

N, N4

End-Suction Centrifugal Pumps standardized EN 733



Construction

Single-stage end-suction centrifugal pumps, with bearing bracket.

Nominal duty points and main dimensions in accordance with EN 733. Back Pull-Out construction, for simple and quick dismantling and reassembly.

N, N4: version with pump casing and lantern bracket in cast iron.

B-N, B-N4: version with pump casing and lantern bracket in bronze.

(the pumps are supplied fully painted).

Rated speed of rotation (50 Hz): **N** ≈ 2900 rpm.

N4 ≈ 1450 rpm.

Connections: PN 10-16 flanges EN 1092-2 (PN 10 for DN 200).

Counter-flanges (on request)

Sizes	Flanges
from 32-160 to 50-250	Screwed flanges PN 16 EN 1092-1
from 65-125 to 150-400	Flanges for welding PN 10-16 EN 1092-1 (PN 10 for DN 200)
for 200-400	Flanges for welding PN 16 EN 1092-1

Shaft sealing

– Standardized mechanical seal in accordance with ISO 3069.

– Stuffing box seal (on request).

Applications

For clean liquids, without abrasives, which are non-aggressive for the pump materials (contents of solids up to 0.2%).

For water supply.

For heating, air conditioning, cooling and circulation plants.

For civil and industrial applications and for agriculture.

For fire fighting applications.

For irrigation.

Operating conditions

Liquid temperature from -10 °C to +90 °C.

Ambient temperature up to 40 °C.

Total suction lift up to 7 m.

Maximum permissible working pressure up to 10 bar.

16 bar for N 32L-160,200; N,N4 40-160,200; N,N4 50-125,160;

N,N4 65-125,160,200,250; N,N4 80-160,250,315,400; N,N4 100-200;

N4 125-315; N4 150-315,400 (Flanges PN10); N4 200-400.

(10 bar bronze version)

Maximum permissible rotation speed: see table on page 90.



The electropumps N, B-N, N4, B-N4 series comply with the European Regulation no. 547/2012.

Materials

Components	N, N4	B-N, B-N4	N, N4
	Mechanical seal	Mechanical seal	Stuffing box
Pump casing	Cast iron	Bronze	Cast iron
Casing cover	GJL 200 EN 1561	CC480K EN 1982	GJL 200 EN 1561
Impeller	Cast iron	Bronze	Cast iron
	GJL 200 EN 1561	CC480K EN 1982	GJL 200 EN 1561
	Brass CW617N EN 12165 For 32-125, 32-160, 32-200, 32L-200, 40-200		
Shaft	Chrome steel 1.4104 EN 10088 (AISI 430)	Cr-Ni-Mo steel 1.4401 EN 10088 (AISI 316)	Carbon steel C 40 UNI 7845
Shaft sleeve	–	–	Bronze CC480K EN 1982 with chromate surface
Mechanical seal	Carbon - Ceramic - NBR		–
Counter-flanges	Steel 1.0044 EN 10025-2 (Fe 430B)		

Pump-Motor unit

N,N4 pump connected to a standard electric motor in B3 construction form (EN 60072-1), by means of a baseplate, driven by a flexible coupling and with coupling protection.

Three-phase 400 V, 50 Hz

IE3 efficiency class for three-phase motors (IE2 up to 0,65 kW).

IP 55 protection.

Motor suitable for operation with frequency converter.

Special features on request

- Special mechanical seal.
- Chrome-nickel steel AISI 316 pump-shaft.
- Higher or lower liquid or ambient temperatures.
- Other motor protection.
- Motor for other voltage.
- Frequency 60 Hz (as per 60 Hz data sheet).

Performance n ≈ 2900 rpm

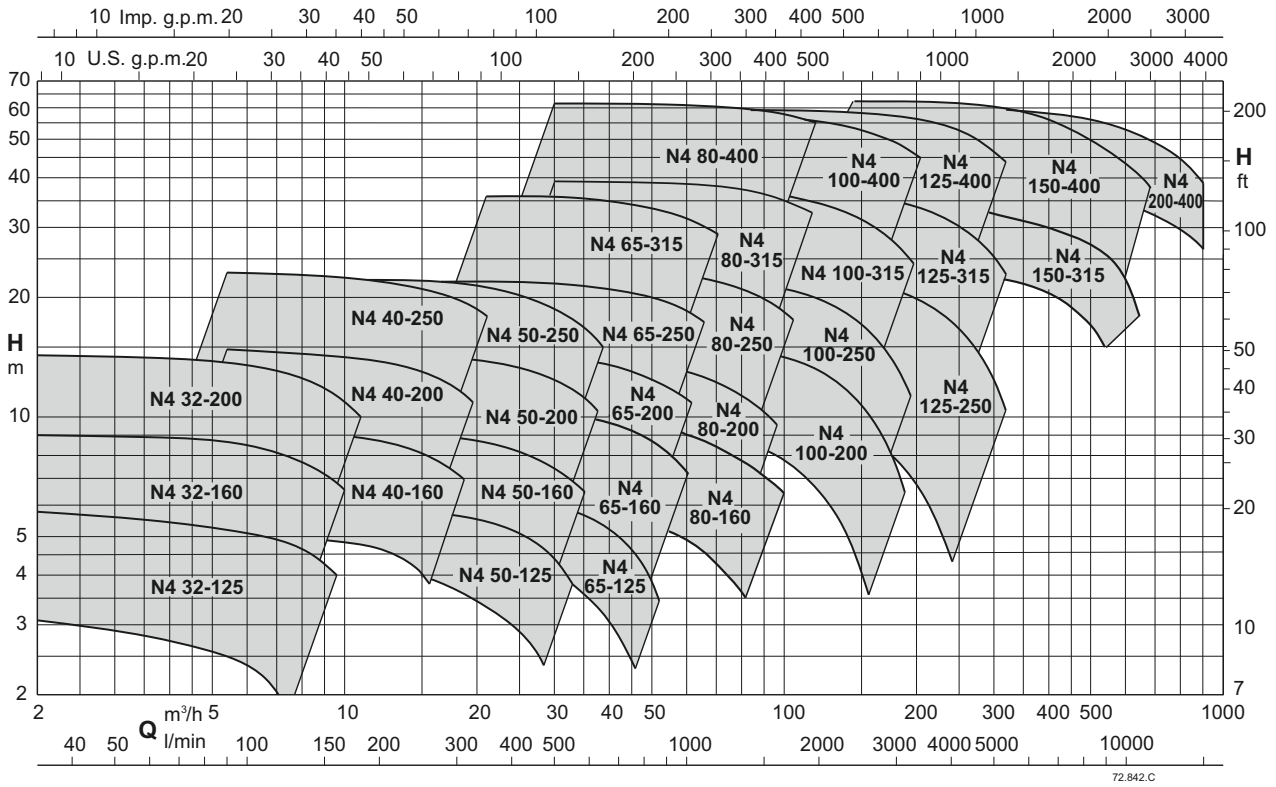
PUMP B-N	PUMP N	MOTOR	P ₂ kW	Q	24	27	30	33	37,8	42	48	54	60	66	69	72	75	78	81	84	96	
				m ³ /h	400	450	500	550	630	700	800	900	1000	1100	1150	1200	1250	1300	1350	1400	1600	
B-N 50-125F/A	N 50-125F/A	90 L2	2,2	H m P₃ kW																		
B-N 50-125D/A	N 50-125D/A	100 L2	3																			
B-N 50-125A/A	N 50-125A/A	112 M2	4																			
B-N 50-125S/A	N 50-125S/A	112 M2 132 S2	4 5,5																			
B-N 50-160B/A	N 50-160B/A	132 S2	5,5																			
B-N 50-160A/A	N 50-160A/A	132 S2	7,5																			
B-N 50-200B/A	N 50-200B/A	160 M2	11																			
B-N 50-200A/A	N 50-200A/A	160 M2	11																			
B-N 50-200S/A	N 50-200S/A	160 M2	15																			
B-N 50-250C/A	N 50-250C/A	160 M2	11																			
B-N 50-250B/A	N 50-250B/A	160 M2	15																			
B-N 50-250A/A	N 50-250A/A	160 L2	18,5																			
B-N 50-250S/A	N 50-250S/A	180 M2	22																			

PUMP B-N	PUMP N	MOTOR	P ₂ kW	Q	24	27	30	33	37,8	42	48	54	60	66	75	84	96	108	120	132	141	
				m ³ /h	400	450	500	550	630	700	800	900	1000	1100	1250	1400	1600	1800	2000	2200	2350	
B-N 65-125E/B	N 65-125E/B	112 M2	4	H m P₃ kW																		
B-N 65-125C/B	N 65-125C/B	132 S2	5,5																			
B-N 65-125A/B	N 65-125A/B	132 S2	7,5																			
B-N 65-160D/B	N 65-160D/B	132 S2	7,5																			
B-N 65-160C/B	N 65-160C/B	160 M2	11																			
B-N 65-160B/B	N 65-160B/B	160 M2	11																			
B-N 65-160AR	N 65-160AR	160 M2	15																			
B-N 65-160A/B	N 65-160A/B	160 M2	15																			
B-N 65-200C/B	N 65-200C/B	160 M2	15																			
B-N 65-200B/B	N 65-200B/B	160 L2	18,5																			
B-N 65-200A/B	N 65-200A/B	180 M2	22																			
B-N 65-250C/B	N 65-250C/B	180 M2	22																			
B-N 65-250B/B	N 65-250B/B	200 L2	30																			
B-N 65-250A/B	N 65-250A/B	200 L2	37																			

PUMP B-N	PUMP N	MOTOR	P ₂ kW	Q	60	66	75	84	96	108	120	132	150	168	180	192	210	240	270	300	
				m ³ /h	1000	1100	1250	1400	1600	1800	2000	2200	2500	2800	3000	3200	3500	4000	4500	5000	
B-N 80-160E/B	N 80-160E/B	132 S2	7,5	H m P₃ kW																	
B-N 80-160D/B	N 80-160D/B	160 M2	11																		
B-N 80-160C/B	N 80-160C/B	160 M2	11																		
B-N 80-160B/B	N 80-160B/B	160 M2	15																		
B-N 80-160A/B	N 80-160A/B	160 L2	18,5																		
B-N 80-200B/B	N 80-200B/B	180 M2	22																		
B-N 80-200A/B	N 80-200A/B	200 L2	30																		
B-N 80-250E/A	N 80-250E/A	180 M2	22																		
B-N 80-250D/A	N 80-250D/A	200 L2	30																		
B-N 80-250C/A	N 80-250C/A	200 L2	37																		
B-N 80-250B/A	N 80-250B/A	225 M2	45																		
B-N 80-250A/A	N 80-250A/A	250 M2	55																		
B-N 100-200E/A	N 100-200E/A	160 L2	18,5																		
B-N 100-200D/A	N 100-200D/A	180 M2	22																		
B-N 100-200C/A	N 100-200C/A	200 L2	30																		
B-N 100-200B/A	N 100-200B/A	200 L2	37																		
B-N 100-200A/A	N 100-200A/A	225 M2	45																		
B-N 100-250B/A	N 100-250B/A	250 M2	55																		
B-N 100-250A/A	N 100-250A/A	280 S2	75																		

N Standard construction. P₂ Rated motor power output. **H** Total head in m. * Maximum suction lift 1-2 m. ° Minimum positive suction head 1 m.
B-N Bronze construction. P₃ Pump power input.

Coverage chart $n \approx 1450$ rpm



72.842.C

Tolerances according to UNI EN ISO 9906:2012

Performance $n \approx 1450$ rpm

PUMP	PUMP	MOTOR	P ₂ kW	Q																	
				m ³ /h	2,4	3	3,6	4,2	4,8	5,4	6	6,6	7,5	8,4	9,6	10,8	12	13,2			
				Q	40	50	60	70	80	90	100	110	125	140	160	180	200	220			
B-N4 32-125F/A	N4 32-125F/A	71 M4	0,25	H m P ₃ kW	3,6 0,07	3,6 0,075	3,5 0,08	3,5 0,09	3,4 0,095	3,2 0,1	3 0,1	2,8 0,105	2,4 0,11	1,9 0,115	1,1 0,115						
B-N4 32-125D/A	N4 32-125D/A	71 M4	0,25		4,7 0,095	4,7 0,075	4,7 0,11	4,7 0,115	4,6 0,125	4,6 0,13	4,5 0,135	4,3 0,145	4,1 0,15	3,8 0,155	3,3 0,165	2,6 0,17					
B-N4 32-125A/A	N4 32-125A/A	71 M4	0,25		5,7 0,12	5,8 0,1	5,8 0,135	5,7 0,145	5,7 0,15	5,7 0,16	5,6 0,165	5,5 0,175	5,4 0,185	5,2 0,195	4,8 0,205	4,3 0,215					
B-N4 32-160B/A	N4 32-160B/A	71 M4	0,37		7,6 0,13	7,5 0,125	7,4 0,15	7,3 0,16	7,2 0,17	7,1 0,18	6,9 0,19	6,7 0,2	6,3 0,21	5,9 0,215	5,2 0,23	4,2 0,235					
B-N4 32-160A/A	N4 32-160A/A	71 M4	0,37		9 0,17	8,95 0,18	8,9 0,19	8,8 0,2	8,7 0,21	8,6 0,22	8,5 0,23	8,3 0,24	7,9 0,26	7,5 0,275	6,8 0,29	6 0,305	5,1 0,315				
B-N4 32-200B/A	N4 32-200B/A	80 M4	0,55		12,5 0,28	12,4 0,3	12,3 0,315	12,2 0,33	12 0,345	11,8 0,36	11,6 0,375	11,2 0,39	10,6 0,41	10 0,43	8,9 0,455	7,6 0,48	6,2 0,5	4,7 0,515			
B-N4 32-200A/A	N4 32-200A/A	80 M4	0,75		14,3 0,35	14,2 0,375	14,1 0,4	14 0,42	13,9 0,44	13,7 0,46	13,5 0,48	13,3 0,5	12,9 0,525	12,3 0,55	11,3 0,585	10,2 0,61	8,9 0,635	7,5 0,655			

PUMP	PUMP	MOTOR	P ₂ kW	Q																	
				m ³ /h	5,4	6	6,6	7,5	8,4	9,6	10,8	12	13,2	15	16,8	18,9	21	24	27	30	
				Q	90	100	110	125	140	160	180	200	220	250	280	315	350	400	450	500	
B-N4 40-160C/A	N4 40-160C/A	71 M4	0,37	H m P ₃ kW	6,1 0,17	6 0,18	5,9 0,19	5,9 0,2	5,8 0,21	5,6 0,23	5,4 0,24	5,2 0,25	5 0,26	4,5 0,27	3,9 0,28	3,1 0,29	2,3 0,3				
B-N4 40-160B/A	N4 40-160B/A	80 M4	0,55		7,6 0,22	7,6 0,23	7,6 0,24	7,6 0,26	7,6 0,27	7,3 0,29	7,1 0,31	6,9 0,32	6,6 0,34	6,3 0,36	5,7 0,38	5 0,39	4 0,4	2,7 0,41			
B-N4 40-160A/A	N4 40-160A/A	80 M4	0,75		9,6 0,28	9,6 0,3	9,6 0,31	9,6 0,33	9,4 0,35	9,3 0,37	9,1 0,4	9 0,42	8,8 0,44	8,4 0,47	7,9 0,49	7,2 0,51	6,4 0,53	5,1 0,55	3,5 0,56		
B-N4 40-200B/A	N4 40-200B/A	90 S4	1,1		13 0,51	12,9 0,53	12,8 0,54	12,7 0,57	12,6 0,60	12,4 0,63	12,2 0,66	12 0,68	11,5 0,71	10,8 0,75	10 0,78	8,6 0,81	7 0,83				
B-N4 40-200A/A	N4 40-200A/A	90 S4	1,1		14,8 0,59	14,7 0,6	14,6 0,61	14,5 0,64	14,4 0,67	14,2 0,71	14 0,74	13,8 0,77	13,6 0,8	13 0,85	12,2 0,9	11,3 0,94	10 0,97				
B-N4 40-250C/A	N4 40-250C/A	90 L4	1,5		17,4 0,689	17,3 0,715	17,2 0,74	17,2 0,779	17 0,817	16,8 0,865	16,6 0,912	16,3 0,967	16 1,018	15,1 1,092	13,8 1,134	12,1 1,178	10,4 1,248	7,2 1,301	2,8 1,348		
B-N4 40-250B/A	N4 40-250B/A	100 LA4	2,2		21,4 0,908	21,5 0,942	21,4 0,99	21,3 1,025	21,2 1,075	21 1,140	20,9 1,203	20,8 1,266	20,5 1,327	20 1,405	19,5 1,482	18,3 1,567	16,4 1,645	13,3 1,752	10 1,815	5 1,867	
B-N4 40-250A/A	N4 40-250A/A	100 LB4	3		22,9 1,068	22,8 1,104	22,9 1,15	22,9 1,193	22,8 1,246	22,5 1,316	22,5 1,385	22,2 1,454	22 1,521	21,8 1,638	21,4 1,733	20,4 1,817	18,9 1,933	16 2,068	12,6 2,168	8 2,267	

N4 Standard construction.
B-N4 Bronze construction.

