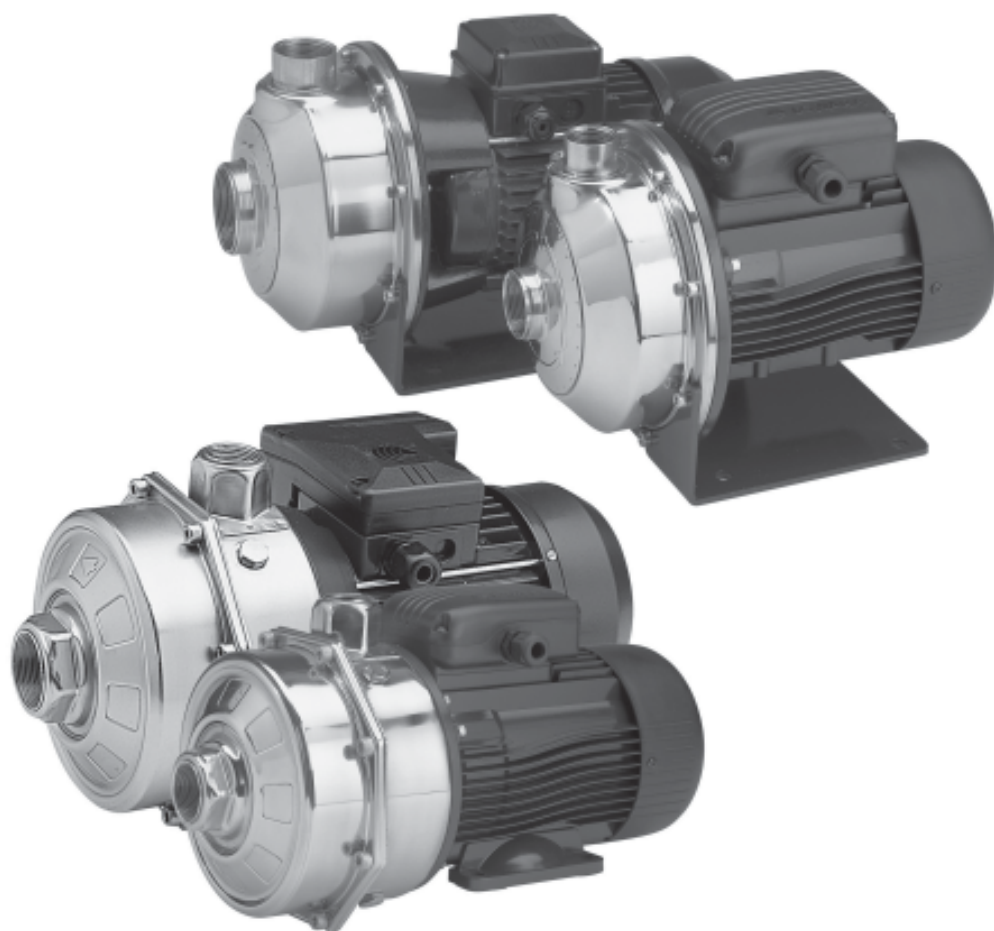


**50 Hz**



# CEA-CA Series CEA(N)-CA(N) made of AISI 316

SINGLE AND TWIN-IMPELLER CENTRIFUGAL ELECTRIC PUMPS  
EQUIPPED WITH IE2/IE3 MOTORS COMPLYING WITH REGULATION (EC) n. 640/2009

