

Single-Impeller Centrifugal Electric Pumps

CEA-CEA(N) Series

MARKET SECTORS

CIVIL, AGRICULTURAL, INDUSTRIAL.

APPLICATIONS

Version made of AISI 304

- Handling of chemically and mechanically non-aggressive water and liquids (*).
- Water supply.
- Irrigation.
- Water circulation (cold, hot, refrigerated).

* For moderately aggressive liquids, a version with FPM elastomers is available (CEA../..-V). For aggressive liquids, please contact our sales network.

"N" version made of AISI 316 (for aggressive liquids)

- Reverse osmosis (where demineralized water is used).
- Industrial washing.
- Thermal waters.
- Chlorine dispensing in swimming pools.
- Jewellery industry.
- Wine production.

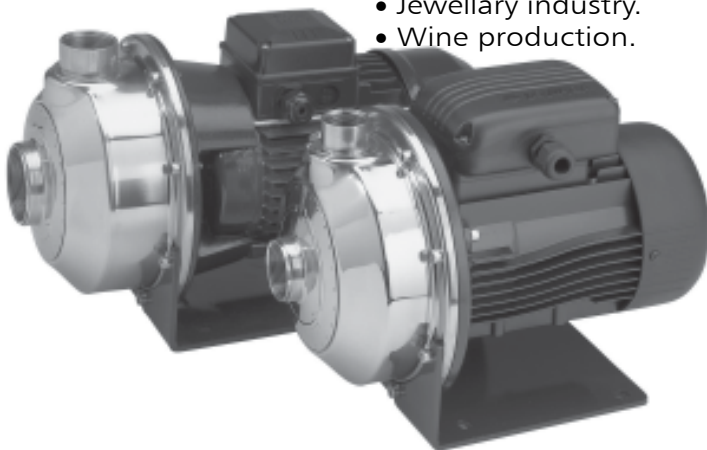
the overload protection must be provided and installed by the user in the control panel.

- **Three-phase** versions: 220-240/380-415 V 50 Hz, 2 poles, the overload protection must be provided and installed by the user in the control panel.

- Condensate drain plugs in the standard version.

CONSTRUCTION CHARACTERISTICS

- Close-coupled, single-impeller centrifugal pump featuring axial suction and radial discharge.
 - Compact construction, with pump coupled directly to motor; special motor shaft extension in common with the pump and supported by ball bearings.
 - Rotating assembly with back pull-out design, eliminating the need to disconnect the pump body from the pipe line.
 - Threaded suction and discharge ports (Rp ISO 7).
 - High performance enclosed **Impeller** made of **AISI 304** stainless steel (**AISI 316** for N version).
 - **Mechanical seal** with Ceramic/Carbon rings, NBR elastomers, (EPDM for N version) other parts are made of AISI 304 stainless steel (AISI 316 for N version). Mounting dimensions according to EN 12756 (ex DIN 24960) and ISO 3069.
 - **O-rings** made of NBR (EPDM for N version).
 - Mounting pedestal on pump body.
- #### OPTIONAL FEATURES
- Different voltages and frequencies.
 - Different material for the mechanical seal and O-rings.



SPECIFICATIONS PUMP

- **Delivery** up to 520 l/min (31 m³/h)
- **Head** up to 32 m.
- **Temperature** of pumped liquid: -10°C to +85°C standard version. -10°C to +110°C (N and V versions).
- Maximum operating **pressure** : 8 bar (PN 8).
- Counter-clockwise rotation facing the pump from the suction port.

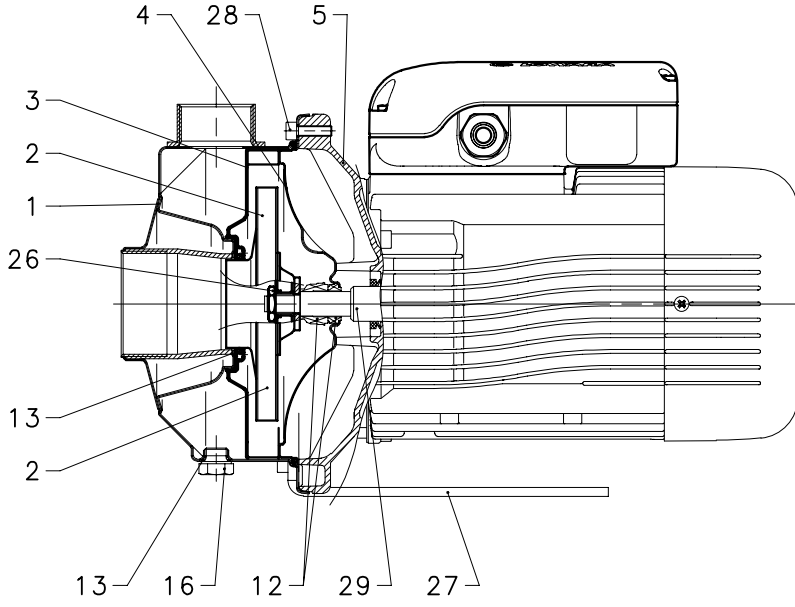
MOTOR

- Asynchronous, squirrel cage rotor, close construction, external ventilation.
- **Protection class**: IP55.
- Class 155 (F) **Insulation**.
- Performances to EN 60034-1 specifications.
- **Standard voltage**:
 - **Single-phase** versions: 220-240 V 50 Hz, 2 poles, with automatic reset overload protection up to 1,5 kW. For higher powers,

- **Standard supplied IE2 motors are compliant with Regulation (EC) no. 640/2009.**

**CEA - CEA(N) SERIES
LIST OF MODELS AND TABLE OF MATERIALS**

04304_C_DS



VERSIONS

CEA70/3
CEA70/5
CEA80/5
CEA120/3
CEA120/5
CEA210/2
CEA210/3
CEA210/4
CEA210/5
CEA370/1
CEA370/2
CEA370/3
CEA370/5

cea-ceaN-en_a_mo

CEA SERIES TABLE OF MATERIALS

REF. N.	PART	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
2	Impeller	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
3	Diffuser	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
4	Seal housing	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
5	Adapter	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
12	Mechanical seal	Ceramic / Carbon / NBR (standard version)		
13	Elastomers	NBR (standard version)		
16	Fill/drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
26	Impeller lock nut	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
27	Mounting pedestal	Painted steel		
28	Pump body fastening nuts and bolts	Zinc-plated steel		
29	Shaft extension	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316

cea-cea-en_b_tm

CEA(N) SERIES TABLE OF MATERIALS

REF. N.	PART	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
2	Impeller	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
3	Diffuser	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
4	Seal housing	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
5	Adapter	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
12	Mechanical seal	Ceramic / Carbon /EPDM		
13	Elastomers	EPDM		
16	Fill/drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
26	Impeller lock nut	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
27	Mounting pedestal	Painted steel		
28	Pump body fastening nuts and bolts	Zinc-plated		
29	Shaft extension	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316

cea-ceaN-en_a_tm

CEA-CEA(N) SERIES HYDRAULIC PERFORMANCE TABLE AT 50 Hz, 2 POLES

PUMP TYPE	RATED POWER		Q = DELIVERY																		
			l/min	0	30	40	60	80	100	120	140	160	180	200	250	300	350	400	430	480	520
	kw	HP	m ³ /h	0	1,8	2,4	3,6	4,8	6	7,2	8,4	9,6	10,8	12	15	18	21	24	26	29	31
H = TOTAL HEAD METRES COLUMN OF WATER																					
CEA(M) 70/3	0,37	0,5	22	20,1	19,1	16,6	12,8														
CEA(M) 70/5	0,55	0,75	31,1	28,8	27,7	24,7	20,2														
CEA(M) 80/5	0,75	1	32	30	29,3	27,4	24,7	21													
CEA(M) 120/3	0,55	0,75	22,4			18,9	17,5	15,9	14	11,8	9,2										
CEA(M) 120/5	0,9	1,2	31,8			28,2	26,5	24,6	22,4	20	17,3										
CEA(M) 210/2	0,75	1	17,7						16,5	16,1	15,6	15	14,4	12,6	10,4						
CEA(M) 210/3	1,1	1,5	20,8						19,7	19,3	19	18,5	18	16,5	14,4						
CEA(M) 210/4	1,5	2	25,5						24,8	24,5	24	23,6	23	21,3	19						
CEA(M) 210/5	1,85	2,5	29						28,2	27,9	27,5	27,1	26,6	25,1	23,1						
CEA(M) 370/1	1,1	1,5	16,3									15,5	15,2	14,3	13	11,4	9,4	8,1			
CEA(M) 370/2	1,5	2	20,4										19,1	18,3	17,2	15,8	14,1	13	10,8		
CEA(M) 370/3	1,85	2,5	24,4										22,9	22,1	21,1	19,8	18,2	17,1	15	13	
CEA370/5	3	4	30,3										28,3	27,5	26,5	25,3	23,8	22,8	21	19,0	

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CEA-CEA(N) SERIES ELECTRICAL DATA AT 50 Hz, 2 POLES

PUMP TYPE 1~	MOTOR TYPE	INPUT POWER*	INPUT CURRENT*	CAPACIT.	PUMP TYPE 3~	MOTOR TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
		kw	220-240 V A	μF / 450 V			kw	220-240 V A	380-415 V A
CEAM70/3	SM63BG/1045	0,60	2,72	14	CEA70/3	SM63BG/304	0,61	2,51	1,45
CEAM70/5	SM71BG/1055	0,97	4,55	16	CEA70/5	SM71BG/305	0,88	2,86	1,65
CEAM80/5	SM71BG/1075	1,07	4,87	20	CEA80/5	SM80BG/307HE	1,02	3,23	1,87
CEAM120/3	SM71BG/1055	0,91	4,33	16	CEA120/3	SM71BG/305	0,82	2,74	1,58
CEAM120/5	SM71BG/1095	1,39	6,24	25	CEA120/5	SM80BG/311HE	1,32	4,07	2,35
CEAM210/2	SM71BG/1075	1,13	5,10	20	CEA210/2	SM80BG/307HE	1,10	3,39	1,96
CEAM210/3	SM80BG/1115	1,48	6,68	30	CEA210/3	SM80BG/311HE	1,39	4,24	2,45
CEAM210/4	SM80BG/1155	1,91	8,60	40	CEA210/4	PLM90BG/315	1,77	5,33	3,08
CEAM210/5	PLM90BG/1225	2,24	10,2	70	CEA210/5	PLM90BG/322	2,20	7,35	4,24
CEAM370/1	SM80BG/1115	1,49	6,75	30	CEA370/1	SM80BG/311HE	1,44	4,34	2,51
CEAM370/2	SM80BG/1155	2,05	9,26	40	CEA370/2	PLM90BG/315	1,99	5,90	3,41
CEAM370/3	PLM90BG/1225	2,45	11,1	70	CEA370/3	PLM90BG/322	2,45	7,84	4,53
					CEA370/5	PLM90BG/330	3,26	10,1	5,86

*Maximum value in specified range.