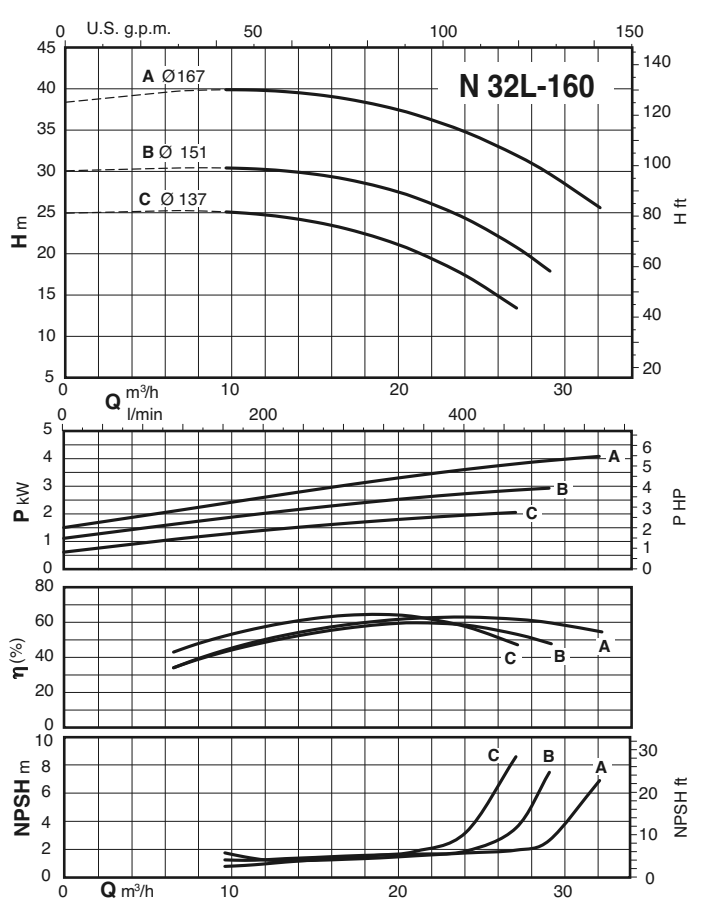
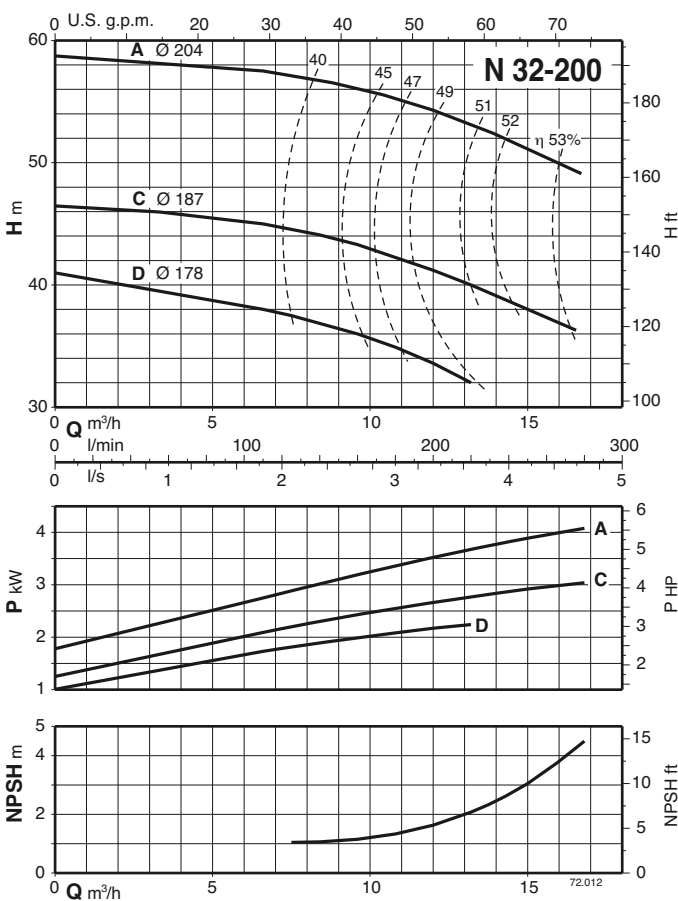
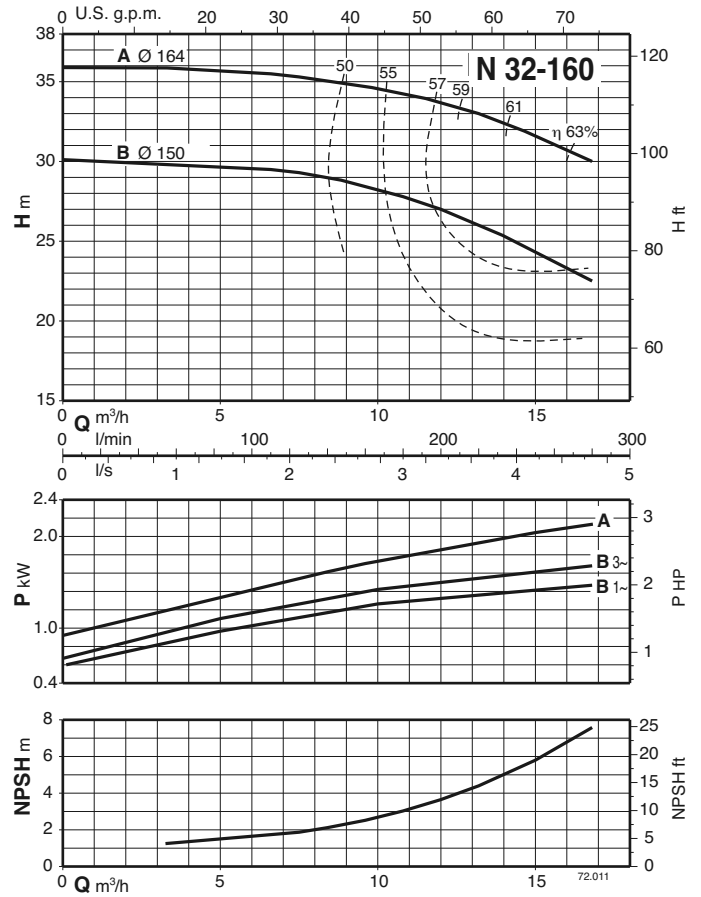
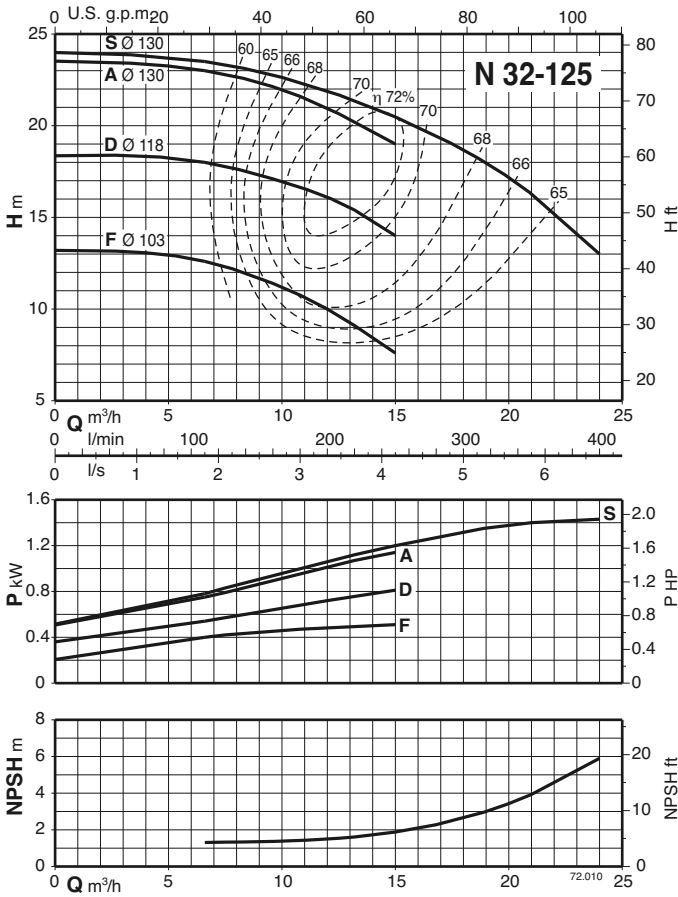
P₂ Rated motor power output.
P₃ Pump power input.

H Total head in m.

* Maximum suction lift 1-2 m.

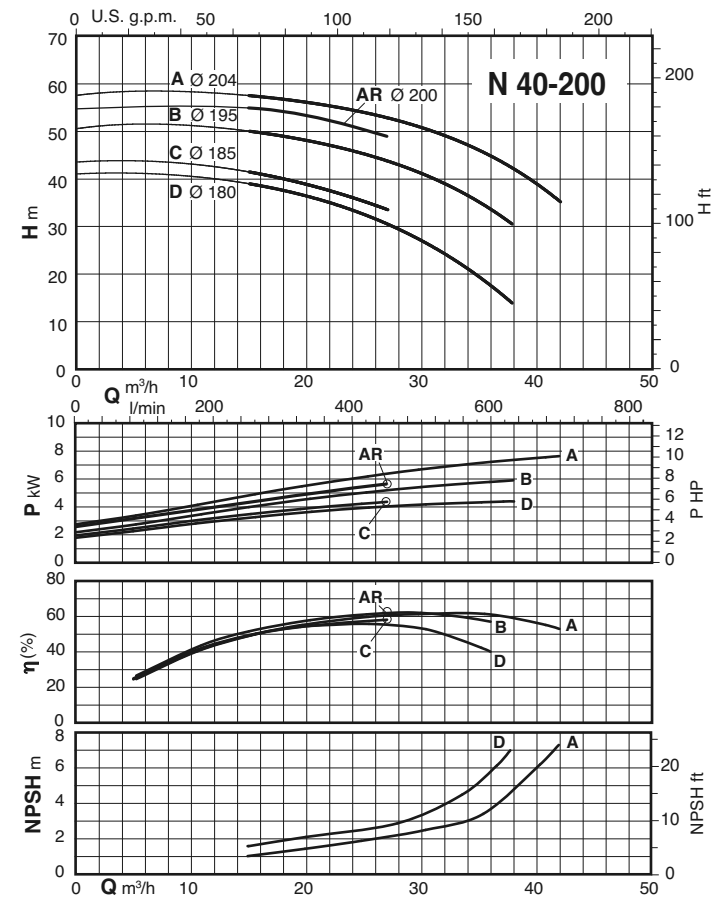
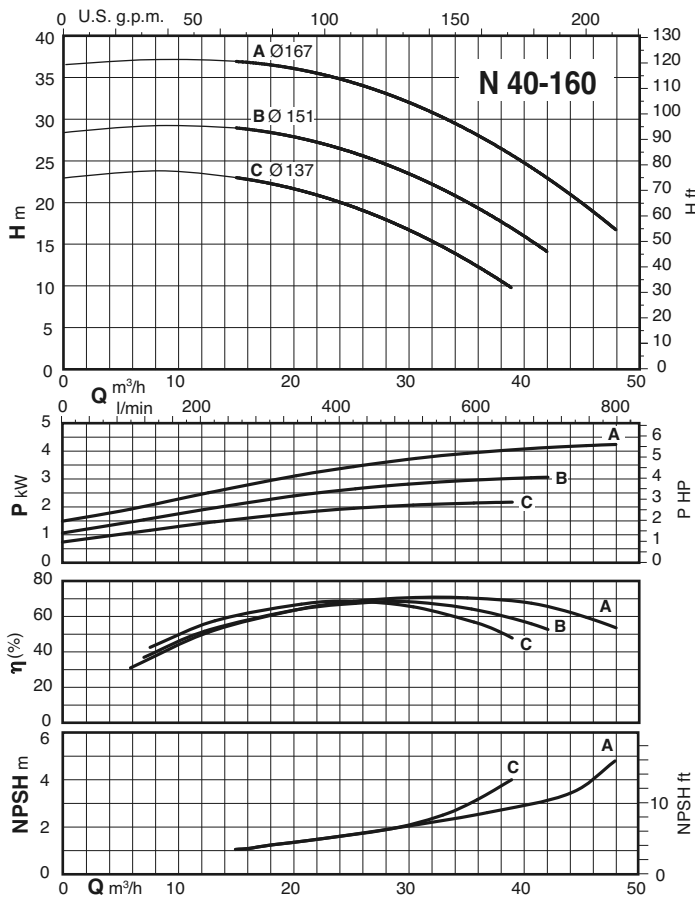
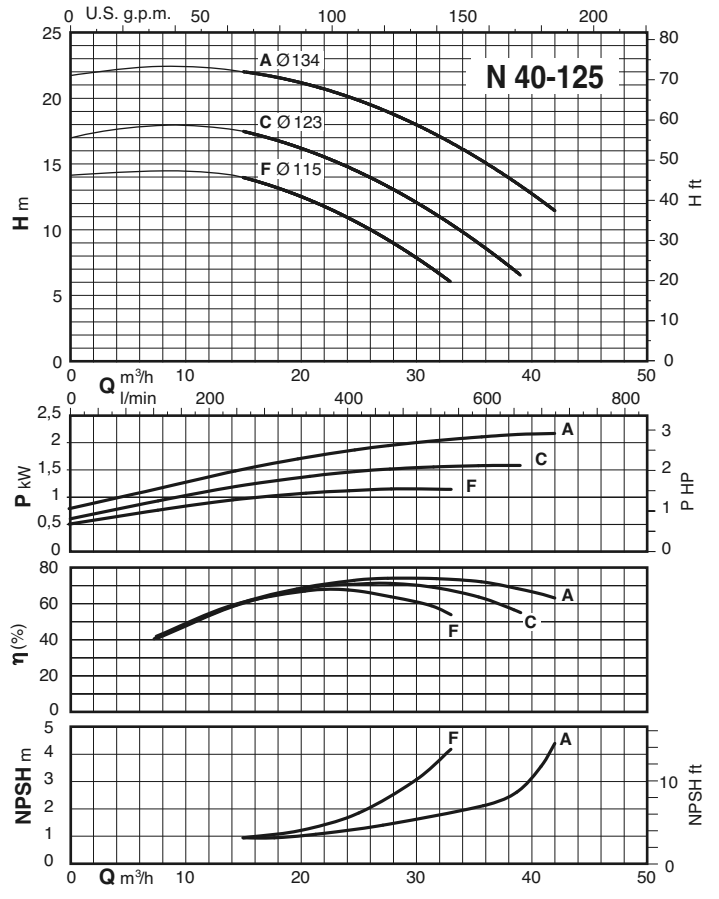
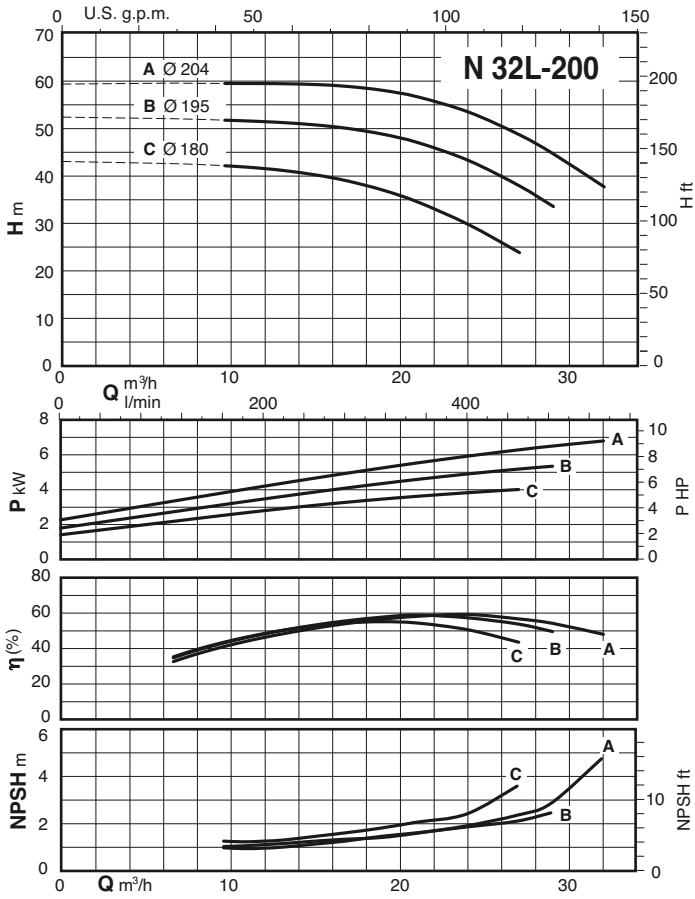