**LENNTECH**

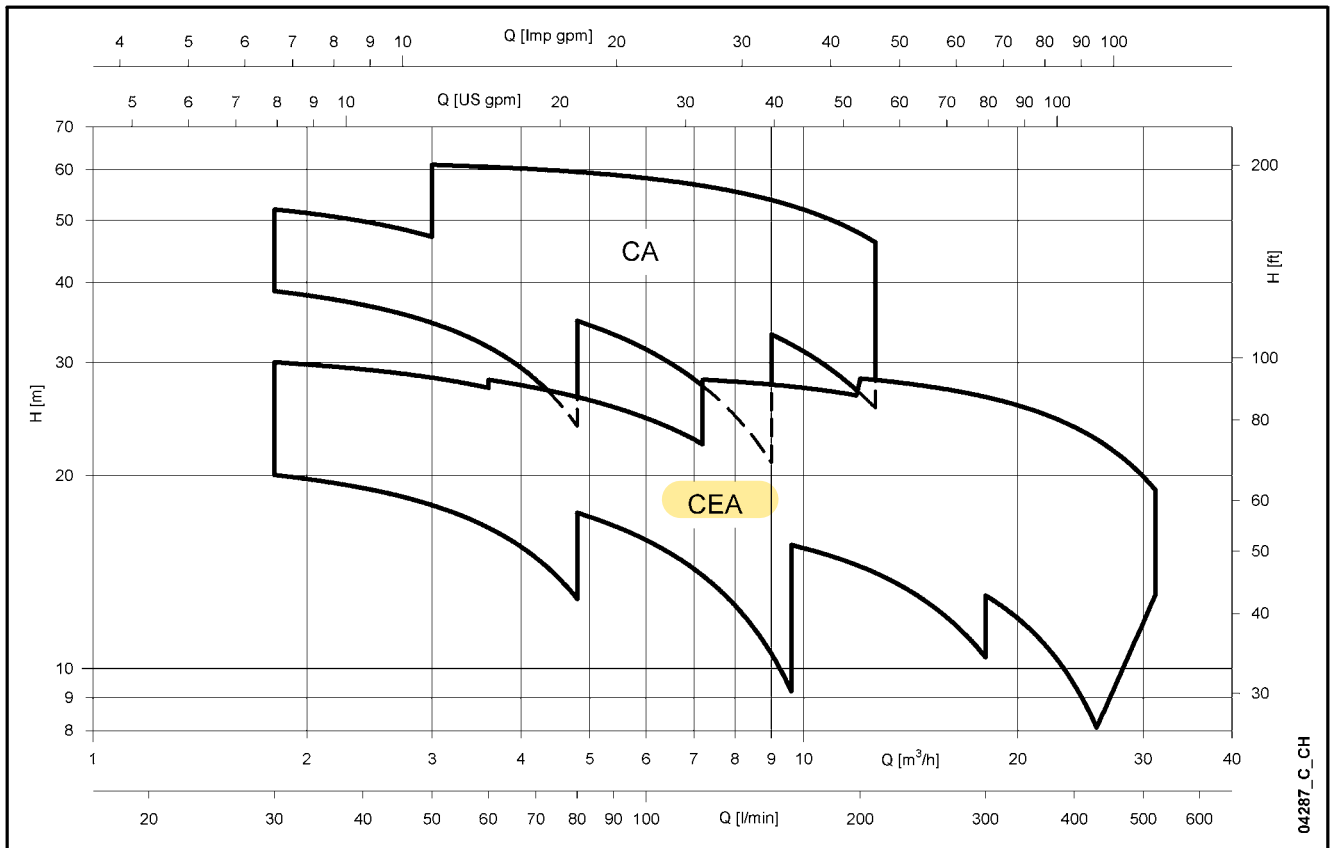
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Cod. 191003881 Rev.C Ed.10/2012

 **LOWARA**  
a xylem brand

**CEA-CA - CEA(N)-CA(N) SERIES  
HYDRAULIC PERFORMANCE RANGE AT 50 Hz**



## 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.

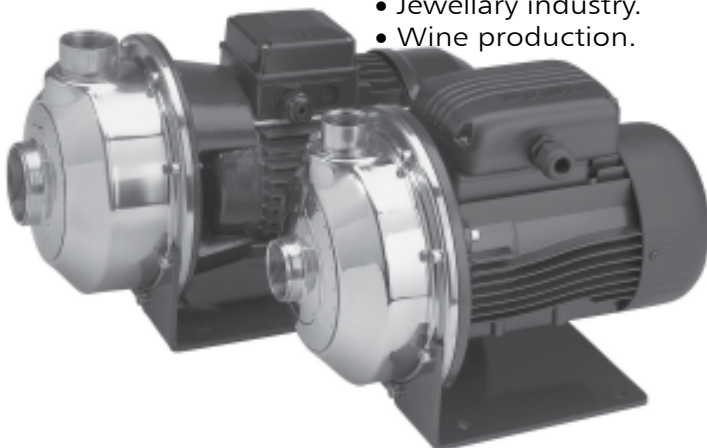
the overload protection must be provided and installed by the user in the control panel.

