



# **Stainless steel centrifugal pumps**

**non self-priming and self-priming**

for

- beer and wort
- juice and wine
- milk and whey
- mineral water and soft drinks
- pharmaceutical products
- chemical products
- CIP and so on

**Kyffhäuser  
Pumpen  
Artern GmbH**



## The KPA – pump system

- **electropolished CrNiMo forged and sheet metal according AISI 316L, ideal cleanableness and very high corrosion resistance**
- **no product parts in stainless steel acc. AISI 304**
- **no dead-end design, mechanical seal from liquid washes around and cooled**
- **mdular system, identical spare parts for several sizes, f.e. one diameter of mechanical seal of 25mm for pypm types KN2, KN3, KN4 and SZ1 from 0.25kW to 22.0kW motor power**
- **free choice of nominal size of inlet / outlet, definition of the intake speed**
- **free choice of kind of the connections, adjustment to available plants possible**
- **open, semi-open and closed impeller available**
- **pipeline-friendly assembly and disassembly, outlet connecting piece adjustment stepless possible**
- **user-friendly and maintenance-poor, fast by hand to open**
- **repair-friendly, fast exchange of wearing parts**
- **free choice of motor manufacturer because IEC-standard motors**
- **control adjustment possible by motor with integrated frequency converter up to 7.5kW**
- **Inducer for low NPSH-values**
- **Bench test for each pump**
- **Guarantee 24 month**
- **3A, EHEDG certificate**

## QUESTIONNAIRE

company: \_\_\_\_\_  
 department: \_\_\_\_\_  
 mr./mrs.: \_\_\_\_\_  
 phone: \_\_\_\_\_  
 fax: \_\_\_\_\_  
 em@il: \_\_\_\_\_

liquid: \_\_\_\_\_ temperature: \_\_\_\_\_  
 flow rate: \_\_\_\_\_ height: \_\_\_\_\_ m \_\_\_\_\_ bar

**drive motor** voltage: \_\_\_\_\_ volt  EExe  EExde

- design**
- A**  stainless steel machine feet with stainless steel motor cover
  - B**  stainless steel machine feet without motor cover
  - C**  on motor foot without motor cover
  - D**  on stainless steel base without motor cover
  - DV**  on stainless steel base with stainless steel motor cover
  - E**  on base plate with coupling and motor

- options**
- pharma - design  trolley
  - valve with emptying  heating-/ cooling jacket
  - socket piece with mouth  frequency converter extern
  - double mechanical seal  integrated frequency converter (max: 7,5 kW)

**connections for suction- and delivery sides**

suction side nominal diameter: \_\_\_\_\_ connection type: \_\_\_\_\_ (standard DIN 11851)  
 delivery side nominal diameter: \_\_\_\_\_ connection type: \_\_\_\_\_ (standard DIN 11851)

**liquid to be pumped**

please enter substance values if known

viscosity: \_\_\_\_\_ in (\_\_\_\_\_) at \_\_\_\_\_ °C/°F density: \_\_\_\_\_ (g/cm<sup>2</sup>)

**specifications for cleaning**

details of cleaning program (temperatures, solutions etc.)

**remarks**

# Content

1. Overview
2. Design KN 1, non self-priming
3. Design KN 2, non self-priming
4. Design KN 3/3H, non self-priming
5. Design KN 4/4H, non self-priming
6. Design KN 5, non self-priming
7. Design KM 2, non self-priming, multistage
8. Design KM 34, non self-priming, multistage
9. Design SZ, self-priming
10. Information



## Tradition and experience

... since 1958 sanitary pumps for the food and pharmaceutical industry are manufactured in Artern Germany. Many years of experience in the development of these pumps and the definite integration of international standards are the prerequisite for the production of pumps with an outstanding price to value comparison. Our success speaks for it self - more than 100.000 pumps have been delivered since that time.

Our pumps are characterized by electropolished CrNiMo- rolled and forged steel, dead end free design, CIP and SIP compatible, choice of nominal size, connections and motors, gentle pumping, simple spare part storage.

