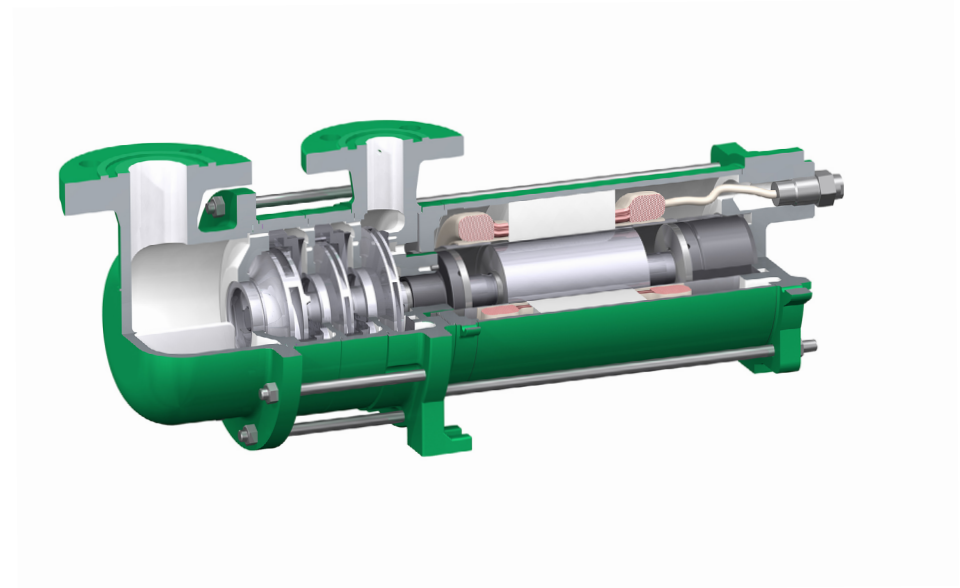
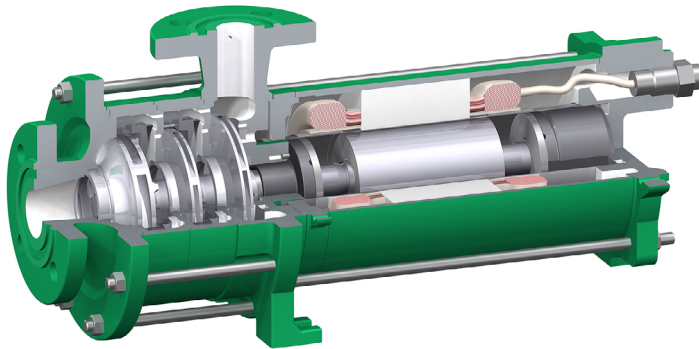


