

Volute Casing Pumps

self-priming

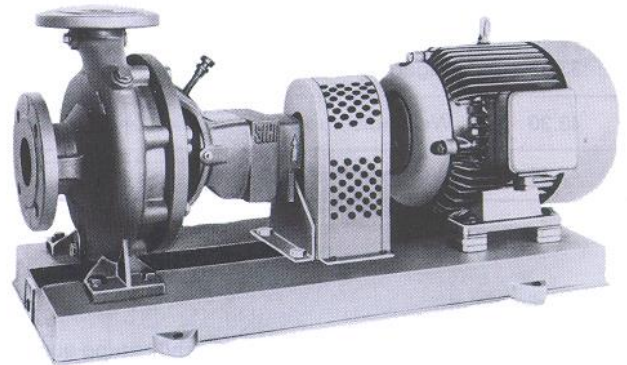
ULN 32-125 . . . 125-250



SIHI® Pumps

TECHNICAL DATA

Output:	max. 300 m ³ /h
Head:	max. 95 m
Suction head:	max. 5 m (cold water)
Speed:	max. 3000 rpm
Temperature:	max. 120 °C
Casing pressure:	PN 10
Shaft sealing:	standard mechanical seal
Flange connections:	DIN 2501 PN 10
Sense of rotation:	clockwise when seen on the pump from the drive



APPLICATION

The **self-priming** volute casing pumps according to DIN 24255 of the series ULN are applied when it is necessary to suck in and to handle without problems and automatically, pure resp. turbid not aggressive liquids which do not contain any solids. So they are suitable for:

- drinking water supply for communities
- general water supply in agriculture, business and industry
- irrigation and drainage
- sprinkling
- pumping of condensate
- charge and discharge of fuels and oils

Please observe: the max. geodetical suction height amounts to 5 m, provided that the necessary pressure corresponding to NPSH is not exceeded.

DESIGN

Horizontal, self-priming single stage volume casing pumps with dimensions and nominal outputs accord. to DIN 24255/EN 733 in back pull out construction.

The back pull out construction allows the demounting of the complete bearing unit towards the drive side so that it is not necessary to detach the pump casing out of the pipings. On applying a coupling with dismounting piece it will be superfluous to detach the motor.

The programme consists of 27 sizes with 4 suction sizes and needs only 2 shaft units on applying the mechanical assembly technique.

Within a shaft unit, shaft sealing, impeller fastening and bearing cover are exchangeable.

The side channel suction stage is arranged at the drive side of the volute casing. It is connected in parallel to the liquid pumping stage and works according to the sucking through principle.

CONSTRUCTION

Casing pressure:

Max. 10 bar from -40 °C to + 120 °C
Intermediate values can be interpolated.

Please observe:

Technical rules and safety regulations.
Casing pressure = positive suction pressure + zero delivery head

Position of branches:

Suction branch directed axially, discharge branch directed radially upwards.

Flanges:

The flanges correspond to DIN 2533/2532 PN 16/10¹⁾.
Flange design drilled accord. to ANSI 150 is possible.

Speed:

n = 1450 rpm; Designation of this construction type: A-
n = 2900 rpm; Designation of this construction type: B-

Bearing:

Two greased antifriction bearings. First grease filling will be made in the factory.. Designation of this construction type: ·B
As special design oil lubrication is possible.

Sense of rotation:

Clockwise when seen on the pump from the drive.

Shaft sealing:

The shaft sealing is made by a standard mechanical seal.

Designation AAE: uncooled, not balanced single standard mechanical seal, flushed from internal source, O-rings Perbunan.
Temperature range: -40 °C up to +120 °C

Designation AA1: as per AAE, but O-rings Viton.
Temperature range: -40 °C up to +140 °C

Material design

Item	COMPONENTS	MATERIAL DESIGN		
		0A	0C	3B
10.20 10.90, 11.40 16.10	volute casing stage casing casing cover	GG-25		G-CuSn 10
21.00	shaft	X 20 Cr 13		X 5 Cr Ni Mo 18 10
23.00	impeller	GG 25	G-Cu Sn 10	
23.50	vane wheel impeller	So Ms die-pressed		chrom-plate
33.00	bearing bracket	GG-25		
43.30	shaft sealing mechanical seal	X 22 Cr Ni 17 / carbon, Perbunan		X 22 Cr Ni 17 / carbon, Viton
47.10	shaft sealing casing	GG-25		G-Cu Sn 10

Casing seal:

For casing sealing a flat type seal of special paper is used. Designation of this construction type: 2

Drive / Speed and co-ordination of the suction stages:

Drive by commercial electric motors, construction type IM B3.

Drive by V-belt is admitted up to 1,5 kW drive power. On request, drive by Diesel engines or gasoline motors.

Suction stage	I			II			II			IV		
Size	32-125 32-250 40-250 65-125	32-160 40-125 50-125	32-200 40-200 50160	50-200 65-200	50-250 80-160	65-160	65-250 100-200	80-200 100-250	80-250	32-250 50-250 65-315 80-315 100-315	40-250 50-315 80-200 100-200 125-250	40-315 65-250 80-250 100-250
Additional drive power kW	0,3			0,9			2,2			0,7		
Speed rpm	2900						1450					
Max. speed rpm	300						1800					
Characteristic design	B •						A •					

The suction stages have been co-ordinated to the different construction sizes in such a manner that an optimal time at an economical drive power will be attained. On selecting of the motor size for the pump unit this constant drive power is to be considered.

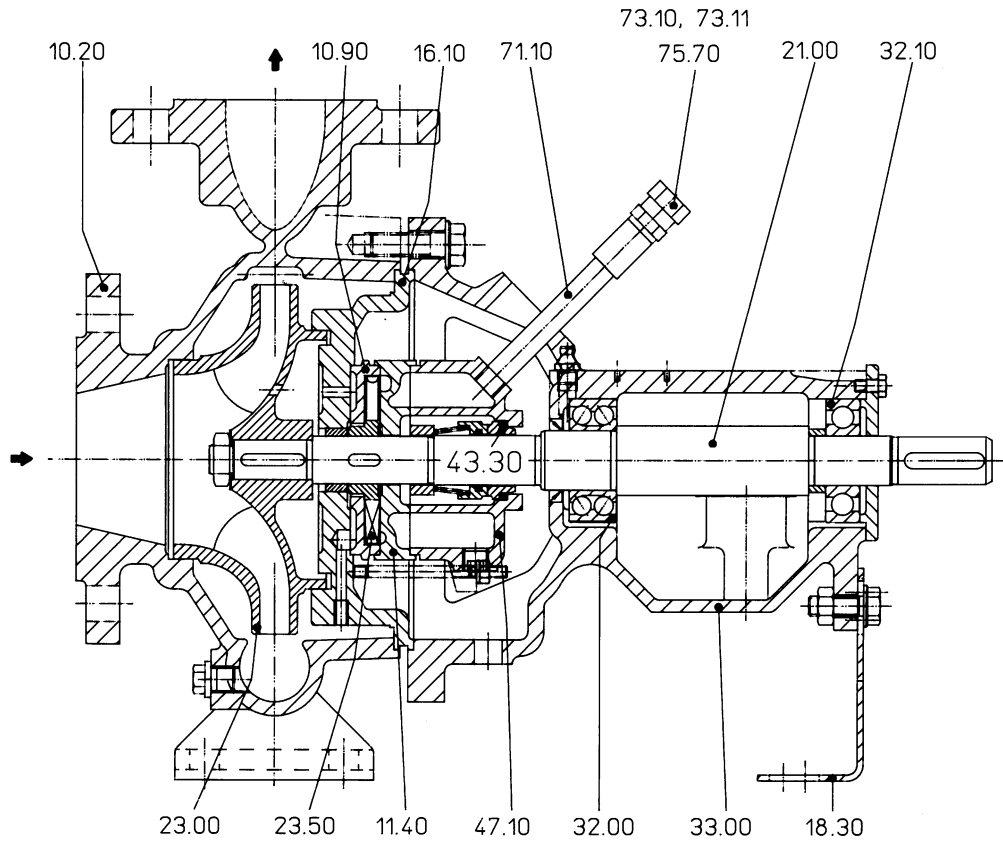
The max. speed of $n = 3000$ rpm resp. $n = 1800$ rpm results from the admitted peripheral speed of GG-impellers of 40 m/s resp. from the max. pumping pressure of 10 bar, as well as from the admitted stress of the suction stage.

General comments:

For self-priming multistage segmental type pumps we refer to the series **TKH** and **TLH**

Technical documentation about these programmes will be readily supplied on request.

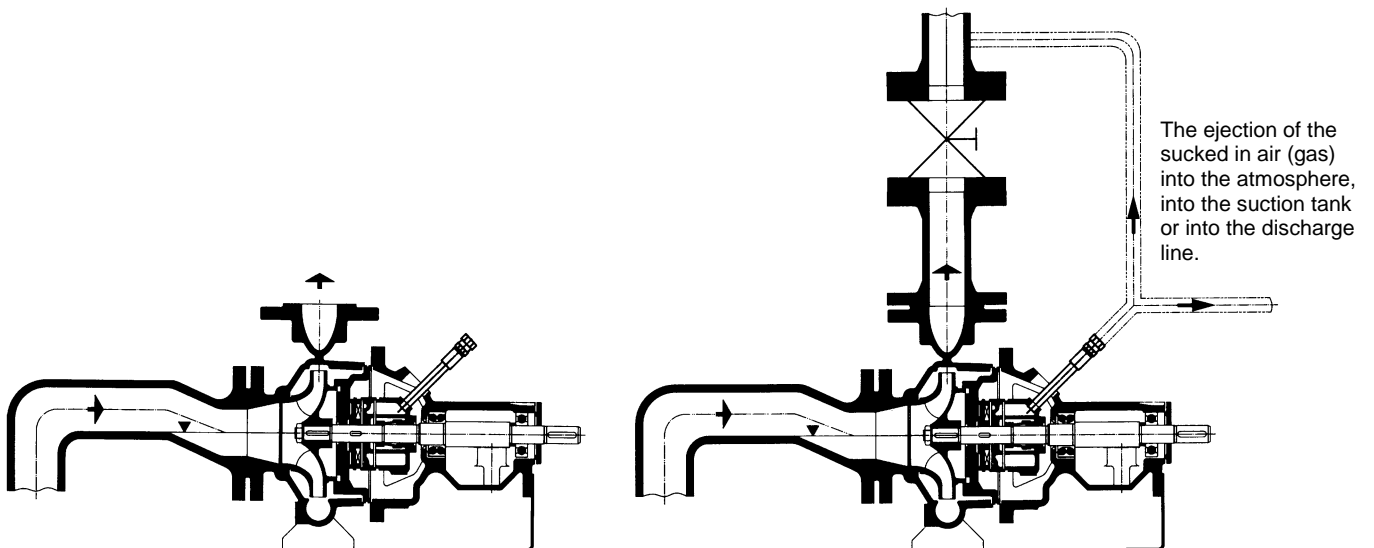
Sectional drawing and nomenclature



10.20	volute casing	23.00	impeller	43.30	mechanical seal
10.90, 11.40	stage casing	23.50	vane wheel impeller	47.10	shaft sealing casing
16.10	casing cover	32.00	inclined ball bearing	71.10	ventilation line
18.30	support foot	32.10	grooved ball bearing	73.10, 73.11	pipe union with orifice plate
21.00	shaft	33.00	bearing bracket	75.70	orifice plate

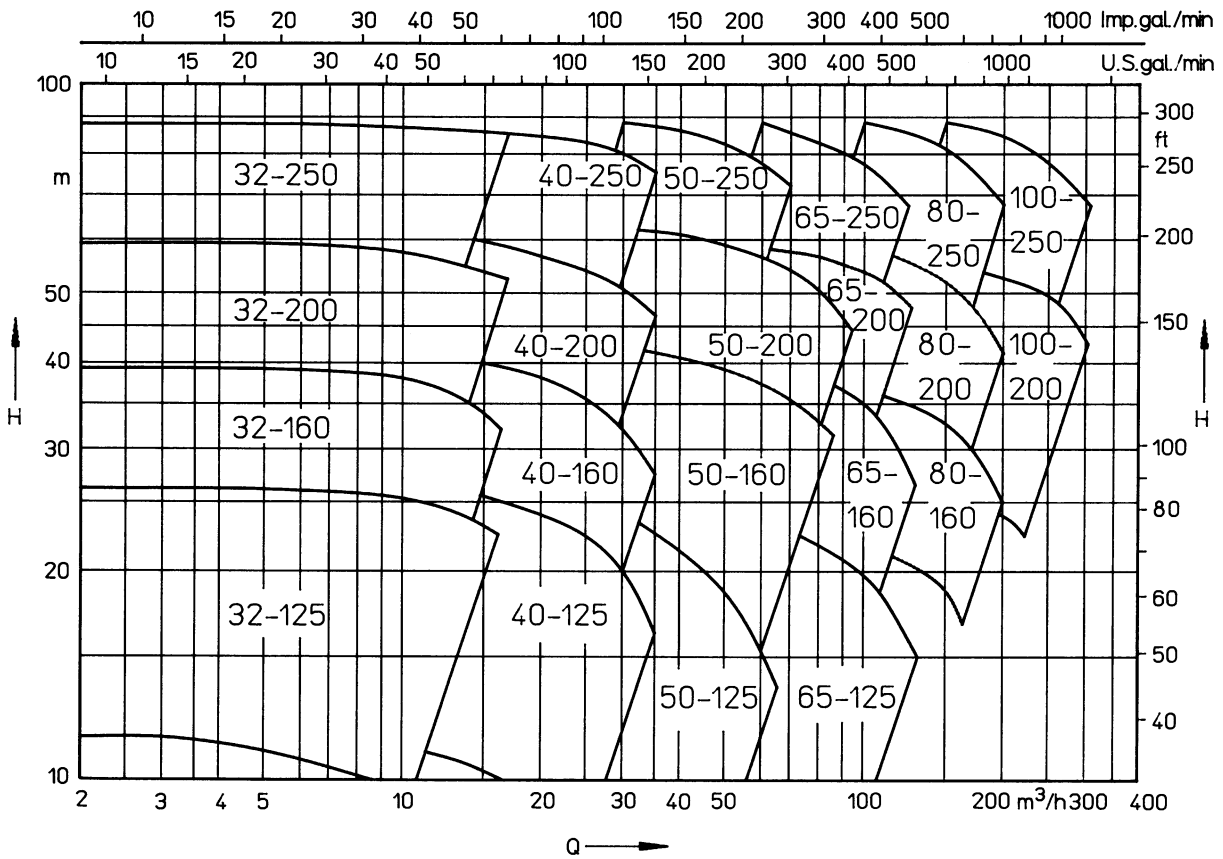
Advices for the installation

The pipeline on suction side has to be installed as shown, above pump centre, so that sufficient quantity of liquid for the self suction procedure is available.