# Sanitary centrifugal pumps

## normal- and self-priming

standard program



Photo: KN2 Design CF: *pump on trolley, inclusive motor-protective-switch, cable and europlug*

sanitary non self-priming pump - series KN 2

max. flow rate : 15.000 l/h @ 50Hz  
 max. height : 20 m @ 50Hz  
 max. motor power : 1,5 kW

options: internal frequency converter, trolley



Photo: KN3 Design B *pump on adjustable stainless steel machine feet*

sanitary non self-priming pump - series KN 3/3H

max. flow rate : 50.000 l/h @ 50Hz  
 max. height : 48 m @ 50Hz  
 max. motor power : 9,2 kW

options: internal frequency converter, double mechanical seal, inducer, pole-changing motor, trolley, on base plate with coupling and motor



Photo: KN4H Design B *pump on adjustable stainless steel machine feet*

sanitary non self-priming pump - series KN4

max. flow rate : 120.000 l/h @ 50Hz  
 max. height : 75 m @ 50Hz  
 max. motor power : 22 kW

options: internal frequency converter (max. power: 7,5 kW), double mechanical seal, inducer, pole-changing motor, trolley, on base plate with coupling and motor



Photo: KN5 Design E *pump on base plate with coupling and motor*

sanitary non self-priming pump - series KN5

max. flow rate : 250.000 l/h @ 50Hz  
 max. height : 60 m @ 50Hz  
 max. motor power : 55 kW

options: double mechanical seal, pole-changing motor



Photo: KM34H Design B *pump on adjustable stainless steel machine feet*

sanitary multistage non self-priming pump - series KM

max. flow rate : 45.000 l/h @ 50Hz  
 max. height : 105 m @ 50Hz  
 max. motor power : 30 kW

options: double mechanical seal, inducer, on base plate with coupling and motor

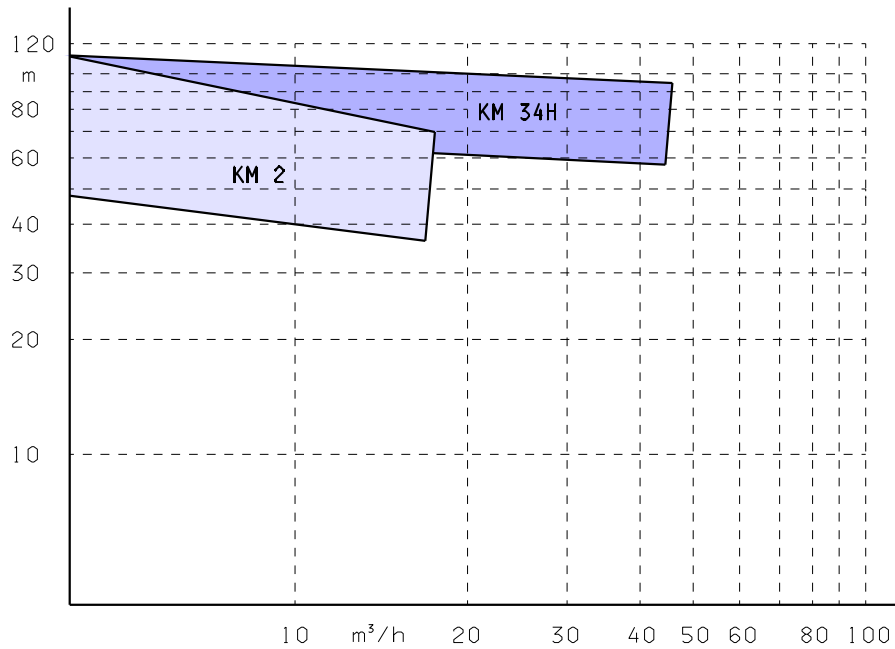
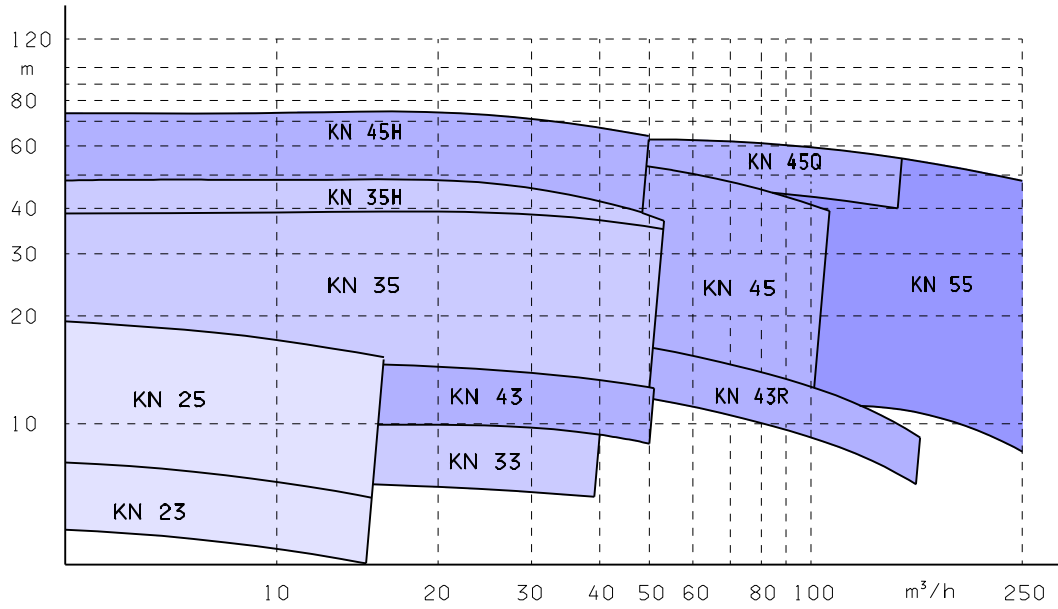


