

CM1-3 A-R-A-E-AVBE F-A-A-N

Grundfos pump 96935387



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<https://www.lenntech.com/grundfos/CMBASIS/96935387/CM1-3-A-R-A-E-AVBE.html>

info@lenntech.com

tel. +31 152 610 900

fax. +31 152 616 289

Position	Qty.	Description
	1	CM1-3 A-R-A-E-AVBE  Product No.: On request Compact, reliable, horizontal, multistage, end-suction centrifugal pump with axial suction port and radial discharge port. The shaft, impellers and chambers are made of stainless steel. The inlet and discharge parts are made of cast iron. The mechanical shaft seal is a special designed, unbalanced O-ring seal. Pipework connection is via internal Whitworth pipe threads, Rp (ISO 7/1). The pump is fitted with a 3-phase, foot-mounted, fan-cooled asynchronous motor. Further product details Pump and motor are integrated in a compact and user-friendly design. The pump is fitted to a low base plate, making it ideal for installation in systems where compactness is important. The state-of-the-art design and materials of the shaft seal ensure high wear resistance, improved sticking and dry-running capabilities and long operating life. Servicing the pump requires no special service tools. Service parts are in stock for quick delivery and are available as kits, single parts or bulk. Service videos are available on www.youtube.com. Pump A combination of a stop ring and a Nord-lock® washer secures a tight and reliable fixation of the impeller spacing pipes to the splined pump shaft. It is possible to remove and fit the hydraulic parts from the pump side. The inlet part, chambers and discharge part are hold together by four staybolts. The pump is fitted with an unbalanced O-ring seal with a rigid torque-transmission system. It has a fixed seal driver ensuring a reliable rotation of all parts. The dynamic secondary seal is an O-ring. Primary seal: - Rotating seal ring material: aluminium oxide (alumina) - Stationary seat material: carbon graphite, resin-impregnated Carbon graphite against alumina is a good all-round seal for not too demanding applications. The corrosion resistance is often limited in water to a range between pH 5 and pH 10. Usage in liquids above 90 °C is not recommended. The seal can handle dry-running conditions for short periods. Secondary seal material: EPDM (ethylene-propylene rubber) EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.  The pump shaft is connected to the motor shaft through a left thread and tight fit. The shaft cannot be dismantled. Motor The motor is a totally enclosed, fan-cooled motor with principal dimensions to EN 50347. Electrical tolerances comply with EN 60034. The motor does not incorporate motor protection and must be connected to a motor-protective circuit breaker which can be manually reset. The motor-protective circuit breaker must be set according to the rated current of the motor (I1/1). An installation indicator is fitted to the motor fan cover. Based on the motor cooling air, it indicates the direction of rotation of the motor. The motor is fitted with a directional sticker.



Technical data

Liquid:

Pumped liquid:	Water
Liquid temperature range:	-20 .. 90 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m ³

Technical:

Rated flow:	1.7 m ³ /h
Rated head:	17.7 m
Primary shaft seal:	AVBE
Approvals on nameplate:	CE,WRAS,ACS,TR,EAC
Curve tolerance:	ISO9906:2012 3B

Materials:

Pump housing:	Cast iron EN-JL1030 ASTM 30 B
Impeller:	Stainless steel DIN W.-Nr. 1.4301 AISI 304
Rubber:	EPDM

Installation:

Maximum ambient temperature:	55 °C
Maximum operating pressure:	10 bar
Max pressure at stated temp:	6 bar / 90 °C 10 bar / 40 °C
Flange standard:	WHITWORTH THREAD RP
Pump inlet:	Rp 1
Pump outlet:	Rp 1

