C
	Maximum working pressure	16 / 10 ⁽¹⁾ / 14 ⁽²⁾ bar	14 / 9 ⁽¹⁾ / 8 ⁽²⁾ bar
Materials	Casing	Cast iron GG-25	
	Impeller	Cast iron GG-25	Bronze G-CuSn10
	Shaft	AISI 420 Stainless Steel 1.4021	
	Shaft sleeve	AISI 420 Stainless Steel 1.4021	
	Mechanical seal	Silicon Carbide / Carcon - EPDM ⁽³⁾	
	Bearings	Lifetime lubricated ball bearings	
Drive	Motor	Electric, Engine, Steam turbine	

⁽¹⁾ From size 80-400 up to 300-500, except 150-500

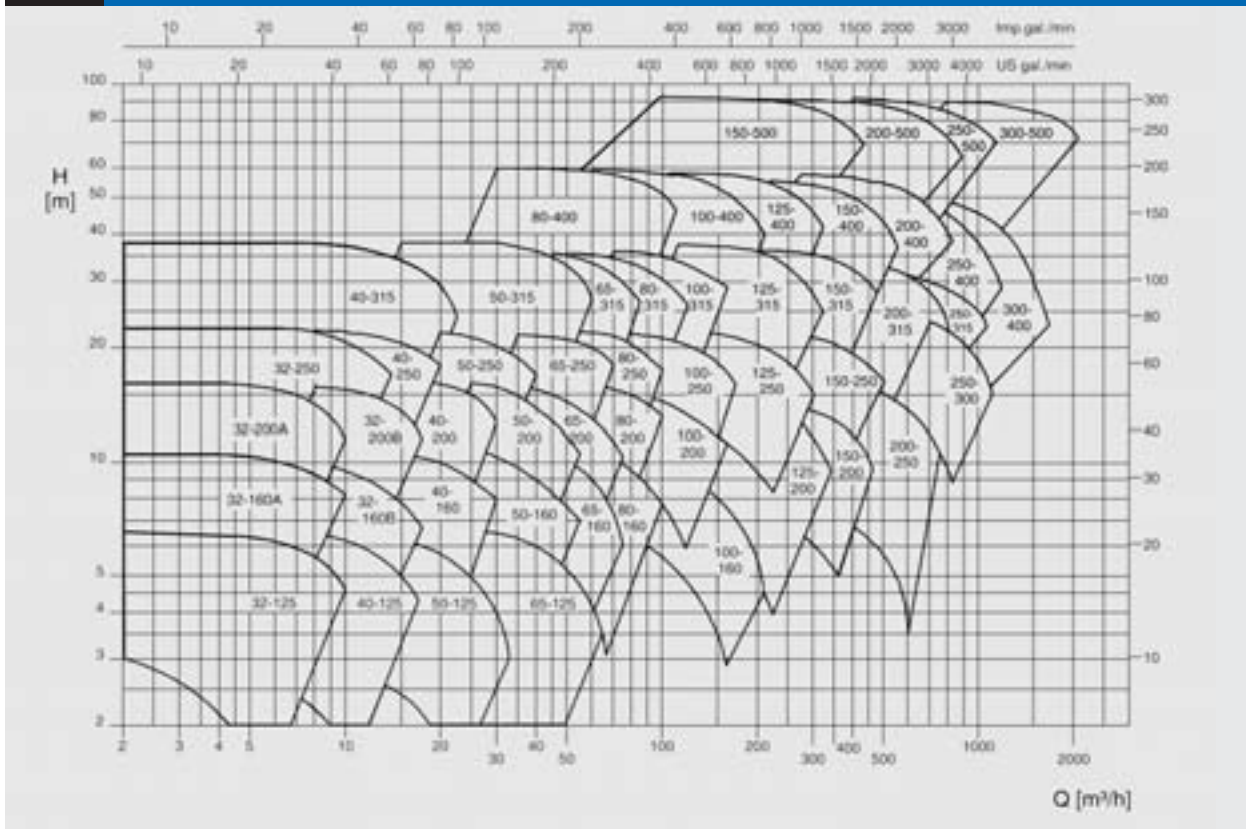
⁽²⁾ Size 150-500

⁽³⁾ Check operating limits depending on pumped fluid

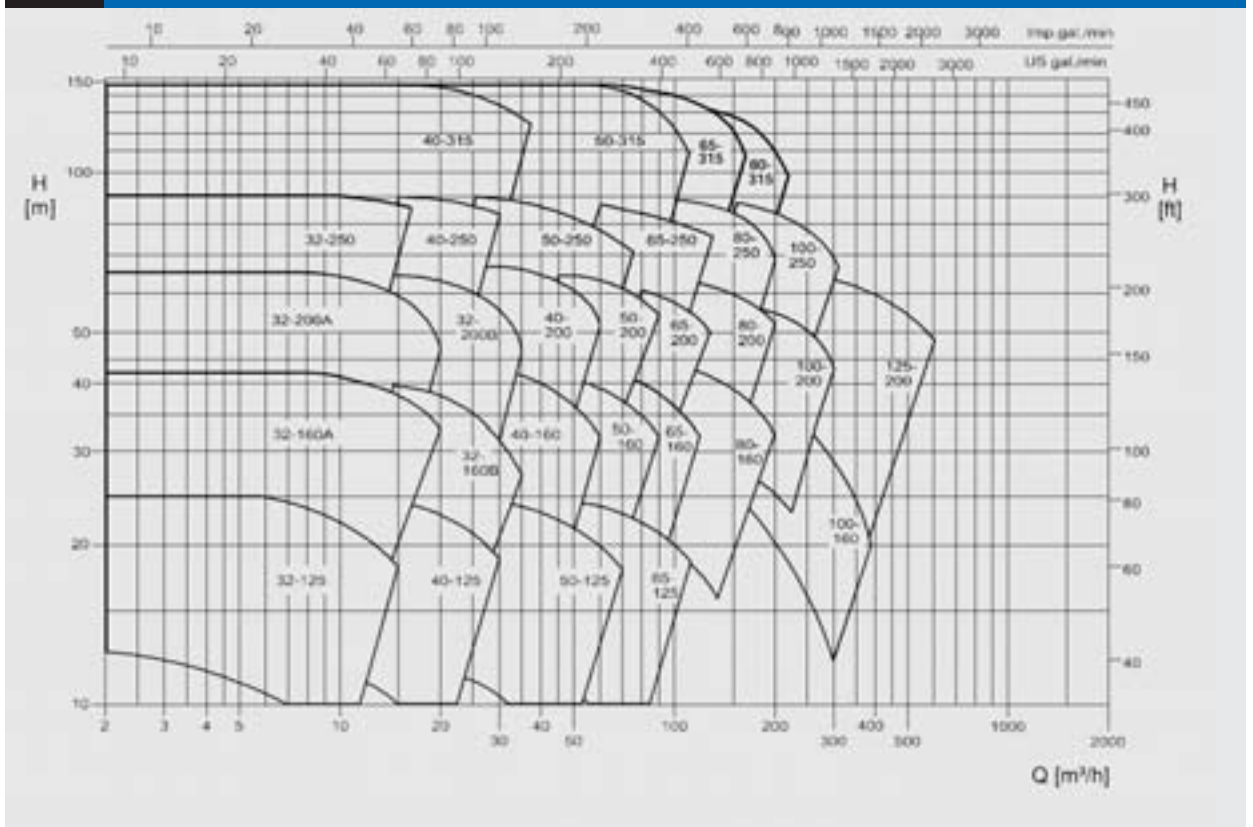
OPTIONS

- Packing
- Oil lubrication
- ANSI 150 flanges
- Interchangeable wear rings
- Special seal executions:
 - External refrigeration
 - Heating
 - Flushing
- Special materials:
 - Bronze
 - Stainless steel

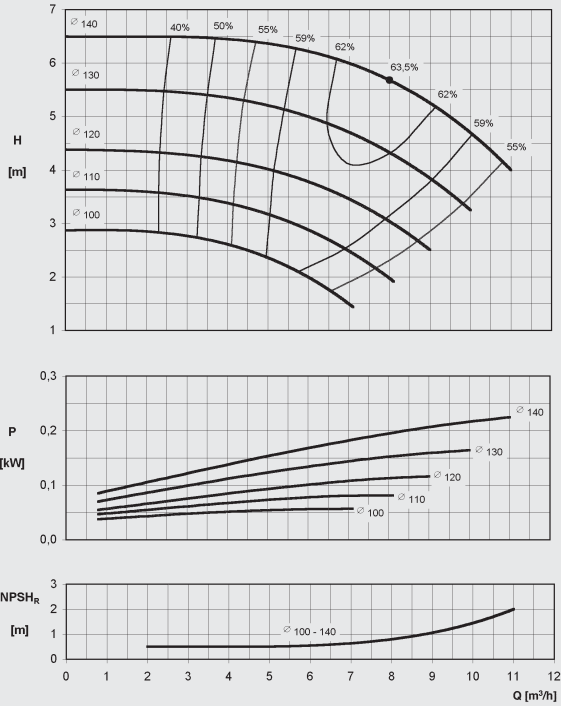
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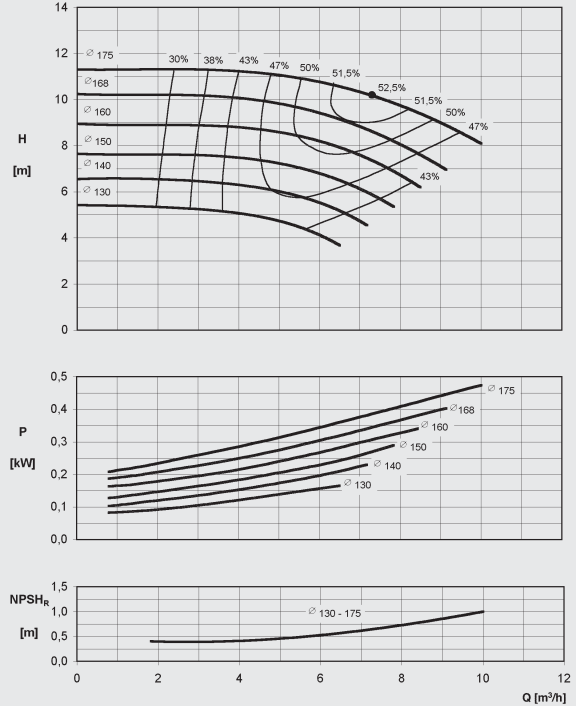
SELECTION CHART at 2.900 r.p.m.