- **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

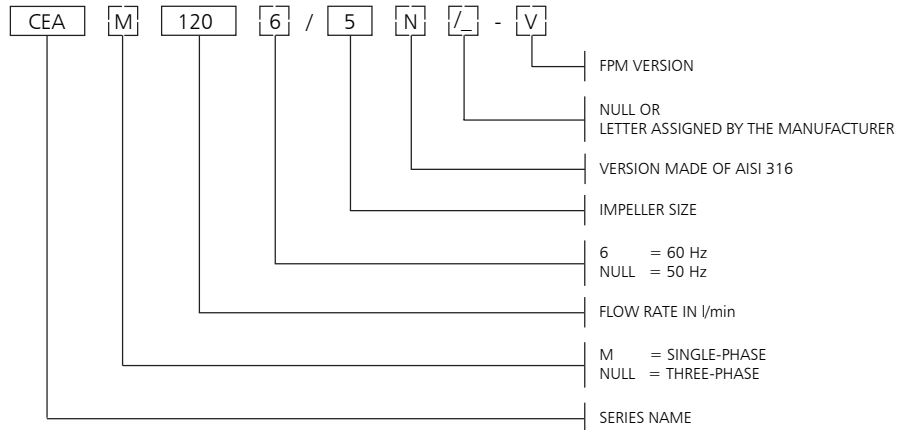
- **Delivery** up to 520 l/min (31 m<sup>3</sup>/h)
- **Head** up to 32 m.
- **Temperature** of pumped liquid: -10°C to +85°C standard version. -10°C to +110°C (N and V versions).
- Maximum operating **pressure** : 8 bar (PN 8).
- Counter-clockwise rotation facing the pump from the suction port.

#### 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,

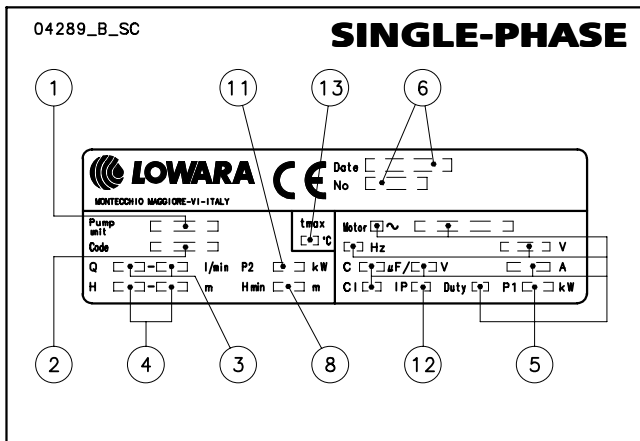
□ **Standard supplied IE2/IE3 motors are compliant with Regulation (EC) no. 640/2009.**

## CEA-CEA(N) SERIES IDENTIFICATION CODE



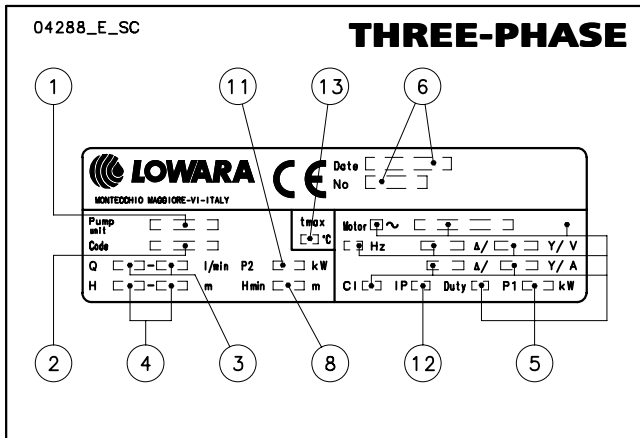
EXAMPLE : CEAM 120/5-V  
 CEA series electric pump, single-phase, flow rate 120 l/min  
 50 Hz, Impeller size 5, FPM version.

