NR, NR4

In-line Pumps

n ≈ 2900 rpm
n ≈ 1450 rpm

calpeda®

Construction

Close-coupled, single-impeller, centrifugal pumps; electric motor with extended shaft directly connected to the pump. Pump casing with suction and delivery connections with the same diameter and on the same axis (in-line).

Connections: Flanges PN 10, EN 1092-2.

Counterflanges (on request)

Sizes	Flanges
NR,NR4 50, NR,NR4 65	Screwed flanges PN 16, EN 1092-1
NR4 80, NR4 100, NR4 125	Flanges for welding PN 10, EN 1092-1

Applications

For clean liquids, without abrasives, which are non-aggressive for the pump materials (contents of solids up to 0.2%).
For heating, conditioning, cooling and circulation plants.
For civil and industrial applications.
When low noise operation is required (n = 1450 rpm).

Operating conditions

Liquid temperature from -10 °C to +100 °C.
Ambient temperature up to 40 °C.
Total suction lift up to 7 m.
Maximum permissible working pressure up to 10 bar.
Continuous duty.

Materials

Component	Material
Pump casing Lantern bracket	Cast iron GJL 200 EN 1561
Impeller	Cast iron GJL 200 EN 1561 (Brass P-Cu Zn Pb 2 EN 1982 for NR,NR4 50)
Shaft	Chrome-nickel steel AISI 303 for pumps up to 1.1 kW Chrome steel AISI 430 for pumps from 1.5 to 4 kW
Mecanical seal	Carbon - Ceramic - NBR
Counterflanges	Steel Fe 430B UNI 7070

Motor

4-pole induction motor, 50 Hz (n = 1450 rpm).
NR4: three-phase 230/400 V ± 10%.
NRM4: single-phase 230 V ± 10%.

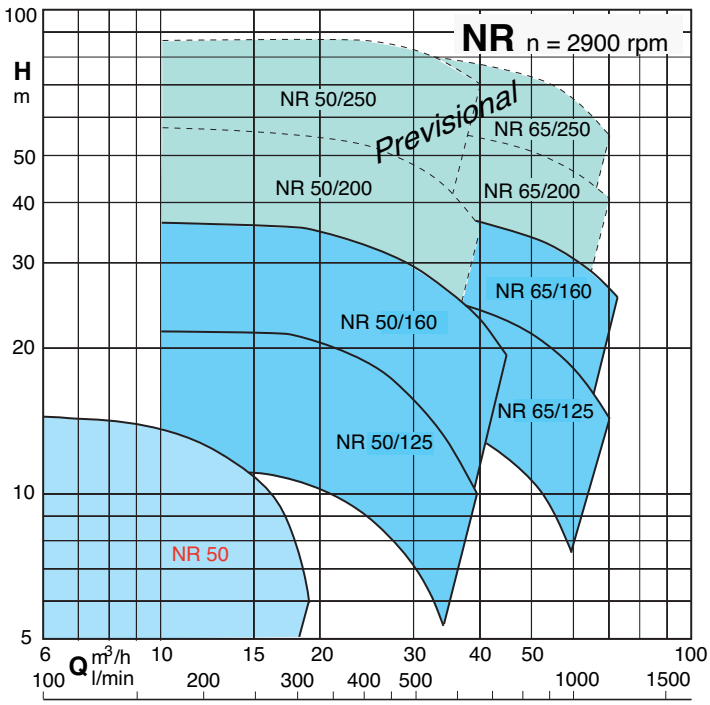
2-pole induction motor, 50 Hz (n = 2900 rpm).
NR : three-phase 230/400 V ± 10%.
NRM : single-phase 230 V ± 10%.

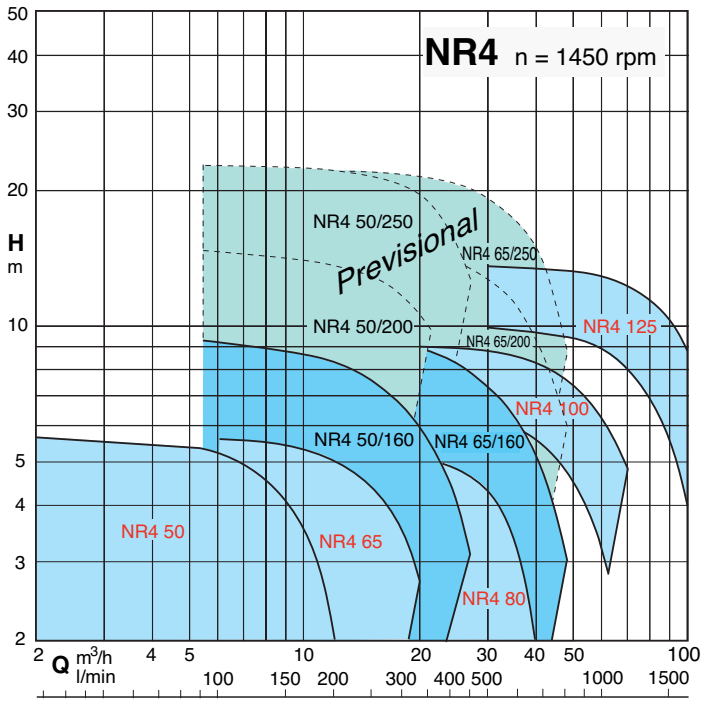
Insulation class F.
Protection IP 54.
Constructed in accordance with IEC 60034.