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MOTORS FOR CEA-CEA(N) SERIES

Standard supplied IE2 three-phase surface motors $\geq 0,75$ kW are compliant with Regulation (EC) no. 640/2009 and IEC 60034-30.

Electrical performances according to EN 60034-1.

Insulation class 155 (F). IP55 protection. Condensate drain plugs on standard version.

Cooling by fan according to EN 60034-6.

Cable gland metric size according to EN 50262. Standard voltage:

- **Single-phase version:** 220-240 V 50 Hz (incorporated automatic-reset overload protection).
- **Three-phase version:** 220-240/380-415 V 50 Hz (overload protection to be provided by the user).

SINGLE-PHASE MOTORS AT 50 Hz, 2 POLES

P _N kW	MOTOR TYPE	IEC SIZE	Construction Design	INPUT CURRENT I _n (A)		CAPACITOR		DATA FOR 230 V 50 Hz VOLTAGE					
				220-240 V	μF	V	min ⁻¹	Is / I _n	η %	cosφ	T _n Nm	T _s /T _n	T _m /T _n
0,4	SM63BG/1045	63	SPECIAL	2,79-2,85	14	450	2745	2,64	65,1	0,96	1,39	0,68	1,63
0,55	SM71BG/1055	71		3,76-3,99	16	450	2820	3,72	68,9	0,91	1,86	0,61	2,00
0,75	SM71BG/1075	71		4,90-4,85	20	450	2765	3,42	70,1	0,96	2,59	0,58	1,75
0,95	SM71BG/1095	71		6,25-5,89	25	450	2740	3,39	71,1	0,98	3,31	0,58	1,66
1,1	SM80BG/1115	80		6,88-6,65	30	450	2800	3,89	74,7	0,96	3,75	0,46	1,72
1,5	SM80BG/1155	80		9,21-8,58	40	450	2810	4,00	76,1	0,98	5,09	0,39	1,74
1,85	PLM80BG/1225	90		12,5-11,6	70	450	2825	4,47	82,4	0,97	7,43	0,53	1,87

THREE-PHASE MOTORS AT 50 Hz, 2 POLES

cea-motm-2p50-en_a_te

P _N kW	Efficiency η _N %																		IE	Year of manufacture	
	Δ 220 V Y 380 V			Δ 230 V Y 400 V			Δ 240 V Y 415 V			Δ 380 V Y 660 V			Δ 400 V Y 690 V			Δ 415 V					
	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4			
0,4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	By June 2011
0,55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0,75	77,4	77,4	74,0	77,4	77,4	74,0	77,4	77,4	74,0	77,4	77,4	74,0	77,4	77,4	74,0	77,4	77,4	74,0	-		
0,9	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9	2		
1,1	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9			
1,5	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8			
1,85	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7			
2,2	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7			
3	85,5	86,8	85,6	86,1	86,8	85,6	86,3	86,8	85,6	85,5	86,8	85,6	85,5	86,8	85,6	85,5	86,8	85,6			

P _N kW	Model	IEC SIZE	Construction Design	N. of Poles	f _n Hz	Data for 400 V / 50 Hz Voltage				
						cosφ	Is / I _N	T _N Nm	T _s /T _N	T _m /T _N
0,4	SM63BG/304	63	SPECIAL	2	50	0,66	4,32	1,38	4,14	3,13
0,55	SM71BG/305	71				0,74	5,97	1,85	3,74	3,56
0,75	SM80BG/307HE	80				0,79	8,70	2,47	4,71	4,09
0,9	SM80BG/311HE	80				0,82	8,98	3,63	4,62	4,00
1,1	SM80BG/311HE	80				0,82	8,98	3,63	4,62	4,00
1,5	PLM90BG/315	90				0,86	7,86	4,96	3,34	3,27
1,85	PLM90BG/322	90				0,80	8,63	7,25	3,74	3,71
2,2	PLM90BG/322	90				0,80	8,63	7,25	3,74	3,71
3	PLM90BG/330	90	0,82	8,39	9,96	3,50	3,32			

P _N kW	Voltage U _N V											n _N min ⁻¹	Operating conditions **			
	Δ			Y			Δ			Y			Altitude Above Sea Level (m)	T. amb min/max °C	ATEX	
	220 V	230 V	240 V	380 V	400 V	415 V	380 V	400 V	415 V	660 V	690 V					
0,4	2,20	2,34	2,51	1,27	1,35	1,45	-	-	-	-	-	2740 ÷ 2790	See note:	≤ 1000	-15 / 40	No
0,55	2,56	2,56	2,62	1,48	1,48	1,51	-	-	-	-	-	2825 ÷ 2850				
0,75	3,10	3,05	3,03	1,79	1,76	1,75	1,78	1,76	1,74	1,03	1,01	2885 ÷ 2905				
0,9	4,17	4,09	4,07	2,41	2,36	2,35	2,40	2,36	2,34	1,39	1,36	2880 ÷ 2900				
1,1	4,17	4,09	4,07	2,41	2,36	2,35	2,40	2,36	2,34	1,39	1,36	2880 ÷ 2900				
1,5	5,53	5,23	5,13	3,19	3,02	2,96	3,19	3,03	2,96	1,84	1,75	2865 ÷ 2895				
1,85	8,05	8,04	8,09	4,65	4,64	4,67	4,62	4,61	4,63	2,67	2,66	2885 ÷ 2900				
2,2	8,05	8,04	8,09	4,65	4,64	4,67	4,62	4,61	4,63	2,67	2,66	2885 ÷ 2900				
3	10,8	10,6	10,6	6,23	6,14	6,12	6,18	6,10	6,06	3,57	3,52	2850 ÷ 2885				

Note: Observe the regulations and codes locally in force regarding sorted waste disposal.

cea-ie2-mott-2p50-en_a_te

** Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

**AVAILABLE VOLTAGES
MOTORS FOR CEA-CEA(N) SERIES**

P _N kW	IEC SIZE	SINGLE-PHASE							
		50 Hz				60 Hz			
		1 x 220-240	1 x 100	1 x 110-120	1 x 220-230	1 x 100	1 x 110-115	1 x 120-127	1 x 200-210
0,4	63	s	o	o	s	-	o	-	-
0,55	71	s	o	o	s	o	o	o	o
0,75	71	s	o	o	s	o	o	o	o
0,95	71	s	o	o	s	o	o	o	o
1,1	80	s	-	o	s	-	o	-	o
1,5	80	s	-	-	s	-	o	-	o
2,2	90	s	-	-	s	-	-	-	-

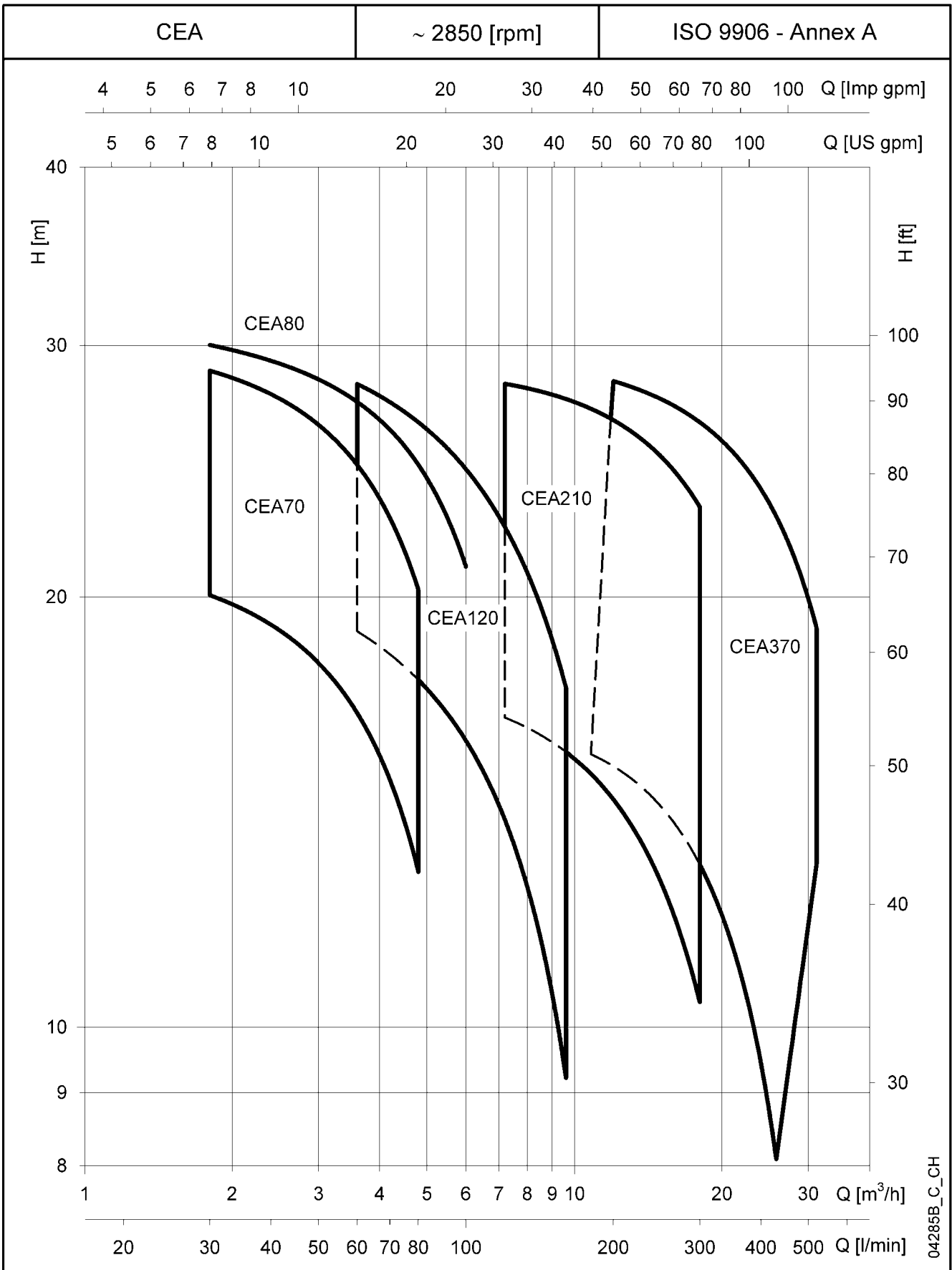
s = Standard voltage o = Optional voltage