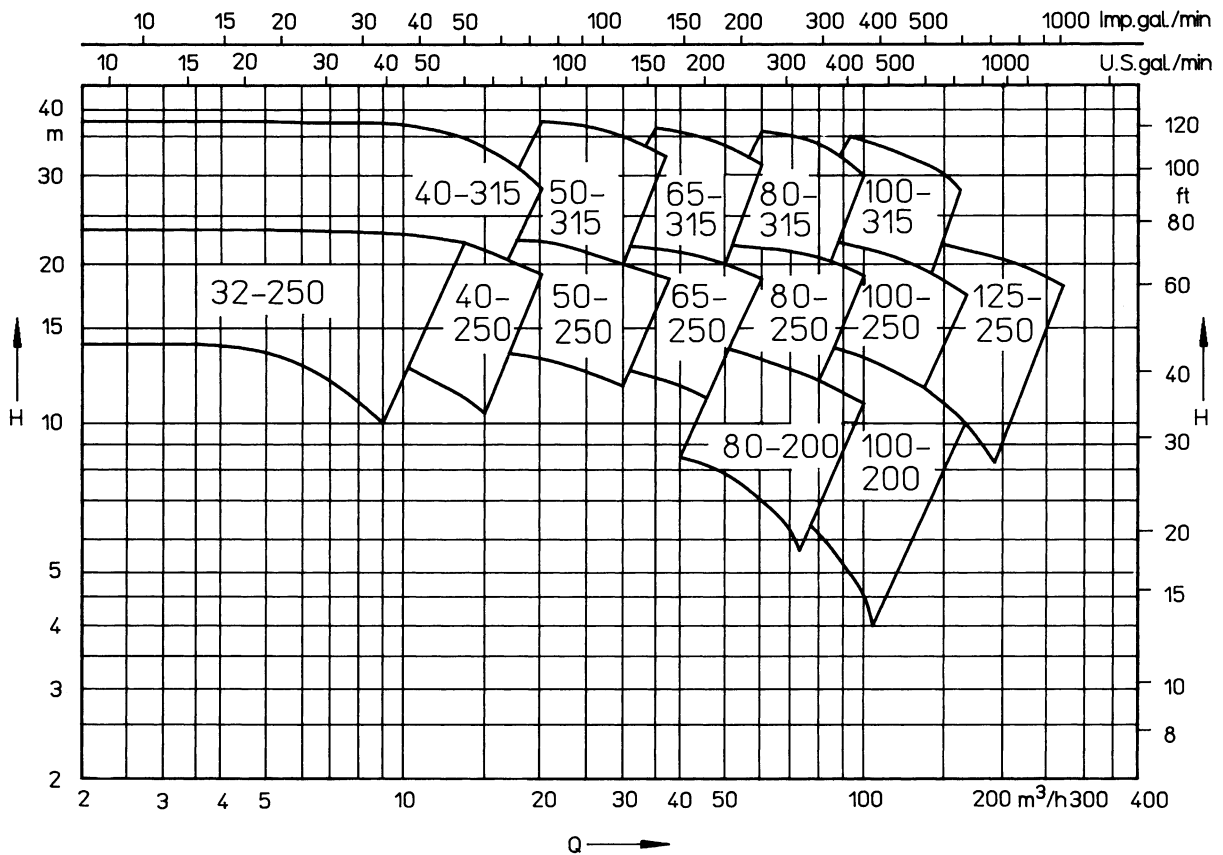


Performance graph

50 Hz
n = 2900 rpm



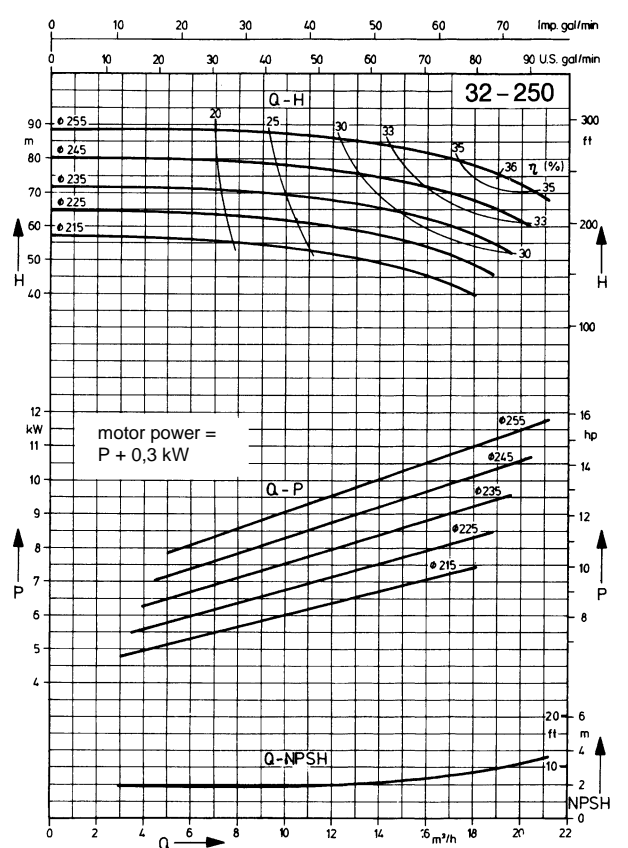
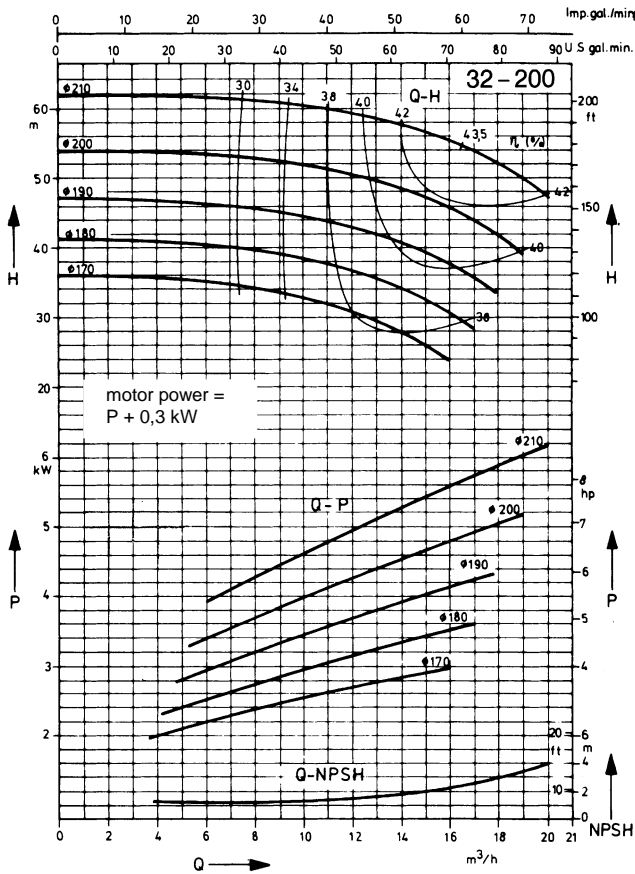
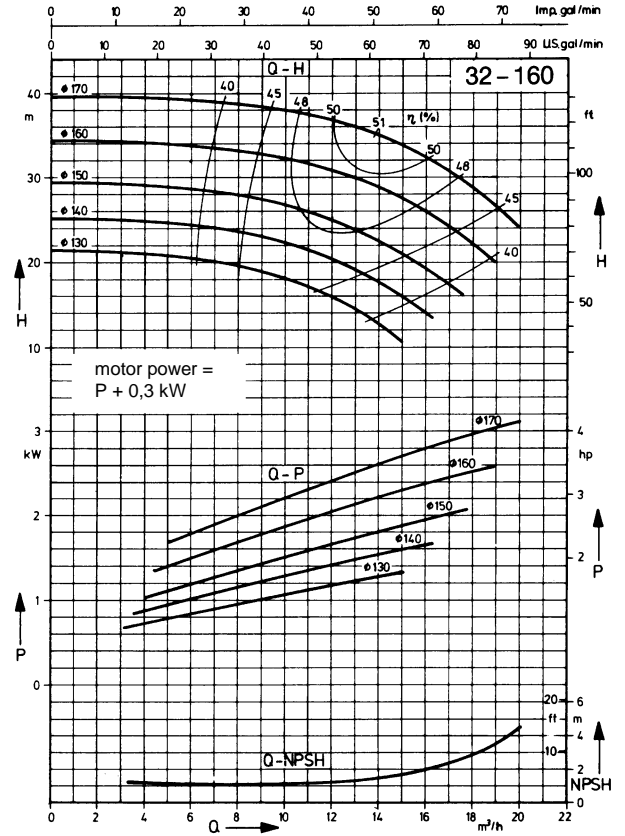
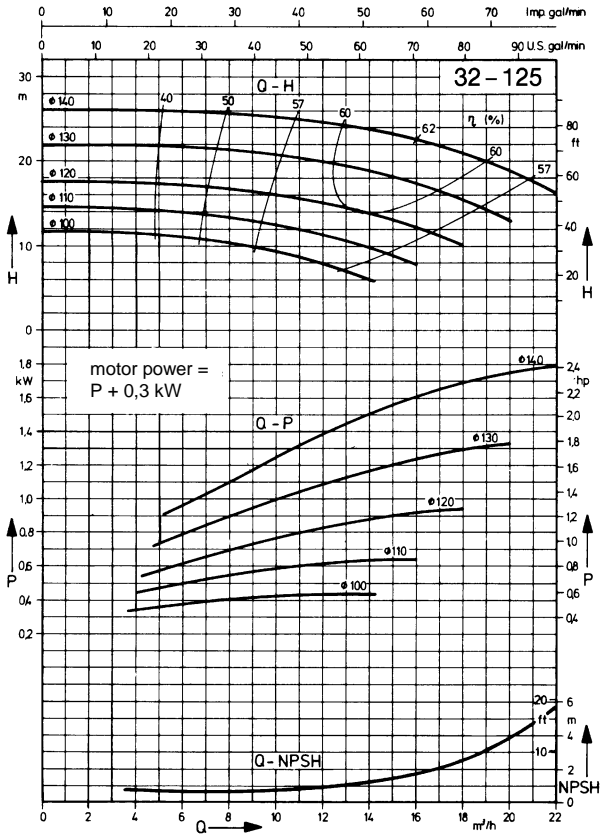
n = 1450 rpm



Characteristic curves

n = 2900 rpm

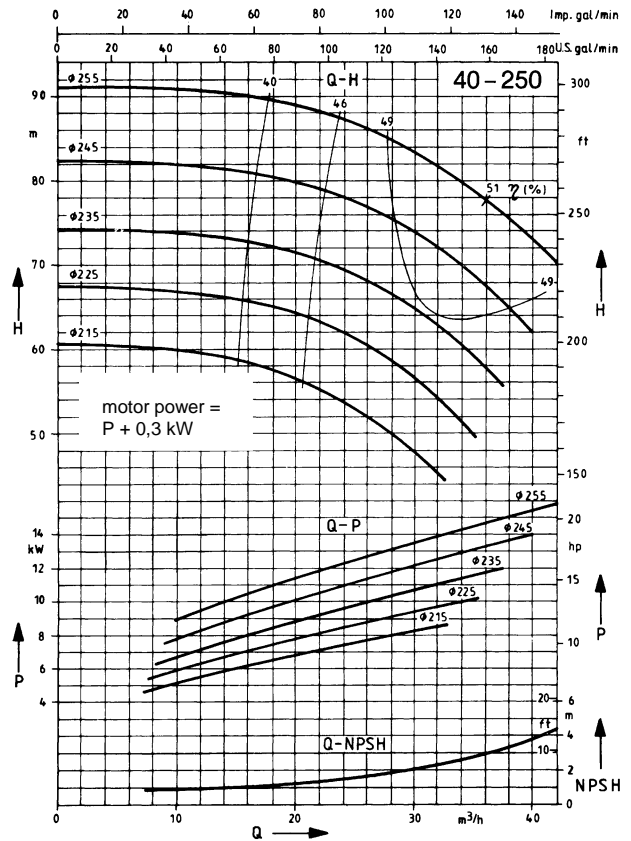
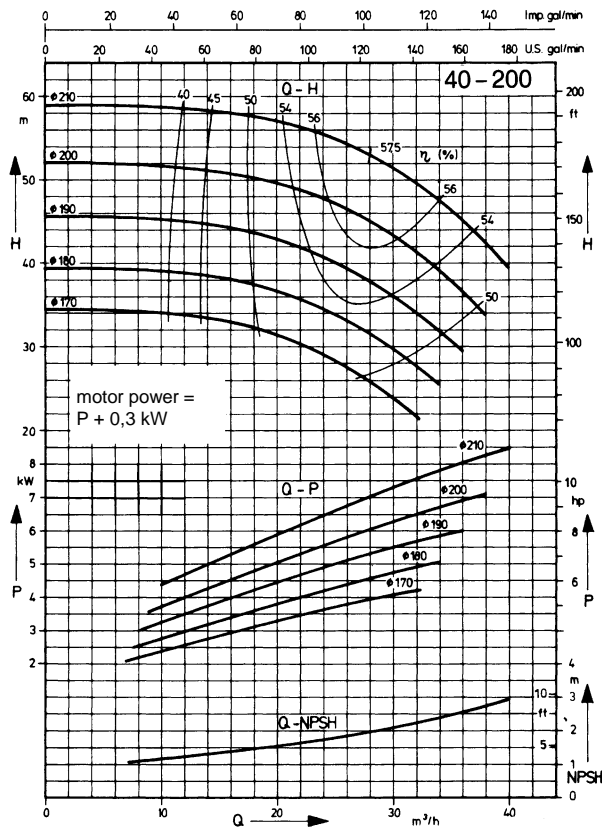
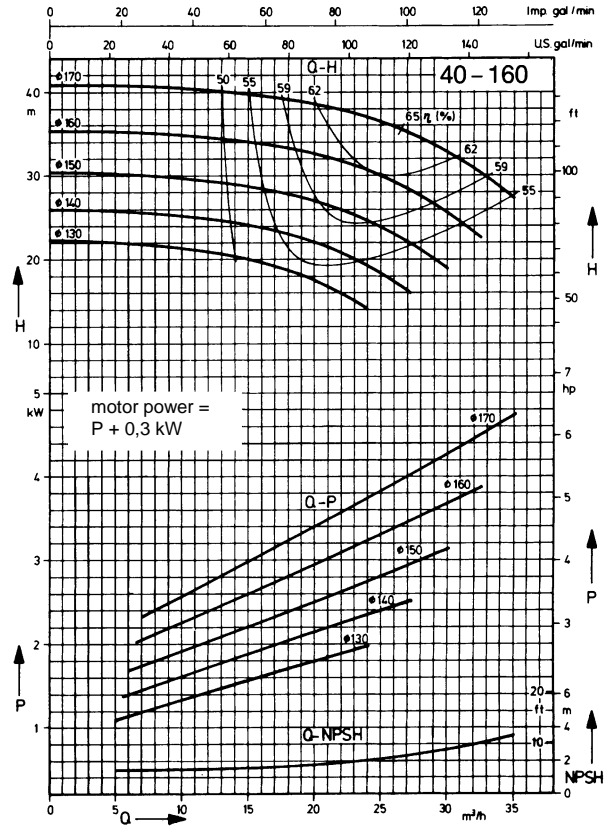
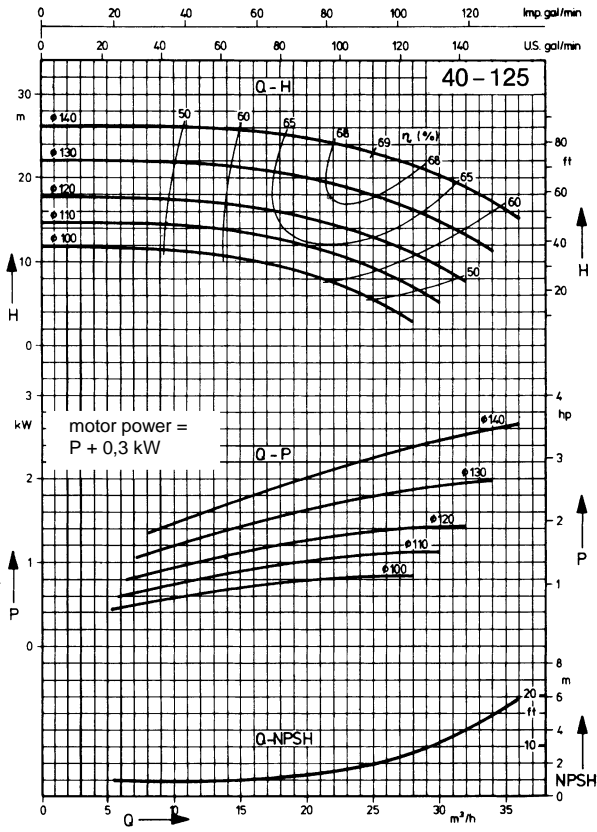
Attention: On selecting the motors, the constant drive power of the pertinent suction stage has to be added to the drive values determined out of the characteristic curves



