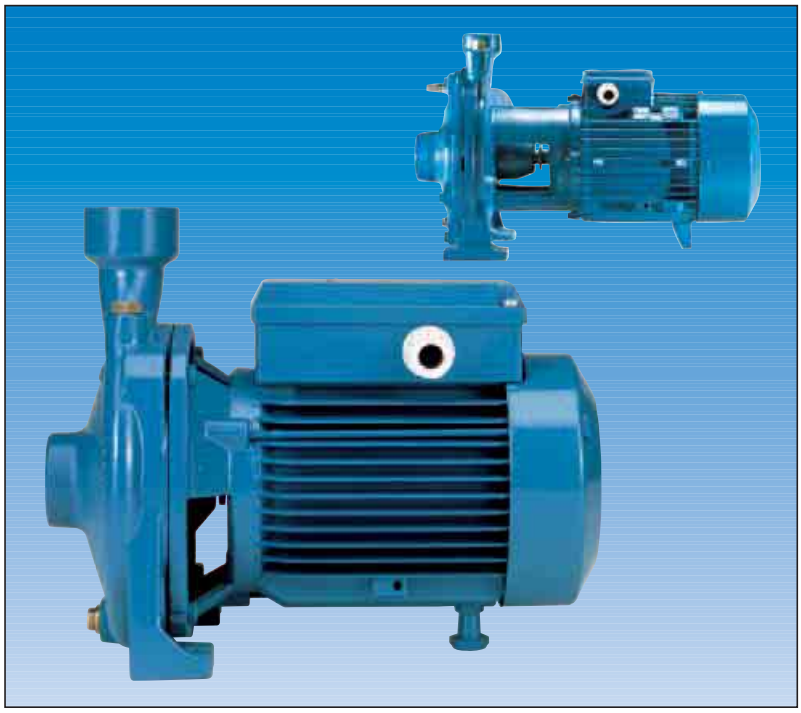
NM, NMD

Close Coupled Centrifugal Pumps
with threaded ports

calpeda®



Construction
Close-coupled, centrifugal pumps; electric motor with extended shaft directly connected to the pump.
NM: single-impeller
NMD: with two back-to-back impellers (with axial thrust balancing).
Connections: threaded ports ISO 228/1 (BS 2779).

Applications
- For clean liquids without abrasives, which are non-aggressive for the pump materials (solids content up to 0.2%).
- For water supply.
- For heating, air-conditioning, cooling and circulation plants.
- For civil and industrial applications.
- 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 pumps NMD 25/190; NMD 32/210; NMD 40/180).
Continuous duty.

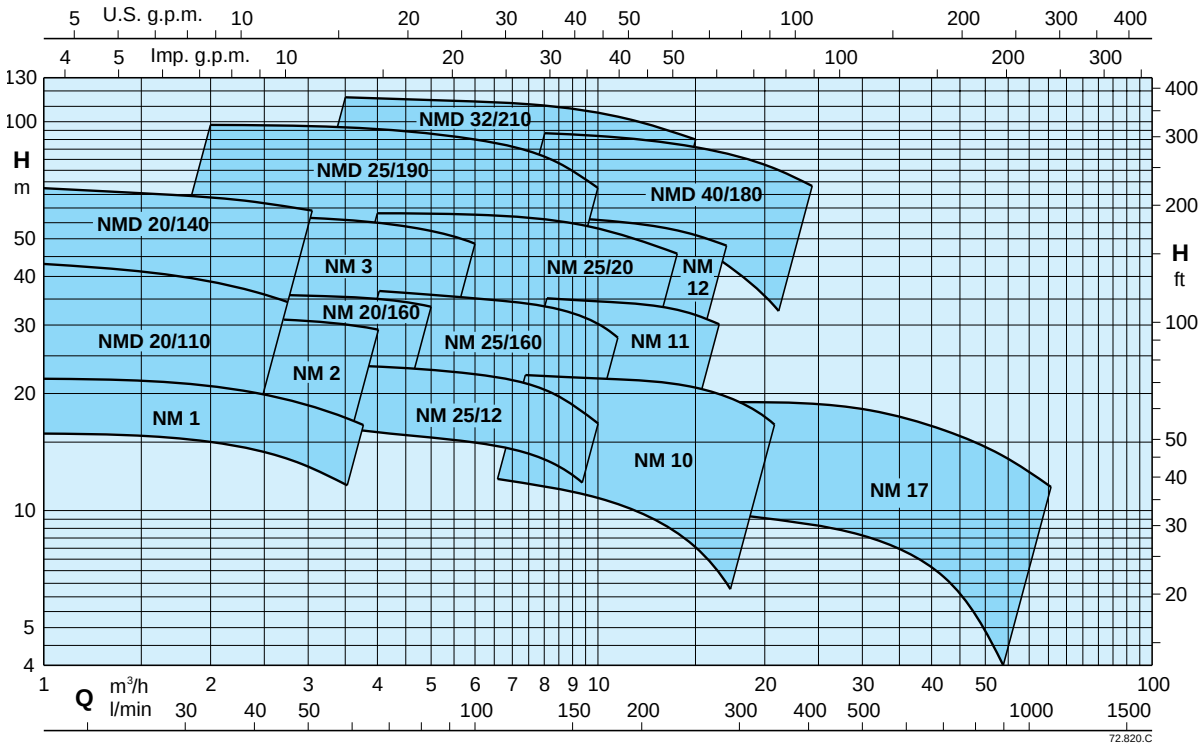
Motor
2-pole induction motor, 50 Hz (n = 2900 rpm).
NM, NMD: three-phase 230/400 V ± 10% up to 3 kW;
400/690 V ± 10% from 4 to 9,2 kW;
NMM, NMDM: single-phase 230 V ± 10%, with thermal protector.
Insulation class F.
Protection IP 54.
Constructed in accordance with IEC 60034.

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.

Materials

Components	NM, NMD	B-NM, B-NMD	I-NM, I-NMD
Pump casing Lantern bracket	Cast iron GJL 200 EN 1561	Bronze G-Cu Sn 10 EN 1982	Cr Ni Mo steel AISI 316
Impeller	Brass P- Cu Zn 40 Pb 2 UNI 5705		
NM 17	Cast iron GJL 200 EN 1561	Bronze G-Cu Sn 10 EN 1982	
Shaft	Cr steel AISI 430	Cr Ni Mo steel AISI 316	
	Cr Ni steel AISI 303 1,1 -1,5 - 2,2 kW		
Mechanical seal	Carbon - Ceramic - NBR		

Coverage chart *n ≈ 2900 rpm*



NM, NMD

Close Coupled Centrifugal Pumps
with threaded ports

calpeda®

Performance n ≈ 2900 rpm

NM	P_2 kW	P_2 HP	Q m³/h	1	1,2	1,5	1,89	2,4	3	3,6	4,2	4,8	5,4	6	6,6	7,5	8,4
			l/min	16	20	25	31,5	40	50	60	70	80	90	100	110	125	140
NM 1/AE●	0,37	0,5		22	21,6	21,3	20,9	20,3	19,4	18,1	16,3						
NM 2/BE●	0,55	0,75		27	26,5	26	25,5	25	24	23	22	20					
NM 2/SE●	0,55	0,75		31	30,5	30	29	27,5	25,5	23,5	20	16					
NM 2/AE●	0,75	1	H	33,5	33	32,5	32	31,5	30,5	29,5	28,5	27	26	24			
NMM 3/CE	1,1	1,5	m		37,5	37,5	37	36,5	36	35	34	32					
NM 3/CE	1,1	1,5			37,5	37,5	37	36,5	36	35	34	32	30,5*	28,5*			
NMM 3/BE	1,5	2			42	42	41	41,5	40,5	40	39	37	35*	32*			
NM 3/BE	1,5	2			47	47	46,5	46	45,5	45	44	43	41,5*	40*	37,5*	33*	26*
NM 3/AE	2,2	3			56	55,5	55,5	55	54,5	53,5	52,5	51,5	50*	48*	46*	42*	36*