Special features on request

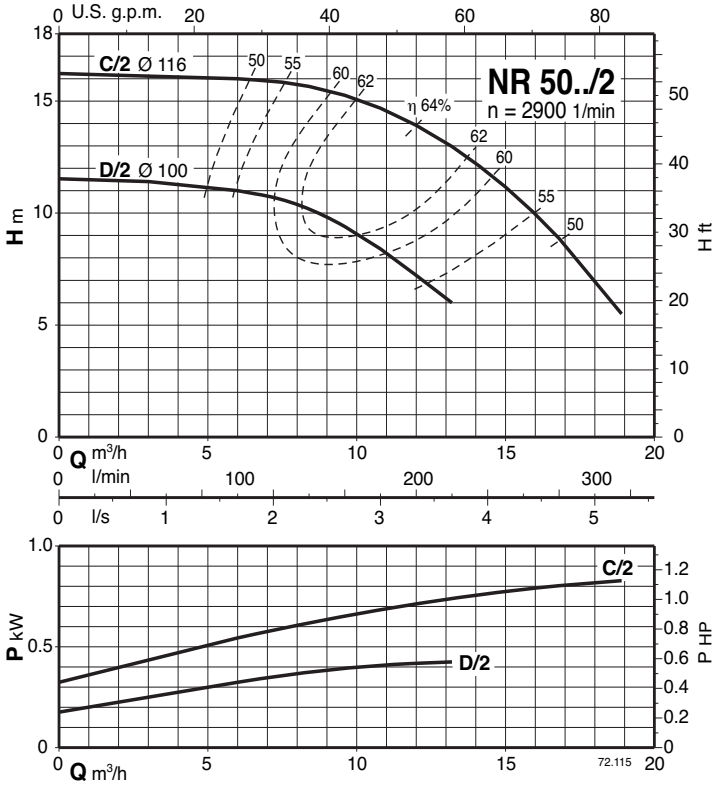
- Other voltages. - Frequency 60 Hz (as per 60 Hz data sheet). - Protection IP 55.
- Special mechanical seal. - Higher or lower liquid or ambient temperatures.

