NR

In-line Pumps

n ≈ 2900 1/min
n ≈ 1450 1/min

calpeda
CREATIVE TECHNOLOGY

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 50, NR 65	Screwed flanges PN 16, UNI 2247
NR 80, NR 100, NR 125	Flanges for welding PN 10, UNI 2277, UNI 2278

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 UNI 5705 for NR 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).
NR: three-phase 230/400 V ± 10%.
NRM: single-phase 230 V ± 10%.

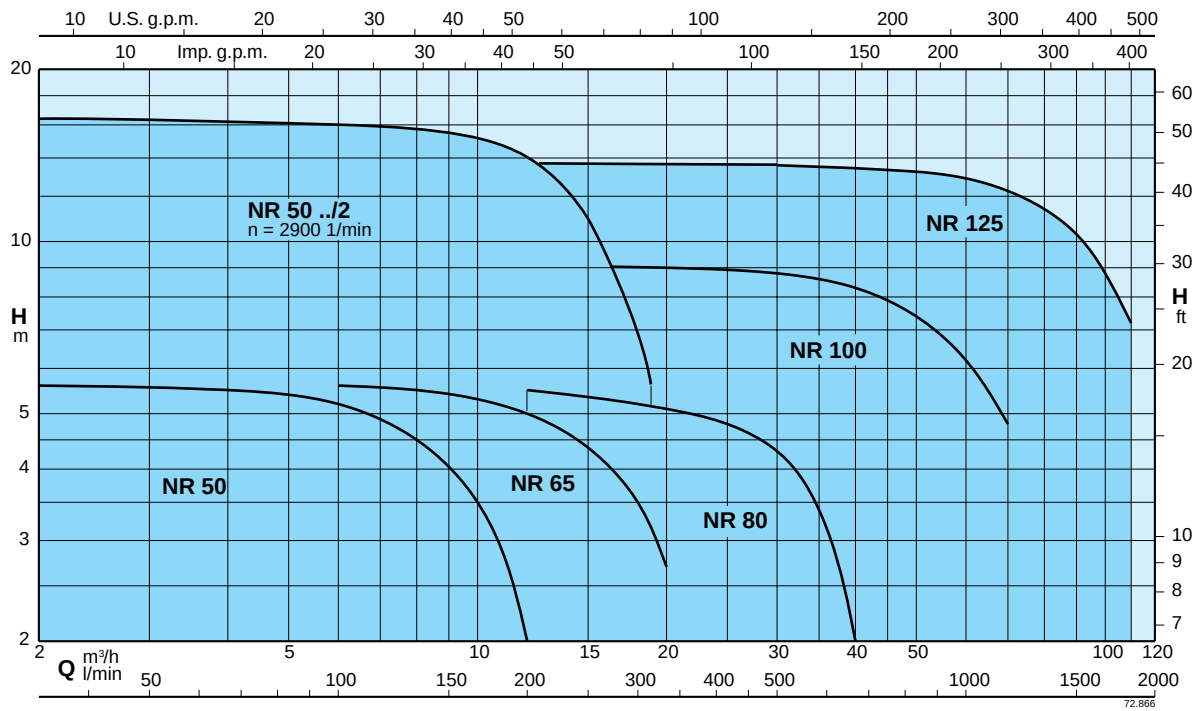
2-pole induction motor, 50 Hz (n = 2900 rpm).
NR .../**2**: three-phase 230/400 V ± 10%.
NRM .../**2**: single-phase 230 V ± 10%.

Insulation class F.
Protection IP 54.
Constructed in accordance with IEC 34.

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 n ≈ 2900 rpm and n ≈ 1450 rpm



