

Utförande

Kortkopplad centrifugalpump med elmotorns axel förlängd in i pumphuset.

NM: singel pumphjul

NMD: med två stycken spegelvända pumphjul (med axiell balansering).

Anslutningar: gängade enligt ISO 228/1 (BS 2779).

Användning

- För rena vätskor utan slitande partiklar vilka ej är aggressiva mot materialet i pumpen (föroreningar innehållande upp till 0.2%).
- För vattenförsörjning.
- För värme, luftkonditionering, kylning och cirkulationsanläggningar.
- För civilt och industriellt ändamål.
- För brandbekämpning.
- För bevattnig.

Förutsättningar

Vätsketemperaturer upp till 90° C.

Omgivningstemperaturer upp till 40° C.

Total sughöjd upp till 7 m.

Maximalt tillåtet arbetstryck upp till 10 bar

(16 bar för pumparna NMD 25/190; NMD 32/210; NMD 40/180). Kontinuerlig drift.

Motor

2-pols induktionsmotor, 50 Hz ($n = 2900$ 1/min).

NM, NMD: trefas 230/400 V $\pm 10\%$ upp till 3 kW;
400/690 V $\pm 10\%$ från 4 till 9,2 kW;

NMM, NMDM: enfas 230 V, med termiskt överströmsskydd.

Isolationsklass F.

Kapslingsklass IP 54.

Konstruerad enligt IEC 34.

Specialutförande på begäran

- Andra spänningar.
- Frekvens 60 Hz (enligt 60Hz datablad).
- Kapslingsklass IP 55.
- Special mekaniska axeltätningar.
- Högre vätske eller omgivningstemperatur.

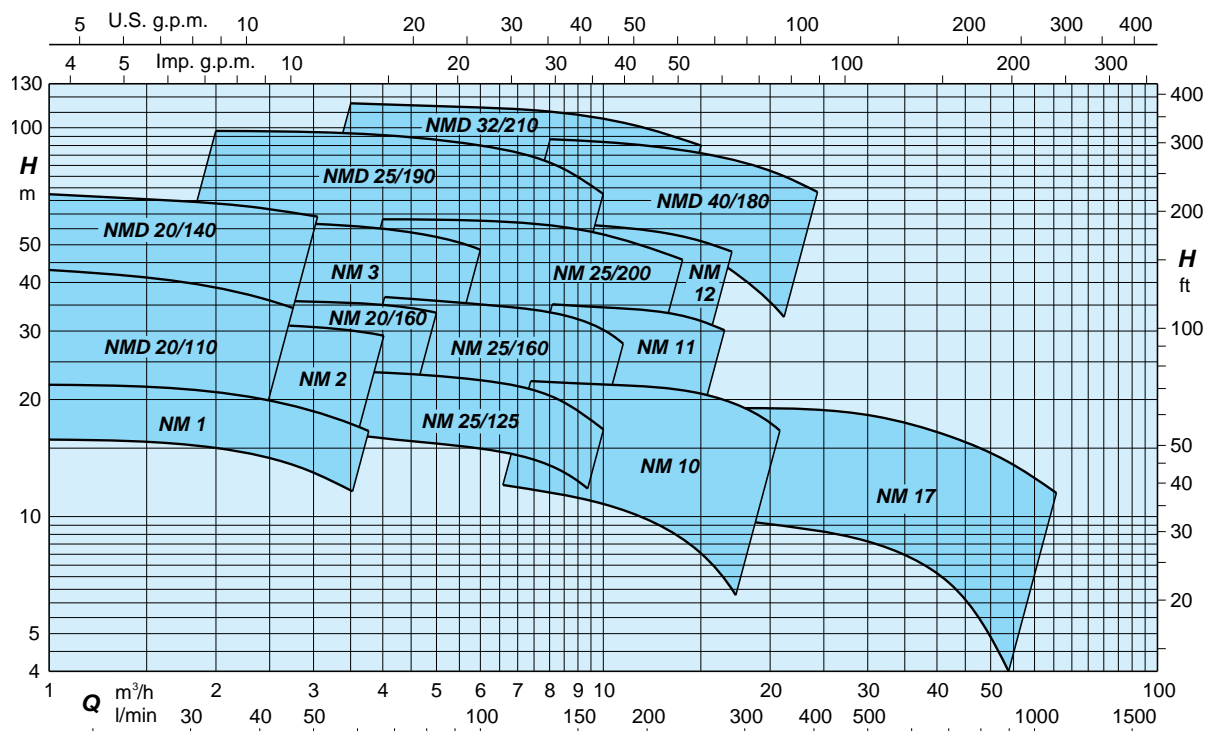
Garanti

Ett år enligt leveransbestämmelserna NL92.

Material

Komponenter	NM, NMD	B-NM, B-NMD	I-NM, I-NMD
Pumphus Mellandel	Gjutjärn 200 ISO 185	Brons G-Cu Sn 10 UNI 7013	Cr Ni Mo stål SIS 2343
Pumphjul	Mässing P- Cu Zn 40 Pb 2 UNI 5705		
NM 17	Gjutjärn 200 ISO 185	Brons G-Cu Sn 10 UNI 7013	
Axel	Cr Ni stål SIS2333 upp till 2.2 kW Cr stål SIS2320 från 3 kW till 9.2 kW	Cr Ni Mo stål SIS2343	
Axeltätning	Kol - Keramik		

Kapacitetsdiagram $n \approx 2900$ 1/min



Pumpkurvor $n \approx 2900$ 1/min

	NM	P ₂		Q m ³ /h														
		kW	HP															
				l/min	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
					16	20	25	31,5	40	50	60	70	80	90	100	110	125	140
	NM 1/AE ●	0,37	0,5	H m	22	21,5	21	20,5	20	19	17,5	15,5						
	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		33,5	33	32,5	32	31,5	30,5	29,5	28,5	27	26	24			
	NMM 3/CE	1,1	1,5		40	39,5	39	38	37	36	35	33,5						
	NM 3/CE	1,1	1,5		40	39,5	39	38,5	38	37	36	34	32*	29*				
	NMM 3/BE	1,5	2		43	42,5	42	41,5	41	40	39	37,5	35,5*	32,5*				
	NM 3/BE	1,5	2		50	49,5	49	48,5	48	47	46	45	43*	40*	37*	33*	26*	
	NM 3/AE	2,2	3		58	57,5	57	56,5	56	55	54	53	51*	49*	47*	43*	36*	

