

CEA-CIE SERIES

GENERAL DESCRIPTION

Single impeller centrifugal electric pumps made of stainless steel

MARKET SECTORS

CIVIL, AGRICULTURAL,
INDUSTRIAL.

APPLICATIONS

CEA Version made of AISI 304

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

CEA Version made of AISI 316 ("..N")

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

CIE

- Heating systems.
- Cooling systems.
- Ventilation systems.

SPECIFICATION

PUMP

- Delivery up to **31 m³/h**.
- Head up to **32 m**.
- Maximum ambient temperature: **45 °C**.
- Temperature of pumped liquid:
 - from -10°C to +85°C for CEA (NBR elastomers).
 - from -10°C to +110°C for CEA..N and for CEA..V (FKM elastomers).
 - from -10°C to +110°C for CIE.
- Maximum operating pressure: **8 bar** (PN 8).
- Hydraulic performance compliant with ISO 9906:2012 (Grade 3B). (ex ISO 9906:1999 - Annex A).
- Counter-clockwise rotation facing the pump from the suction port.

MOTOR

- Asynchronous, squirrel cage rotor, close construction, external ventilation.
- Protection class:
 - IP55** as motor (EN 60034-1).
 - IPX5** as electric pump (EN 60335-1).
- **Class 155** (F) Insulation
- Performance to EN 60034-1 specifications.
- **Standard voltage:**
 - Single-phase version: 220-240 V, 50 Hz
 - Three-phase version: 220-240/380-415 V, 50 Hz.
- 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).
- **CIE version:**
 - SiC/SiC/EPDM mechanical seal,
 - motor with reinforced bearing (only for SM motors),
 - without fill/drain plugs for HVAC applications.

OPTIONAL FEATURES

- Different voltages.
- 60 Hz frequency (see 60 Hz catalog).
- Different material for the mechanical seal and O-rings.

CEA-CIE SERIES TYPICAL APPLICATIONS ELECTRIC PUMPS

Residential and Commercial Applications:

- Humidifiers
- Water supply.
- Heating, Cooling and Ventilation systems
- Water re-circulation
- Cooling towers
- Cooling systems
- Temperature control
- Chillers
- Induction heating
- Heat exchangers
- Water heating

General Industry:

- Spray booths
- Light chemical transfer
- Booster systems
- Commercial washers
- Car washer

Water Purification:

- Filtration
- De-ionized water
- Water treatment
- Commercial and residential pools

Plastic Industry:

- Temperature Regulators
- Extrusion machines
- Manufacture of polymers

Agricultural Applications:

- Irrigation
- Greenhouses
- Water supply



Medical:

- Laser cooling
- Massage
- Medical chillers
- Sanitary equipment

Machine Tool:

- Degreasing
- Parts washing
- Chemical treatment
- Heat treatment

Graphics:

- Film washing
- Cooling processes

Marine Sector:

- Water on board ships

Computers:

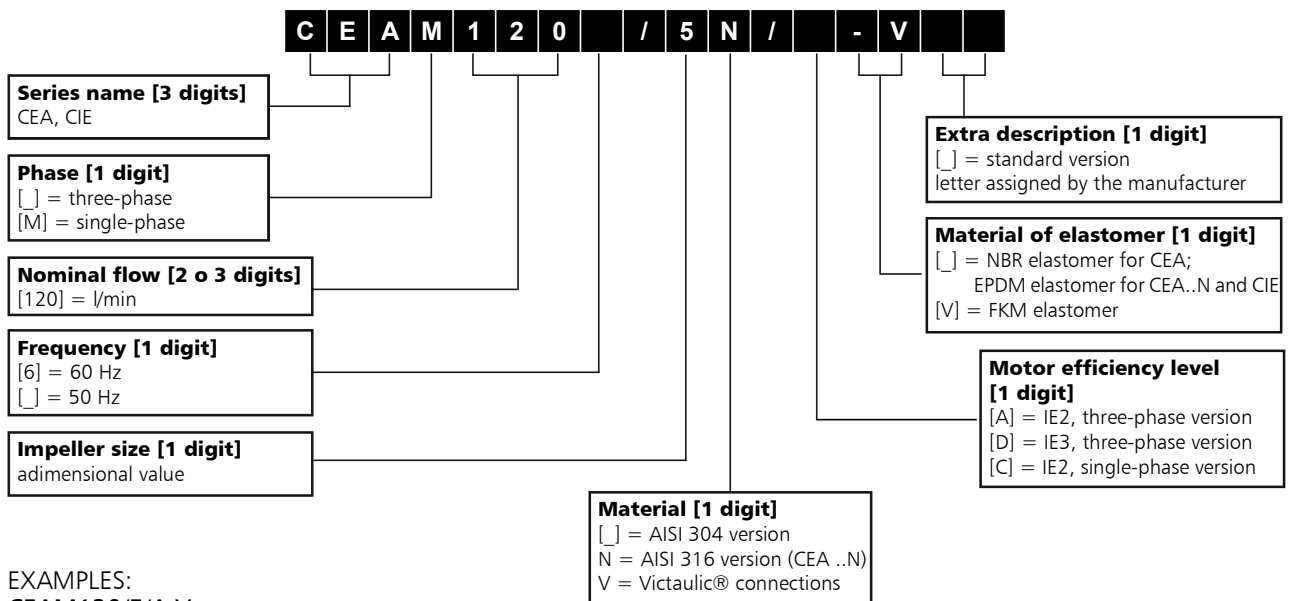
- Circuit board washing
- Unit cooling

Food and Drink:

- Food processing
- Bottle washing
- Citrus processing
- Dish-washing
- Brewing
- Sanitary ware



CEA-CIE SERIES IDENTIFICATION CODE



EXAMPLES:

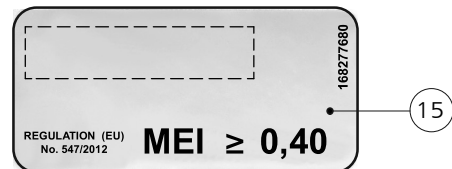
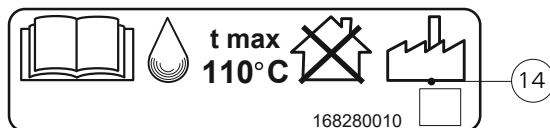
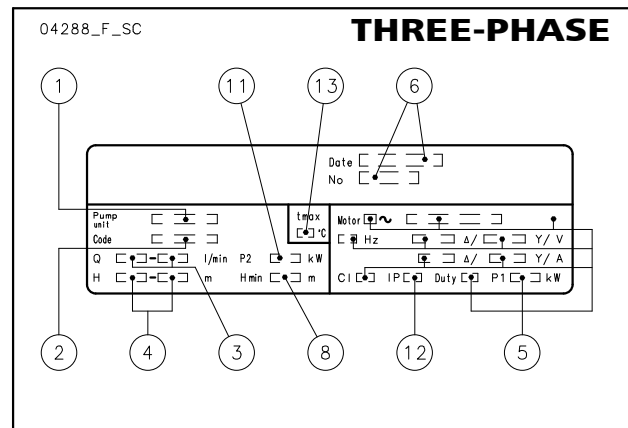
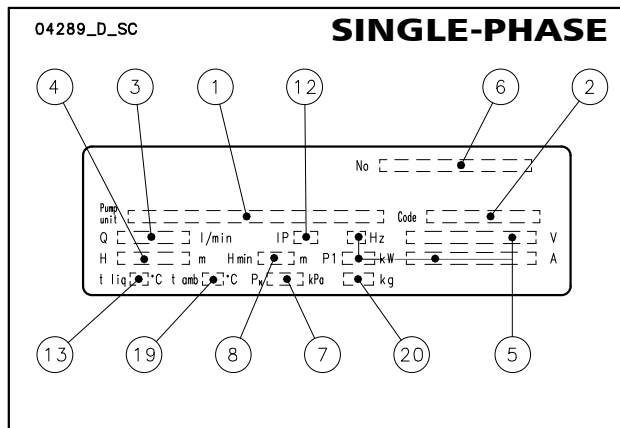
CEAM120/5/A-V

CEA series electric pump, single-phase, nominal flow 120 l/min, frequency 50 Hz, 1 impeller size 5, AISI 304 version, FKM (FPM) elastomers.

CIE370/1V/D

CIE series electric pump, three-phase, nominal flow 370 l/min, frequency 50 Hz, 1 impeller size 1, AISI 304 version and Victaulic® connections, EPDM elastomers.