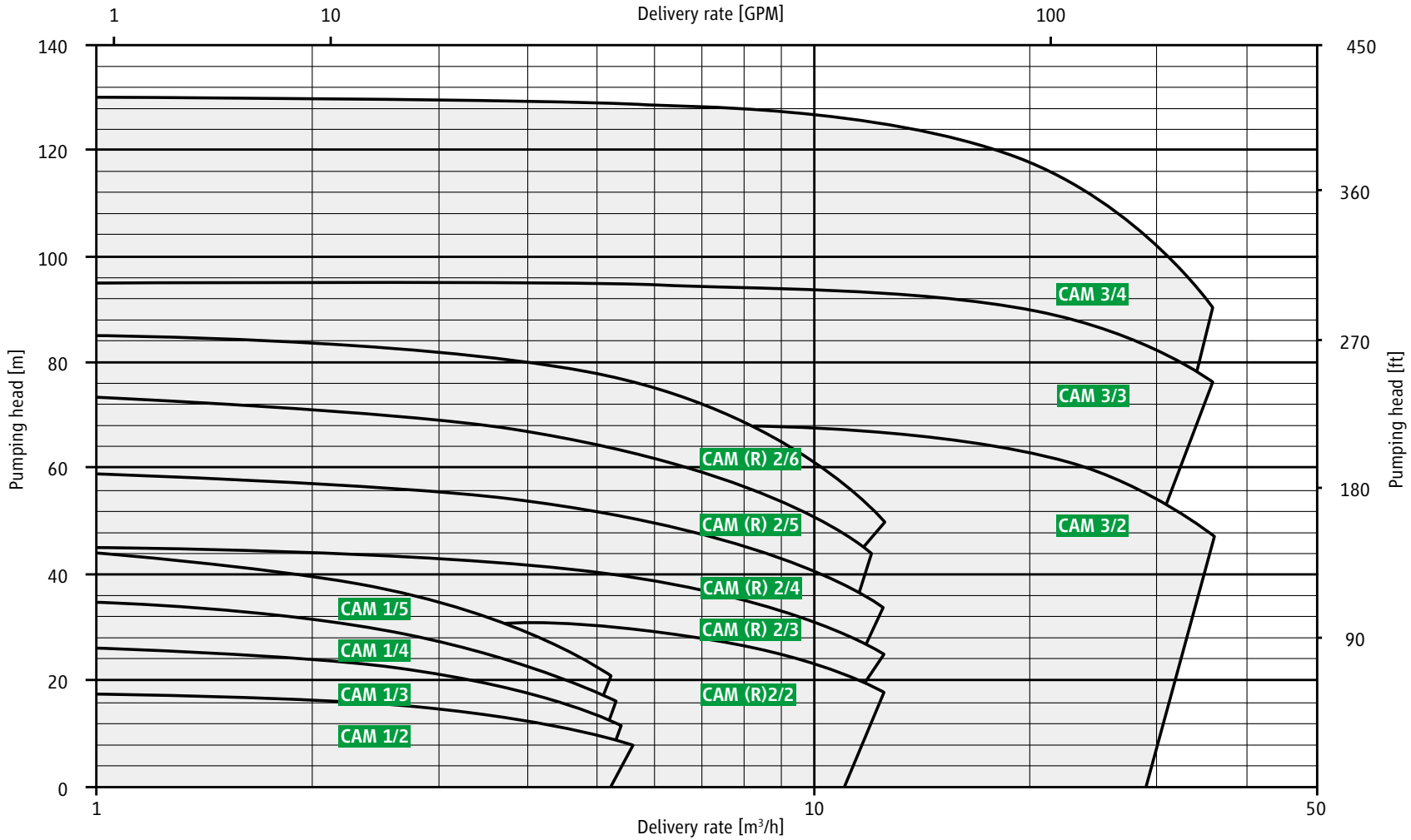
PRODUCT INFORMATION  
CANNED MOTOR PUMP TYPE CAM / CAMR

# REFRIGERATION ENGINEERING



**ZART®**  
*simply best balance*

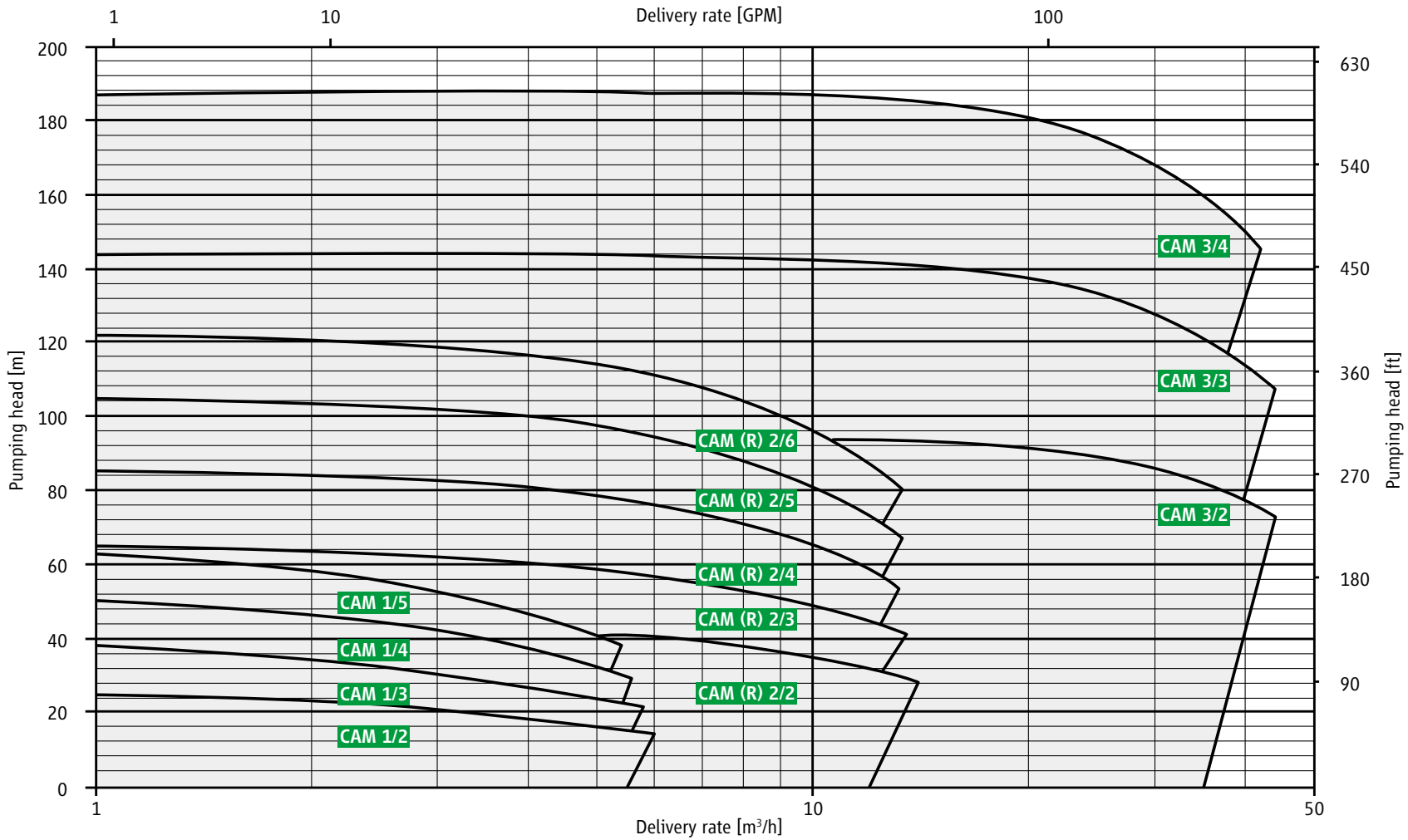
2900 rpm 50 Hz



- Table of Contents
- General information
- Function
- Operating principle
- Characteristic maps**
- Versions
- CAM 1 / CAM 2
- CAM R 2
- CAM 3
- Documentation and tests
- Installation
- Protection and monitoring
- Flow regulation
- Design software
- Contact



3500 rpm 60 Hz



- Table of Contents
- General information
- Function
- Operating principle
- Characteristic maps**
- Versions
- CAM 1 / CAM 2
- CAM R 2
- CAM 3
- Documentation and tests
- Installation
- Protection and monitoring
- Flow regulation
- Design software
- Contact