B-NM B-NMD I-NMD	NM NMD	P ₂		Q m ³ /h														
		kW	HP															
				l/min	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
					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	H m	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		52	51,5	51	50	48,5	47	45							
I-B-NMD 20/140BE	NMD 20/140BE	1,1	1,5		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-NM B-NMD I-NM I-NMD	NM NMD	P ₂		Q m ³ /h														
		kW	HP															
				l/min	2,4	3	3,6	4,8	6	6,6	7,5	8,4	9,6	10,8	12	13,2	15	16,8
					40	50	60	80	100	110	125	140	160	180	200	220	250	280
	NM 25/125BE ●	0,55	0,75	H m	20,5	20,5	20,3	19,5	18,5	18	17	15,5	14*	11,5*				
	NM 25/125AE ●	0,75	1		24	24	23,7	23,2	22,5	22	21	20	18*	16*				
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			42,5	42	41	40	39,5	38,5	37,5	36	33*	29*			
I-B-NM 25/200AE	NM 25/20AE	3	4			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		Q m ³ /h															
		kW	HP																
				l/min	6,6	7,5	8,4	9,6	10,8	12	13,2	15	16,8	18,9	21	24	27	30	
					110	125	140	160	180	200	220	250	280	315	350	400	450	500	
	NM 10/FE ●	0,55	0,75	H m	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		26,5	25,5	25	24	23	22,5	21,5	19,5	17,5						
	NM 11/BE	1,5	2		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*						

Kapacitet $n \approx 2900$ 1/min

1