P _N kW	THREE-PHASE - 2 POLES																	
	50 Hz						60 Hz						50/60 Hz					
	3 x 220-230-240/380-400-415	3 x 380-400-415/660-690	3 x 200-208/346-360	3 x 255-265/440-460	3 x 290-300/500-525	3 x 440-460/-	3 x 500-525/-	3 x 220-230/380-400	3 x 255-265-277/440-460-480	3 x 380-400/660-690	3 x 440-460-480/-	3 x 110-115/190-200	3 x 200-208/346-360	3 x 330-346/575-600	3 x 575/-	3 x 230/400 50 Hz	3 x 265/460 60 Hz	3 x 400/690 50 Hz
0,4	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	o
0,55	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	o
0,75	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	o
0,95	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	o
1,1	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	o
1,5	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	o
2,2	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	o
3	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	o

- = Not available

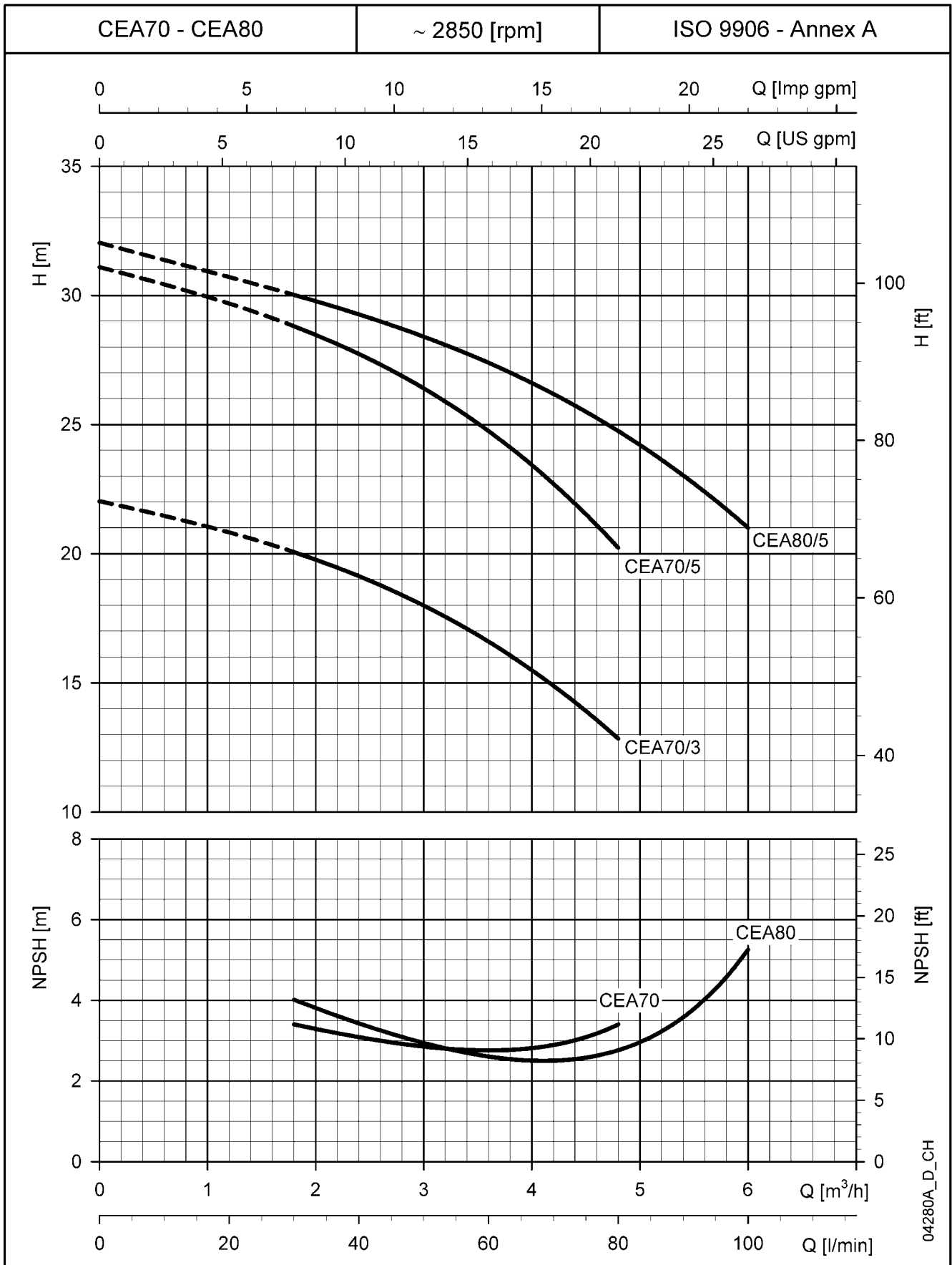
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**CEA-CEA(N) SERIES
HYDRAULIC PERFORMANCE RANGE AT 50 Hz, 2 POLES**



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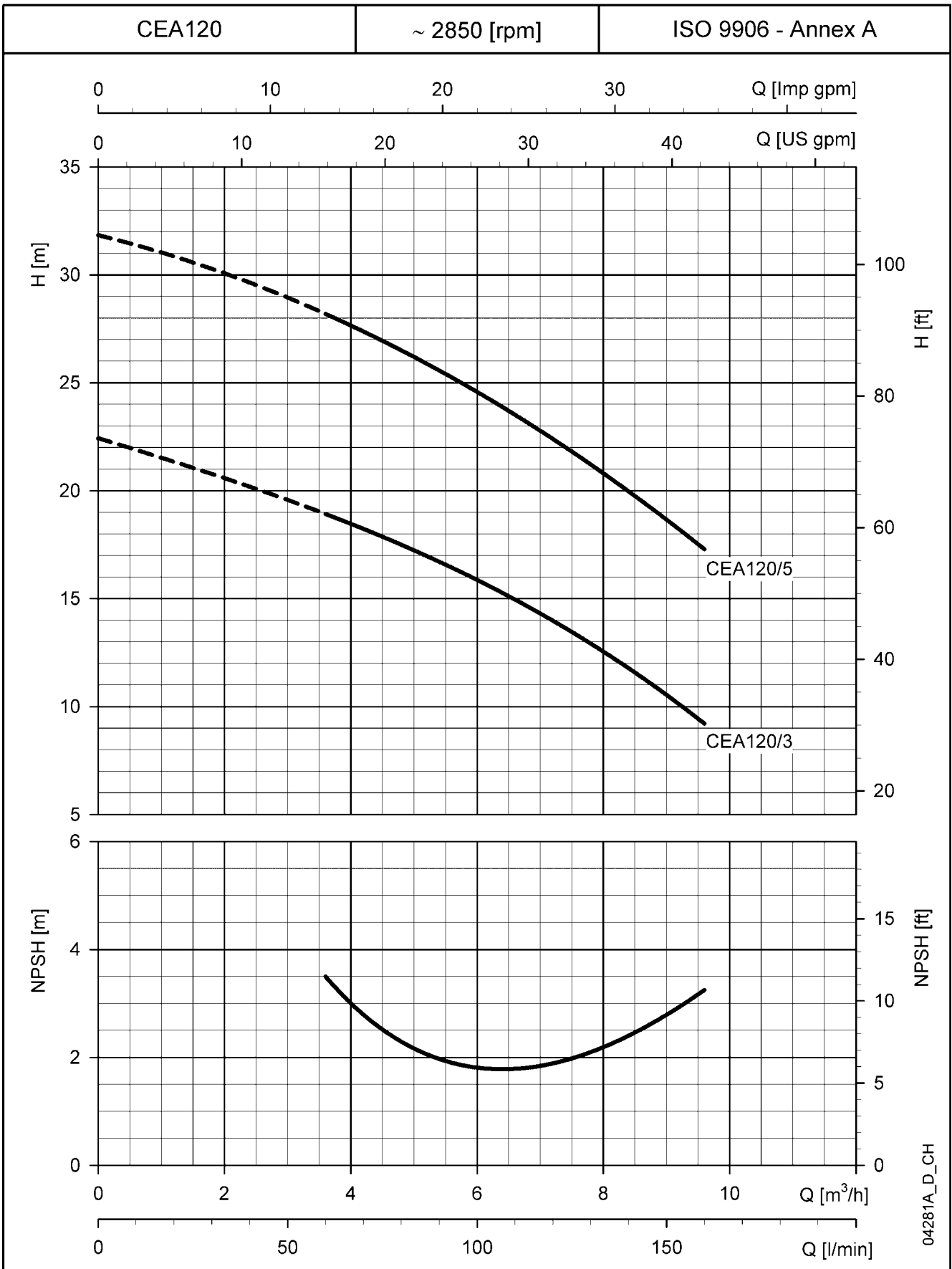
CEA70-CEA80 SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