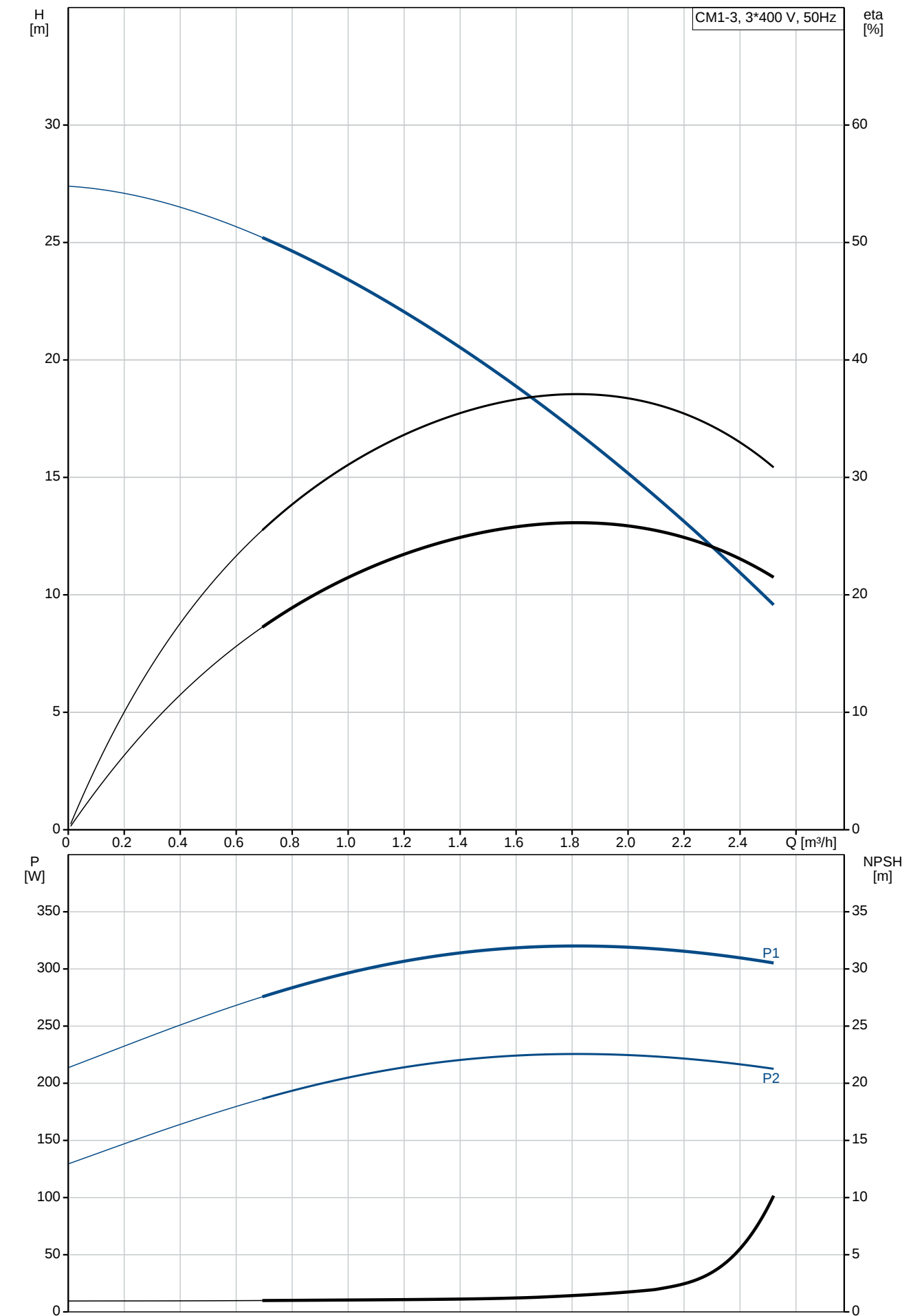
Electrical data:

Motor type:	71A
Rated power - P2:	0.46 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 220-240D/380-415Y V
Service factor:	1
Rated current:	2,0-2,2/1,0-1,2 A
Starting current:	490-530 %
Rated speed:	2770-2820 rpm
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F