Coverage chart





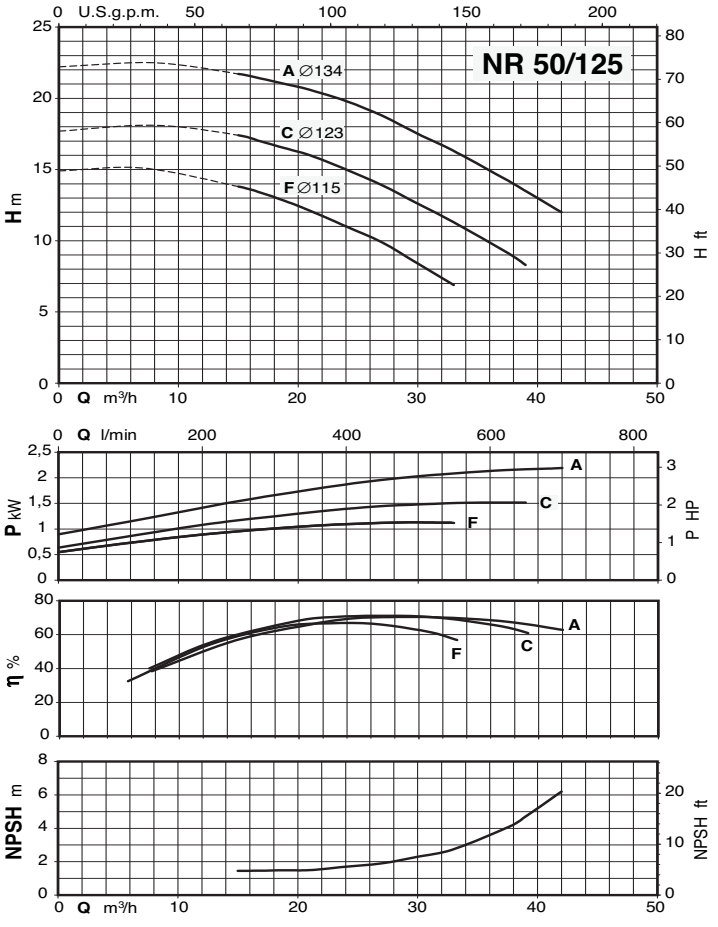
Characteristic curves n ≈ 2900 rpm

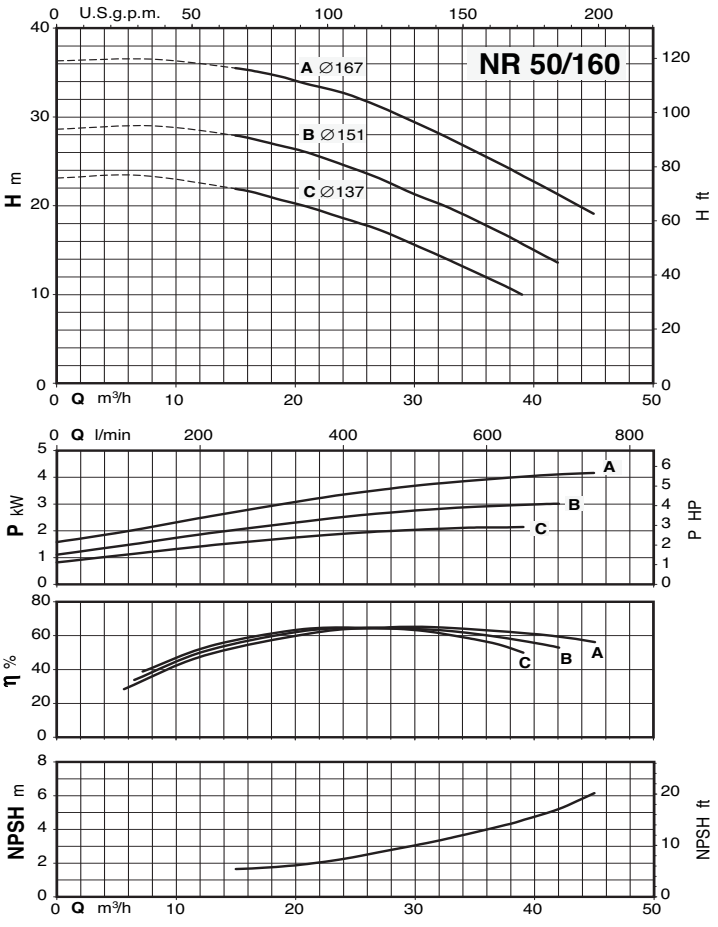


3 ~	230V A	400V A	1 ~	230V A	P1 A	P2 kW	P2 HP
NR 50DE/2	2,3	1,3	NRM 50DE/2	3,6	0,72	0,45	0,6
NR 50CE/2	3,7	2,2	NRM 50CE/2	5,7	1,13	0,75	1

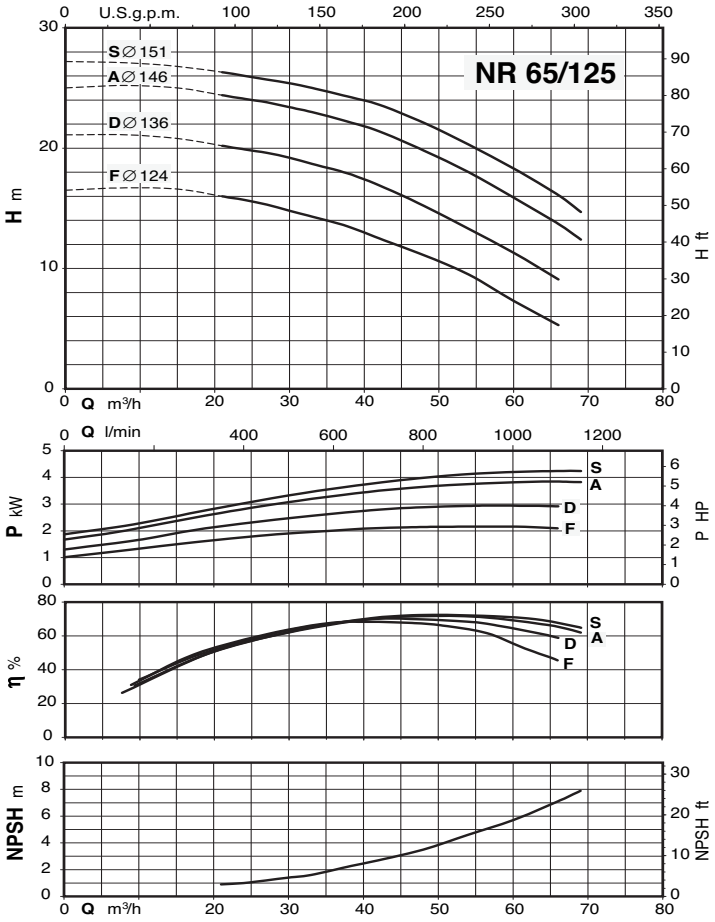
3 ~	230V A	400V A		P2 kW	P2 HP
NR 50/125F	5	2,9	-	1,1	1,5
NR 50/125C	7,5	4,3	-	1,5	2
NR 50/125A	9,15	5,3	-	2,2	3
NR 50/160C	9,15	5,3	-	2,2	3
NR 50/160B	11,5	6,6	-	3	4
NR 50/160A		9,6	-	4	5,5