Characteristic curves

$n = 2900 \text{ rpm}$

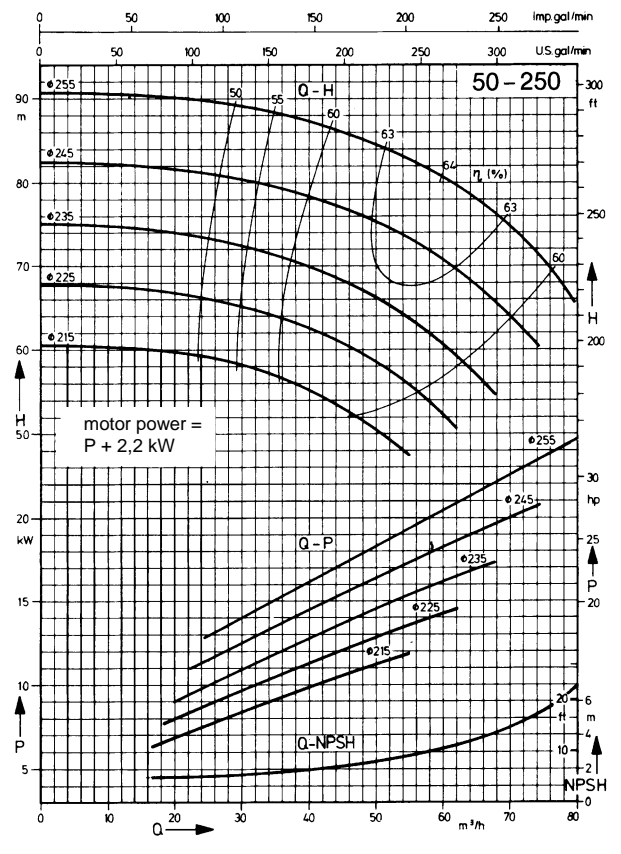
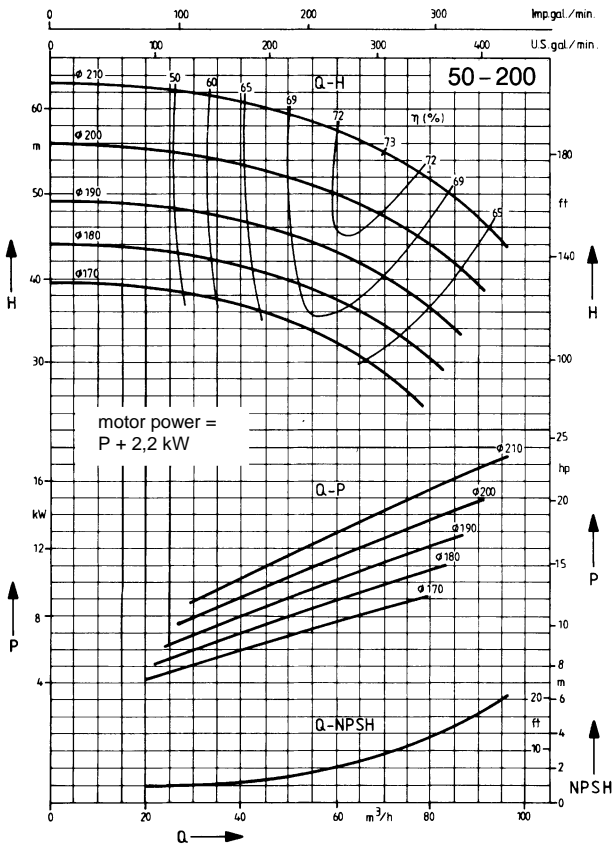
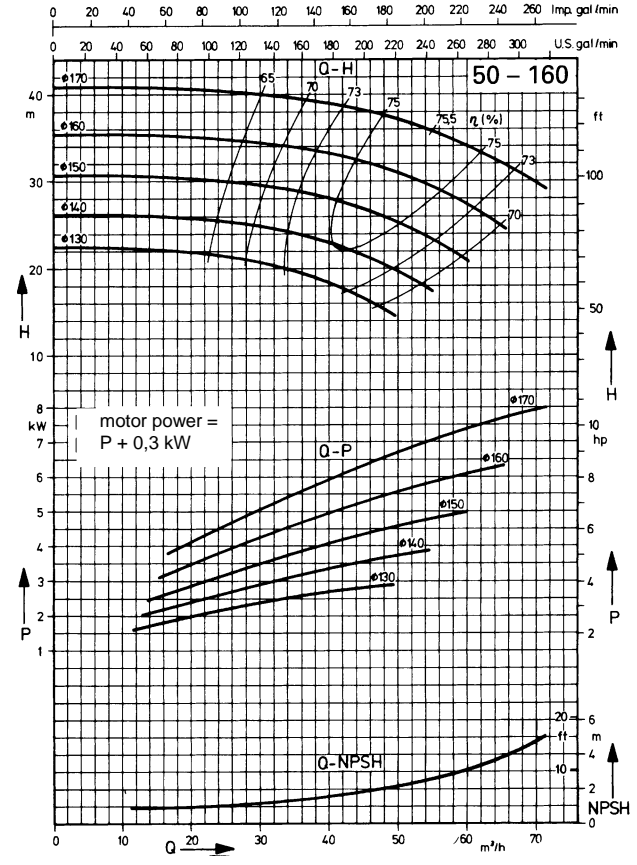
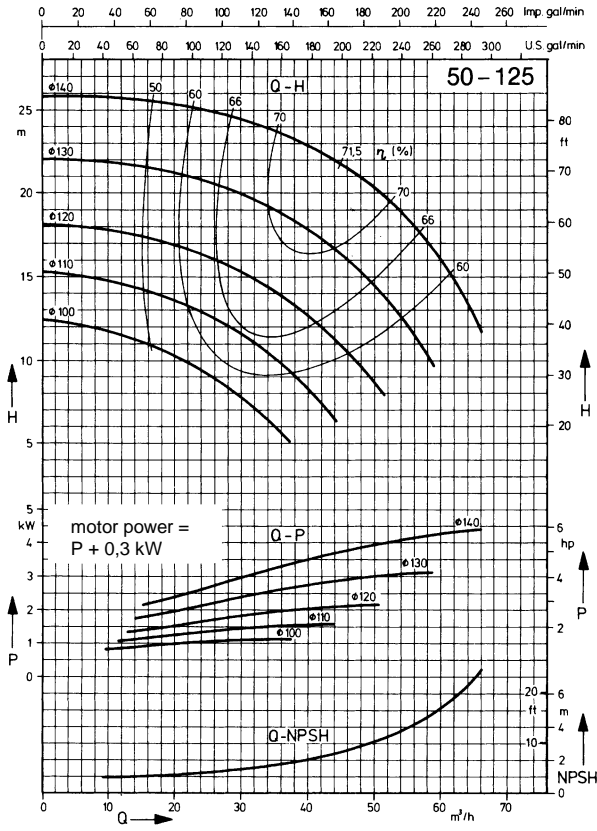
Attention: On selecting the motors, the constant drive power of the pertinent suction stage has to be added to the drive values determined out of the characteristic curves



Characteristic curves

n = 2900 rpm

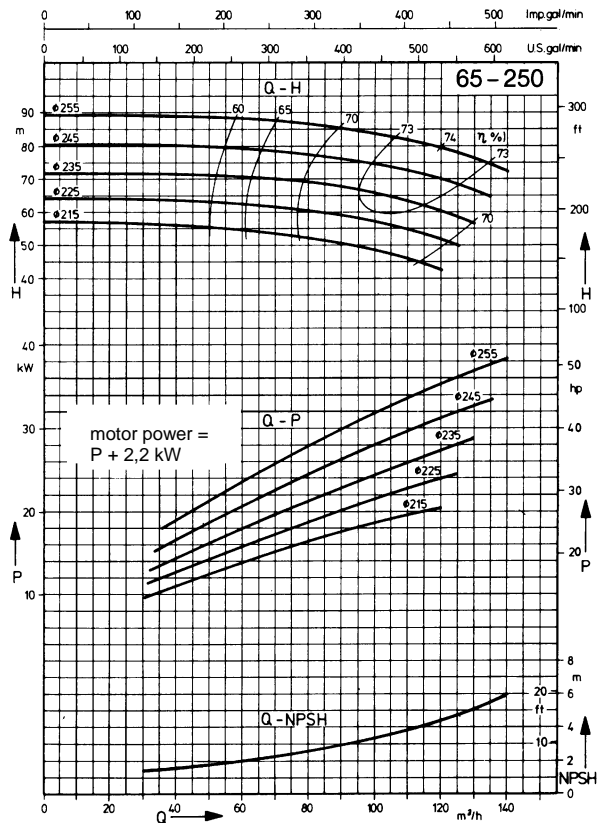
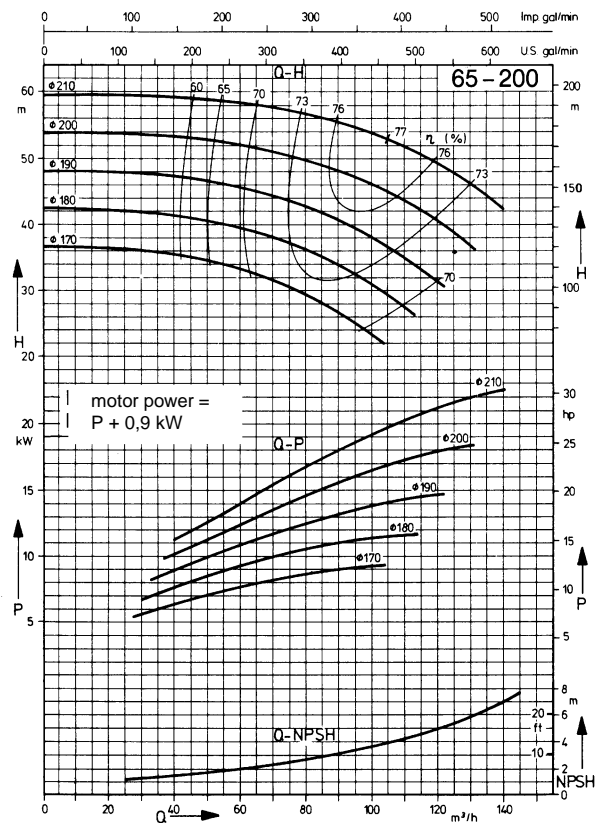
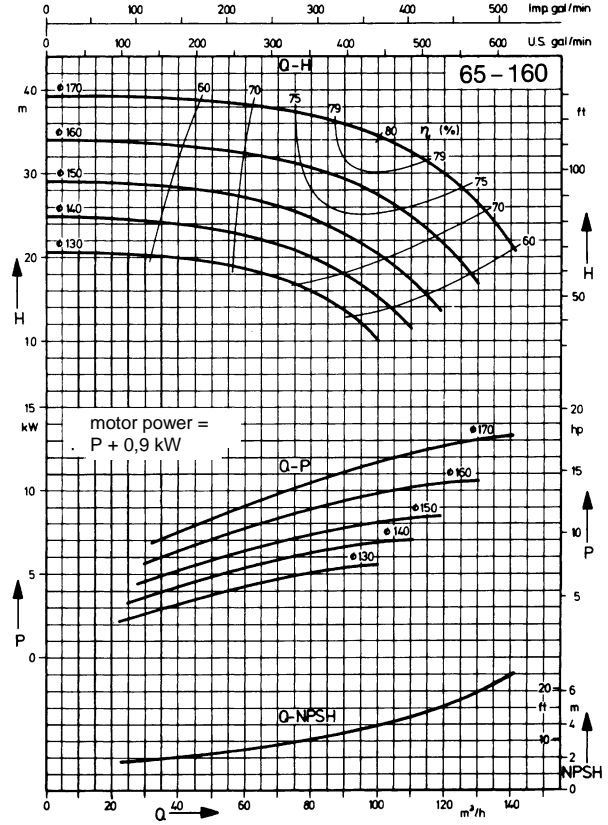
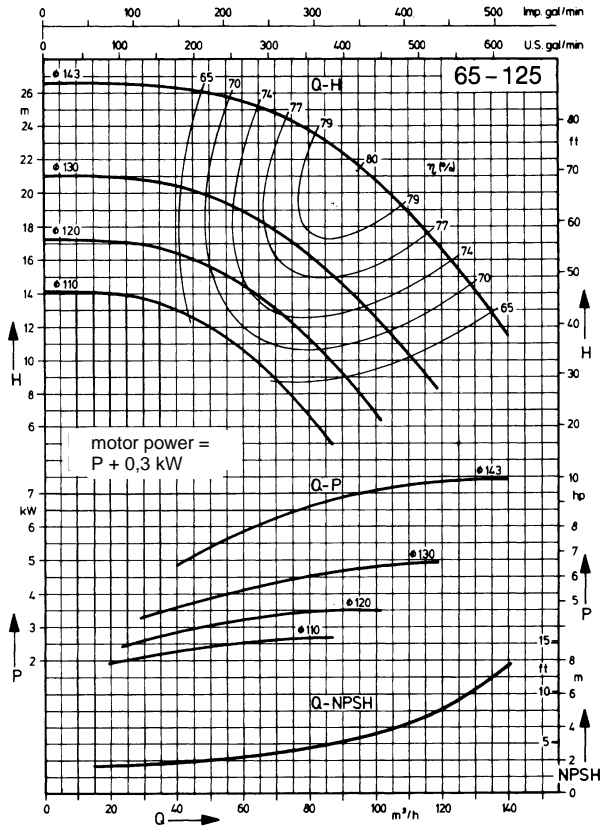
Attention: On selecting the motors, the constant drive power of the pertinent suction stage has to be added to the drive values determined out of the characteristic curves