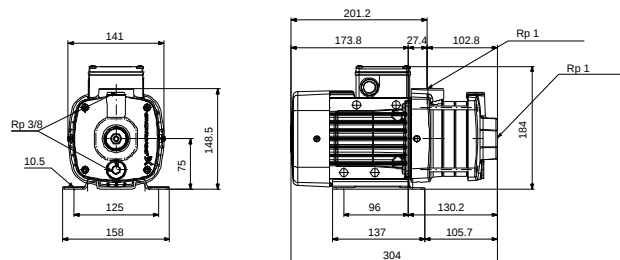
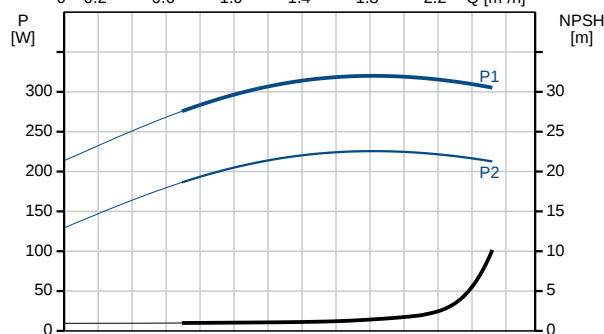
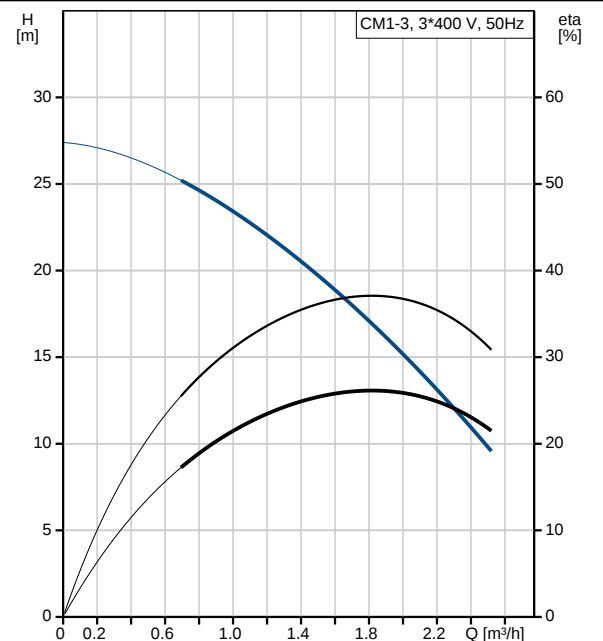
Others:

Minimum efficiency index, MEI ≥:	0.7
Net weight:	11.3 kg
Gross weight:	13.8 kg

On request CM1-3 A-R-A-E-AVBE 50 Hz



Description	Value
General information:	
Product name:	CM1-3 A-R-A-E-AVBE
Product No:	On request
EAN number:	On request
Technical:	
Rated flow:	1.7 m³/h
Rated head:	17.7 m
Impellers:	3
Primary shaft seal:	AVBE
Approvals on nameplate:	CE,WRAS,ACS,TR,EAC
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
Materials:	
Pump housing:	Cast iron
	EN-JL1030
	ASTM 30 B
Impeller:	Stainless steel
	DIN W.-Nr. 1.4301
	AISI 304
Material code:	A
Rubber:	EPDM
Code for rubber:	E
Installation:	
Maximum ambient temperature:	55 °C
Maximum operating pressure:	10 bar
Max pressure at stated temp:	6 bar / 90 °C
	10 bar / 40 °C
Flange standard:	WHITWORTH THREAD RP
Pump inlet:	Rp 1
Pump outlet:	Rp 1
Connect code:	R
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-20 .. 90 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m³
Electrical data:	
Motor type:	71A
Rated power - P2:	0.46 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 220-240D/380-415Y V
Service factor:	1
Rated current:	2,0-2,2/1,0-1,2 A
Starting current:	490-530 %
Rated speed:	2770-2820 rpm
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Motor protec:	NO
Others:	
Minimum efficiency index, MEI ≥:	0.7
Net weight:	11.3 kg
Gross weight:	13.8 kg