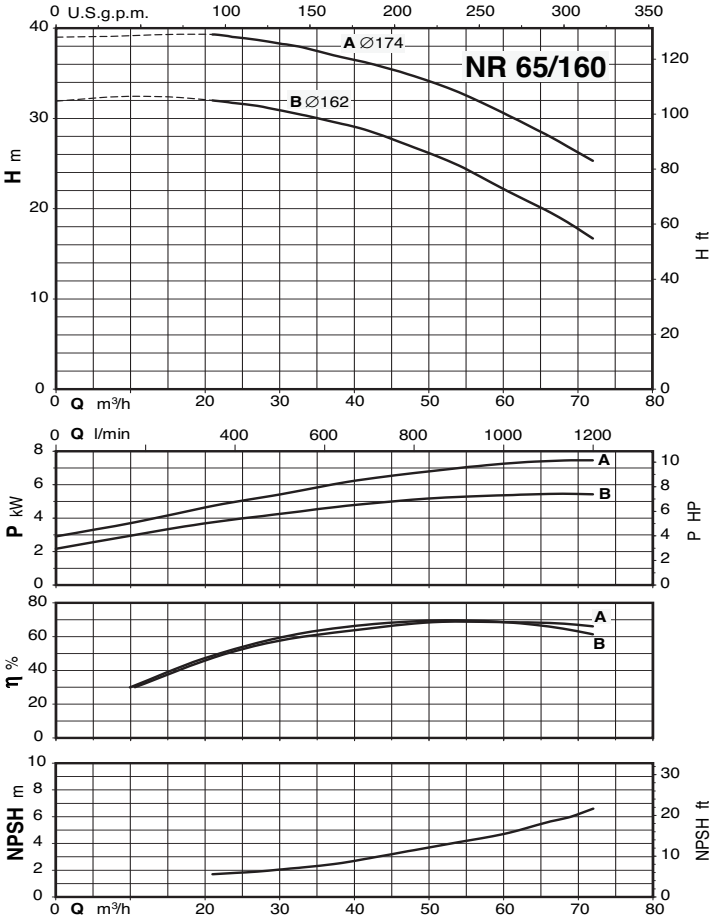
3 ~	230V A	400V A		P2 kW	P2 HP
NR 65/125F	9,15	5,3	-	2,2	3
NR 65/125D	11,5	6,6	-	3	4
NR 65/125A		9,6	-	4	5,5
NR 65/125S		9,6	-	4	5,5
NR 65/160B		12	-	5,5	7,5
NR 65/160A		16	-	7,5	10





Characteristic curves n ≈ 2900 rpm



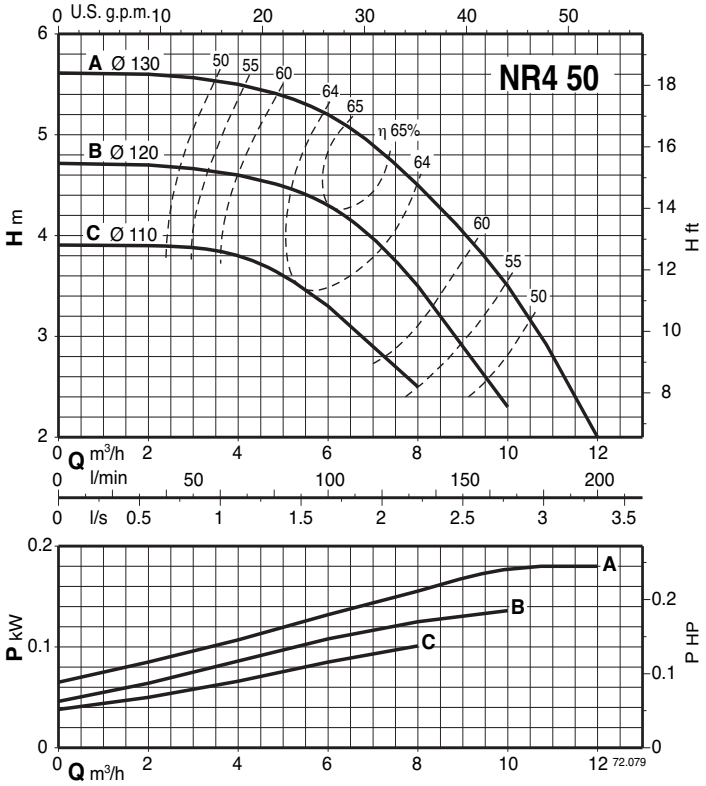


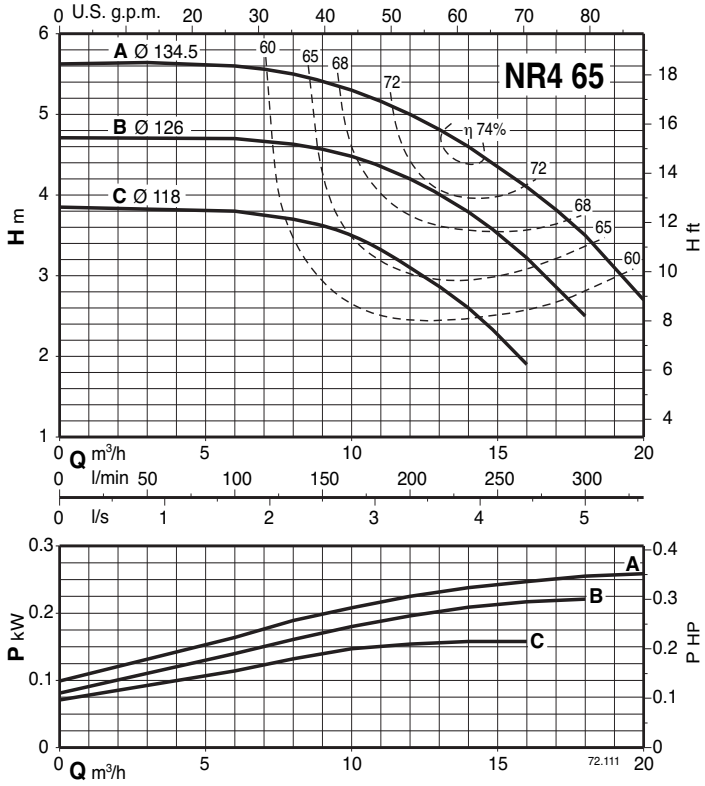
3 ~	230V	400V		P_2	
	A	A		kW	HP
NR4 50/160C	1,6	0,92	-	0,37	0,5
NR4 50/160B	2,6	1,5	-	0,55	0,75
NR4 50/160A	3,3	1,9	-	0,75	1