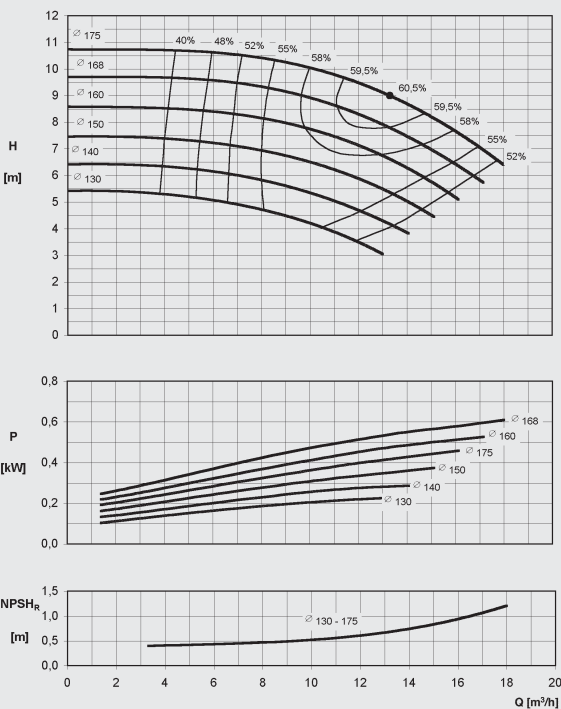
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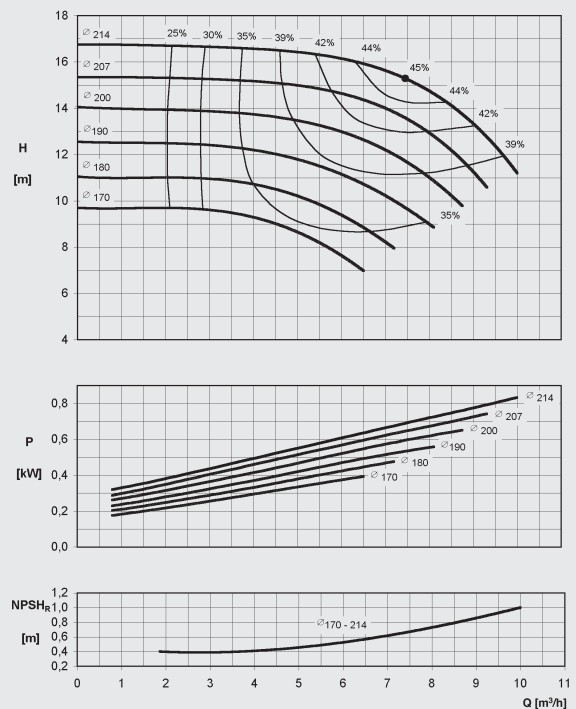
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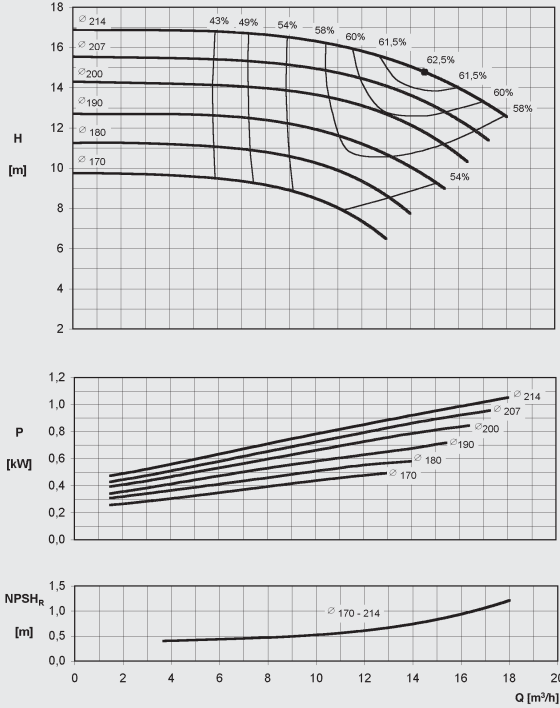
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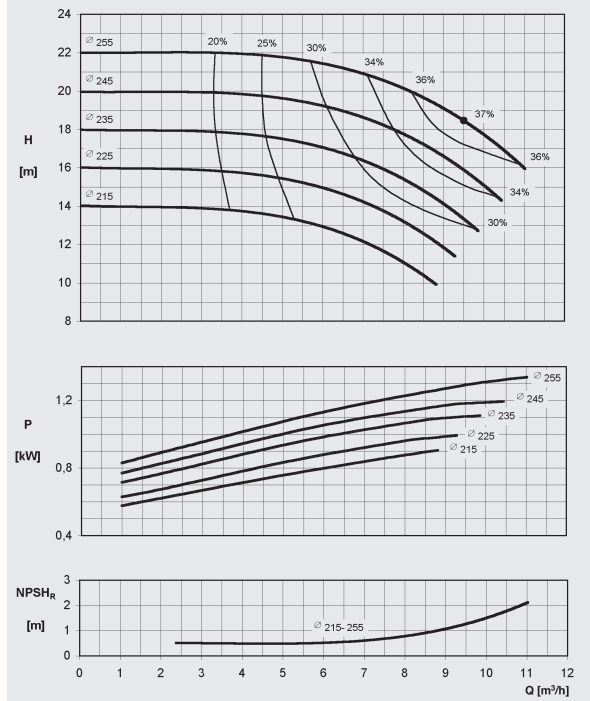
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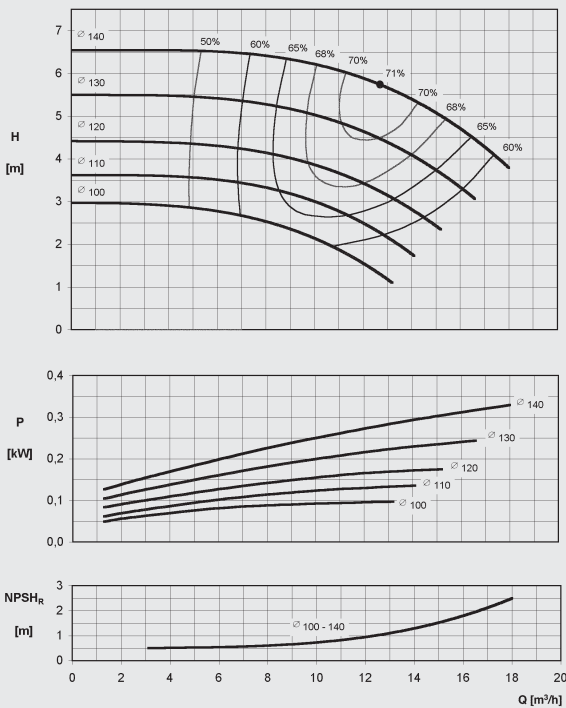
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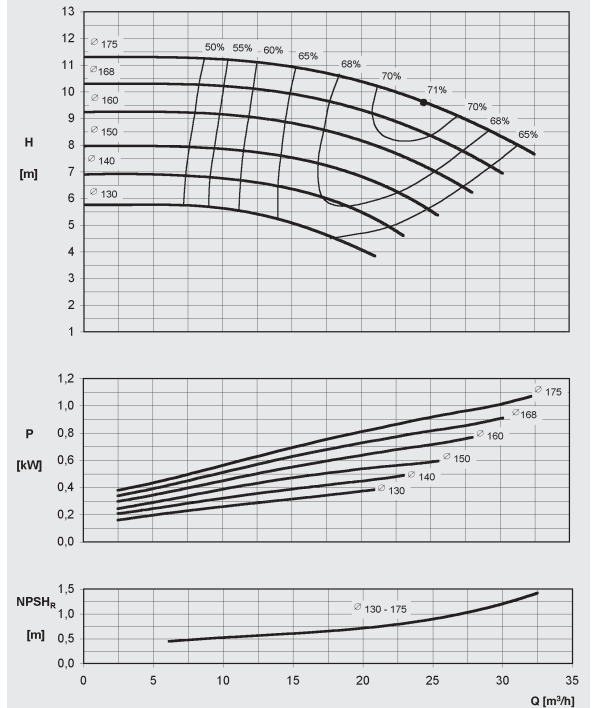
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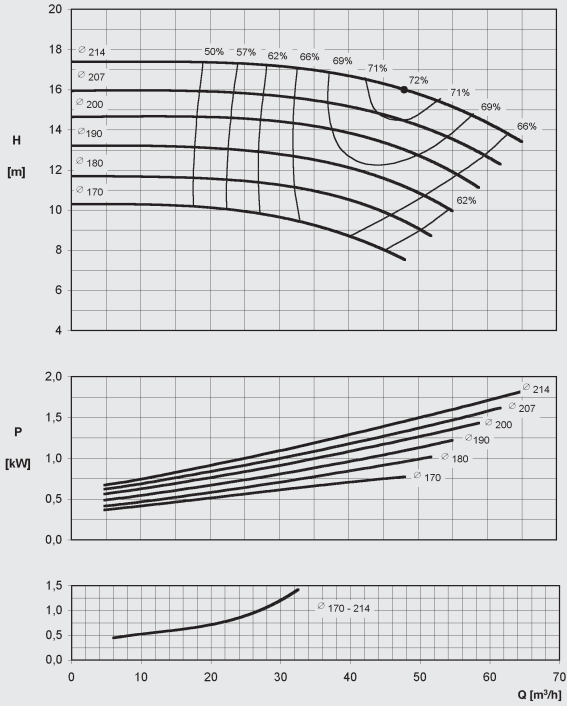
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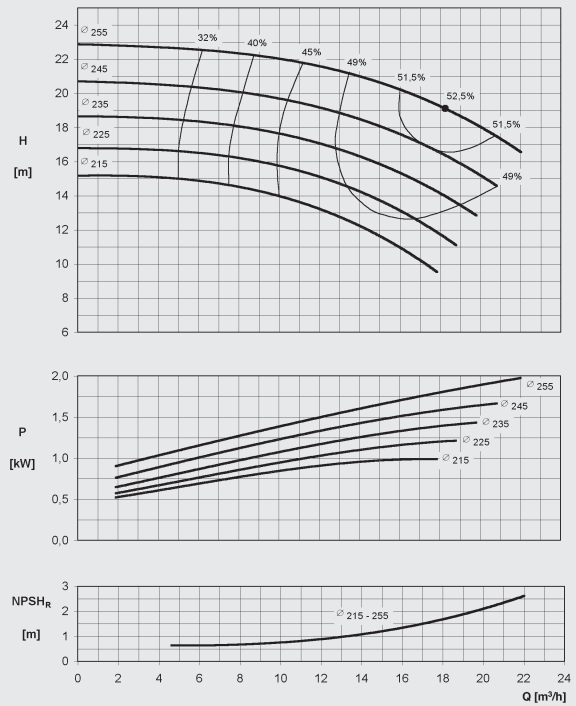
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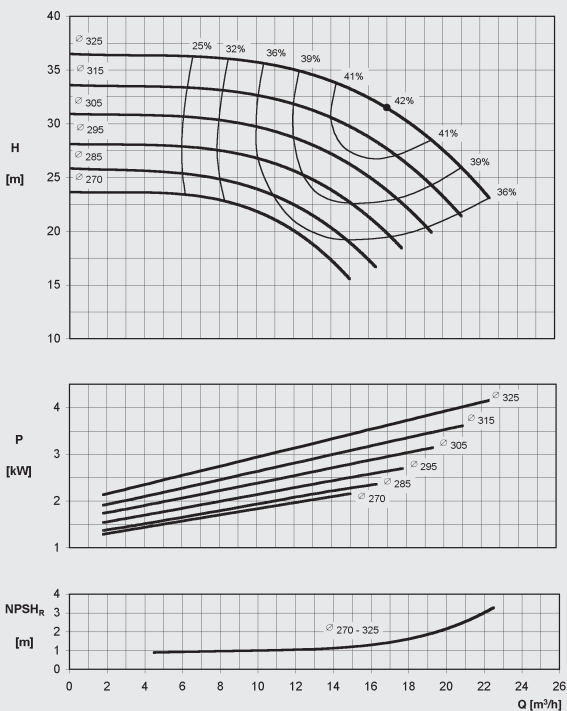
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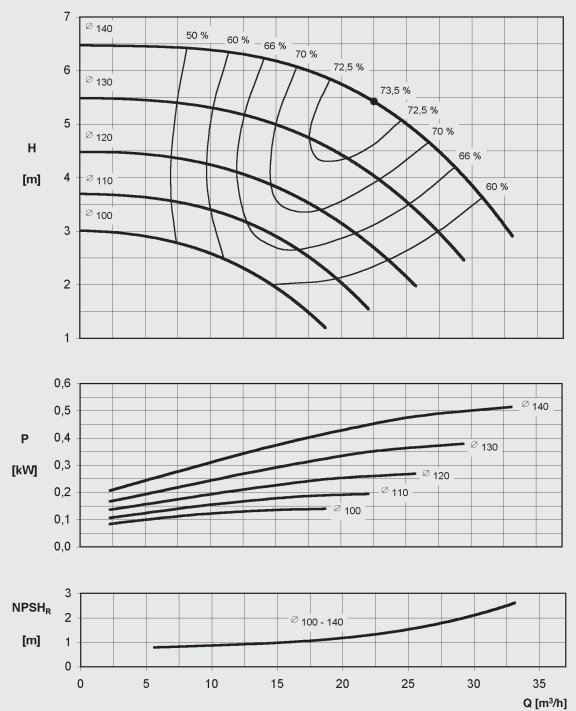
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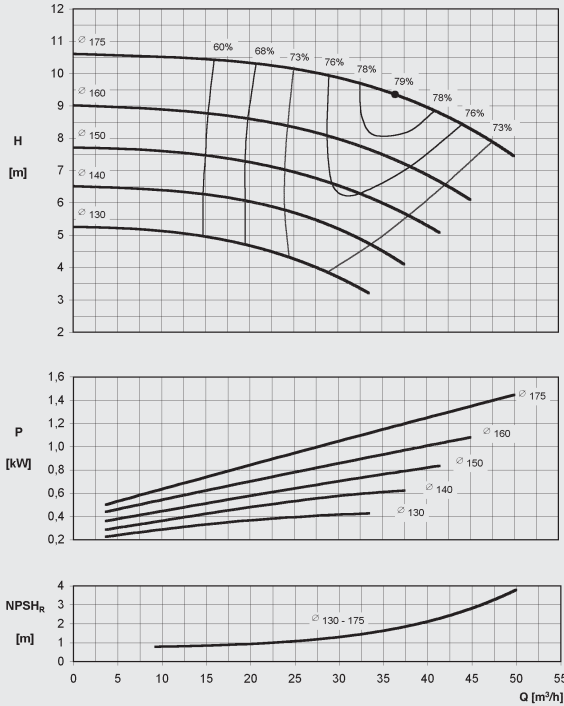
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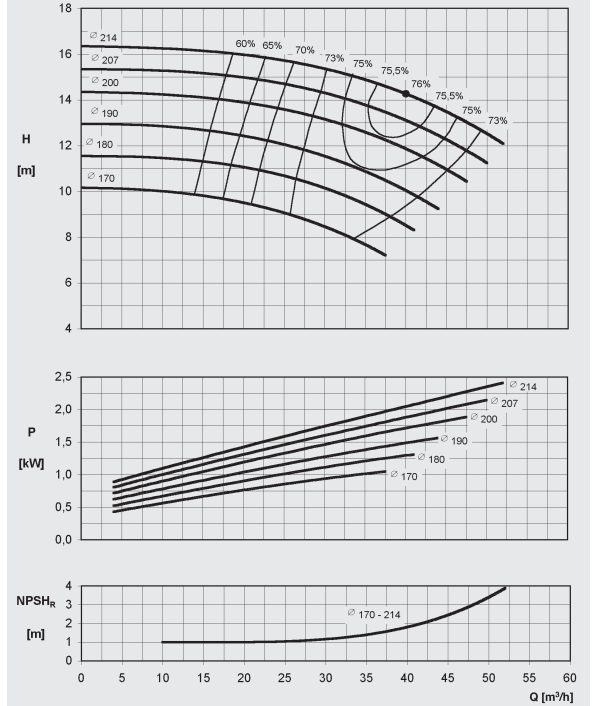
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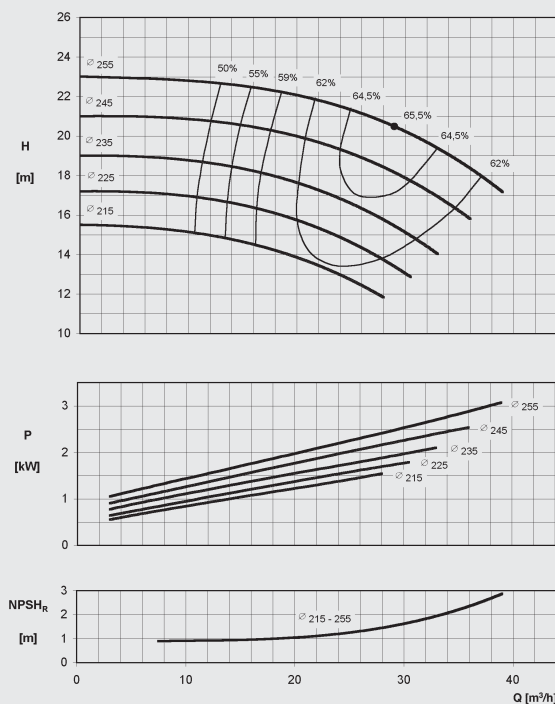
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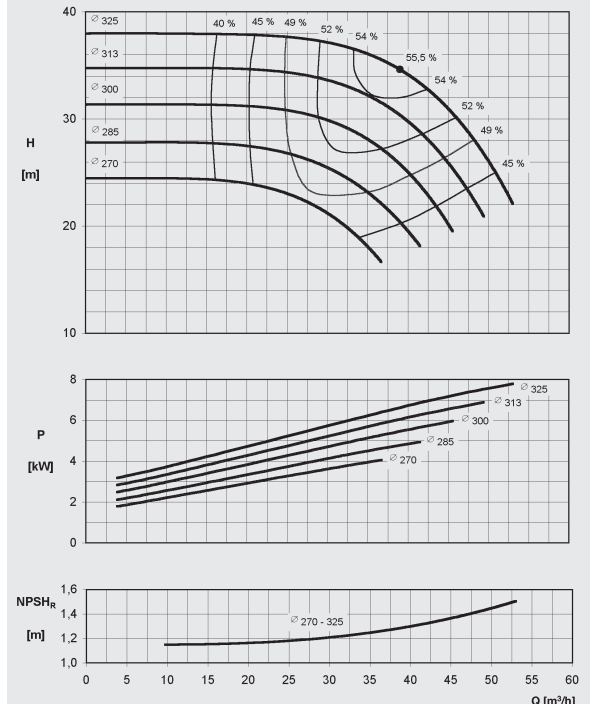
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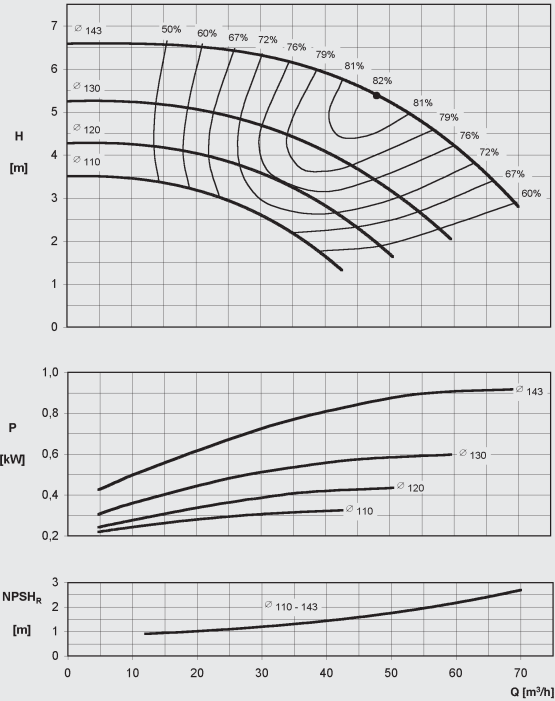
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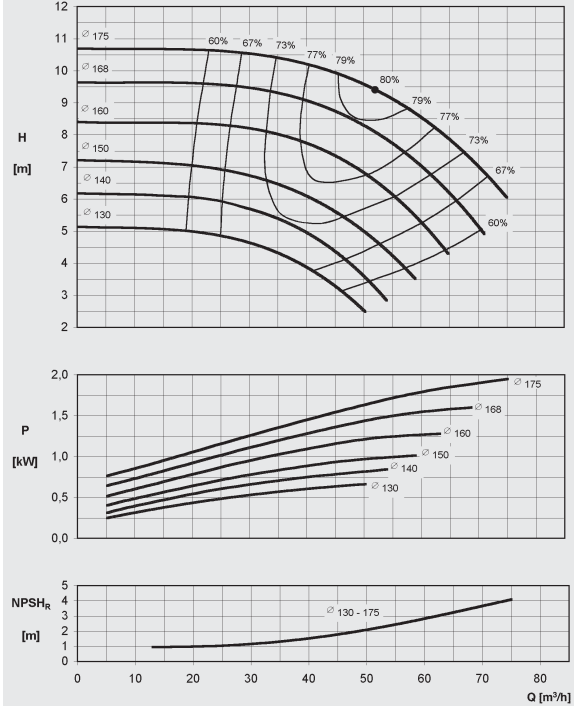
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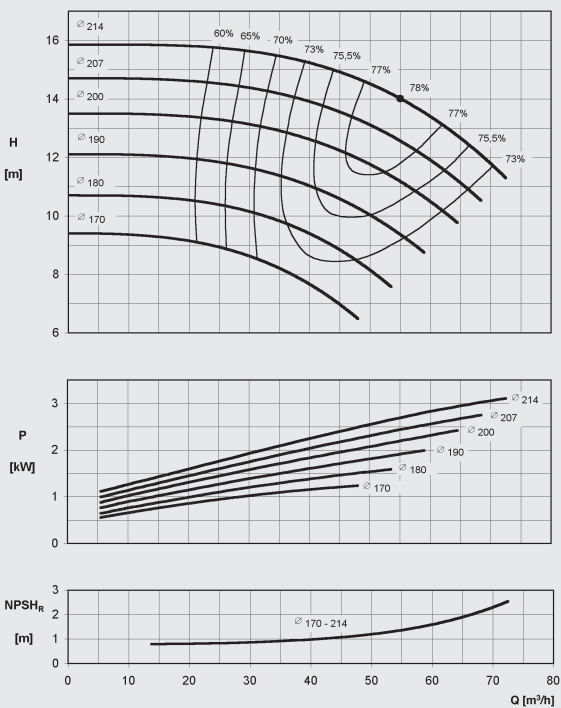
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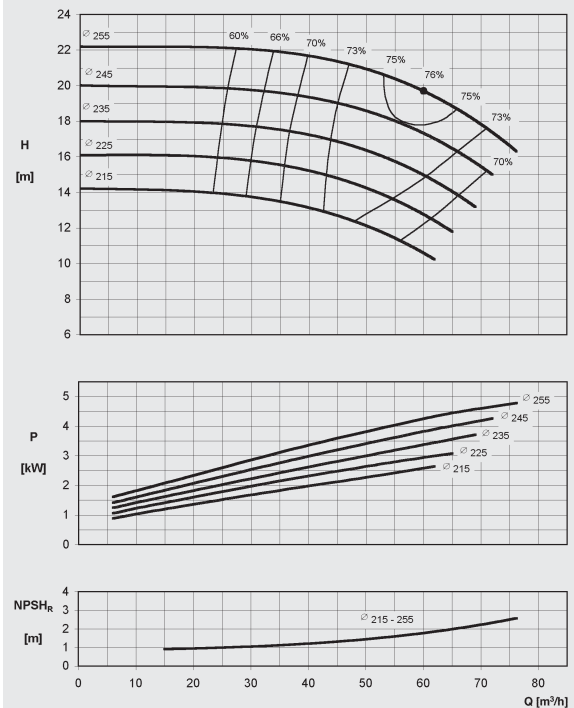
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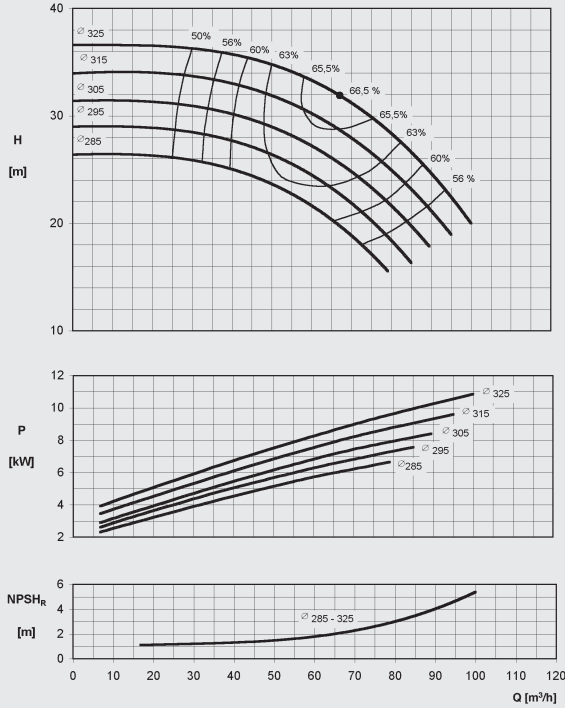
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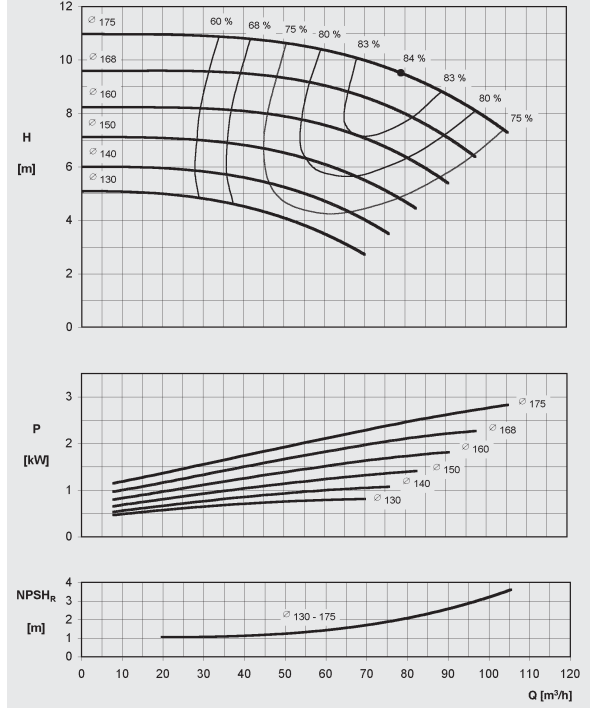
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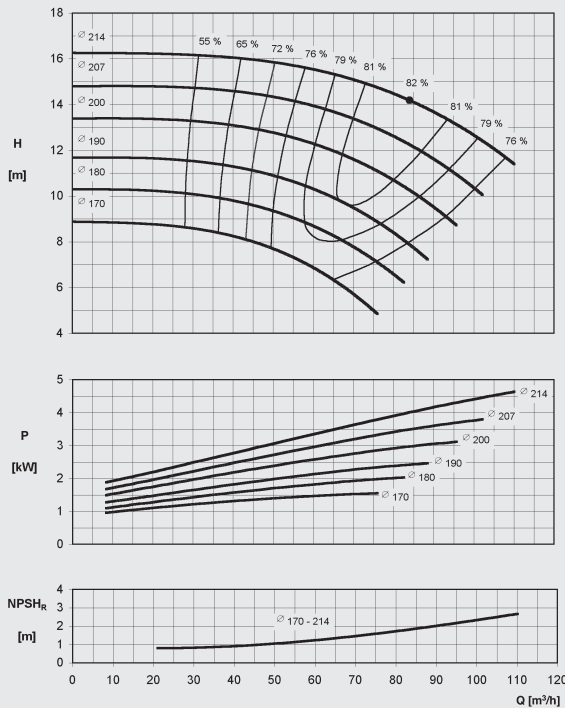
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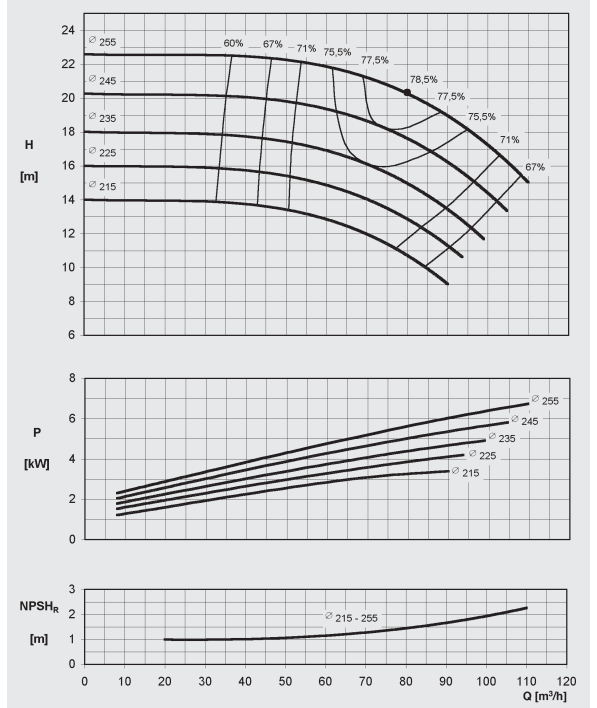
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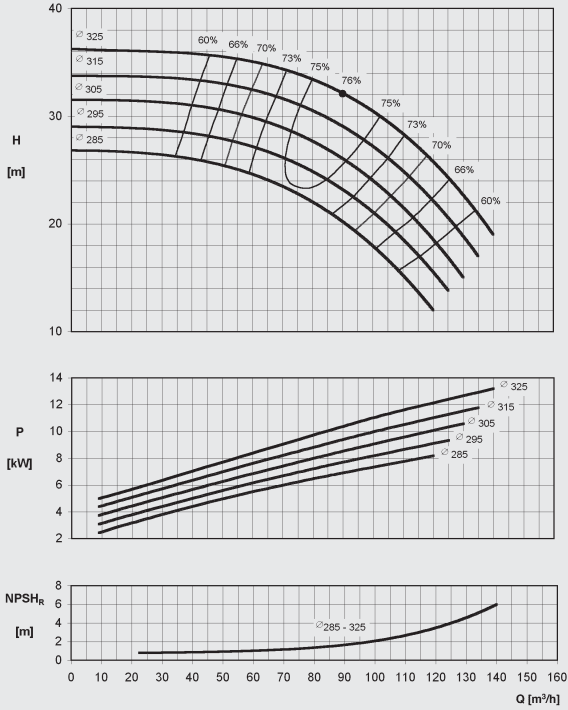
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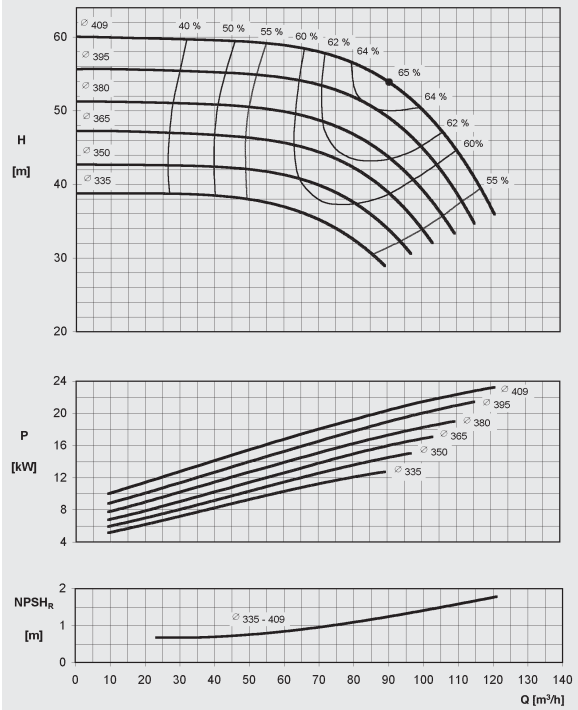
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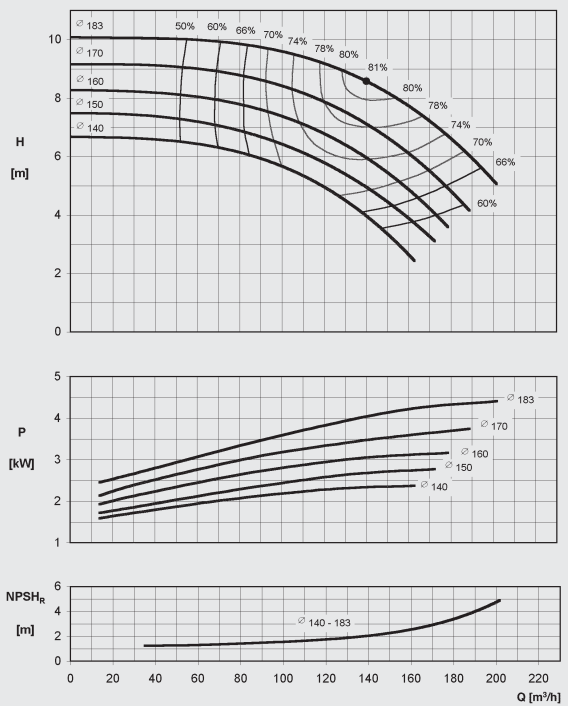
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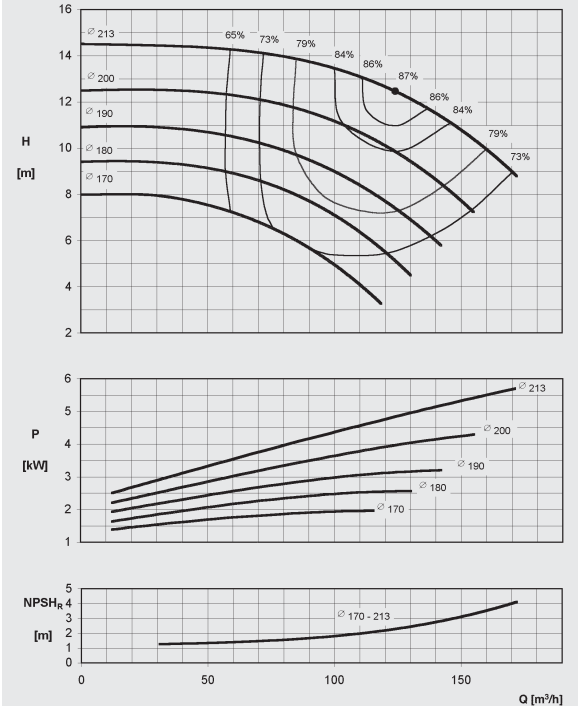
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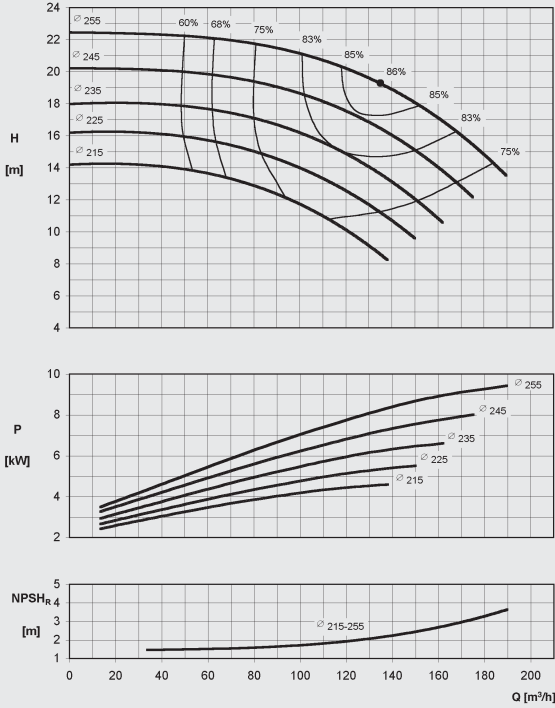