B-NM B-NMD I-NMD	NM NMD	P_2 kW	P_2 HP	Q m³/h	1	1,2	1,5	1,89	2,4	3	3,6	4,2	4,8	5,4	6	6,6	7,5	8,4
				l/min	16	20	25	31,5	40	50	60	70	80	90	100	110	125	140
B-NMD 20/110BE●	NMD 20/110BE●	0,45	0,6		33	32	31	29	26,5	23	18							
B-NMD 20/110ZE●	NMD 20/110ZE●	0,55	0,75		37	36	35	33	30,5	27,5	23	18*						
B-NMD 20/110AE●	NMD 20/110AE●	0,75	1		43	42	40,5	39	36,5	33	29	25*						
I-B-NMDM 20/140BE	NMDM 20/140BE	1,1	1,5	H	52	51,5	51	50	48,5	47	45							
I-B-NMD 20/140BE	NMD 20/140BE	1,1	1,5	m	53	52,5	52	51	50	48	46	43,5	40					
I-B-NMDM 20/140AE	NMDM 20/140AE	1,5	2		57,5	57	56,5	55,5	54	51,5	49	46	43	40	36			
I-B-NMD 20/140AE	NMD 20/140AE	1,5	2		67	66,5	66	64,5	63	61,5	59	57	53,5	50	46			
B-NM 20/160BE●	NM 20/160BE●	0,75	1					30,5	30	29,5	28,5	27,5	26,5	25,5	24	22*		
B-NM 20/160AE●	NM 20/160AE●	1,1	1,5					36	35,5	35	34,5	33,5	32	30,5	29	27*		

B-NMD, B-NMD I-NM, I-NMD	NM NMD	P_2 kW	P_2 HP	Q m³/h	2,4	3	3,6	4,8	6	6,6	7,5	8,4	9,6	10,8	12	13,2	15	16,8
				l/min	40	50	60	80	100	110	125	140	160	180	200	220	250	280
B-NM 25/125BE●	NM 25/12BE●	0,55	0,75		20	19,9	19,8	19,3	18,5	18	17,3	16,3	15*	13,2*	11*			
B-NM 25/125AE●	NM 25/12AE●	0,75	1		23,5	23,4	23,3	22,9	22,1	21,7	20,9	20	18,7*	17,1*	15,2*			
B-NM 25/160BE●	NM 25/160BE●	1,1	1,5			31	30,7	30	28,5	28	27	26	23					
B-NM 25/160AE●	NM 25/160AE●	1,5	2			36,5	36,2	35,5	34,5	34	33,5	32,5	31	28,5*	26*			
I-B-NM 25/200BE	NM 25/20BE	2,2	3	H		42,5	42	41	40	39,5	38,5	37,5	36	33*	29*			
I-B-NM 25/200AE	NM 25/20AE	3	4	m		50	49,7	49	48	47,5	47	46,5	45,5	44*	42*	39*		
I-B-NM 25/200SE	NM 25/20SE	4	5,5			59	58,5	58	57,5	57	56,5	55,5	54,5	53	51,5	49*	44,5*	37*
I-B-NMD 25/190CE	NMD 25/190CE	2,2	3		62	60,5	59	55,5	51	48,5	44	38*						
I-B-NMD 25/190BE	NMD 25/190BE	3	4		76	75	74	70	66	64	60	54	46*					
I-B-NMD 25/190AE	NMD 25/190AE	4	5,5		98	97	96	93,5	90	88	84	79	70*					

NM	P_2 kW	P_2 HP	Q m³/h	6,6	7,5	8,4	9,6	10,8	12	13,2	15	16,8	18,9	21	24	27	30
			l/min	110	125	140	160	180	200	220	250	280	315	350	400	450	500
NM 10/FE●	0,55	0,75		12,5	12,5	12	11,5	11	10	9	7,5						
NM 10/DE●	0,75	1		18	18	17,5	17	16,5	16	15,5	14						
NM 10/AE●	1,1	1,5		23	23	22,5	22	21,5	21	20,5	19						
NM 10/SE●	1,5	2		23,5	23,5	23	22,5	22	21,5	21	20,5	19*	18,5*	16,5*	13*		
NMM 11/BE	1,5	2	H	26,5	25,5	25	24	23	22,5	21,5	19,5	17,5					
NM 11/BE	1,5	2	m	29,5	29,5	29	28,5	27,5	27	26	25*	22,5*					
NM 11/AE	2,2	3		35,5	35,5	35	34,5	34	33,5	33	32*	30*					
NM 12/DE	2,2	3		38	37,5	37	36	35	33,5	32							
NM 12/CE	3	4		45	44,5	44	43,5	42,5	41	40	38	36*					
NM 12/AE	4	5,5		57,5	57	56	55,5	55	54,5	53,5	51,5	49*					

NM, NMD

Close Coupled Centrifugal Pumps
with threaded ports

calpeda®

Performance n ≈ 2900 rpm

B-NMD I-NMD	NMD	P2		Q m³/h	5,4	6	6,6	7,5	8,4	9,6	10,8	12	13,2	15	16,8	18,9	21	24
		kW	HP	l/min	90	100	110	125	140	160	180	200	220	250	280	315	350	400
B-NMD 32/210DE	NMD 32/210DE	4	5,5		71	69	67,5	65	62,5	58	53	46	37*					
B-NMD 32/210CE	NMD 32/210CE	5,5	7,5		84	83	82	81	79	76	73	69	64*	54*				
B-NMD 32/210BE	NMD 32/210BE	7,5	10		104	103	102	100	98	95	92	88	84*	76*				
B-NMD 32/210AE	NMD 32/210AE	9,2	12,5	H	114	113	112	110	108	105	103	99	96*	90*				
I- B-NMD 40/180DE	NMD 40/180DE	4	5,5	m				60	59,5	57	56	53	51,5	48	44	39	34*	25*
I- B-NMD 40/180CE	NMD 40/180CE	5,5	7,5					69	68	67	66	64,5	63	60	57	53	48*	40*
I- B-NMD 40/180BE	NMD 40/180BE	7,5	10					87	86	85	84	82,5	81	78	75	71	66*	59*
I- B-NMD 40/180AE	NMD 40/180AE	9,2	12,5					94	93	92	91	89,5	88	85	82	78	74*	67*

B-NM	NM	P2		Q m³/h	21	24	27	30	33	37,8	42	48	54	60	66	75	84	96
		kW	HP	l/min	350	400	450	500	550	630	700	800	900	1000	1100	1250	1400	1600
B-NM 17/HE●	NM 17/HE●	1,1	1,5		9,5	9,2	9	8,6	8,2	7,5	6,7	5,5	3,5*					
B-NM 17/GE●	NM 17/GE●	1,5	2	H	12	11,7	11,5	11,2	11	10,3	9,7	8,5	7*	4*				
B-NM 17/FE	NM 17/FE	2,2	3	m		16	16	15,5	15	14,5	14	13	11,5*	10*	8*			
B-NM 17/DE	NM 17/DE	3	4				18	18	17,5	17	16,5	15,5	14*	13*	11,5*			

NM, NMD Standard construction.
B-NM, B-NMD Bronze construction.
I-NM, I-NMD Stainless steel construction.

P2 Rated motor power output.
H Total head in m.

● With single-phase motor = NMM - NMDM.
* Maximum suction lift 1-2 m.
Tolerances according to ISO 9906, annex A.