Characteristic curves

n = 2900 rpm

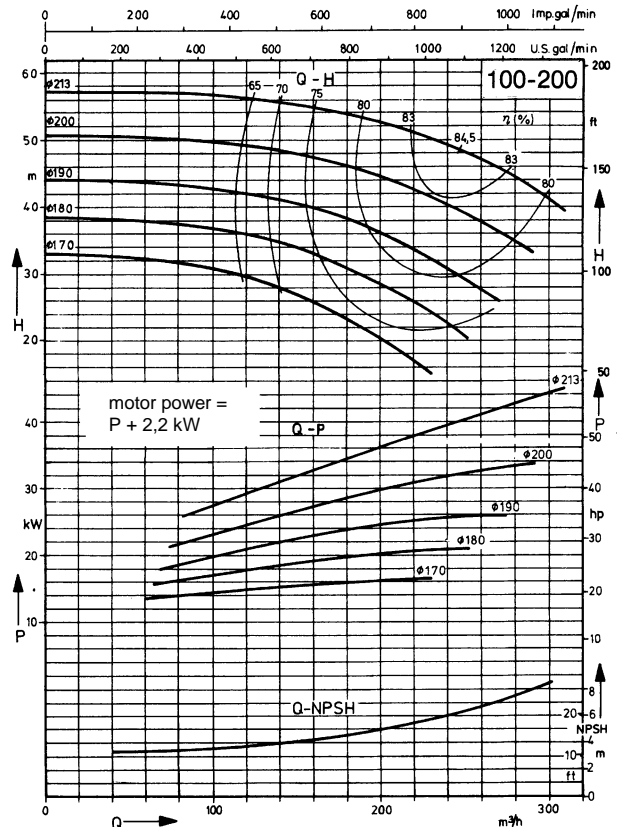
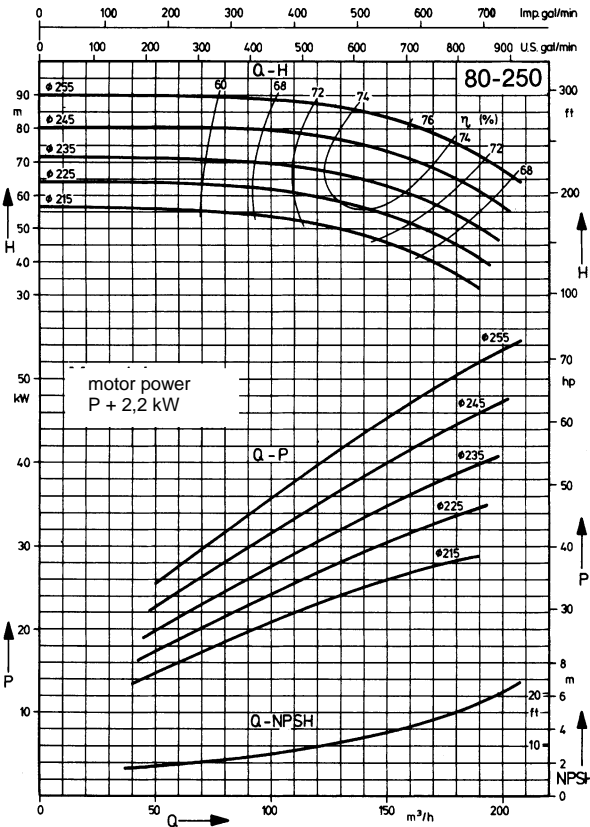
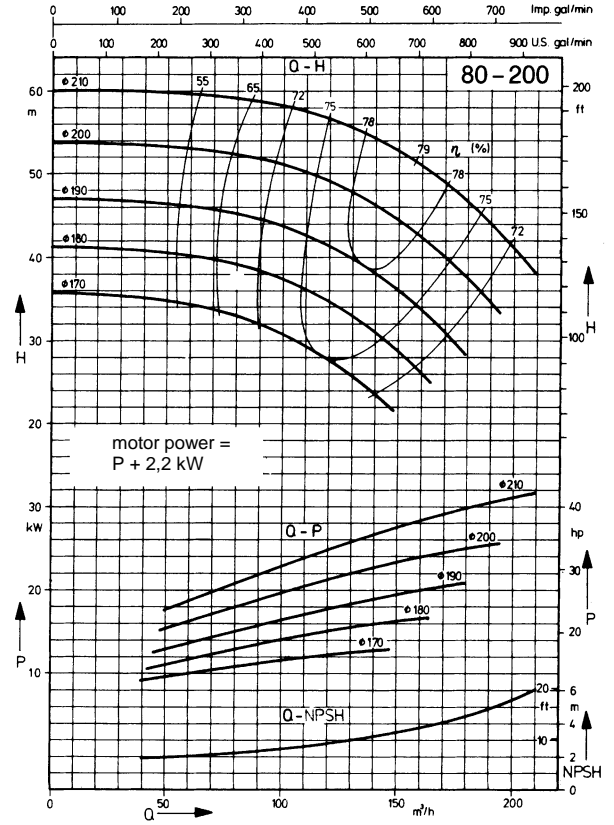
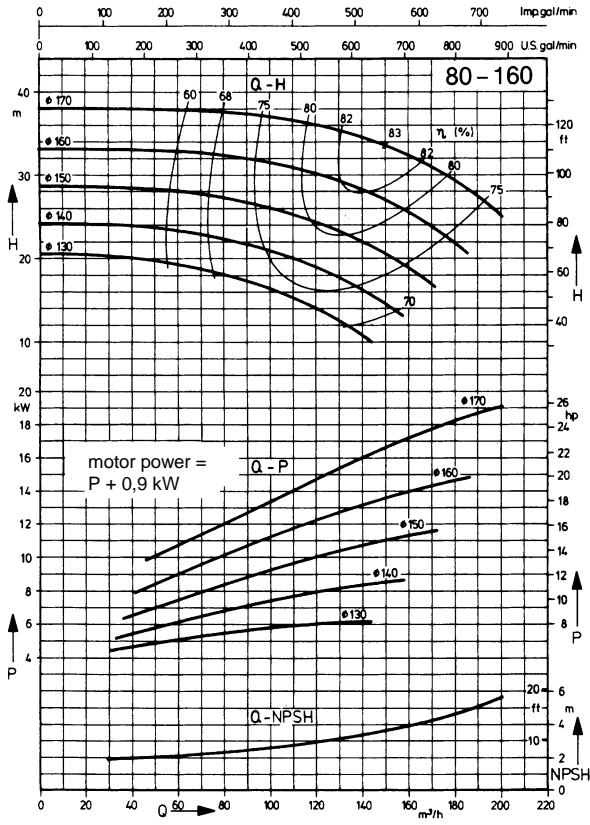
Attention: On selecting the motors, the constant drive power of the pertinent suction stage has to be added to the drive values determined out of the characteristic curves



Characteristic curves

n = 2900 rpm

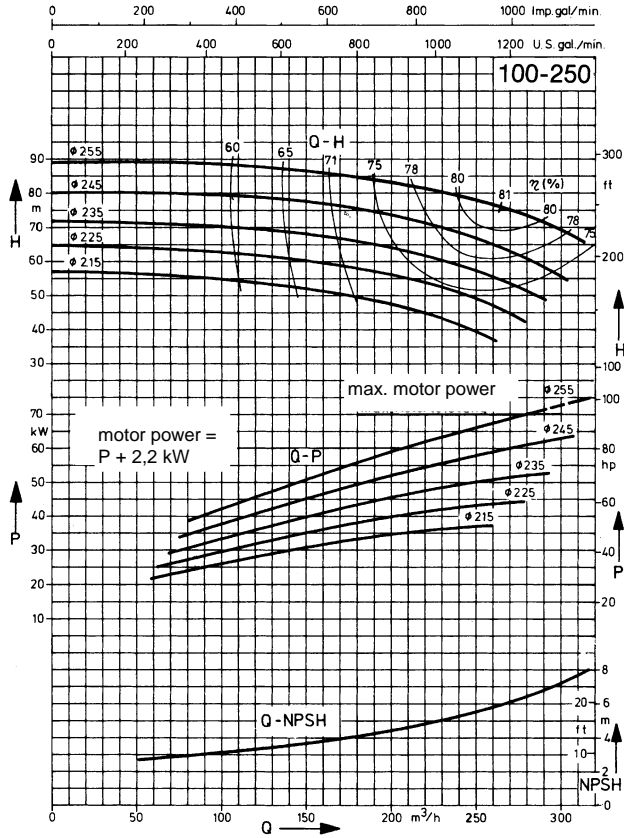
Attention: On selecting the motors, the constant drive power of the pertinent suction stage has to be added to the drive values determined out of the characteristic curves



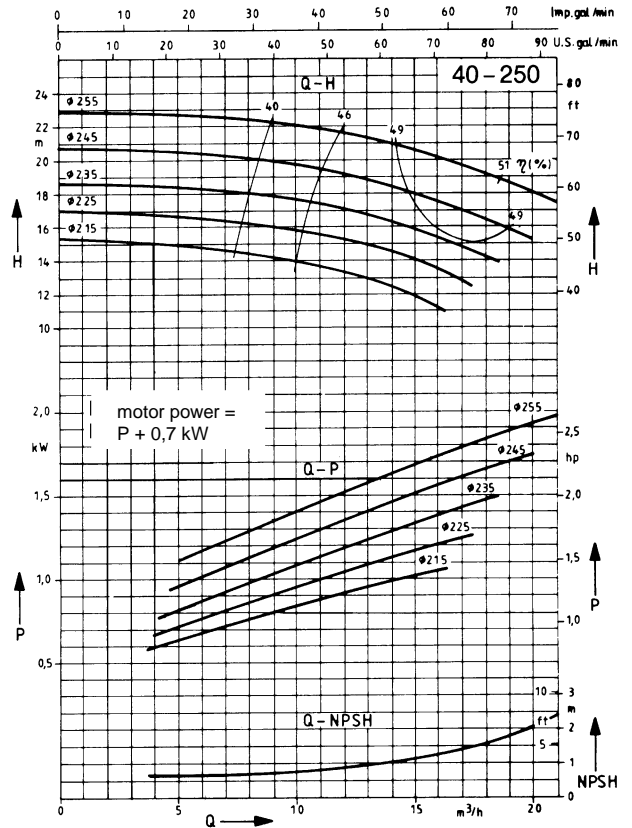
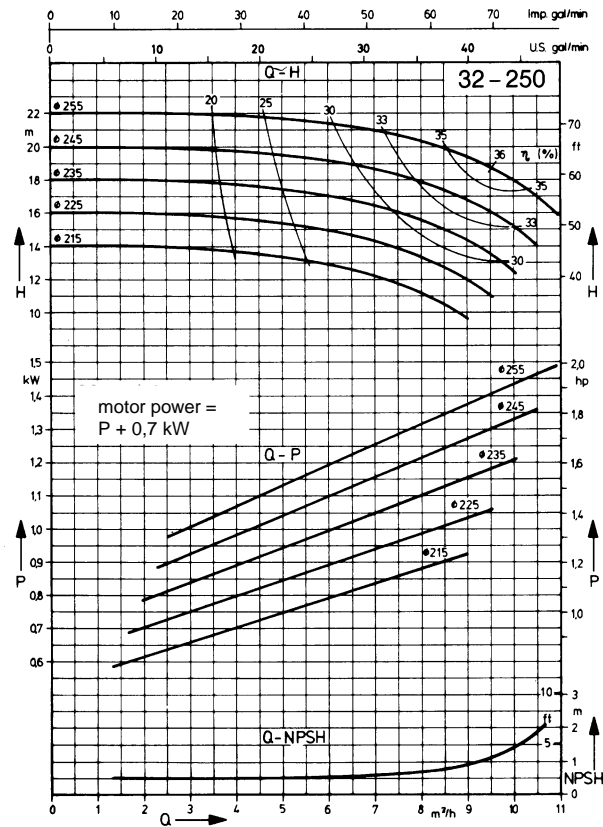
Characteristic curves

n = 2900 rpm

Attention: On selecting the motors, the constant drive power of the pertinent suction stage has to be added to the drive values determined out of the characteristic curves