Photo: SZ2 Design A *pump on adjustable stainless steel machine feet, with stainless steel motor cover*

sanitary self-priming pump - series SZ

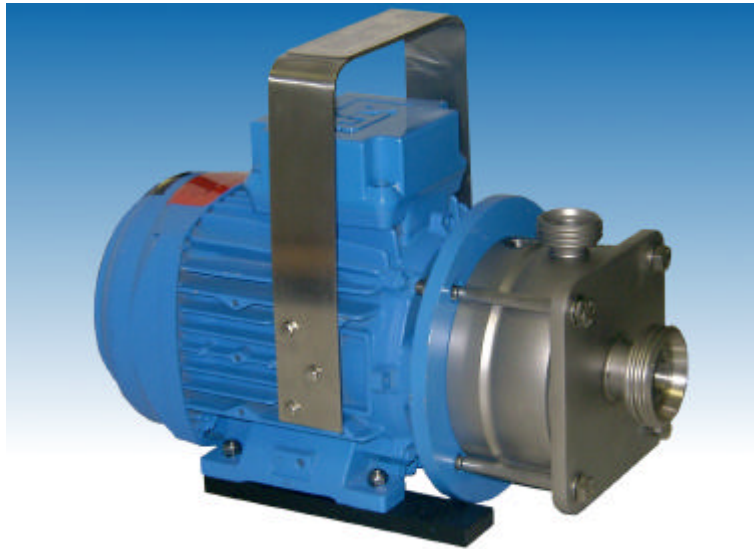
max. flow rate : 40.000 l/h @ 50Hz  
 max. height : 28 m @ 50Hz  
 max. motor power : 11 kW

options: double mechanical seal, central inlet, pole-changing motor, trolley



## Sanitary non self-priming

KN 1



Design T

... for the brewery and beverage industry

### Design

Thick-walled CrNiMo stainless steel casing, CrNiMo stainless steel casing cover, semi-opened CrNiMo stainless steel impeller, with hygienic chambered O-ring seal

### Construction arrangements

T..... portable  
C..... on motor foot  
V..... vertically

### Materials

All parts in contact with product correspond to the materials AISI316L (1.4404 or 1.4435), stainless steel motor lantern, various process seal materials to suit application

### Shaft seal

Adjusted self cleaning and self rinsing single mechanical seal with uniform shaft diameter of 18mm for aseptic applications and with material combinations depending on product

### Parameter

- Flow rate : max. 6.000 l/h @50Hz
- Discharge head : max. 1,0 bar @50Hz
- Motor power : max. 0,55 kW
- Working temperature : max. 130°C
- Operating pressure : max. 6 bar