## RATING PLATE



## LEGEND

- 1 - Electric pump type
- 2 - Code
- 3 - Delivery range
- 4 - Head range
- 5 - Electrical data
- 6 - Serial number (date + sequential number)
- 8 - Minimum head
- 11 - Rated power
- 12 - Electric pump protection class
- 13 - Maximum temperature of pumped liquid



## 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 <sup>3</sup> /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	

cea-2p50-en\_d\_th

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

PUMP TYPE	MOTOR TYPE	INPUT POWER*	INPUT CURRENT*	CAPACIT.	PUMP TYPE	MOTOR TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
		kW	A				kW	A	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/307PE	0,98	3,08	1,78
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/311PE	1,28	4,10	2,37
CEAM210/2	SM71BG/1075	1,13	5,10	20	CEA210/2	SM80BG/307PE	1,04	3,22	1,86
CEAM210/3	SM80BG/1115	1,48	6,68	30	CEA210/3	SM80BG/311PE	1,35	4,24	2,45
CEAM210/4	SM80BG/1155	1,91	8,60	40	CEA210/4	SM80BG/315PE	1,73	5,46	3,15
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/311PE	1,40	4,35	2,51
CEAM370/2	SM80BG/1155	2,05	9,26	40	CEA370/2	SM80BG/315PE	1,95	5,94	3,43
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.

cea-2p50-en\_f\_te

## MOTORS FOR CEA-CEA(N) SERIES

Standard supplied IE2/IE3 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 <sub>N</sub> kW	MOTOR TYPE	IEC SIZE	Construction Design	INPUT CURRENT I <sub>n</sub> (A)		CAPACITOR		DATA FOR 230 V 50 Hz VOLTAGE					
				220-240 V	μF	V	min <sup>-1</sup>	I <sub>s</sub> / I <sub>n</sub>	η %	cosφ	T <sub>n</sub> Nm	T <sub>s</sub> /T <sub>n</sub>	T <sub>m</sub> /T <sub>n</sub>
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 <sub>N</sub> kW	Efficiency η <sub>N</sub> %																		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	82,5	83,1	81,3	82,8	82,7	80,1	82,6	82,0	78,9	82,5	82,0	78,9	82,5	82,0	78,9	82,5	82,0	78,9	82,5	82,0	78,9		3
0,9	84,0	84,7	83,4	84,4	84,5	82,5	84,3	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4		3
1,1	84,0	84,7	83,4	84,4	84,5	82,5	84,3	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4		3
1,5	85,6	86,5	85,8	85,9	86,4	84,9	86,0	86,0	84,0	85,6	86,0	84,0	85,6	86,0	84,0	85,6	86,0	84,0	85,6	86,0	84,0		3
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	83,7	83,7	83,7		2
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	83,7	83,7	83,7		2
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	85,5	86,8	85,6	2	

P <sub>N</sub> kW	Manufacturer		IEC SIZE	Construction Design	N. of Poles	f <sub>n</sub> Hz	Data for 400 V / 50 Hz Voltage				
	Lowara srl Unipersonale Reg. No. 03471820260 Montecchio Maggiore Vicenza - Italia						cosφ	I <sub>s</sub> / I <sub>N</sub>	T <sub>N</sub> Nm	T <sub>s</sub> /T <sub>N</sub>	T <sub>m</sub> /T <sub>N</sub>
	Model										
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/307PE		80				0,78	7,38	2,48	3,57	3,75
0,9	SM80BG/311PE		80				0,79	8,31	3,63	3,95	3,95
1,1	SM80BG/311PE		80				0,79	8,31	3,63	3,95	3,95
1,5	SM80BG/315PE		80				0,80	8,80	4,96	4,31	4,10
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			