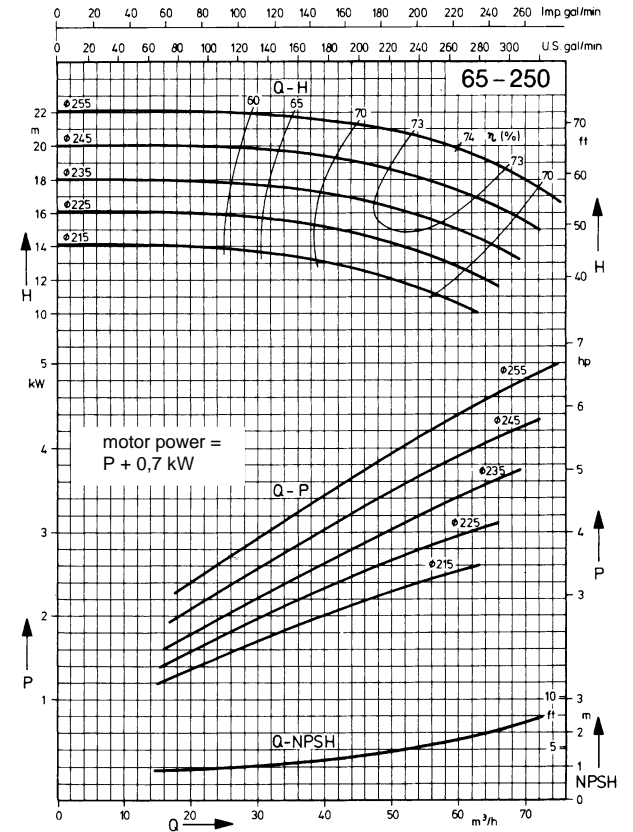
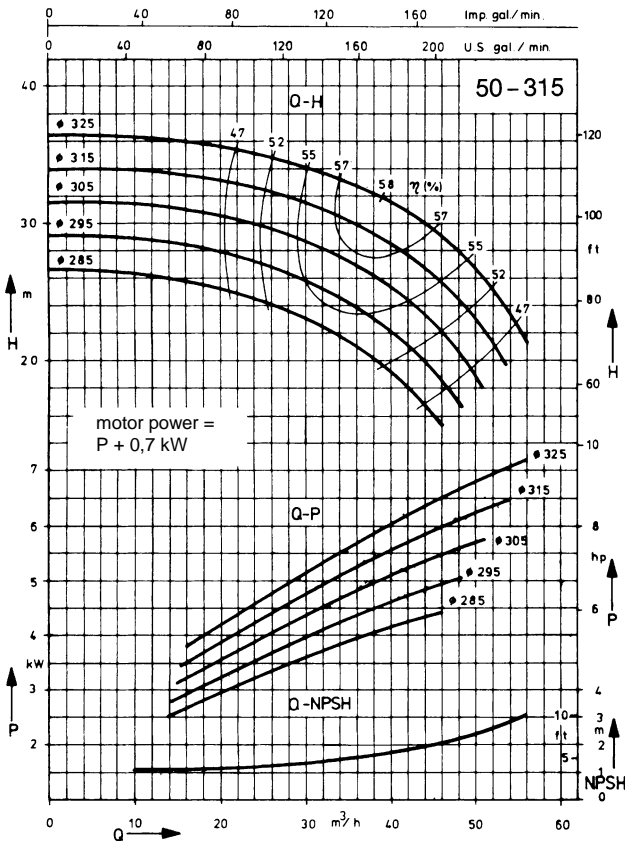
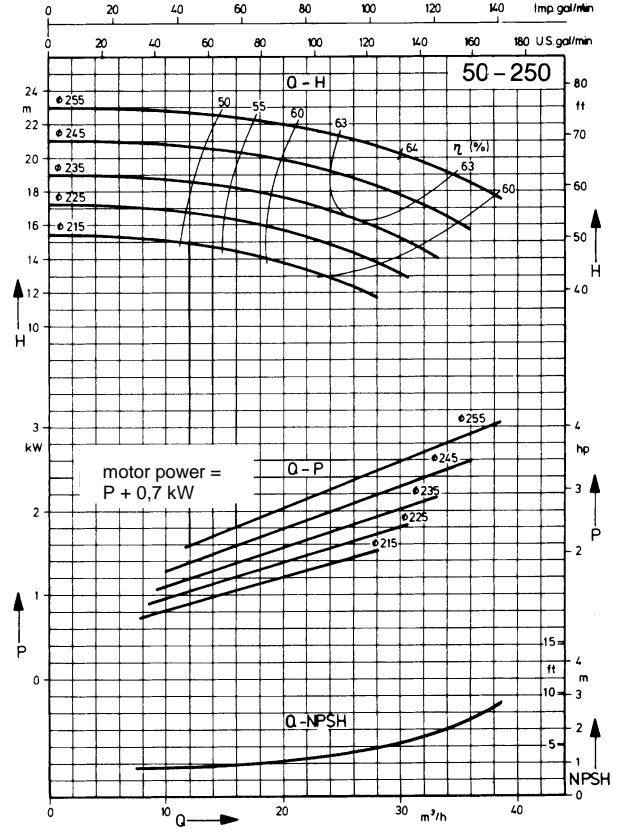
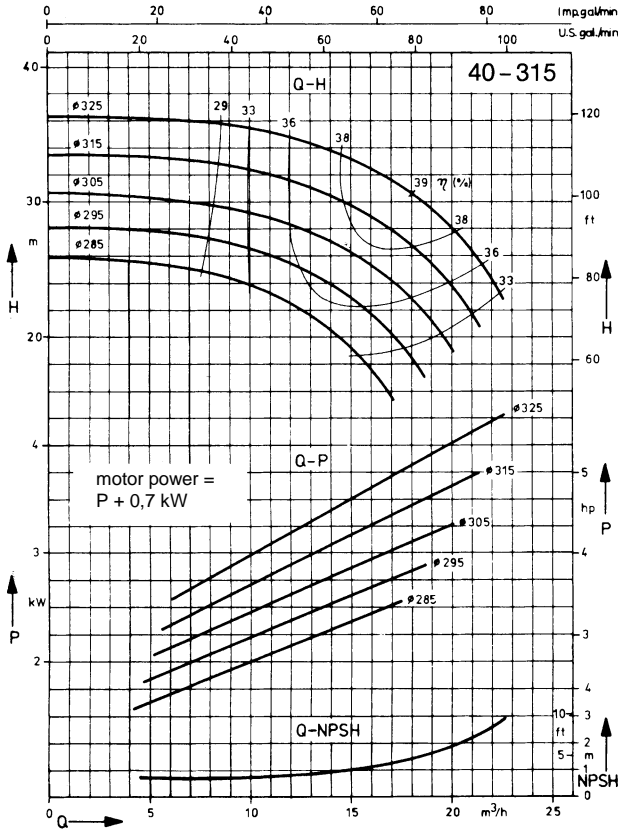
n = 1450 rpm



Characteristic curves

n = 1450 rpm

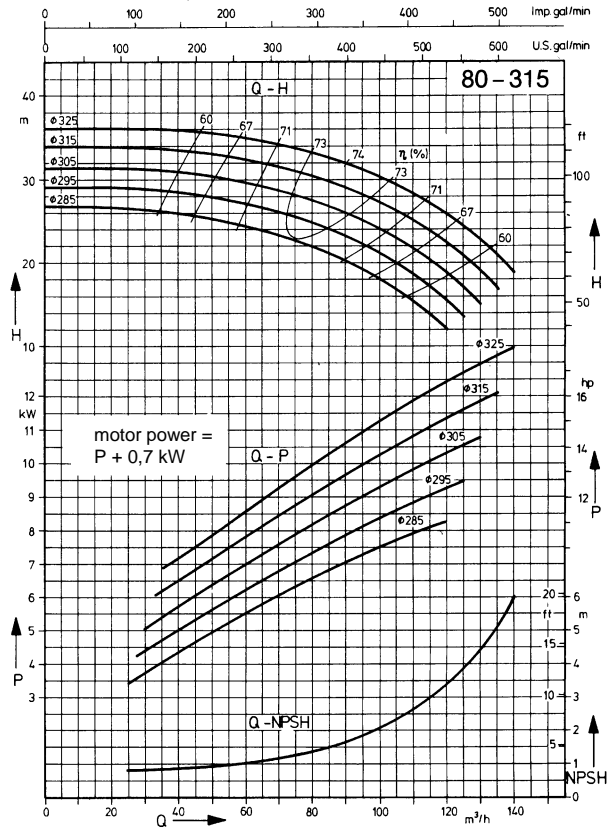
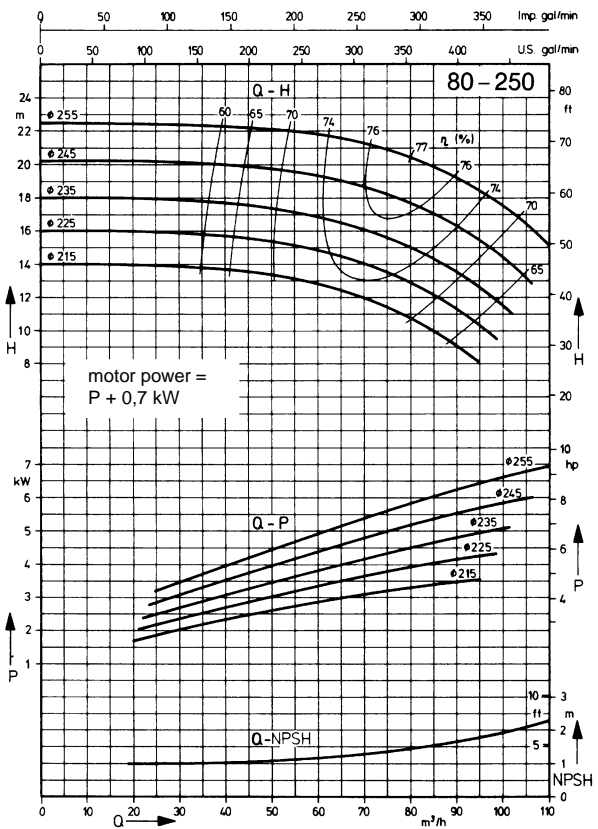
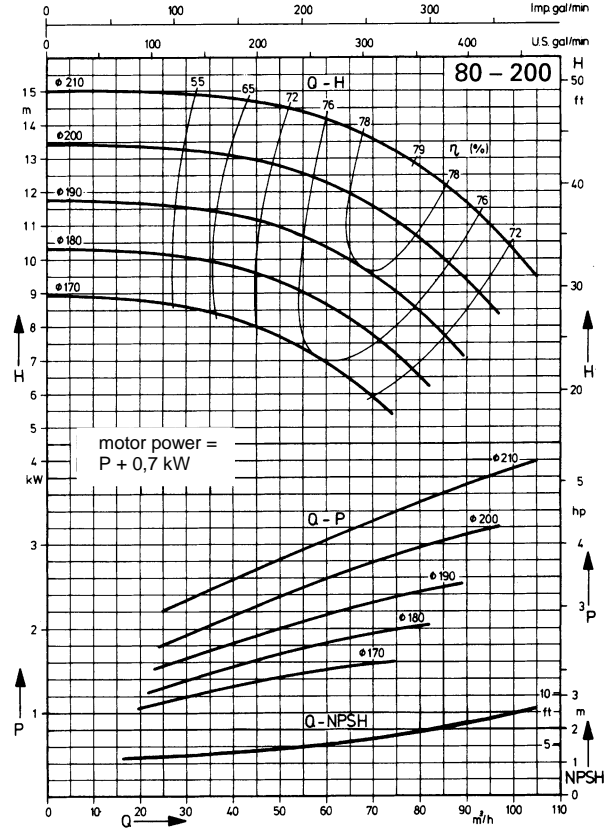
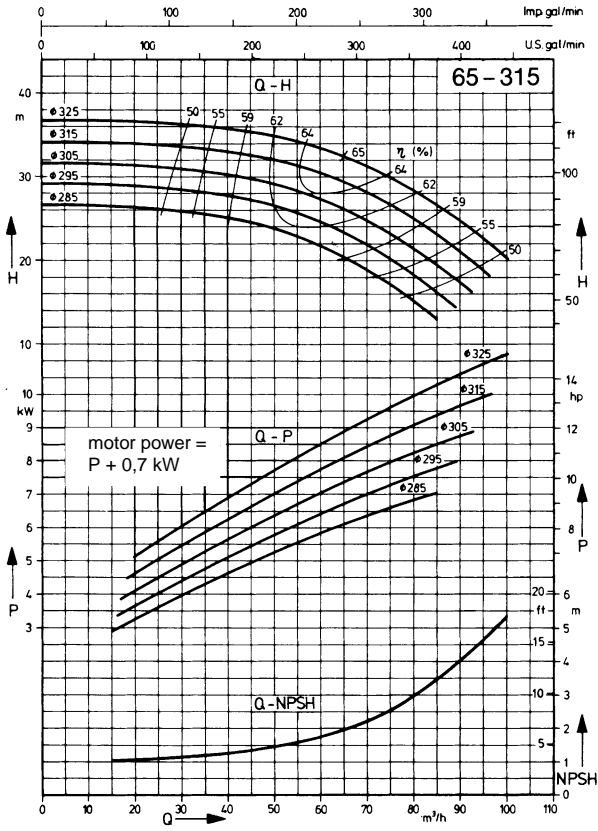
Attention: On selecting the motors, the constant drive power of the pertinent suction stage has to be added to the drive values determined out of the characteristic curves