RATING PLATE

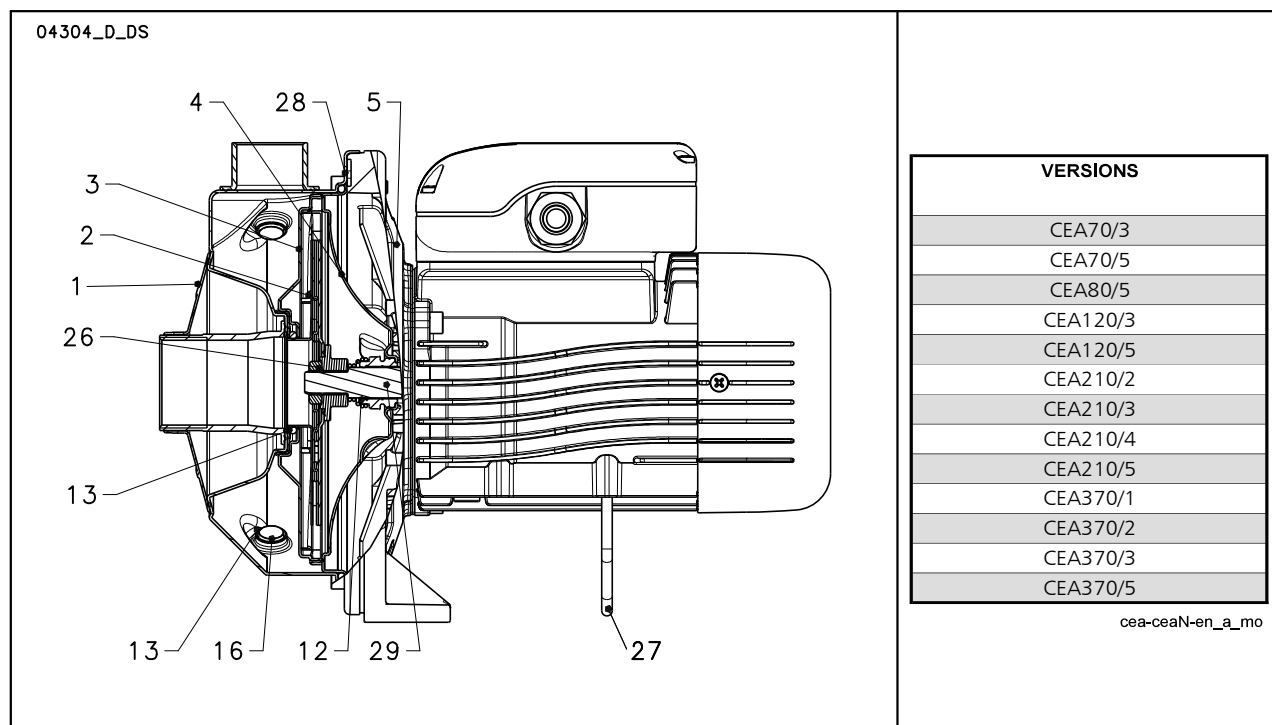


LEGEND

- 1 - Electric pump unit type
- 2 - Electric pump unit code
- 3 - Flow range
- 4 - Head range
- 5 - Electrical data
- 6 - Serial number (data + order number)
- 7 - Maximum operating pressure
- 8 - Minimum head (EN 60335-2-41)

- 11 - Rated power
- 12 - Protection degree
- 13 - Maximum operating liquid temperature (uses as EN 60335-2-41)
- 14 - Maximum operating liquid temperature (for use other than EN 60335-2-41)
- 15 - MEI label (Regulation (EU) No 547/2012 (50 Hz))
- 19 - Maximum operating ambient temperature
- 20 - Weight

CEA SERIES ELECTRIC PUMP CROSS-SECTION AND MAIN COMPONENTS



CEA VERSION

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-ALSi8Cu3 (Fe) (AC46200)	-
12	Mechanical seal	Ceramic / Carbon / NBR (standard version)		
13	Elastomers	NBR (standard version)		
16	Fil/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	Support foot	Galvanized steel		
28	Pump body fastening nuts and bolts	Galvanized steel		
29	Shaft extension	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316

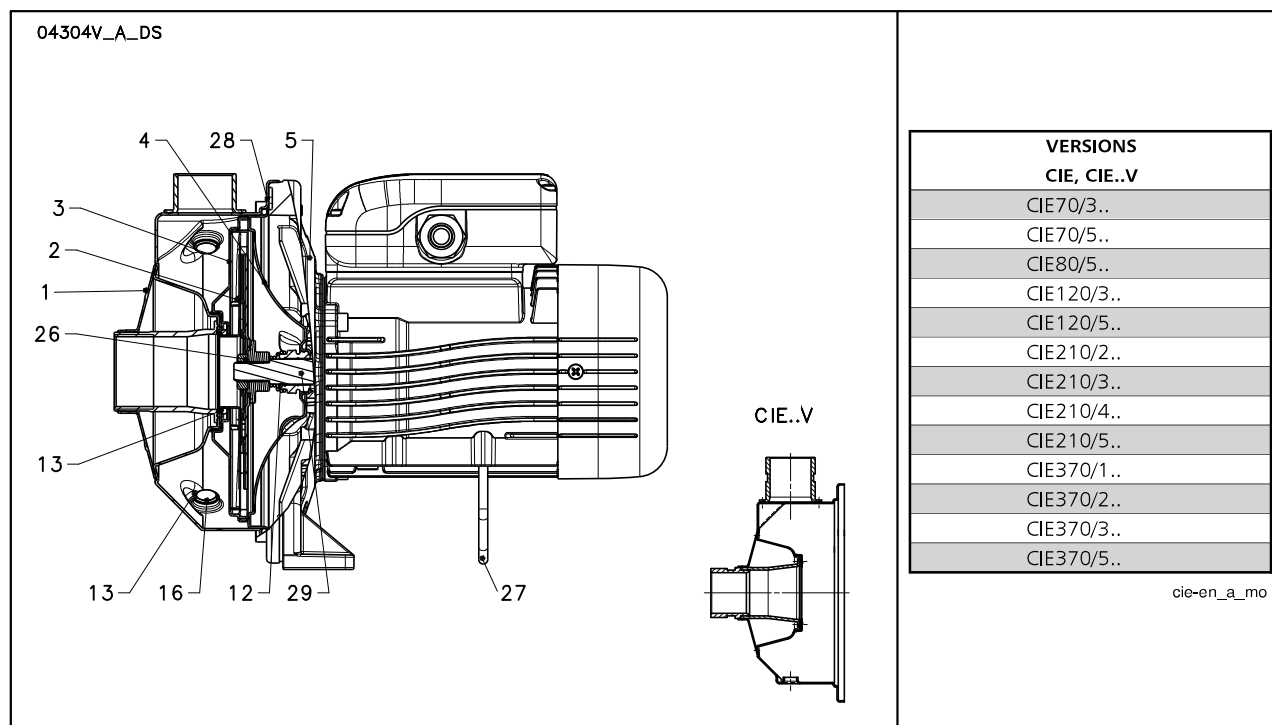
cea-ceaN-en_c_tm

CEA..N VERSION

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-ALSi8Cu3 (Fe) (AC46200)	-
12	Mechanical seal	Ceramic / Carbon /EPDM (standard version)		
13	Elastomers	EPDM (standard version)		
16	Fil/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	Support foot	Galvanized steel		
28	Pump body fastening nuts and bolts	Galvanized steel		
29	Shaft extension	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316

cea-ceaN-en_c_tm

CIE SERIES ELECTRIC PUMP CROSS-SECTION AND MAIN COMPONENTS



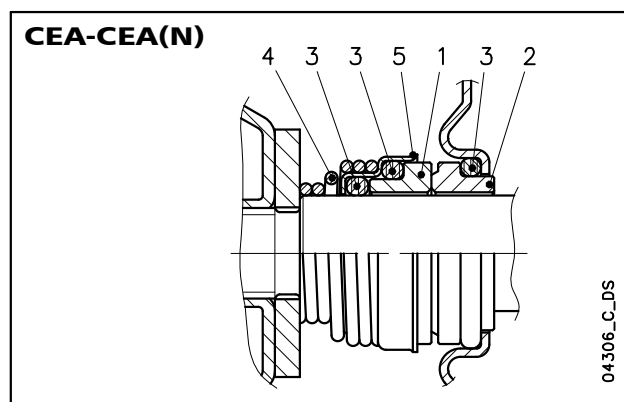
CIE VERSION

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-AISI8Cu3 (Fe) (AC46200)	-
12	Mechanical seal	Silicon carbide / Silicon carbide / EPDM (standard version)		
13	Elastomers	EPDM (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	Support foot	Galvanized steel		
28	Pump body fastening nuts and bolts	Galvanized steel		
29	Shaft extension	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316

cio-en_b_tm

CEA SERIES MECHANICAL SEAL

Mechanical seal with mounting dimensions according to EN12756 (ex DIN 24960) and ISO 3069.