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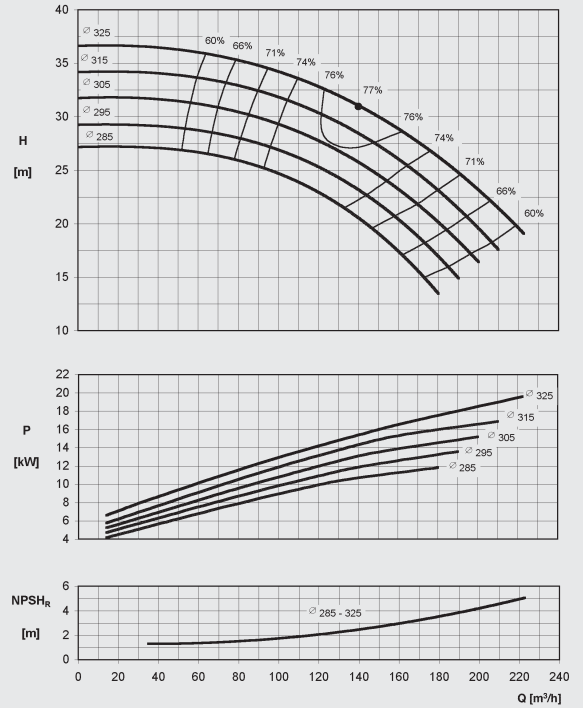
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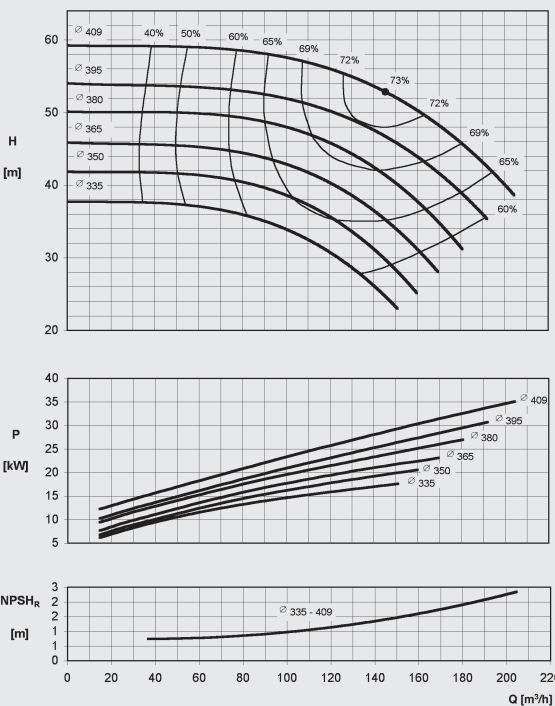
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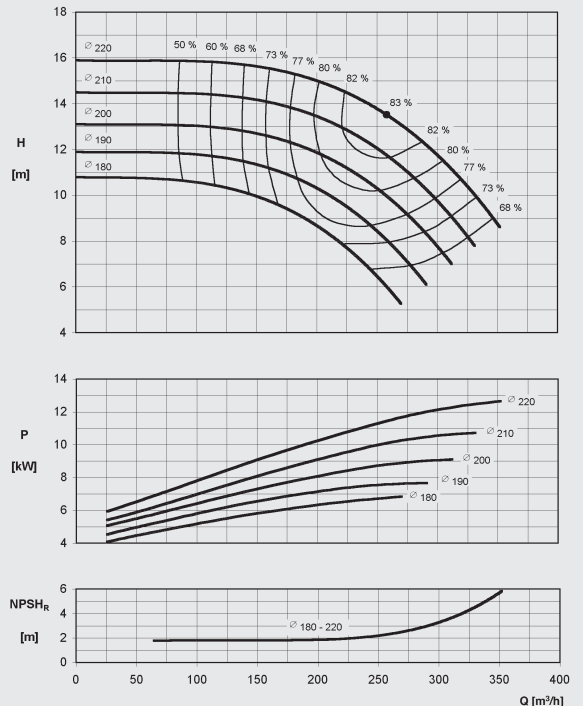
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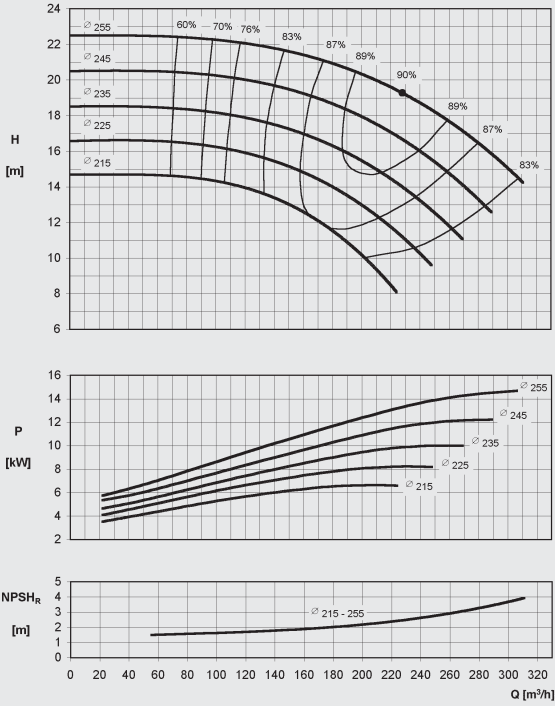
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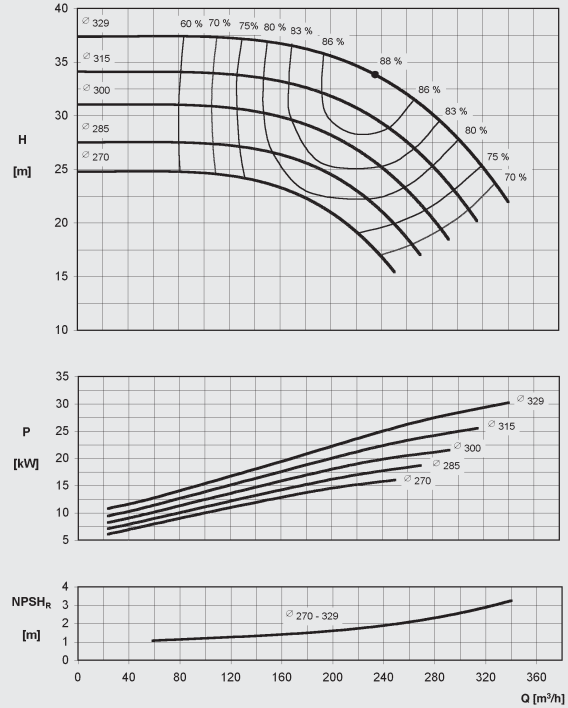
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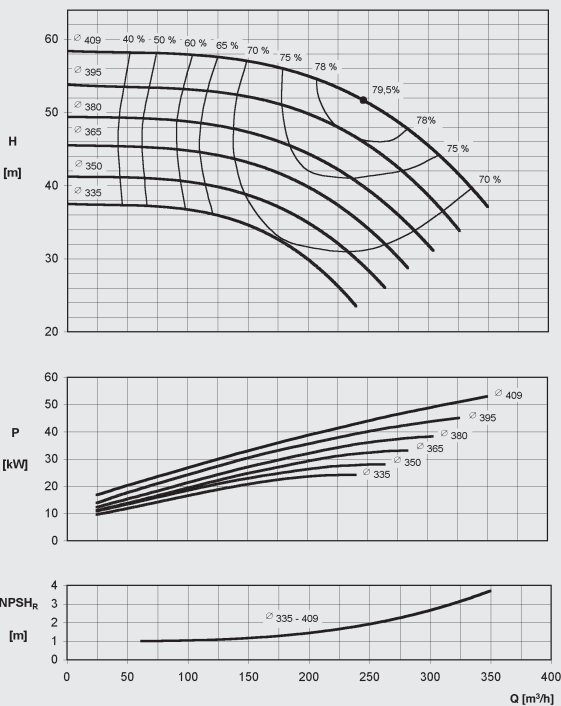
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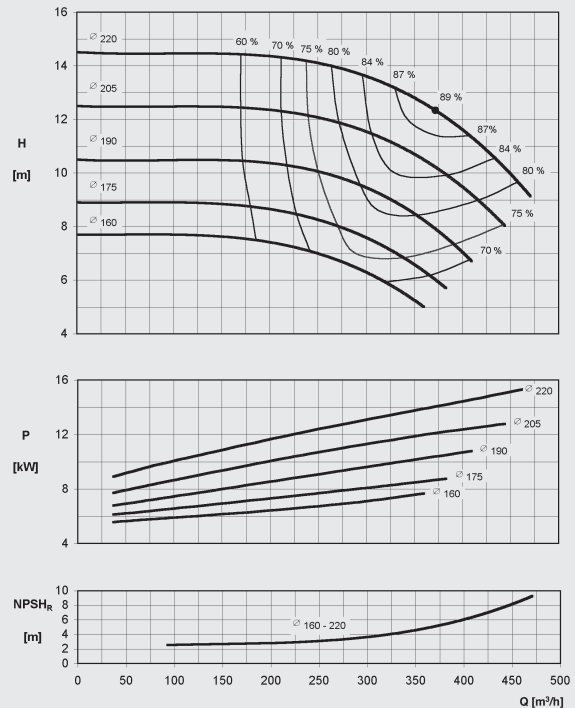
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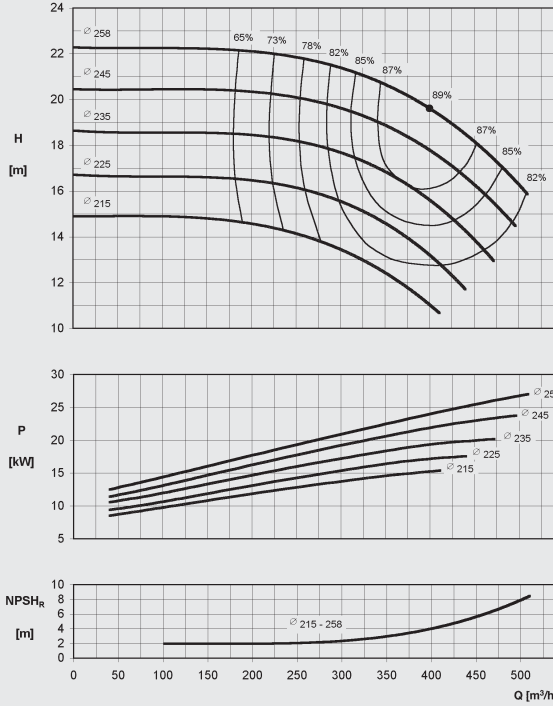
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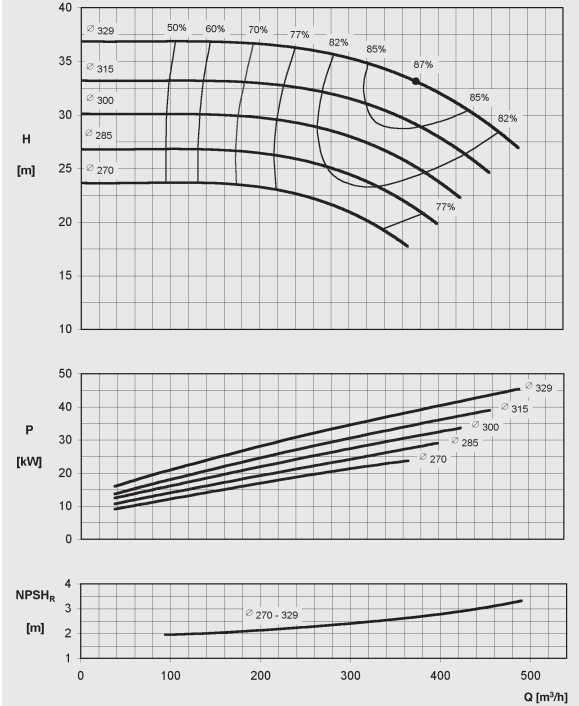
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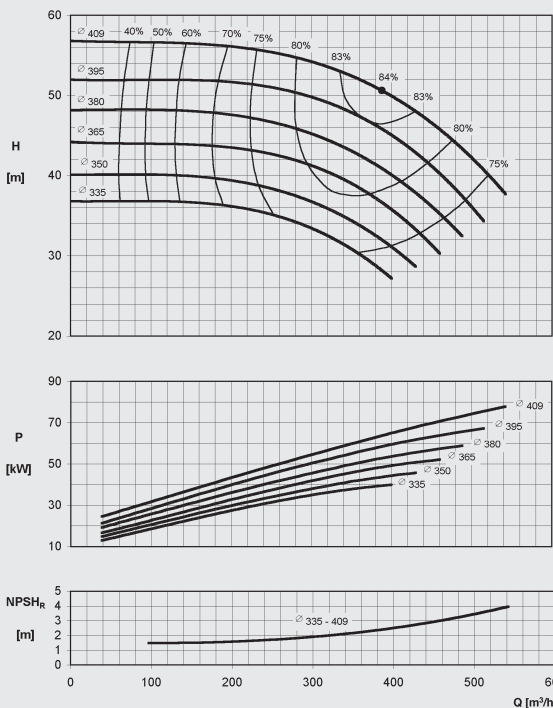
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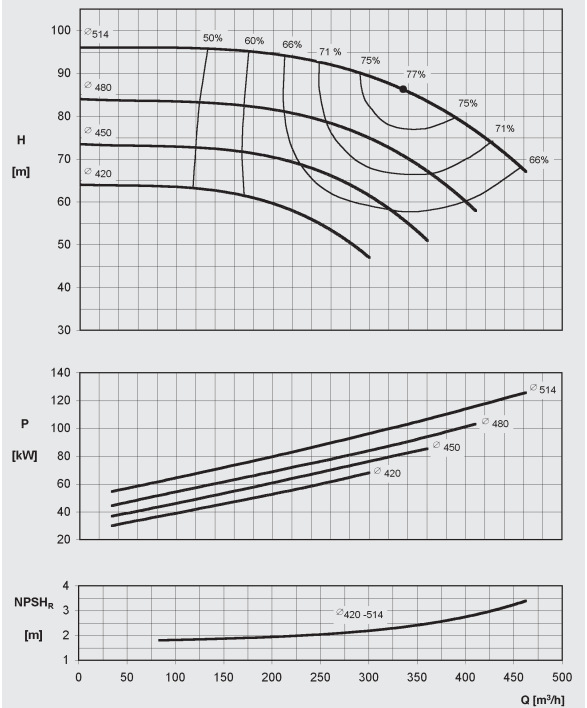
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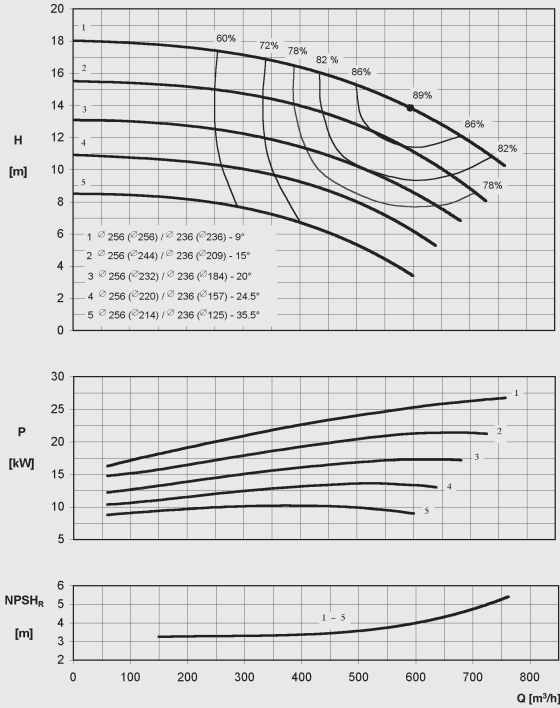
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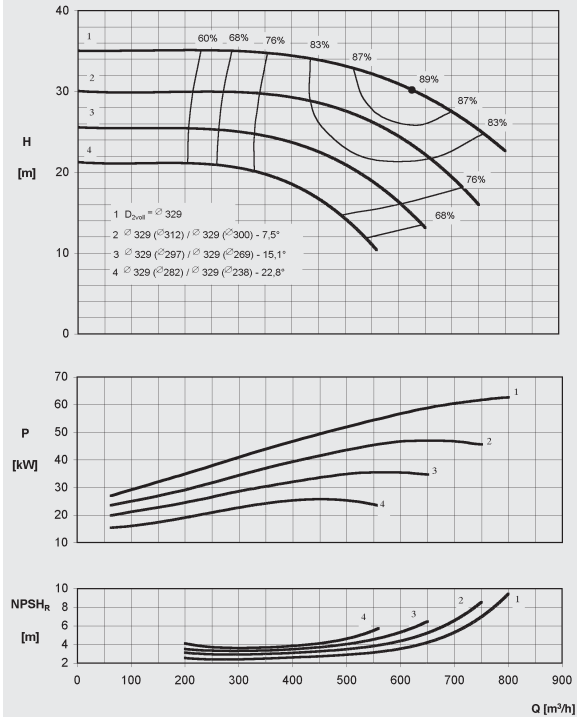
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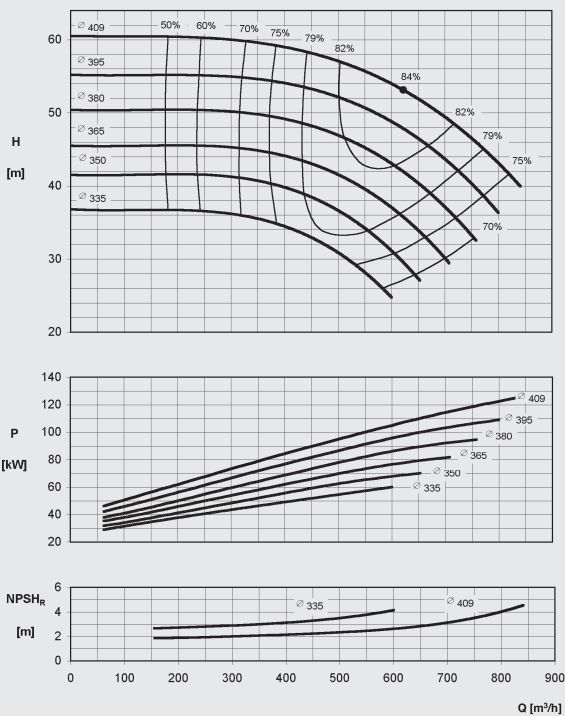
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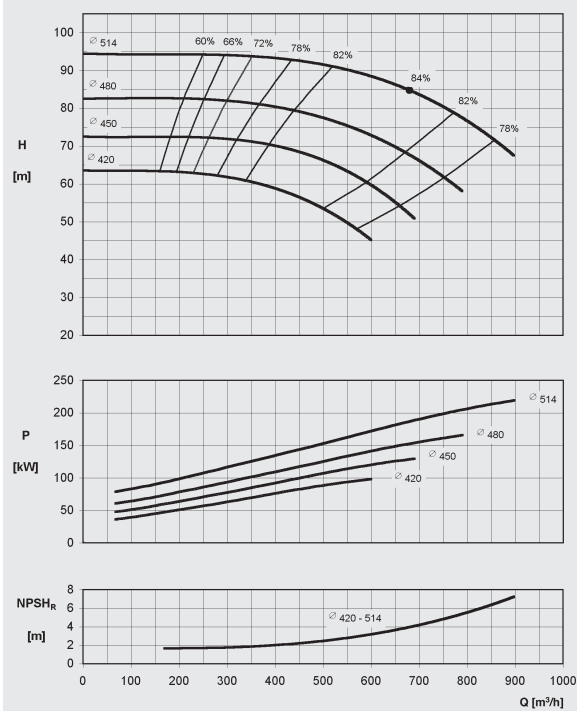
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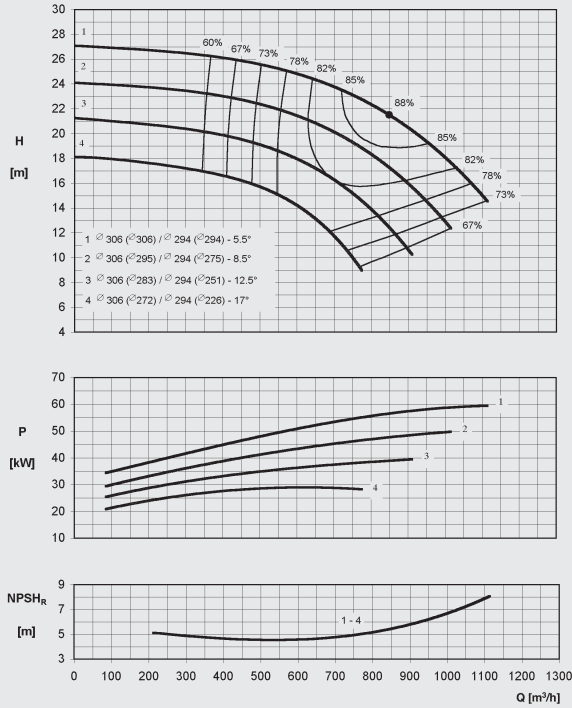
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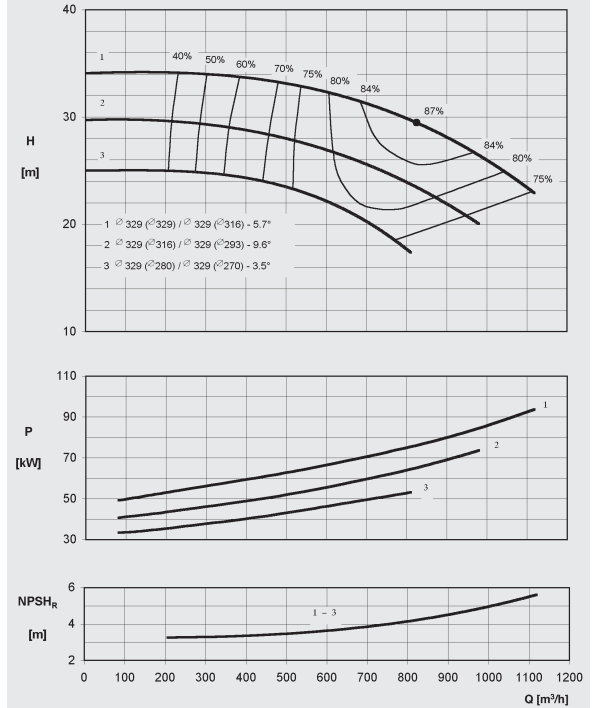
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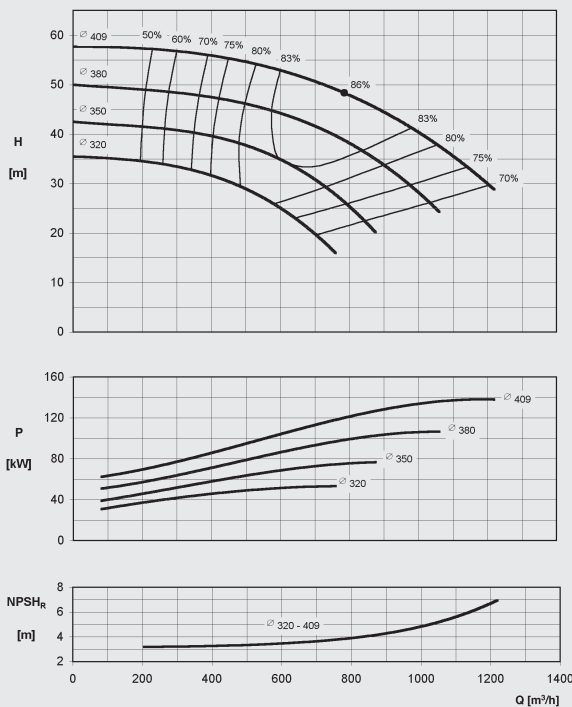
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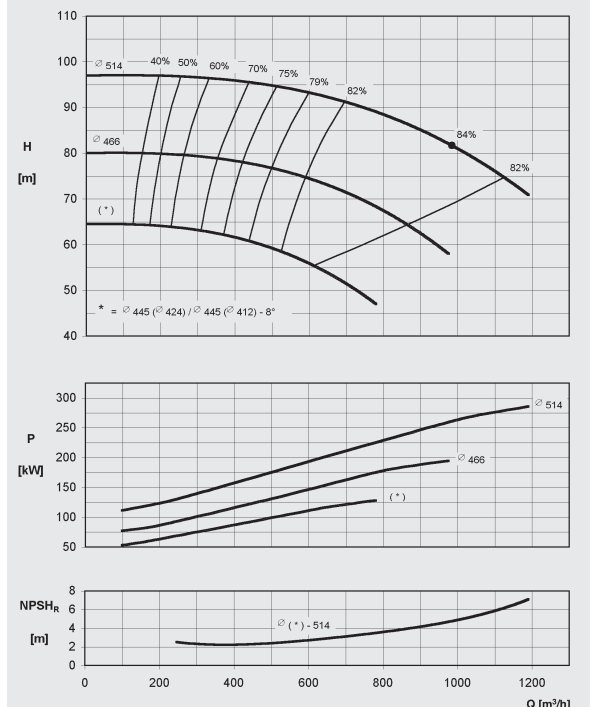
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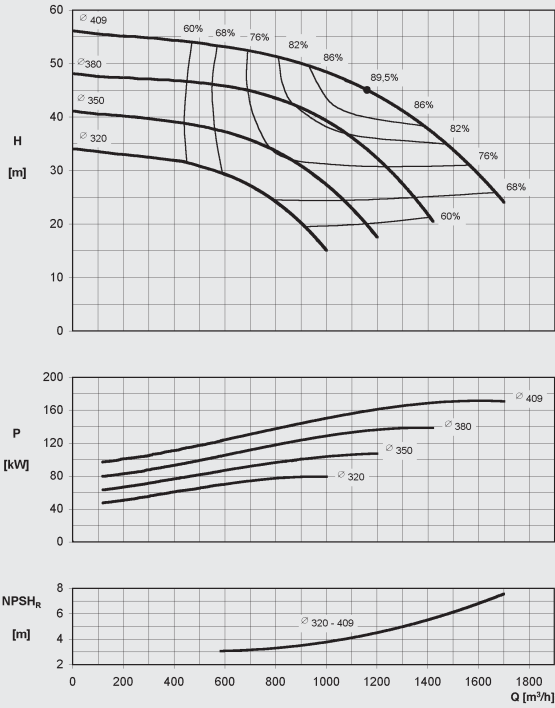
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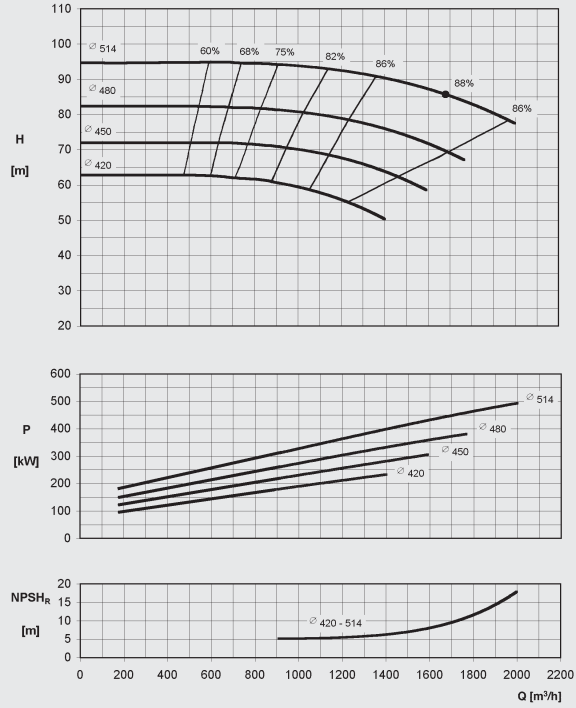
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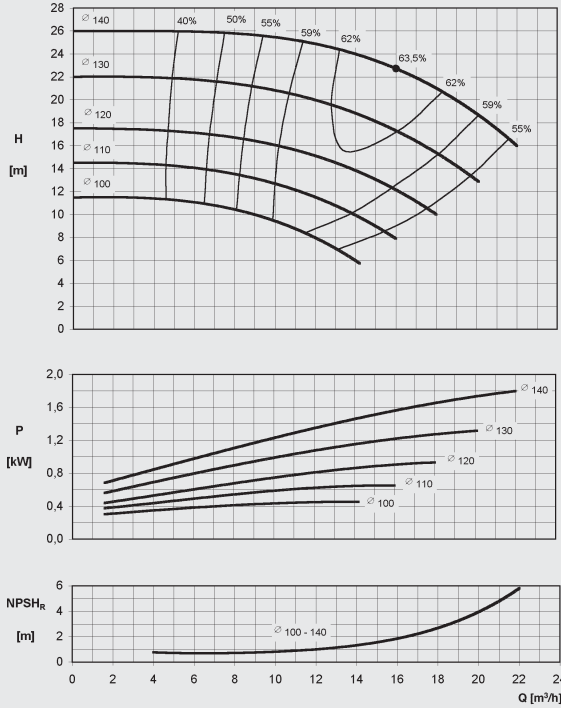
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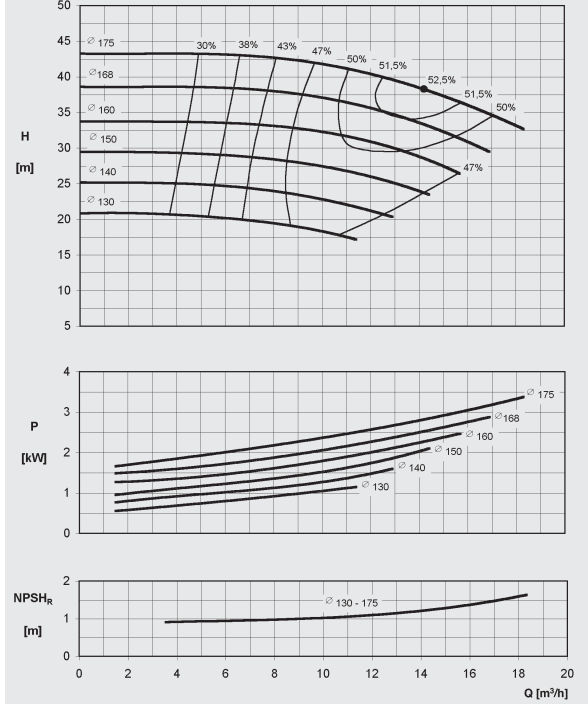
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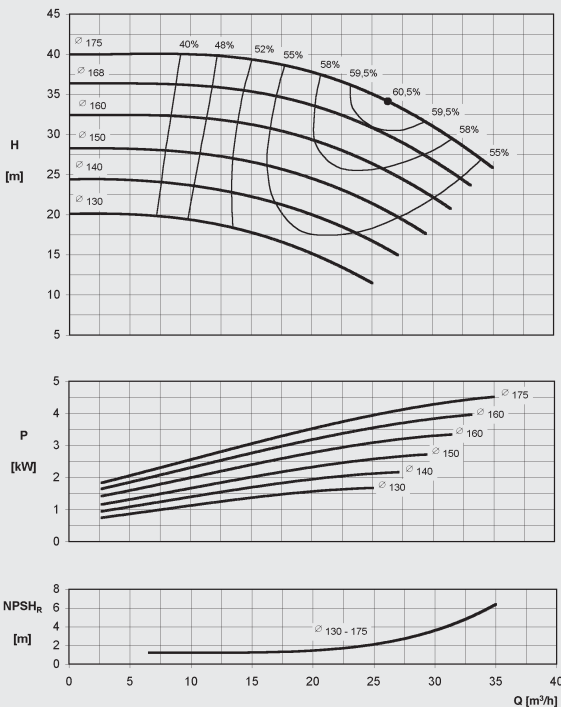
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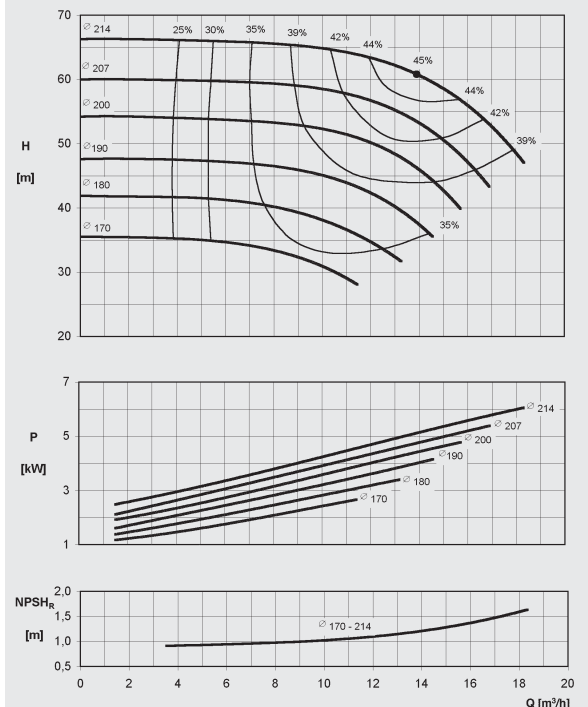
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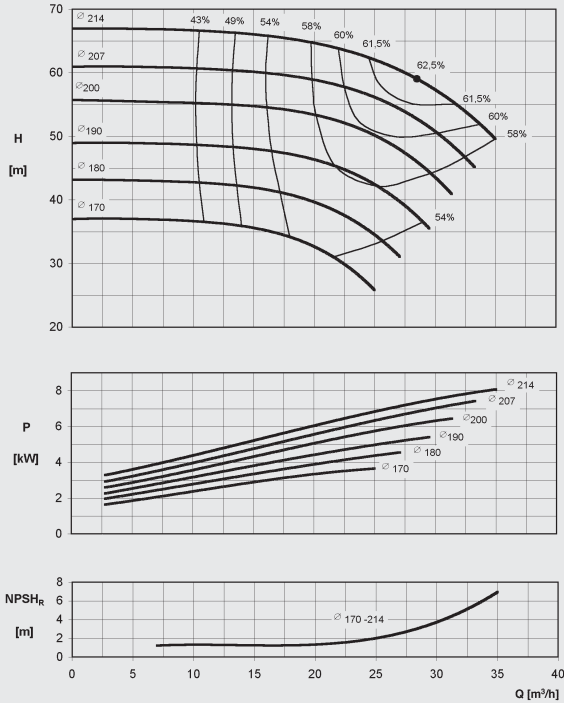