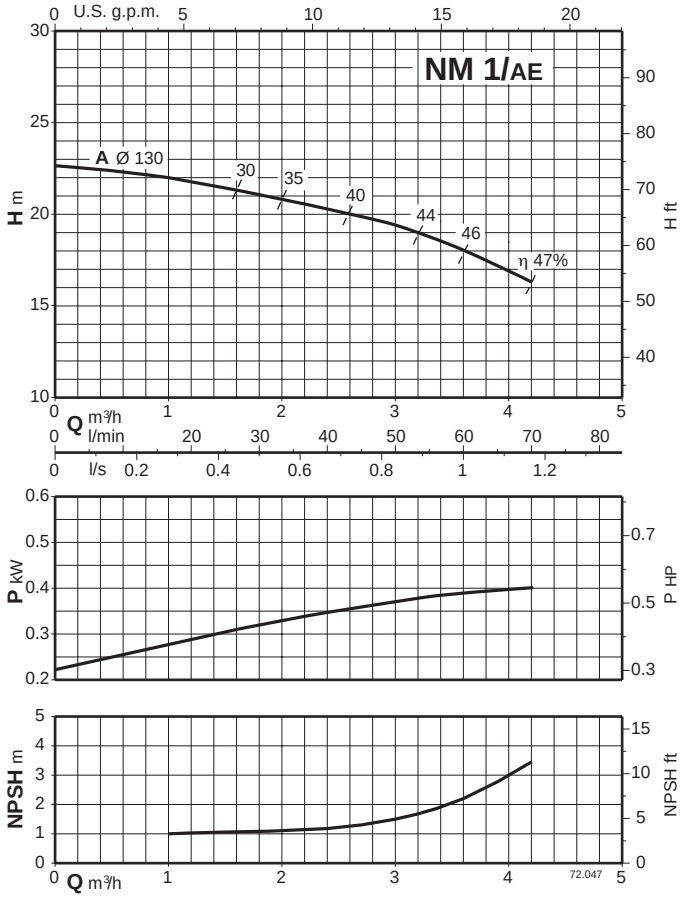
Rated currents

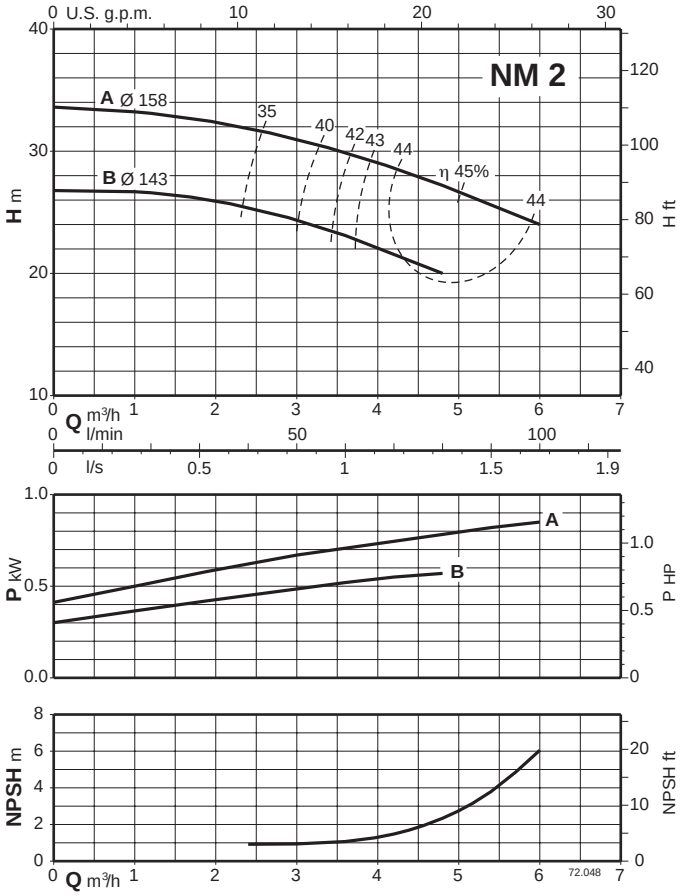
P1	P2		230 V 1~	
kW	kW	HP	IN A	IA/IN
0,62	0,37	0,5	3	2,7
0,72	0,45	0,6	3,6	2,9
0,91	0,55	0,75	4,5	3,1
1,2	0,75	1	5,8	3
1,6	1,1	1,5	7,4	3
2	1,5	2	9,2	3,8

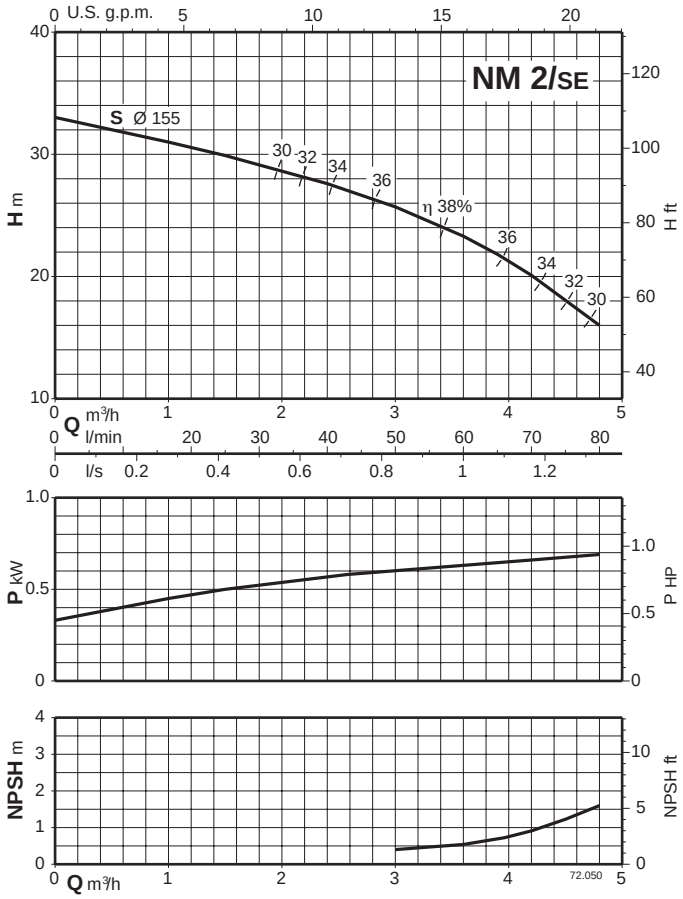
P2		230 V Δ / 400 V Y			
			400 V Δ / 690 V Y		
kW	HP	IN A	IN A	IN A	IA/IN
0,37	0,5	2,3	1,3		3,8
0,45	0,6	2,3	1,3		3,5
0,55	0,75	3	1,7		4,3
0,75	1	4	2,3		5,2
1,1	1,5	5	2,9		5,3
1,5	2	7,5	4,3		5,8
2,2	3	9,15	5,3		6
3	4	11,5	6,6		7,9
4	5,5		9,6	5,5	7,3
5,5	7,5		12	7	8,3
7,5	10		16	9,2	8,8
9,2	12,5		20	11,5	10