Characteristic curves

$n = 1450 \text{ rpm}$

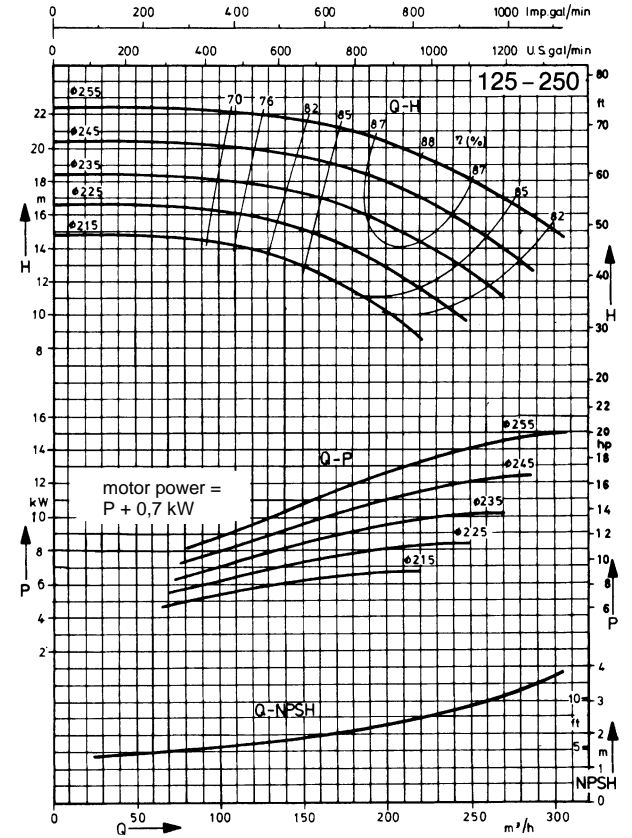
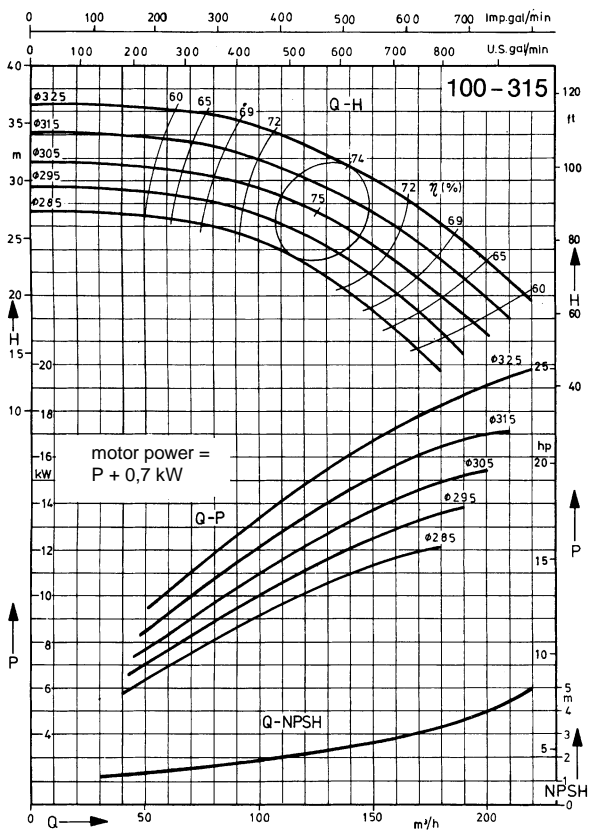
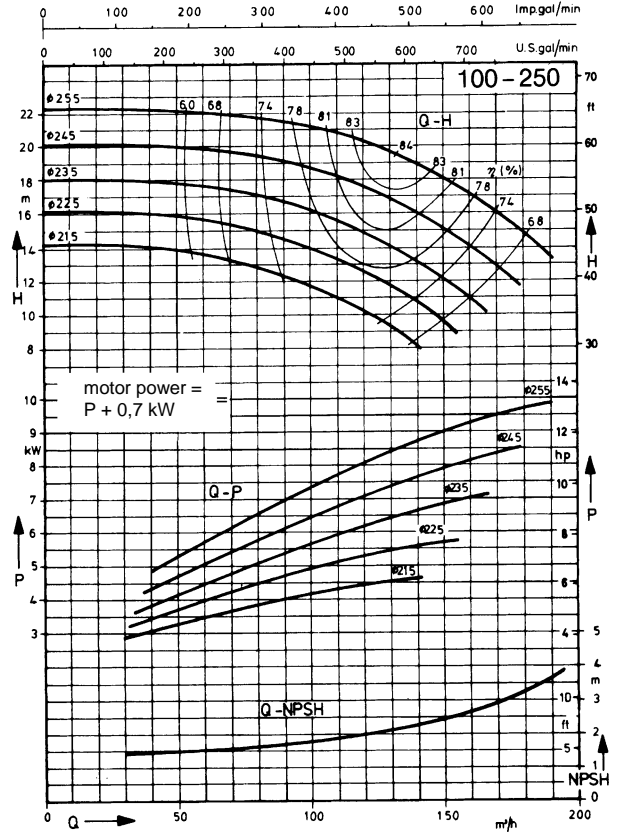
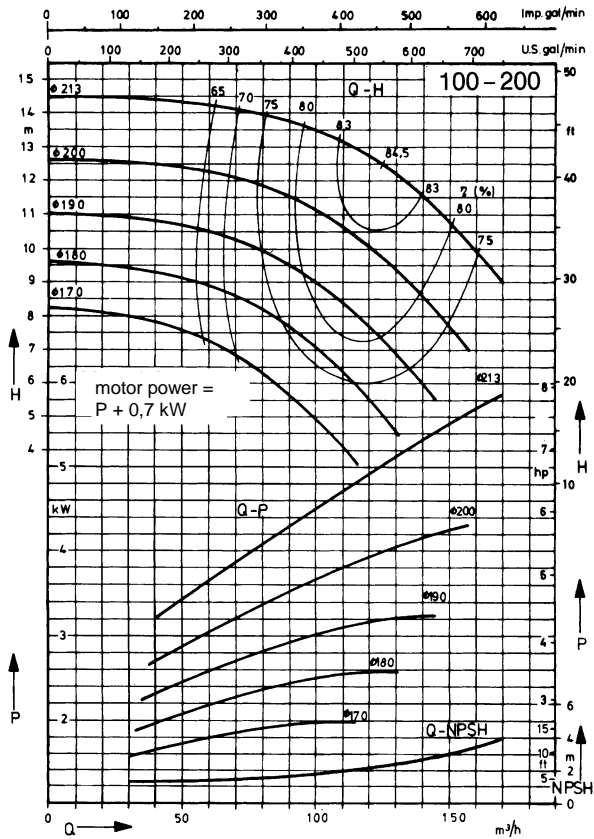
Attention: On selecting the motors, the constant drive power of the pertinent suction stage has to be added to the drive values determined out of the characteristic curves



Characteristic curves

n = 1450 rpm

Attention: On selecting the motors, the constant drive power of the pertinent suction stage has to be added to the drive values determined out of the characteristic curves



Values are applicable for water $\rho = 1 \text{ kg/l}$

Description:

..... piece

VOLUTE CASING PUMPS
self-priming, acc. to DIN 24255

Make: Sterling SIHI

For handling of pure respectively turbid not aggressive liquids
which do not contain solids.

Volute casing , casing cover and stage casing of GG-25 respectively
cast tin bronze *, impeller of GG-25 respectively cast tin bronze*,
vane wheel impeller of brass, shaft of 13% chrome steel with shaft seal
by not balanced single standard mechanical seal of material combina
tion Cr Ni/carbon, Perbunan resp. Viton for the following operation data:

*Please delete which is inapplicable

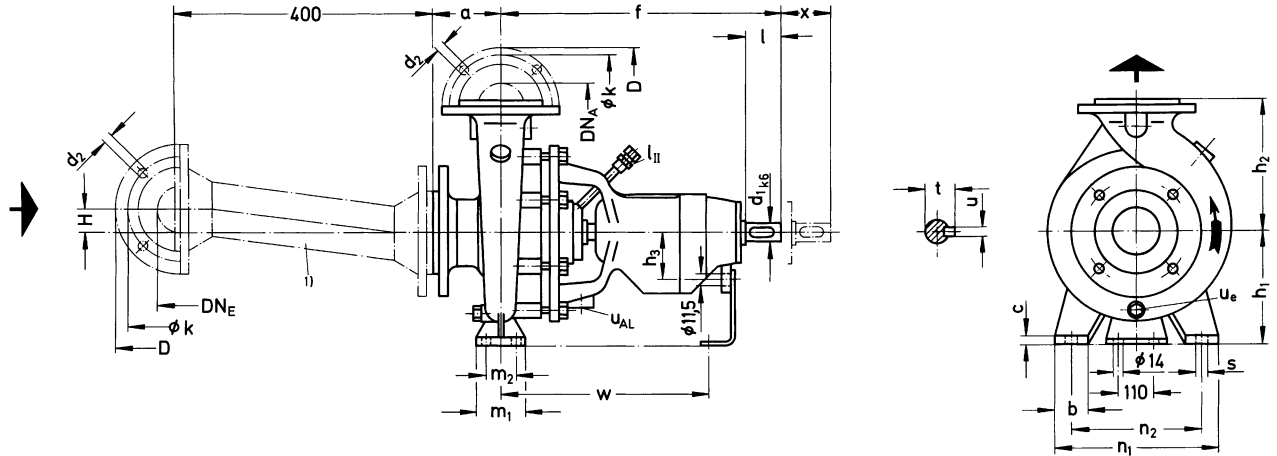
Liquid to be handled:
Temperature:	°C
Capacity Q	m ³ /h
Delivery head H	m
Power absorption of the pump	kW
Speed n	1/min
Motor pwer	kW

Scope of delivery: pump unit complete, i.e. pump incl. three-
phase AC motor 220 VΔ resp. 380 VΔ, 50 Hz, protection type
IP 54, incl. common base plate for pump and motor with flexible
coupling.

Price for piece DM

Weight per piece kg

Dimension table



l_{II} = connection for air ventilation pipe G 3/8
 U_{AL} = connection for leak liquid G 1/4
 u_e = connection for discharge G 1/4 from DN_A 65 G 3/8

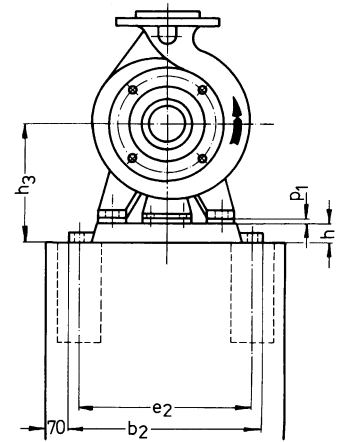
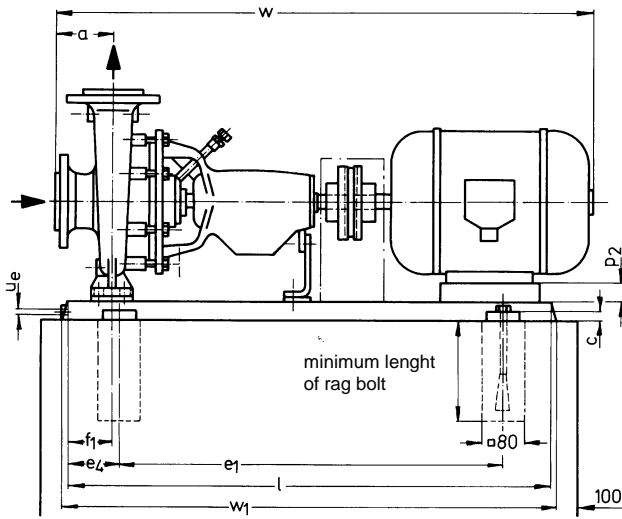
1) Pipe bend can be delivered as accessory by the factory.

size	DN_A	DN_E	a	b	c	f	H	h_1	h_2	h_3	m_1	m_2	n_1	n_2	s	w	x	d_1	l	t	u																	
32-125	32	50	80	50	15	360	25	112	140	73	100	70	190	140	15	267	80	24	50	27	8																	
32-160								132	160				240	190																								
32-200								160	180				265	212																								
32-250								180	225				320	250								342	100	32	80	35	10											
40-125	40	65	80	50	15	360	32,5	112	140	73	100	70	210	160	15	267	80	24	50	27	8																	
40-160								132	160				240	190																								
40-200								160	180				265	212																								
40-250								180	225				320	250								342	100	32	80	35	10											
40-315								125	18				470	225								250	87	345	280	340	100	32	80	35	10							
50-125								50	80				100	50								15	360	40	132	160	73	100	70	240	190	15	267	80	24	50	27	8
50-160	160	180	265	212																																		
50-200	180	225	320	250	342	100	32			80	35	10																										
50-250	200	250	320	250	342	100	32			80	35	10																										
50-315	125	18	470	225	280	87	345			280	340	100			32	80	35	10																				
65-125	65	80	100	50	15	360	40			160	180	73			100	70	240	190	15	267	80				24	50				27	8							
65-160								180	225	320	250		342	100			32	80				35	10															
65-200								200	250	320	250		342	100			32	80				35	10															
65-250								225	280	320	250		342	100			32	80				35	10															
65-315								125	18	470	225		280	87			345	280				340	100	32			80	35	10									
80-160								80	100	100	65		15	360			50	180				225	73	125			95	320	250			15	267	80	24	50	27	8
80-200	200	250	320	250	342	100	32					80			35	10																						
80-250	225	280	320	250	342	100	32					80			35	10																						
80-315	250	315	320	250	342	100	32					80			35	10																						
100-200	100	125	100	65	15	360	62,5					200			280	73		125	95	320	250	15			267	80		24	50	27	8							
100-250												225			315					320	250																	
100-315								250	315	320	250	342	100	32	80		35			10																		
125-250								125	150	100	65	15	360	75	355		73			125	95		320	250			15					267	80	24	50	27	8	

Flange connections acc. to DIN 2501 PN 16 and PN 10								
DN_A/DN_E	32	40	50	65	80	100	125	150
D	140	150	165	185	200	220	250	285
k	100	110	125	145	160	180	210	240
$d_2 \times$ number	18x4	18x4	18x4	18x4	18x8	18x8	18x8	22x8

Foundation plan

n = 2900 rpm



Dimensions in mm, tolerances (base plates) for cast pieces DIN 1686/GTB 17, for welded pieces acc. to DIN 8570 B

size	motor		base plate Nr.	coup- ling	weight		a	b ₂	c	e ₁	e ₂	e ₄	f ₁	h	h ₃	l	p ₁	p ₂	w*	w ₁	u _e	rag bolt DIN 529					
	size	kW			pump **kg	unit kg																					
32-125	71 b	0,55	P 241	A 10	23	52	80	330	25	480	290	115	60	65	177	710	-		41	678	730	G1/2	M 16 x 200				
	80 a	0,75				55																		32	687		
	80 b	1,1				56																		702			
	90 S	1,5				59																		22	742		
	90 L	2,2				63																		767			
32-160	80 b	1,1	P 272	A 25	26	59	360	540	320	130				197	800			52	702	820							
	90 S	1,5				63																	42	742			
	90 L	2,2				67																	767				
	100 L	3,0				77																	32	826			
	112 M	4,0				95																	20	826			
32-200	90 L	2,2	P 241	A 10	30	71	330	480	290	115				225	710			70	767	730							
	100 L	3,0				81																	360	540	320	130	
	112 M	4,0				99																	48	826			
	13S	5,5				117																	28	909			
	132 S	7,5				120																	909				
32-250	132 S	7,5	P 342	A 63	48	148	100	450	30	540	400	130	75	80	260	800			48	929	820						
	160 M	11,0				207																		20	1094	1020	
	160 M	15,0				209																		1094			
40-125	80 b	1,1	P 241	A 10	24	57	80	330	25	480	290	115	60	65	177	710			32	702	730		M 16 x 200				
	90 S	1,5				61																		22	742		
	90 L	2,2				65																		767			
	100 L	3,0				74																		12	826		
	100 L	3,0				74																		360	540	320	130
40-160	90 S	1,5	P 241	A 10	27	64	330	480	290	115				197	710			42	742	730							
	90 L	2,2				68																	767				
	100 L	3,0				78																	32	826			
	112 M	4,0				96																	20	826			
	132 S	5,5				113																	-	909			
40-200	100 L	3,0	P 272	A 25	34	85	360	540	320	130				225	800			32	826	820							
	112 M	4,0				103																	20	826			
	132 S	5,5				121																	60	846			
	132 S	7,5				124																	48	846			
	160 M	11,0				198																	28	929			
40-250	160 M	11,0	P 344	A 63	42	156	450	30	660	400	170	75	80	240	1000			-	1094	1020		M 20 x 200					
	132 S	7,5				207																	48	929			
	160 M	11,0				207																	20	1094			
	160 M	15,0				209																	1094				
	160 L	18,5				232																	1138				
50-125	90 S	1,5	P 241	A 10	26	63	100	330	25	480	290	115	60	65	197	710			42	762	730		M 16 x 200				
	90 L	2,2				67																		787			
	100 L	3,0				77																		32	846		
	112 M	4,0				95																		20	846		
	132 S	5,5				112																		-	929		
50-160	90 L	2,2	P 301	A 10	31	77	390	480	350	115				225	800			70	787	730							
	100 L	3,0				82																	360	540	320	130	800
	112 M	4,0				100																	48	846			
	132 S	5,5				118																	28	929			
	132 S	7,5				121																	929				
50-200	160 M	11,0	P 344	A 63	43	195	490	40	740	440	190	75	80	240	1000			-	1094	1020		M 20 x 200					
	100 L	3,0				87																	60	846			
	112 M	4,0				105																	48	846			
	132 S	5,5				134																	28	929			
	132 S	7,5				137																	929				
50-250	160 M	11,0	P 342	A 10	35	201	450	30	400		170	75	80	240	800			-	1094	820							
	160 M	15,0				210																	48	846			
	160 L	18,5				233																	28	929			
	180 M	22,0				292																	929				
	200 L	30,0				388																	1138				
50-250	180 M	22,0	S 385	A 100	43	208	490	40	740	440	190	110	290	1120			20										
	200 L	30,0				233																	1138				
50-250	180 M	22,0	S 385	A 160	43	208	490	40	740	440	190	110	290	1120			20										
	200 L	30,0				233																	1138				