Characteristic curves $n \approx 2900$ rpm



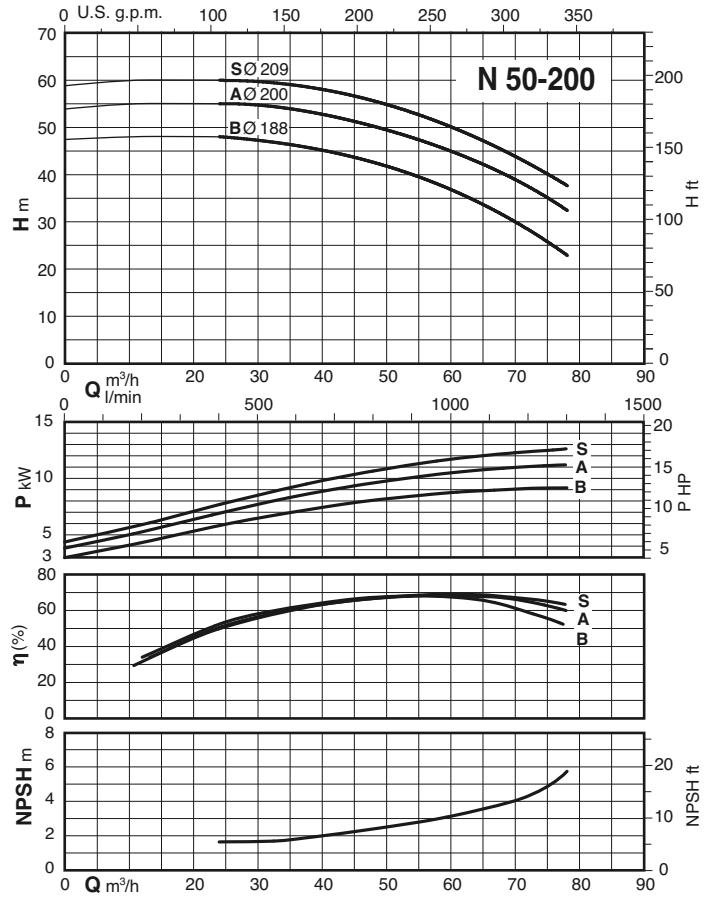
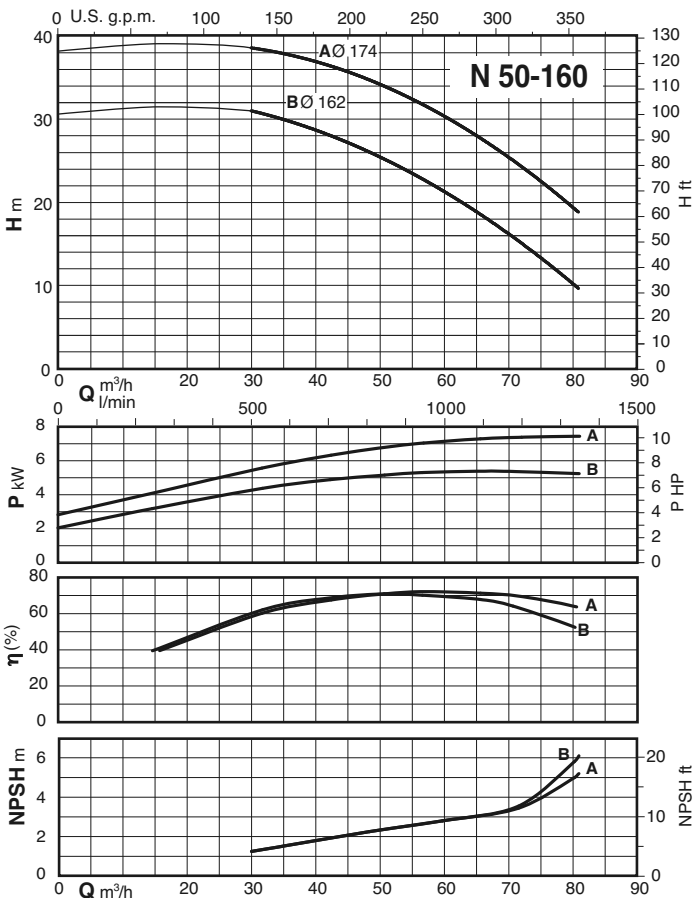
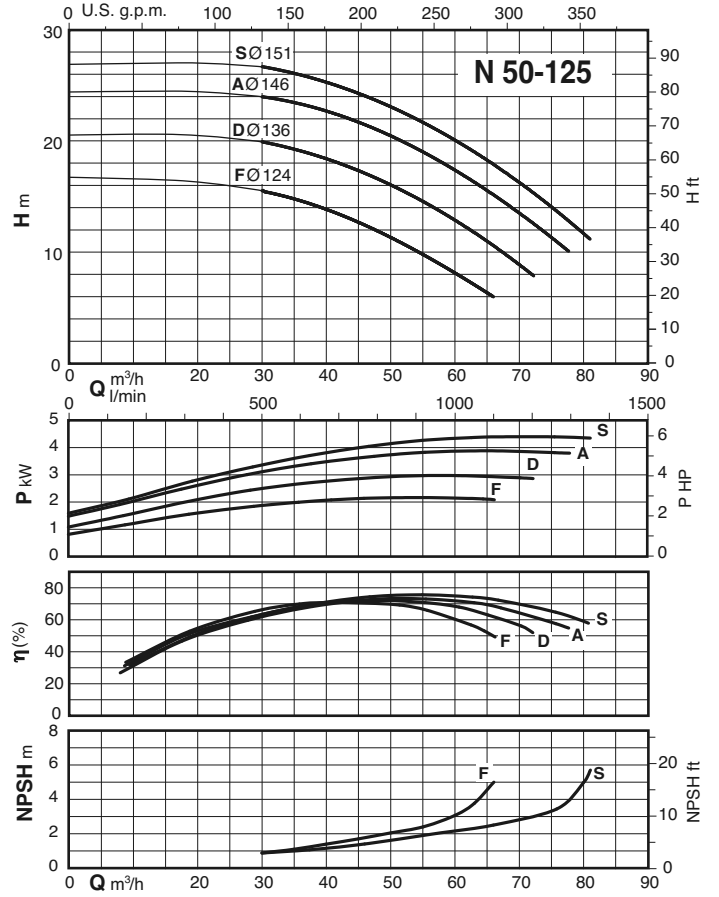
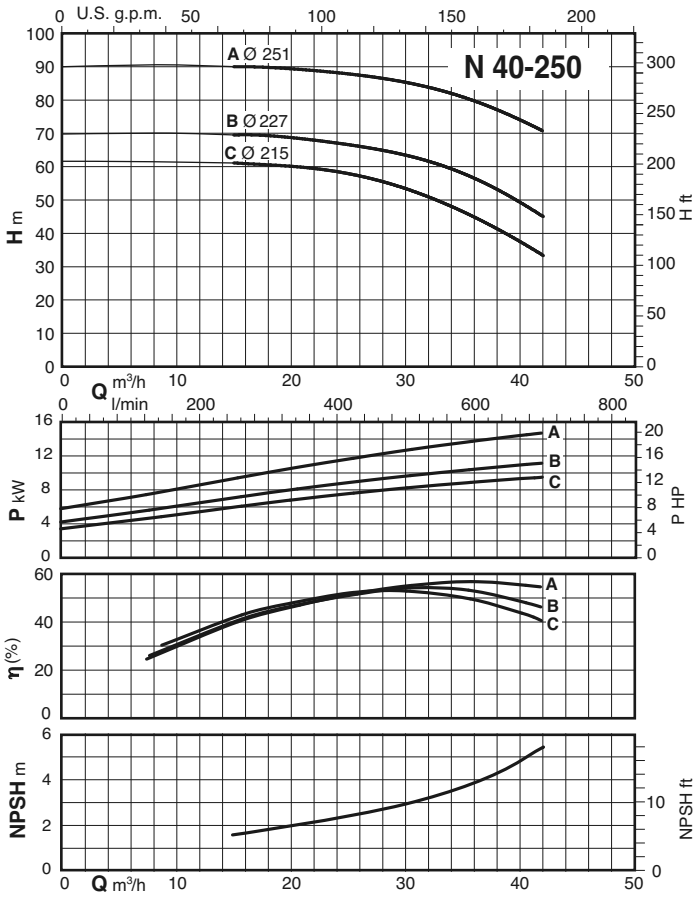


Characteristic curves $n \approx 2900$ rpm



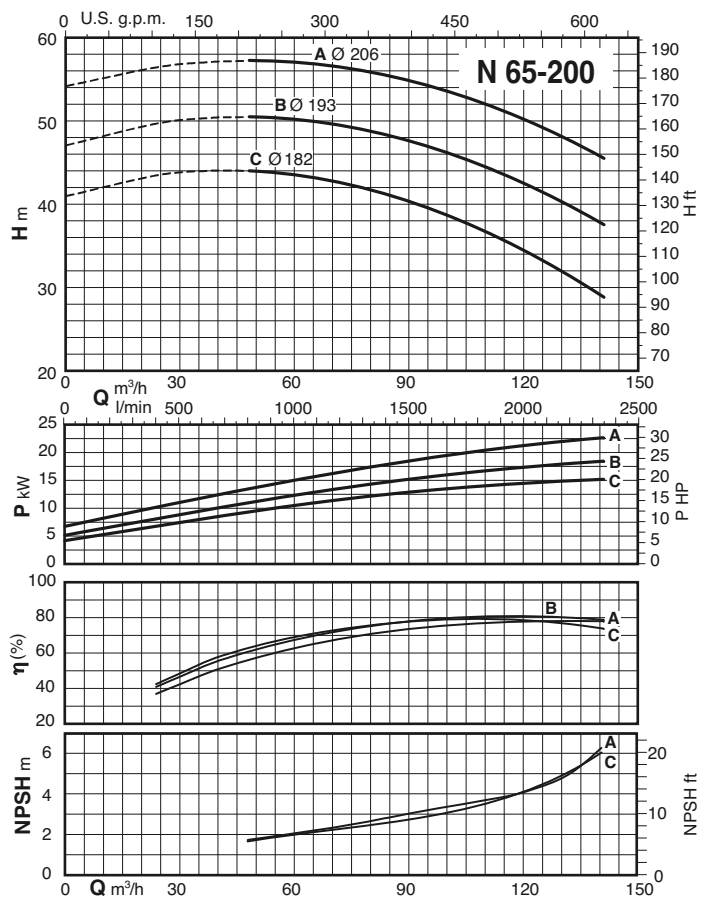
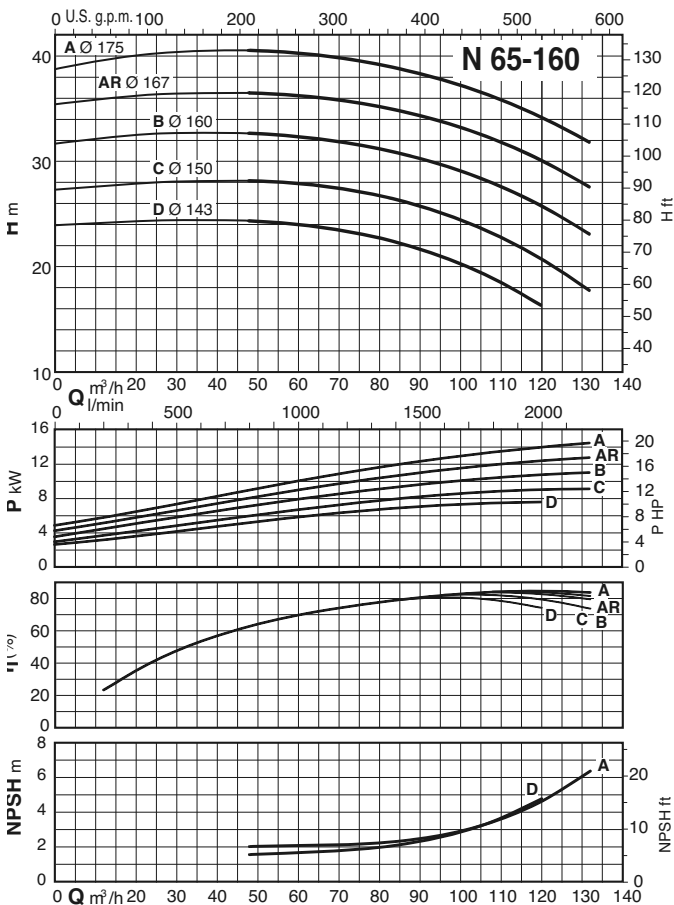
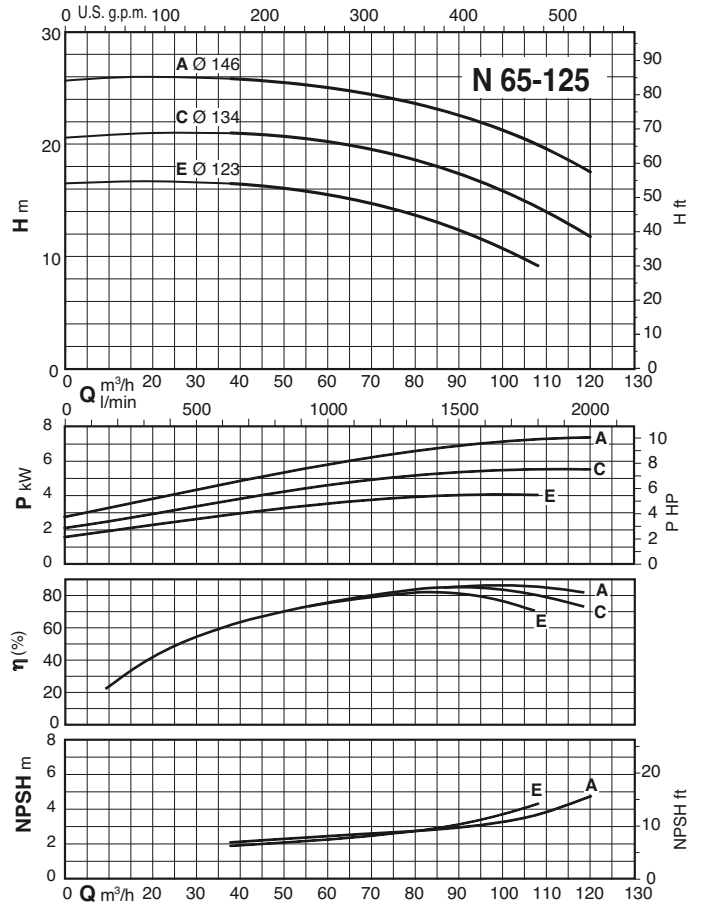
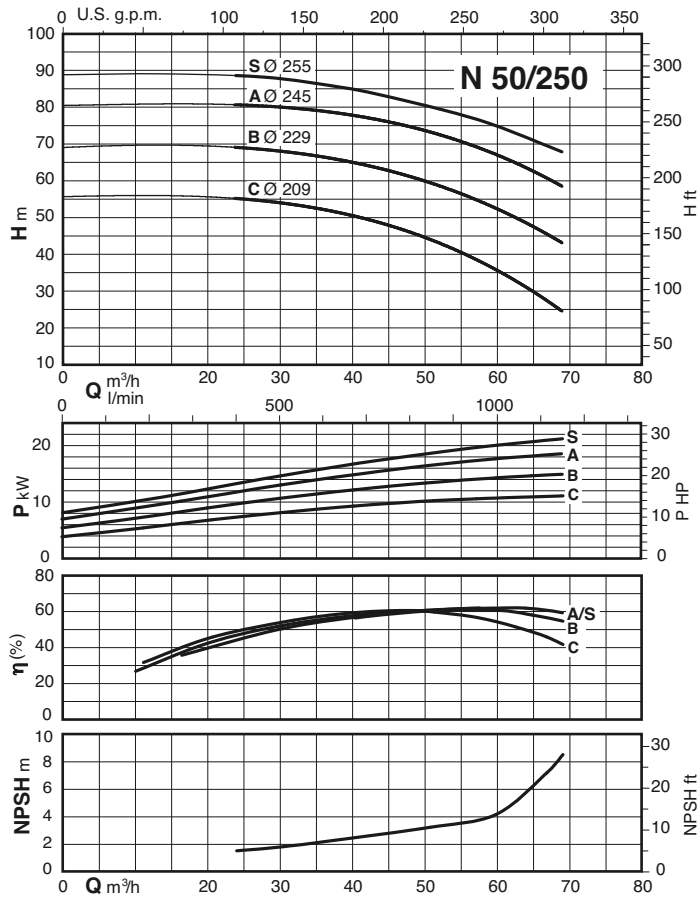