B-NMD I-NMD	NMD	P ₂		Q m ³ /h l/min	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		90	100	110	125	140	160	180	200	220	250	280	315	350	400	
B-NMD 32/210DE	NMD 32/210DE	4	5,5	H m	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		114	113	112	110	108	105	103	99	96*	90*					
I-B-NMD 40/180DE	NMD 40/180DE	4	5,5					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	P ₂		Q m ³ /h l/min	21	24	27	30	33	37,8	42	48	54	60	66	75	84	96	
		kW	HP		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	H m	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		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				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 Standardutförande.
 B-NM, B-NMD Bronsutförande.
 I-NM, I-NMD Syrafast stål utförande.

P₂ Uttagen motoreffekt.
 H Total höjd i m.

● med enfasmotor = NMM - NMDM.
 * Maximal sughöjd 1-2 m.
 Toleranser enligt ISO 2548, bilaga B.

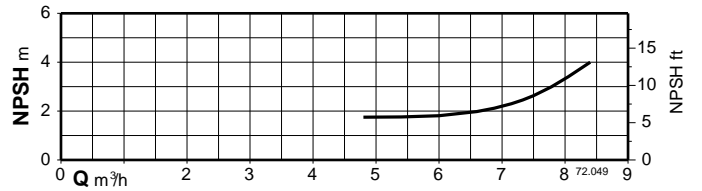
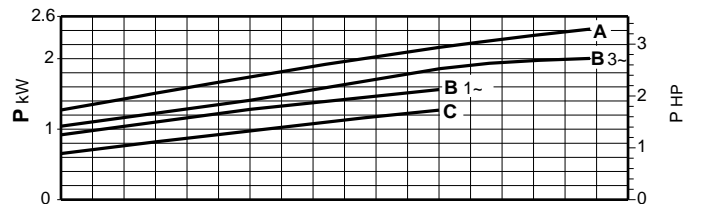
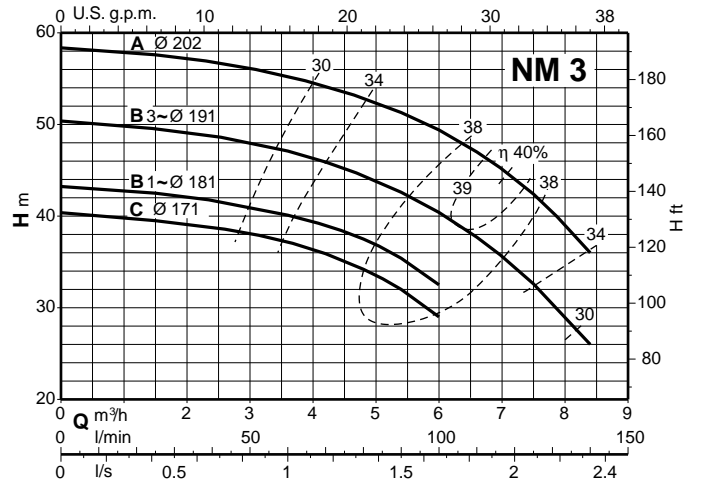
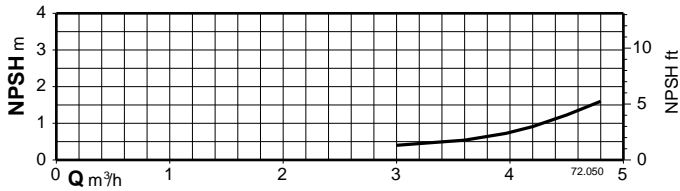
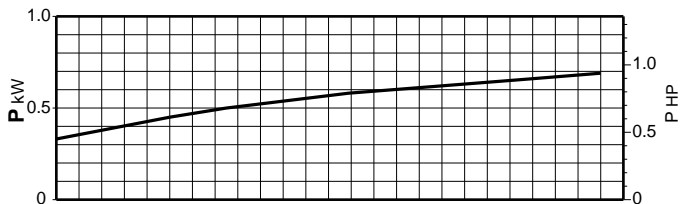
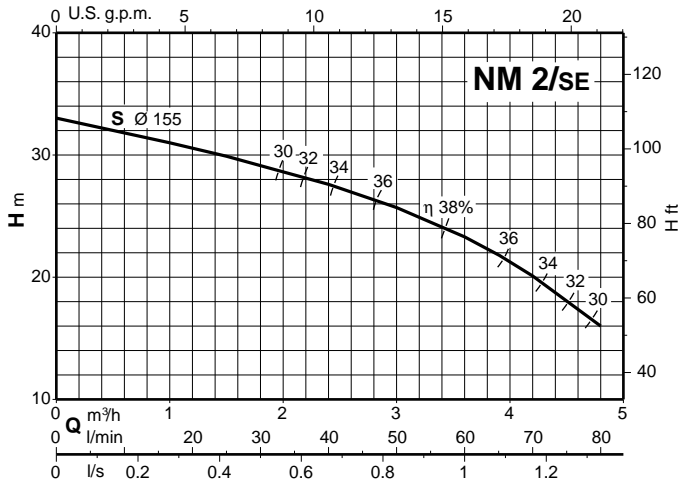
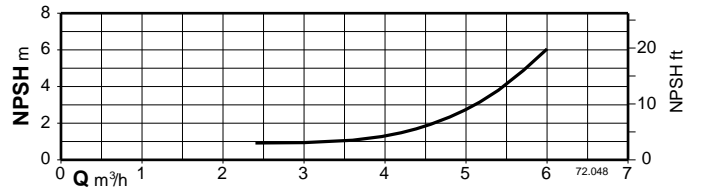
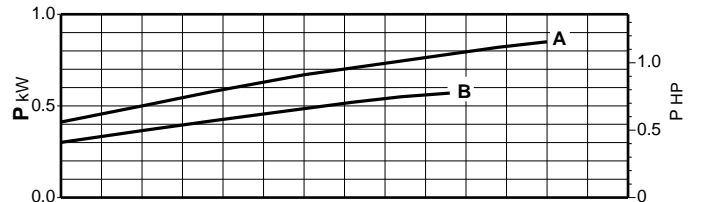
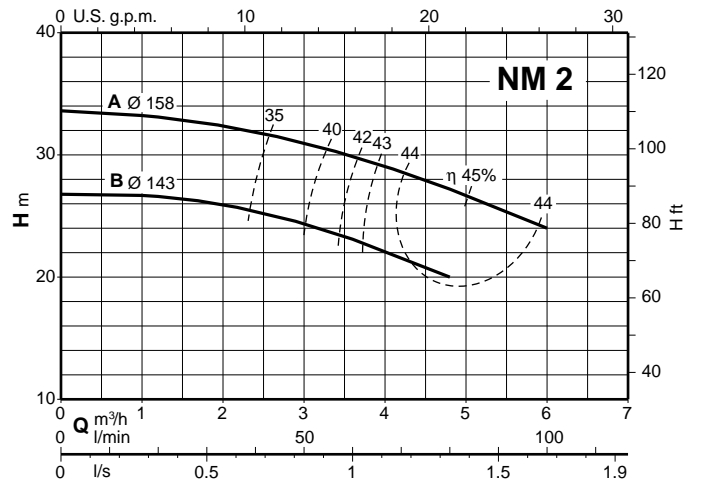
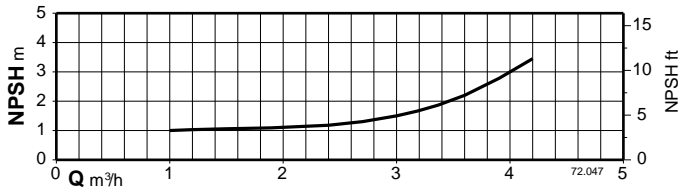
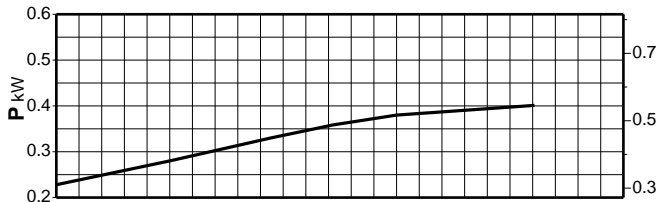
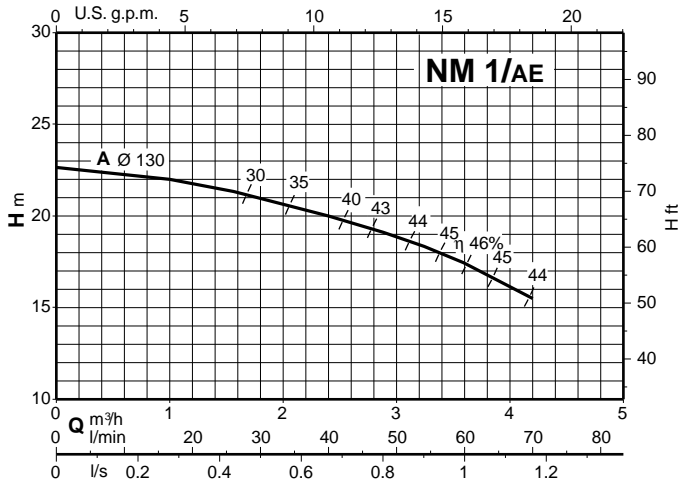
Strömförbrukning