Performance n ≈ 2900 rpm and n ≈ 1450 rpm

n ≈ 2900 rpm

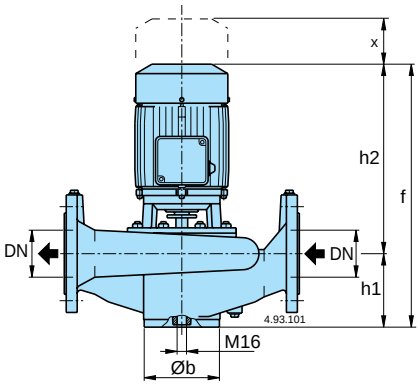
3 ~	230V	400V	1 ~	230V	P1	P2		Q m³/h	6	6,6	7,5	8,4	9,6	10,8	12	13,2	15	16,8	18,9			
	A	A		A	kW	kW	HP	l/min	100	110	125	140	160	180	200	220	250	280	315			
NR 50DE/2	2,3	1,3	**NRM 50DE/2**	3,6	0,72	0,45	0,6	**H** m	11	10,8	10,5	10,2	9,5	8,5	7	6						
NR 50CE/2	3,7	2,2	**NRM 50CE/2**	5,7	1,13	0,75	1		16	15,9	15,8	15,7	15,3	14,6	14	13	11	9	5,5			

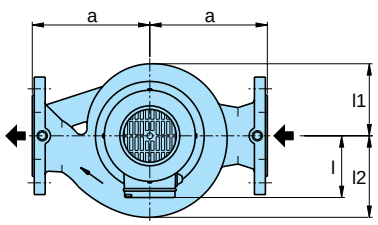
n ≈ 1450 rpm

3 ~	230V	400V	1 ~	230V	P1	P2		Q m³/h	2	4	6	8	10	12	14	16	18	20	25	30	35	40	50	60	70	80	90	100	110
	A	A		A	kW	kW	HP	l/min	33	67	100	133	167	200	233	267	300	333	417	500	583	667	833	1000	1167	1333	1500	1667	1840
NR 50CE	1,4	0,8	**NRM 50CE**	2,1	0,27	0,25	0,34		3,9	3,8	3,3	2,5																	
NR 50BE	1,4	0,8	**NRM 50BE**	2,1	0,29	0,25	0,34		4,7	4,6	4,3	3,5	2,3																
NR 50AE	1,4	0,8	**NRM 50AE**	2,1	0,33	0,25	0,34		5,6	5,5	5,2	4,5	3,5	2															
NR 65CE	1,4	0,8	**NRM 65CE**	2,1	0,31	0,25	0,34				3,8	3,7	3,5	3,1	2,6	1,9													
NR 65BE	2,1	1,2				0,37	0,5				4,7	4,6	4,5	4,2	3,8	3,2	2,5												
NR 65AE	2,1	1,2				0,37	0,5				5,6	5,5	5,3	5	4,6	4,1	3,5	2,7											
NR 80CE	2,8	1,6				0,55	0,75							3,9	3,8	3,7	3,6	3,5	3,2	2,5									
NR 80BE	2,8	1,6				0,55	0,75	**H** m						4,7	4,6	4,5	4,4	4,3	3,8	3,3	2,4								
NR 80AE	3,5	2				0,75	1							5,5	5,4	5,3	5,2	5,1	4,8	4,3	3,4	2							
NR 100CE	5	2,9				1,1	1,5											6,6	6,4	6,3	6	5,6	4,6	3,3					
NR 100BE	5	2,9				1,1	1,5											7,5	7,4	7,2	7	6,6	5,6	4,4					
NR 100AE	6,2	3,6				1,5	2											9	8,9	8,8	8,6	8,3	7,4	6,2	4,8				
NR 125CE	9,2	5,3				2,2	3													10,2	10,1	10	9,6	9	8,2	7,1	5,7	4	
NR 125BE	11	6,3				3	4													12	11,9	11,8	11,6	11	10,4	9,4	8,2	6,7	5,1
NR 125AE	16	9,2				4	5,5													13,6	13,5	13,4	13,2	12,9	12,3	11,4	10,3	8,8	7,2

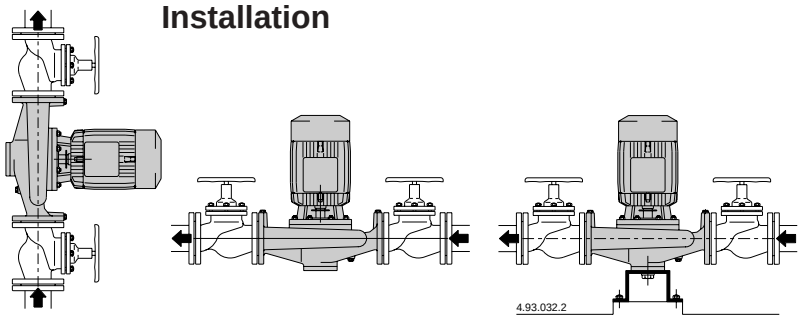
P1 Maximum power input. P2 Rated motor power output. **H** Rated motor power output. Tolerances according to ISO 9906, annex A.