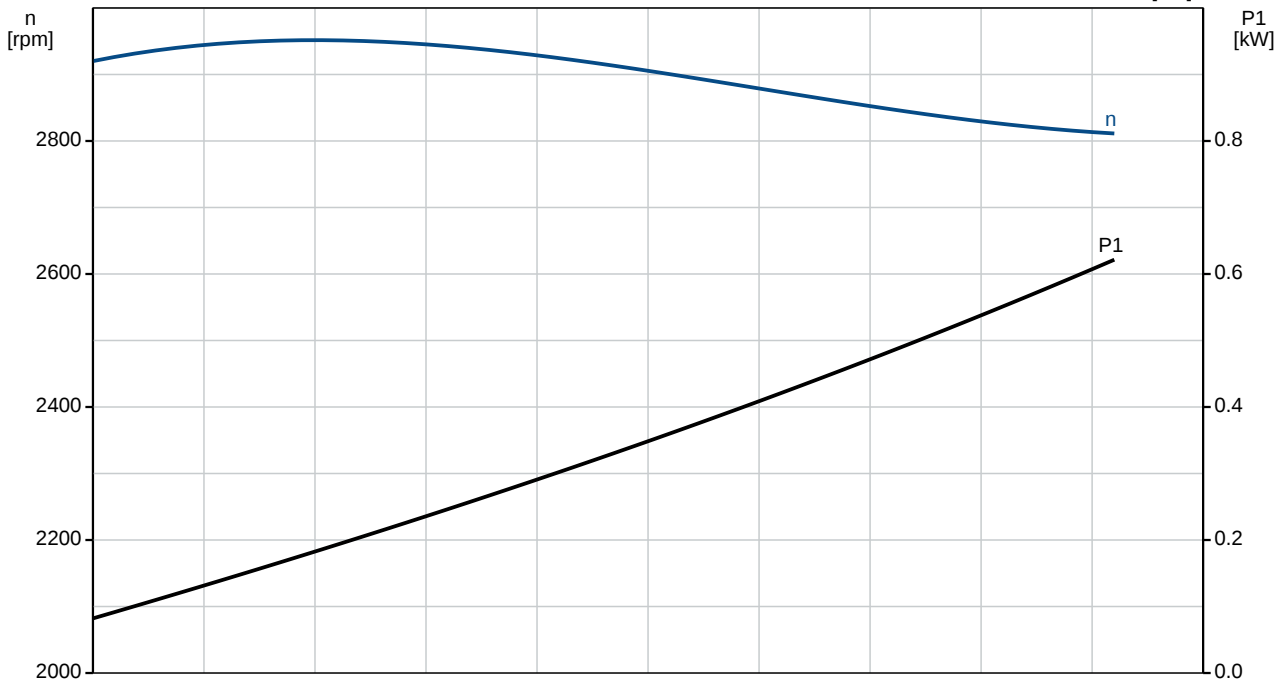
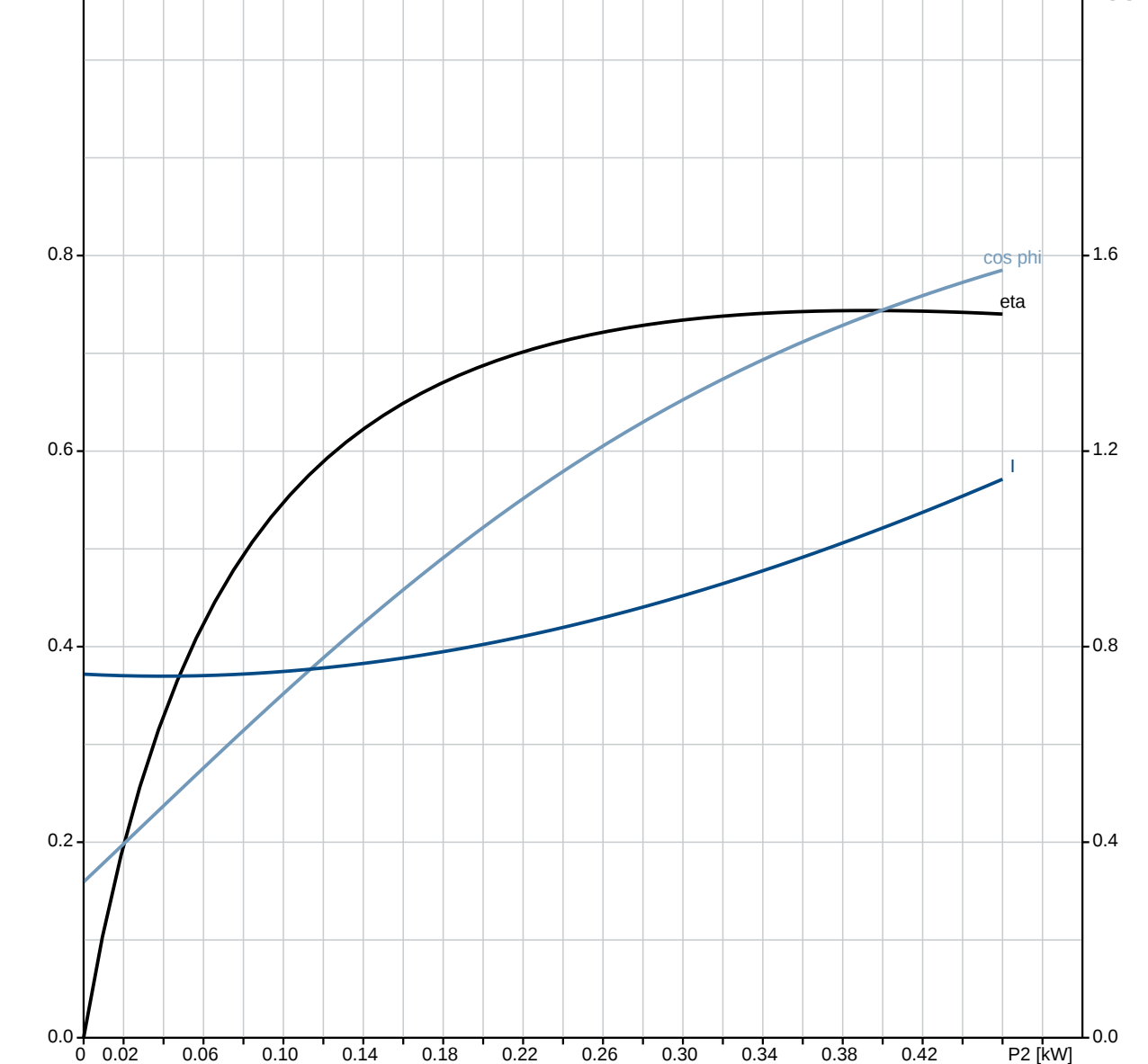