Foundation plan

n = 2900 rpm

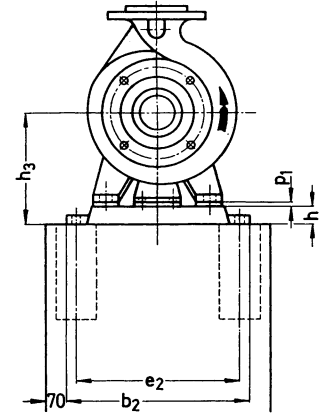
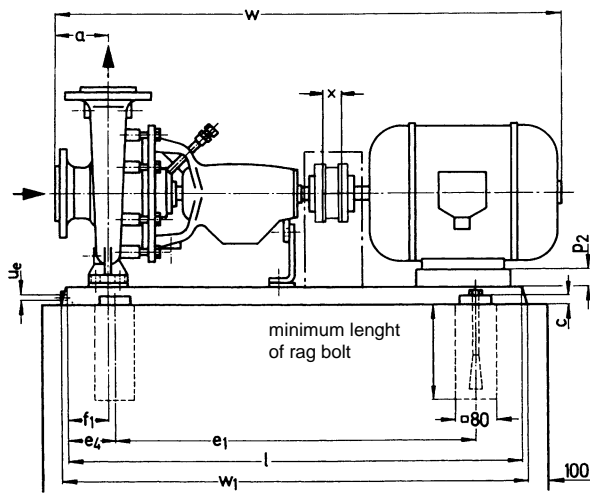
size	motor		base plate Nr.	coup-ling	weight		a	b ₂	c	e ₁	e ₂	e ₄	f ₁	h	h ₃	l	p ₁	p ₂	w*	w ₁	u _e	rag bolt DIN 529		
	size	kW			pump kg	unit kg																		
65-125	100 L	3,0	P 342	A 10	29	95	100	450	30	540	400	130	75	80	240	800	-	60	846	820	G1/4	M 20 x 200		
	112 M	4,0		A 25		113												48	846					
	132 S	5,5	P 303	A 63		127												28	929				920	
	132 S	7,5				130												929						
65-160	132 S	5,5	P 344	A 100	34	132	125	450	30	660	400	170	75	80	240	1000	-	48	1094	1020	G1/2	M 20 x 200		
	132 S	7,5				A 160												135	20				1094	
	160 M	11,0				198												20	1094					
	160 M	15,0				200												1138						
65-200	160 M	11,0	S 385	A 100	38	203	125	490	40	740	440	190	90	110	290	1120	-	20	1165	-	-	M 24 x 250		
	160 M	15,0				A 160												205	20				1094	
	160 L	18,5				228												1138						
	180 M	22,0				287												1263						
	200 L	30,0				382												1275						
	200 L	37,0				417												1373						
65-250	200 L	37,0	S 386	A 160	62	427	125	610	40	840	205	90	110	290	310	-	20	1248	-	-	M 24 x 250			
	225 M	45,0				A 63											289	40				1248		
	180 M	22,0				A 100											311	20				1275		
	200 L	30,0				A 160											417	1373						
80-160	132 S	7,5	P 342	A 63	39	144	125	450	30	540	400	130	75	80	260	800	-	48	954	820	G1/2	M 20 x 200		
	160 M	11,0				A 100												203	20				1119	
	160 M	15,0				A 160												205	1119					
	160 L	18,5				228												1163						
	80-200	180 M	22,0	S 385	A 100	56	287	125	490	40	740	440	190	90	110	290	1120	-	20	1190	-	-	M 24 x 250	
		160 M	15,0				A 63												260	20				1229
		160 L	18,5				A 100												283	1273				
		180 M	22,0				A 160												305	1300				
	80-250	200 L	30,0	S 386	A 160	69	411	125	610	40	840	205	90	110	310	1250	20	-	20	1398	-	-	M 24 x 250	
		200 L	37,0				421												1398					
180 M		22,0	A 100				319												20	1300				
200 L		30,0	A 160				424												1398					
200 L		37,0	434				1398																	
225 M		45,0	S 486				504												1457					
100-200	160 L	18,5	S 385	A 63	65	299	140	490	40	740	440	190	90	110	310	1120	-	40	1273	-	-	M 20 x 200		
	180 M	22,0				A 100												314	20				1300	
	200 L	30,0				A 160												420	1398					
	200 L	37,0				430												1398						
	100-250	225 M	45,0	S 486	A 250	78	503	140	610	40	940	550	230	90	110	325	1400	-	33	1457	-	-	M 24 x 250	
		200 L	30,0				440												1413					
		200 L	37,0				450												1413					
		225 M	45,0				525												1472					
		250 M	55,0				621												1592					
		280 S	75,0				822												1676					
100-250	280 M	90,0	S 607	PKZ 17 **	78	868	140	730	40	940	695	230	100	380	1400	-	55	1727	-	-	M 24 x 250			
	280 M	90,0				868											1727							

* motors-type of enclosure IP 54, dimensions dependent on motor make

** PKZ-coupling dynamically balanced

Foundation plan

n = 1450 rpm



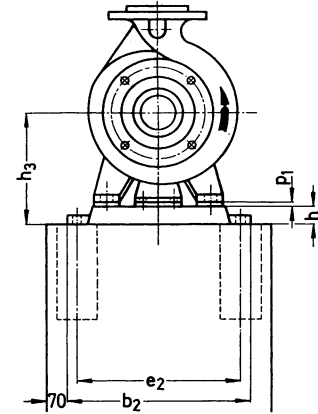
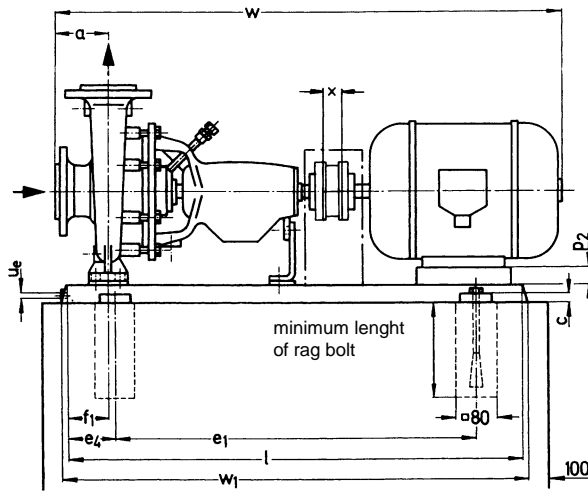
Dimensions in mm, tolerances (base plates) for cast pieces acc. to DIN 1686/GTB 17, for welded pieces acc. to DIN 8570 B

size	motor size	motor kW	base plate Nr.	coupling	pump weight kg	unit weight kg	a	b ₂	c	e ₁	e ₂	e ₄	f ₁	h	h ₃	l	p ₂	w*	w ₁	u _e	rag bolt DIN 529	
32-250	80 b	0,75	P 342	A 10	40	92	100	450	30	540	400	130	60	80	260	800	100	722	820	G1/2	M 20 x 200	
	90 S	1,1				96											762					
	90 L	1,5		100		787																
	100 L	2,2		108		846																
40-250	90 S	1,1	P 342	A 10	42	99	100	450	30	540	400	130	73	80	260	800	90	762	820	G1/2	M 20 x 200	
	90 L	1,5				103											787					
	100 L	2,2		110		846																
	100 L	3,0		111		846																
40-315	100 L	2,2	P 383	A 25	78	153	125	490	600	440	150	75	305	900	900	125	981	920	G1/2	M 20 x 200		
	100 L	3,0				154										981						
	112 M	4,0		172		981																
	132 S	5,5		194		1064																
50-250	90 L	1,5	P 342	A 10	43	104	100	450	30	540	400	130	75	80	260	800	90	787	820	G1/2	M 20 x 200	
	100 L	2,2				111											846					
	100 L	3,0		112		846																
	112 M	4,0		130		846																
50-315	112 M	4,0	P 383	A 63	80	174	125	490	600	400	150	40	470	305	900	113	981	920	G1/2	M 20 x 200		
	132 S	5,5				196										1064						
	132 M	7,5		246		1102																
65-250	100 L	2,2	P 383	A 25	62	137	100	490	30	600	440	150	90	80	280	900	100	956	920	G1/2	M 20 x 200	
	100 L	3,0				136											956					
	112 M	4,0		156		956																
	132 S	5,5		216		1039																
65-315	132 S	5,5	S 385	A 63	87	242	125	490	40	740	190	110	310	335	1120	68	1064	-	-	-	-	
	132 M	7,5				252										1102						
	160 M	11,0		297		1229																
	160 L	15,0		318		1273																
80-200	90 L	1,5	P 383	A 25	56	122	125	490	30	600	440	150	75	80	260	900	90	922	920	G1/2	M 20 x 200	
	100 L	2,2				130											981					
	100 L	3,0		131		981																
	112 M	4,0		149		981																
80-250	132 S	5,5	S 385	A 63	69	170	40	740	190	100	110	110	310	1120	48	1064	-	-	-	-		
	100 L	3,0				184									981							
	112 M	4,0		203		981																
	132 S	5,5		224		1064																
80-315	132 M	7,5	S 385	A 63	92	234	140	490	40	740	190	110	310	1120	68	1064	-	-	-	-		
	132 S	5,5				248									1064							
	132 M	7,5		258		1102																
	160 M	11,0		302		1229																
100-200	100 L	2,2	P 383	A 25	65	137	125	490	30	600	440	150	90	80	280	900	100	981	920	G1/2	M 20 x 200	
	100 L	3,0				140											981					
	112 M	4,0		159		981																
	132 S	5,5		220		1064																
100-250	132 M	7,5	S 385	A 63	78	230	140	490	40	740	190	110	310	1120	68	1064	-	-	-	-		
	112 M	4,0				212									996							
	132 S	5,5		234		1079																
	132 M	7,5		244		1117																
100-315	160 M	11,0	S 385	A 100	97	288	140	490	40	740	440	190	100	110	360	65	1244	-	-	-	-	
	160 L	15,0				307										1244						
	180 M	18,5		328		1288																
	180 L	22,0		348		1315																
125-250	132 M	7,5	S 385	A 63	97	263	140	490	40	740	440	190	100	110	360	1120	118	1117	-	-	-	M 20 x 200
	160 M	11,0				307											1244					
	160 L	15,0		328		1288																

* motors-type of enclosure IP 54, dimensions dependent on motor make

Foundation plan for units with spacer type coupling

n = 2900 rpm



Dimensions in mm, tolerances (base plate) for cast pieces acc. to DIN 1686/GTB 17, for welded pieces acc. to DIN 8570 B

size	motor size	kW	base plate Nr.	coupling PKA	weight		a	b ₂	c	e ₁	e ₂	e ₄	f ₁	h	h ₃	l	p ₁	p ₂	w*	w ₁	u _e	x	rag bolt DIN 529								
					pump kg	unit kg																									
32-125	71 b	0,55	P 241	8	23	55	80	330	25	480	290	115	50	65	177	710	-	41	794	730	G1/2	100	M 16 x 160								
	80 a	0,75	P 272			62													360	540				320	160	60	800	32	820	820	
	80 b	1,1				63																						22	850		
	90 S	1,5				67																							880		
	90 L	2,2				71																									
32-160	80 b	1,1		26	67	70	390	360	600	350	150	60	65	197	900	-	41	794	730	G1/2	100	M 16 x 160									
	90 S	1,5																70										52	820		
	90 L	2,2																74										42	850		
	100 L	3,0																80											880		
	112 M	4,0	P 303															108										32	930		
32-200	90 L	2,2	P 272	30	79	85	390	360	600	350	150	60	65	225	800	-	41	794	730	G1/2	100	M 16 x 160									
	100 L	3,0																85										70	880	820	
	112 M	4,0	P 303															113										60	930		
	132 S	5,5																128										48	940	920	
	132 S	7,5																132										28	1010		
32-250	132 S	7,5	P 344	9	48	173	100	450	30	660	400	170	75	80	260	1000	-	41	794	730	G1/2	100	M 16 x 160								
	160 M	11,0																	214										48	1090	1020
	160 M	15,0																	218										20	1200	
40-125	80 b	1,1	P 272	8	24	64	80	360	25	540	320	130	60	65	177	800	-	41	794	730	G1/2	100	M 16 x 160								
	90 S	1,5																	68										32	820	820
	90 L	2,2																	72										22	850	
	100 L	3,0																	78											880	
	100 L	3,0																	78										12	930	
40-160	90 S	1,5		27	71	75	390	360	600	350	150	60	65	197	900	-	41	794	730	G1/2	100	M 16 x 160									
	90 L	2,2																71										42	850		
	100 L	3,0																84											880		
	112 M	4,0	P 303															109										32	930		
	132 S	5,5																124										20	940	920	
40-200	100 L	3,0	P 272	34	89	117	100	360	540	320	130	50	65	225	800	-	41	794	730	G1/2	100	M 16 x 160									
	112 M	4,0	P 303															117										60	950	820	
	132 S	5,5																132										48	960	920	
	132 S	7,5																136										28	1030		
	160 M	11,0	P 344															200										-	1200	1020	
40-250	132 S	7,5	P 344	42	157	208	450	30	660	400	170	75	80	240	1000	-	41	794	730	G1/2	100	M 16 x 160									
	160 M	11,0																208										48	1030		
	160 M	15,0																212										20	1200		
	160 L	18,5	S 385															272										-	1010		
	160 L	18,5	S 385															272										490	40	740	440
50-125	90 S	1,5	P 272	8	26	70	360	25	540	320	130	60	65	197	800	-	41	794	730	G1/2	100	M 16 x 200									
	90 L	2,2																74										32	820	820	
	100 L	3,0																80										32	820	820	
	112 M	4,0	P 303															108										20	960	920	
	132 S	5,5																123										-	1030		
50-160	90 L	2,2	P 272	31	80	86	360	25	540	320	130	60	65	225	800	-	41	794	730	G1/2	100	M 16 x 200									
	100 L	3,0																86										70	900	820	
	112 M	4,0	P 303															114										60	950		
	132 S	5,5																129										48	960	920	
	132 S	7,5																133										28	1030		
50-200	160 M	11,0	P 344	9	197	197	450	30	660	400	170	75	80	240	1000	-	41	794	730	G1/2	100	M 20 x 200									
	100 L	3,0	P 272															92										60	950	820	
	112 M	4,0	P 303															118										48	960	920	
	132 S	5,5																133										28	1030		
	132 S	7,5																137										-	1200	1020	
50-250	160 M	11,0	P 344	10	201	204	450	30	660	400	170	75	80	240	1000	-	41	794	730	G1/2	100	M 20 x 250									
	160 M	15,0																204										-	1200	1020	
	160 M	11,0																209										20			
	160 M	15,0																213										-	1270		
	160 L	18,5	S 385															273										110	290	1120	1250
50-250	180 M	22,0		12	297	383	490	40	740	440	190	75	80	280	1250	20	41	794	730	G1/2	100	M 20 x 250									
	200 L	30,0	P 436															383										-	1270		
	200 L	30,0	P 436															383										540	30	840	490