LIST OF MATERIALS

POSITION 1 - 2	POSITION 3	POSITION 4 - 5
B₃ : Carbon graphite	P : NBR	G : AISI 316
C : Special resin impregnated carbon	E : EPDM	
Q₁ : Silicon carbide	E₂ : EPDM - WRAS	
U₃ : Tungsten carbide	V : FPM (FKM)*	
V : Ceramic		

* For hot water: max 80°C

cea-ca_ten-mec-en_c_tm

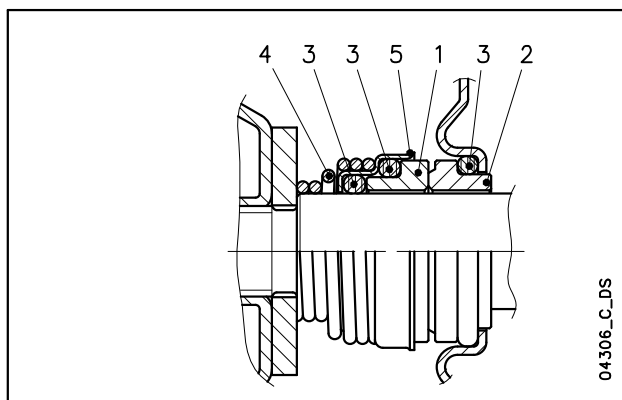
SEAL TYPES

SERIES	TYPE	POSITION					TEMPERATURE (°C)
		1 ROTATING ASSEMBLY	2 FIXED ASSEMBLY	3 ELASTOMERS	4 SPRINGS	5 OTHER COMPONENTS	
CEA	STANDARD MECHANICAL SEAL						
	VB ₃ PGG	V	B ₃	P	G	G	-10...+85
	OTHER TYPES OF MECHANICAL SEAL						
	VB ₃ PGG	V	B ₃	E	G	G	-10...+110
	VCEGG	V	C	E	G	G	
	Q ₁ Q ₁ EGG	Q ₁	Q ₁	E	G	G	
	U ₃ CEGG	U ₃	C	E	G	G	
	U ₃ U ₃ EGG	U ₃	U ₃	E	G	G	
	VBVGG	V	B	V	G	G	
	VCVGG	V	C	V	G	G	
	Q ₁ Q ₁ VGG	Q ₁	Q ₁	V	G	G	
	U ₃ CVGG	U ₃	C	V	G	G	
	U ₃ U ₃ VGG	U ₃	U ₃	V	G	G	
CEA..N	STANDARD MECHANICAL SEAL						
	VBEGG	V	B	E	G	G	-10...+110
	OTHER TYPES OF MECHANICAL SEAL						
	VCEGG	V	C	E	G	G	-10...+110
	Q ₁ Q ₁ EGG	Q ₁	Q ₁	E	G	G	
	VCVGG	V	C	V	G	G	
	Q ₁ Q ₁ VGG	Q ₁	Q ₁	V	G	G	

cea_tipi_ten-mec-en_d_tc

CIE SERIES MECHANICAL SEAL

Mechanical seal with mounting dimensions according to EN12756 (ex DIN 24960) and ISO 3069.



LIST OF MATERIALS

POSITION 1 - 2	POSITION 3	POSITION 4 - 5
Q ₁ : Silicon carbide	E : EPDM V : FPM (FKM)*	G : AISI 316

* For hot water: max 80°C

cie_ten-mec-en_a_tm

SEAL TYPES

TYPE	POSITION					TEMPERATURE (°C)
	1 ROTATING ASSEMBLY	2 FIXED ASSEMBLY	3 ELASTOMERS	4 SPRINGS	5 OTHER COMPONENTS	
STANDARD MECHANICAL SEAL						
Q ₆ Q ₆ EGG	Q ₆	Q ₆	E	G	G	-10...+110
Q ₆ Q ₆ VGG	Q ₆	Q ₆	V	G	G	-10...+110

cie_tipi-ten-mec-en_a_tc

CEA-CIE SERIES MOTORS (ErP 2009/125/EC)

- Short-circuit squirrel-cage motor, enclosed construction with external ventilation (TEFC).
- **IP55** protection degree.
- Insulation class **155 (F)**.
- Electrical performances according to EN 60034-1.
- Supplied **single-phase** surface motors with **IE2** efficiency level
- Supplied **three-phase** surface motors with **IE2** efficiency level (power < 0,75 kW) or **IE3** efficiency level (power ≥ 0,75 kW) as standard according to EN 60034-30:2009 and EN 60034-30-1:2014.
- Metric cable gland according to EN 50262.
- **Single-phase** version:
0,4 to 1,5 kW (2-pole)
220-240 V 50 Hz
Built-in automatic reset overload protection
Maximum ambient temperature: 45 °C.
- **Three-phase** version:
0,4 to 3 kW (2-pole)
220-240/380-415 V 50 Hz
Overload protection to be provided by the user.
Maximum ambient temperature: 40 °C.

From 1 July 2023 in accordance with the **Regulations (EU) 2019/1781 and (EU) 2021/341**, the three-phase 50 Hz, 60 Hz or 50/60 Hz **surface motors** with **power outputs ranging from 0,12 to 0,749 kW** must have a minimum level **IE2** efficiency; the ones with power outputs ranging **from 0,75 to 74,9 kW** must have a minimum level of **IE3** efficiency. The single-phase **surface motors** with **power outputs ranging from 0,12 kW** must have a minimum level **IE2** efficiency.

The following tables also contain the mandatory information pursuant to Annex I, section 2, of the aforementioned Regulations.

SINGLE-PHASE MOTORS AT 50 Hz, 2 POLES

P _N kW	MOTOR TYPE	IEC SIZE	Construction Design	INPUT CURRENT	CAPACITOR		DATA FOR 230 V 50 Hz VOLTAGE							OPERATING CONDITIONS **		
				In (A)							Tn			Altitude	T. amb	ATEX
				220-240 V	μF	V	min ⁻¹	Is / In	η %	cosφ	Nm	Ts/Tn	Tm/Tn	asl m	min/max °C	
0,4	SM63BG/1045 .. E2	63	SPECIAL	2,52-2,41	16	450	2800	3,24	70,4	0,99	1,36	0,66	1,98	≤1000	-15/45	No
0,55	SM71BG/1055 .. E2	71		3,33-3,19	16	450	2810	4,16	74,1	0,99	1,87	0,69	2,13			
0,75	SM80BG/1075 .. E2	80		4,38-4,27	25	450	2865	5,11	77,4	0,97	2,50	0,40	2,26			
1,1	SM80BG/1115 .. E2	80		6,26-5,93	30	450	2860	4,78	79,6	0,98	3,67	0,50	2,14			
1,5	PLM90CEA-CO/1155 E2	90		8,41-7,87	50	450	2890	6,71	81,3	0,97	4,95	0,59	2,78			

** Operating conditions related only to the motor. For the electric pump refer to the IOM.

cea-motm-2p50-en_e_te

CEA-CIE SERIES

THREE-PHASE MOTORS AT 50 Hz, 2 POLES

P _N kW	Manufacturer	IEC SIZE	Construction Design	N. of Poles	f _N Hz	Data for 400 V / 50 Hz Voltage				
	Xylem Service Italia Srl Reg. No. 07520560967 Montecchio Maggiore Vicenza - Italia					cosφ	I _s / I _N	T _N Nm	T _s /T _N	T _m /T _N
	Model									
0,4	SM63BG/304	63	SPECIALE	2	50	0,64	4,35	1,37	4,14	4,10
0,55	SM71BG/305	71				0,71	6,25	1,84	3,96	3,97
0,75	SM80BG/307 PE	80				0,78	7,38	2,48	3,57	3,75
1,1	SM80BG/311 PE	80				0,79	8,31	3,63	3,95	3,95
1,5	SM80BG/315 PE	80				0,80	8,80	4,96	4,31	4,10
2,2	PLM90BG/322 E3	90				0,80	8,77	7,28	3,72	3,70
3	PLM90BG/330 E3	90				0,79	7,81	9,93	4,26	3,94

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				
	I _N (A)														
0,4	2,03	2,18	2,32	1,17	1,26	1,34	-	-	-	-	-	2745 ÷ 2800	≤ 1000	-15 / 40	No
0,55	2,46	2,49	2,56	1,43	1,44	1,48	-	-	-	-	-	2835 ÷ 2865			
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			
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			
2,2	7,97	7,90	7,98	4,60	4,56	4,61	4,57	4,54	4,57	2,64	2,62	2880 ÷ 2900			
3	11,0	11,0	11,2	6,35	6,33	6,44	6,29	6,27	6,34	3,63	3,62	2865 ÷ 2895			