## Versions CAM / CAMR

Type	Motor	Pump data		Motor data 50 Hz / 60 Hz		Weight kg	PN
		Q <sub>min</sub> m <sup>3</sup> /h	Q <sub>max</sub> m <sup>3</sup> /h	Output kW [P2]	Rated current at 400 V / 480 V		
CAM 1/2	AGX 1.0	0.5	5.0	1.0 / 1.2	2.7	27.0	40
CAM 1/3	AGX 1.0	0.5	5.0	1.0 / 1.2	2.7	28.0	40
CAM 1/4	AGX 1.0	0.5	5.0	1.0 / 1.2	2.7	29.0	40
CAM 1/5	AGX 1.0	0.5	5.0	1.0 / 1.2	2.7	30.0	40
CAM (R) 2/2	AGX 3.0	1.0	13.0	3.0 / 3.4	7.1	48.0	40
CAM (R) 2/2	AGX 4.5	1.0	14.0	4.5 / 5.6	10.4	56.0	40
CAM (R) 2/3	AGX 3.0	1.0	13.0	3.0 / 3.4	7.1	52.0	40
CAM (R) 2/3	AGX 4.5	1.0	14.0	4.5 / 5.6	10.4	60.0	40
CAM (R) 2/3	AGX 6.5	1.0	14.0	6.5 / 7.5	15.2	63.0	40
CAM (R) 2/4	AGX 3.0	1.0	14.0	3.0 / 3.4	7.1	56.0	40
CAM (R) 2/4	AGX 4.5	1.0	14.0	4.5 / 5.6	10.4	68.0	40
CAM (R) 2/4	AGX 6.5	1.0	14.0	6.5 / 7.5	15.2	71.0	40
CAM (R) 2/5	AGX 3.0	1.0	14.0	3.0 / 3.4	7.1	60.0	40
CAM (R) 2/5	AGX 4.5	1.0	14.0	4.5 / 5.6	10.4	74.0	40
CAM (R) 2/5	AGX 6.5	1.0	14.0	6.5 / 7.5	15.2	77.0	40
CAM (R) 2/6	AGX 3.0	1.0	14.0	3.0 / 3.4	7.1	64.0	40
CAM (R) 2/6	AGX 4.5	1.0	14.0	4.5 / 5.6	10.4	78.0	40
CAM (R) 2/6	AGX 6.5	1.0	14.0	6.5 / 7.5	15.2	81.0	40
CAM 3/2	AGX 8.5	6.0	30.0	8.5 / 9.7	19.0	120.0	40
CAM 3/2	CKPx 12.0	6.0	30.0	13.5 / 15.7	31.0	150.0	25 / 40
CAM 3/3	AGX 8.5	6.0	30.0	8.5 / 9.7	19.0	138.0	40
<b>CAM 3/3</b>	<b>CKPx 12.0</b>	<b>6.0</b>	<b>30.0</b>	<b>13.5 / 15.7</b>	<b>31.0</b>	<b>168.0</b>	<b>25 / 40</b>
CAM 3/3	CKPx 19.0	6.0	30.0	22.0 / 25.0	49.5	213.0	25 / 40
CAM 3/4	CKPx 12.0	6.0	35.0	13.5 / 15.7	31.0	186.0	25 / 40
CAM 3/4	CKPx 19.0	6.0	35.0	22.0 / 25.0	49.5	231.0	25 / 40

Table of Contents

General information

Function

Operating principle

Characteristic maps

Versions

CAM 1 / CAM 2

CAMR 2

CAM 3

Documentation and tests

Installation

Protection and monitoring

Flow regulation

Design software

Contact



## Materials / pressure stages / flanges

Housing	JS 1025
Suction cover (suction housing CAMR 2)	JS 1025
Stage casing (CAM 1, CAM 2, CAMR 2)	1.0460
Stage casing (CAM 3)	JS 1025
Diffuser (guide wheel CAM 3)	JL 1030
Impellers	JL 1030
Slide bearing	1.4021 / carbon
Shaft	1.4021
Rotor lining	1.4571
Seals	AFM 34*
Pressure rating	PN 40**, PN 25 (for motors CKPx 12.0 and CKPx 19.0)
Flanges	according to DIN EN 1092-1, PN 40 and PN 25 type D

\* asbestos-free aramid fibre, \*\* test pressure 60 bar

## Noise expectancy values

Motors	AGX 1.0	AGX 3.0	AGX 4.5	AGX 6.5	AGX 8.5	CKPx 12.0	CKPx 19.0
Output power [P2 at 50 Hz]	1.0 kW	3.0 kW	4.5 kW	6.5 kW	8.5 kW	13.5 kW	22.0 kW
max. expected sound pressure level dB(A) at 50 Hz	48	52	54	56	57	59	61
Output power [P2 at 60 Hz]	1.2 kW	3.4 kW	5.6 kW	7.5 kW	9.7 kW	15.7 kW	25.0 kW
max. expected sound pressure level dB(A) at 60 Hz	48	52	55	56	57	59	61