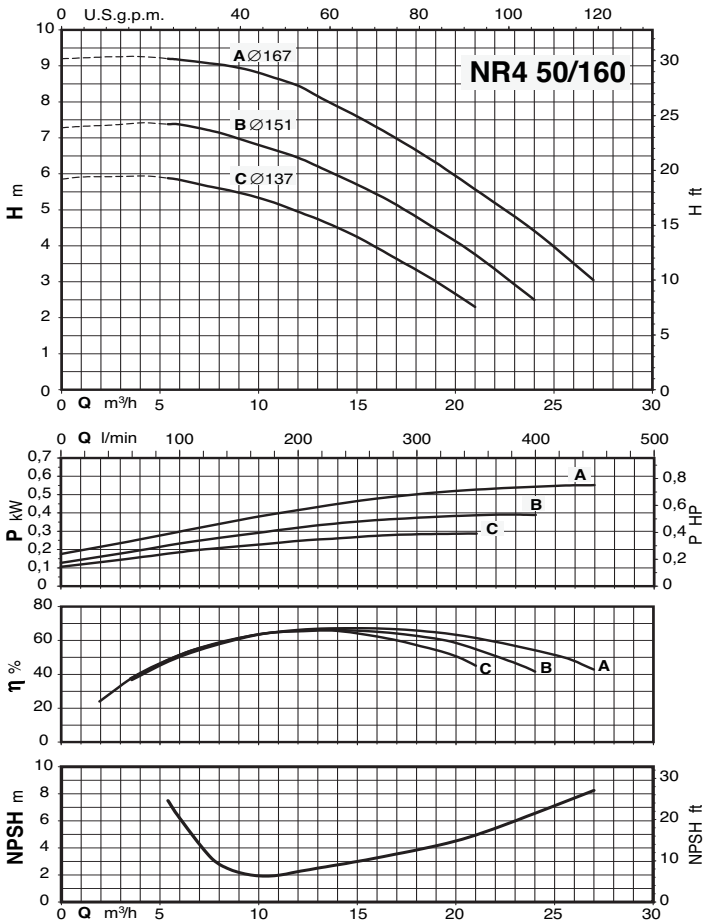
3 ~	230V	400V	1 ~	230V	P_1	P_2	
	A	A		A	A	kW	HP
NR4 50CE	1,4	0,8	NR4M 50CE	2,1	0,27	0,25	0,34
NR4 50BE	1,4	0,8	NR4M 50BE	2,1	0,29	0,25	0,34
NR4 50AE	1,4	0,8	NR4M 50AE	2,1	0,33	0,25	0,34
NR4 65CE	1,4	0,8	NR4M 65CE	2,1	0,31	0,25	0,34
NR4 65BE	2,1	1,2	-			0,37	0,5
NR4 65AE	2,1	1,2	-			0,37	0,5
NR4 65/160B	5	2,9	-			1,1	1,5
NR4 65/160A	5	2,9	-			1,1	1,5

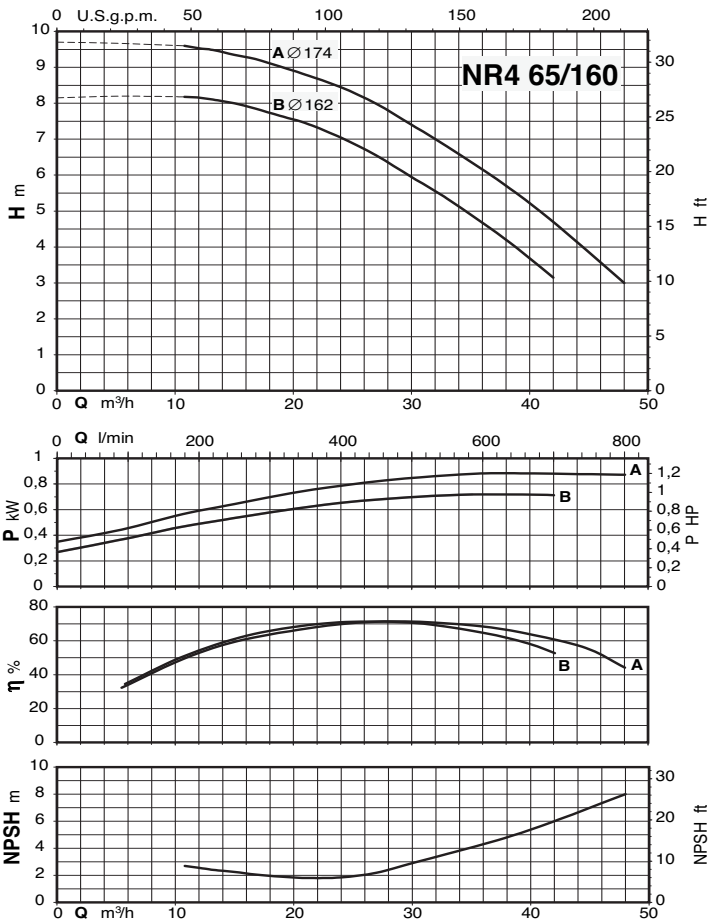
3 ~	230V	400V		P_2	
	A	A		kW	HP
NR4 80CE	2,6	1,5	-	0,55	0,75
NR4 80BE	2,6	1,5	-	0,55	0,75
NR4 80AE	3,3	1,9	-	0,75	1
NR4 100CE	5	2,9	-	1,1	1,5
NR4 100BE	5	2,9	-	1,1	1,5
NR4 100AE	6	3,5	-	1,5	2
NR4 125CE	8,6	5	-	2,2	3
NR4 125BE	10,9	6,3	-	3	4
NR4 125AE	14,7	8,5	-	4	5,5