P _N kW	Efficiency η_N																		IE
	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	70,4	73,2	68,9	70,4	70,3	64,5	70,4	67,2	60,2	-	-	-	-	-	-	-	-	-	2
0,55	74,1	74,2	70,4	74,1	73,6	68,8	74,1	72,7	67,1	-	-	-	-	-	-	-	-	-	
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	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	
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	
2,2	86,5	87,4	86,8	86,4	86,9	85,7	86,6	86,7	85,0	86,4	86,7	85,0	86,4	86,7	85,0	86,4	86,7	85,0	
3	87,2	88,5	88,3	87,5	88,2	87,5	87,5	87,8	86,4	87,2	87,8	86,4	87,2	87,8	86,4	87,2	87,8	86,4	

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

cea-IE3-mott-2p50-en_c_te

CEA-CIE SERIES

AVAILABLE VOLTAGES

SINGLE-PHASE		50 Hz		THREE-PHASE		50 Hz								60 Hz								50/60 Hz	
		PN kW	1 x 220-240			PN kW	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
0,40	s		0,40	s	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	
0,55	s		0,55	s	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	
0,75	s		0,75	s	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	
1,1	s		1,1	s	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	
1,5	s		1,5	s	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	
			2,2	s	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	
			3	s	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o	o	

s = Standard voltage

o = voltage upon request

cea-volt-lowara-en_d_te

Please contact the sales network to check other available voltages.

Tolerances on nominal voltages

• 50 Hz:

± 10% on the single voltage value shown on the rating plate.

± 5% on voltage range shown on the rating plate.

• 60 Hz:

± 10% on the voltage values shown on the rating plate.

CEA-CIE SERIES PUMPS (ErP 2009/125/EC)

The **Commission Regulation (EU) No 547/2012** has implemented two directives with regard to ecodesign requirements for **some types of clean water pumps** placed on the market and put into service inside EU zone as self-alone units or integrated in other products.

For end-suction close-coupled pumps (ESCC for the Regulation) the efficiency assessment refers to:

- just the pump and not the pump and motor assembly (electric or combustion);
- pumps with
 - one impeller;
 - a nominal pressure PN not higher than 16 bar (1600 kPa);
 - a minimum nominal flow not less than 6 m³/h;
 - a maximum nominal power at the shaft not higher than 150 kW;
 - a head not greater than 140 meters, with a speed of 2900 min⁻¹
 - a head not greater than 90 meters, with a speed of 1450 min⁻¹
- use with clean water at a temperature ranging from -10°C to 120°C (the test is performed with cold water at a temperature not higher than 40°C).

This regulation states that water pumps shall have a minimum index MEI coming from a dedicated formula which considers hydraulic efficiency values at 'best efficiency point' (BEP), 75 % of the flow at BEP (Part load – PL) and 110 % of the flow at BEP (Over load – OL).

The Regulation also establishes the following deadline:

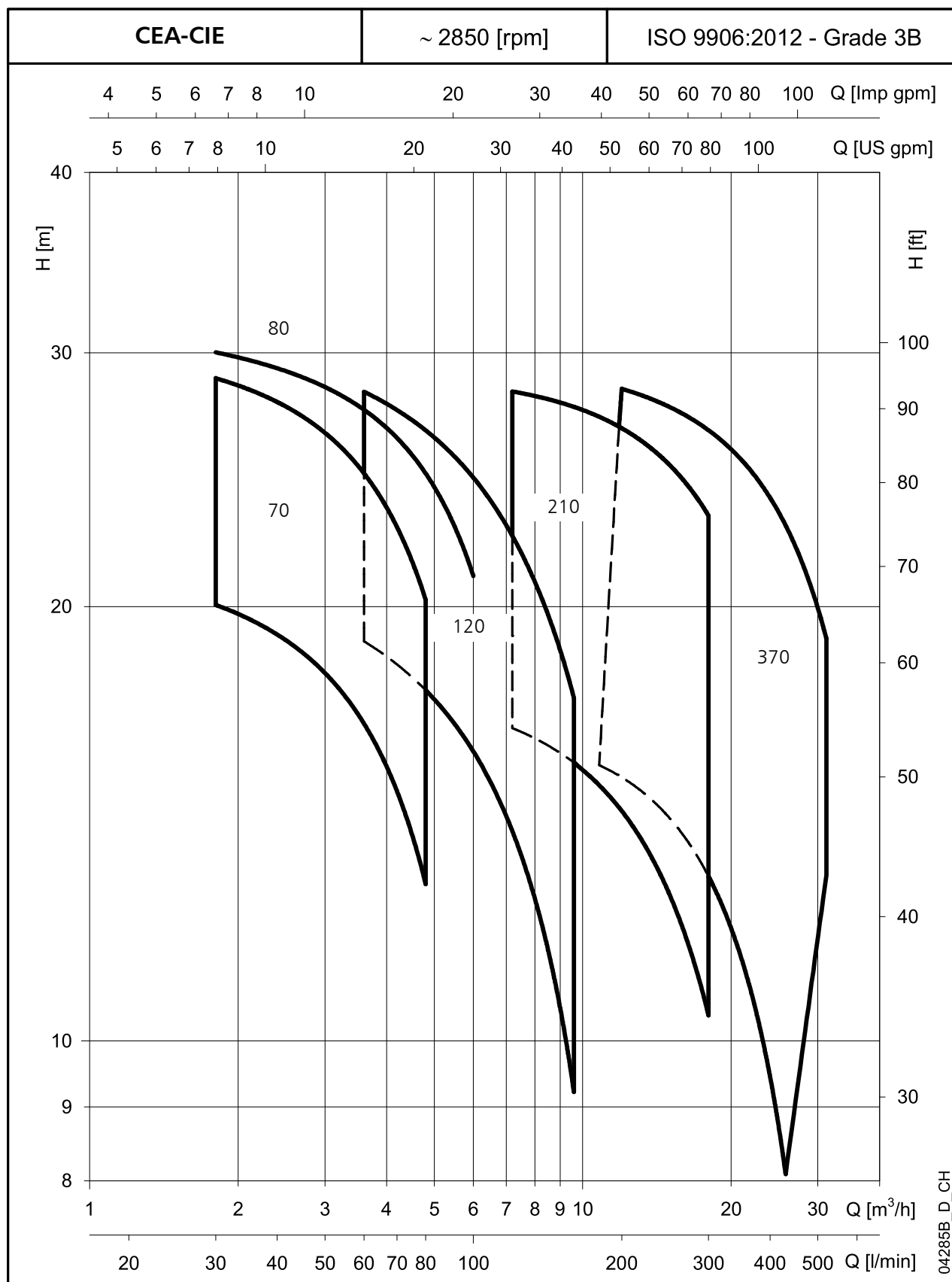
from	minimum efficiency index (MEI)
1 st January 2015	MEI ≥ 0,4

According to the definitions established in the Regulation the CEA and CIE pumps correspond to the “end-suction close-coupled pump” (ESCC).

Regulation (EU) n. 547/2012 – Annex II – point 2 (Product information requirements)

- 1) Minimum efficiency index: see MEI values in specific tables on following page.
- 2) The benchmark for most efficient water pumps is MEI ≥ 0,70.
- 3) Year of manufacture: see date on rating plate (≥ 2013).
- 4) Manufacturer: Xylem Service Italia Srl - Via dott. Vittorio Lombardi 14, 36075 Montecchio Maggiore (VI), Italia - Reg. No 07520560967.
- 5) Product type: see the PUMP TYPE column in the tables in the *Hydraulic performance* section.
- 6) Hydraulic pump efficiency with trimmed impeller: see η_p and $\varnothing$ columns in the tables in the *Hydraulic performance* section.
- 7) Pump performance curves, including the performance curve: see the *Operating Characteristics* graphs in the following pages.
- 8) The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.
- 9) The operation of this water pump with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.
- 10) Information relevant for disassembly, recycling or disposal at end-of-life: observe the current laws and by-laws governing sorted waste disposal. Consult the product operating manual.
- 11) “Designed for use below – 10 °C only”: note not applicable to these products.
- 12) “Designed for use above 120 °C only”: note not applicable to these products.
- 13) Specific instructions for pumps as per points 11 and 12: not applicable to these products.
- 14) “Information on benchmark efficiency is available at”: www.europump.org (Ecodesign section).
- 15) The benchmark efficiency graphs with MEI = 0.7 and MEI = 0.4 are available at www.europump.org, (Ecodesign, Efficiency charts). Refer to “ESCC 1450 rpm”, “ESCC 2900 rpm”.