On request CM1-3 A-R-A-E-AVBE 50 Hz

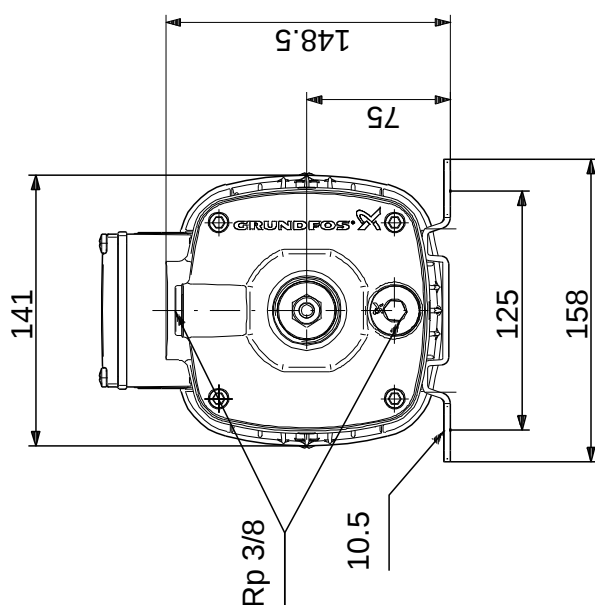
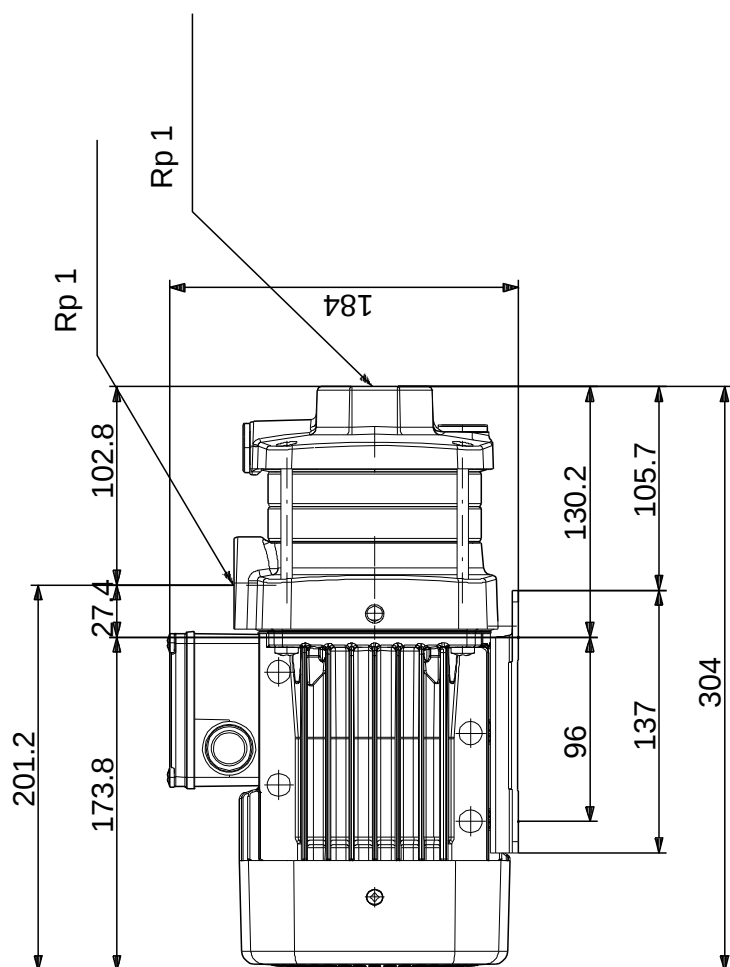
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CM1-3 + 71A 0.46 kW 3*400 V, 50 Hz, SF = 1