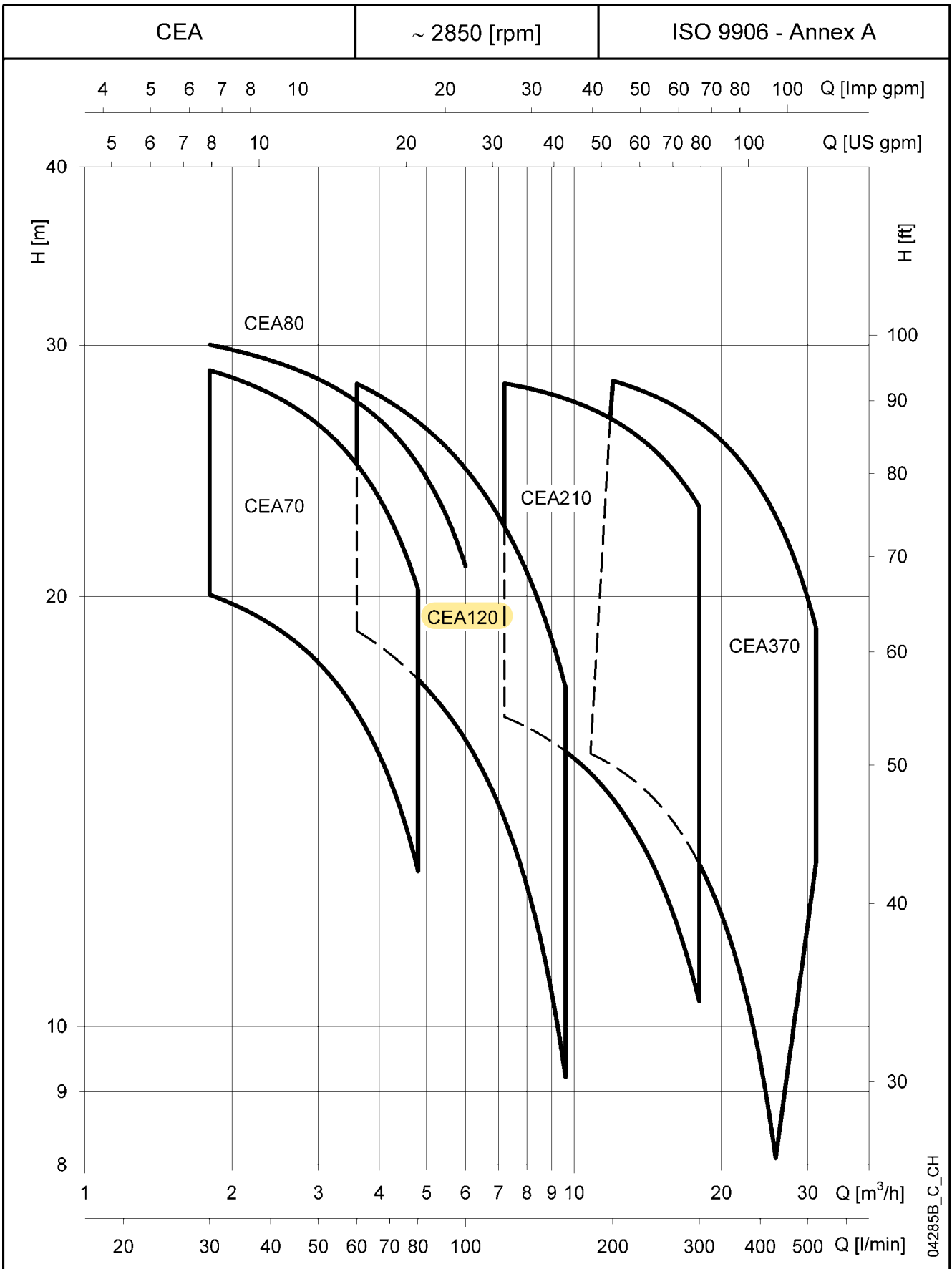
P <sub>N</sub> kW	Voltage U <sub>N</sub> V											n <sub>N</sub> min <sup>-1</sup>	Operating conditions **			
	Δ			Y			Δ			Y			Altitude Above Sea Level (m)	T. amb min/max °C	ATEX	
	220 V	230 V	240 V	380 V	400 V	415 V	380 V	400 V	415 V	660 V	690 V					
0,4	2,20	2,34	2,51	1,27	1,35	1,45	-	-	-	-	-	2740 ÷ 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	2,96	2,94	2,96	1,71	1,70	1,71	1,70	1,69	1,70	0,98	0,98	2875 ÷ 2895				
0,9	4,19	4,14	4,16	2,42	2,39	2,40	2,41	2,38	2,38	1,39	1,37	2870 ÷ 2900				
1,1	4,19	4,14	4,16	2,42	2,39	2,40	2,41	2,38	2,38	1,39	1,37	2870 ÷ 2900				
1,5	5,56	5,49	5,51	3,21	3,17	3,18	3,21	3,18	3,19	1,85	1,84	2870 ÷ 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.