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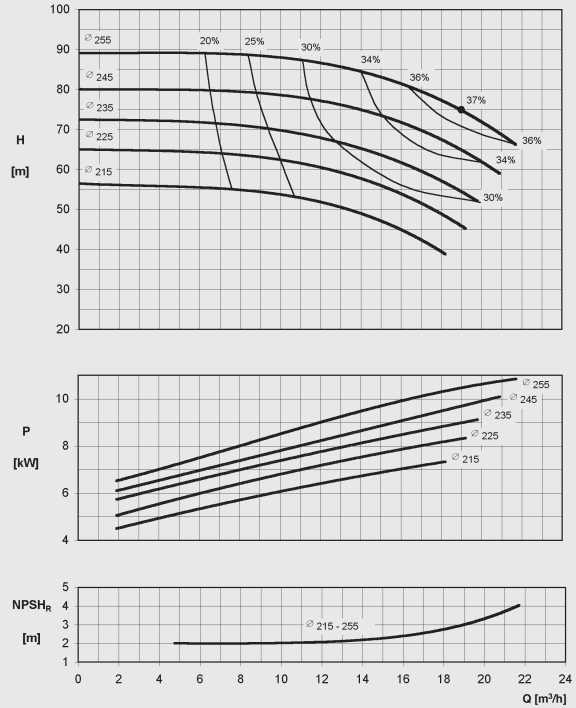
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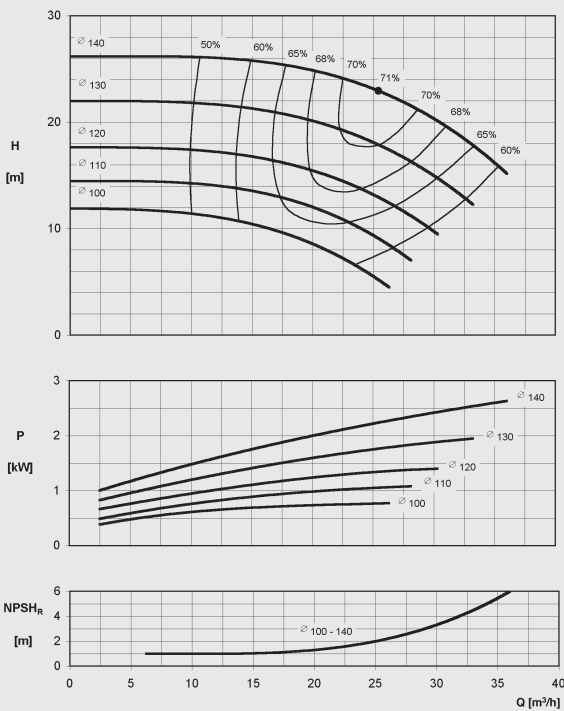
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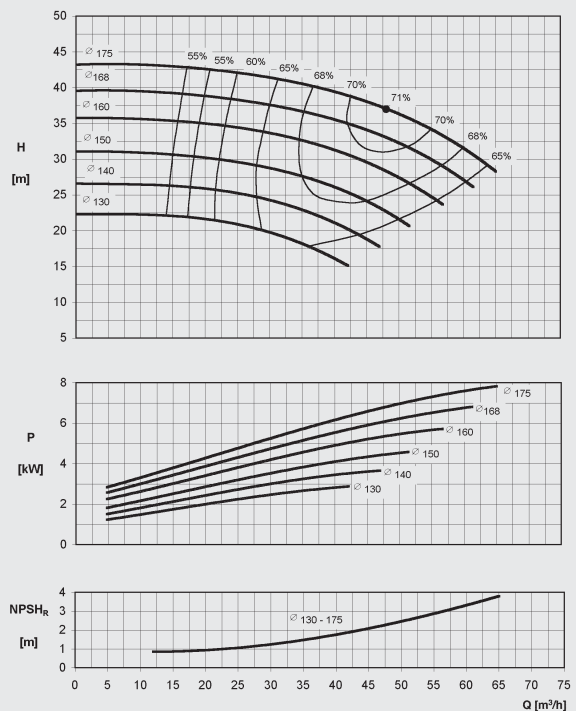
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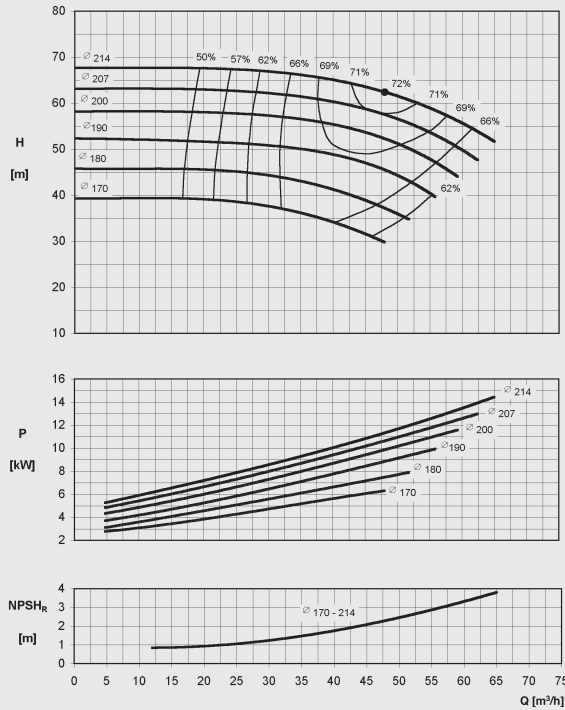
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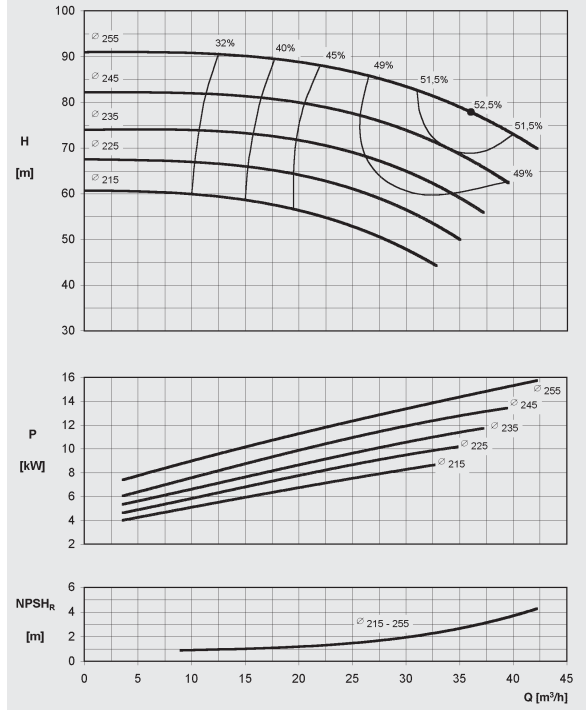
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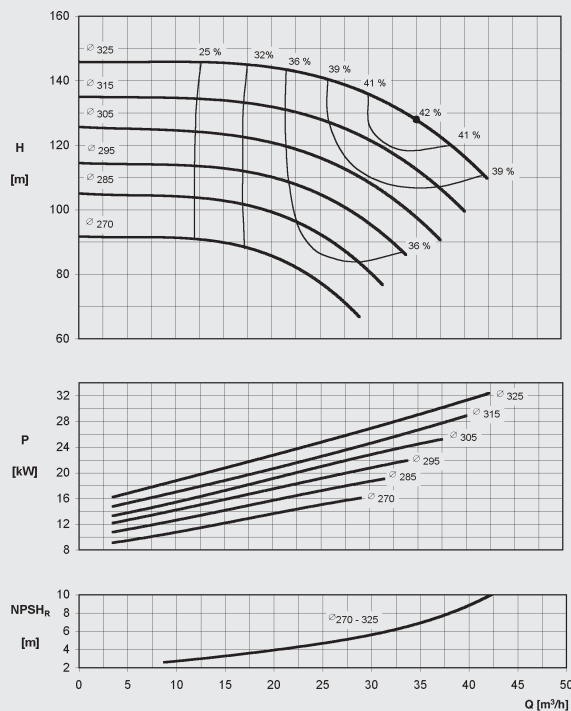
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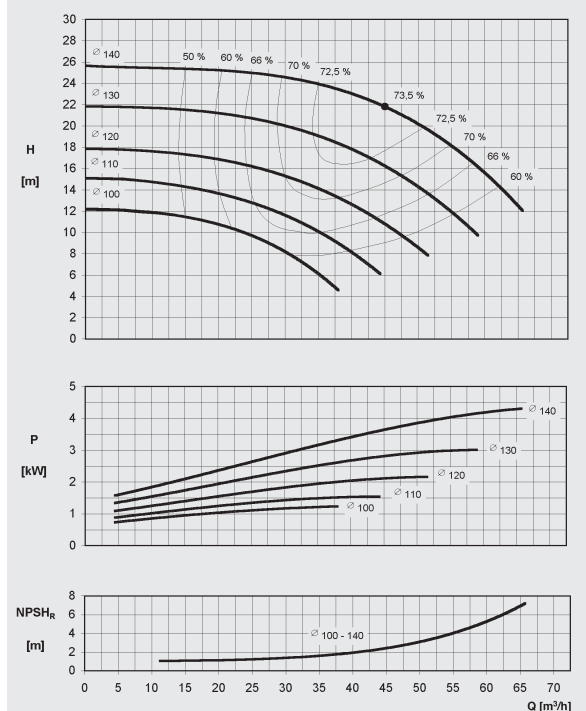
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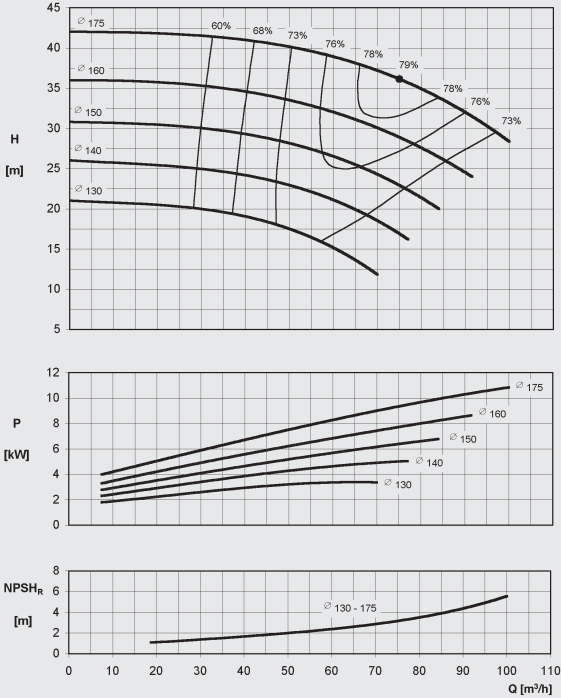
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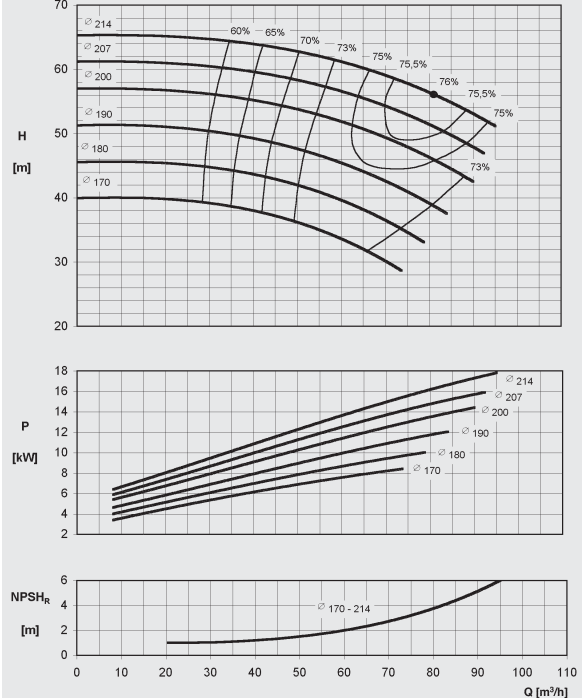
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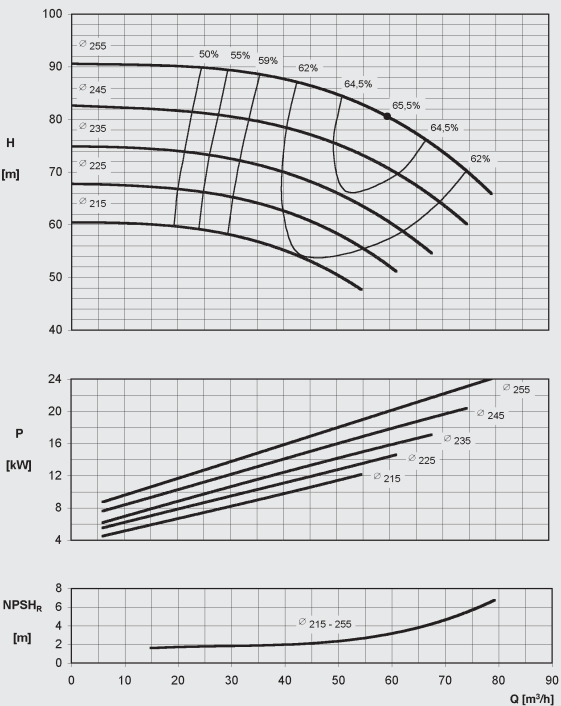
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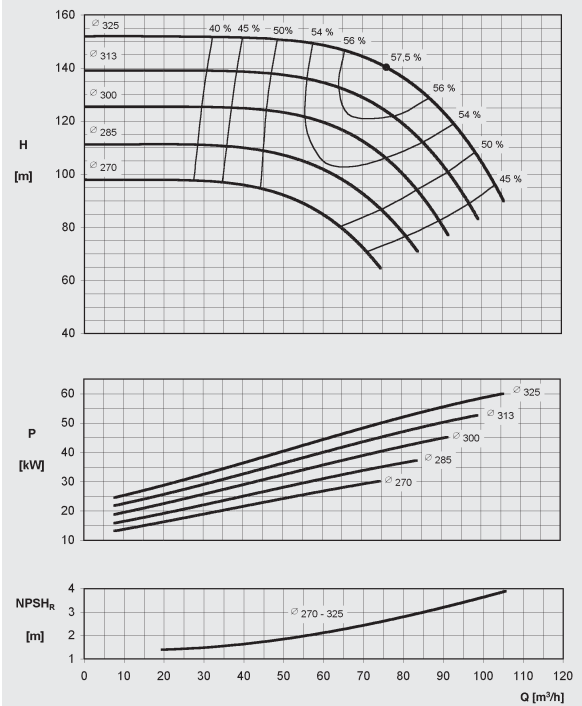
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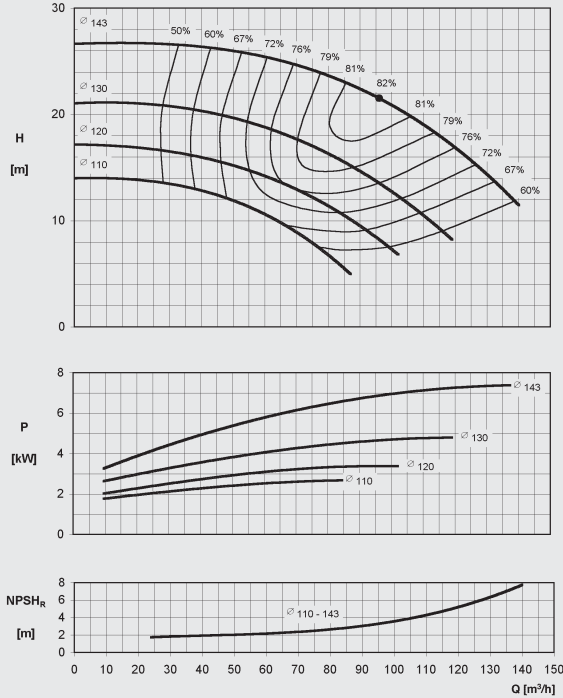
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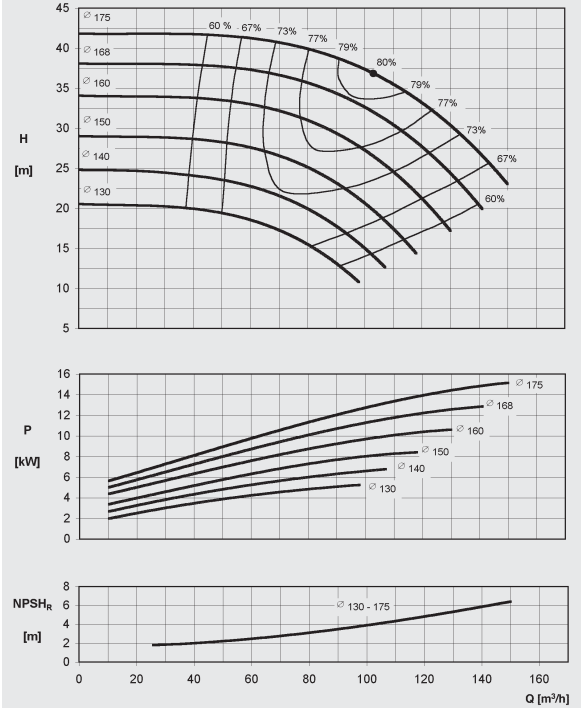
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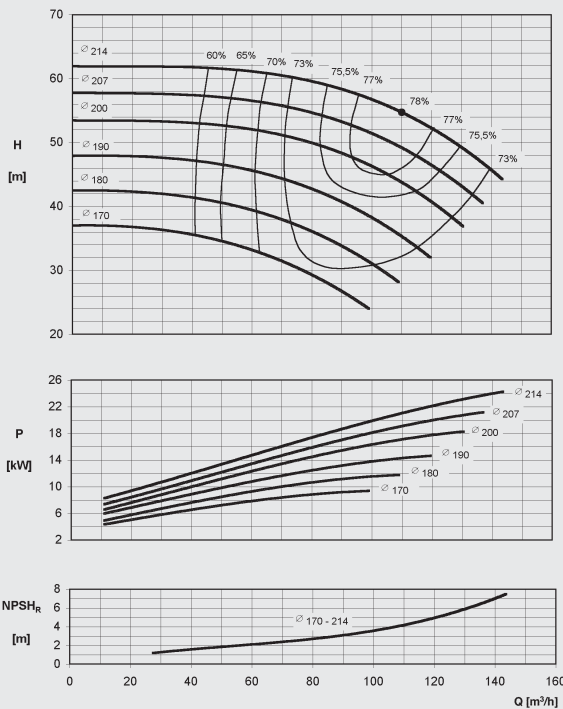
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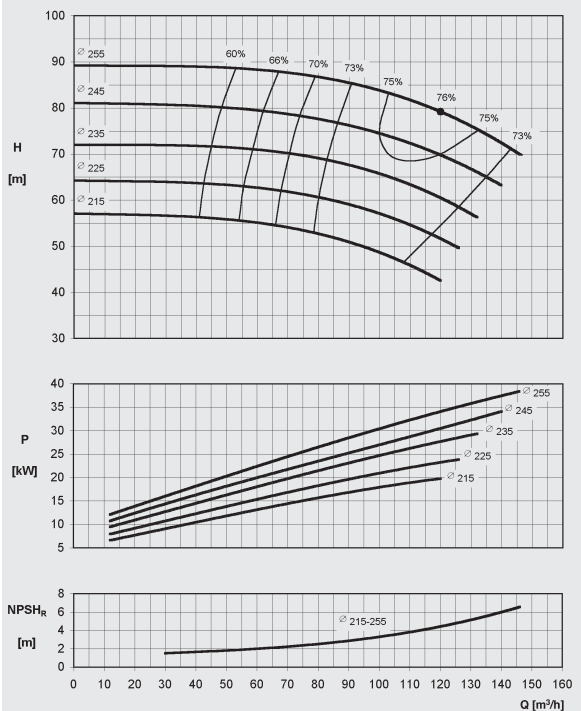
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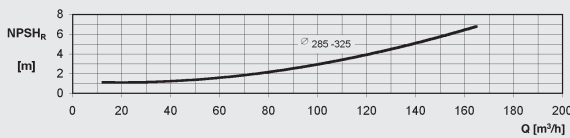
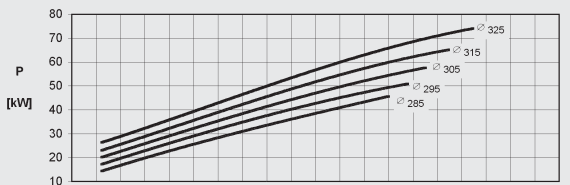
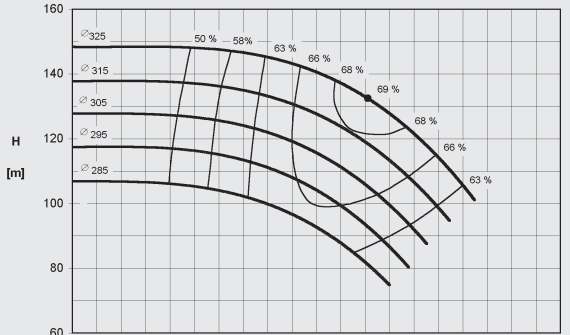
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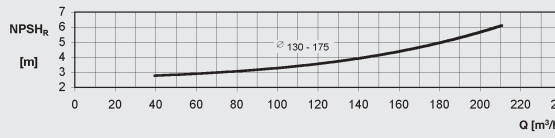
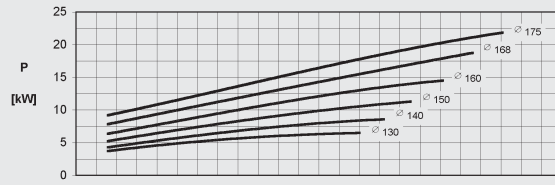
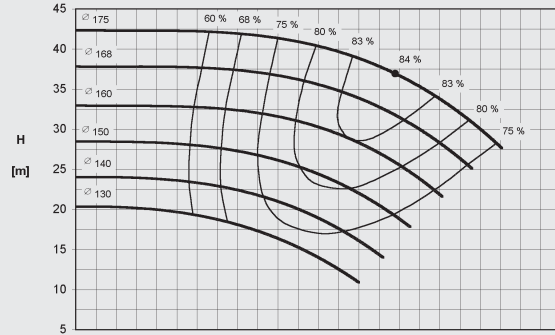
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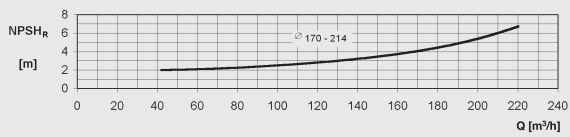
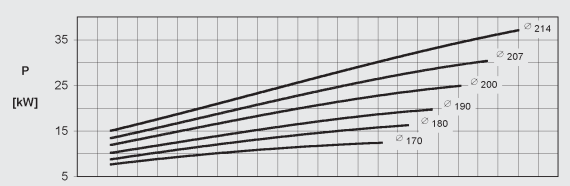
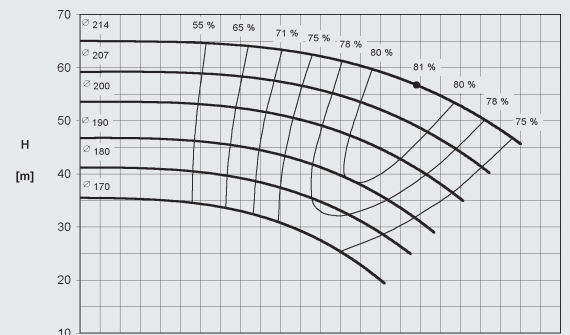
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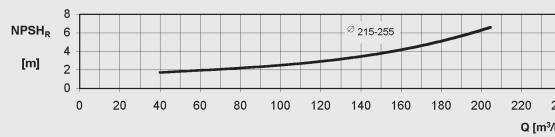
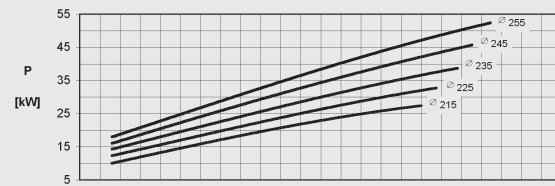
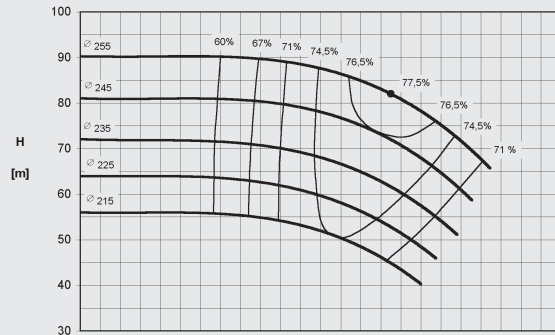
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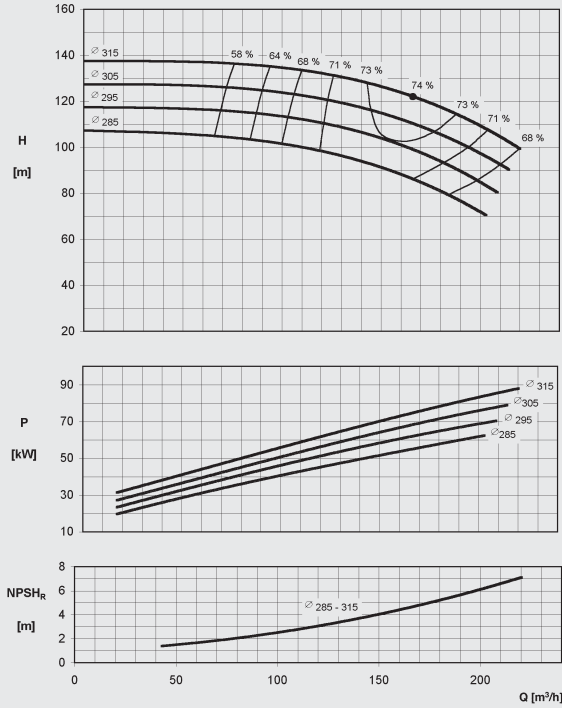
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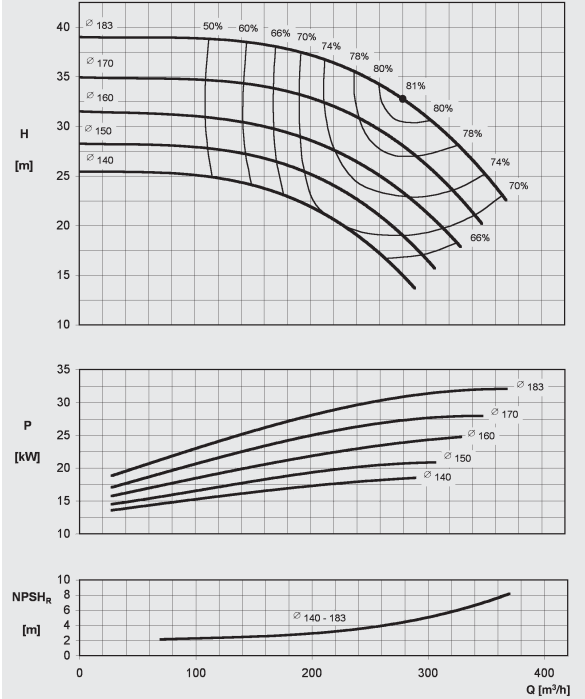
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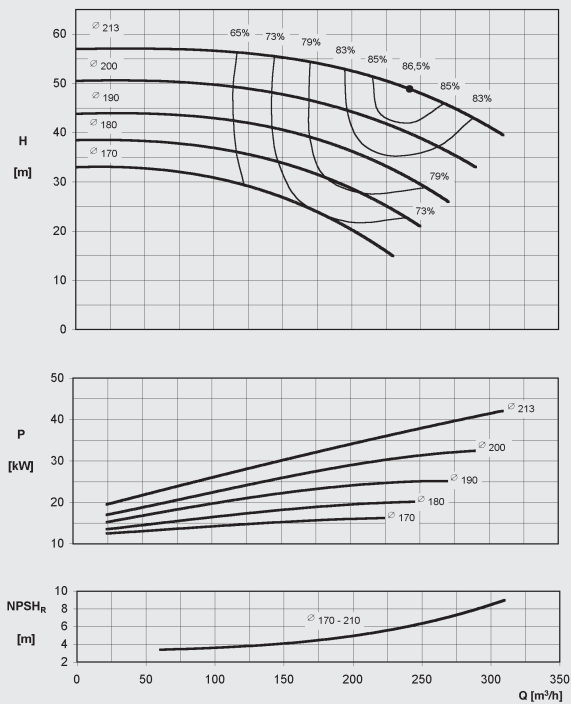
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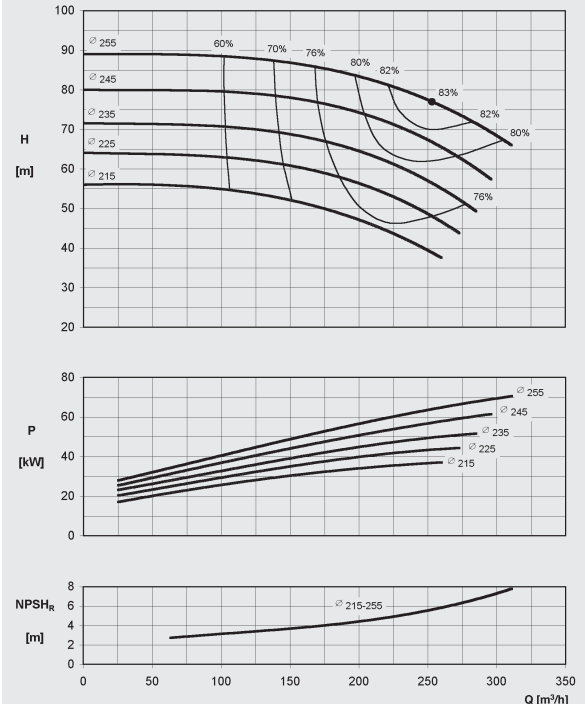
100-160