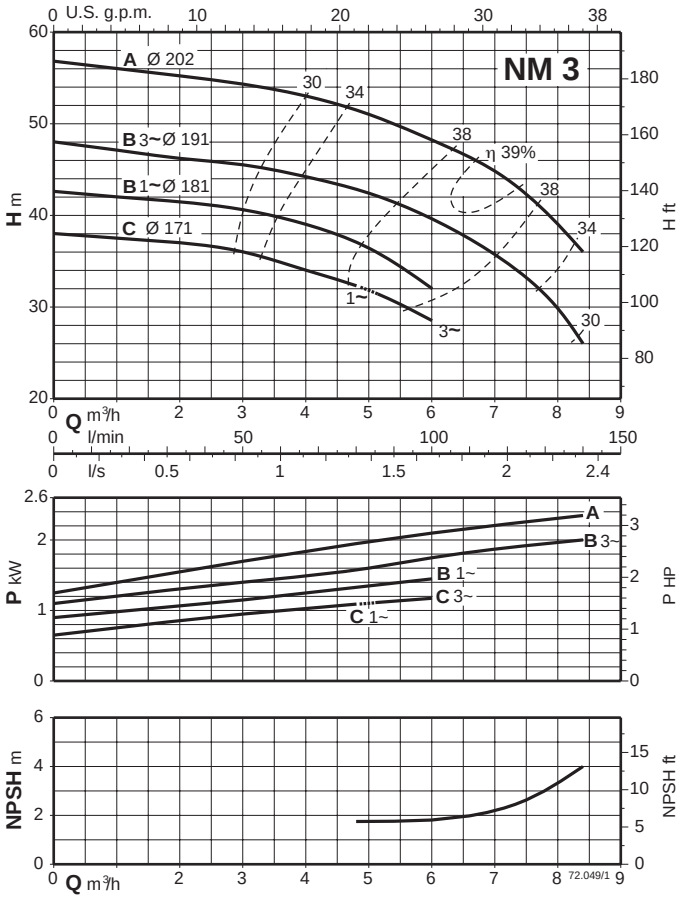
P1 Maximum power input.
P2 Rated motor power output.
IA/IN D.O.L. starting current / Nominal current