### Motor

IEC-standard motor IP 55 hoseproof

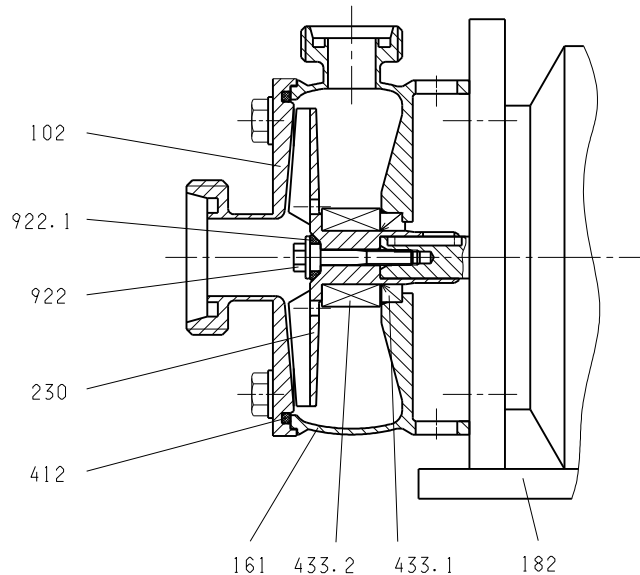
### Optional features

- explosion proof EExelIT3 or EExdeIICT4
- degree of protection IP 65
- alternative paint for motor (standard RAL 5015)
- casing with drainage connection or diaphragm valve

### Connections

Connection in diameters: suction side DN25; pressure side DN15 according standard DIN 11851 (other on request)

## section KN 1



Technical subject to change

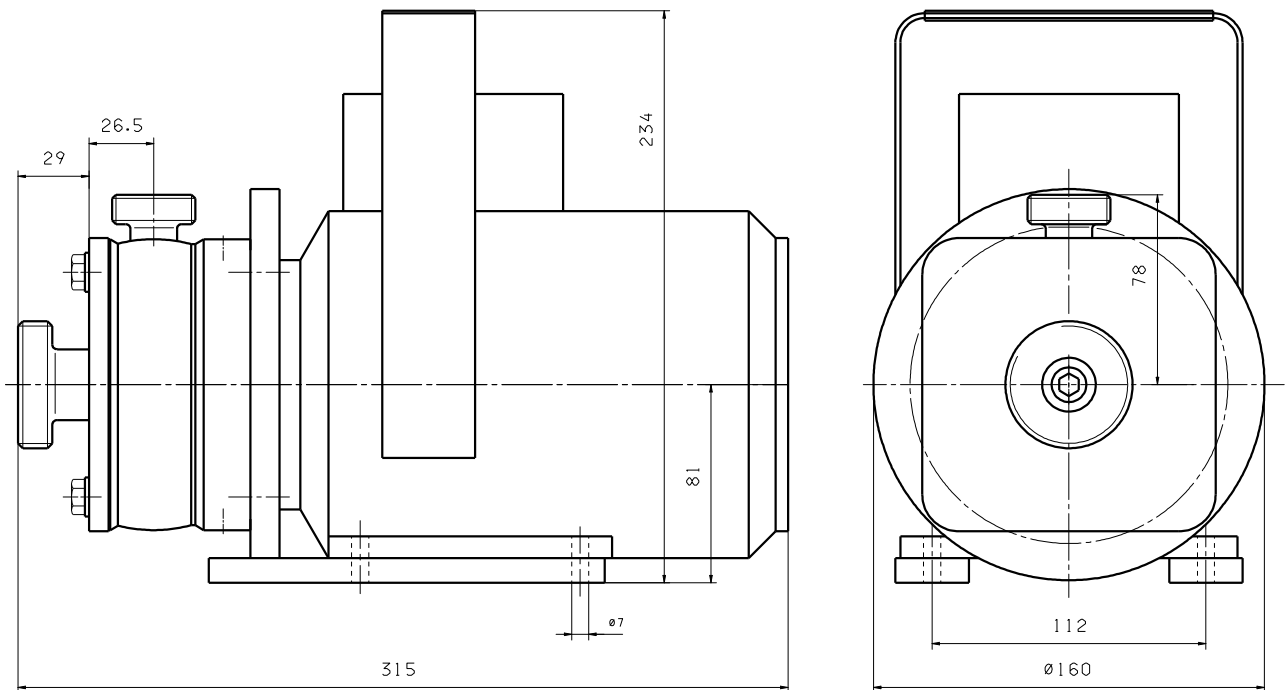
- |   |  |
|---|--|
| <b>102 casing</b><br>material AISI 316L   | <b>922 impeller screw</b><br>material AISI 316L                            |
| <b>161 casing cover</b><br>material AISI 316L   | <b>922.1 O-ring</b><br>flushed O-Ring in EPDM, NBR, FKM or perflour-rubber |
| <b>182 base frame</b>   |  |
| <b>230 impeller</b><br>semi open, material AISI 316L  |  |
| <b>412 O-ring</b><br>flushed O-Ring in EPDM, NBR, FKM or perflour-rubber  |  |
| <b>433.1 shaft seal ring *</b>  |  |
| <b>433.2 mechanical seal *</b><br>single mechanical seal in different design and material according to the requirements |  |