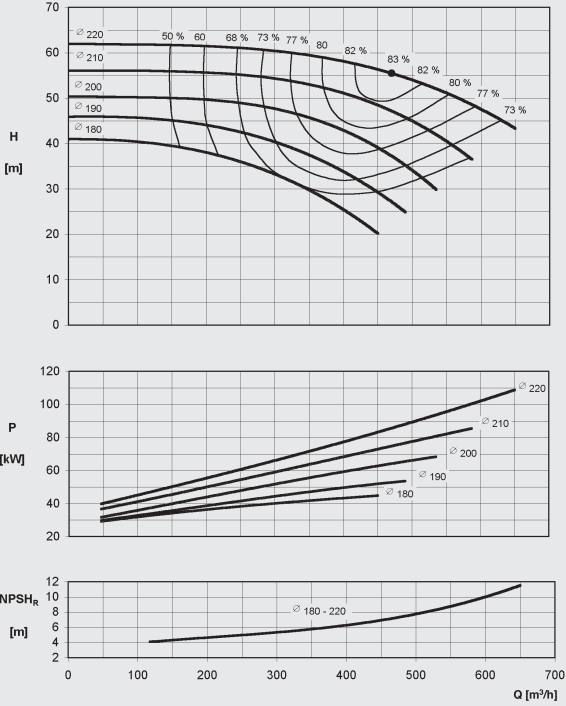
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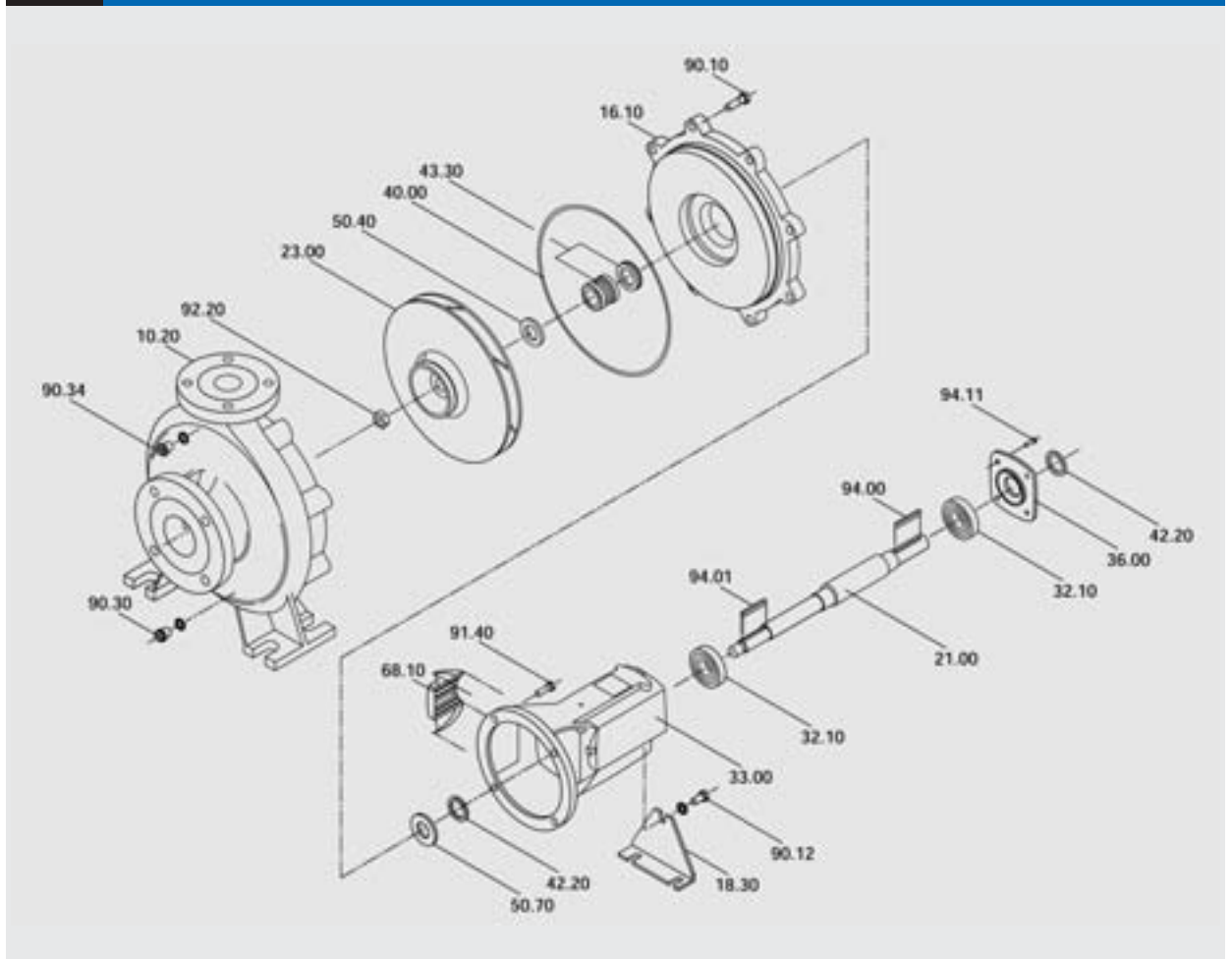
100-250