CEA-CIE SERIES
HYDRAULIC PERFORMANCE RANGE AT 50 Hz, 2 POLES



CEA-CIE SERIES

TABLE OF HYDRAULIC PERFORMANCES AT 50 Hz, 2 POLES

PUMP TYPE CEA.. CIE..	VERSION	MOTOR		ELECTRIC PUMP			MEI η (1)	Q = DELIVERY									
		P _N kW	TYPE	* P ₁ kW	* I			l/min 0	30	45	60	75	90	105	120	135	160
					220-240 V	380-415 V											
					H = TOTAL HEAD IN METRES OF COLUMN OF WATER												
70/3	1 ~	0,4	SM63BG/1045	0,55	2,33	-	-	22,2	20,2	18,8	16,8	14,1					
70/5		0,75	SM80BG/1075	0,91	4,05	-	-	31,9	29,7	28,3	26,0	22,8					
80/5		1,1	SM80BG/1115	1,06	4,70	-	-	32,6	30,6	29,6	28,3	26,5	24,1				
120/3		0,55	SM71BG/1055	0,79	3,47	-	0,40	22,3			18,7	17,6	16,5	15,1	13,6	11,9	8,7
120/5		1,1	SM80BG/1115	1,30	5,73	-	0,40	32,1			28,5	27,4	26,1	24,6	22,9	21,0	17,6
70/3	3 ~	0,4	SM63BG/304	0,61	2,51	1,45	-	22,1	20,0	18,7	16,6	13,8					
70/5		0,55	SM71BG/305	0,88	2,86	1,65	-	31,1	28,8	27,2	24,8	21,5					
80/5		0,75	SM80BG/307 PE	0,98	3,08	1,78	-	32,1	30,0	28,9	27,4	25,5	23,0				
120/3		0,55	SM71BG/305	0,82	2,74	1,58	0,40	22,5			18,9	17,9	16,8	15,5	14,0	12,3	9,1
120/5		1,1	SM80BG/311 PE	1,28	4,10	2,37	0,40	31,9			28,2	27,0	25,7	24,1	22,4	20,5	17,1

PUMP TYPE CEA.. CIE..	VERSION	MOTOR		ELECTRIC PUMP			MEI (1)	Q = DELIVERY									
		P _N kW	TYPE	* P ₁ kW	* I			l/min 0 m³/h 0	120	140	160	180	200	250	300	301	302
					220-240 V	380-415 V											
					A	A		7,2	8,4	9,6	10,8	12,0	15,0	18,0	18,1	18,1	
H = TOTAL HEAD IN METRES OF COLUMN OF WATER																	
210/2	1 ~	1,1	SM80BG/1115	1,11	4,91	-	0,40	17,9	16,9	16,5	16,1	15,6	15,0	14,4	13,7	12,9	11,1
210/3		1,1	SM80BG/1115	1,37	6,09	-	0,40	20,7	19,6	19,3	18,9	18,4	17,9	17,3	16,7	15,9	14,2
210/4		1,5	PLM90CEA-CO/1155 E2	1,81	8,23	-	0,40	25,6	24,9	24,5	24,1	23,7	23,1	22,4	21,7	20,9	19,1
210/2	3 ~	0,75	SM80BG/307 PE	1,04	3,22	1,86	0,40	17,7	16,5	16,1	15,6	15,1	14,4	13,8	13,0	12,2	10,4
210/3		1,1	SM80BG/311 PE	1,35	4,24	2,45	0,40	20,8	19,7	19,4	19,0	18,6	18,0	17,5	16,8	16,1	14,4
210/4		1,5	SM80BG/315 PE	1,73	5,46	3,15	0,40	25,6	24,8	24,5	24,1	23,6	23,0	22,4	21,6	20,8	19,0
210/5		2,2	PLM90BG/322 E3	2,20	7,35	4,24	0,40	29,0	28,2	27,9	27,5	27,1	26,6	26,0	25,4	24,7	23,1

PUMP TYPE CEA.. CIE..	VERSION	MOTOR		ELECTRIC PUMP			MEI η (1)	Q = DELIVERY									
		P _N kW	TYPE	* P ₁ kW	* I			l/min 0 m³/h 0	180	200	250	300	350	400	430	480	520
					220-240 V A	380-415 V A											
					H = TOTAL HEAD IN METRES OF COLUMN OF WATER												
370/1	1 ~	1,1	SM80BG/1115	1,43	6,32	-	0,40	16,3	15,5	14,7	13,7	12,4	10,9	9,1			
370/2		1,5	PLM90CEA-CO/1155 E2	1,95	8,87	-	0,40	20,4		18,8	17,9	16,9	15,6	14,1	12,3		
370/1	3 ~	1,1	SM80BG/311 PE	1,40	4,35	2,51	0,40	16,3	15,5	14,8	13,8	12,6	11,0	9,2			
370/2		1,5	SM80BG/315 PE	1,95	5,94	3,43	0,40	20,4		18,7	17,9	16,8	15,5	13,9	12,1		
370/3		2,2	PLM90BG/322 E3	2,45	7,84	4,53	0,40	24,4		22,5	21,7	20,7	19,5	18,1	16,3	14,3	13,0
370/5		3	PLM90BG/330 E3	3,26	10,10	5,86	0,40	30,3		27,9	27,1	26,2	25,0	23,6	22,0	20,2	19,0

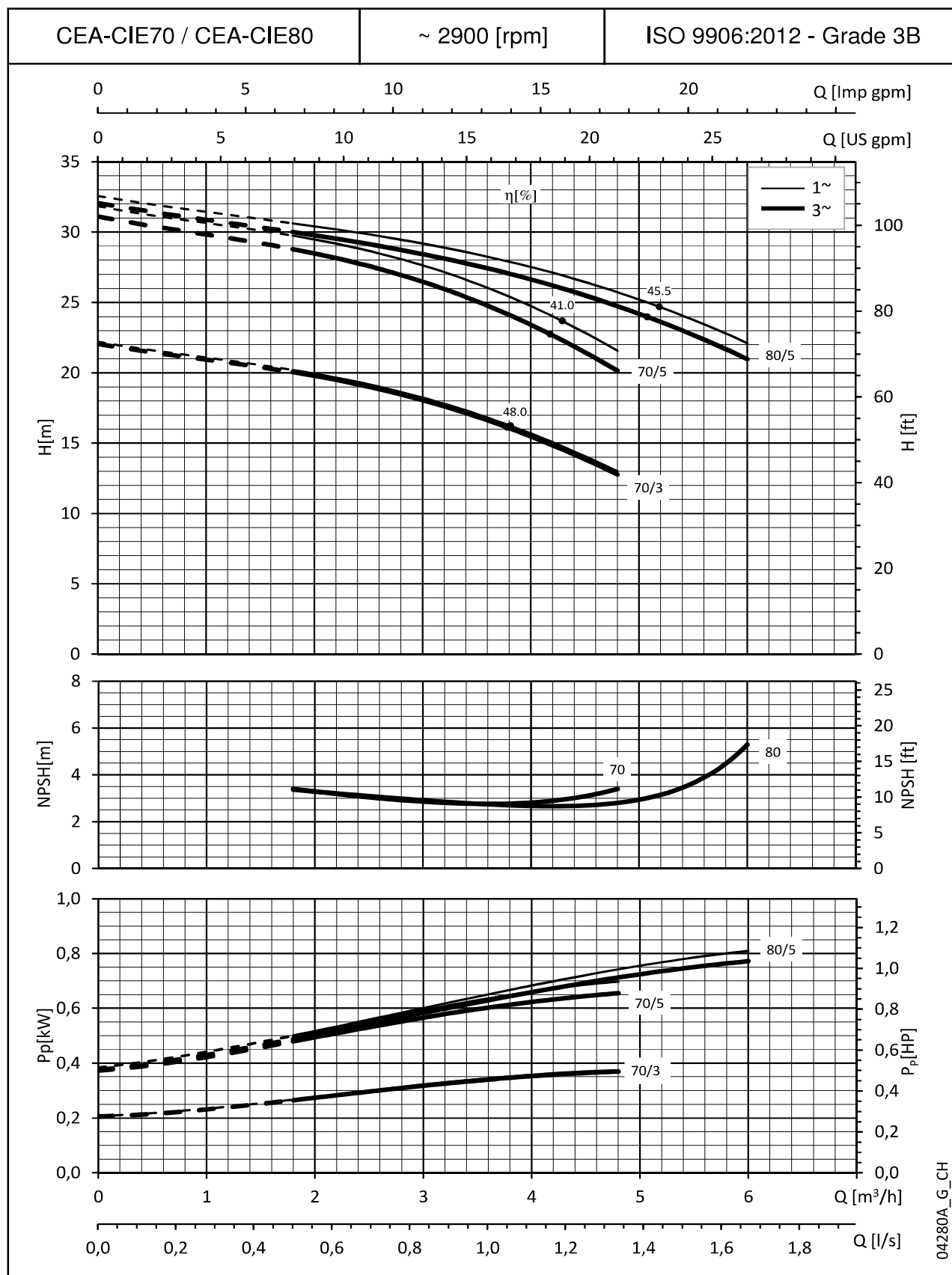
Hydraulic performances in compliance with ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A)