Table of Contents

General information

Function

Operating principle

Characteristic maps

**Versions**

CAM 1 / CAM 2

CAMR 2

CAM 3

Documentation and tests

Installation

Protection and monitoring

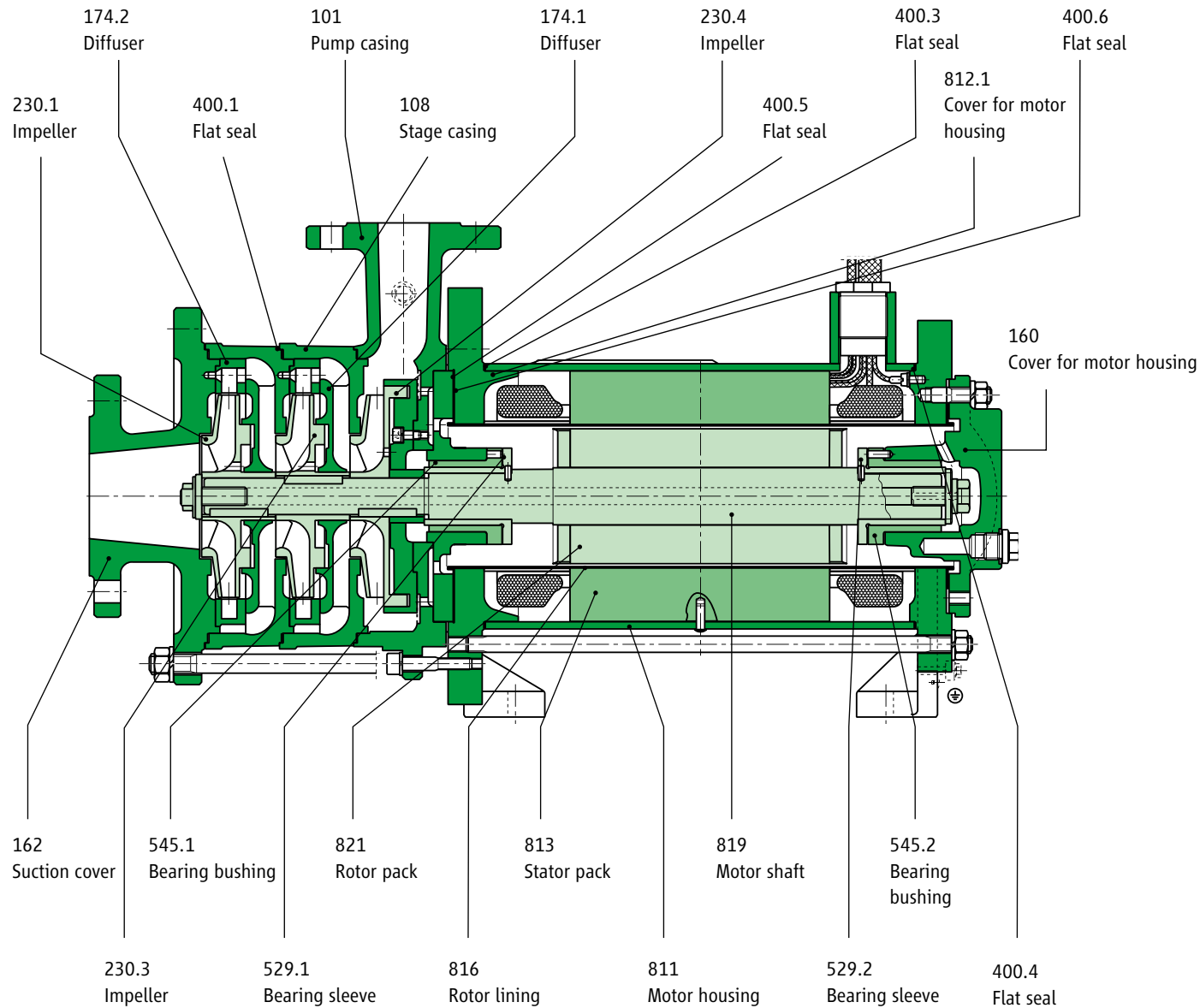
Flow regulation

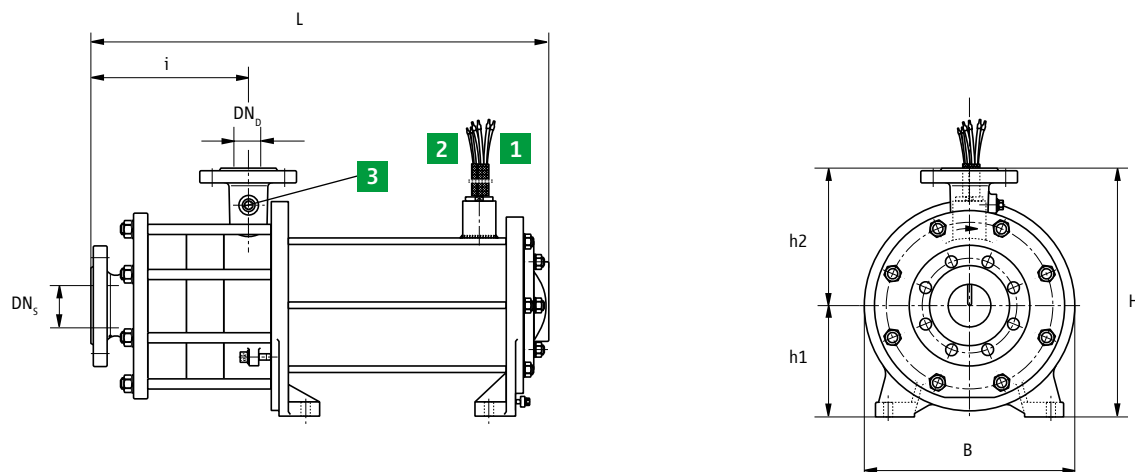
Design software

Contact



## List of parts CAM 3


[Table of Contents](#)
[General information](#)
[Function](#)
[Operating principle](#)
[Characteristic maps](#)
[Versions](#)
[CAM 1 / CAM 2](#)
[CAMR 2](#)
[CAM 3](#)
[Documentation and tests](#)
[Installation](#)
[Protection and monitoring](#)
[Flow regulation](#)
[Design software](#)
[Contact](#)


**Dimension drawing for motors of size: AGX 8.5 / CKPx 12.0 / CKPx 19.0**


- |  |  |   |
|--|--|---|
| <p><b>1</b> Cable U1, V1, W1 + protective conductor ⊕<br/>           AGX 8.5: 4 x 6 mm<sup>2</sup><br/>           CKPx 12.0: 4 x 6 mm<sup>2</sup><br/>           CKPx 19.0: 4 x 6 mm<sup>2</sup><br/>           Cable length 2.5 m</p> | <p><b>2</b> Cable for PTC thermistor<br/>           2 x 1.0 mm<sup>2</sup>, cable 5 + 6,<br/>           Cable length 2.5 m</p> | <p><b>3</b> Pressure gauge connection G 1/4</p> |