Characteristic curves $n \approx 2900$ rpm

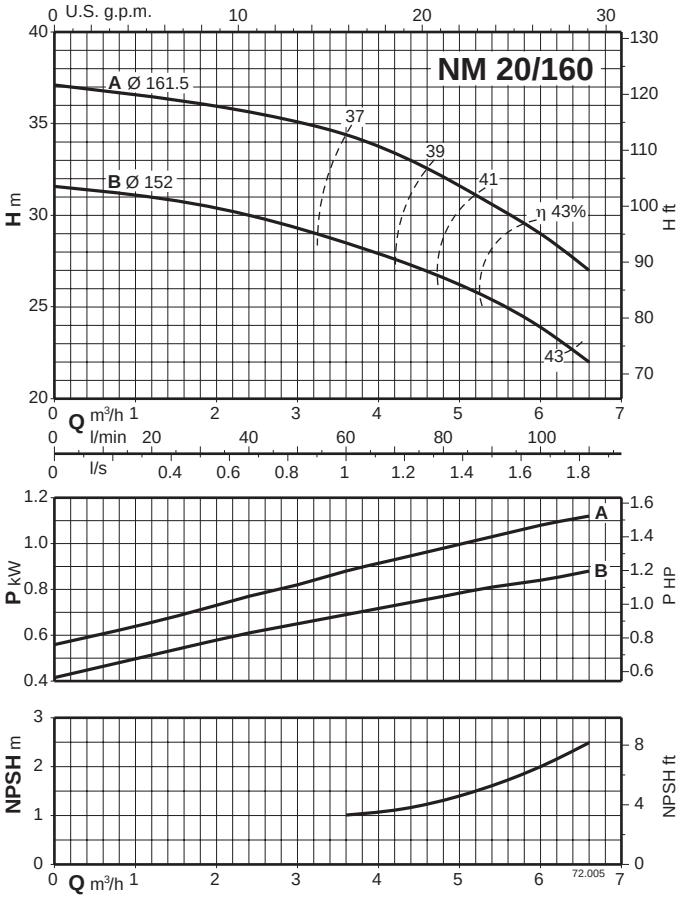


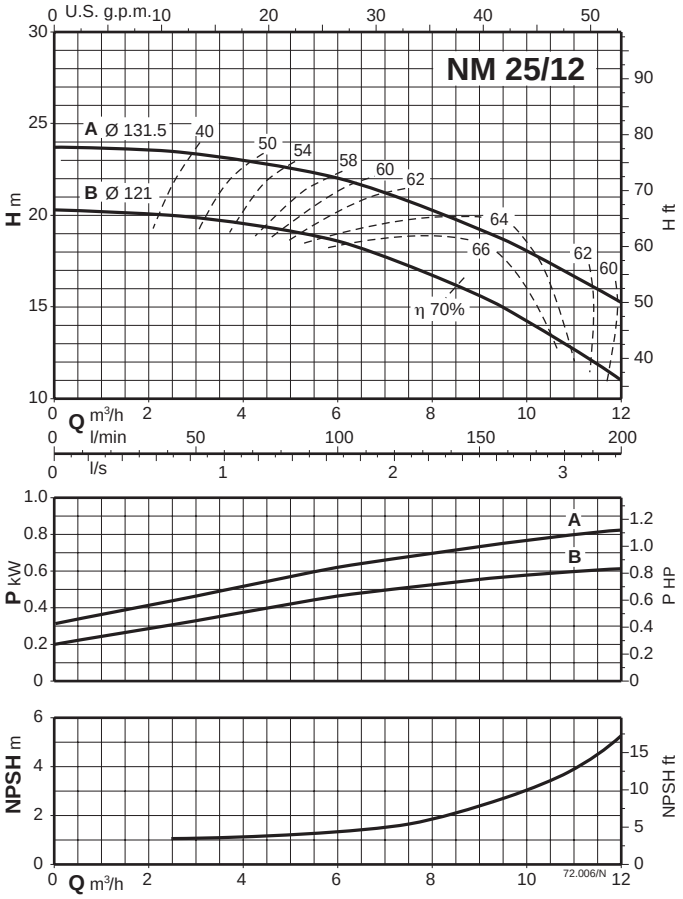


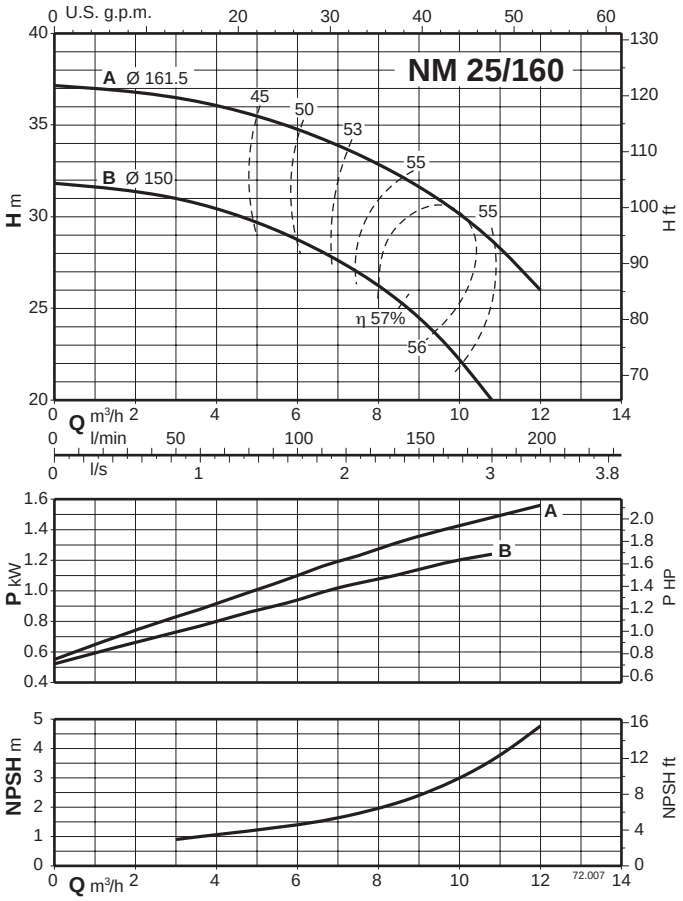


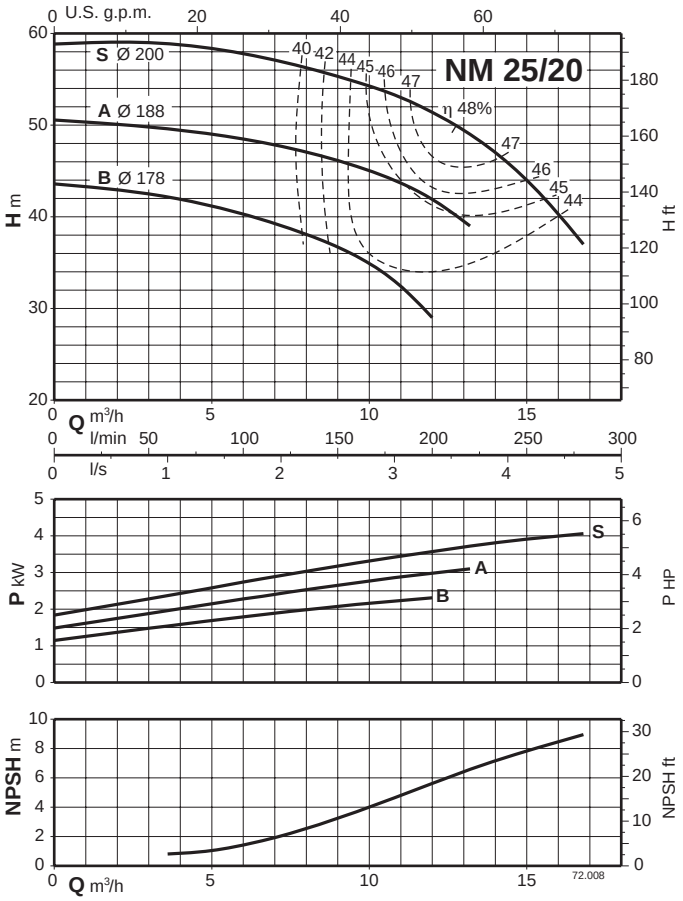


Characteristic curves $n \approx 2900$ rpm

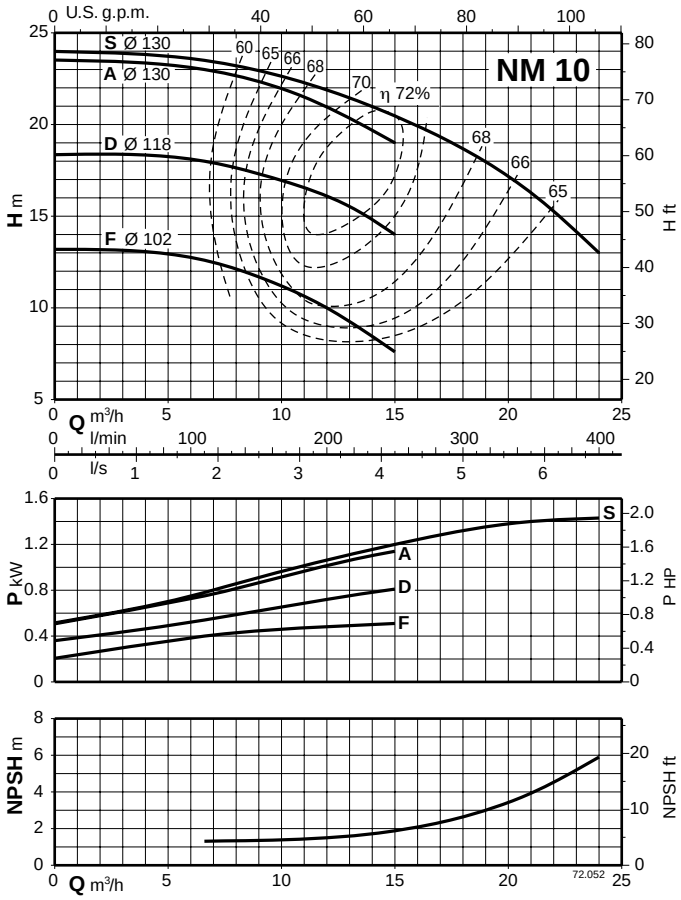


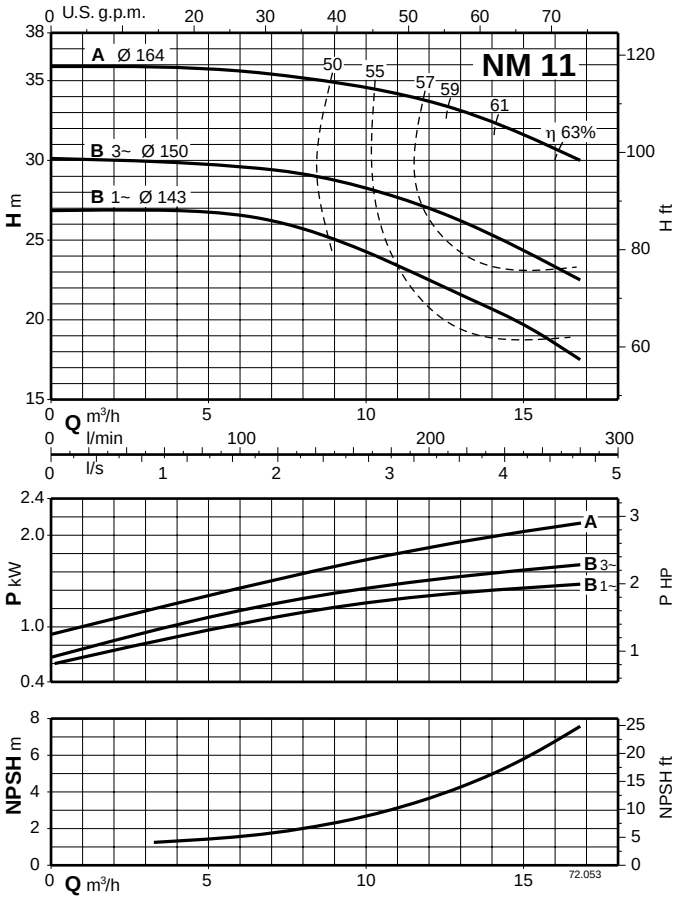


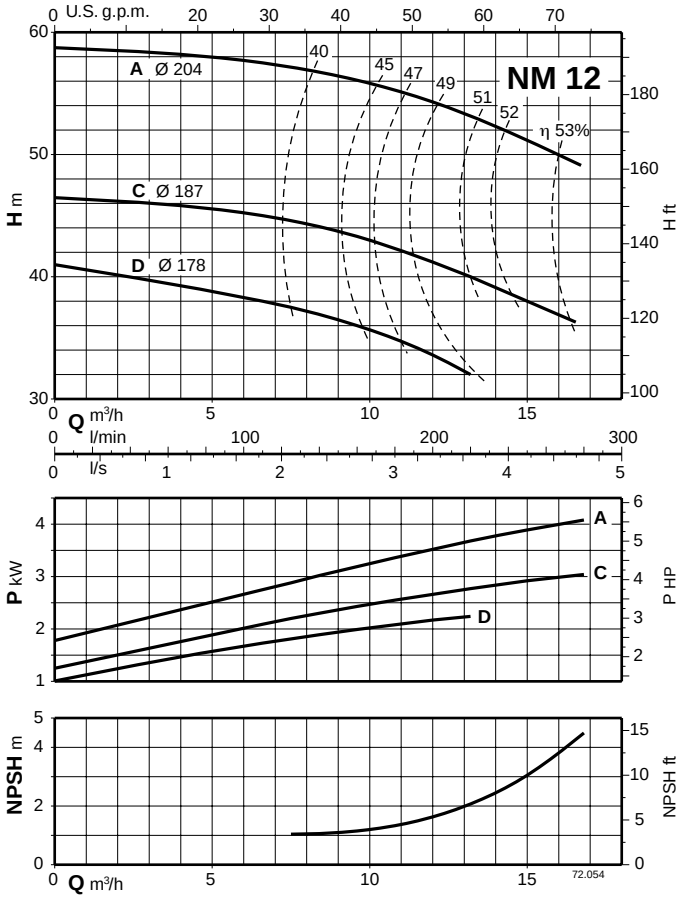


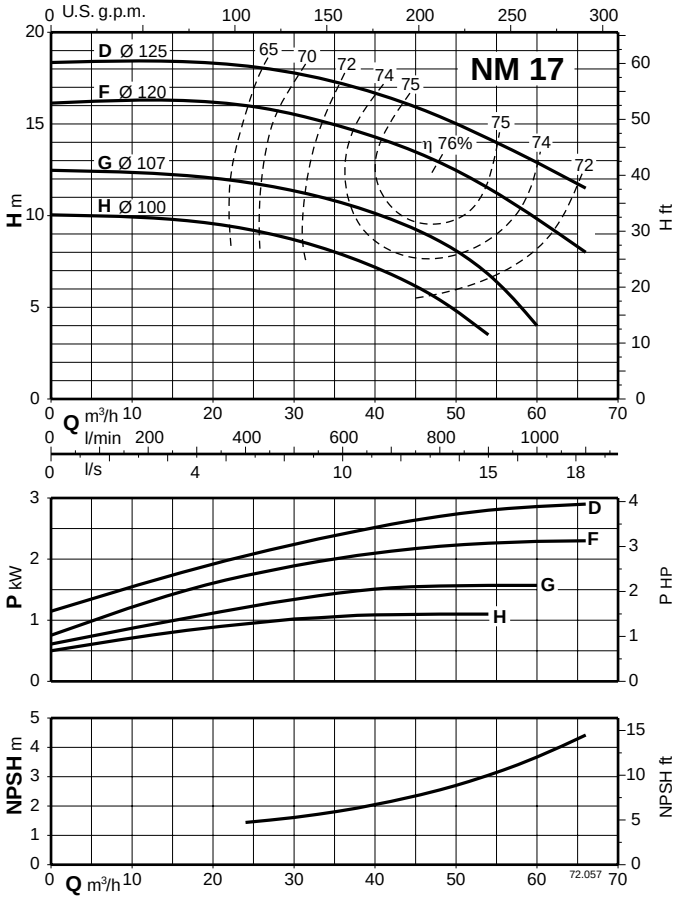


Characteristic curves $n \approx 2900$ rpm

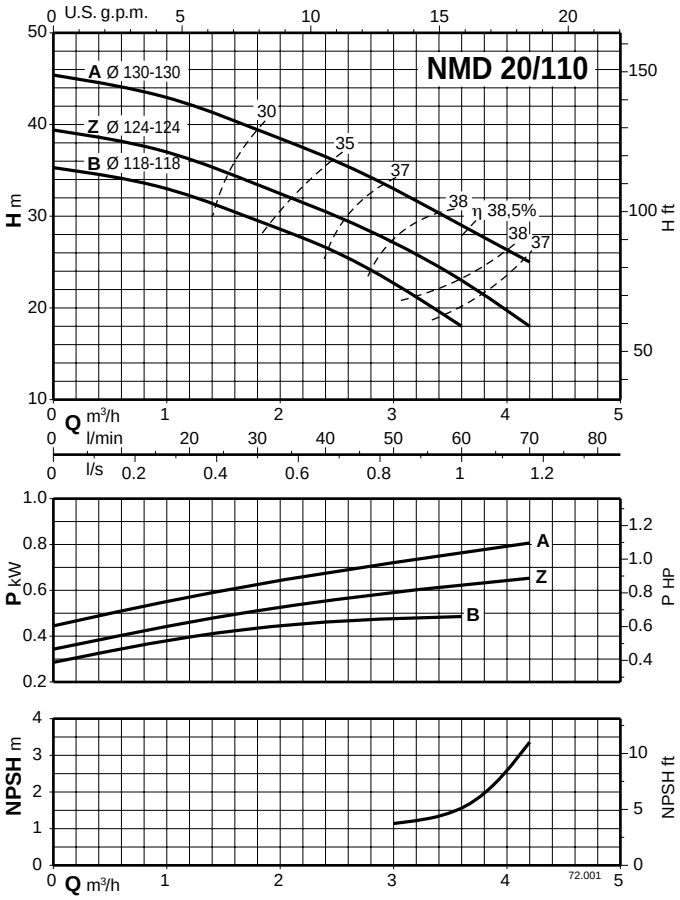


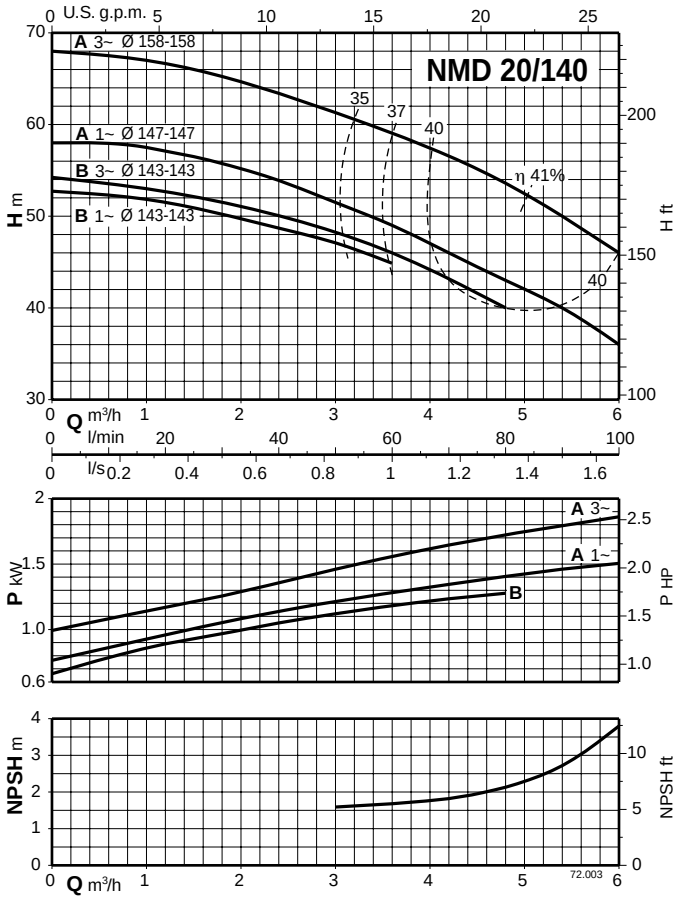