P1 kW	P2		230 V 1~ IN A	IA/IN
	kW	HP		
0,6	0,37	0,5	3	2,6
0,71	0,45	0,6	3,6	2,9
0,91	0,55	0,75	4,5	3,1
1,2	0,75	1	5,7	3
1,6	1,1	1,5	7,4	3
2	1,5	2	9,2	2,5

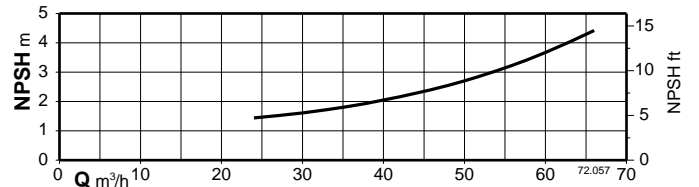
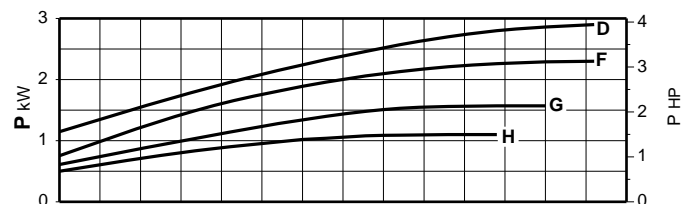
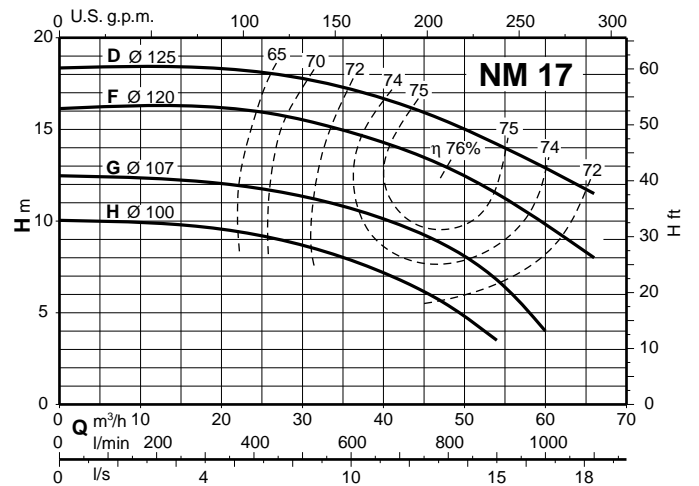
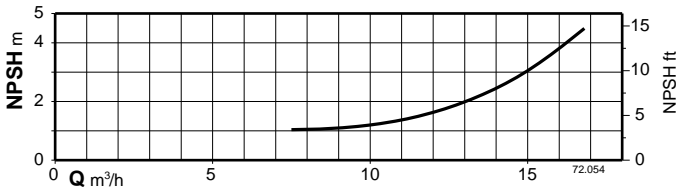
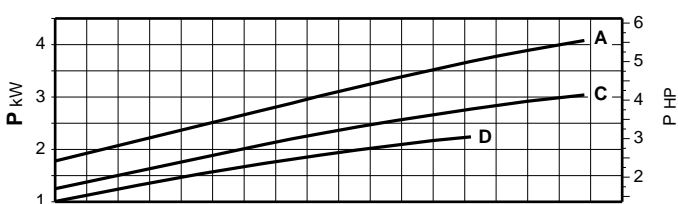
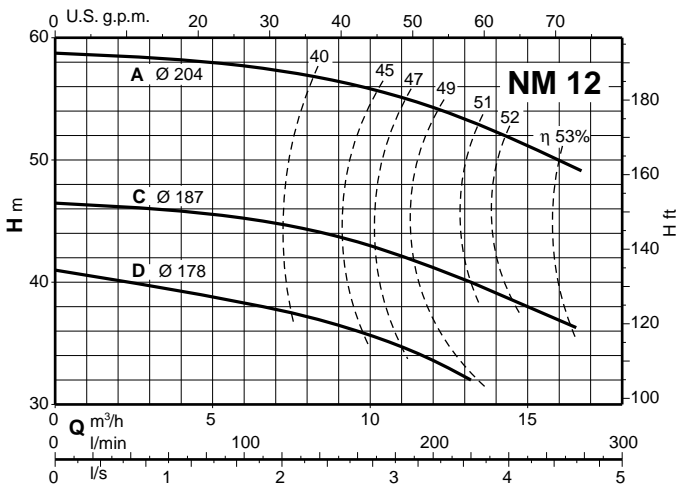
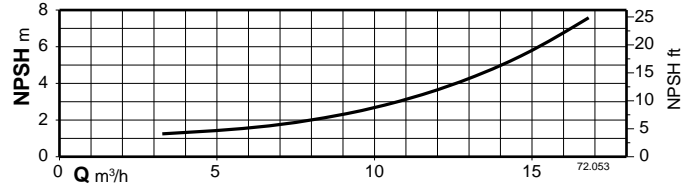
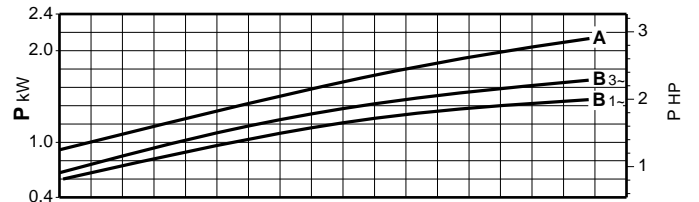
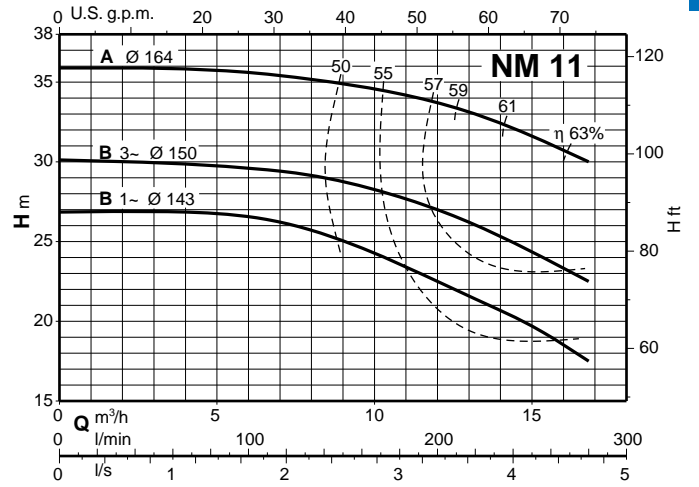
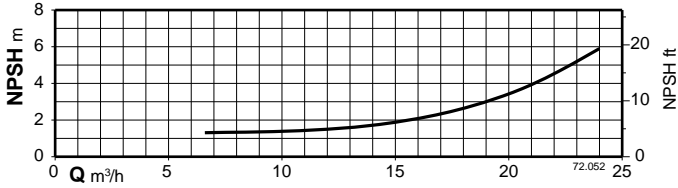
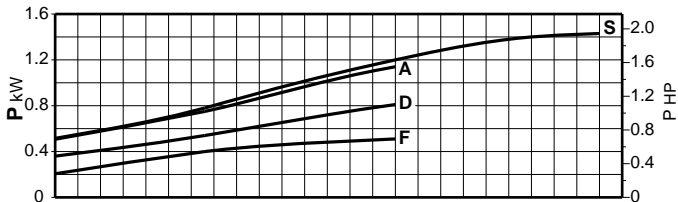
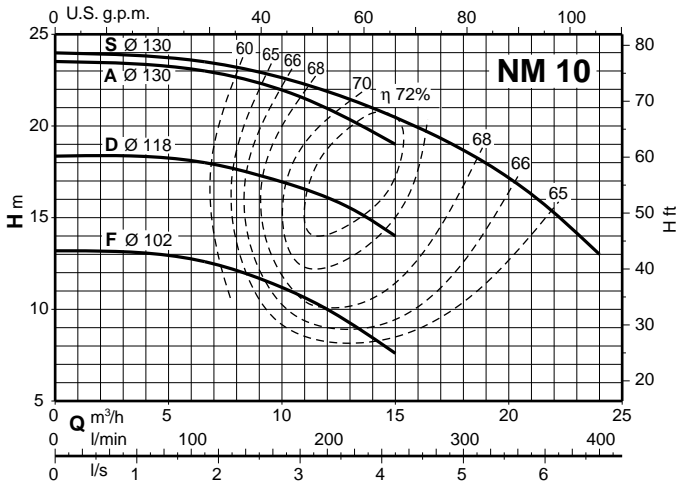
P2		230 V Δ / 400 V Y 400 V Δ / 690 V Y			IA/IN
kW	HP	IN A	IN A	IN A	
0,37	0,5	2,4	1,4		3,8
0,45	0,6	2,5	1,5		3,8
0,55	0,75	3	1,7		4,7
0,75	1	4	2,3		5,5
1,1	1,5	5	2,9		5,4
1,5	2	7,5	4,3		5,2
2,2	3	9,15	5,3		4,7
3	4	11,5	6,6		7,8
4	5,5		9,6	5,5	5,9
5,5	7,5		12	7	6
7,5	10		16	9,2	9,3
9,2	12,5		20	11,5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

P1 Maximal ineffekt.
 P2 Uttagen motoreffekt.
 IA/IN D.O.L. startström / Driftström