\* alternatively



# Dimensions / connections acc. to DIN 11851

## KN 15

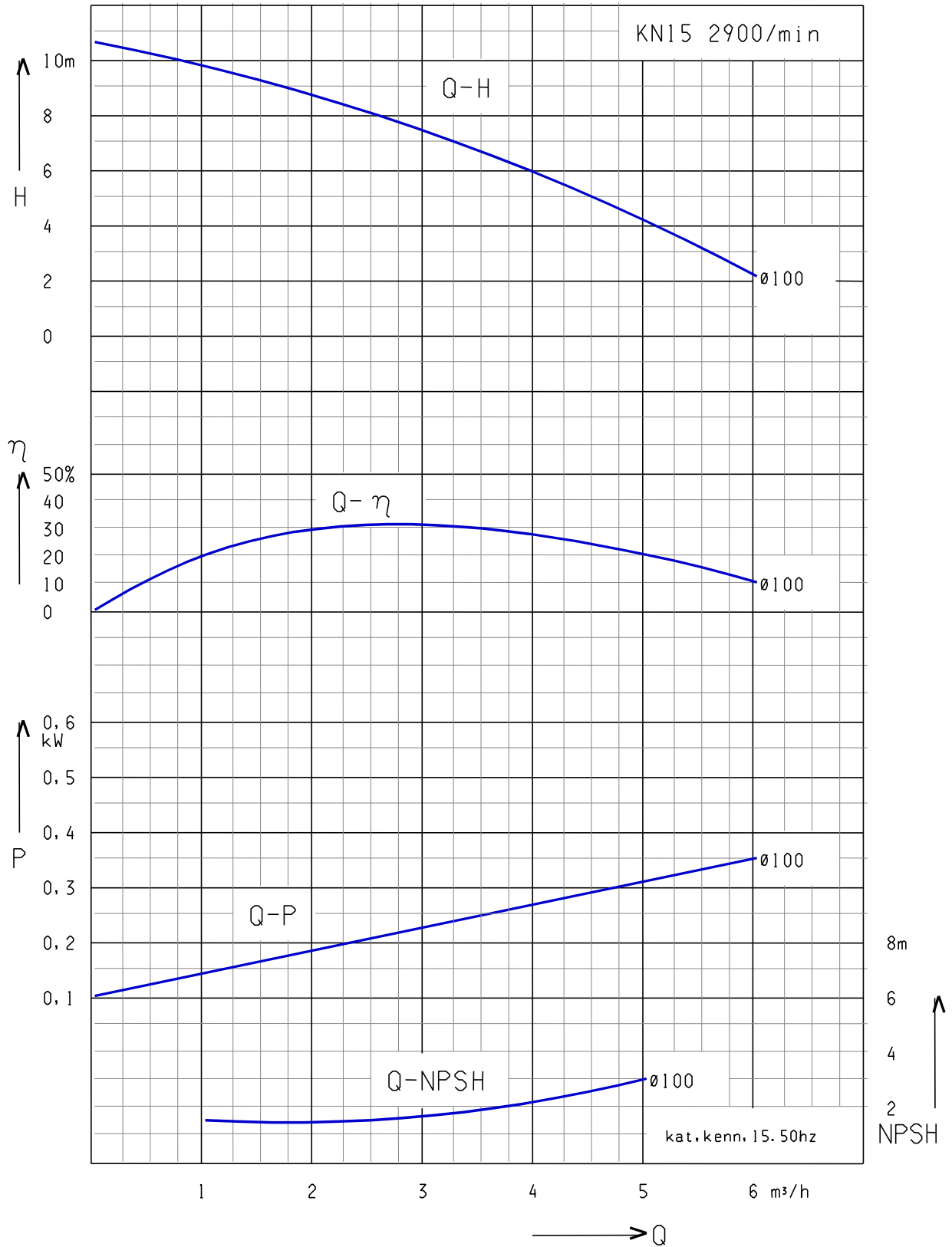


Type	Weights [kg]	kW	rpm		Motor IEC	Inlet	Outlet
	Design T		50Hz	60Hz			
<b>KN 25/1</b>	11	<b>0,55</b>	2900	3500	080	25	15

Reserved for technical alteration!  
02 / 2005

# Characteristics KN 15

50 Hz



KN 15/1 - 0,55 kW

Water: 68°F (20°C)



## Sanitary non self-priming

## KN 2 Series



Design CF

## ... for the brewery and beverage industry

### Design

Thick-walled CrNiMo stainless steel casing, forged CrNiMo stainless steel casing cover, semi-opened CrNiMo stainless steel impeller, sturdy quick-release clamp ring with hygienic chambered O-ring seal

### Construction arrangements

- A..... on adjustable stainless steel machine feet, stainless steel motor cover,
- B..... on adjustable stainless steel machine feet,
- C..... on motor foot
- D..... on stainless steel foot
- DV.. on stainless steel foot incl. stainless steel motor cover