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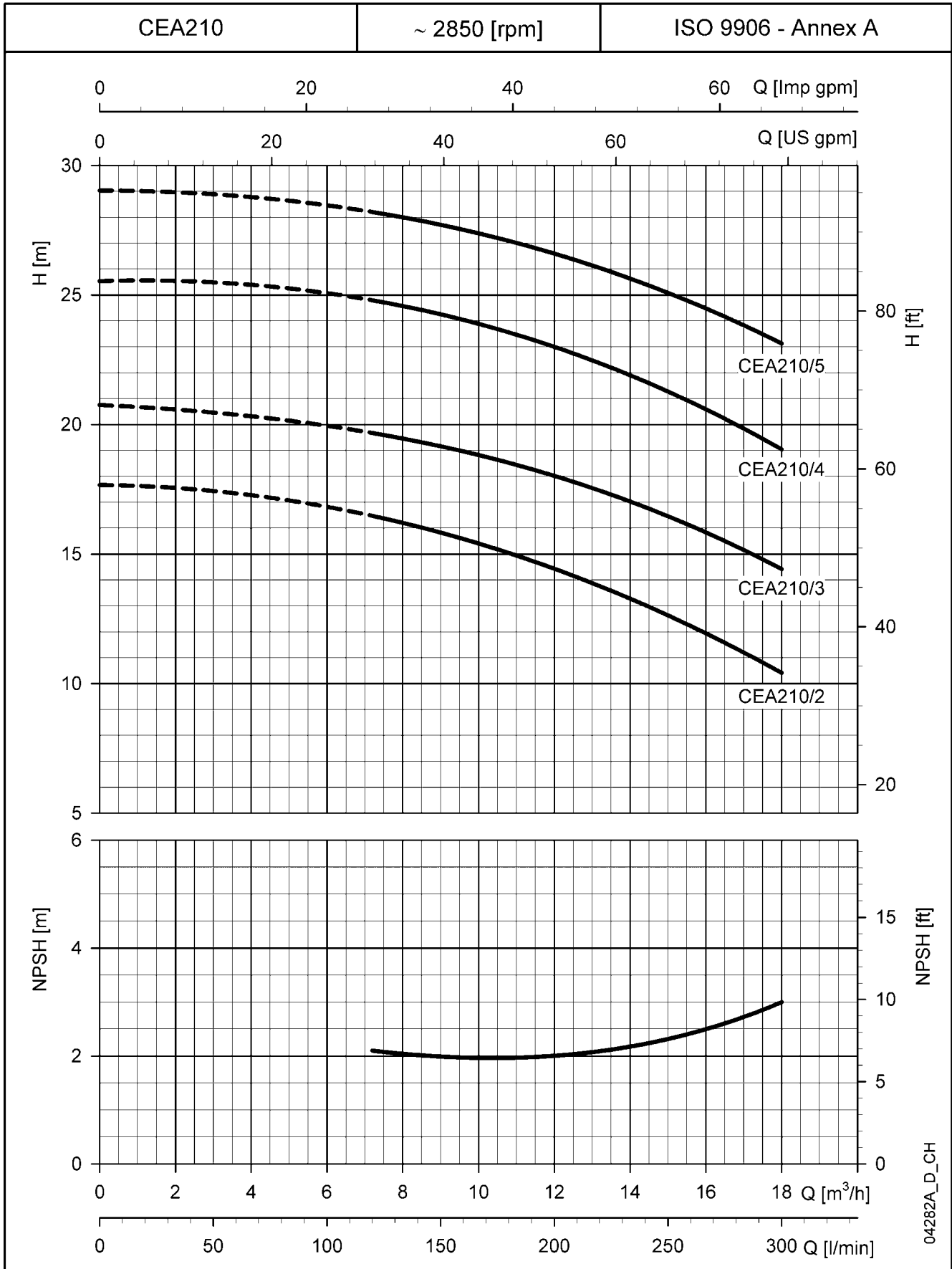
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**CEA120 SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

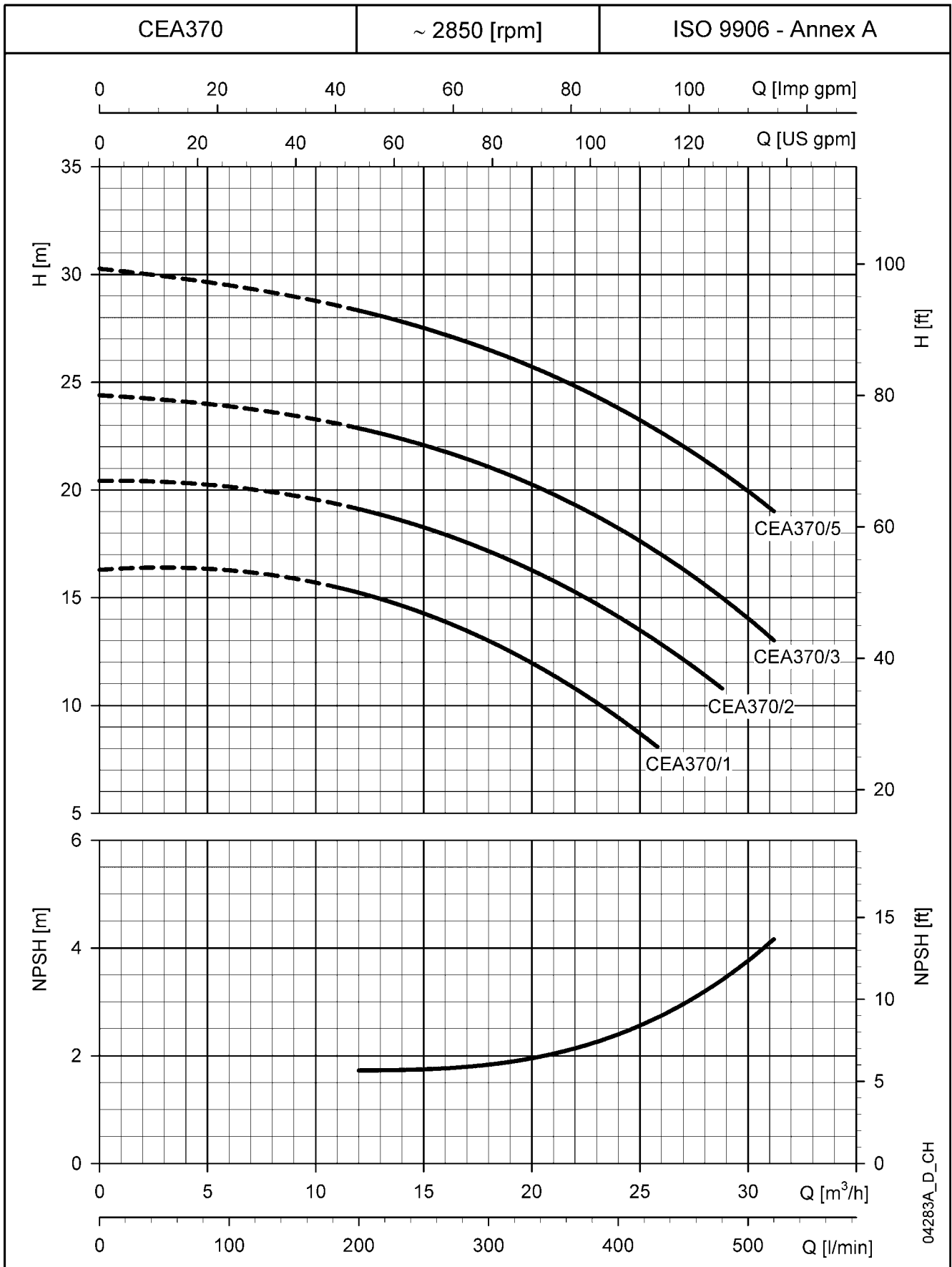
**CEA210 SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



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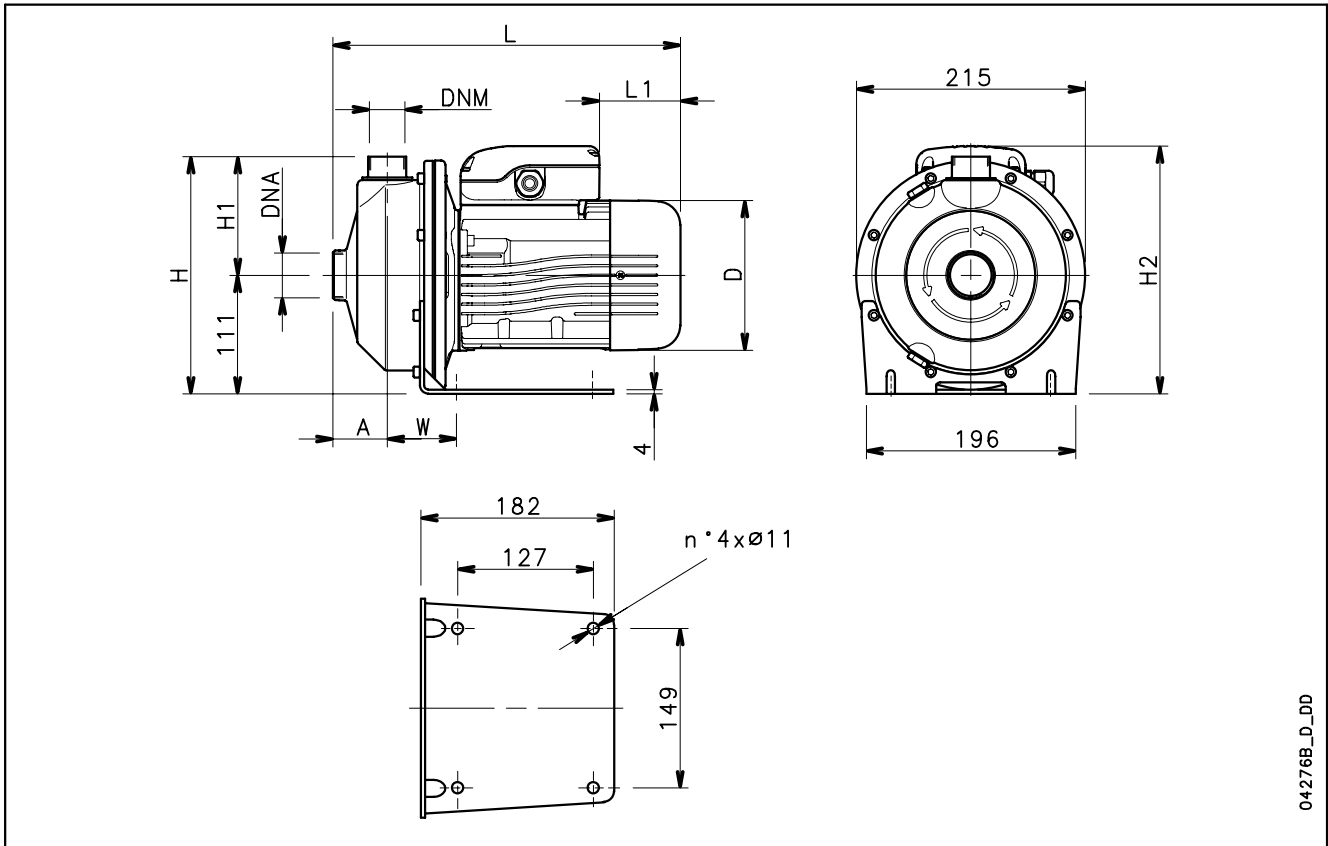
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**CEA370 SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**CEA-CEA(N) SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES**