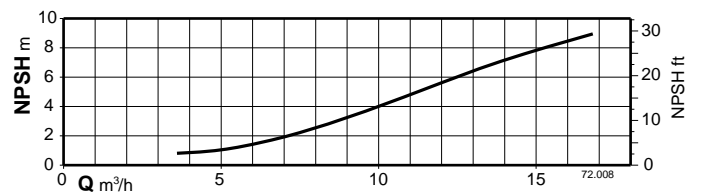
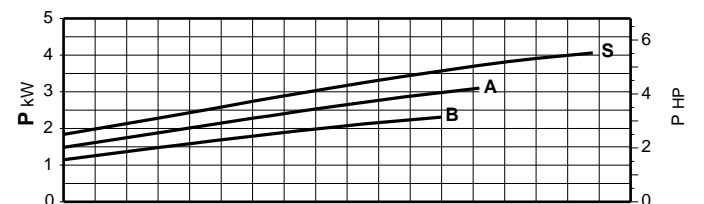
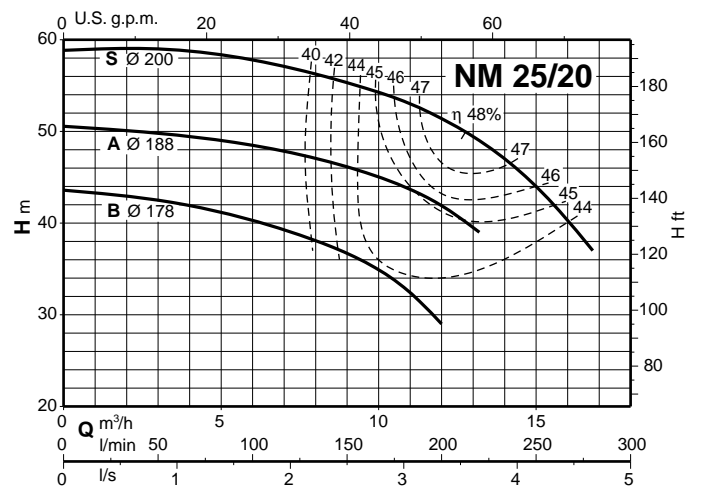
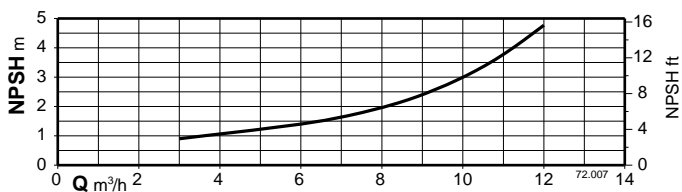
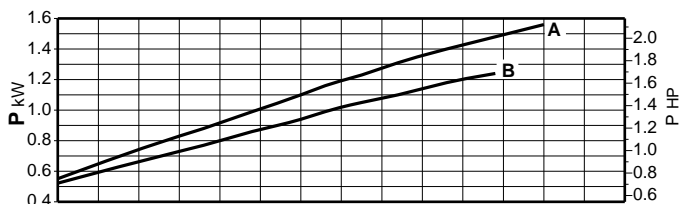
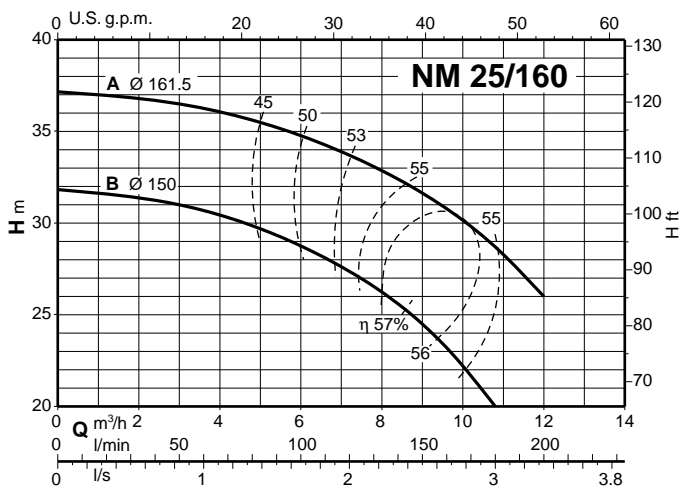
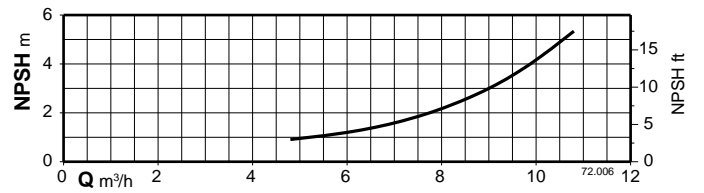
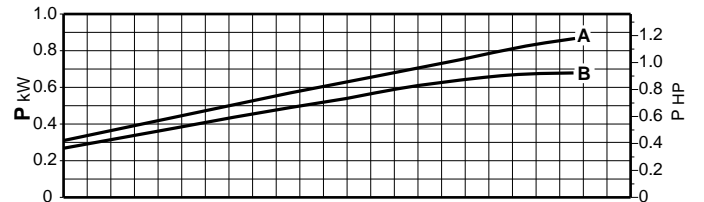
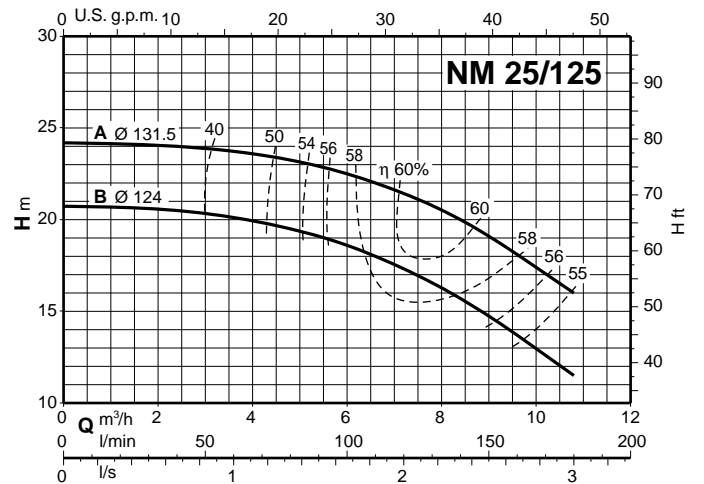
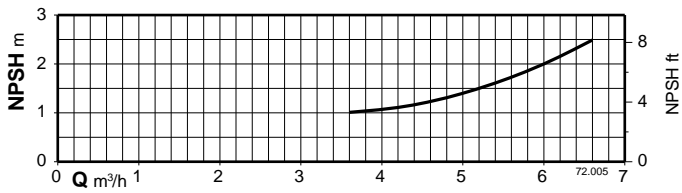
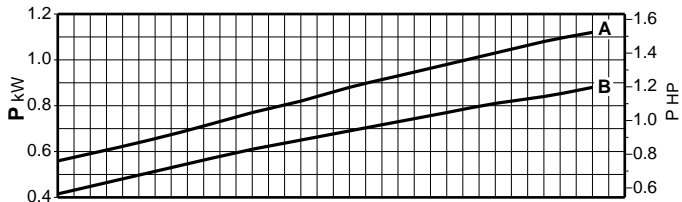
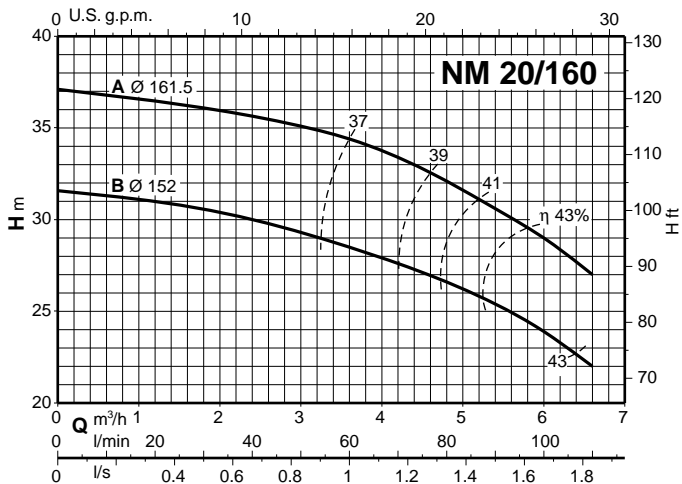
Pumpkurvor $n \approx 2900$ 1/min