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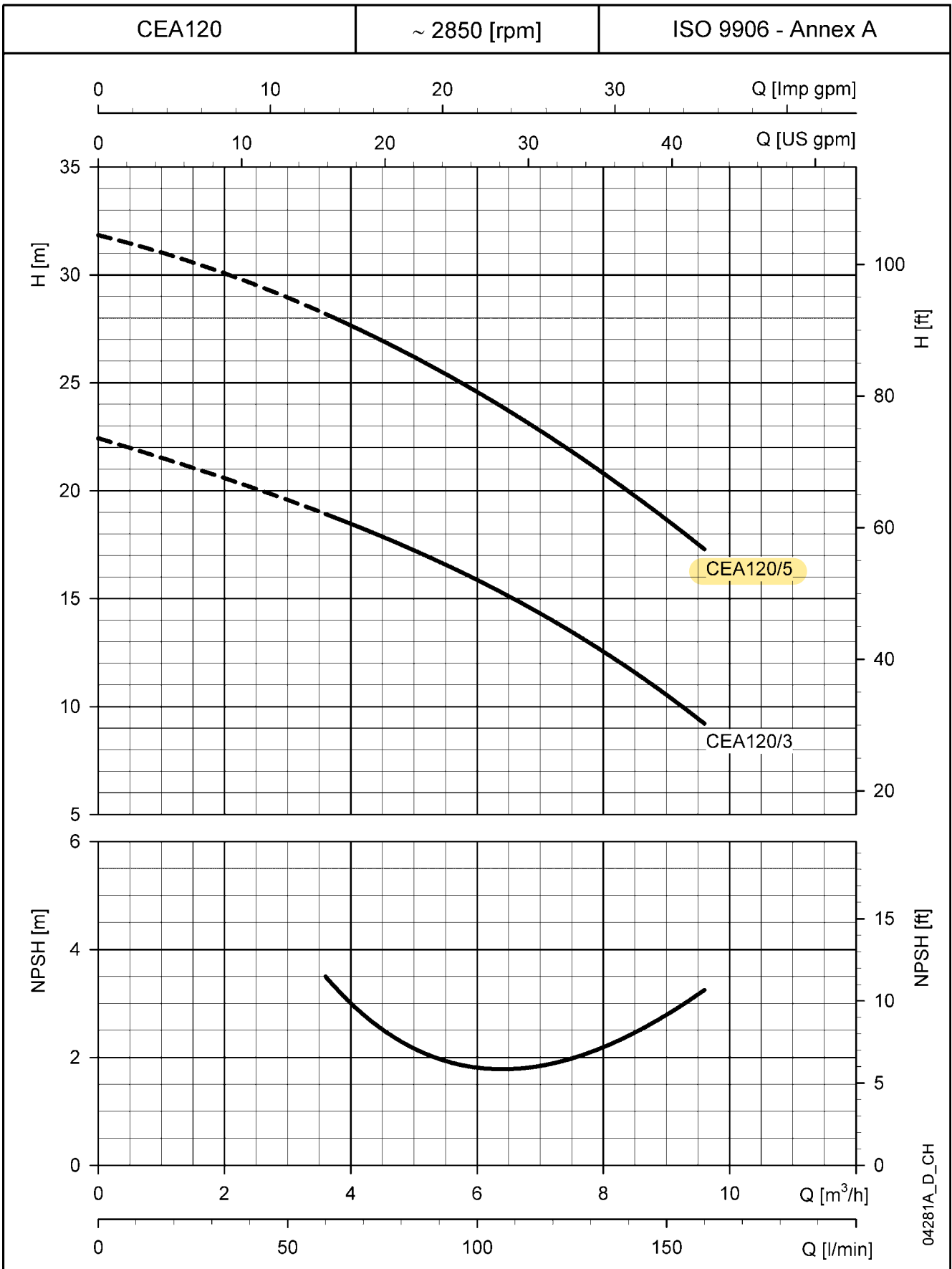
\*\* Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