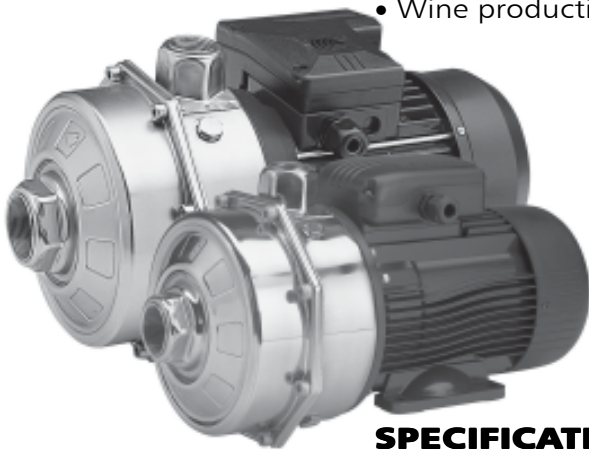
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PUMP TYPE	DIMENSIONS (mm)								DNA	DNM	WEIGHT kg
	A	D	H	H1	H2	L	L1	W			
CEAM 70/3	51	120	222	111	222	311	62	65	Rp 1¼	Rp 1	9,7
CEAM 70/5	51	140	222	111	232	325	76	65	Rp 1¼	Rp 1	11,6
CEAM 80/5	51	140	222	111	232	325	76	65	Rp 1¼	Rp 1	12,5
CEAM 120/3	51	140	222	111	232	325	76	65	Rp 1¼	Rp 1	11,5
CEAM 120/5	51	140	222	111	241	325	31	65	Rp 1¼	Rp 1	13
CEAM 210/2	54	140	224	113	232	339	76	76	Rp 1½	Rp 1¼	13
CEAM 210/3	54	156	224	113	248	385	69	76	Rp 1½	Rp 1¼	14,5
CEAM 210/4	54	156	224	113	248	385	69	76	Rp 1½	Rp 1¼	16,1
CEAM 210/5	54	174	224	113	262	429	84	76	Rp 1½	Rp 1¼	17
CEAM 370/1	54	156	224	113	248	385	69	76	Rp 2	Rp 1¼	14
CEAM 370/2	54	156	224	113	248	385	69	76	Rp 2	Rp 1¼	16,1
CEAM 370/3	54	174	224	113	262	429	84	76	Rp 2	Rp 1¼	20
CEA 70/3	51	120	222	111	222	311	62	65	Rp 1¼	Rp 1	9,7
CEA 70/5	51	140	222	111	232	325	76	65	Rp 1¼	Rp 1	11,6
CEA 80/5	51	155	222	111	240	371	114	65	Rp 1¼	Rp 1	15,8
CEA 120/3	51	140	222	111	232	325	76	65	Rp 1¼	Rp 1	11,5
CEA 120/5	51	155	222	111	240	371	114	65	Rp 1¼	Rp 1	16
CEA 210/2	54	155	224	113	240	385	114	76	Rp 1½	Rp 1¼	16
CEA 210/3	54	155	224	113	240	385	114	76	Rp 1½	Rp 1¼	17,8
CEA 210/4	54	174	224	113	245	429	172	76	Rp 1½	Rp 1¼	21
CEA 210/5	54	174	224	113	245	429	172	76	Rp 1½	Rp 1¼	21
CEA 370/1	54	155	224	113	240	385	114	76	Rp 2	Rp 1¼	17
CEA 370/2	54	174	224	113	245	429	172	76	Rp 2	Rp 1¼	21
CEA 370/3	54	174	224	113	245	429	172	76	Rp 2	Rp 1¼	21
CEA 370/5	54	174	224	113	245	429	172	76	Rp 2	Rp 1¼	21

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Twin-Impeller Centrifugal Electric Pumps

CA-CA(N) Series



MARKET SECTORS

CIVIL, AGRICULTURAL, INDUSTRIAL.

APPLICATIONS

Version made of AISI 304

- Handling of chemically and mechanically non-aggressive water and liquids (*).
- Water supply.
- Irrigation.
- Water circulation (cold, hot, refrigerated).

* For moderately aggressive liquids, a version with FPM elastomers is available (CA../.-V). For aggressive liquids, please contact our sales network.

“N” version made of AISI 316 (for aggressive liquids)

- Reverse osmosis (where demineralized water is used).
- Industrial washing.
- Thermal waters.
- Chlorine dispensing in swimming pools.
- Jewellery industry.
- Wine production.

the overload protection must be provided and installed by the user in the control panel.

- **Three-phase** versions: 220-240/380-415 V 50 Hz, 2 poles, the overload protection must be provided and installed by the user in the control panel.

- Condensate drain plugs in the standard version.

CONSTRUCTION CHARACTERISTICS

- Close-coupled, single-impeller centrifugal pump featuring axial suction and radial discharge.
- Compact construction, with pump coupled directly to motor; special motor shaft extension in common with the pump and supported by ball bearings.
- Threaded suction and discharge ports (Rp ISO 7).
- High performance enclosed **Impeller** made of **AISI 304** stainless steel (**AISI 316** for N version).
- **Mechanical seal** with Ceramic/Carbon rings, NBR elastomers, (EPDM for N version) other parts are made of AISI 304 stainless steel (AISI 316 for N version). Mounting dimensions according to EN 12756 (ex DIN 24960) and ISO 3069.
- **O-rings** made of NBR (EPDM for N version).
- Mounting pedestal on motor.

SPECIFICATIONS PUMP

- **Delivery** up to 210 l/min (12,5 m³/h).
- **Head** fino a 62 m.
- **Temperature** of pumped liquid: -10°C to +85°C standard version. -10°C to +110°C (N and V versions).
- Maximum operating **pressure** : 8 bar (PN 8).
- Counter-clockwise rotation facing the pump from the suction port.

MOTOR

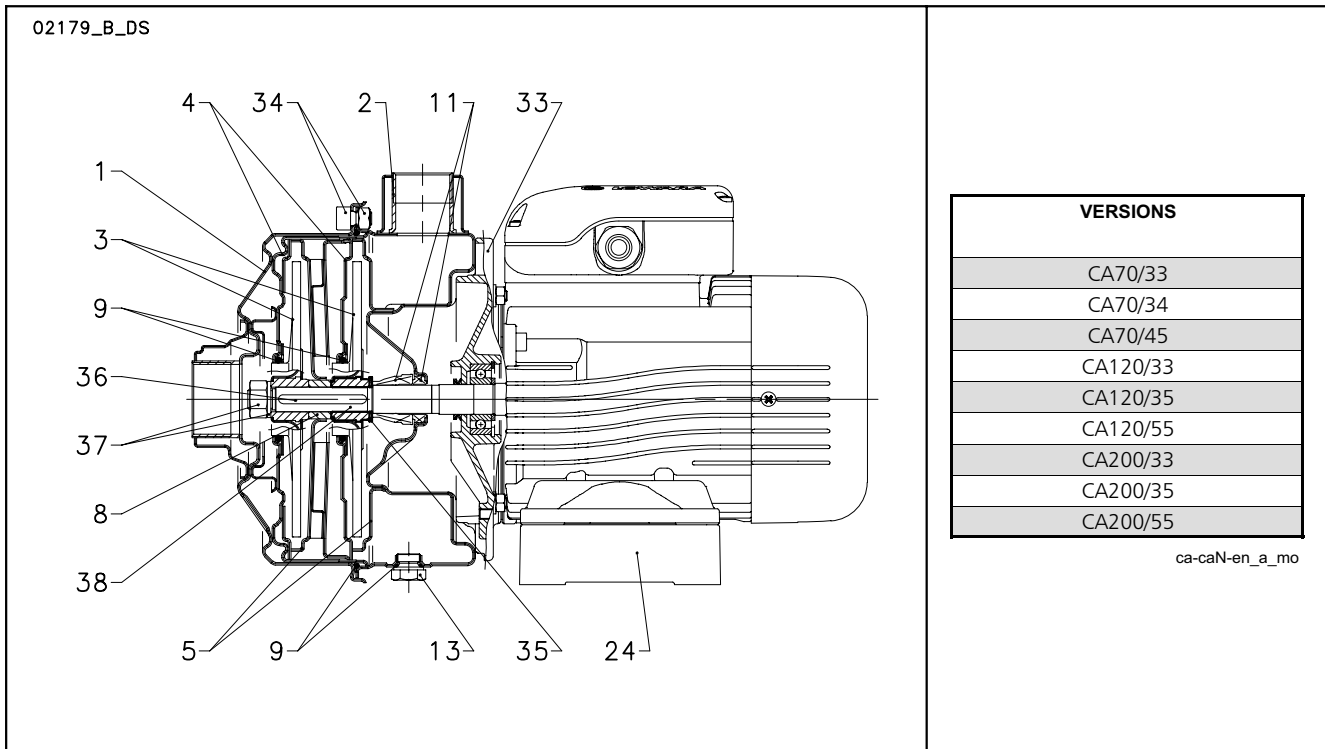
- Asynchronous, squirrel cage rotor, close construction, external ventilation.
- **Protection class:** IP55.
- Class 155 (F) **Insulation.**
- Performances to EN 60034-1 specifications.
- **Standard voltage:**
 - **Single-phase** versions: 220-240 V 50 Hz, 2 poles, with automatic reset overload protection up to 1,5 kW. For higher powers,

OPTIONAL FEATURES

- Different voltages and frequencies.
- Different material for the mechanical seal and O-rings.

- **Standard supplied IE2 motors are compliant with Regulation (EC) no. 640/2009.**

CA - CA(N) SERIES LIST OF MODELS AND TABLE OF MATERIALS



CA SERIES TABLE OF MATERIALS

REF. N.	PART	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Suction flange	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
2	Pump body	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
3	Impeller	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
4	Diffuser cover	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
5	Diffuser cover	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
8	Impeller spacer	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
9	Elastomers	NBR (standard version)		
11	Mechanical seal	Ceramic / Carbon / NBR (standard version)		
13	Fill/drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
24	Mounting pedestal	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
33	Adapter	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
34	Pump body fastening nuts and bolts	Zinc-plated steel		
35	Impeller shoulder washer	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
36	Key	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
37	Impeller lock nut and washer	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
38	Shaft extension	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316

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CA(N) SERIES TABLE OF MATERIALS

REF. N.	PART	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Suction flange	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
2	Pump body	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
3	Impeller	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
4	Diffuser cover	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
5	Diffuser	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
8	Impeller spacer	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
9	Elastomers	EPDM (standard version)		
11	Mechanical seal	Ceramic / Carbon / EPDM (standard version)		
13	Fill/drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
24	Mounting pedestal	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
33	Adapter	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
34	Pump body fastening nuts and bolts	Zinc-plated steel		
35	Impeller shoulder washer	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
36	Key	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
37	Impeller lock nut and washer	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
38	Shaft extension	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316