Pumpkurvor $n \approx 2900$ 1/min

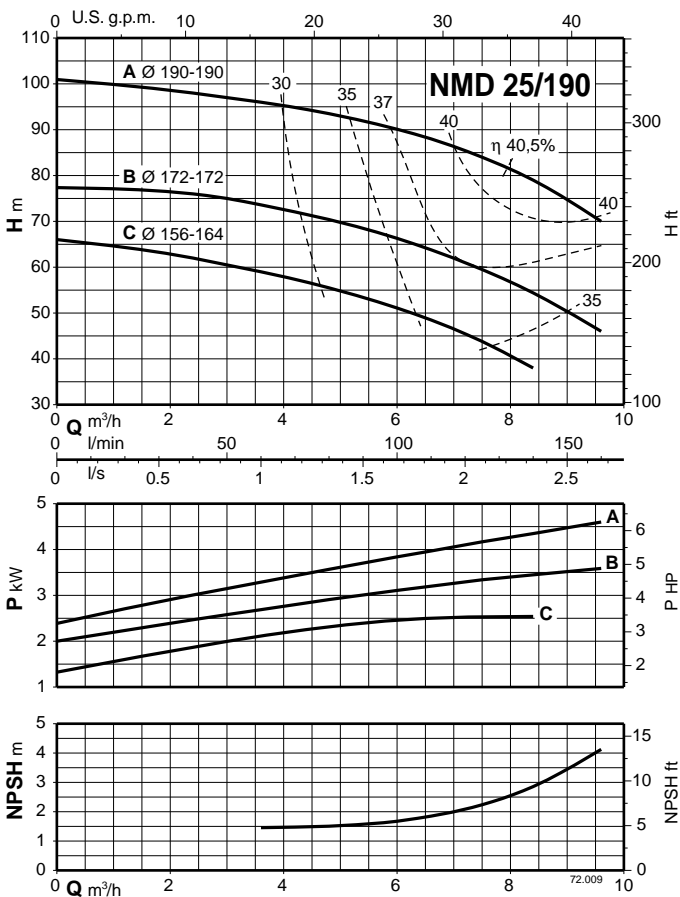
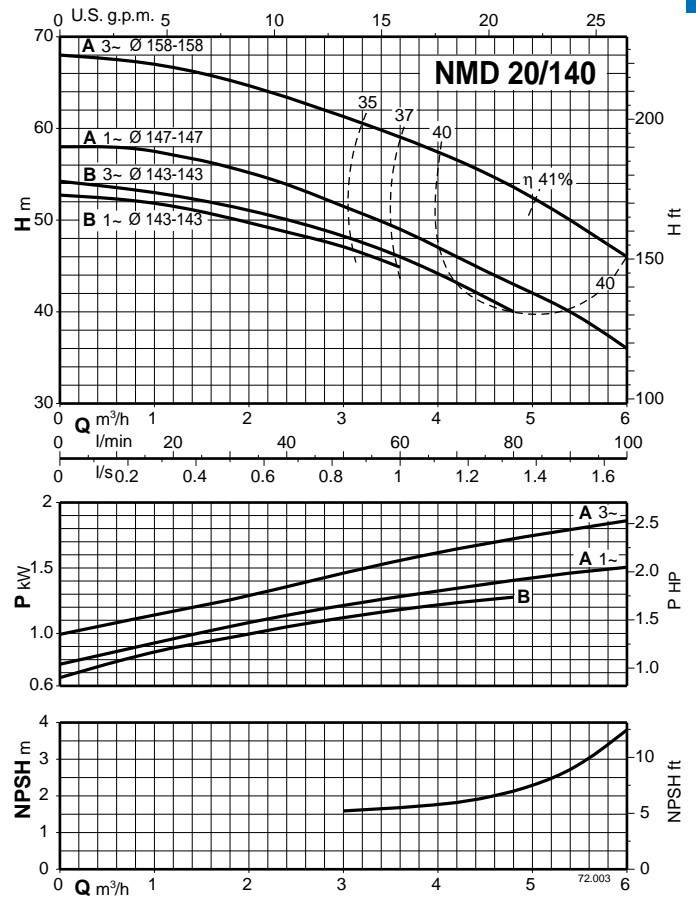
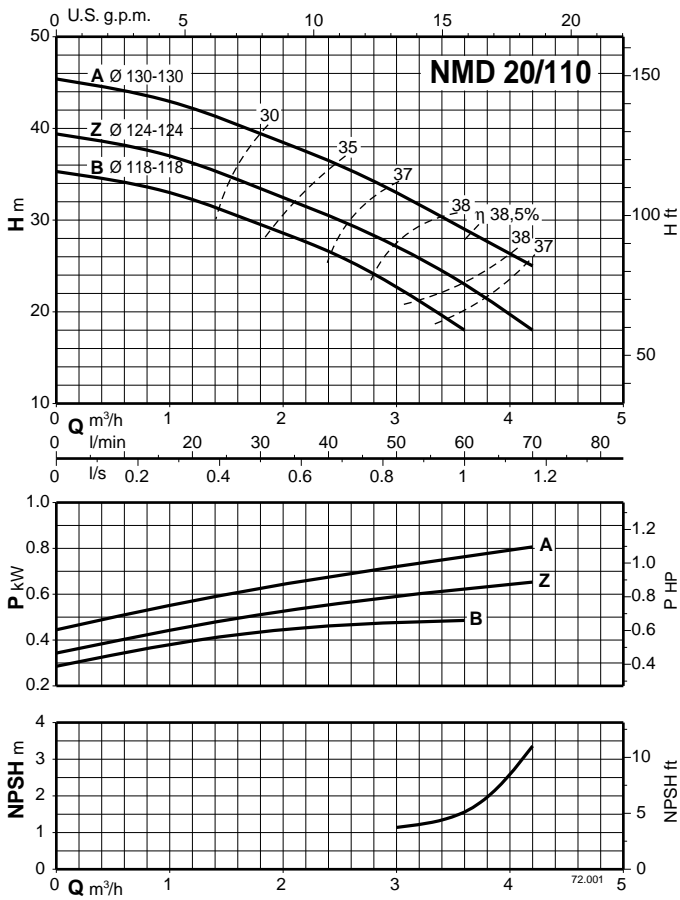