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



04285B\_C\_CH

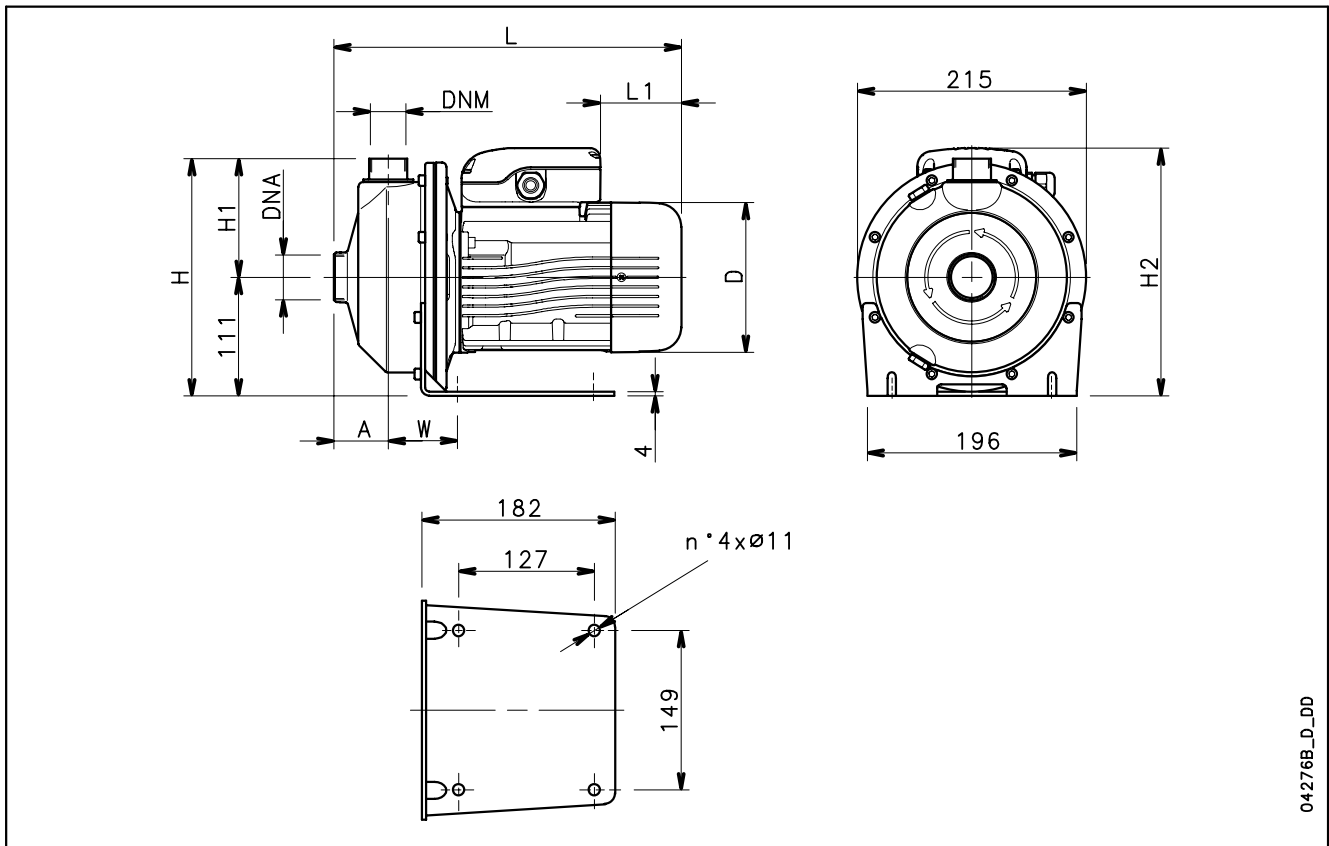
**CEA120 SERIES  
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



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



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



04276B\_D\_DD

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