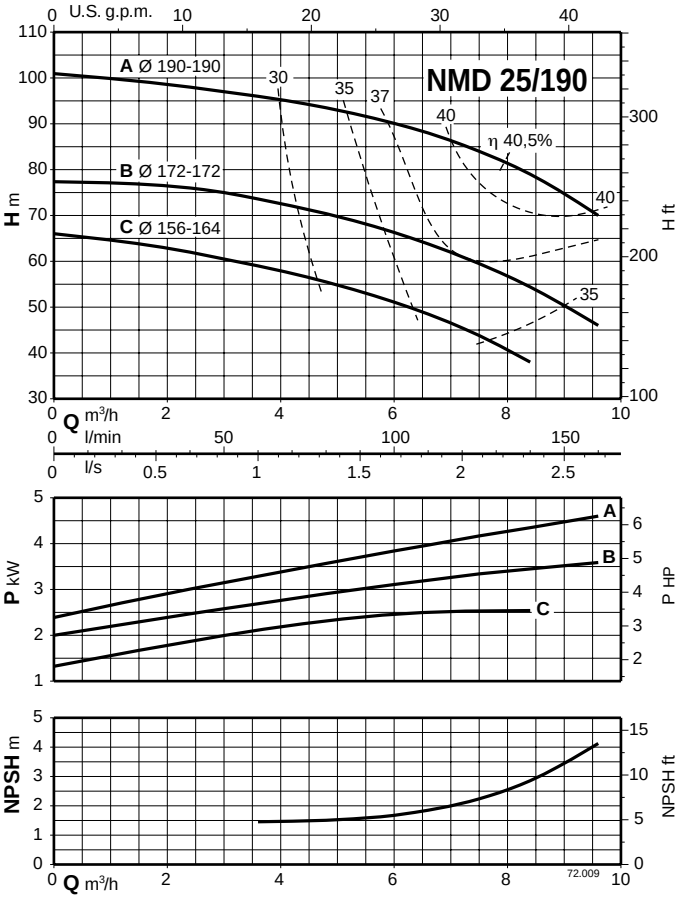




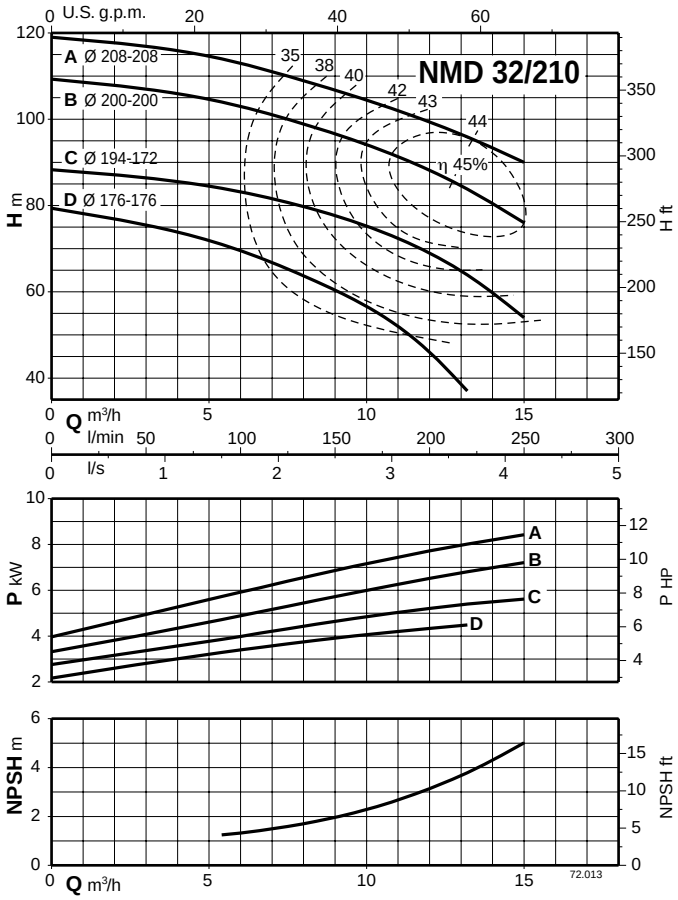
Characteristic curves $n \approx 2900$ rpm

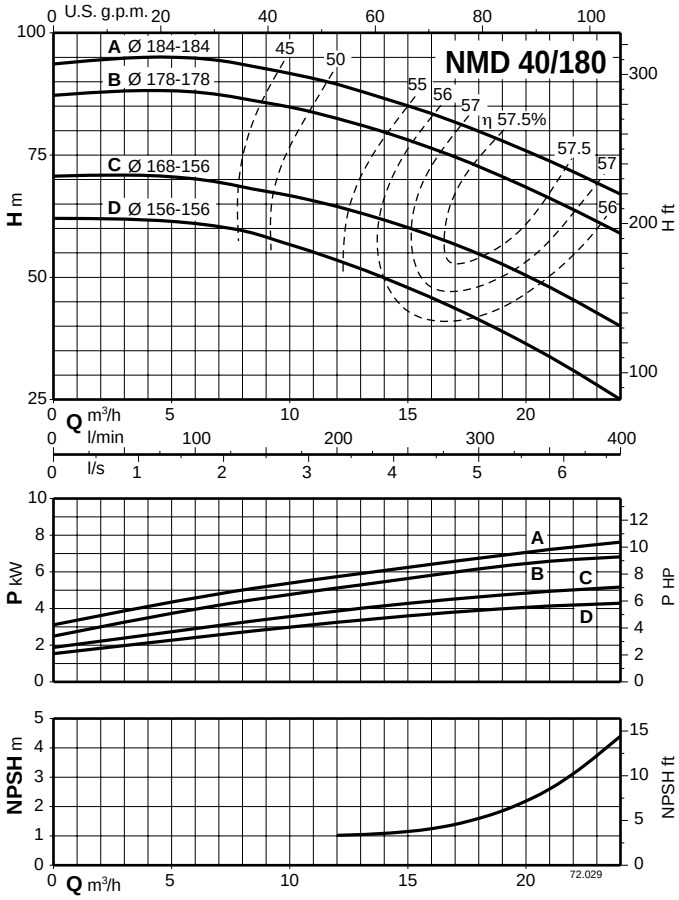




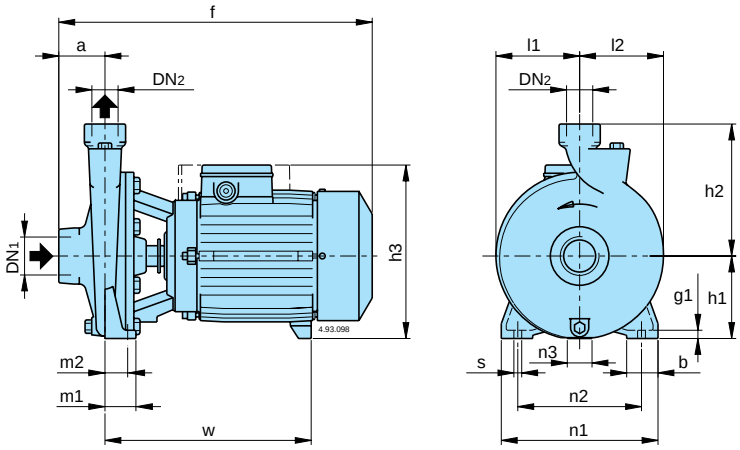


Characteristic curves n ≈ 2900 rpm





Dimensions and weights

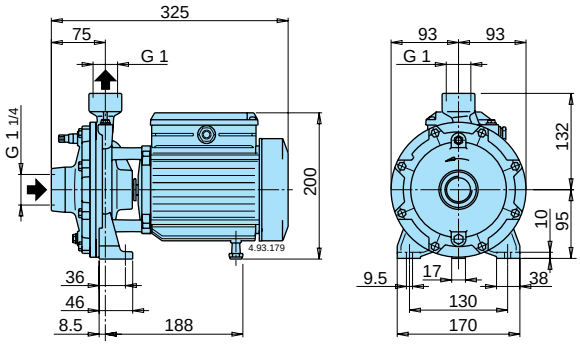


TYPE	NMM kg	NM kg	B-NM kg	I-NM kg
NM 1/AE	8,7	8,6		
NM 2/BE	14	13,1		
NM 2/SE	14,2	13,3		
NM 2/AE	15,1	14,2		
NM 3/CE	24	22,9		
NM 3/BE	26	25,1		
NM 3/AE		26,1		
B- **NM 20/160BE**	19,9	18,4	21	
B- **NM 20/160AE**	20,7	19,7	22,5	
NM 25/12BE	13,2	12,3		
NM 25/12AE	14,2	13,3		
B- NM 25/125BE			18,2	
B- NM 25/125AE			18,2	
B- **NM 25/160BE**	20,4	19,7	22,8	
B- **NM 25/160AE**	22,5	21,5	24	
NM 25/20BE		28,6		
NM 25/20AE		37,9		
NM 25/20SE		41,7		
I- B- NM 25/200BE			32,7	31
I- B- NM 25/200AE			40,7	38,6
I- B- NM 25/200SE			44,7	42,6
NM 10/FE	19,3	18,5		
NM 10/DE	19,4	18,8		
NM 10/AE	20,2	19,3		
NM 10/SE	22,1	21,5		
NM 11/BE	24,7	24,1		
NM 11/AE		25,1		
NM 12/DE		30,5		
NM 12/CE		39		
NM 12/AE		43		
B- NM 17/HE	23	22,2	29,2	
B- NM 17/GE	24,2	23,2	30,2	
B- NM 17/FE		25,2	32,2	
B- NM 17/DE		33,2	40,2	