Dimensions and weights

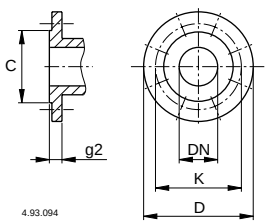




Installation



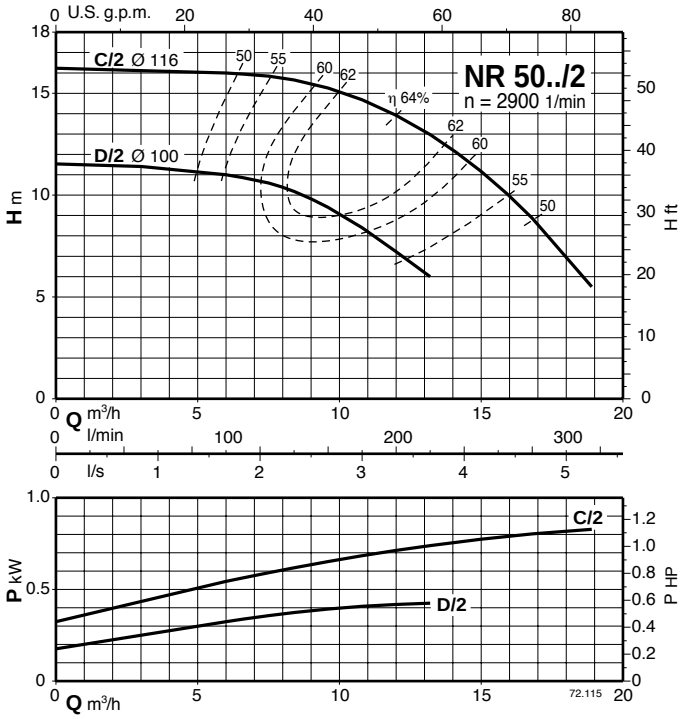
Flanges PN 10, EN 1092-2

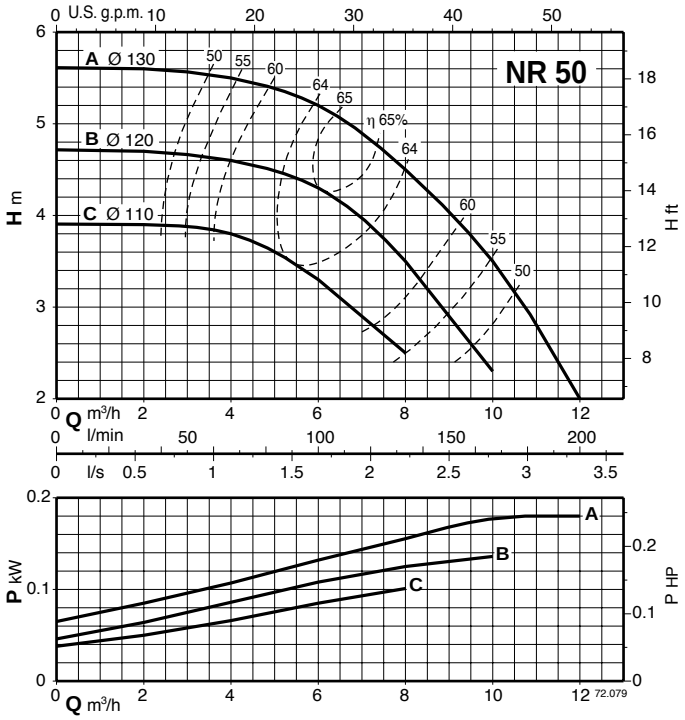


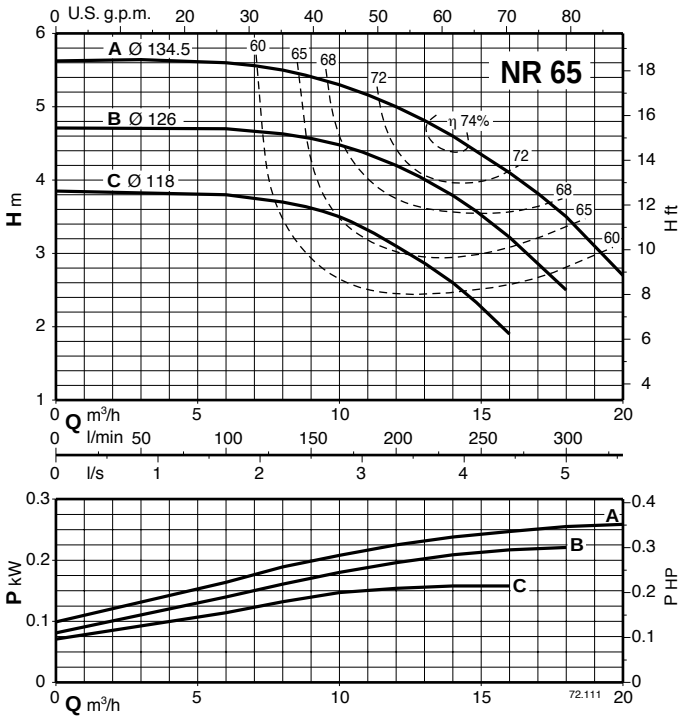
TYPE	mm										kg
	DN	a	f	h1	h2	Øb	l	l1	l2	x	
NR 50DE/2-CE/2	50	160	360	90	270	98	105	93	100	70	29,5-30
NR 50AE-BE-CE	50	160	360	90	270	98	105	93	100	70	24-24-24
NR 65AE-BE-CE	65	180	370	100	270	118	105	102	114	70	28-28-28
NR 80AE-BE-CE	80	200	445	125	320	130	110	123	140	80	38,5-38-37,5