### Materials

All parts in contact with product correspond to the materials AISI316L (1.4404 or 1.4435), stainless steel motor lantern, various process seal materials to suit application

### Shaft seal

Adjusted self cleaning and self rinsing single mechanical seal with uniform shaft diameter of 25mm for aseptic applications and with material combinations depending on product

### Parameter

- Flow rate : max. 15.000 l/h @50Hz
- Discharge head : max. 19 mWC @50Hz
- Motor power : max. 1,5 kW
- Working temperature : max. 130°C
- Operating pressure : max. 10 bar

### Motor

IEC-standard motor IP 55 hoseproof and with cold inducters, NEMA-standard motor on request

### Optional features

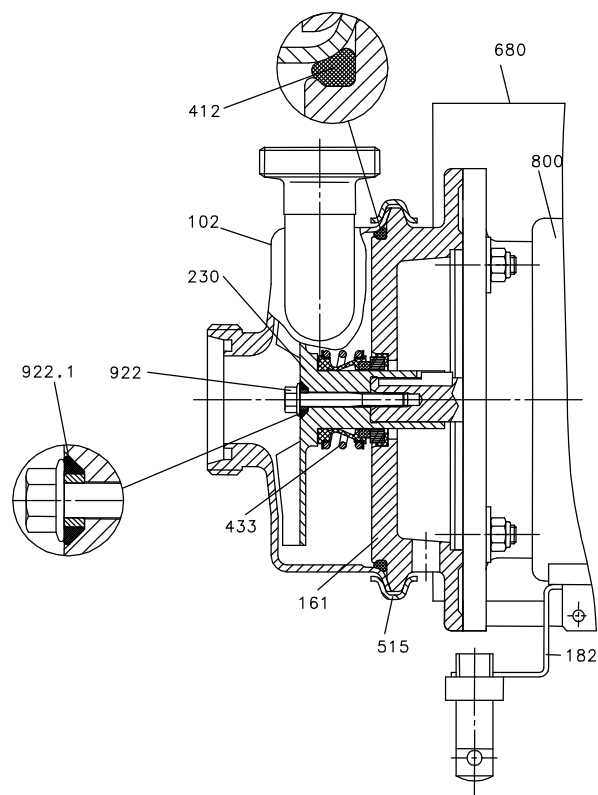
- internal frequency converter FCM 300
- trolley with breaker and cable
- explosion proof EExelIT3 or EExdeIICT4
- pole changing electric motor
- alternative paint for motor (standard RAL 5015)
- casing with drainage connection or diaphragm valve

### Connections

Connection in diameters from DN25 up to DN50 or 1" up to 2" according to the following standards: DIN, IDF, Clamp, RJT, SMS, small flanges (other on request)