125-200



EXPLODED VIEW AND LIST OF COMPONENTS



PART	DESCRIPTION	N° of pumps		
		1÷3	4÷7	≥7
10.20	Volute casing			
16.10	Casing cover			
18.30	Pump foot			
21.00	Shaft			
23.00	Impeller			
32.10	Ball bearing			
33.00	Bearing housing			
36.00	Bearing cover			
40.00	Casing gasket			
42.20	V seal			
43.30	Mechanical seal			
50.40	Distance ring			
50.70	Thrower			
68.10	Protection screen			
90.10	Casing screw			
90.11	Bearing cover screw			
90.12	Foot screw			
90.30	Draining plug			
90.34	Priming plug			
91.40	Housing screw			
92.20	Impeller nut			
94.00	Shaft side key			
94.01	Impeller key			

PART	DESCRIPTION	N° of pumps		
		1÷3	4÷7	≥7
21.00	Complete shaft	2	3	4
23.00	Impeller	1	2	3
32.10	Ball bearing (set)	2	3	4
43.30	Mechanical seal	2	3	4
-	Gasket kit	2	3	4

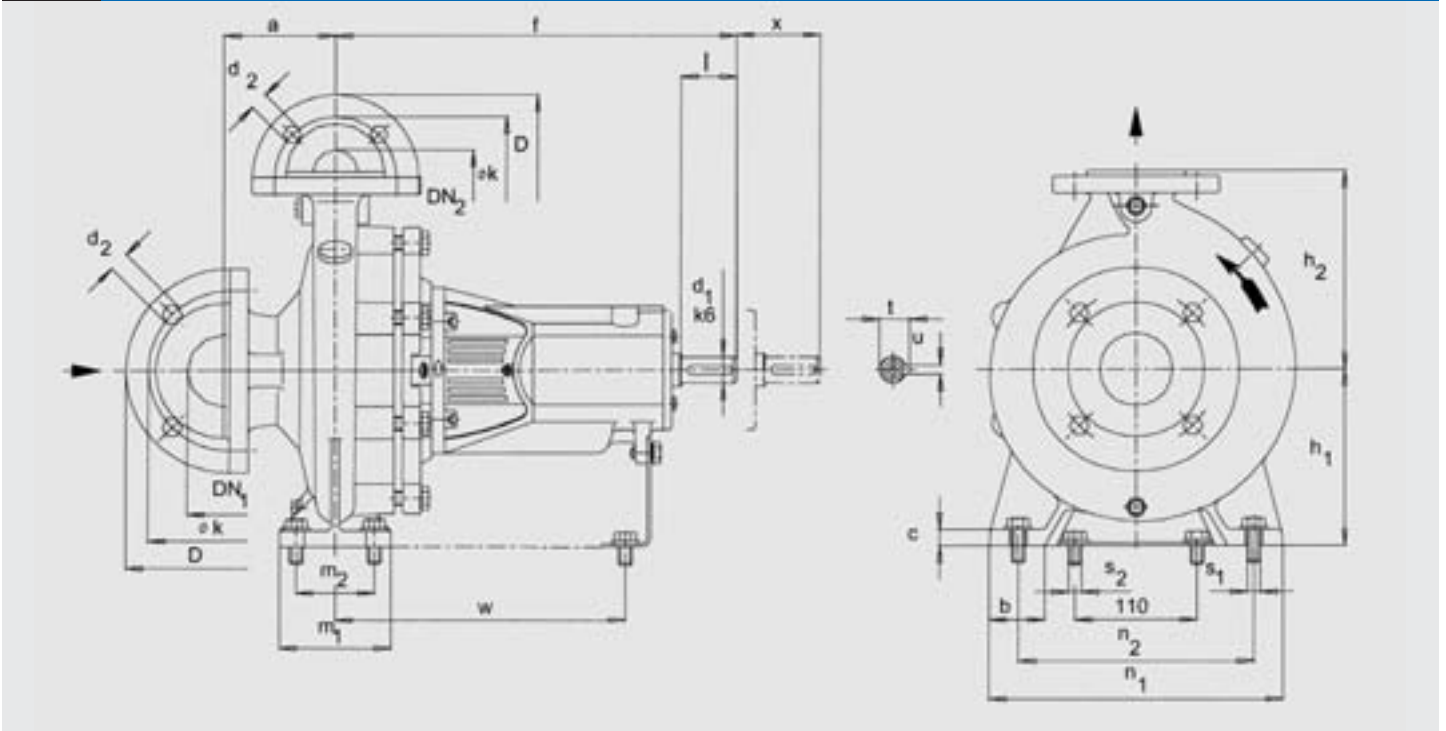
CHANGEABILITY CHART

PART NAME	CASING	CASING COVER	FOOT	SHAFT	IMPELLER	BALL BEARING	BEARING HOUSING	BEARING COVER	CASING GASKET	MECHANICAL SEAL	DISTANCE RING	PROTECTION SCREEN	IMPELLER NUT	KEY	IMPELLER KEY
PUMP	10.20	16.10	18.30	21.00	23.00	32.10	33.00	36.00	40.00	43.30	50.40	68.10	92.20	94.00	94.01
ENR 32-125	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ENR 32-160 A	2a	2	2	1	2a	1	1	1	2	1	1	1	1	1	1
ENR 32-160 B	2b	2	2	1	2b	1	1	1	2	1	1	1	1	1	1
ENR 32-200 A	3a	4	3	1	3a	1	1	1	3	1	1	1	1	1	1
ENR 32-200 B	3b	4	3	1	3b	1	1	1	3	1	1	1	1	1	1
ENR 32-250	4	7	4	1	4	1	1	1	4	1	1	1	1	1	1
ENR 40-125	5	1	1	1	5	1	1	1	1	1	1	1	1	1	1
ENR 40-160	6	2	2	1	6	1	1	1	2	1	1	1	1	1	1
ENR 40-200	7	4	3	1	7	1	1	1	3	1	1	1	1	1	1
ENR 40-250	8	7	4	1	8	1	1	1	4	1	1	1	1	1	1
ENR 40-315	9	14	5	2	9	2	2	2	6	2	2	2	2	2	2
ENR 50-125	10	1	2	1	10	1	1	1	1	1	1	1	1	1	1
ENR 50-160	11	3	3	1	11	1	1	1	2	1	1	1	1	1	1
ENR 50-200	12	5	3	1	12	1	1	1	3	1	1	1	1	1	1
ENR 50-250	13	7	4	1	13	1	1	1	4	1	1	1	1	1	1
ENR 50-315	14	15	5	2	14	2	2	2	6	2	2	2	2	2	2
ENR 65-125	15	1	3	1	15	1	1	1	1	1	1	1	1	1	1
ENR 65-160	16	3	3	1	16	1	1	1	2	1	1	1	1	1	1
ENR 65-200	17	5	4	1	17	1	1	1	3	1	1	1	1	1	1
ENR 65-250	18	8	6	2	18	2	2	2	4	2	2	2	2	2	2
ENR 65-315	19	15	5	2	19	2	2	2	6	2	2	2	2	2	2
ENR 80-160	20	3	4	1	20	1	1	1	2	1	1	1	1	1	1
ENR 80-200	21	6	7	2	21	2	2	2	3	2	2	2	2	2	2
ENR 80-250	22	9	6	2	22	2	2	2	4	2	2	2	2	2	2
ENR 80-315	23	15	8	2	23	2	2	2	6	2	2	2	2	2	2
ENR 80-400	24	17	9	3	24	3	3	3	7	3	3	3	3	3	3
ENR 100-160	25	19	6	2	25	2	2	2	5	2	2	2	2	2	2
ENR 100-200	26	20	6	2	26	2	2	2	3	2	2	2	2	2	2
ENR 100-250	27	10	5	2	27	2	2	2	4	2	2	2	2	2	2
ENR 100-315	28	15	8	2	28	2	2	2	6	2	2	2	2	2	2
ENR 100-400	29	17	9	3	29	3	3	3	7	3	3	3	3	3	3
ENR 125-200	30	21	8	2	30	2	2	2	5	2	2	2	2	2	2
ENR 125-250	31	11	8	2	31	2	2	2	4	2	2	2	2	2	2
ENR 125-315	32	16	9	3	32	3	3	3	6	3	3	3	3	3	3
ENR 125-400	33	18	10	3	33	3	3	3	7	3	3	3	3	3	3
ENR 150-200	34	21	11	2	34	2	2	2	5	2	2	2	2	2	2
ENR 150-250	35	12	11	2	35	2	2	2	4	2	2	2	2	2	2
ENR 150-315	36	16	9	3	36	3	3	3	8	3	3	3	3	3	3
ENR 150-400	37	18	10	3	37	3	3	3	7	3	3	3	3	3	3
ENR 200-250	39	13	9	3	39	3	3	3	9	3	3	3	3	3	3

The chart shows the part list (main parts) of ENR 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 pump sizes.