NR 100BE-CE	100	250	485	150	335	162	110	153	173	105	59-59
NR 100AE	100	250	545	150	355	162	140	153	173	105	64
NR 125CE	125	300	535	170	365	194	140	172	195	120	89
NR 125AE-BE	125	300	610	170	440	194	170	172	195	120	110-108

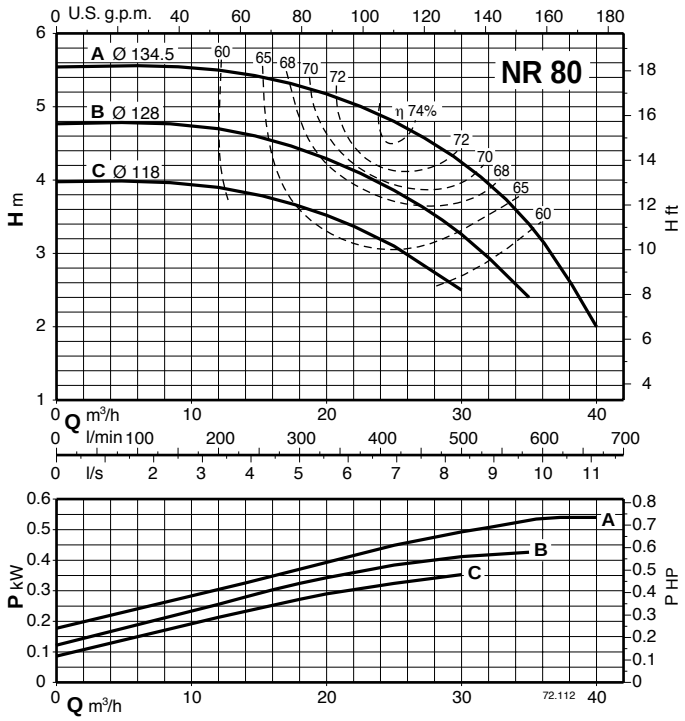
mm						
DN	C	K	D	Holes		g2
				N°	Ø	
50	99	125	165	4	19	20
65	118	145	185	4	19	20
80	132	160	200	8	19	22
100	156	180	220	8	19	24
125	184	210	250	8	19	24

Characteristic curves n ≈ 2900 rpm and n ≈ 1450 rpm









Characteristic curves $n \approx 1450$ rpm