(1) Minimum efficiency index MEI

cea-cie_2p50-en_b_th

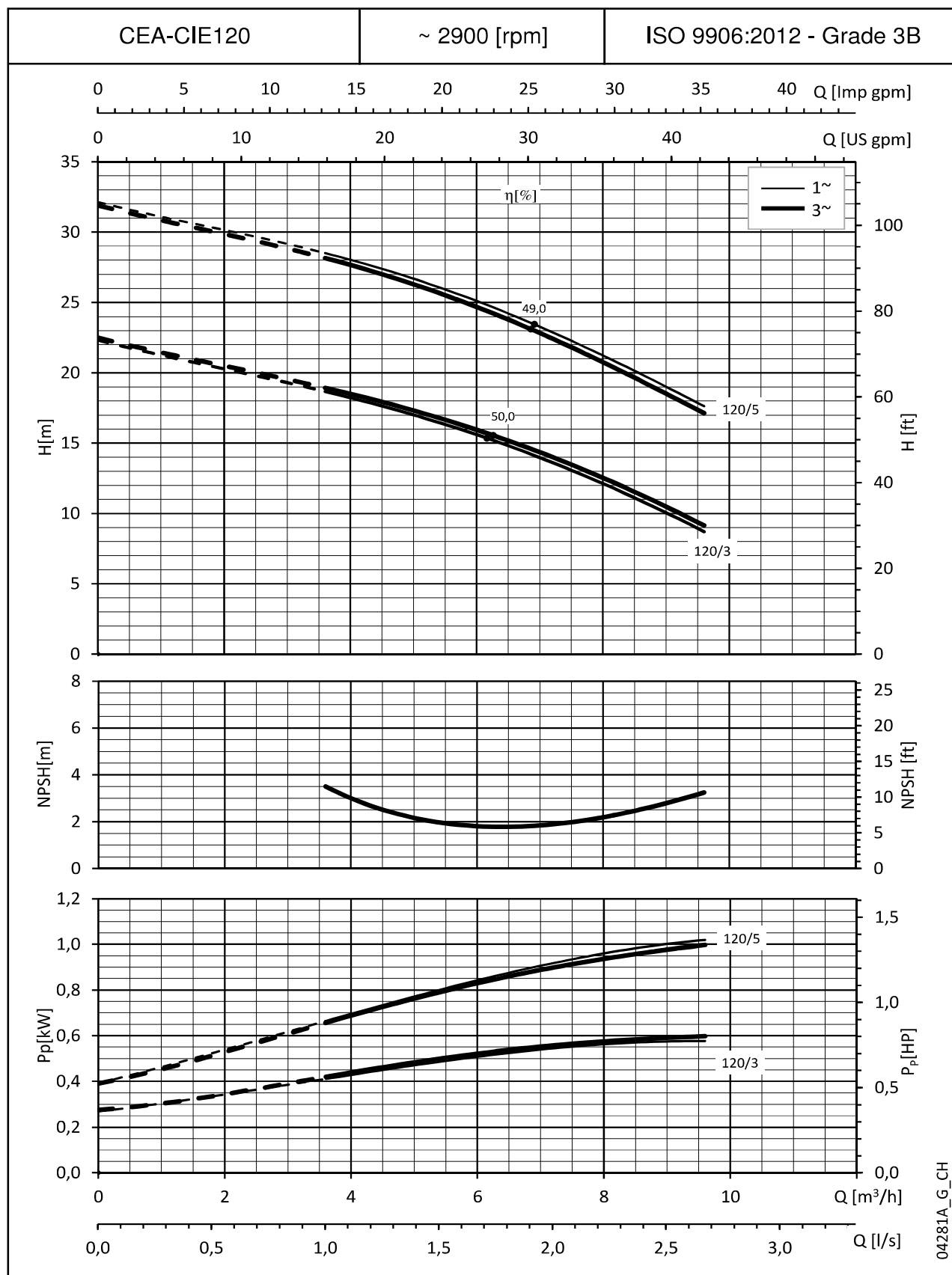
* Maximum value in specified range: P₁ = input power; I = input current.

CEA-CIE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



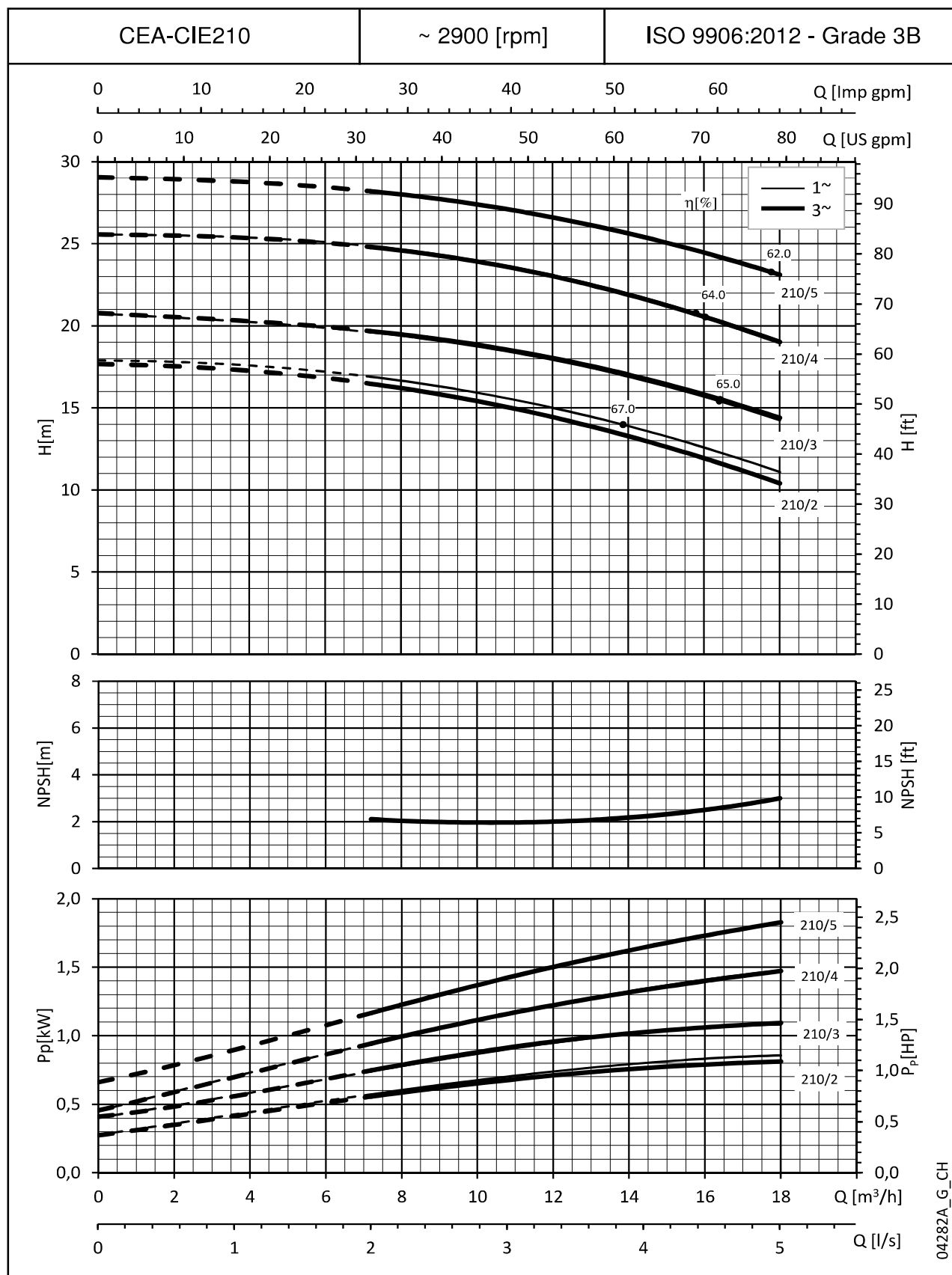
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