Characteristic curves n ≈ 1450 rpm

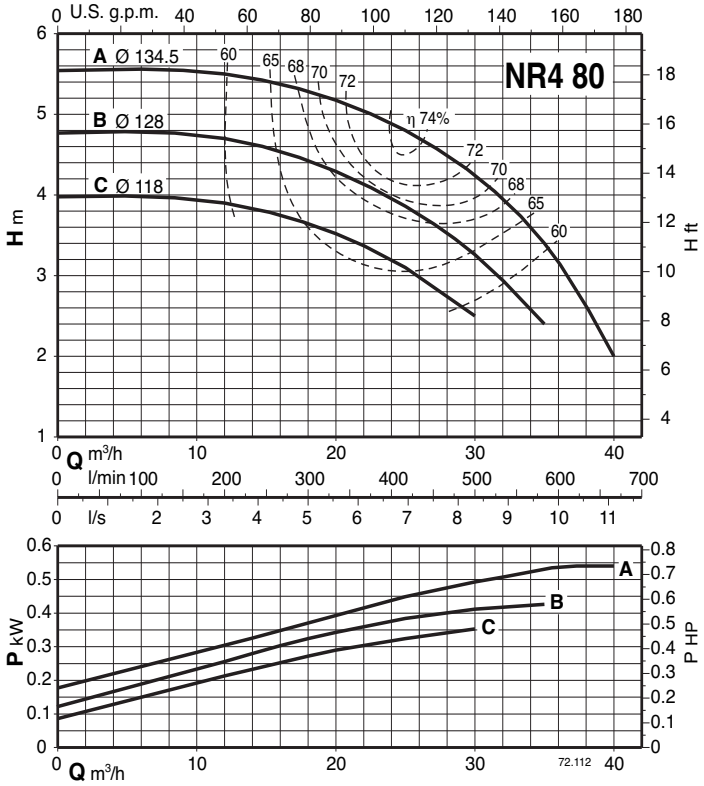


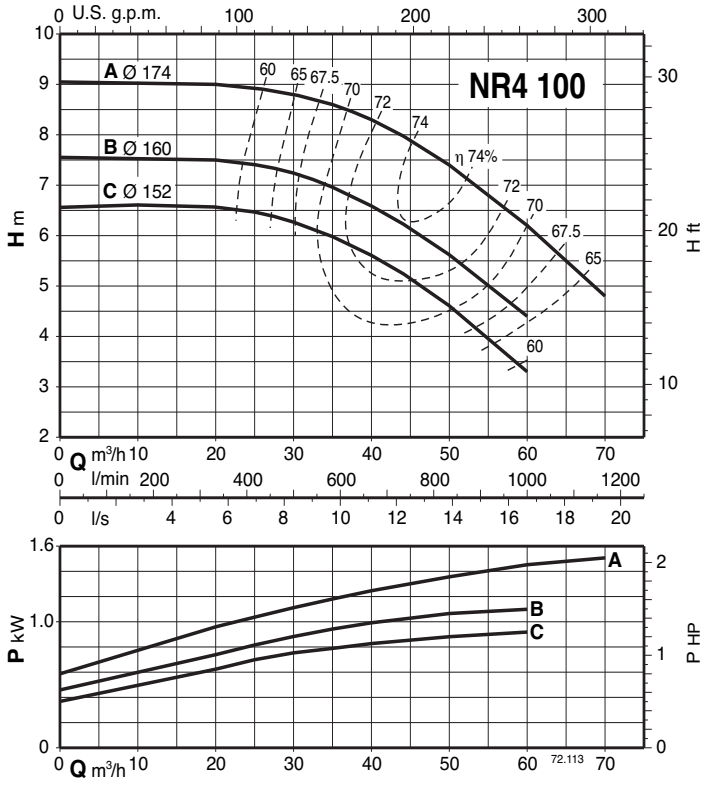


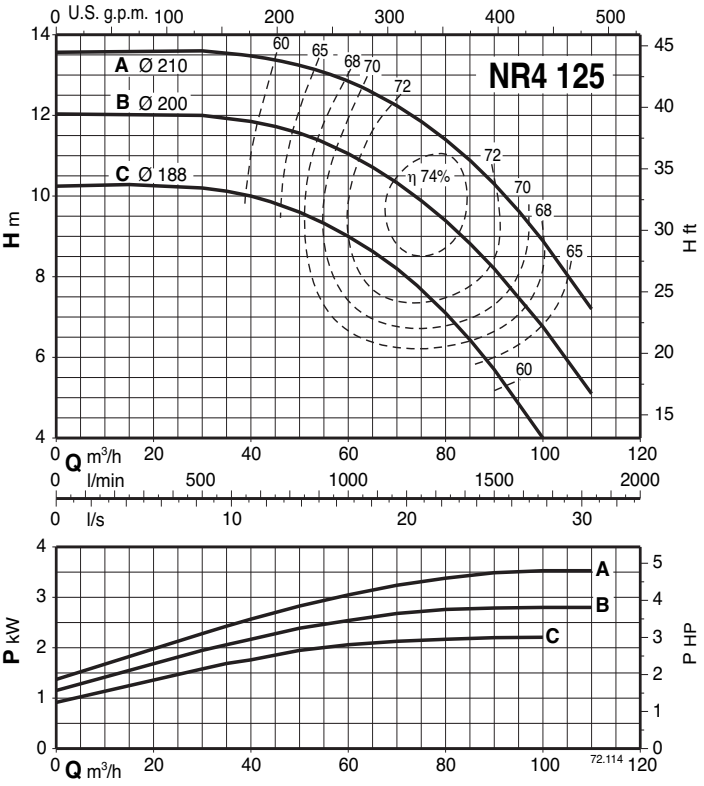




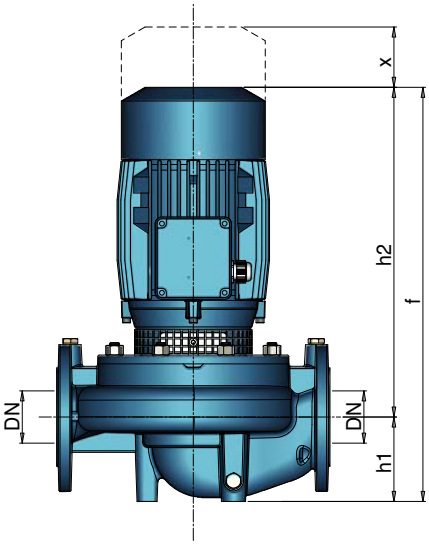
Characteristic curves n ≈ 1450 rpm

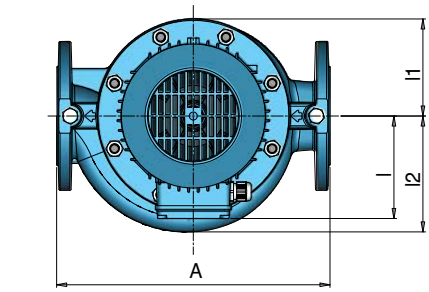


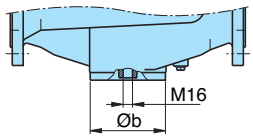




Dimensions and weights



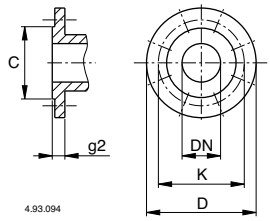




TYPE	mm										kg
	DN	a	f	h1	h2	Øb	l	l1	l2	x	
NR 50DE/2-CE/2	50	160	360	90	270	98	105	93	100	70	29,5-30
NR4 50AE-BE-CE	50	160	360	90	270	98	105	93	100	70	24-24-24
NR4 65AE-BE-CE	65	180	370	100	270	118	105	102	114	70	28-28-28
NR4 80AE-BE-CE	80	200	445	125	320	130	110	123	140	80	38,5-38-37,5