|--|--|---|

[Table of Contents](#)
[General information](#)
[Function](#)
[Operating principle](#)
[Characteristic maps](#)
[Versions](#)
[CAM 1 / CAM 2](#)
[CAMR 2](#)
**[CAM 3](#)**
[Documentation and tests](#)
[Installation](#)
[Protection and monitoring](#)
[Flow regulation](#)
[Design software](#)
[Contact](#)


## Versions CAM 3

Dimensions	CAM 3 / 2-stage	CAM 3 / 2-stage	CAM 3 / 3-stage	CAM 3 / 3-stage	CAM 3 / 3-stage	CAM 3 / 4-stage	CAM 3 / 4-stage
	AGX 8.5	CKPx 12.0	AGX 8.5	CKPx 12.0	CKPx 19.0	CKPx 12.0	CKPx 19.0
Length / L	597	642	654	699	764	756	821
Width / W	250	290	250	290	340	290	340
Height / H	355	380	355	380	380	380	380
h1	145	170	145	170	170	170	170
h2	210	210	210	210	210	210	210
i	184	184	241	241	241	298	298
DN <sub>s</sub>	65	65	65	65	65	65	65
DN <sub>d</sub>	40	40	40	40	40	40	40

Table of Contents

General information

Function

Operating principle

Characteristic maps

Versions

CAM 1 / CAM 2

CAM R 2

**CAM 3**

Documentation and tests

Installation

Protection and monitoring

Flow regulation

Design software

Contact