CEA-CIE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



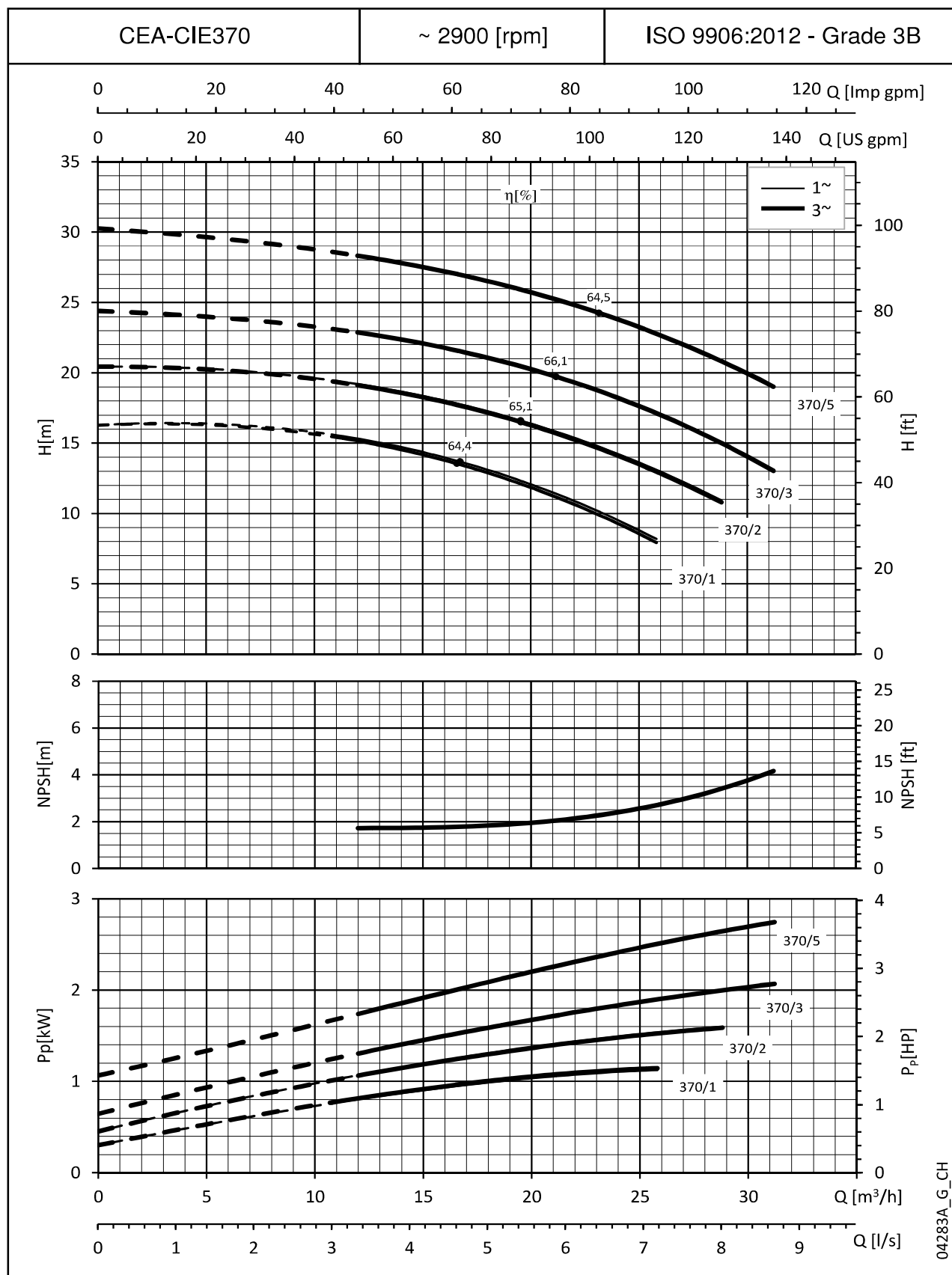
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

CEA-CIE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



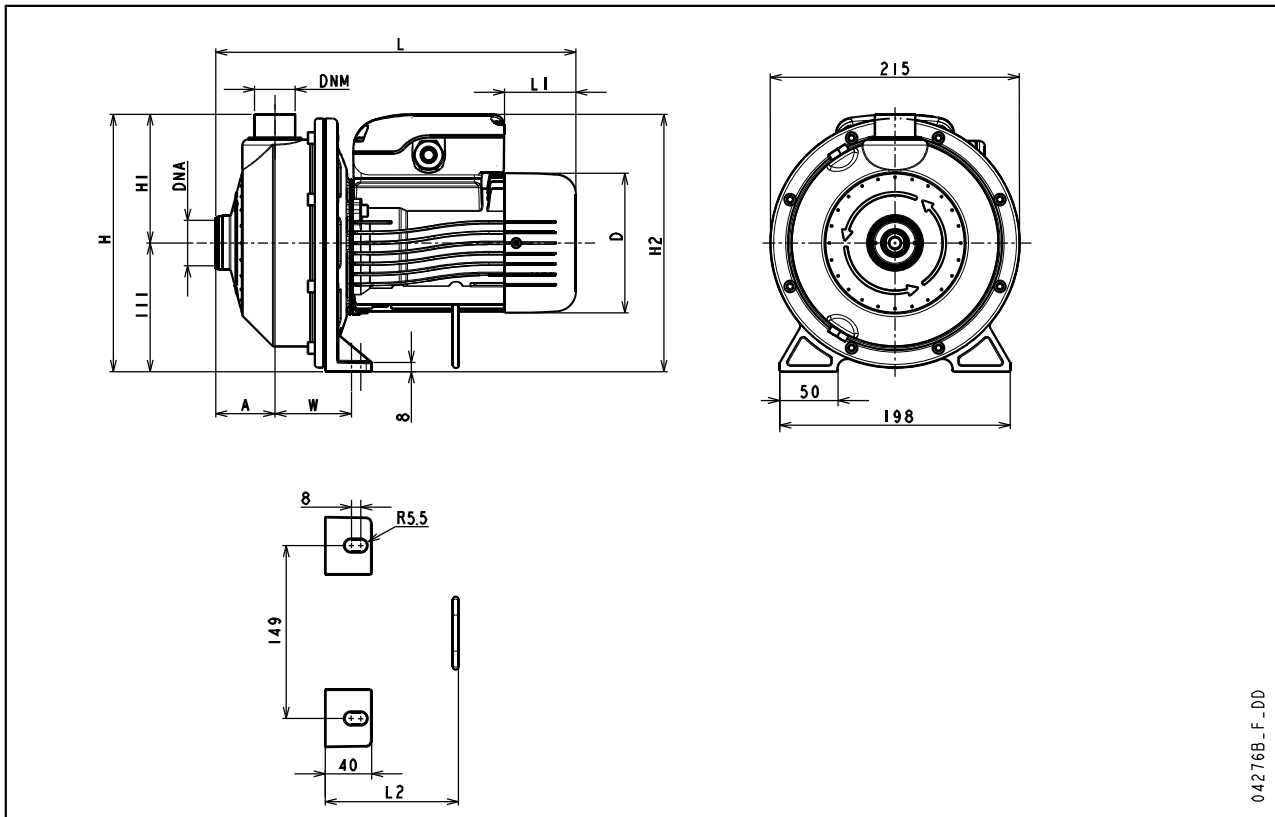
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

CEA-CIE 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-CIE SERIES DIMENSIONS AND WEIGHTS AT 50 Hz