DIMENSIONS BEARING BRACKET 25, 35 & 45



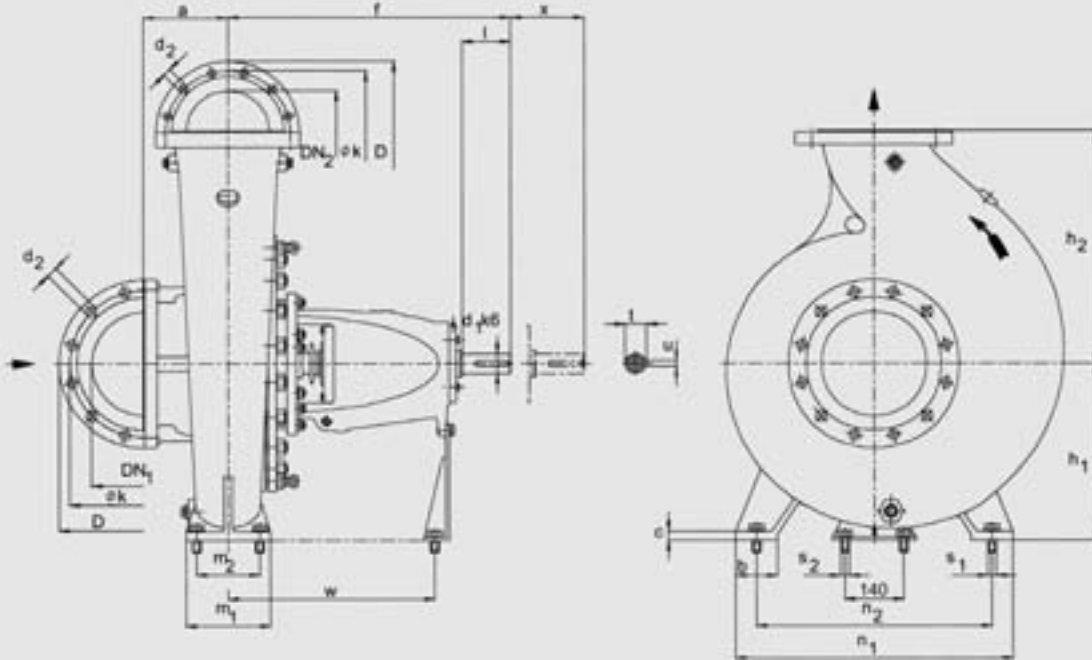
OUTLINE DIMENSIONS

Pump size	Sup.	Pump dimensions						Foot dimensions								Shaft end					Weight kg	
		DN2	DN1	a	f	h1	h2	b	c	m1	m2	n1	n2	s1*	s2*	w	x	d1	l	t		u
32-125	25	32	50	80	360	112	140	50	15	100	70	190	140	M12	M12	260	100	24	50	27	8	31
32-160						132	160					240	190									33
32-200						160	180					210	160									34
32-250 ¹⁾						180	225					320	250									46
40-125	25	40	65	80	360	112	140	50	15	100	70	210	160	M12	M12	260	100	24	50	27	8	28
40-160						132	160					240	190									30
40-200						160	180					265	212									36
40-250						180	225					320	250									46
40-315 ¹⁾	35	40	65	125	470	225	250	65	18	125	95	345	280		340		32	80	35	10	73	
50-125	25	50	65	100	360	132	160	50	15	100	70	240	190	M12	M12	260	100	24	50	27	8	30
50-160						160	180					265	212									36
50-200						180	225					320	250									40
50-250						200	200					320	250									50
50-315 ¹⁾	35	50	65	125	470	225	280	65	17	125	95	345	280		340		32	80	35	10	88	
65-125	25	65	80	100	360	160	180	65	15	125	95	280	212	M12	M12	260	100	24	50	27	8	33
65-160						200	200					360	250									39
65-200						180	225					400	315									45
65-250						200	250					360	280									70
65-315	35	65	80	125	470	225	280	80	18	160	120	400	315	M16		340	140	32	80	35	10	92
80-160	25	80	100	125	470	360	225	65	15	125	95	320	250	M12	M12	260	140	24	50	27	8	43
80-200						180	250					345	280									60
80-250						200	280					400	315									75
80-315						250	315					400	315									95
80-400 ¹⁾	45	80	100	125	530	280	355	80	18	160	120	435	355	M16		370	140	42	110	45	12	143
100-160 ¹⁾	35	100	125	140	470	200	280	80	18	160	120	360	280	M16	M12	340	140	32	80	35	10	78
100-200						225	315					400	315									70
100-250						250	315					400	315									85
100-315						280	355					500	400									104
100-400	45	100	125	140	530	280	355	100		200	150	500	400	M20		370	140	42	110	45	12	177
125-200 ¹⁾	35	125	150	140	470	250	315	80	18	160	120	400	315	M16	M12	340	140	32	80	35	10	100
125-250						280	355					500	400									102
125-315						315	400					500	400									151
125-400						350	450					500	400									188
150-200 ¹⁾	35	150	200	160	470	280	400	100	20	200	150	550	450	M20	M12	340	140	32	80	35	10	123
150-250						315	450					500	400									128
150-315						350	450					500	400									170
150-400						370	450					500	400									205
200-250 ¹⁾	45	200	200	160	590	280	400	100	22	200	150	500	400	M20	M12	430	180	42	110	45	12	230

1) Transnorm pump sizes, not included in DIN 24255 / EN 733. Flanges drilled according to ANSI 150 on request.

* Slots suitable for bolts with dimensions indicated. Bolts are not included in the bare shaft pump standard scope of supply.

DIMENSIONS BEARING BRACKET 55 & 65



OUTLINE DIMENSIONS

Pump size	Sup.	Pump dimensions						Foot dimensions								Shaft end					Weight kg	
		DN2	DN1	a	f	h1	h2	b	c	m1	m2	n1	n2	s1*	s2*	w	x	d1	l	t		u
150-500 ¹⁾	55	150	200	180	670	400	500	100	22	200	150	640	540	M20	M16	489	180	50	115	53.5	14	335
200-315 ¹⁾	55	200	250	200	670	355	450	100	22	200	150	550	450	M20	M16	489	180	50	115	53.5	14	310
200-400 ¹⁾				180		500	340															
200-500 ¹⁾				200		425	560					395										
250-300 ¹⁾	55	250	300	305	655	425	550	120	28	240	190	700	600	M20	M16	474	180	50	115	53.5	14	416
250-315 ¹⁾				670	375	560	424															
250-400 ¹⁾				400	600	464																
250-500 ¹⁾	65	300	350	720	450	670	32	120	30	250	190	750	650	M24	M16	503	180	60 ²⁾	145	64	18	589
300-400 ¹⁾				425	670	30	660					620	520									489
300-500 ¹⁾				480	670	32	660					720	508									620

1) Transnom pump sizes, not included in DIN 24255 / EN 733. Flanges drilled according to ANSI 150 on request.

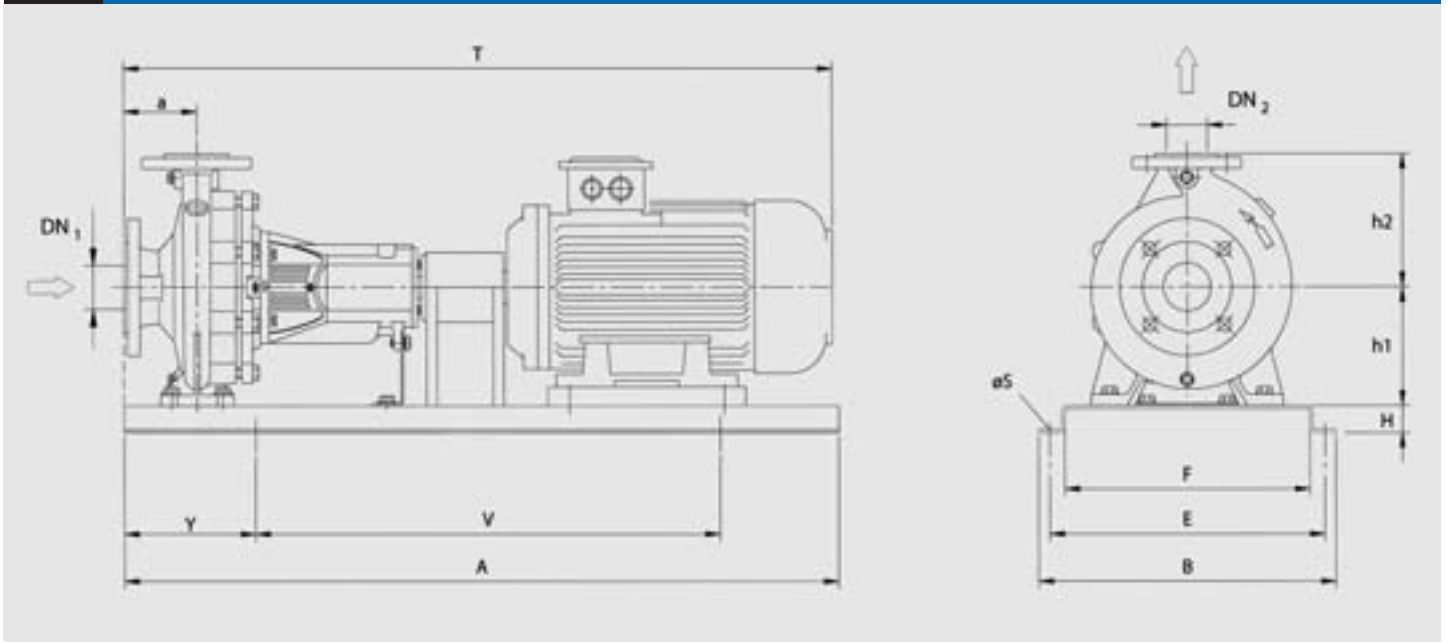
2) For these sizes the clearance corresponds to m6.

* Slots suitable for bolts with dimensions indicated. Bolts are not included in the bare shaft pump standard scope of supply.

FLANGES

Flange connections to DIN 2501 PN 16														DIN 2501 PN 10			
DN2/DN1	32	40	50	65	80	100	125	150	200	250	300	350	400	100	125	150	200
D	140	150	165	185	200	220	250	285	340	405	460	520	580	220	250	285	340
k	100	110	125	145	160	180	210	240	295	355	410	470	525	180	210	240	295
d: x number	18x4	18x4	18x4	18x4	18x8	18x8	18x8	22x8	22x12	26x12	26x12	26x16	30x16	18x8	18x8	22x8	22x8

FOUNDATION PLAN, BEARING BRACKETS 25, 35 & 45



OUTLINE DIMENSIONS

Components			Common				Standard coupling										Coupling with spacer												
Pump	Motor		DN2	DN1	a	h2	h1	A	B	F	Y	V	E	H	S	T	kg	A	B	F	Y	V	E	H	S	T	kg		
	kW	Frame size																											
32-125	0,37	71	32	50	80	140	112	900	390	300	150	600	350	50	18	714	70	900	390	300	150	600	350	50	18	810	71		
	0,55	80																										70	71
	0,75	80																										70	71
	0,75	80																										70	71
	1,1	80																										70	71
	1,5	90S																										73	74
	2,2	90L																										76	77
	3	100L																										76	77
32-160	0,37	71	32	50	80	160	132	900	390	300	150	600	350	50	18	714	71	900	390	300	150	600	350	50	18	810	72		
	0,55	80																										71	72
	0,75	80																										71	72
	1,5	90S																										74	74
	2,2	90L																										76	77
	3	100L																										76	77
	4	112																										84	87
	5,5	132S																										84	87
32-200	0,55	80	32	50	80	180	160	900	390	300	150	600	350	50	18	714	79	900	390	300	150	600	350	50	18	810	79		
	0,75	80																										79	79
	1,1	90S																										82	83
	1,5	90L																										76	84
	2,2	90L																										84	84
	3	100L						84	84																				
	4	112						84	91																				
	5,5	132S						84	103																				
	7,5	132S						84	103																				
	11	160M						92	105																				
32-250	0,75	80	32	50	100	225	180	900	490	380	150	600	440	50	18	734	95	900	490	380	150	600	440	50	18	880	96		
	1,1	90S																										98	99
	1,5	90L																										78	100
	2,2	100L																										78	100
	3	100L																										86	111
	7,5	132S						86	111																				
	11	160M						94	132																				
	15	160M						94	132																				
	18,5	160L						112	187																				
	40-125	0,37						71	40	65	80	140	112	900	390	300	150	600	350	50	18	714	71	900	390	300	150	600	350
0,55		80	71	72																									
0,75		80	71	72																									
1,1		80	71	72																									
1,5		90S	74	75																									
2,2		90L	76	77																									
3		100L	76	77																									
4		112	84	87																									
5,5		132S	84	94																									
			92	114																									
			92	114																									
			92	114																									

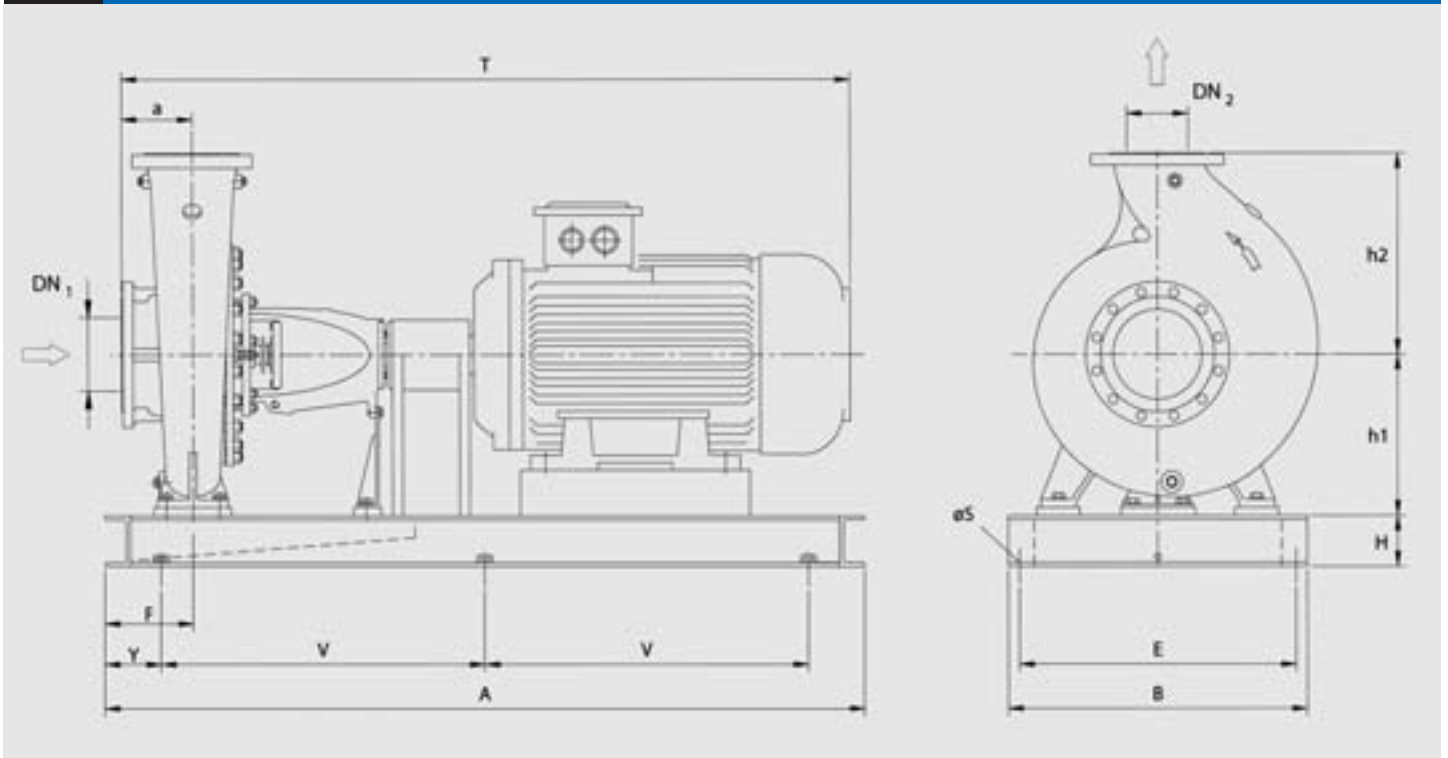
Components				Common					Standard coupling									Coupling with spacer										
Pump	Motor			DN2	DN1	a	h2	h1	A	B	F	Y	V	E	H	S	T	kg	A	B	F	Y	V	E	H	S	T	kg
	4 pol.	2 pol.	Frame size																									
40-160	0,37		71	40	65	80	160	132	900	390	300	150	600	350	50	18	714	77	900	390	300	150	600	350	50	18	810	77
	0,55		80															77										77
	0,75		80															77										77
	1,1		90S															80										80
	1,5		90L															82										83
		1,5	90S															82										83
		2,2	90L															83										83
		3	100L															844										93
		4	112															844										104
		5,5	132S															900										104
		7,5	132S															900										104
	11	160M	926	115																								
			1092	165																								
			1120	165																								
40-200	0,55		80	40	65	100	180	160	900	490	380	150	600	440	50	18	734	84	1000	450	340	170	660	400	50	22	830	86
	0,75		80															84										86
	1,1		90S															87										89
	1,5		90L															88										91
		3	100L															89										91
		4	112															97										99
		5,5	132S															864										106
		7,5	132S															864										106
		11	160M															946										121
		15	160M															946										121
																		1120										121
			1120	121																								
			1112	167																								
			1112	167																								
40-250	1,1		90S	40	65	100	225	180	900	490	380	150	600	440	50	18	784	98	1120	490	380	150	600	440	50	18	880	99
	1,5		90L															100										101
	2,2		100L															111										113
	3		100L															864										111
		7,5	132S															946										132
		11	160M															946										132
		15	160M															1112										178
		18,5	160L															1112										178
		22	180M															1112										201
																		1150										224
																		1150										224
40-315	2,2		100L	40	65	125	250	225	1120	610	480	190	740	550	50	22	999	171	1250	540	430	205	840	490	50	22	1095	173
	3		100L															171										173
	4		112															178										180
	5,5		132S															1081										189
		15	160M															1247										242
		18,5	160L															1247										256
		22	180M															1285										280
		30	200L															1322										345
		37	200L															1322										345
																		1400										230
																		1400										230
50-125	0,37		71	50	65	100	160	132	900	390	300	150	600	350	50	18	734	77	900	390	300	150	600	350	50	18	830	77
	0,55		80															77										77
	0,75		80															77										77
	1,1		90S															80										80
	1,5		90S															82										83
	2,2		90L															83										83
		3	100L															864										93
		4	112															864										104
		5,5	132S															900										104
		7,5	132S															900										104
		11	160M															946										115
	15	160M	946	115																								
50-160	0,55		80	50	65	100	180	160	900	490	380	150	600	440	50	18	734	82	1120	490	380	190	740	440	50	22	830	84
	0,75		80															82										84
	1,1		90S															85										87
	1,5		90L															87										89
	2,2		100L															864										97
		2,2	90L															864										97
		3	100L															864										97
		4	112															864										103
		5,5	132S															946										119
		7,5	132S															946										119
		11	160M															1112										165
	15	160M	1112	165																								
50-200	1,1		90S	50	65	100	200	160	900	490	380	150	600	440	50	18	784	89	1120	490	380	190	740	440	50	22	880	91
	1,5		90L															92										93
	2,2		100L															102										104
	3		100L															102										104
	4		112															864										109
		3	100L															864										109
		4	112															864										109
		5,5	132S															946										123
		7,5	132S															946										123
		11	160M															1112										169
		15	160M															1112										169
	18,5	160L	1112	183																								
	22	180M	1150	217																								