NR4 100BE-CE	100	250	485	150	335	162	110	153	173	105	59-59
NR4 100AE	100	250	510	150	360	162	140	153	173	105	64
NR4 125CE	125	300	540	160	370	194	140	172	195	120	89
NR4 125AE-BE	125	300	610	160	440	194	170	172	195	120	110-108

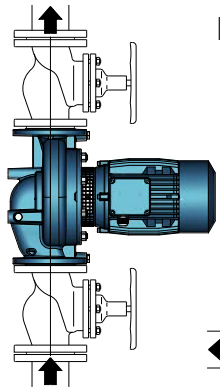
TYPE	mm									kg
	DN	a	f	h1	h2	l	l1	l2	x	
NR 50/125A-C-F	50	340	435	90	345	128	96	115	75	33,2-31,5-29,5
NR 50/160C NR 50/160A-B	50	340	437 502	90	347 412	128	120	128	75	38,7 51,3-47,5
NR 65/125F NR 65/125S-A-D	65	340	452 517	105	347 412	128	121	145	95	43,1 55,6-55,6-51,6
NR 65/160A-B	65	340	549	105	444	160	121	142	95	73-67
NR4 50/160A-B-C	50	340	437	90	347	128	120	128	75	37,5-35,5-33,5
NR4 65/160A-B	65	340	454	105	349	128	121	142	95	42,7-42,5