Characteristic curves $n \approx 2900$ rpm



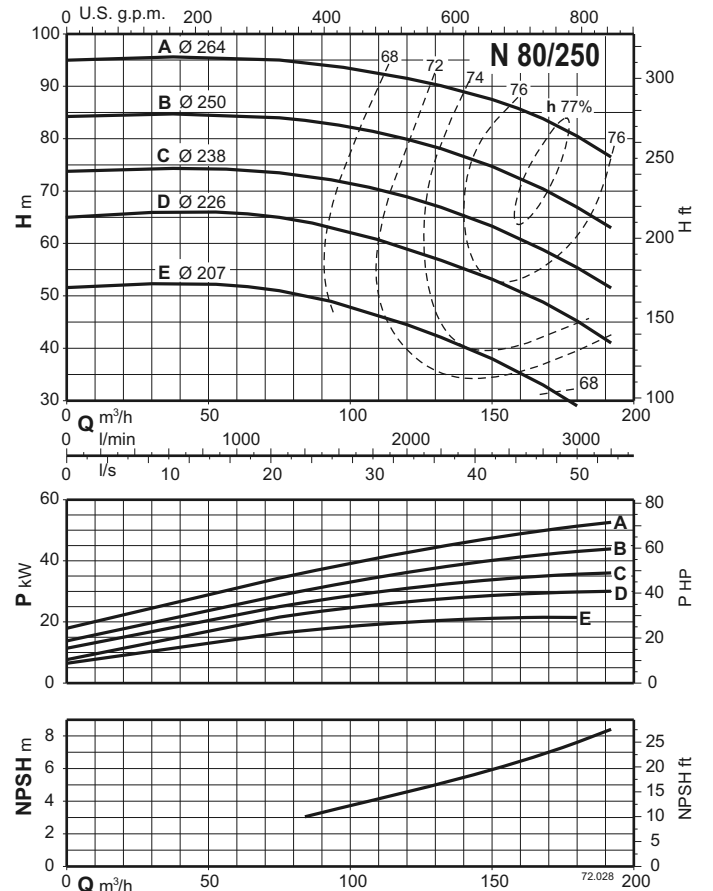
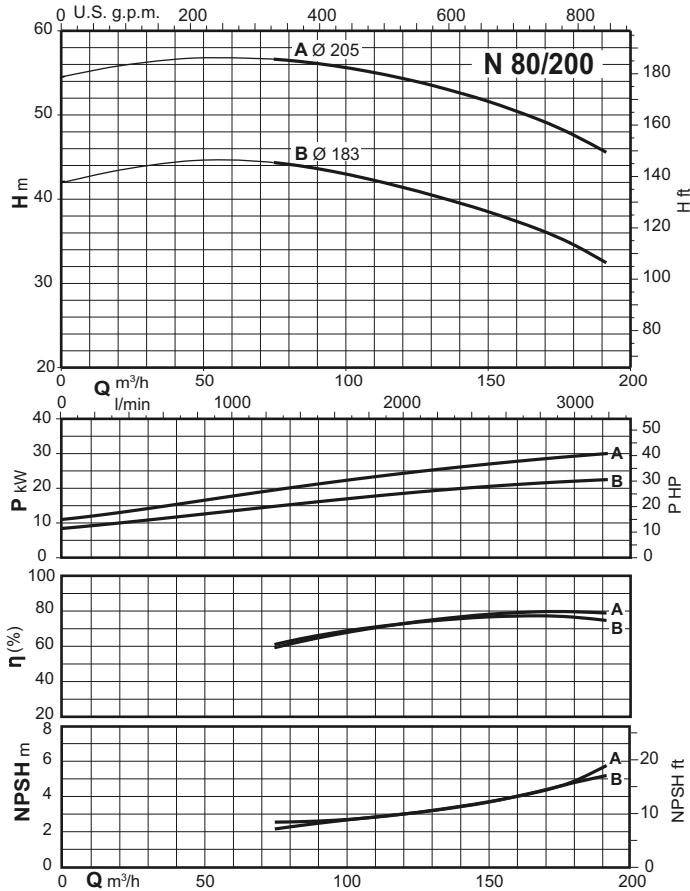
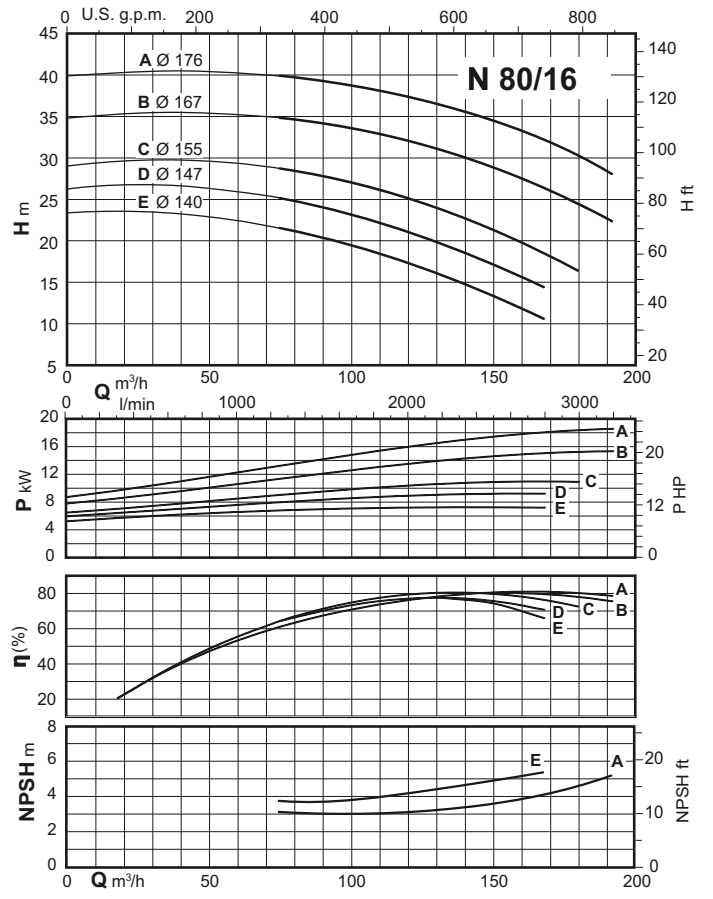
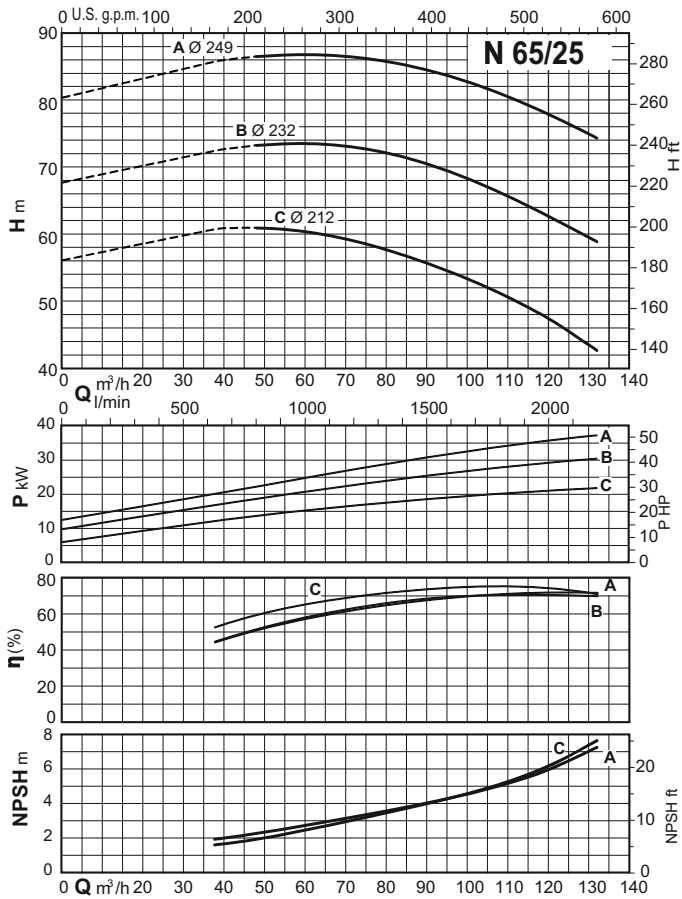


Characteristic curves $n \approx 2900$ rpm



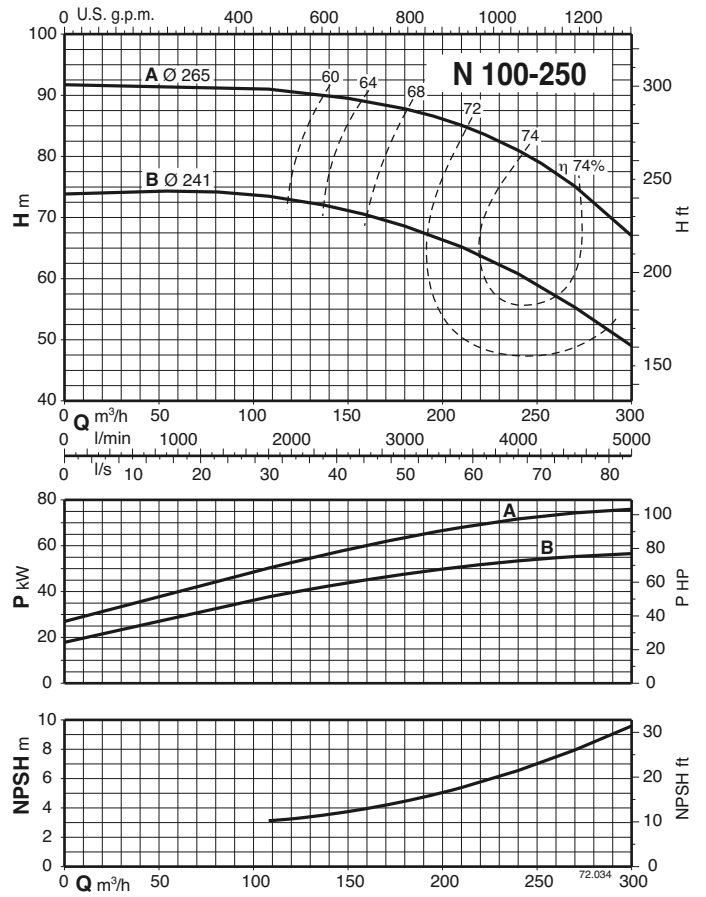
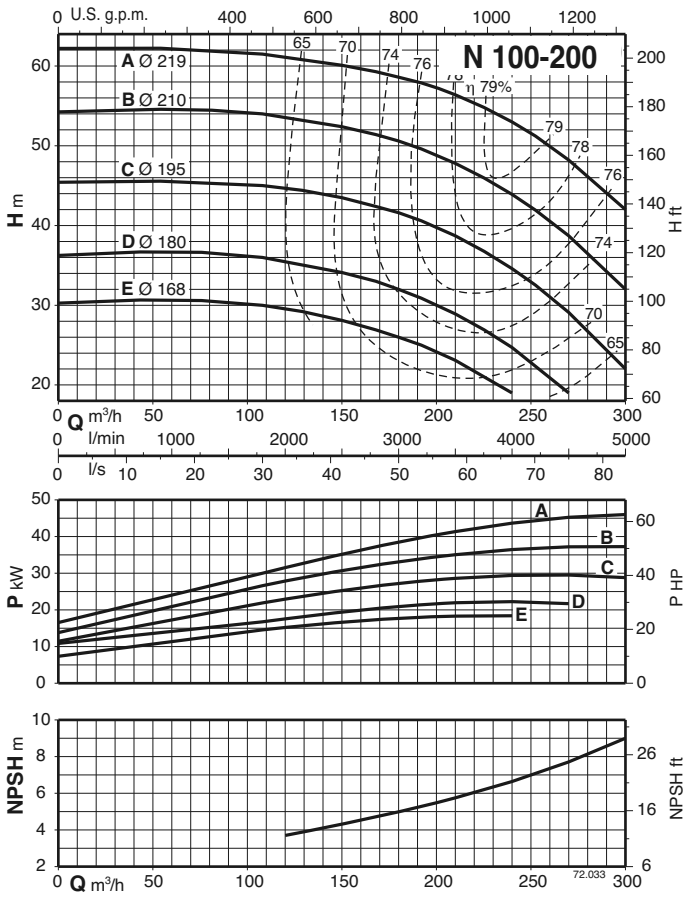


Characteristic curves $n \approx 2900$ rpm

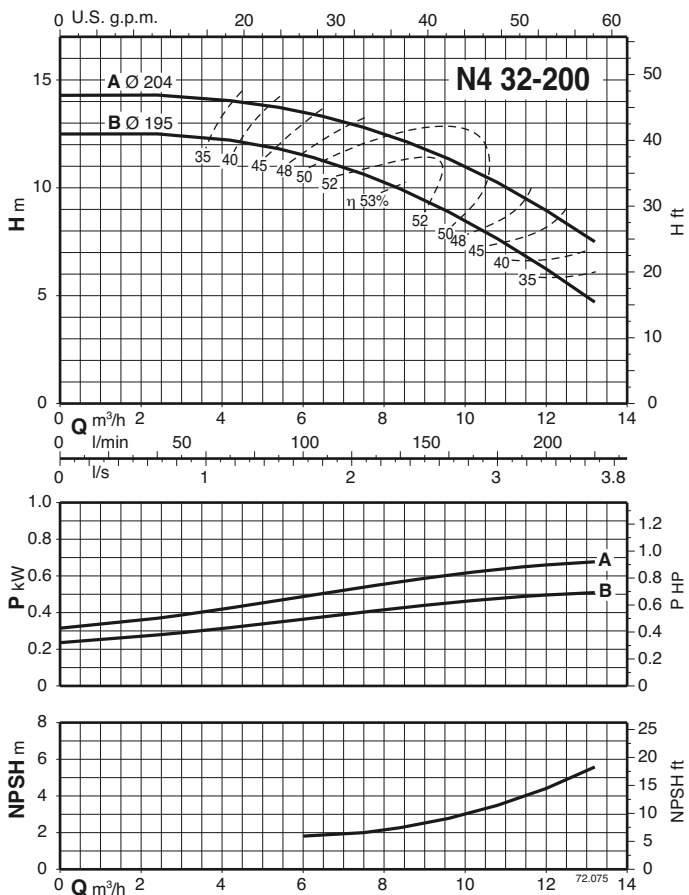
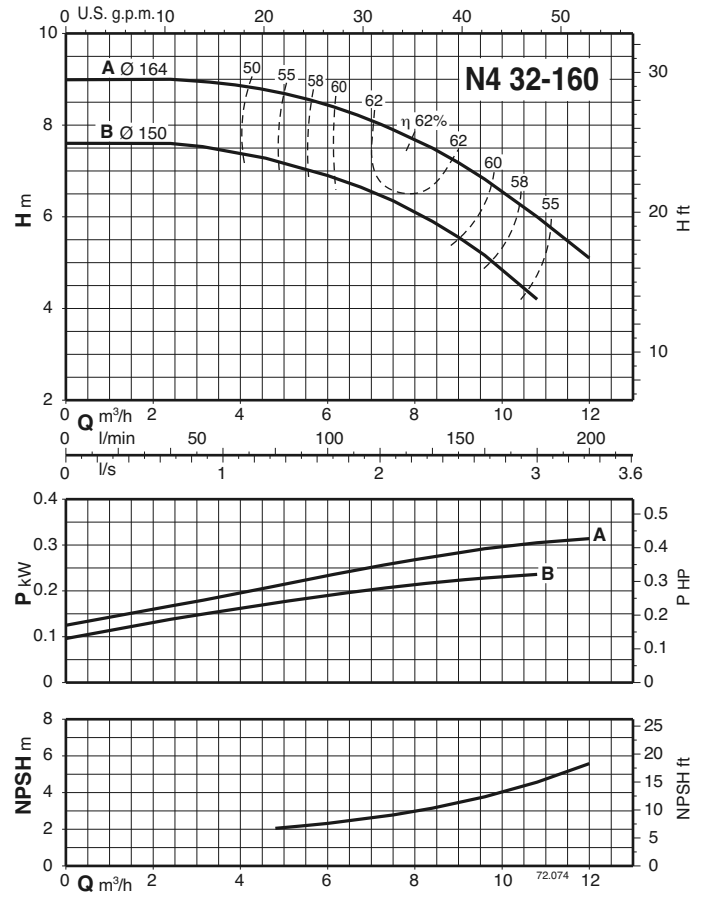
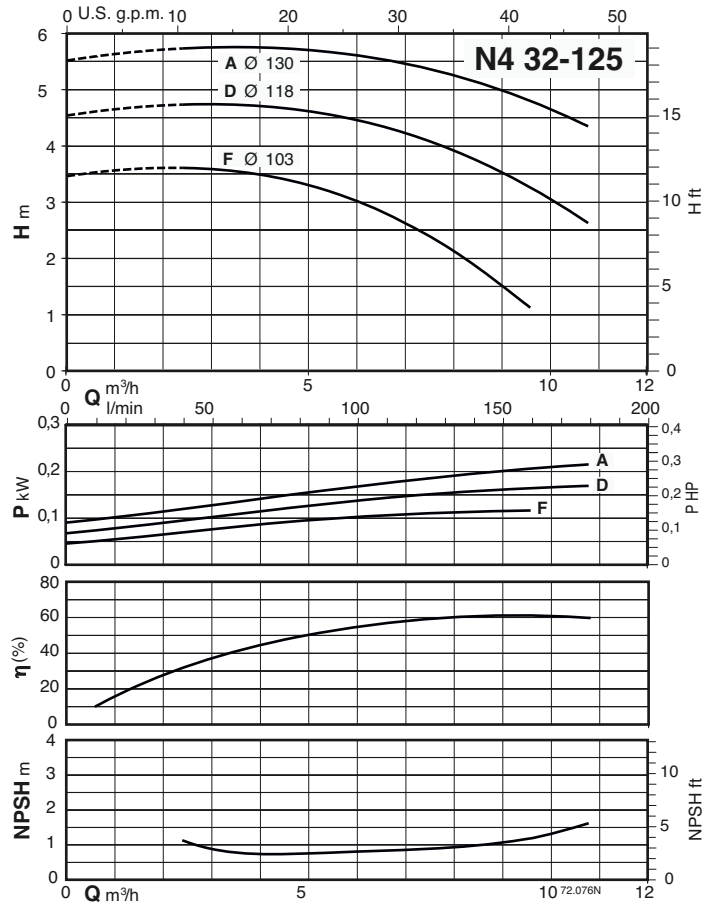