Components				Common					Standard coupling									Coupling with spacer										
Pump	Motor			DN2	DN1	a	h2	h1	A	B	F	Y	V	E	H	S	T	kg	A	B	F	Y	V	E	H	S	T	kg
	4 pol.	2 pol.	Frame size																									
50-250	1,5		90L	50	65	100	225	180	900	490	380	150	600	440	50	18	784	107	900	490	380	150	600	440	50	18	880	108
	2,2		100L														864	117									960	119
	3		100L														864	117									960	119
	4		112														946	123									1042	142
	5,5		132S														946	138									1042	157
	15		160M														1112	194									1208	195
	18,5		160L														1112	207									1208	211
	22		180M														1150	232									1250	235
30		200L	1187	296	1400	321																						
50-315	3		100L	50	65	125	280	225	1120	610	480	190	740	550	50	22	999	171	1250	540	430	205	840	490	50	22	1095	173
	4		112														1081	178									1095	180
	5,5		132S														1081	189									1177	195
	7,5		132M														1081	199									1177	203
	22		180M														1285	280									1381	283
	30		200L														1322	345									1418	348
	37		200L														1322	345									1418	348
	45		225M														1400	404									1525	411
55		250M	1400	438	1525	441																						
75		280S	1559	572	1655	576																						
65-125	0,55		80	65	80	100	180	160	900	490	380	150	600	440	50	18	734	80	1000	450	340	170	660	400	50	22	830	81
	0,75		80														784	80									880	85
	1,1		90S														784	83									880	85
	3		100L														864	95									960	98
	4		112														864	102									960	120
	5,5		132S														946	117									1042	135
	7,5		132S														946	117									1042	135
	11		160M														1112	163									1208	164
65-160	0,75		80	65	80	100	200	160	900	490	380	150	600	440	50	18	734	85	1000	450	340	170	660	400	50	22	830	86
	1,1		90S														784	88									880	90
	1,5		90L														784	90									880	92
	2,2		100L														864	100									960	103
	5,5		132S														946	122									1042	140
	7,5		132S														946	122									1042	140
	11		160M														1112	168									1208	169
	15		160M														1112	168									1208	169
18,5		160L	1112	182	1208	183																						
65-200	1,1		90S	65	80	100	225	180	900	490	380	150	600	440	50	18	784	98	1120	490	380	190	740	440	50	22	880	115
	1,5		90L														864	110									960	128
	2,2		100L														864	110									960	128
	3		100L														946	116									1042	134
	4		112														946	131									1042	149
	5,5		132S														1112	186									1208	219
	11		160M														1112	186									1208	219
	15		160M														1112	200									1208	234
	18,5		160L														1150	225									1246	257
	22		180M														1187	288									1283	313
	30		200L														974	163									1070	164
	37		200L														974	169									1070	172
65-250	2,2		100L	65	80	100	250	200	1120	610	480	190	740	550	50	22	974	163	1250	540	430	205	840	490	50	22	1070	164
	3		100L														1056	184									1152	187
	4		112														1056	194									1152	194
	5,5		132S														1222	249									1318	251
	7,5		132M														1260	273									1356	276
	18,5		160L														1297	337									1393	340
	22		180M														1297	337									1393	340
	30		200L														1404	396									1500	403
	37		200L														1404	419									1500	427
	45		225M														1404	449									1500	452
	75		280S														1559	583									1695	587
	90		280M														1559	629									1695	633
80-160	0,75		80	80	100	125	225	180	900	490	380	150	600	440	50	18	759	90	1120	490	380	190	740	440	50	22	855	108
	1,1		90S														809	93									905	111
	1,5		90L														809	95									905	113
	2,2		100L														889	105									985	123
	3		100L														889	105									985	123
	4		112														971	112									1067	130
	7,5		132S														971	143									1067	145
	11		160M														1137	182									1233	206
	15		160M														1137	182									1233	206
	18,5		160L														1137	196									1233	220
	22		180M														1175	220									1271	243
	30		200L														1212	284									1308	309

Components				Common					Standard coupling									Coupling with spacer										
Pump	Motor		Frame size	DN2	DN1	a	h2	h1	A	B	F	Y	V	E	H	S	T	kg	A	B	F	Y	V	E	H	S	T	kg
	4 pol.	2 pol.																										
80-200	2,2		100L	80	100	125	250	180	1120	610	480	190	740	550	50	22	999	152	1120	610	480	190	740	550	50	22	1095	153
	3		100L														159	160										
	4		112														1247	224									238	
	5,5		132S														1081	170									1217	176
		15	160M														1285	262									1343	226
		18,5	160L														1322	327									1418	240
		22	180M														1429	385									1381	265
		30	200L														1429	385									1418	329
		37	200L														1429	385									1418	329
	45	225M	1429	385	1525	392																						
80-250	3		100L	80	100	125	280	200	1120	610	480	190	740	550	50	22	999	167	1120	610	480	190	740	550	50	22	1095	170
	4		112														174	177										
	5,5		132S														1081	185									188	
		7,5	132M														1247	193									198	
		11	160M														1285	275									1343	238
		22	180M														1322	338									1381	278
		30	200L														1429	397									1418	341
		37	200L														1429	397									1418	341
		45	225M														1429	397									1525	404
		55	250M														1429	431									1525	434
	75	280S	1559	565	1655	569																						
80-315	5,5		132S	80	100	125	315	250	1120	610	480	190	740	550	50	22	1081	196	1400	610	480	230	940	550	75	26	1217	218
	7,5		132M														204	228										
	11		160M														1247	248									250	
	15		160L														1285	262									1383	264
	18,5		180M														1322	286									1421	288
	22		180L														1322	325									1458	327
	30		200L														1322	364									1458	367
		37	200L														1429	413									1458	367
		45	225M														1429	413									1565	416
		55	250M														1429	443									1565	446
		75	280S														1559	576									1695	580
	90	280M	1559	622	1695	626																						
80-400	11		160M	80	125	125	355	280	1400	610	480	230	940	550	75	26	1307	356	1400	610	480	230	940	550	75	26	1443	340
	15		160L														1345	369									1481	354
	18,5		180M														1382	392									1481	379
	22		180L														1382	428									1518	417
	30		200L														1382	452									1518	491
	37		225S														1489	494									1625	533
100-160	2,2		100L	100	125	125	280	200	1120	610	480	190	740	550	50	22	999	155	1120	610	480	190	740	550	50	22	1135	157
	3		100L														162	163										
	4		112														1081	173									1217	179
	5,5		132S														1247	242									1383	244
		18,5	160L														1285	266									1421	268
		22	180M														1322	330									1458	332
		30	200L														1322	330									1458	332
	37	200L	1429	330	1458	332																						
100-200	2,2		100L	100	125	125	280	200	1120	610	480	190	740	550	50	22	999	159	1120	610	480	190	740	550	50	22	1135	160
	3		100L														165	166										
	4		112														1081	176									182	
	5,5		132S														1247	186									190	
		7,5	132M														1285	245									1383	247
		18,5	160L														1322	269									1421	271
		22	180M														1322	333									1458	336
		30	200L														1322	333									1458	336
		37	200L														1429	392									1525	399
		45	225M														1429	392									1525	429
	55	250M	1429	426	1565	429																						
	75	280S	1559	560	1695	564																						
100-250	4		112	100	125	140	280	225	1120	610	480	190	740	550	50	22	1014	190	1120	610	480	190	740	550	50	22	1150	192
	5,5		132S														1096	201									1232	225
	7,5		132M														1247	209									1232	233
	11		160M														1285	252									1398	254
	15		160L														1322	266									1398	268
		30	200L														1337	368									1473	371
		37	200L														1337	368									1473	371
		45	225M														1444	417									1580	420
		55	250M														1444	447									1580	450
		75	280S														1574	581									1710	585
	90	280M	1574	627	1710	631																						
100-315	11		160M	100	125	140	315	250	1400	610	480	230	940	550	75	26	1262	270	1400	610	480	230	940	550	75	26	1398	272
	15		160L														1300	284									1436	286
	18,5		180M														1337	309									1473	311
	22		180L														1337	347									1473	349
	30	200L	1337	386	1473	425																						

Components			Common					Standard coupling										Coupling with spacer									
Pump	Motor		DN2	DN1	a	h2	h1	A	B	F	Y	V	E	H	S	T	kg	A	B	F	Y	V	E	H	S	T	kg
	kW	Frame size																									
100-400	15	160L	100	125	140	355	280	1400	730	600	230	940	670	75	26	1322	373	1400	730	600	230	940	670	75	26	1458	376
	18,5	180M														1360	398									1496	401
	22	180L														436	437										
	30	200L														1397	462									1533	501
	37	225S														503	542										
	45	225M														1504	521									1640	561
125-200	7,5	132M	125	150	140	315	250	1120	610	480	190	740	550	50	22	1096	223	1400	610	480	230	940	670	75	26	1232	248
	11	160M														1262	267									1398	269
	15	160L														281	283										
	37	200L														1337	383									1473	386
	45	225M														432	435										
	55	250M														462	465										
	75	280S														595	599										
	90	280M														1574	641									1710	645
	110	315S														670	675										
	315	1800														730	600									300	1200
125-250	7,5	132M	125	150	140	355	250	1120	610	480	190	740	550	50	22	1096	237	1400	610	480	230	940	670	75	26	1232	262
	11	160M														1262	281									1398	283
	15	160L														295	297										
	18,5	180M														1300	319									1436	322
	22	180L														1337	358									1473	360
	15	160L														1322	352									1458	355
125-315	18,5	180M	125	150	140	355	280	1400	730	600	230	940	670	75	26	1360	377	1400	730	600	230	940	670	75	26	1496	379
	22	180L														1397	415									1533	415
	30	200L														440	479										
	37	225S														1504	482									1640	521
	45	225M														500	540										
	30	200L														1397	475									1533	513
125-400	37	225S	125	150	140	400	315	1400	730	600	230	940	670	75	26	1504	516	1800	730	600	300	1200	670	100	26	1640	555
	45	225M														534	575										
	55	250M														1569	612									1705	616
	75	280S														1634	733									1770	739
	1116	303														1252	306										
	1282	325														1418	327										
150-200	15	160L	150	200	160	400	280	1400	730	600	230	940	670	75	26	1282	338	1400	730	600	230	940	670	75	26	1418	373
	18,5	180M														1320	363									1456	366
	15	160L														1282	370									1418	373
	18,5	180M														1320	395									1456	398
	22	180L														1357	433									1493	436
	30	200L														459	497										
150-250	37	225S	150	200	160	400	280	1400	730	600	230	940	670	75	26	1464	500	1800	730	600	300	1200	670	100	26	1600	539
	18,5	180M														1380	427									1516	432
	22	180L														1417	465									1553	504
	30	200L														491	530										
	37	225S														1524	567									1660	571
	45	225M														586	591										
150-315	55	250M	150	200	160	400	280	1400	730	600	230	940	670	100	26	1589	628	1800	730	600	300	1200	670	100	26	1725	632
	45	225M														1524	605									1660	610
	55	250M														1589	647									1725	652
	75	280S														1654	768									1790	774
	90	280M														837	844										
	15	160L														1402	425									1578	468
200-250	18,5	180M	200	200	160	400	280	1400	730	600	230	940	670	75	26	1440	450	1800	730	600	300	1200	670	100	26	1616	493
	22	180L														488	531										
	30	200L														1477	514									1653	557

FOUNDATION PLAN, BEARING BRACKETS 55 & 65



OUTLINE DIMENSIONS

Components			Common					Standard coupling										Coupling with spacer															
Pump	Motor		DN2	DN1	a	h2	h1	A	B	F	Y	V	E	H	S	T	kg	A	B	F	Y	V	E	H	S	T	kg						
	kW 4 pol.	Frame size																															
150-500	22	180L	150	200	180	500	430	1670	810	235	170	665	760	120	18	1566	674	1850	810	235	190	735	760	120	18	1742	677						
	30	200L						1740			700			1624	754	1920				1661	817	1960			190	770					1800	757	
	37	225S						1780			720			1661	817	1960				1784	845	2080	820	240	190	790					1837	820	
	45	225M						1900	820	240	760	770	140	18	1784	955	2080				1859	1136	2150			830	770	140	18	1960	961		
	55	250M						1980			190	800			1859	1186	2150									210	865				2035	1143	
	75	280S						2120			210	850			1994	1397	2300									230	920				2170	1406	
	90	280M						2260			230	900			2134	1477	2440									250	970				2310	1486	
	110	315S						2380	870	245	230	960	810	160	20	2254	1605	2560	870	245	250	1030	810	160	20	2430	1625				2430	1625	
	132	315M						1690	720	255	170	675	670	120	18	1586	659	1870	720	255	190	745	670	120	20	1762	662				1762	662	
	160	315L						1760			170					1644	712	1940								190	780				1820	715	
200	315L	1800	730	260	190	710	680	140	18	1681	777	1980	730	260	190	800	680	140	20	1857	780				1857	780							
250	315	1920								1804	915	2100								210	840				1980	921							
200-315	22	180L	200	250	200	450	385	1670	740	260	210	790	690	140	18	1879	1095	2170	740	260	210	875	690	140	20	2055	1102						
	30	200L						1760			170			1644	712	1940									190	800				1820	715		
	37	225S						1800	730	260	190	710	680	140	18	1681	777	1980	730	260	190	800	680	140	20	1857	780				1857	780	
	45	225M						1920							1804	915	2100								210	840				1980	921		
	55	250M						2000	740	260	210	790	690	140	18	1879	1095	2170	740	260	210	875	690	140	20	2055	1102				2055	1102	
	75	280S						1670	720	235	170	665	670	120	18	1566	666	1850	720	235	190	735	670	120	18	1742	669				1742	669	
	90	280M						1740			700					1624	742	1920								190	770				1800	745	
	110	315S						1780	730	240	170	720	680	140	18	1661	807	1960	730	240	190	790	680	140	18	1837	810				1837	810	
	132	315M						1900			190	760			1784	945	2080									210	830				1960	951	
	160	315L						1980	740	240	190	800	690	140	18	1859	1125	1175	2150	740	240	210	865	690	140	18	2035	1132				2035	1132
200	315L	2120			210	850			1994	1400	2300									230	920				2170	1409							
200-400	22	180L	200	250	180	500	385	1670	720	235	170	665	670	120	18	1566	666	1850	720	235	190	735	670	120	18	1742	669						
	30	200L						1740			700			1624	742	1920									190	770				1800	745		
	37	225S						1780	730	240	170	720	680	140	18	1661	807	1960	730	240	190	790	680	140	18	1837	810				1837	810	
	45	225M						1900			190	760			1784	945	2080								210	830				1960	951		
	55	250M						1980	740	240	190	800	690	140	18	1859	1125	1175	2150	740	240	210	865	690	140	18	2035	1132				2035	1132
	75	280S						2120			210	850			1994	1400	2300									230	920				2170	1409	
	90	280M						2260			230	900			2134	1480	2440									250	970				2310	1489	
	110	315S						2380	870	245	230	960	810	160	18	2254	1610	2560	870	245	250	1030	810	160	20	2430	1630				2430	1630	
	132	315M						1690	720	235	170	665	670	120	18	1566	666	1850	720	235	190	735	670	120	18	1742	669				1742	669	
	160	315L						1760			170					1644	712	1940								190	780				1820	715	
200	315L	1800	730	260	190	710	680	140	18	1681	777	1980	730	260	190	800	680	140	20	1857	780				1857	780							
200-500	45	225M	200	250	200	560	455	1800			190	710				1681	915	1980			190	800				1857	920						
	55	250M						1920	840	260	770	790	140	18	1804	1025	2100	840	260						840	790	140	18	1980	1031			
	75	280S						2000			210	790			1879	1205	1255	2170							210	875				2055	1212		
	90	280M						2140			210	860			2014	1465	1545	2320							230	930				2190	1474		
	110	315S						2280			230	910			2154	1700	1840	2460							250	980				2330	1554		
	132	315M						2400	870	265	250	950	810	160	20	2274	1665	1865	2580	870	265	250	1040	810	160	20	2450	1685		2450	1685		
	160	315L						2640	980	270	270	1050	920	180	20	2499	1965	2810	980	270	290	1115	920	180	20	2675	1885				2675	1885	
	200	315L																															
	250	315																															
	315	315																															
355	355																																

Components			Common					Standard coupling										Coupling with spacer																									
Pump	Motor		DN2	DN1	a	h2	h1	A	B	F	Y	V	E	H	S	T	kg	A	B	F	Y	V	E	H	S	T	kg																
	kW 4 pol.	Frame size																																									
250-300	37	225S	250	300	305	550	455	1890	880	365	190	755	830	140	18	1771	894 922	2070	880	365	210	825	830	140	18	1947	898																
	45	225M						2010			795	1894				1037	2190	885				2070				1044																	
	55	250M						2090			835	1969				1217	2260	900				1225																					
	75	280S						1810			715	1694				842	1990	190				1870				846																	
250-315	37	225S	250	300	250	560	405	1850	800	310	190	735	750	140	18	1731	902	2030	800	310	210	805	750	140	18	1907	906																
	45	225M						1970			795	1854				1045	2150	865				2030				1052																	
	55	250M						2050			815	1929				1225	2220	880				2105				1233																	
	75	280S						2190			820	315				210	885	760				160				20	2064	1485	2370	820	315	230	955	760	160	20	2240	1496					
	90	280M																										1565															1576
	110	315S																																									
	132	315M																																									
250-400	37	225S	250	300	250	600	430	1900	880	310	190	760	830	140	18	1781	958	2080	880	310	230	830	830	140	18	1957	962																
	45	225M						2020			800	1904				1095	2200	870				2080				1103																	
	55	250M						2100			840	1979				1275	2270	905				2155				1284																	
	75	280S						2240			890	2114				1540	2420	960				2290				1552																	
	90	280M																																									
	110	315S																																									
	132	315M																																									
	160	315L																																									
	200	315L																																									
	250	315																																									
	315	315																																									
	355	355																																									
250-500	75	280S	250	300	250	670	480	2100	930	310	210	840	880	140	18	1979	1407	2270	930	310	230	905	880	140	18	2155	1431																
	90	280M						2240			890	2114				1671	2420	960				2290				1703																	
	110	315S																																									
	132	315M																																									
	160	315L																																									
	200	315L																																									
	250	315																																									
	315	315																																									
355	355																																										
400	355																																										
300-400	45	225M	300	350	300	670	455	1950	940	360	190	785	890	140	18	1831	1150	2130	940	360	230	855	890	140	18	2007	1143																
	55	250M						2070			825	1954				1260	2250	895				2130				1243																	
	75	280S						2150			865	2029				1442	2320	930				2205				1466																	
	90	280M						2290			915	2164				1701	2470	985				2340				1733																	
	110	315S																																									
	132	315M																																									
	160	315L																																									
	200	315L																																									
	250	315																																									
	315	315																																									
	355	355																																									
	400	355																																									
300-500	45	225M	300	350	300	670	510	1950	1020	360	190	785	970	140	18	1831	1270	2130	1020	360	230	855	970	140	18	2007	1263																
	55	250M						2070			825	1954				1477	2250	895				2130				1471																	
	75	280S						2150			865	2029				1655	2320	930				2205				1654																	
	90	280M						2290			915	2164				1711	2470	985				2340				1711																	
	110	315S																																									
	132	315M																																									
	160	315L																																									
	200	315L																																									
	250	315																																									
	315	315																																									
	355	355																																									
	400	355																																									
	500	355																																									
	560	400																																									
	630	400																																									
	710	400																																									

Consultar / Under request

SOUND LEVEL DB(A)

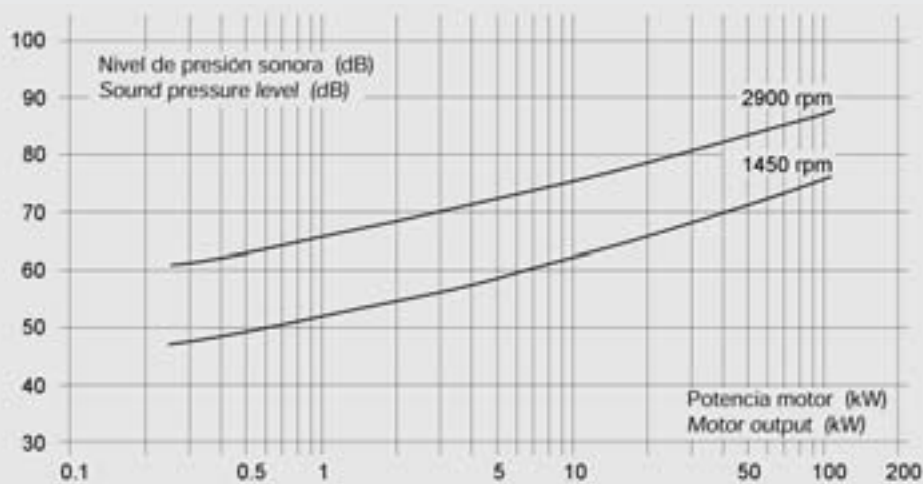
The graphic shows the values of sound levels corresponding to the equipment composed by pump + motor.

These values were measured according to UNE-EN ISO 3746 "Acoustics. Determination of sound levels of noise sources using sound pressure", using measuring points located on parallel planes of the ones delimitating the equipment in a distance of 1 meter, operating with water and the motors in full power.

The shown values should be used as reference since the real values measured in the installation may vary due to resonance effects of the building and the pipes. It is recomendable the use of dampeners to avoid noise transmission through the installation.

In the case of equipment operating at 60Hz electric supply, the values obtained from the graphic will be corrected as follows:

- 2 poles motors (3500 r.p.m.): + 3 dB
- 4 poles motors (1750 r.p.m.): + 1 dB





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