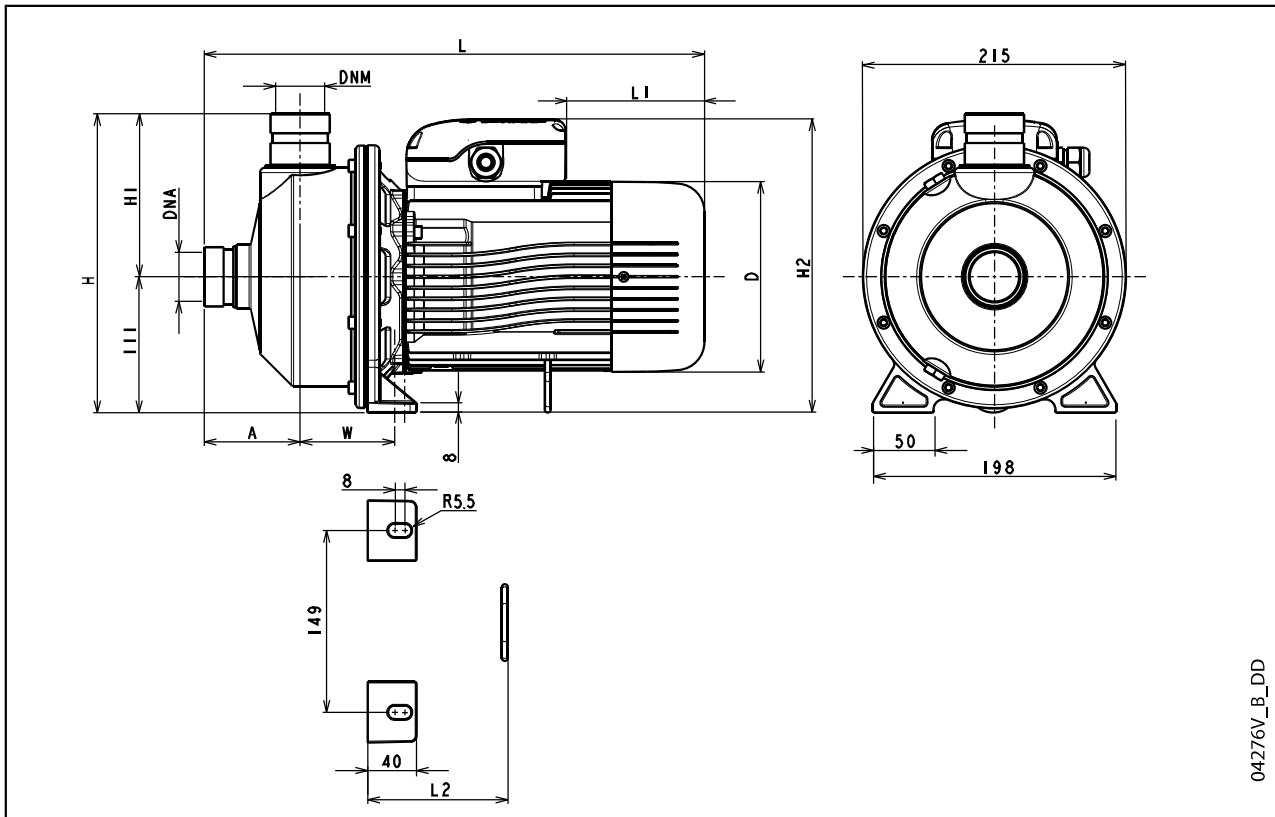


04276B_F_DD

PUMP TYPE CEA.. CIE..	VERSION	MOTOR		DIMENSIONS (mm)									DNA	DNM	WEIGHT
		KW	SIZE	A	D	H	H1	H2	L	L1	L2	W			kg
70/3/C	1 ~	0,4	63	51	120	222	111	222	311	62	115	65	Rp 1 1/4	Rp 1	7,8
70/5/C		0,75	80	51	156	222	111	248	371	69	150	65	Rp 1 1/4	Rp 1	11,8
80/5/C		1,1	80	51	156	222	111	248	371	69	150	65	Rp 1 1/4	Rp 1	12,0
120/3/C		0,55	71	51	140	222	111	232	325	76	117	65	Rp 1 1/4	Rp 1	10,3
120/5/C		1,1	80	51	156	222	111	248	371	69	150	65	Rp 1 1/4	Rp 1	13,6
210/2/C		1,1	80	54	156	224	113	248	385	69	150	76	Rp 1 1/2	Rp 1 1/4	13,8
210/3/C		1,1	80	54	156	224	113	248	385	69	150	76	Rp 1 1/2	Rp 1 1/4	13,8
210/4/C		1,5	90	54	174	224	113	270	433	57	197	76	Rp 1 1/2	Rp 1 1/4	15,1
370/1/C		1,1	80	54	156	224	113	248	385	69	150	76	Rp 2	Rp 1 1/4	13,0
370/2/C		1,5	90	54	174	224	113	270	433	57	197	76	Rp 2	Rp 1 1/4	15,1
70/3/A	3 ~	0,4	63	51	120	222	111	222	311	62	115	65	Rp 1 1/4	Rp 1	8,7
70/5/A		0,55	71	51	140	222	111	232	325	76	117	65	Rp 1 1/4	Rp 1	10,6
80/5/D		0,75	80	51	155	222	111	240	371	114	150	65	Rp 1 1/4	Rp 1	13,4
120/3/A		0,55	71	51	140	222	111	232	325	76	117	65	Rp 1 1/4	Rp 1	10,5
120/5/D		1,1	80	51	155	222	111	240	371	114	150	65	Rp 1 1/4	Rp 1	13,6
210/2/D		0,75	80	54	155	224	113	240	385	114	150	76	Rp 1 1/2	Rp 1 1/4	13,6
210/3/D		1,1	80	54	155	224	113	240	385	114	150	76	Rp 1 1/2	Rp 1 1/4	15,4
210/4/D		1,5	80	54	155	224	113	240	385	114	150	76	Rp 1 1/2	Rp 1 1/4	16,9
210/5/D		2,2	90	54	174	224	113	245	429	172	197	76	Rp 1 1/2	Rp 1 1/4	20,0
370/1/D		1,1	80	54	155	224	113	240	385	114	150	76	Rp 2	Rp 1 1/4	14,8
370/2/D		1,5	80	54	155	224	113	240	385	114	150	76	Rp 2	Rp 1 1/4	16,9
370/3/D		2,2	90	54	174	224	113	245	429	172	197	76	Rp 2	Rp 1 1/4	20,0
370/5/D		3	90	54	174	224	113	245	429	172	197	76	Rp 2	Rp 1 1/4	20,0

cea-2p50-en_m_td

CIE..V SERIES - VICTAULIC **DIMENSIONS AND WEIGHTS AT 50 Hz**



04276V_B_DD

PUMP TYPE	VERSION	MOTOR		DIMENSIONS (mm)									VICTAULIC		WEIGHT
		KW	SIZE	A	D	H	H1	H2	L	L1	L2	W	DNA	DNM	kg
CIEM 70/3V/C	1 ~	0,4	63	73,5	120	244,2	133,2	222	334	62	115	65	1 ½"	1"	7,8
CIEM 70/5V/C		0,75	80	73,5	156	244,2	133,2	248	394	69	150	65	1 ½"	1"	11,8
CIEM 80/5V/C		1,1	80	73,5	156	244,2	133,2	248	394	69	150	65	1 ½"	1"	12,0
CIEM 120/3V/C		0,55	71	73,5	140	244,2	133,2	232	348	76	117	65	1 ½"	1"	10,3
CIEM 120/5V/C		1,1	80	73,5	156	244,2	133,2	248	394	69	150	65	1 ½"	1"	13,6
CIEM 210/2V/C		1,1	80	78,5	156	244,2	133,2	248	410	69	150	76	1 ½"	1 ½"	13,8
CIEM 210/3V/C		1,1	80	78,5	156	244,2	133,2	248	410	69	150	76	1 ½"	1 ½"	13,8
CIEM 210/4V/C		1,5	90	78,5	174	244,2	133,2	270	454	57	197	76	1 ½"	1 ½"	15,1
CIEM 370/1V/C		1,1	80	78,5	156	244,2	133,2	248	410	69	150	76	1 ½"	1 ½"	13,0
CIEM 370/2V/C		1,5	90	78,5	174	244,2	133,2	270	454	57	197	76	1 ½"	1 ½"	15,1
CIE 70/3V/A	3 ~	0,4	63	73,5	120	244,2	133,2	222	334	62	115	65	1 ½"	1"	8,7
CIE 70/5V/A		0,55	71	73,5	140	244,2	133,2	232	348	76	117	65	1 ½"	1"	10,6
CIE 80/5V/D		0,75	80	73,5	155	244,2	133,2	240	394	114	150	65	1 ½"	1"	13,4
CIE 120/3V/A		0,55	71	73,5	140	244,2	133,2	232	348	76	117	65	1 ½"	1"	10,5
CIE 120/5V/D		1,1	80	73,5	155	244,2	133,2	240	394	114	150	65	1 ½"	1"	13,6
CIE 210/2V/D		0,75	80	78,5	155	244,2	133,2	240	410	114	150	76	1 ½"	1 ½"	13,6
CIE 210/3V/D		1,1	80	78,5	155	244,2	133,2	240	410	114	150	76	1 ½"	1 ½"	15,4
CIE 210/4V/D		1,5	80	78,5	155	244,2	133,2	240	410	114	150	76	1 ½"	1 ½"	16,9
CIE 210/5V/D		2,2	90	78,5	174	244,2	133,2	245	454	172	197	76	1 ½"	1 ½"	20,0
CIE 370/1V/D		1,1	80	78,5	155	244,2	133,2	240	410	114	150	76	1 ½"	1 ½"	14,8
CIE 370/2V/D		1,5	80	78,5	155	244,2	133,2	240	410	114	150	76	1 ½"	1 ½"	16,9
CIE 370/3V/D		2,2	90	78,5	174	244,2	133,2	245	454	172	197	76	1 ½"	1 ½"	20,0
CIE 370/5V/D		3	90	78,5	174	244,2	133,2	245	454	172	197	76	1 ½"	1 ½"	20,0

cieV-2p50-en_c_td