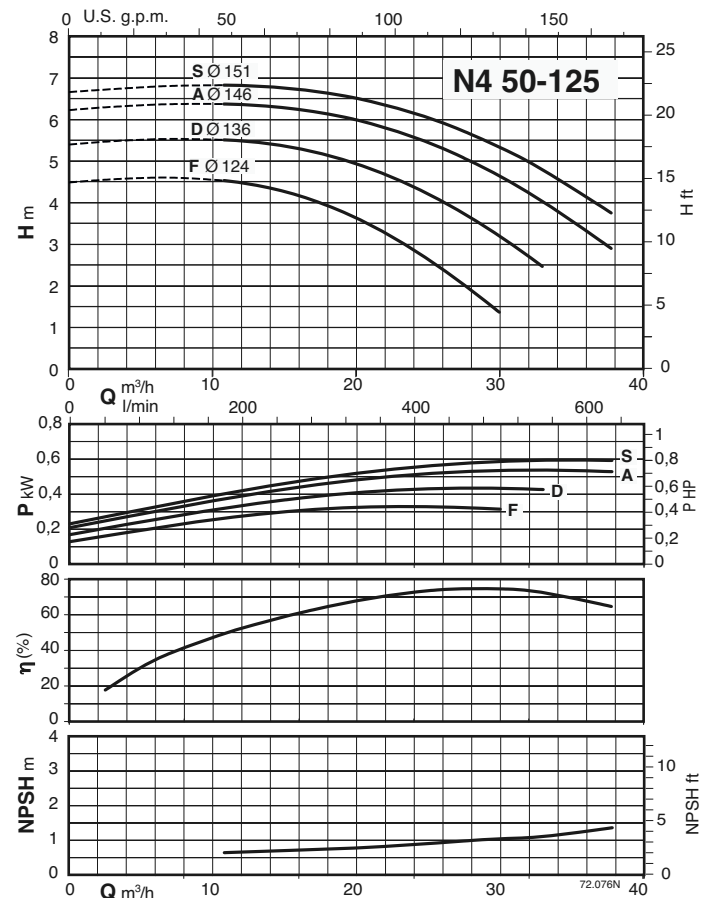
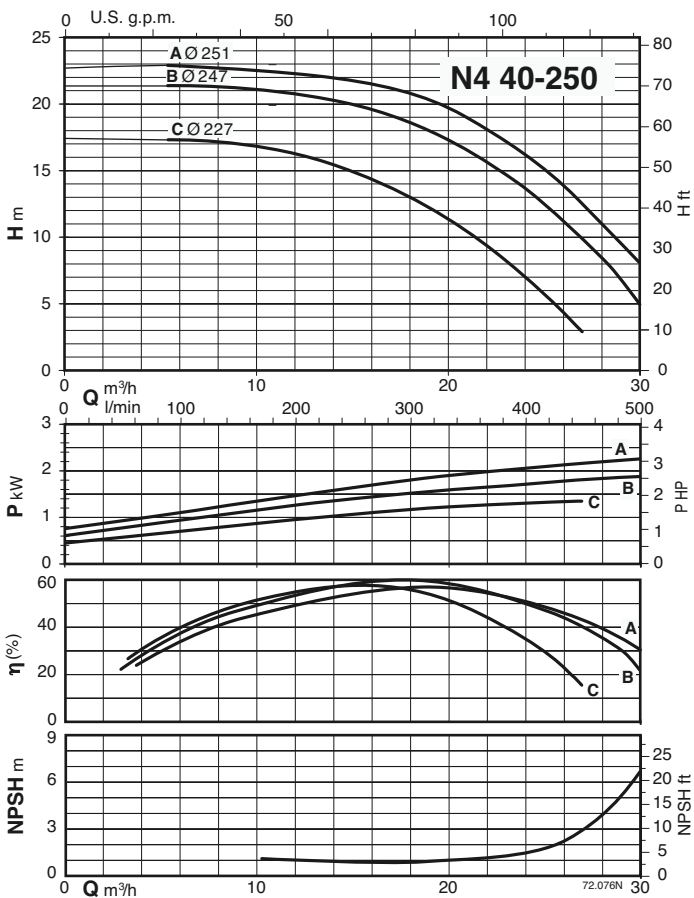
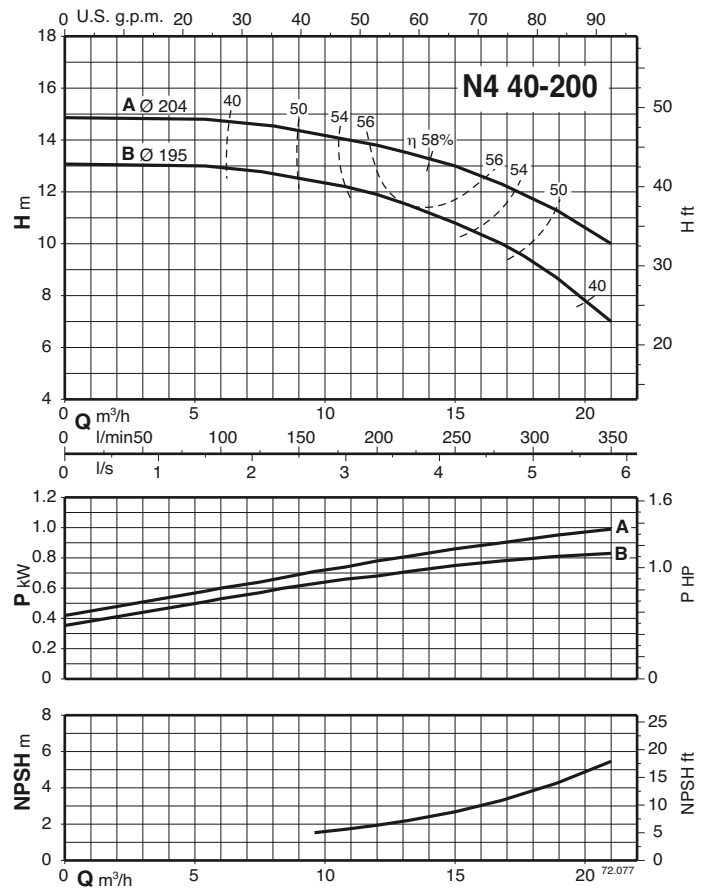
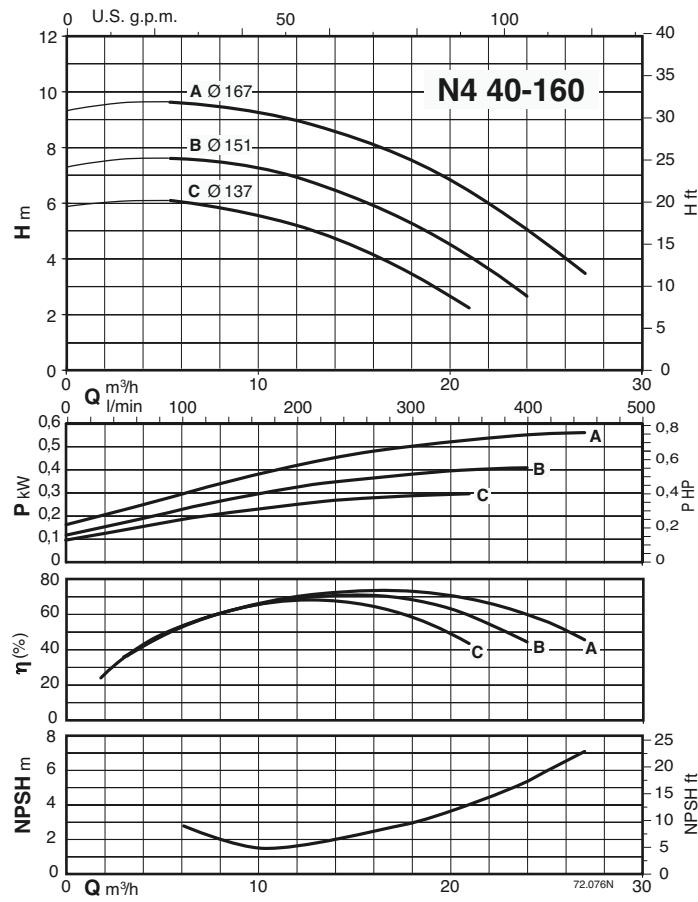
Characteristic curves $n \approx 2900$ rpm



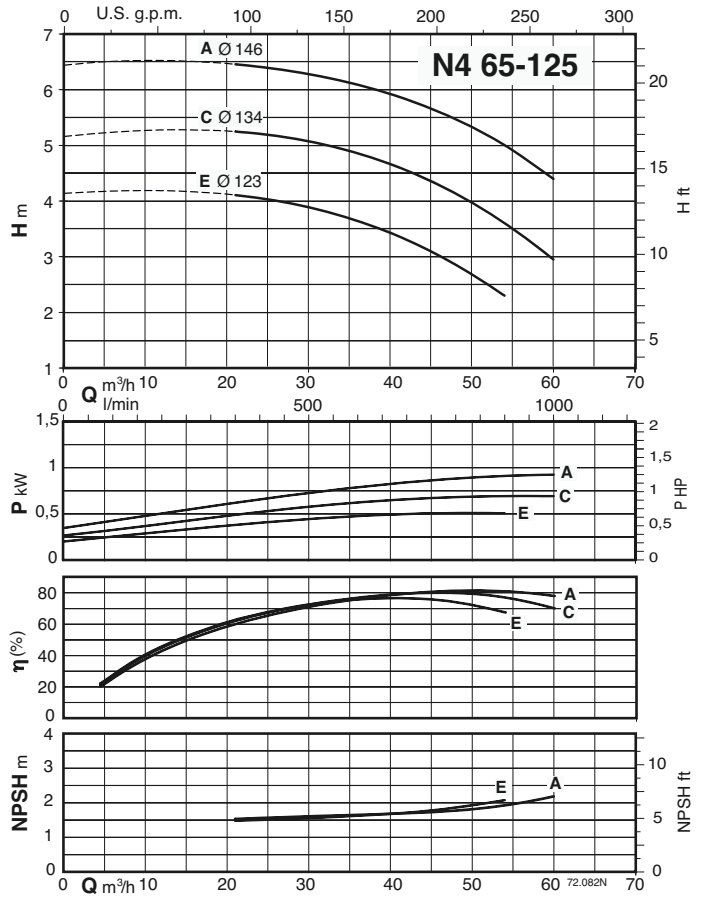
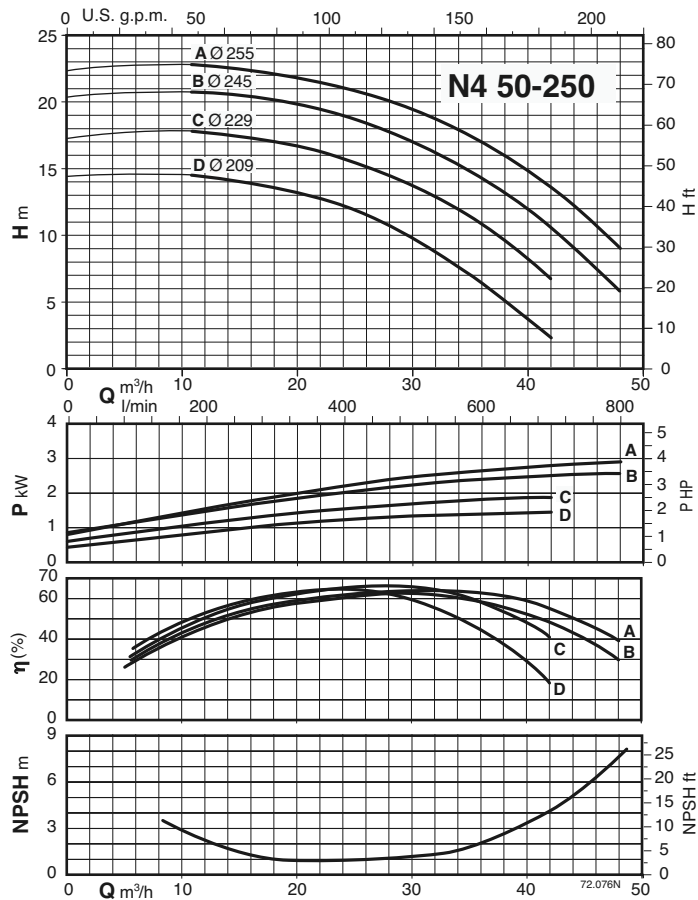
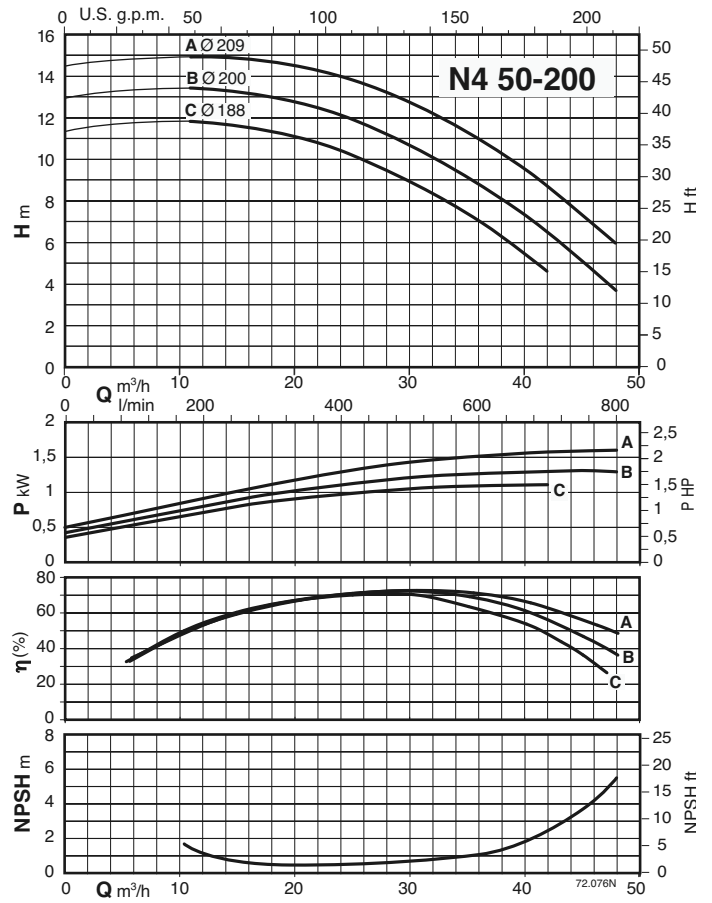
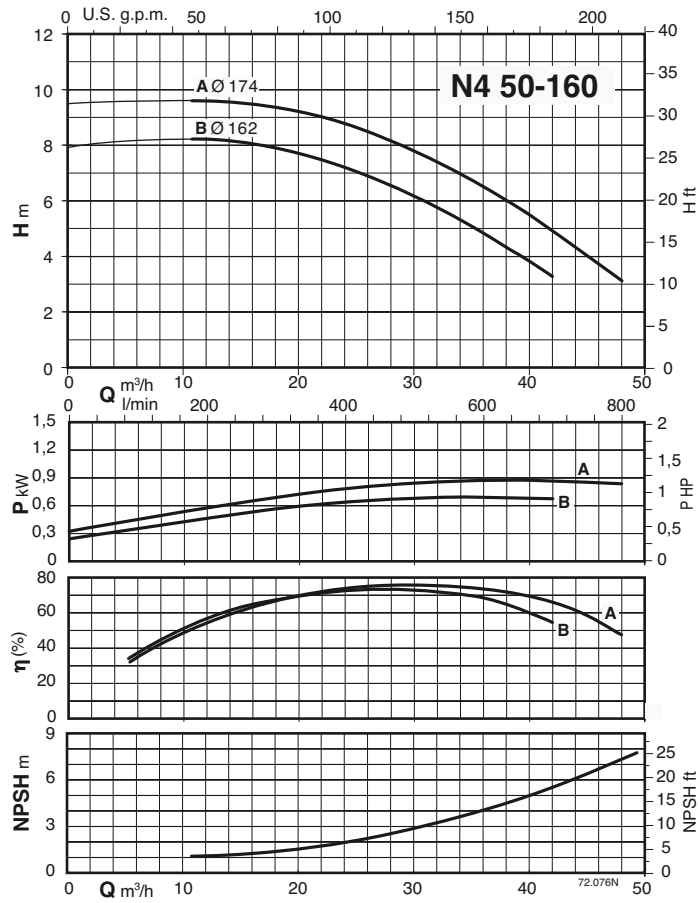
Characteristic curves $n \approx 1450$ rpm