B-NM I-NM	NM	DN1 ISO 228	DN2 ISO 228	mm															
				a	f	h1	h2	h3	m1	m2	n1	n2	n3	b	s	l1	l2	w	g1
	NM 1/AE	G 1	G 1	40	261	80	132	176	40	32	170	140	17	35	9,5	77	81	171	10
	NM 2/AE-SE-BE	G 1	G 1	45	305	95	150	203	40	32	190	160	17	35	9,5	87	90	218	10
	NM 3/AE-BE-CE	G 1	G 1	50	375	112	180	222	55	43	245	205	37	45	11,5	110	113	244	12
B-NM 20/160AE-BE	**NM 20/160AE-BE**	G 1¼	G ¾	53	375	100	150	210	37,5	27,5	190	150	30	38	9,5	102	102	246	10
	NM 25/12AE-BE	G 1½	G 1	56	313	90	140	195	37,5	27,5	170	130	9	38	9,5	85	88	195	10
B-NM 25/125AE-BE		G 1½	G 1	56	380	90	140	200	37,5	27,5	170	130	9	38	9,5	85	88	250	10
B-NM 25/160AE-BE	**NM 25/160AE-BE**	G 1½	G 1	56	380	100	160	210	37,5	27,5	190	150	30	38	9,5	102	102	246	10
	NM 25/20BE **NM 25/20AE-SE**	G 1½	G 1	63	393 460	125	180	235 253	45	32,5	245	200	49 42	45	11,5	125	125	251 295	11
I-B-NM 25/200BE **I-B-NM 25/200AE-SE**		G 1½	G 1	63	405 455	125	180	235 253	45	32,5	245	200	49 42	45	11,5	125	125	263 295	11
	NM 10/SE-AE-DE-FE	G 2	G 1¼	63	382	100	150	210	50	35	190	140	30	50	13	90	97	239	14
	NM 11/AE-BE	G 2	G 1¼	70	400	112	170	222	50	35	210	160	37	50	15	103	110	247	14
	NM 12/DE **NM 12/AE-CE**	G 2	G 1¼	70	400 470	132	190	242 260	50	35	240	190	47 45	50	15	125	127	247 300	14
B-NM 17/FE- GE-HE **B-NM 17/DE**	**NM 17/FE- GE-HE** **NM 17/DE**	G 2½	G 2½	80	417 480	112	160	222 240	50	35	210	160	37 20	50	14	96	113	257 295	14

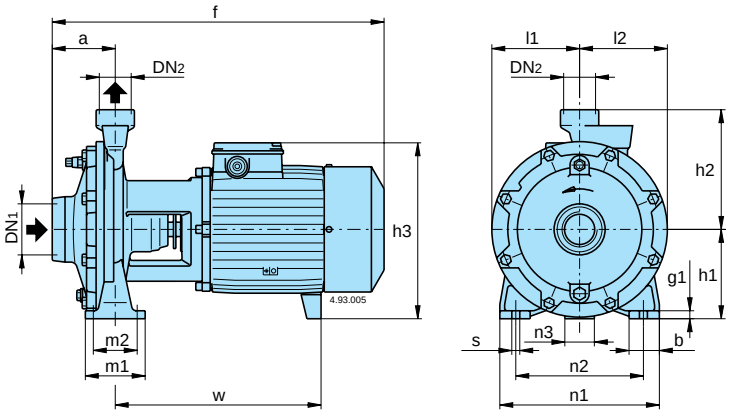
Dimensions and weights

NMD 20/110



TYPE	NMDM kg	NMD kg	B-NMD kg
B- **NMD 20/110BE**	13	12,1	13,4
B- **NMD 20/110ZE**	14	13	14,2
B- **NMD 20/110AE**	15,1	14,2	17,4

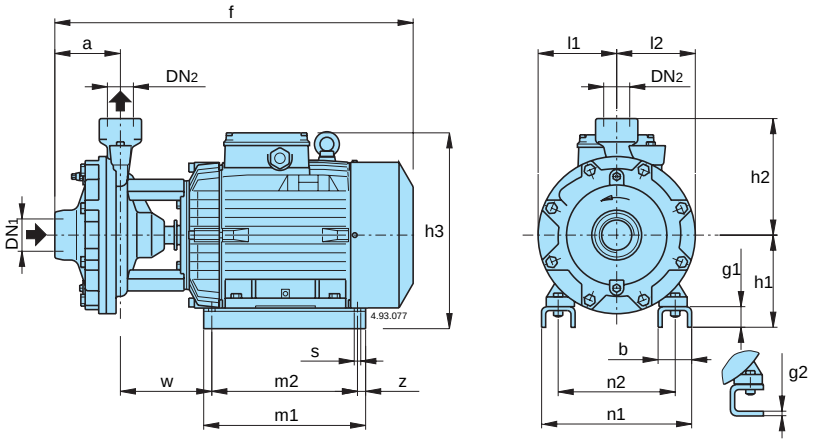
NMD 20/140
NMD 25/190



TYPE	NMDM kg	NMD kg	B-NMD kg	I-NMD kg
I- B- **NMD 20/140BE**	23,9	22,7	25,2	25
I- B- **NMD 20/140AE**	25,2	24,8	27,6	29,2
I- B- **NMD 25/190CE**		39	42,7	40
I- B- **NMD 25/190BE**		46,7	51	48
I- B- **NMD 25/190AE**		51	55	52

B-NMD I-NMD	NMD	DN1 ISO 228	DN2 ISO 228	mm																
				a	f	h1	h2	h3	m1	m2	n1	n2	n3	b	s	l1	l2	w	g1
I-B-NMD 20/140AE-BE	NMD 20/140AE-BE	G 1 1/4	G 1	80	410	112	150	222	75	55	200	160	37	38	9,5	110	110	256	10
I-B-NMD 25/190CE	NMD 25/190CE				447			250					50					274	
I-B-NMD 25/190BE	NMD 25/190BE	G 1 1/2	G 1	97	500	140	180	268	100	70	240	190	49	50	14	133	133	306	13
I-B-NMD 25/190AE	NMD 25/190AE				500			268					49					306	

NMD 32/210
NMD 40/180



TYPE	NMD kg	B-NMD kg	I-NMD kg
B- **NMD 32/210DE**	60	66	
B- **NMD 32/210CE**	70	76	
B- **NMD 32/210BE**	76,5	82	
B- **NMD 32/210AE**	99	105	
I-B- **NMD 40/180DE**	59	65	61
I-B- **NMD 40/180CE**	69	75	71
I-B- **NMD 40/180BE**	75,5	81	77
I-B- **NMD 40/180AE**	97	102	99

B-NMD I-NMD	NMD	DN1 ISO 228	DN2 ISO 228	mm																	
				a	f	h1	h2	h3	m1	m2	n1	n2	z	b	s	l	l1	l2	w	g1	g2
B- NMD 32/210DE	NMD 32/210DE	G 2	G 1 1/4	110	530	155	215	283	205	175	194	140	15	54	10	-	150	150	139	-	6
B- NMD 32/210BE-CE	NMD 32/210BE-CE				550	150		310	280	250	258	190		68	12	-			108	38	-
B- NMD 32/210AE	NMD 32/210AE				625	170		355	298	268	286	216		70	12	-			152	38	-
I- B- NMD 40/180DE	NMD 40/180DE	G 2	G 1 1/2	121	535	155	215	283	205	175	194	140	15	54	10	-	145	145	133	-	6
I- B- NMD 40/180BE-CE	NMD 40/180BE-CE				555	150		310	280	250	258	190		68	12	-			102	38	-
I- B- NMD 40/180AE	NMD 40/180AE				630	170		355	298	268	286	216		70	12	-			145	38	-