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CA-CA(N) SERIES HYDRAULIC PERFORMANCE TABLE AT 50 Hz, 2 POLES

PUMP TYPE	RATED POWER		Q = DELIVERY												
			l/min	0	30	40	50	60	70	80	100	120	150	180	210
			m ³ /h	0	1,8	2,4	3	3,6	4,2	4,8	6	7,2	9	10,8	12,6
		H = TOTAL HEAD METRES COLUMN OF WATER													
	kW	HP													
CA(M) 70/33	0,75	1	42,9	38,8	36,9	34,6	31,7	28,2	23,9						
CA(M) 70/34	0,9	1,2	48,8	45,1	43,2	40,7	37,7	34,0	29,5						
CA(M) 70/45	1,1	1,5	56,2	52,0	49,8	47,1	43,9	39,9	35,3						
CA(M) 120/33	1,1	1,5	44,3			39,1	37,8	36,4	34,8	31,4	27,6	21,0			
CA(M) 120/35	1,5	2	54,0			49,4	48,1	46,6	44,9	41,2	36,8	29,3			
CA(M) 120/55	2,2	3	63,8			59,6	58,2	56,6	54,8	50,6	45,7	37,1			
CA(M) 200/33	1,85	2,5	43,2			41,8	41,2	40,6	39,9	38,3	36,4	33,2	29,5	25,5	
CA(M) 200/35	2,2	3	53,5			52,4	51,9	51,4	50,7	49,2	47,5	44,3	40,6	36,5	
CA 200/55	3	4	62,6			61,0	60,6	60,1	59,5	58,2	56,6	53,8	50,4	46,2	

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CA-CA(N) SERIES ELECTRICAL DATA AT 50 Hz, 2 POLES

PUMP TYPE	MOTOR TYPE	INPUT POWER*	INPUT CURRENT* 220-240 V	CAPACIT. μF / 450 V	PUMP TYPE	MOTOR TYPE	INPUT POWER*	INPUT CURRENT* 220-240 V	INPUT CURRENT* 380-415 V
CAM70/33	SM71CA/1075	1,15	5,16	20	CA70/33	SM80CA/307HE	1,11	3,43	1,98
CAM70/34	SM71CA/1095	1,39	6,22	25	CA70/34	SM80CA/311HE	1,32	4,05	2,34
CAM70/45	SM80CA/1115	1,76	7,92	30	CA70/45	SM80CA/311HE	1,67	4,95	2,86
CAM120/33	SM80CA/1115	1,67	7,53	30	CA120/33	SM80CA/311HE	1,58	4,72	2,73
CAM120/35	SM80CA/1155	2,18	9,87	40	CA120/35	LLM90CA/315	1,99	5,85	3,38
CAM120/55	PLM90CA/1225	2,54	11,5	70	CA120/55	LLM90CA/322	2,47	7,40	4,28
CAM200/33	PLM90CA/1225	2,29	10,4	70	CA200/33	LLM90CA/322	2,18	6,71	3,88
CAM200/35	PLM90CA/1225	2,94	12,6	70	CA200/35	LLM90CA/322	2,97	8,86	5,12
-	-	-	-	-	CA200/55	LLM90CA/330	3,52	10,7	6,19

*Maximum value in specified range.

ca-2p50-en_d_te

MOTORS FOR CA-CA(N) SERIES

Standard supplied IE2 three-phase surface motors $\geq 0,75$ kW are compliant with Regulation (EC) no. 640/2009 and IEC 60034-30.

Electrical performances according to EN 60034-1.

Insulation class 155 (F). IP55 protection. Condensate drain plugs on standard version.

Cooling by fan according to EN 60034-6.

Cable gland metric size according to EN 50262. Standard voltage:

- **Single-phase version:** 220-240 V 50 Hz (incorporated automatic-reset overload protection).
- **Three-phase version:** 220-240/380-415 V 50 Hz (overload protection to be provided by the user).

SINGLE-PHASE MOTORS AT 50 Hz, 2 POLES

P _N kW	MOTOR TYPE	IEC SIZE	Construction Design	INPUT CURRENT I _N (A) 220-240 V	CAPACITOR		DATA FOR 230 V 50 Hz VOLTAGE						
					μF	V	n _N min ⁻¹	I _s / I _N	η %	cosφ	T _N Nm	T _s /T _N	T _m /T _N
0,75	SM71CA/1075	71	SPECIAL	4,90-4,85	20	450	2765	3,42	70,1	0,96	2,59	0,58	1,75
0,95	SM71CA/1095	71		6,25-5,89	25	450	2740	3,39	71,1	0,98	3,31	0,58	1,66
1,1	SM80CA/1115	80		6,88-6,65	30	450	2800	3,89	74,7	0,96	3,75	0,46	1,72
1,5	SM80CA/1155	80		9,21-8,58	40	450	2810	4,00	76,1	0,98	5,09	0,39	1,74
1,85	PLM80CA/1225	90		12,5-11,6	70	450	2825	4,47	82,4	0,97	7,43	0,53	1,87
2,2	PLM80CA/1225	90		12,5-11,6	70	450	2825	4,47	82,4	0,97	7,43	0,53	1,87

THREE-PHASE MOTORS AT 50 Hz, 2 POLES

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P _N kW	Efficiency η _N %																		IE	Year of manufacture
	Δ 220 V Y 380 V			Δ 230 V Y 400 V			Δ 240 V Y 415 V			Δ 380 V Y 660 V			Δ 400 V Y 690 V			Δ 415 V				
	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4		
0,75	77,4	77,4	74,0	77,4	77,4	74,0	77,4	77,4	74,0	77,4	77,4	74,0	77,4	77,4	74,0	77,4	77,4	74,0	2	By June 2011
0,9	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9		
1,1	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9	80,1	80,1	78,9		
1,5	82,6	83,7	81,8	82,6	83,7	81,8	82,6	83,7	81,8	82,6	83,7	82,7	83,4	83,9	82,2	83,8	83,9	81,8		
2,2	83,7	84,6	82,9	83,7	84,6	82,9	83,7	84,6	82,9	83,7	84,6	83,6	84,6	84,9	83,3	84,9	84,9	82,9		
2,2	83,7	84,6	82,9	83,7	84,6	82,9	83,7	84,6	82,9	83,7	84,6	83,6	84,6	84,9	83,3	84,9	84,9	82,9		
3	86,1	87,0	85,6	86,1	87,0	85,6	86,1	87,0	85,6	86,1	87,4	87,1	86,6	87,4	86,5	86,7	87,0	85,6		

P _N kW	Model	IEC SIZE	Construction Design	N. of Poles	f _N Hz	Data for 400 V / 50 Hz Voltage				
						cosφ	I _s / I _N	T _N Nm	T _s /T _N	T _m /T _N
0,75	SM80CA/307HE	80	SPECIAL	2	50	0,79	8,70	2,47	4,71	4,09
0,9	SM80CA/311HE	80				0,82	8,98	3,63	4,62	4,00
1,1	SM80CA/311HE	80				0,82	8,98	3,63	4,62	4,00
1,5	LLM90CA/315	90				0,85	7,47	4,97	3,09	3,26
1,85	LLM90CA/322	90				0,84	7,71	7,29	3,73	3,73
2,2	LLM90CA/322	90				0,84	7,71	7,29	3,73	3,73
3	LLM90CA/330	90				0,82	8,45	9,93	3,44	3,86

P _N kW	Voltage U _N V										n _N min ⁻¹	See note.	Operating conditions **				
	Δ			Y			Δ			Y			Altitude Above Sea Level (m)	T. amb min/max °C	ATEX		
	220 V	230 V	240 V	380 V	400 V	415 V	380 V	400 V	415 V	660 V						690 V	
0,75	3,10	3,05	3,03	1,79	1,76	1,75	1,78	1,76	1,74	1,03	1,01	2885 ÷ 2905	≤ 1000	-15 / 40	No		
0,9	4,17	4,09	4,07	2,41	2,36	2,35	2,40	2,36	2,34	1,39	1,36	2880 ÷ 2900					
1,1	4,17	4,09	4,07	2,41	2,36	2,35	2,40	2,36	2,34	1,39	1,36	2880 ÷ 2900					
1,5	5,33	5,14	5,07	3,08	2,97	2,93	3,08	2,97	2,93	1,78	1,71	2855 ÷ 2890					
1,85	7,72	7,50	7,45	4,46	4,33	4,30	4,46	4,33	4,30	2,57	2,50	2860 ÷ 2890					
2,2	7,72	7,50	7,45	4,46	4,33	4,30	4,46	4,33	4,30	2,57	2,50	2860 ÷ 2890					
3	10,7	10,5	10,5	6,16	6,07	6,09	6,16	6,07	6,09	3,56	3,50	2870 ÷ 2890					

Note: Observe the regulations and codes locally in force regarding sorted waste disposal.

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** Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

**AVAILABLE VOLTAGES
MOTORS FOR CA-CA(N) SERIES**

P _N kW	IEC SIZE	SINGLE-PHASE							
		50 Hz				60 Hz			
		1 x 220-240	1 x 100	1 x 110-120	1 x 220-230	1 x 100	1 x 110-115	1 x 120-127	1 x 200-210
0,75	71	s	o	o	s	o	o	o	o
0,95	71	s	o	o	s	o	o	o	o
1,1	80	s	-	o	s	-	o	-	o
1,5	80	s	-	-	s	-	o	-	o
2,2	90	s	-	-	s	-	-	-	-