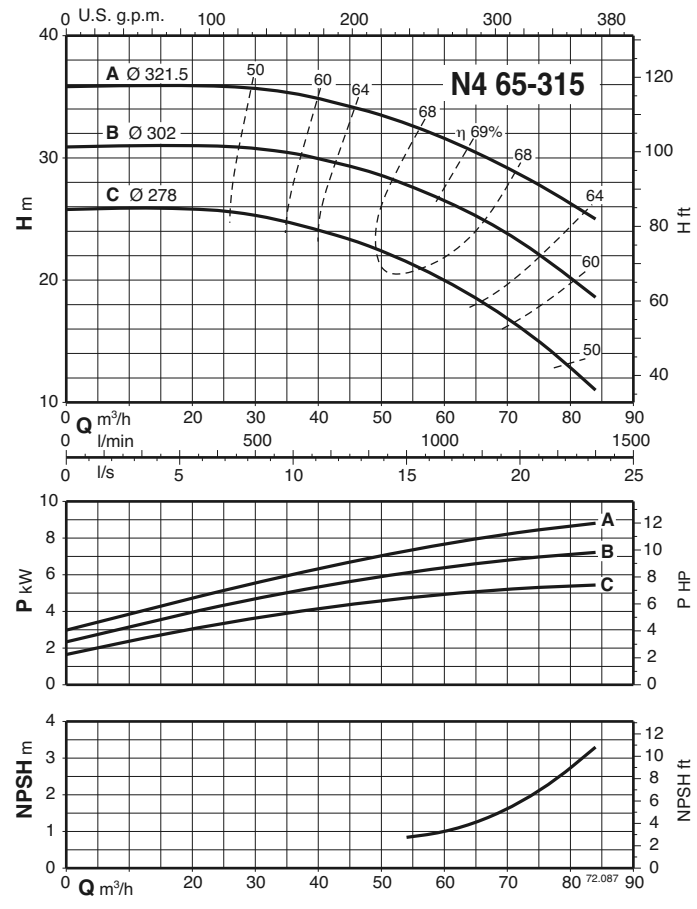
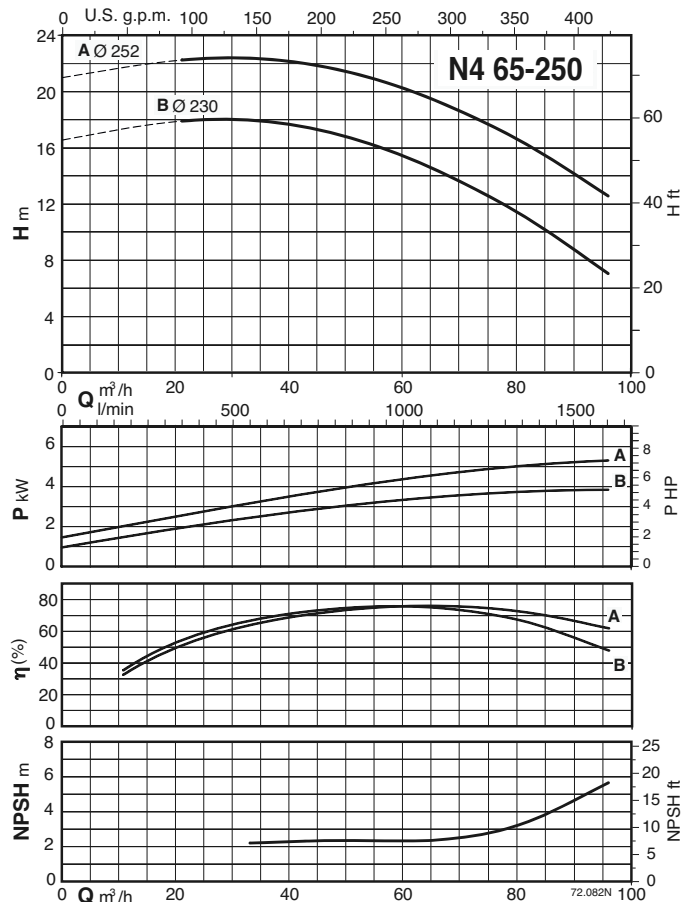
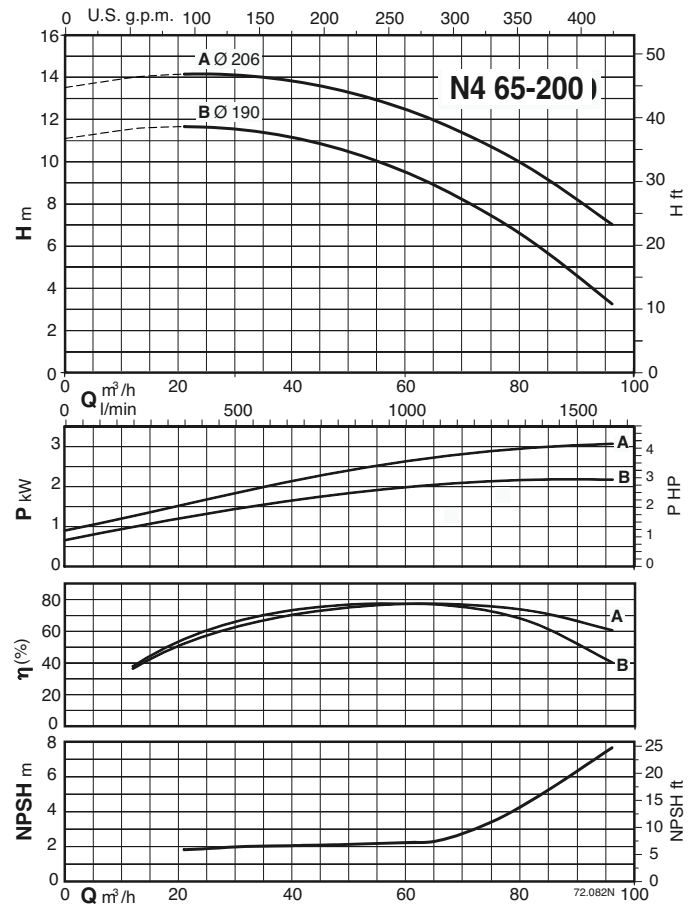
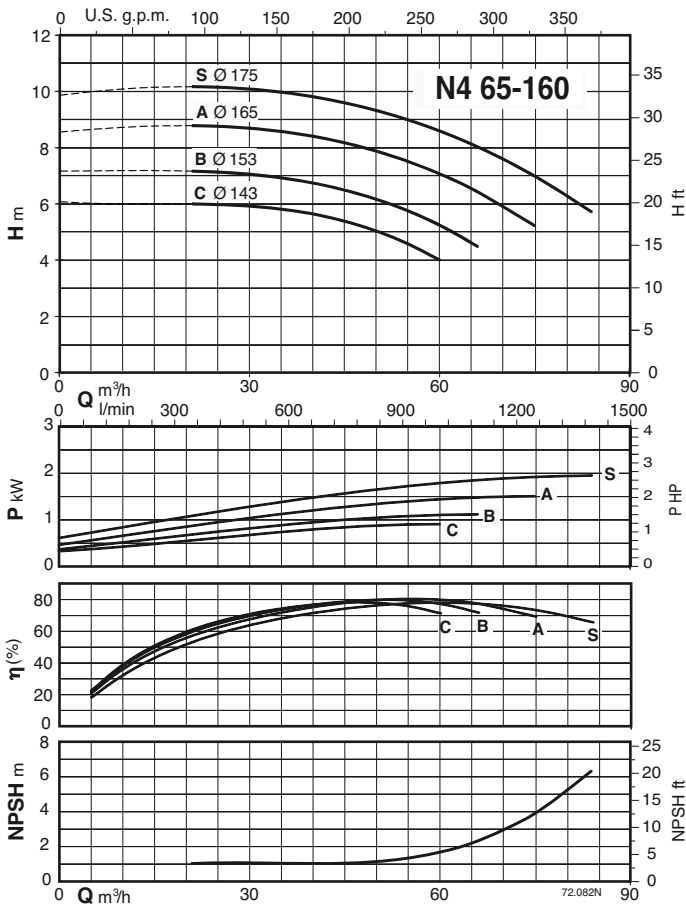
Characteristic curves $n \approx 1450$ rpm



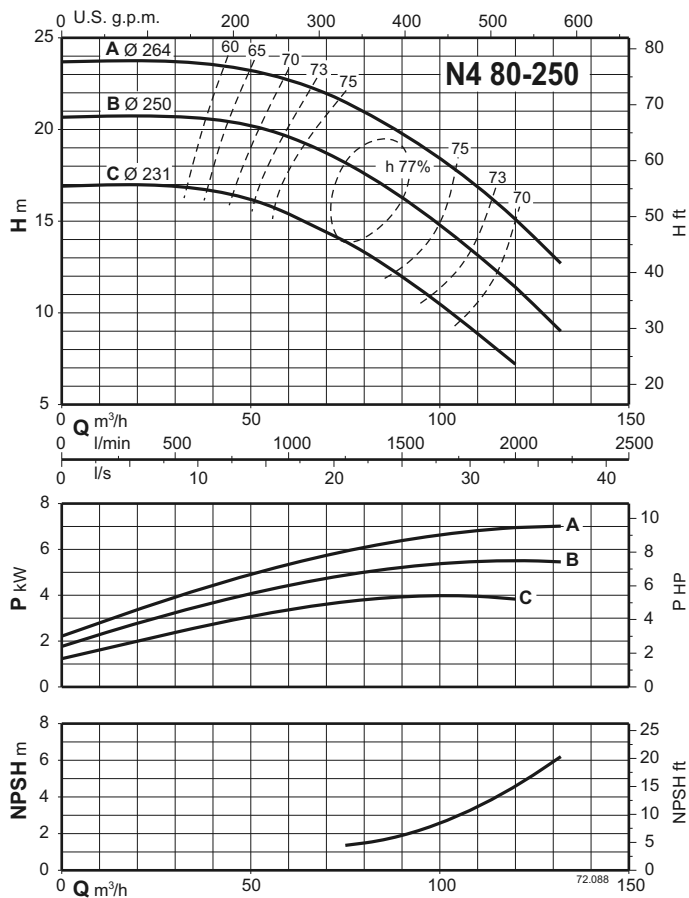
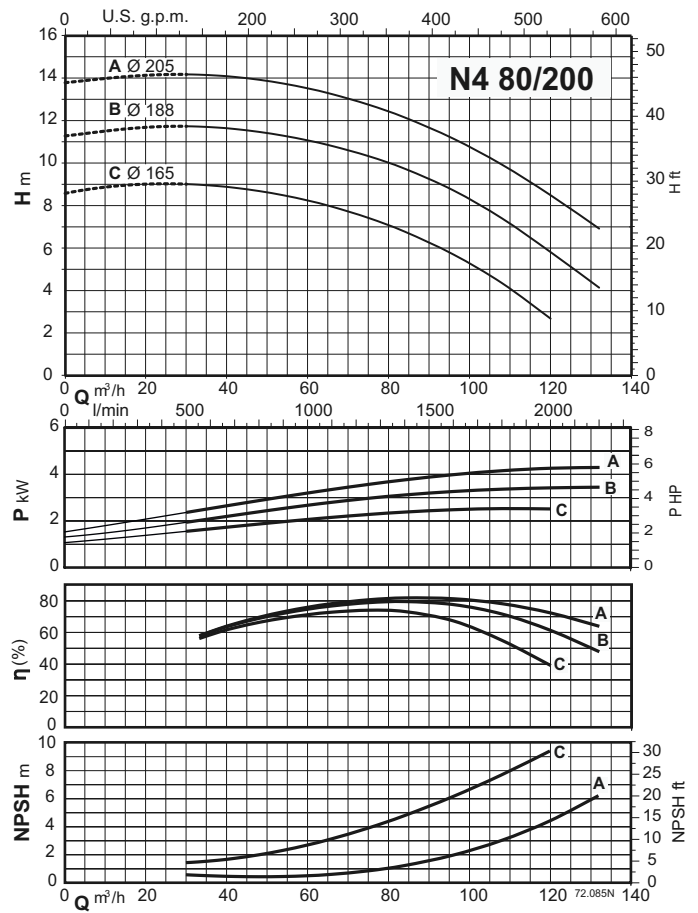
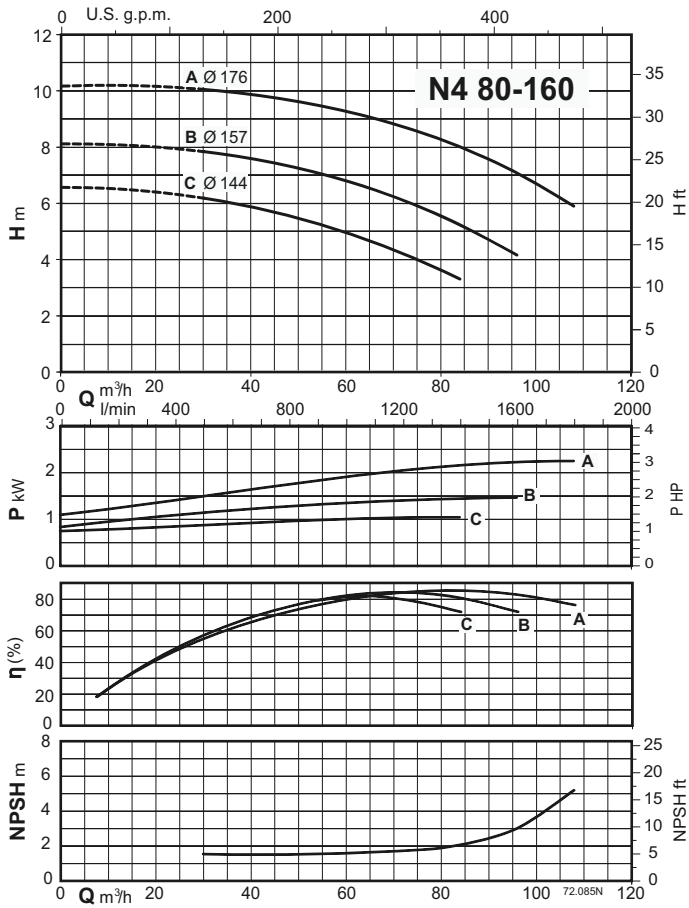
Characteristic curves $n \approx 1450$ rpm



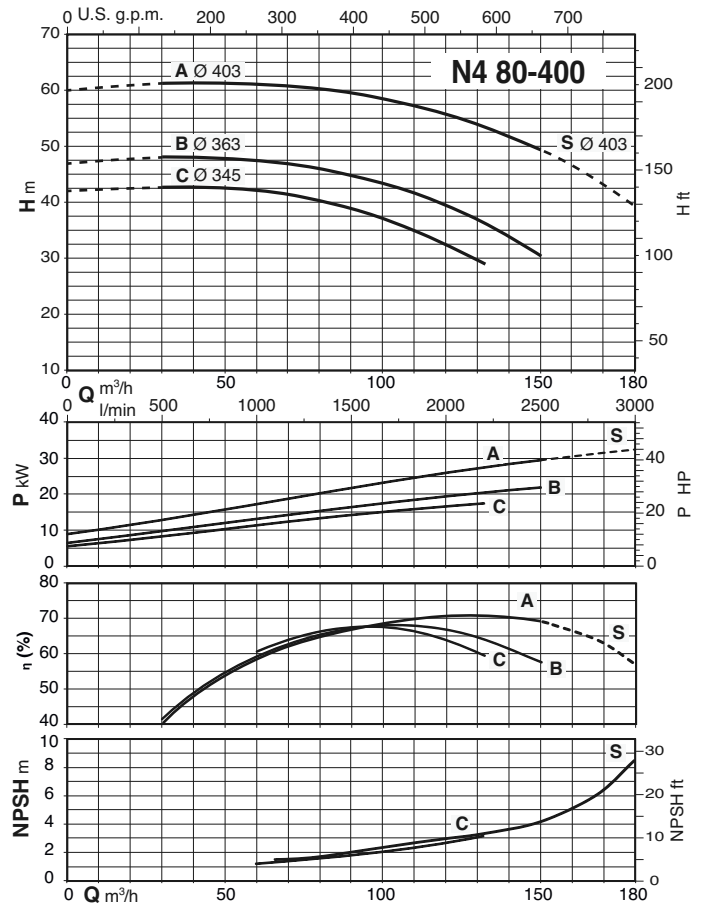
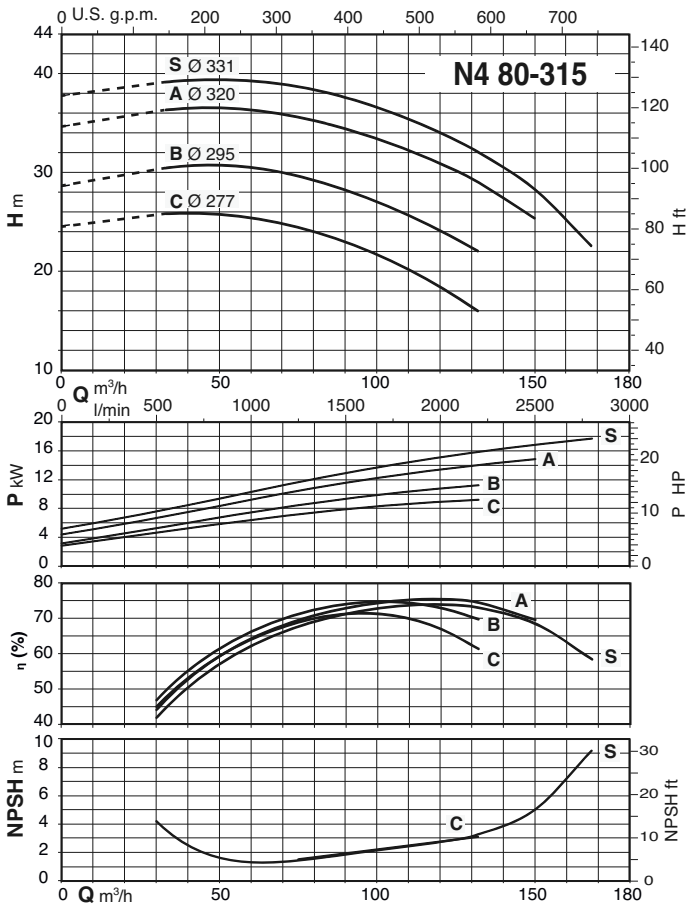
Characteristic curves $n \approx 1450$ rpm