Pumpkurvor $n \approx 2900$ 1/min

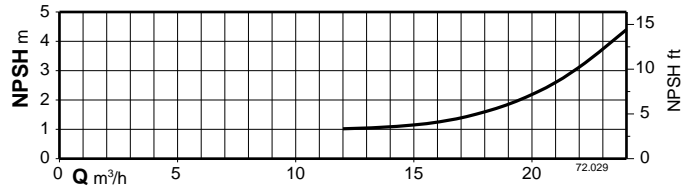
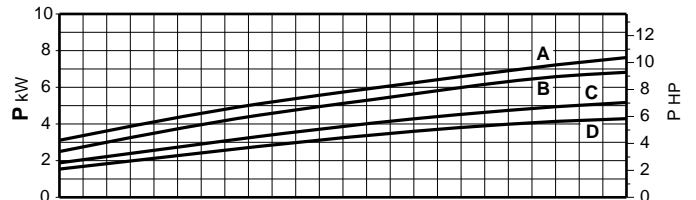
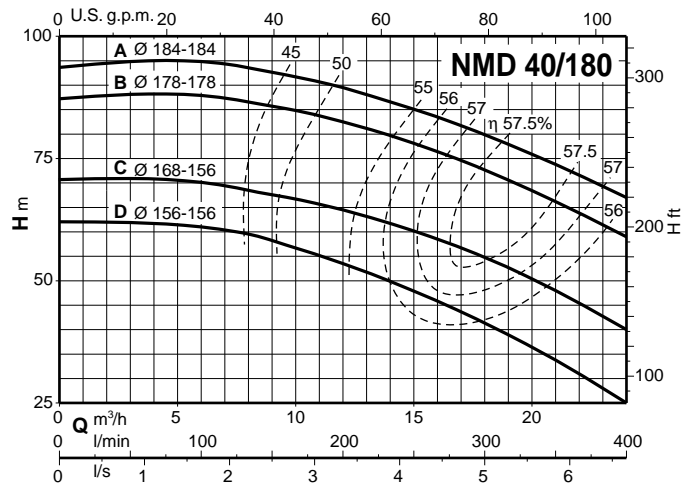
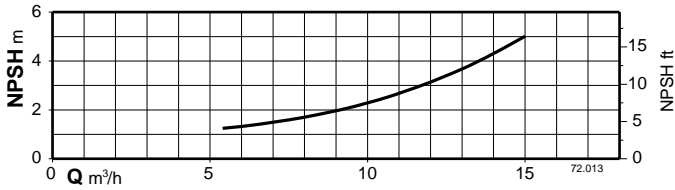
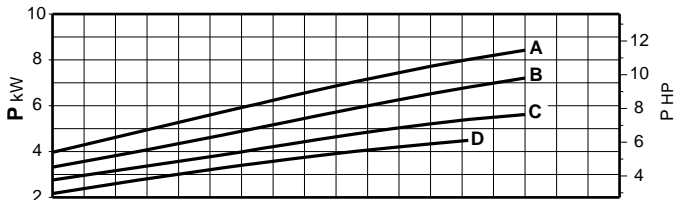
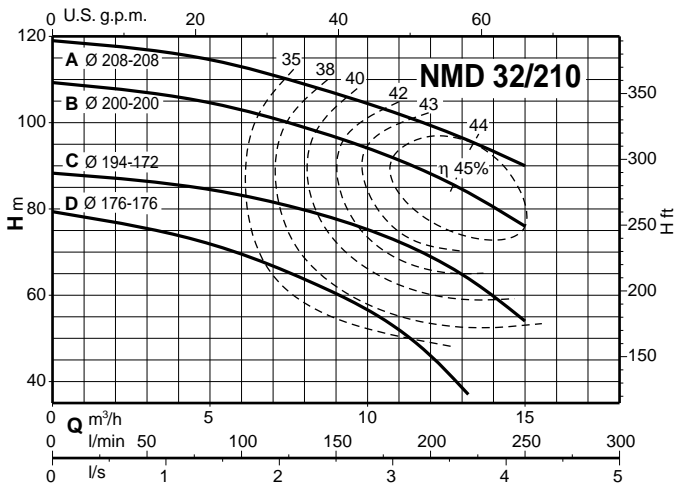


Pumpkurvor $n \approx 2900$ 1/min

1

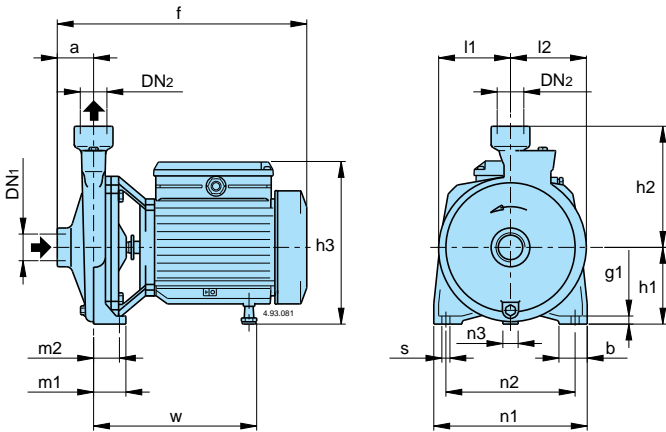


Pumpkurvor $n \approx 2900$ 1/min



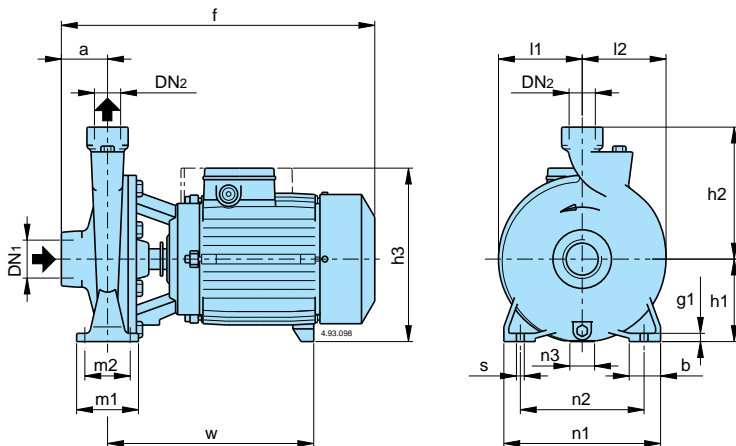
Dimension och vikter

1



TYPE	NMM kg	NM kg	B-NM kg
NM 1/AE	9	9	
NM 2/BE	14,5	13,7	
NM 2/SE	14,7	13,9	
NM 2/AE	15,7	15	
NM 3/CE	24,8	23,6	
NM 3/BE	26,8	25,8	
NM 3/AE		27	
NM 10/FE	19	18,8	
NM 10/DE	19,2	18,9	
NM 10/AE	21,6	20,3	
NM 10/SE	23,2	22,2	
NM 11/BE	26	25	
NM 11/AE		26	
NM 12/DE		31,5	
NM 12/CE		38,3	
NM 12/AE		42	
B- NM 17/HE	25	22,5	24,5
B- NM 17/GE	30	25	27
B- NM 17/FE		26	28
B- NM 17/DE		32	34

B-NM	NM	DN ₁ ISO 228	DN ₂	mm															
				a	f	h ₁	h ₂	h ₃	m ₁	m ₂	n ₁	n ₂	n ₃	b	s	l ₁	l ₂	w	g ₁
	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	200	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
	NM 10/SE-AE-DE-FE	G 2	G 1 1/4	63	382	100	150	210	50	35	190	140	30	50	13	90	97	239	14
	NM 11/AE-BE	G 2	G 1 1/4	70	400	112	170	222	50	35	210	160	37	50	15	103	110	247	14
	NM 12/DE				400			242					47					247	
	NM 12/CE	G 2	G 1 1/4	70	465	132	190	260	50	35	240	190	45	50	15	125	127	300	14
	NM 12/AE				465			260					45					300	
	B- NM 17/HE				417			222					37					257	
	B- NM 17/GE				417			222					37					257	
	B- NM 17/FE	G 2 1/2	G 2 1/2	80	417	112	160	222	50	35	210	160	37	50	14	96	113	257	14
	B- NM 17/DE				475			240					20					295	