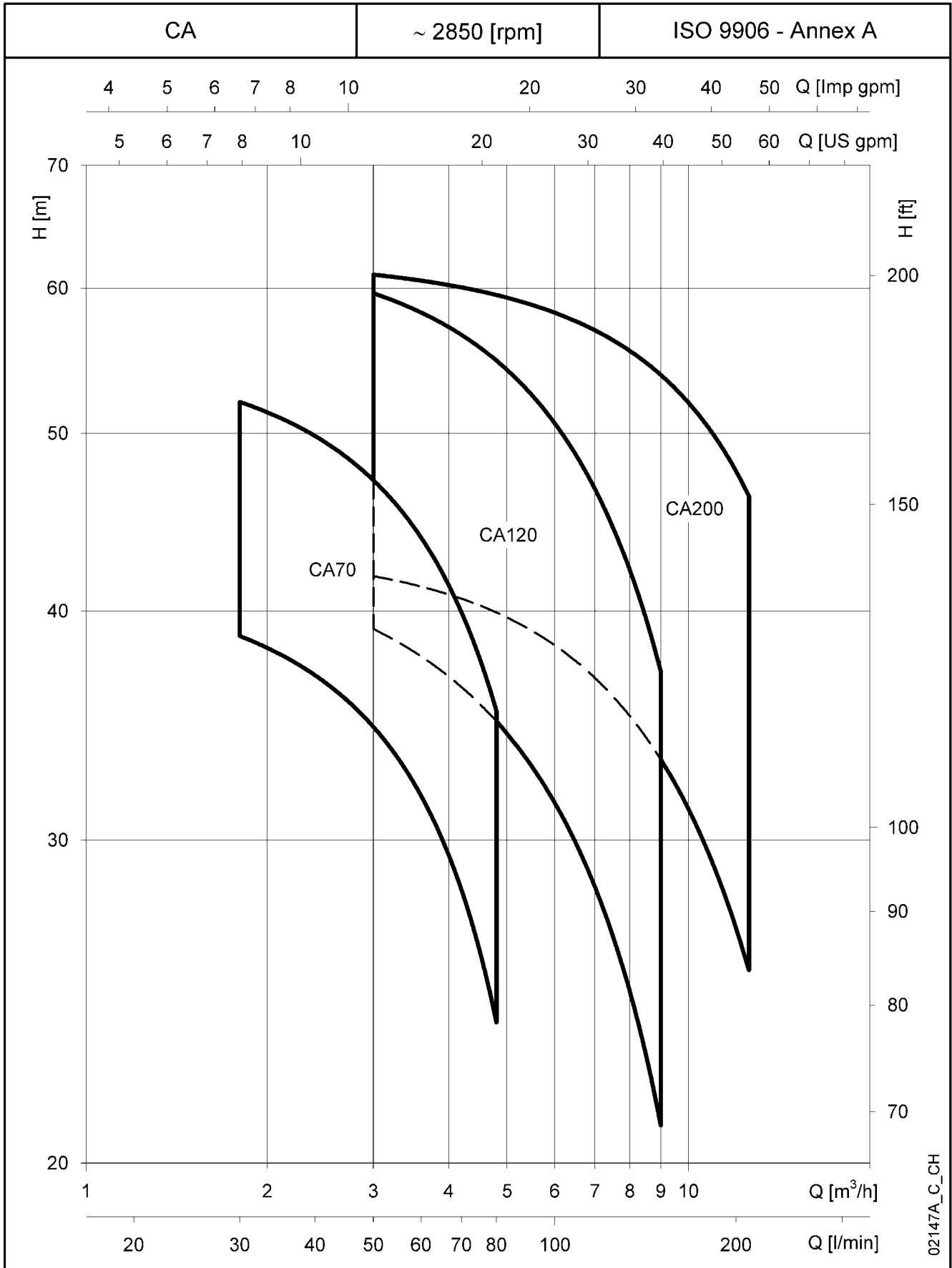
s = Standard voltage o = Optional voltage

P _N kW	THREE-PHASE - 2 POLES																		
	50 Hz						60 Hz						50/60 Hz						
	3 x 220-230-240/380-400-415	3 x 380-400-415/660-690	3 x 200-208/346-360	3 x 255-265/440-460	3 x 290-300/500-525	3 x 440-460/-	3 x 500-525/-	3 x 220-230/380-400	3 x 255-265-277/440-460-480	3 x 380-400/660-690	3 x 440-460-480/-	3 x 110-115/190-200	3 x 200-208/346-360	3 x 330-346/575-600	3 x 575/-	3 x 230/400 50 Hz	3 x 265/460 60 Hz	3 x 400/690 50 Hz	3 x 460/- 60 Hz
0,75	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	o	o
0,95	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	o	o
1,1	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	o	o
1,5	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	o	o
2,2	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	o	o
3	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	o	o