Foundation plan for units with spacer type coupling

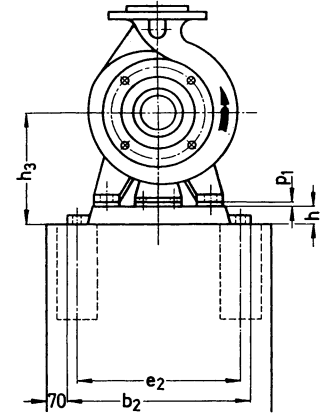
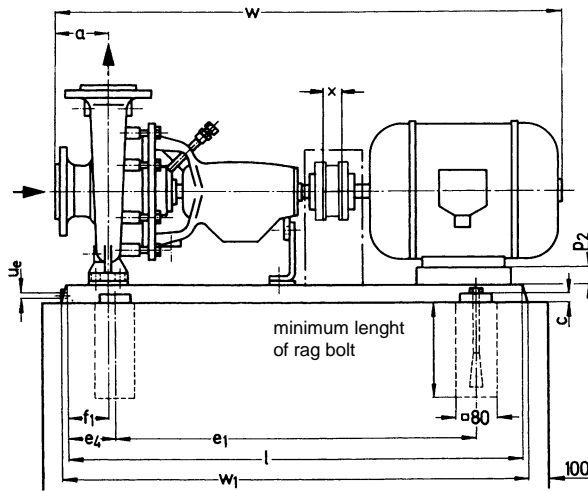
n = 2900 rpm

size	motor		base plate Nr.	coupling PKA	weight		a	b ₂	c	e ₁	e ₂	e ₄	f ₁	h	h ₃	l	p ₁	p ₂	w*	w ₁	u _e	x	rag bolt DIN 529														
	size	kW			pump kg	unit kg																															
65-125	100 L	3,0	P 303	8	29	95	100	390	25	600	350	150	75	65	225	900	-	60	950	920	G1/2	100	M 16 x 160														
	112 M	4,0				112												48	965																		
	132 S	5,5				127												28	1030																		
	132 S	7,5				131																															
65-160	132 S	5,5	P 344	9	34	132	450	30	660	400	170	65	80	240	1000	-	-	-	1200	1020	-	-	M 20 x 250														
	132 S	7,5				139																															
	160 M	11,0				200																															
	160 M	15,0				204																															
65-200	160 M	11,0	S 385	10	38	204	490	40	740	440	190	75	110	290	1120	-	-	-	20	1250	-	-	-														
	160 L	18,5				269																															
	180 M	22,0				292																															
	200 L	30,0				378																															
65-250	160 L	18,5	S 386	12	62	402	490	40	-	440	-	90	110	310	-	-	-	40	1340	-	-	-															
	180 M	22,0				326																															
	200 L	30,0	S 487	14	-	416	610	-	940	550	230	-	100	300	1400	-	-	20	1380	-	-	-															
	200 L	37,0																430																			
	225 M	45,0																512																			
80-160	132 S	7,5	P 344	9	39	154	125	450	30	660	400	170	65	80	260	1000	-	-	48	1055	1020	G1/2	-														
	160 M	11,0				205																															
	160 M	15,0				209																															
	160 L	18,5				269													490	40				740	440	190	75	110	290	1120	-	-	-	-	1270	-	-
	180 M	22,0				293																															
80-200	160 M	15,0	S 386	10	56	263	610	-	840	-	-	-	-	-	-	-	-	20	1335	-	-	-															
	160 L	18,5				296																															
	180 M	22,0				320																															
	200 L	30,0				410												940	550				230	-	100	300	1400	20	-	-	-	-	1510				
200 L	37,0	424																																			
80-250	180 M	22,0	S 486	12	69	324	730	-	840	-	205	90	-	-	-	-	-	1250	1410	-	-	-															
	200 L	30,0				424																															
	200 L	37,0				437																															
	225 M	45,0				519																															
	250 M	55,0				650																															
100-200	160 L	18,5	S 386	12	65	312	490	-	840	440	205	-	110	310	1250	-	-	40	1420	-	-	140															
	180 M	22,0				322																															
	200 L	30,0				422												610	940				550	230	-	100	300	1400	-	-	-	-	1550				
	200 L	37,0				435																															
	225 M	45,0				518																															
100-250	200 L	30,0	S 487	14	78	435	730	-	1060	670	270	-	-	-	-	-	-	25	1565	-	-	-															
	200 L	37,0				448																															
	225 M	45,0				531																															
	250 M	55,0				661																															
	280 S	75,0				842																															
280 M	90,0	892																																			
100-250	200 L	30,0	S 608	17	78	435	140	-	1060	670	270	-	-	-	-	-	-	25	1565	-	-	-															
	200 L	37,0				448																															
	225 M	45,0				531																															
	250 M	55,0				661																															
	280 S	75,0				842																															
280 M	90,0	892																																			

* motor-type of enclosure IP 54, dimensions dependent on motor make

Foundation plan for units with spacer type coupling

n = 1450 rpm



Dimensions in mm, tolerances (base plate) for cast pieces acc. to DIN 1686/GBT 17, for welded pieces acc. to DIN 8570 B

size	motor size	motor kW	base plate Nr.	coupling PKA	pump kg	weight unit kg	a	b ₂	c	e ₁	e ₂	e ₄	f ₁	h	h ₃	l	p ₂	w*	w ₁	u _e	x	rag bolt DIN 529	
32-250	80 b	0,75	P 342	8	40	100	100	450	30	540	400	130	75	80	260	800	100	840	820	G1/2	100	M 20 x 250	
	90 S	1,1				104											870						
	90 L	1,5				108											895						
	100 L	2,2				118											950						
40-250	90 S	1,1	P 342	8	42	106	100	450	30	540	400	130	75	80	260	800	90	870	820	G1/2	100	M 20 x 250	
	90 L	1,5				110											870						
	100 L	2,2				122											985						
	100 L	3,0	P 383	9	78	125	125	490	600	150	740	190	110	335	1120	125	1080	-	-	-	-	-	
	100 L	2,2				177											1080						
112 M	4,0	S 385	9	78	177	125	490	600	150	740	190	110	335	1120	125	113	1090	-	-	-	-	-	
132 S	5,5				196											1090							
50-250	90 L	1,5	P 342	8	43	111	100	450	30	540	400	130	75	80	260	900	90	895	920	G1/2	100	M 20 x 250	
	100 L	2,2				123											80	950					
	100 L	3,0	P 383	9	43	126	100	490	600	150	740	190	110	335	1120	125	68	1000	-	-	-	-	
	112 M	4,0				145											1000						
50-315	112 M	4,0	S 385	9	80	225	125	490	40	740	190	110	335	1120	125	113	1090	-	-	-	-	-	
	132 S	5,5				235										1165							
	132 M	7,5				253										1200							
65-250	100 L	2,2	P 343	8	62	155	100	540	30	660	490	170	90	80	280	1000	100	1060	1020	G1/2	100	M 20 x 250	
	100 L	3,0				158											88	1070					
	112 M	4,0	S 385	9	62	176	125	490	40	740	440	190	110	310	1120	125	68	1140	-	-	-	-	
	132 S	5,5				221											93	1165					
	132 S	5,5				241											1200						
65-315	132 M	7,5	S 386	12	87	258	125	490	40	740	440	190	110	335	1120	125	65	1330	-	-	-	-	
	160 M	11,0				310											1330						
	160 L	15,0	S 386	12	87	335	125	490	40	740	440	190	110	335	1120	125	65	1375	-	-	-	-	
	160 L	15,0				335											1375						
80-200	90 L	1,5	P 434	8	56	128	125	540	30	660	490	170	75	80	260	1000	90	1035	1020	G1/2	100	M 20 x 250	
	100 L	2,2				146											80	1080					
	100 L	3,0				148											68	1090					
	112 M	4,0				169											48	1165					
	132 S	5,5				184											88	1090					
	80-250	100 L	3,0	S 385	9	69	164	125	490	40	740	440	190	90	280	1120	125	100	1080	-	-	-	-
		112 M	4,0				183											88	1090				
		132 S	5,5				219											68	1165				
		132 M	7,5	S 386	12	92	235	125	490	40	740	440	190	110	310	1120	125	118	1165	-	-	-	-
		160 M	11,0				311											1200					
160 L	15,0	S 386	12	92	335	125	490	40	740	440	190	110	310	1120	125	90	1330	-	-	-	-		
160 L	15,0				335											1375							
100-200	100 L	2,2	P 434	8	65	163	125	540	30	660	490	170	90	80	280	1000	100	1125	1020	G1/2	140	M 20 x 250	
	100 L	3,0				166											88	1135					
	112 M	4,0				203											68	1210					
	100-250	132 S	5,5	S 385	9	78	218	140	490	40	740	440	190	110	310	1120	125	113	1150	-	-	-	-
		132 M	7,5				238											93	1220				
		112 M	4,0				220											1260					
		132 S	5,5				235											65	1390				
		132 M	7,5				253											90	1430				
	100-315	160 M	11,0	S 386	12	97	305	140	490	40	740	440	190	80	360	1120	1250	65	1390	-	-	-	-
		160 M	11,0				321											70	1460				
		160 L	15,0				346											1500					
		180 M	18,5				370											1430					
180 L		22,0	395				1430																
125-250	132 M	7,5	S 385	10	97	273	140	490	40	740	440	190	90	110	360	1120	118	1260	-	-	140	M 20 x 250	
	160 M	11,0	S 386	12	97	321	140	490	40	840	440	205	90	110	360	1250	90	1390	-	-	140	M 20 x 250	
	160 L	15,0	S 386	12	97	347	140	490	40	840	440	205	90	110	360	1250	90	1430	-	-	140	M 20 x 250	

Data regarding size - order notes

Series + size	Hydraulic+ bearing	Shaft seal	Material design	Casing seal
	A: speed n = 1450 rpm B: speed n = 2900 rpm ·B two greased antifriction bearing	AAE standard mechanical seal O-rings Perbunan AA1 as per AAE, but O-rings Viton	0A standard design cast iron 0C as per 0A, but impeller of G-CuSn 10 3B main parts of G-CuSn 10	2 flat seals
ULN	32-125 BB 32-160 BB 32-200 BB 32-250 AB 32-250 BB 40-125 BB 40-160 BB 40-200 BB 40-250 AB 40-250 BB 40-315 AB 50-125 BB 50-160 BB 50-200 BB 50-250 AB 50-250 BB 50-315 AB 65-125 BB 65-160 BB 65-200 BB 65-250 AB 65-250 BB 65-315 AB 80-160 BB 80-200 AB 80-200 BB 80-250 AB 80-250 BB 80-315 AB 100-200 AB 100-200 BB 100-250 AB 100-250 BB 100-315 AB 125-250 AB	alternatively AAE AA1	alternatively 0A 0C 3B	2

Design	Designation	Selection table motors					
		motor n = 2900 rpm			motor n = 1450 rpm		
		kW	size	designation	kW	size	designation
pump with free shaft end	01						
pump with coupling, ready drilled at motor side and coupling guard for the shaft coupling	41	0,55	71 b	EA	0,25	71 a	DB
as above, but pump and coupling guard for the shaft coupling, mounted on base plate, incl. supports for pump and motor and 1 set of rag bolts	53	0,75	80 a	FA	0,37	71 b	EB
		1,1	80 b	GA	0,55	80 a	FB
		1,5	90 S	HA	0,75	80 b	GB
		2,2	90 L	JA	1,1	90 S	HB
as above, but with motor e.g. 18,5 kW three-phase AC motor (50 Hz, 380 V) at 2900 rpm	e.g. UA	3,0	100 L	KA	1,5	90 L	JB
		4,0	112 M	MA	2,2	100 L	KB
		5,5	132 S	NA	3,0	100 L	LB
		7,5	132 S	OA	4,0	112 M	MB
		11	160 M	SA	5,5	132 S	NB
		15	160 M	TA	7,5	132 M	PB
		18,5	160 L	UA	11	160 M	SB
		22	180 M	VA	15	160 L	UB
		30	200 L	XA	18,5	180 M	VB
		37	200 L	YA	22	180 L	WB
		45	225 M	AA			
		55	250 M	BA			
		75	280 S	CA			
		90	280 M	DA			

Important:

In case of order please indicate always output Q [m³/h] and delivery head H [m].

Example for ordering:

The size ULN 65-250 BB AAE 0A 2 with coupling, pre-drilled at the motor side and coupling guard for the shaft coupling has the complete order number:

ULN · 65-250 BB AAE 0A 2 41

The size ULN 65-250 BB AAE 0A 2 as complete unit with 18,5 kW three-phase AC motor, 2900 rpm has the complete order number:

ULN · 65-250 BB AAE 0A 2 UA

On delivery, the period (·) at the fourth place of the type designation is replaced by a letter in the factory.

On ordering the designs 41 and 53 please indicate always the provided motor in order that the coupling can be ready drilled at motor side and choose the correct base plate and to enclose the proper documentation.

On request, the bearing bracket can be delivered in oil-lubricated design against additional costs-please indicate extra.

Any changes in the interest of the technical development are reserved.

Sterling SIHI (Spain), S.A.
Vereda de los Zapateros s/n, Pozuelo de Alarcón 28223 Madrid, Spain.
Telephone +34 91 709 1310 Telefax +34 91 715 9700
www.sihi.com