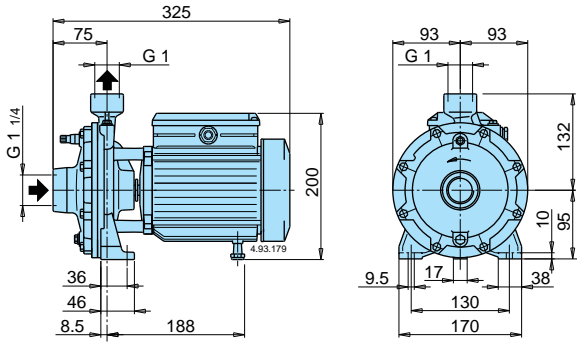


TYPE	NMM kg	NM kg	B-NM kg	I-NM kg
B- NM 20/160BE	20,9	19,8	21,5	
B- NM 20/160AE	22,2	21	23	
NM 25/125BE	19	18		
NM 25/125AE	19	18		
B- NM 25/160BE	22	21,2	23,5	
B- NM 25/160AE	23,6	22,8	25	
NM 25/20BE		30		
NM 25/20AE		39		
NM 25/20SE		43		
I- B- NM 25/200BE			32	31
I- B- NM 25/200AE			41	40
I- B- NM 25/200SE			45	44

B-NM I-NM	NM	DN ₁ ISO 228	DN ₂	mm															
				a	f	h ₁	h ₂	h ₃	m ₁	m ₂	n ₁	n ₂	n ₃	b	s	l ₁	l ₂	w	g ₁
B- NM 20/160AE-BE	NM 20/160AE-BE	G 1 1/4	G 3/4	53	375	100	150	210	75	55	190	150	30	38	9,5	102	102	246	10
	NM 25/125AE-BE	G 1 1/2	G 1	56	380	90	140	200	75	55	170	130	9	38	9,5	85	88	250	10
B- NM 25/160AE-BE	NM 25/160AE-BE	G 1 1/2	G 1	56	380	100	160	210	75	55	190	150	30	38	9,5	102	102	246	10
	NM 25/20BE				393			235					49					251	
	NM 25/20AE-SE	G 1 1/2	G 1	63	455	125	180	253	90	65	245	200	42	45	11,5	125	125	295	11
I- B- NM 25/200-BE					405			235					49					263	
I- B- NM 25/200-AE-SE		G 1 1/2	G 1	63	455	125	180	253	90	65	245	200	42	45	11,5	125	125	295	11

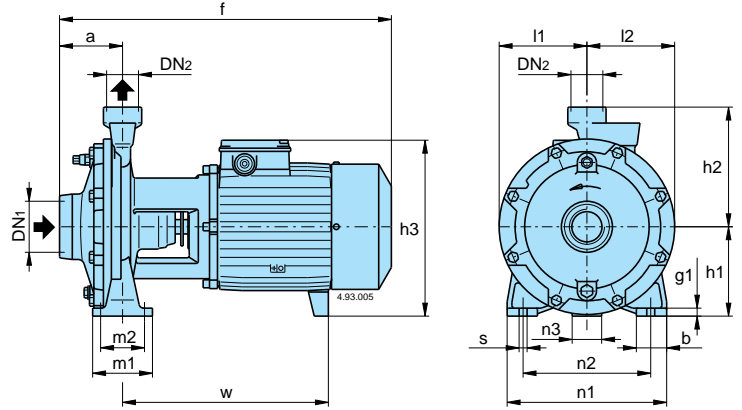
Dimension och vikter

NMD 20/110



TYPE	NMDM kg	NMD kg	B-NMD kg
B- NMD 20/110BE	14,3	13,7	15,7
B- NMD 20/110ZE	15,7	14,7	16,5
B- NMD 20/110AE	16,6	15,6	17

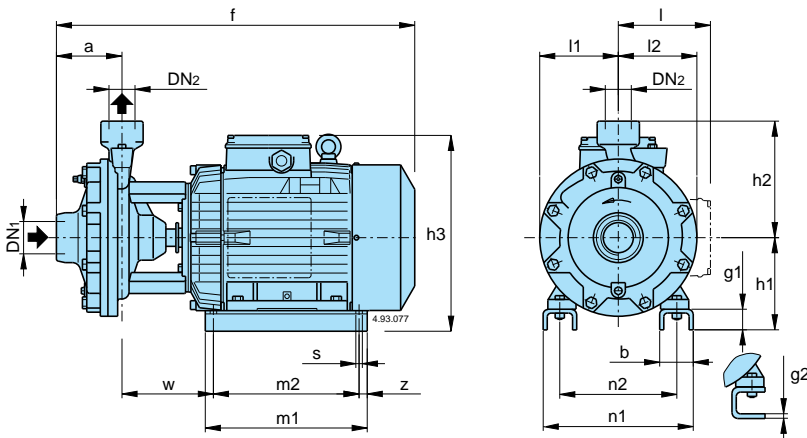
NMD 20/140 NMD 25/190



TYPE	NMDM kg	NMD kg	B-NMD kg	I-NMD kg
I- B- NMD 20/140BE	24,8	23,6	26	25
I- B- NMD 20/140AE	26,6	25,6	28	27
I- B- NMD 25/190CE		39	41	40
I- B- NMD 25/190BE		46	48	47
I- B- NMD 25/190AE		51	54	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	14			274			
I-B- NMD 25/190BE	NMD 25/190BE	G 1 1/2	G 1	97	495	140	180	268	100	70	240	190	49	50	14	133	133	306	13	
I-B- NMD 25/190AE	NMD 25/190AE				495		268						49				306			

NMD 32/210 NMD 40/180



TYPE	NMD kg	B-NMD kg	I-NMD kg
B- NMD 32/210DE	61	64	
B- NMD 32/210CE	70	73	
B- NMD 32/210BE	77	80	
B- NMD 32/210AE	95	98	
I- B- NMD 40/180DE	61	64	63
I- B- NMD 40/180CE	69	72	71
I- B- NMD 40/180BE	76	79	78
I- B- NMD 40/180AE	96	99	98

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			110	525	155	215	283	205	175	194	140	15	54	10	-	170	150	139	-	6
B- NMD 32/210BE-CE	NMD 32/210BE-CE	G 2	G 1 1/4		550	150		-	280	250	258	190	15	68	12	-	150	150	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				530	155		283	205	175	194	140		54	10	-			133	-	6
I- B- NMD 40/180BE-CE	NMD 40/180BE-CE	G 2	G 1 1/2	121	555	150	215	-	280	250	258	190	15	68	12	170	145	145	102	38	-
I- B- NMD 40/180AE	NMD 40/180AE				630	170		355	298	268	286	216		70	12	-			145	38	-