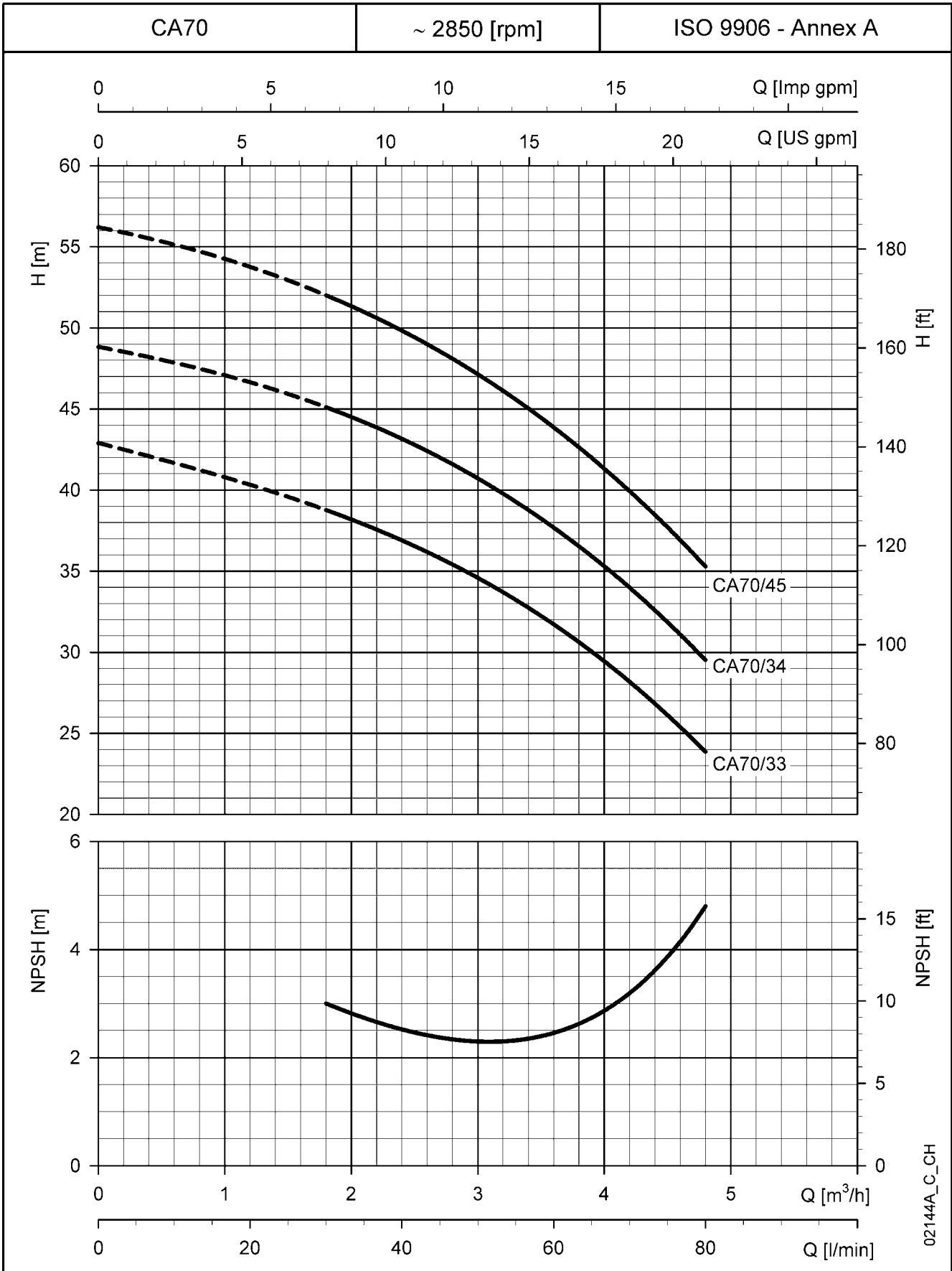
- = Not available

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**CA-CA(N) SERIES
HYDRAULIC PERFORMANCE RANGE AT 50 Hz, 2 POLES**

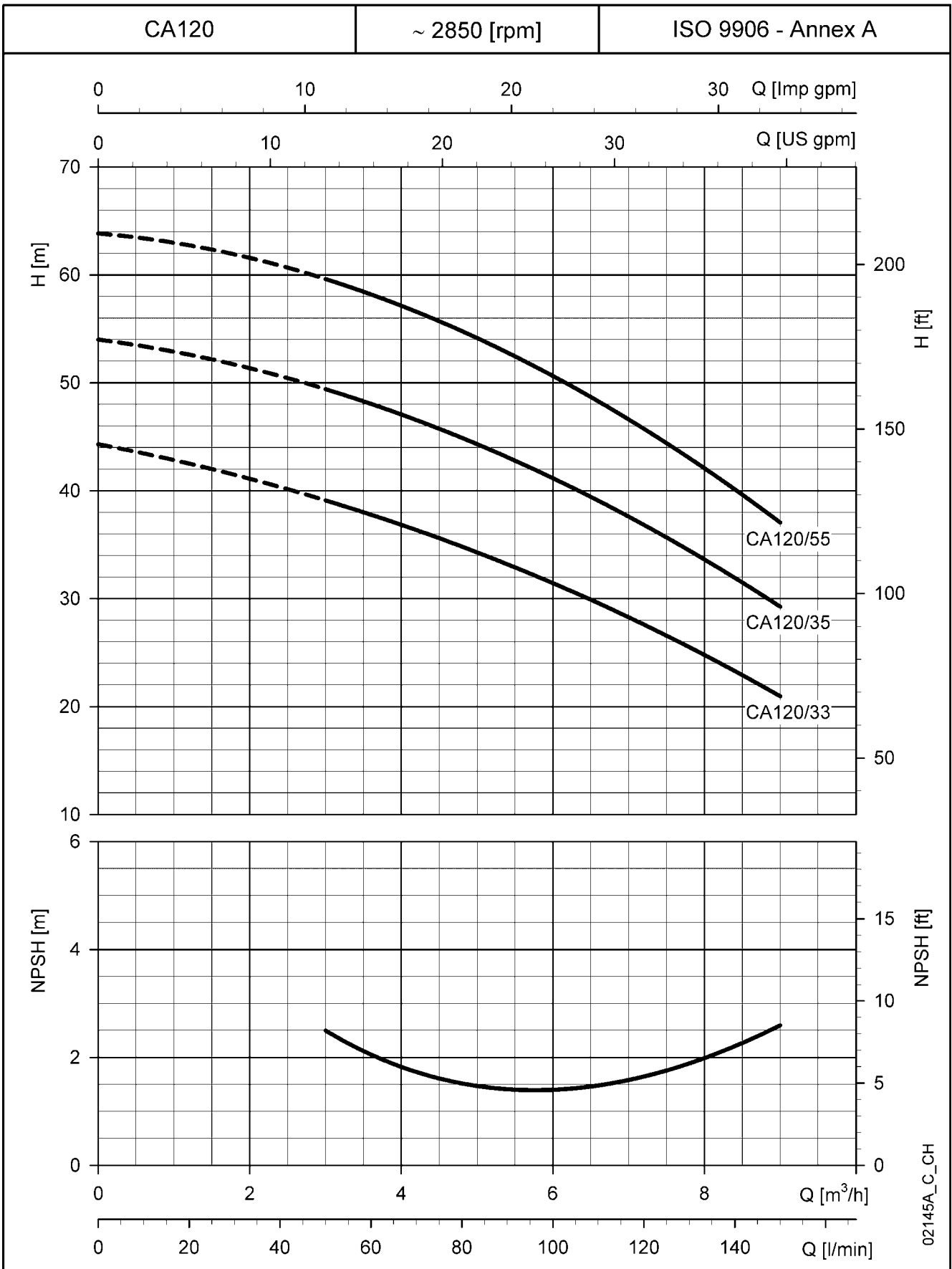


**CA70 SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



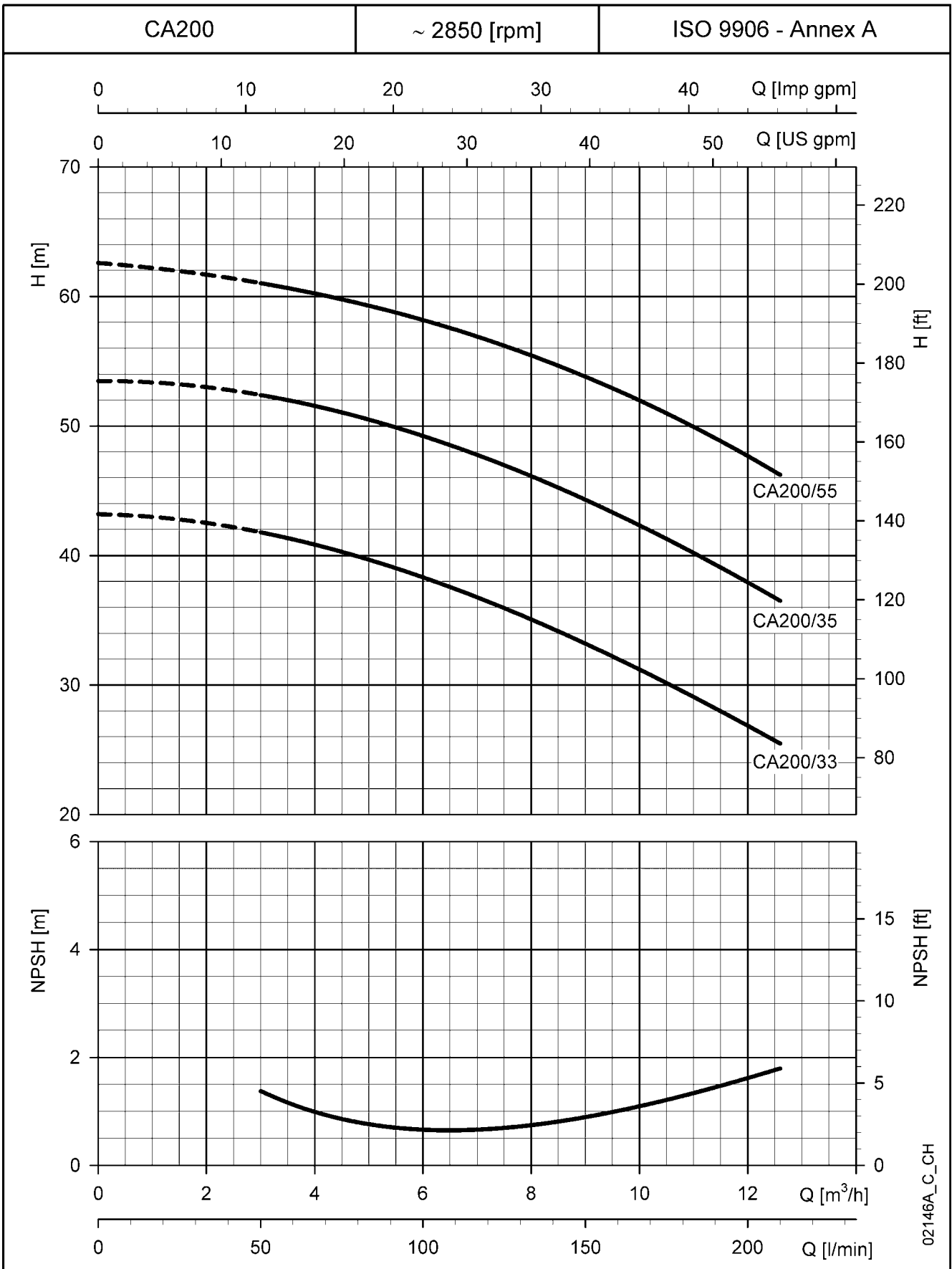
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**CA120 SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

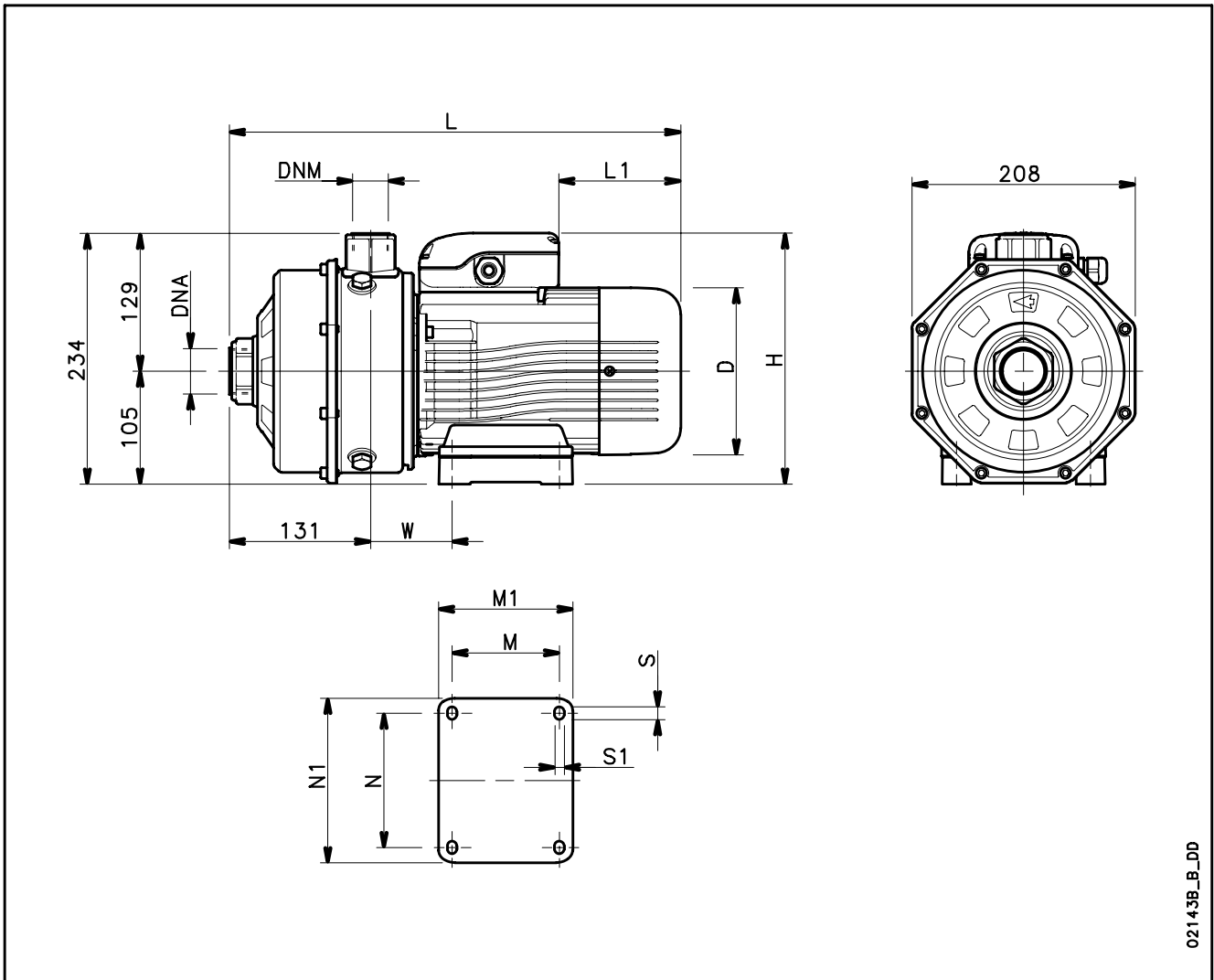
**CA200 SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



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These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**CA-CA(N) SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES**



021*3B_B_DD

POMPA TIPO	DIMENSIONI (mm)											DNA	DNM	PESO kg
	D	H	L	L1	M	M1	N	N1	S	S1	W			
CAM 70/33	140	226	383	76	90	113	112	135	12	7	66	Rp 1/4	Rp 1	15
CAM 70/34	140	235	383	31	90	113	112	135	12	7	66	Rp 1/4	Rp 1	15,8
CAM 70/45	156	242	420	69	100	125	125	153	12	9	76	Rp 1/4	Rp 1	18,5
CAM 120/33	156	242	420	69	100	125	125	153	12	9	76	Rp 1/4	Rp 1	18,4
CAM 120/35	156	242	420	69	100	125	125	153	12	9	76	Rp 1/4	Rp 1	20,2
CAM 120/55	174	239	454	84	125	155	140	170	13	10	98	Rp 1/4	Rp 1	27
CAM 200/33	174	239	454	84	125	155	140	170	13	10	98	Rp 1/2	Rp 1	27
CAM 200/35	174	239	454	84	125	155	140	170	13	10	98	Rp 1/2	Rp 1	27
CA 70/33	155	234	420	114	100	125	125	153	12	9	76	Rp 1/4	Rp 1	18
CA 70/34	155	234	420	114	100	125	125	153	12	9	76	Rp 1/4	Rp 1	19
CA 70/45	155	234	420	114	100	125	125	153	12	9	76	Rp 1/4	Rp 1	20
CA 120/33	155	234	420	114	100	125	125	153	12	9	76	Rp 1/4	Rp 1	20
CA120/35	178	242	433	125	125	150	140	170	13	10	98	Rp 1/4	Rp 1	22,5
CA 120/55	178	242	433	125	125	150	140	170	13	10	98	Rp 1/4	Rp 1	24
CA 200/33	178	242	433	125	125	150	140	170	13	10	98	Rp 1/2	Rp 1	24
CA 200/35	178	242	433	125	125	150	140	170	13	10	98	Rp 1/2	Rp 1	24
CA 200/55	178	242	453	145	125	150	140	170	13	10	98	Rp 1/2	Rp 1	26

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