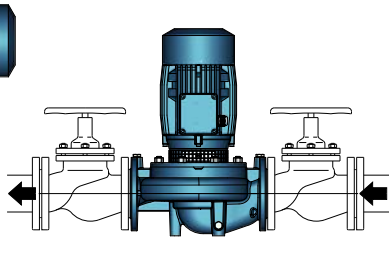
Flanges PN 10, EN 1092-2

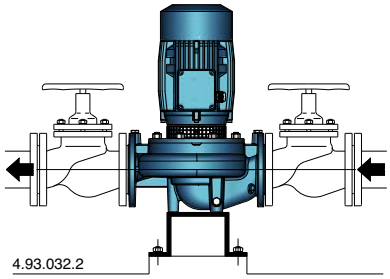


mm						
DN	C	K	D	Holes		g2
				N°	Ø	
50	99	125	165	4	19	20
65	118	145	185	4	19	20
80	132	160	200	8	19	22
100	156	180	220	8	19	24
125	184	210	250	8	19	24

Installation



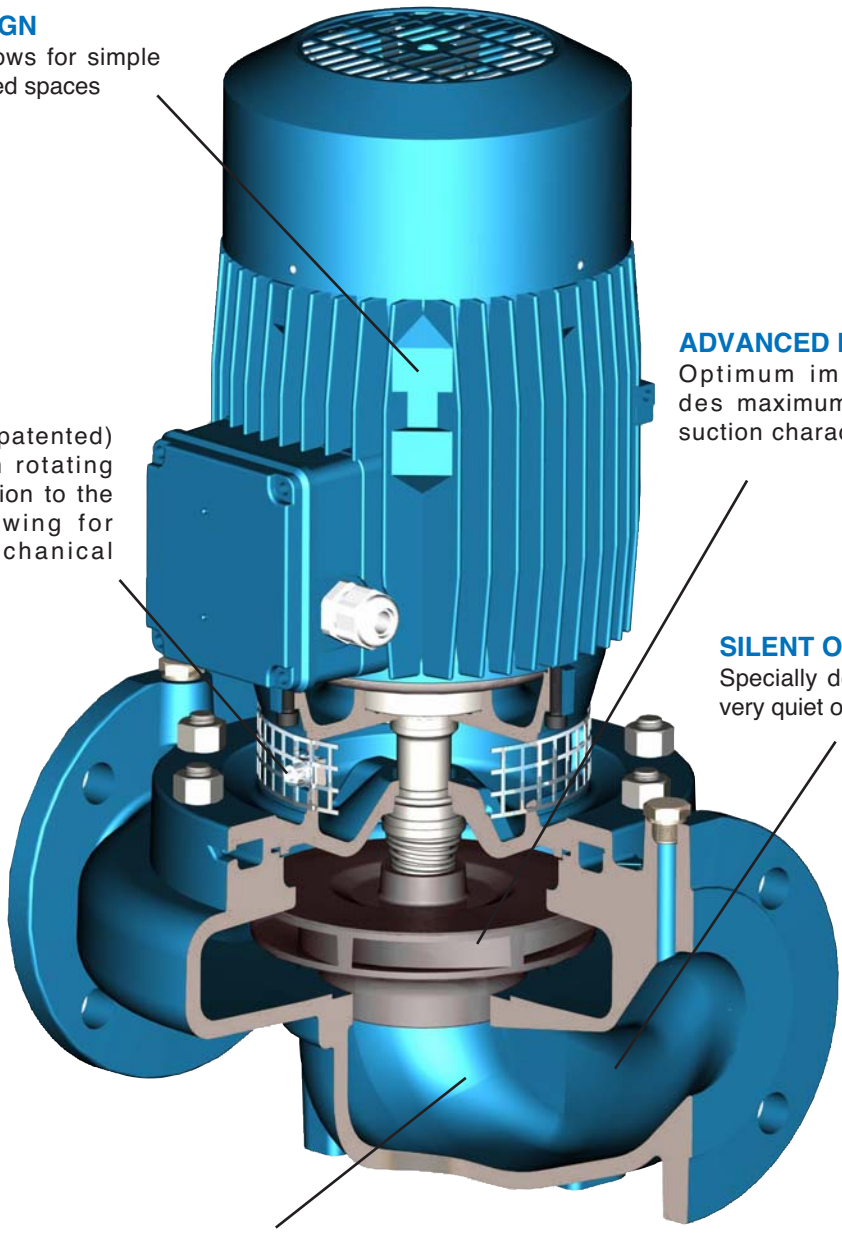




Features

NEW COMPACT DESIGN
A compact structure allows for simple installation even in confined spaces

A UNIQUE DESIGN
An innovative guard (patented) prevents contact with rotating parts, providing protection to the end user whilst allowing for inspection of the mechanical seal.



ADVANCED HYDRAULICS
Optimum impeller geometry provides maximum efficiency and excellent suction characteristics.

SILENT OPERATION
Specially designed fluid ducts provide very quiet operation

EXCEPTIONAL FLUID DYNAMICS
The fluid dynamics through the impeller and casing are designed to minimize losses and increase performance.