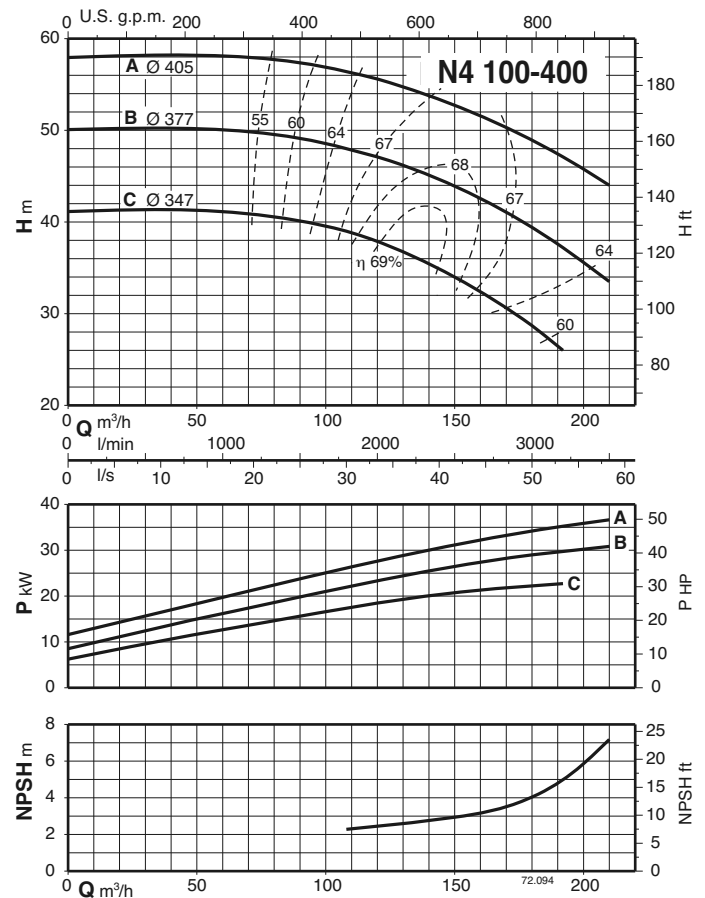
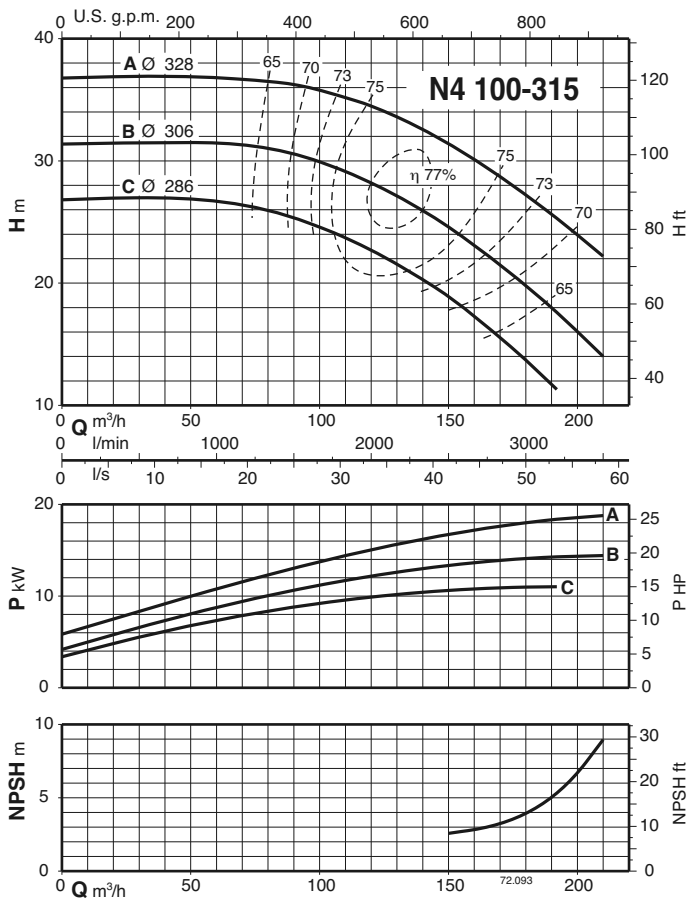
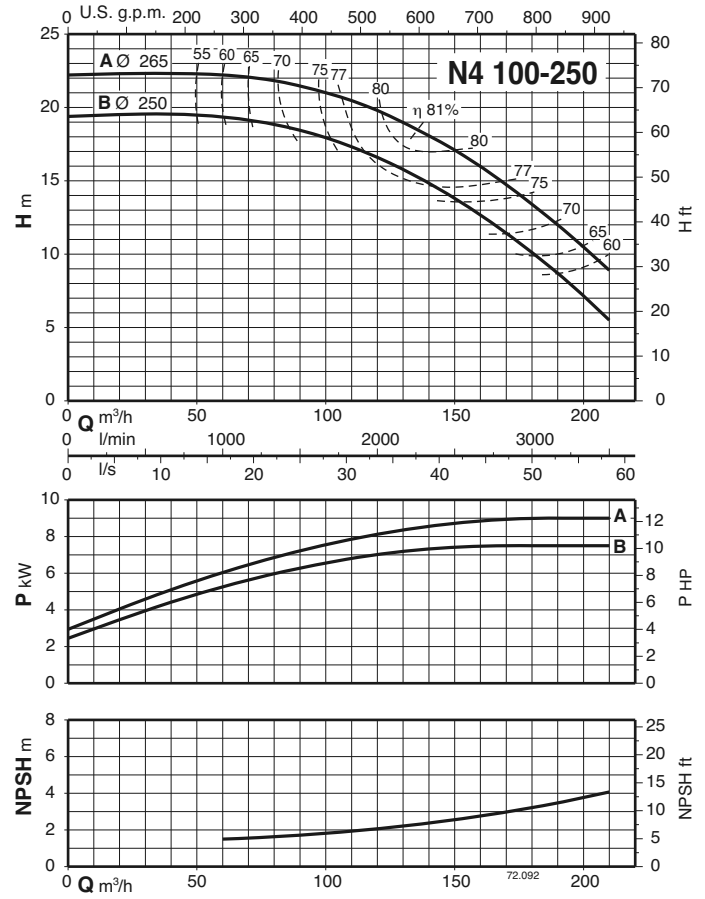
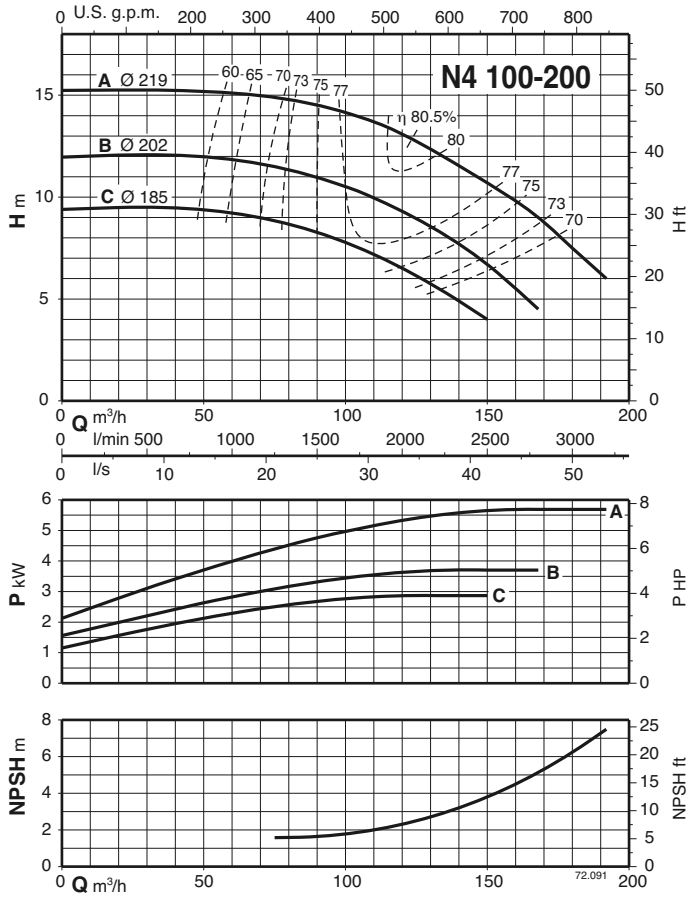
Characteristic curves $n \approx 1450$ rpm



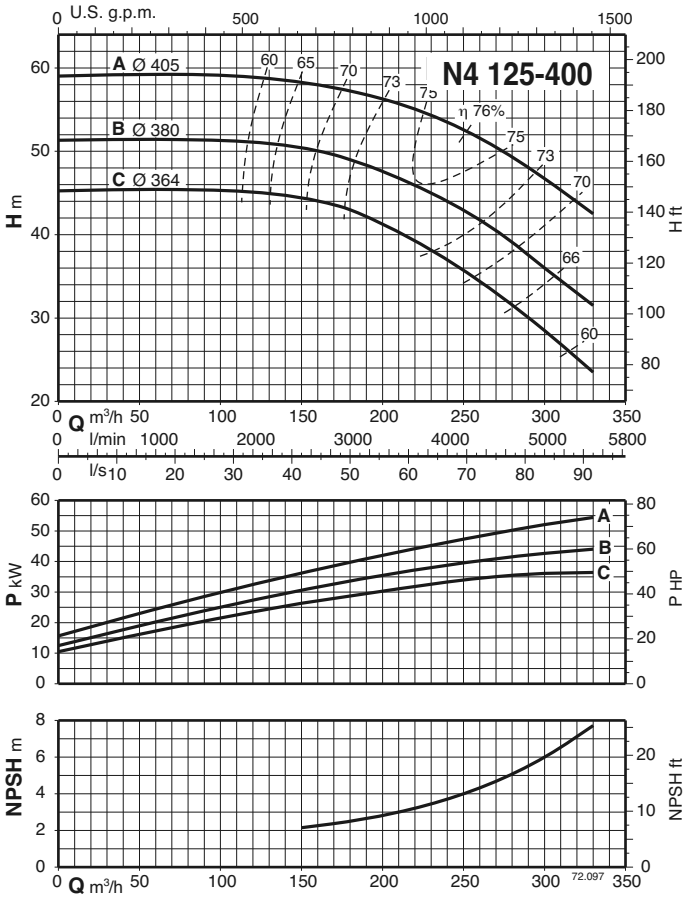
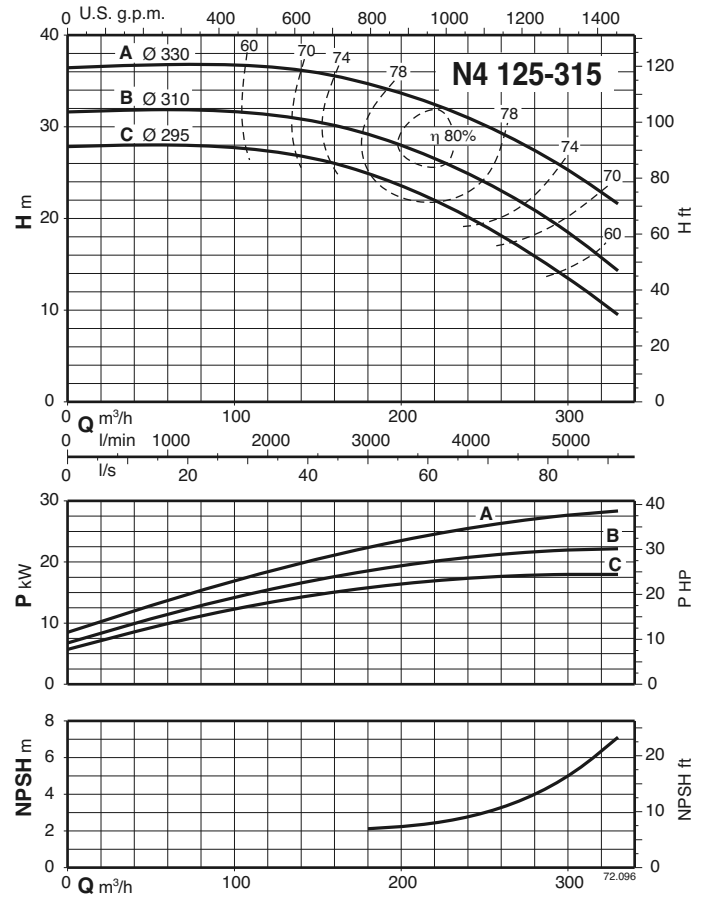
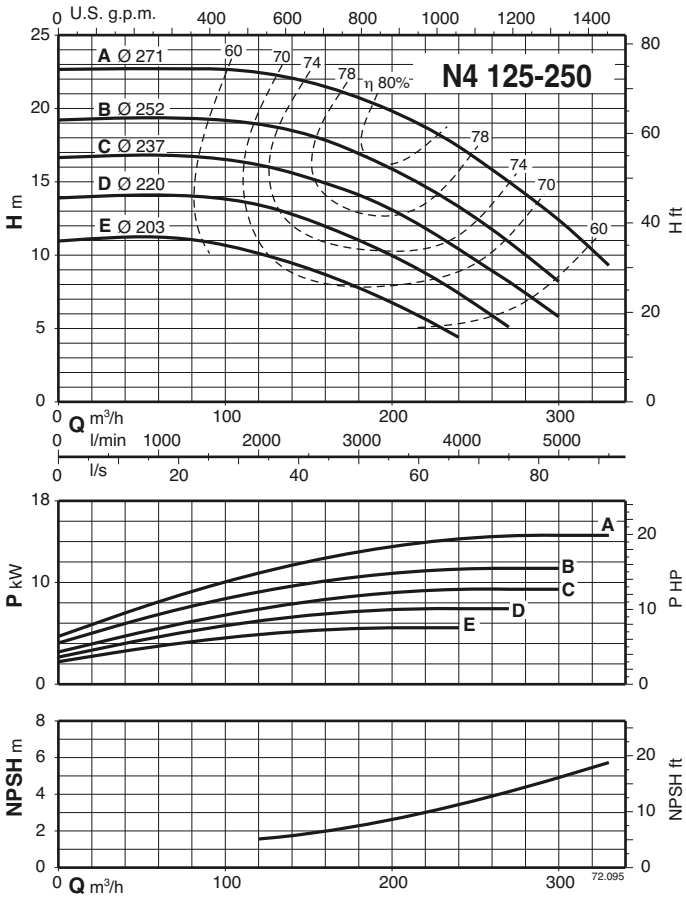
Characteristic curves $n \approx 1450$ rpm