I
[A]



On request CM1-3 A-R-A-E-AVBE 50 Hz



Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Exploded view



Sectional drawing (TM058200 for TPE2,TPE3)



TM058200

Exploded view (TM057026 for MGE model H/I)



Parts list CM1-3, Product No. On request
Valid from 2.7.2009 (0927)

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
	MG71A				1	pcs
	Cross recess countersunk screw				4	pcs
- 4	Chamber cpl.				1	pcs
	Guide vane				6	
	Plate				1	
	Retainer				1	
	Intermediate chamber				1	
	Vane				1	
45	Neck ring				1	
65	Retainer				1	
- 4.f	Chamber				1	pcs
	Guide vane				6	
	Plate				1	
	Plate				1	
	Retainer				1	
45	Neck ring				1	
65	Retainer				1	
- 5a	Chamber cpl.				1	pcs
	Retainer				1	
	Intermediate chamber				1	
	Vane				1	
45	Neck ring				1	
65	Retainer				1	
6	Inlet part				1	pcs
- 25	Drain plug cpl.				2	pcs
11	O-ring		Diameter: 18,5		1	
			Material type: EPDM			
			Thickness: 2			
25	Plug				1	
26	Hex socket head cap screw		Length (mm): 75		4	pcs
			Thread: M06			
36	Lock nut		Thread: M8		1	pcs
49	Impeller cpl.				3	pcs
51	Pump shaft		Diameter: D12		1	pcs
64	Spacing pipe				2	pcs
64.c	Clamp				1	pcs
66	Wedge lock washer				1	pcs
76	Nameplate				2	pcs
- 105	Shaft seal				1	pcs
102	O-ring		Diameter: 17,86		1	
			Material type: EPDM			
			Thickness: 2,62			
103	Seal ring, stationary				1	
104	Seal ring, rotating				1	
107	O-ring				1	
108	Compression spring				1	
111	Retainer				1	
112	Driver for shaft seal				1	
111.a	Stop ring				1	pcs
139.b	Gasket		Internal diameter: 103		4	pcs
			Outer diameter: 110			
			Thickness: 0,25			
151	Fan cover				1	pcs
151.a	Installation indicator				1	pcs
152	Pan head thread forming screw				2	pcs
156	Fan				1	pcs
191	Base plate				1	pcs

Disclaimer: The information about the Grundfos pump in this document may be outdated.

Data may be subject to alterations without further notice.

Please contact us to verify the data above is still accurate/up-to-date.

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info@lenntech.com

<https://www.lenntech.com>

tel. +31 152 610 900

fax. +31 152 616 289