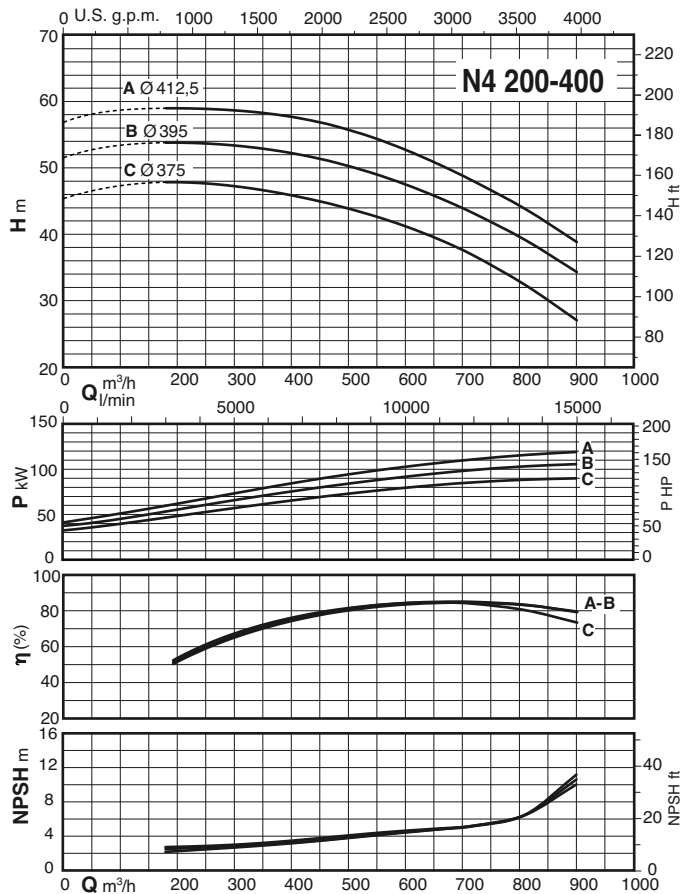
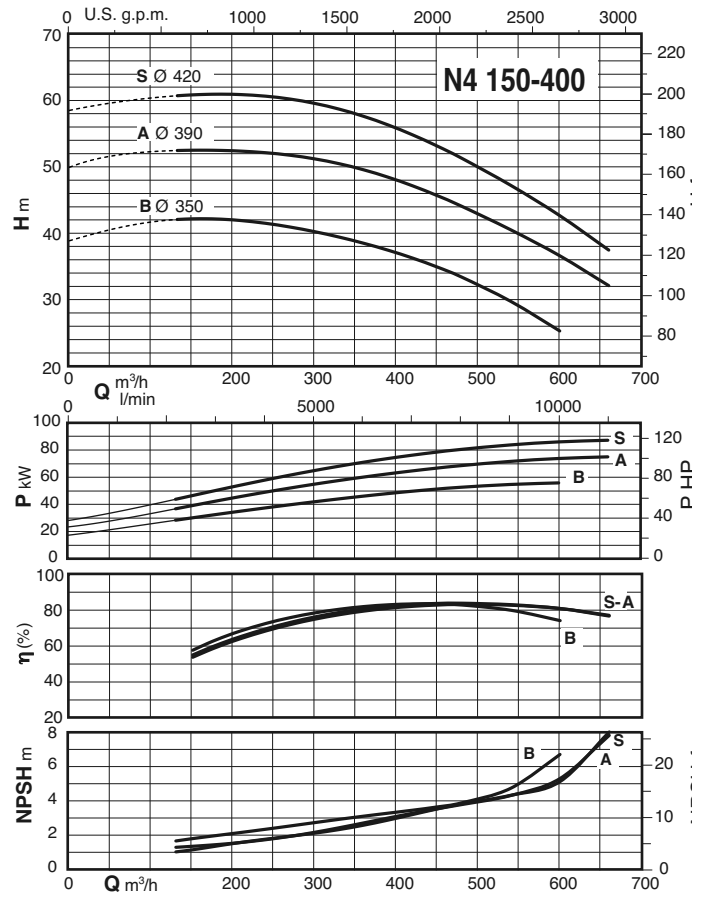
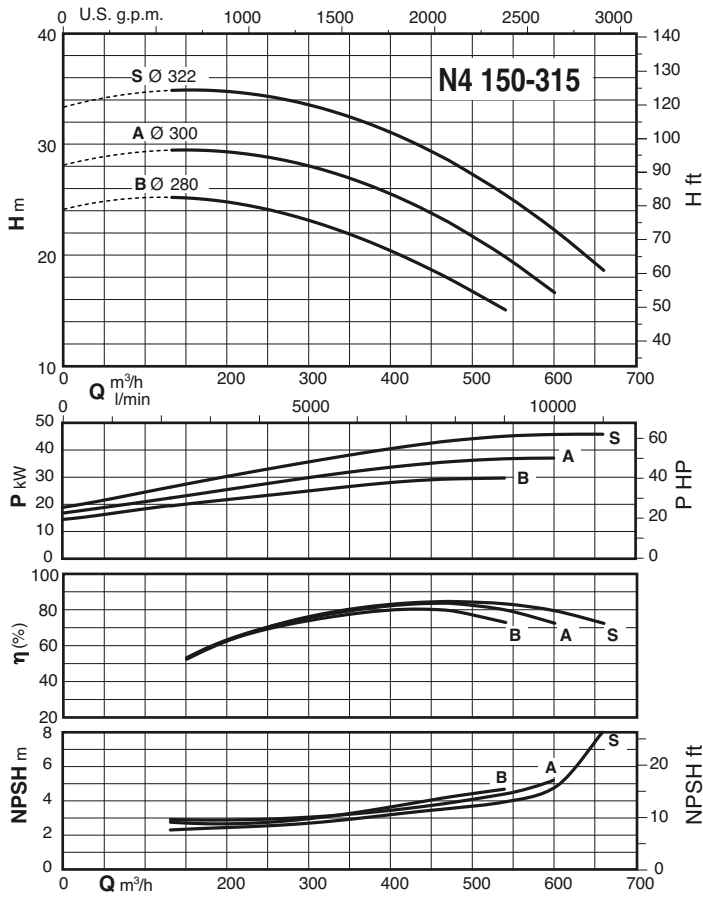
Characteristic curves $n \approx 1450$ rpm



Characteristic curves $n \approx 1450$ rpm



Characteristic curves $n \approx 1450$ rpm



Interchangeability of parts

TYPE	Bearing housing					Pump shaft							Ball bearings						Shaft sealing			
	1	2	3	4	5	I	II	III	IV	V	VI	VII	6207 Z 6306 Z	6207 Z 3306	6309 Z 3309	6311 Z 3311	NU 311 7311x2	NU 213 7313x2	Ø 32	Ø 40	Ø 50	Ø 60
N,N4 32-125	x					x							x						x			
N,N4 32-160	x						x						x						x			
N,N4 32-200	x						x						x						x			
N,N4 40-125	x						x						x						x			
N,N4 40-160	x						x						x						x			
N,N4 40-200C	x						x						x						x			
N,N4 40-200A-AR-B	x							x						x					x			
N,N4 40-250	x							x						x					x			
N,N4 50-125	x						x						x						x			
N,N4 50-160	x							x						x					x			
N,N4 50-200	x							x						x					x			
N,N4 50-250	x							x						x					x			
N,N4 65-125E	x						x						x						x			
N,N4 65-125A-C	x							x						x					x			
N,N4 65-160	x							x						x					x			
N,N4 65-200	x							x						x					x			
N,N4 65-250		x							x						x					x		
N4 65-315		x							x						x					x		
N,N4 80-160	x							x						x					x			
N,N4 80-200		x							x						x					x		
N,N4 80-250		x							x						x					x		
N4 80-315		x							x						x					x		
N4 80-400			x							x						x					x	
N,N4 100-200		x							x						x					x		
N,N4 100-250		x							x						x					x		
N4 100-315		x							x						x					x		
N4 100-400			x							x						x					x	
N4 125-250		x							x						x					x		
N4 125-315			x							x						x					x	
N4 125-400			x							x						x					x	
N4 150-315			x							x						x					x	
N4 150-400			x							x						x					x	
N4 150-400S				x							x						x					x
N4 200-400					x							x						x				x

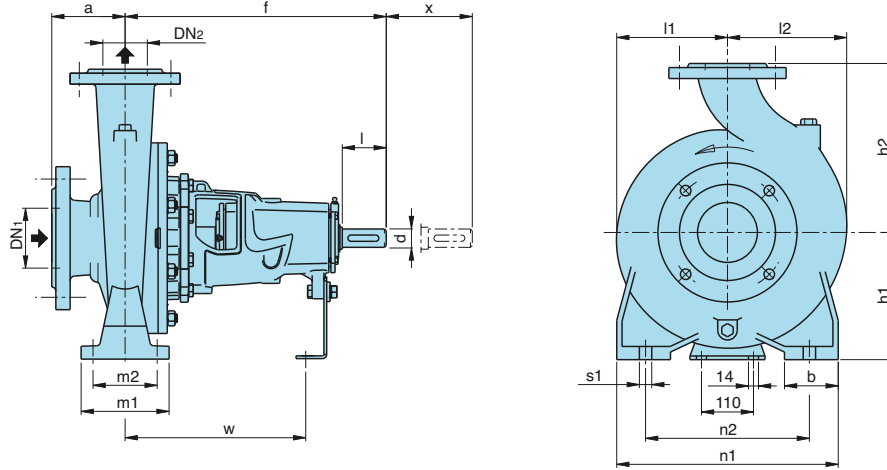
Maximum permissible rotation speed

3600 rpm			3000 rpm			1800 rpm		
32-125	32-160	32-200						
40-125	40-160	40-200			40-250			
50-125	50-160	50-200			50-250			
65-125	65-160				65-250			
		80-200		80-160	80-250		65-315	
		100-200			100-250		80-315	80-400
							100-315	100-400
							125-250	125-315
								125-400
								150-315
								150-400
								200-400

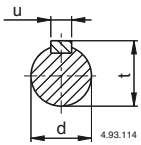
Suction pipe: recommended minimum inside diameter (DN) for different capacities (Q)

Threaded pipe		G 2		G 2 1/2						
DN	mm	50	65	80	100	125	150	200	250	300
Q max	m³/h	10,5	19	28,8	45	75	108	215	350	508

Dimensions and weights

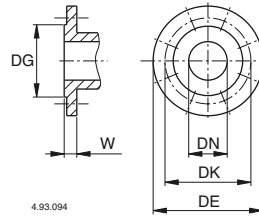


Shaft extension ISO 775 Parallel key UNI 6604



mm			
d	l	u	t
24 j6	50	8	27
32 k6	80	10	35
42 k6	110	12	45
55 k6	110	16	59

Flanges PN 10, EN 1092-2

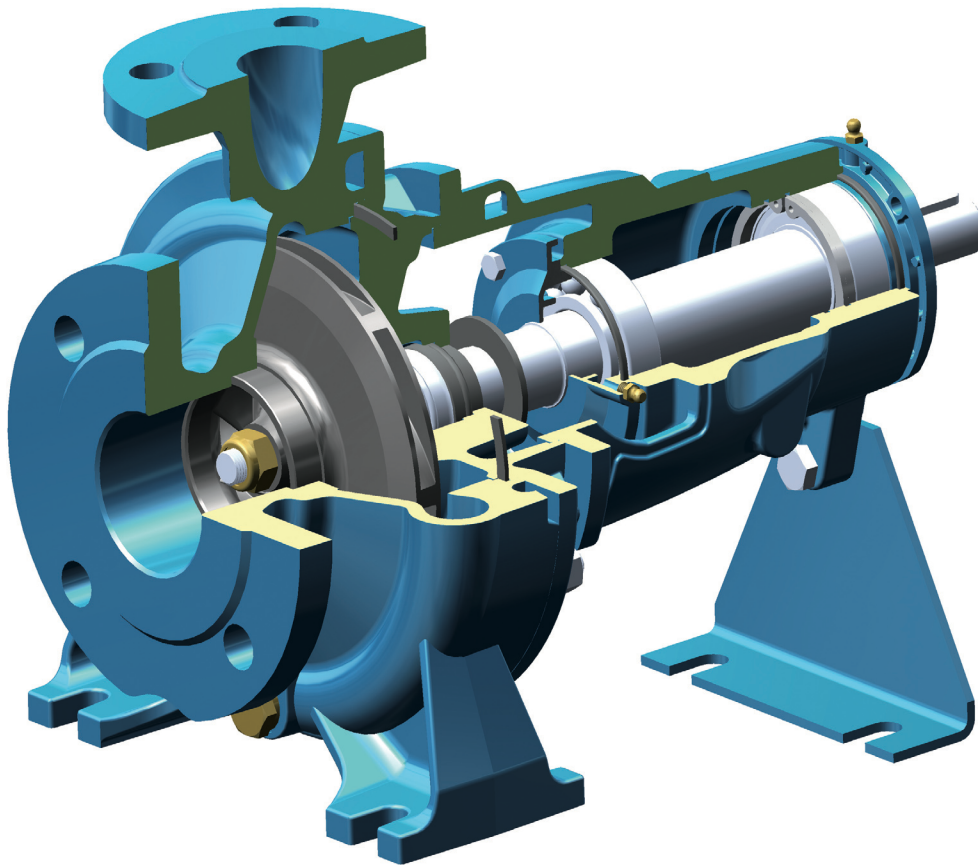


mm						
DN	DG	DK	DE	Holes		W
				N°	Ø	
32	76	100	140	4	19	18
40	84	110	150	4	19	18
50	99	125	165	4	19	20
65	118	145	185	4	19	20
80	132	160	200	8	19	22
100	156	180	220	8	19	24
125	184	210	250	8	19	24
150	211	240	285	8	23	26
200	266	295	340	8	23	30

N n = 2900 1/min
N4 n = 1450 1/min

TYPE	mm																kg			
	DN ₁	DN ₂	a	f	h ₁	h ₂	l ₁	l ₂	m ₁	m ₂	n ₁	n ₂	b	s ₁	d	w	x	B-N B-N4	N N4	
B-N, B-N4 - N, N4 32-125	50	32	80	360	112	140	93	97	100	70	190	140	50	14	24	260	100	30	26,5	
B-N, B-N4 - N, N4 32-160					132	160	120	120										37	33	
B-N, B-N4 - N, N4 32-200					160	180	140	140										44	38,4	
B-N, - N, 32L-160					132	160	120	120										35,8	33,2	
B-N, - N, 32L-200					160	180	140	140										43,8	40	
B-N, - N, 40-125	65	40	80	360	112	140	100	113	100	70	210	160	50	14	24	260	100	32	28,4	
B-N, B-N4 - N, N4 40-160					132	160	119	119										38	33,6	
B-N, B-N4 - N, N4 40-200					160	180	140	140										47,1	40,4	
B-N, B-N4 - N, N4 40-250					180	225	175	175										63	55	
B-N, B-N4 - N, N4 40-250					132	160	121	137										42,4	36,5	
B-N, B-N4 - N, N4 50-125	65	50	100	360	160	180	127	141	100	70	265	212	50	14	24	260	100	45	39,2	
B-N, B-N4 - N, N4 50-160					200	200	140	153										54	47	
B-N, B-N4 - N, N4 50-200					180	225	175	175										66	57,5	
B-N, B-N4 - N, N4 50-250					132	160	121	137										42,4	36,5	
B-N, B-N4 - N, N4 50-250					160	180	134	155										45	39,2	
B-N, B-N4 - N, N4 65-125	80	65	100	360	160	200	150	172	125	95	280	212	65	14	24	260	100	48	38,7	
B-N, B-N4 - N, N4 65-160					200	250	175	190										50,6	44,5	
B-N, B-N4 - N, N4 65-200					180	225	155	175										55,5	50	
B-N, B-N4 - N, N4 65-250					200	250	175	190										103	90	
B-N4 - N4 65-315					225	280	220	220										149	130	
B-N, B-N4 - N, N4 80-160	100	80	125	360	180	225	165	193	125	95	320	250	65	14	24	260	140	61	53	
B-N, B-N4 - N, N4 80-200					250	250	175	190										93	80,5	
B-N, B-N4 - N, N4 80-250					200	280	191	210										110	95	
B-N4 - N4 80-315					250	315	220	232										154	134	
B-N4 - N4 80-400 (1)					280	355	268	268										220	192	
B-N, B-N4 - N, N4 100-200	125	100	140	360	200	280	180	212	160	120	360	280	80	18	32	340	140	103	89	
B-N, B-N4 - N, N4 100-250					225	225	205	233										123	104	
B-N4 - N4 100-315					250	315	230	250										158	138	
B-N4 - N4 100-400					530	280	355	268										280	230	200
B-N4 - N4 100-400					470	250	355	235										268	150	129
B-N4 - N4 125-250	150	125	140	360	280	280	247	278	160	120	400	315	80	18	32	340	140	217	189	
B-N4 - N4 125-315					315	400	280	305										255	222	
B-N4 - N4 125-400					280	400	256	307										211	192	
B-N4 - N4 150-315					315	450	295	328										284	247	
B-N4 - N4 150-400	200	150	160	530	355	500	322	370	250	190	630	500	125	24	55	370	200			

1) Additional size

Features**Cutting edge hydraulics**

The geometry of the impeller and the pump casing are optimized to achieve maximum efficiency and the best suction capability.

Flexible

The option to choose between cast iron and bronze materials for the hydraulic parts in contact with the pumped liquid allows N-N4 series pumps to be selected for use with different types of liquids.

Robust

The mechanical structure of the hydraulic parts in contact with the pumped liquid are dimensioned to guarantee the maximum resistance to mechanical stress. Also the casing cover is provided with wings that prevent turbulence in the area of the mechanical seal, increasing the reliability.

Reliable

The bearing and shaft are designed to ensure the reduction of the stress, providing high reliability under all operating conditions.