## SECTION KN 2

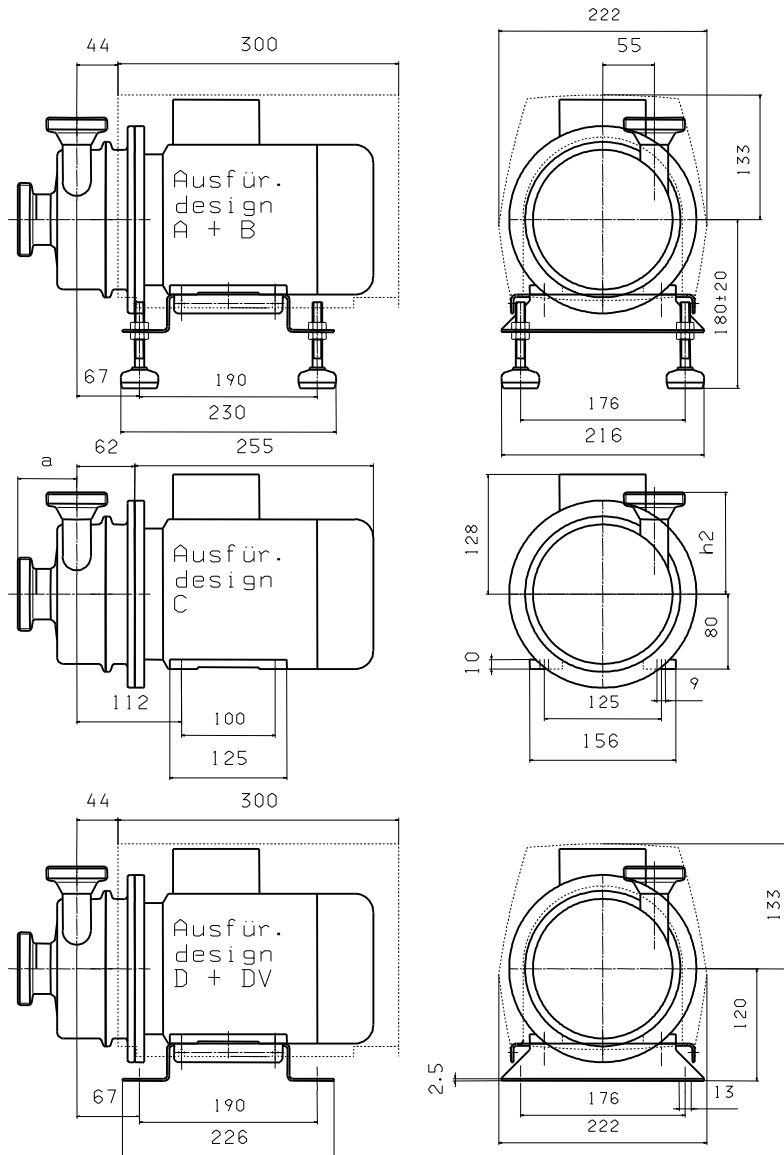


Reserved for technical alteration!

- |  |   |
|--|---|
| <p><b>102 Volute casing</b><br/>material AISI 316L; 3 mm; variable connections</p>                     | <p><b>433 Mechanical seal</b><br/>single mechanical seal of various designs and material combinations</p>       |
| <p><b>161 Casing cover</b><br/>AISI 316L; forged material</p>  | <p><b>515 Clamping ring</b><br/>quick-release fastener in stainless steel</p>                                   |
| <p><b>182 Base frame</b><br/>height-adjustable machine feet of stainless steel</p>                     | <p><b>680 Enclosure</b><br/>Stainless steel cover</p>   |
| <p><b>230 Impeller</b><br/>open or closed, precision casting in AISI 316L</p>                          | <p><b>800 Electric motor</b><br/>IEC standard; 0.25 – 1.5 Dimension 80</p>                                      |
| <p><b>412 O-ring</b><br/>fully flushed, hygienic O-ring in EPDM, NBR, FKM or perfluorinated rubber</p> | <p><b>922 Impeller nut</b></p>  |
|  | <p><b>922.1 Impeller seal</b><br/>fully flushed, hygienic O-ring in EPDM, NBR, FKM or perfluorinated rubber</p> |

# Dimensions / connections acc. to DIN 11851

## KN 23, KN 25



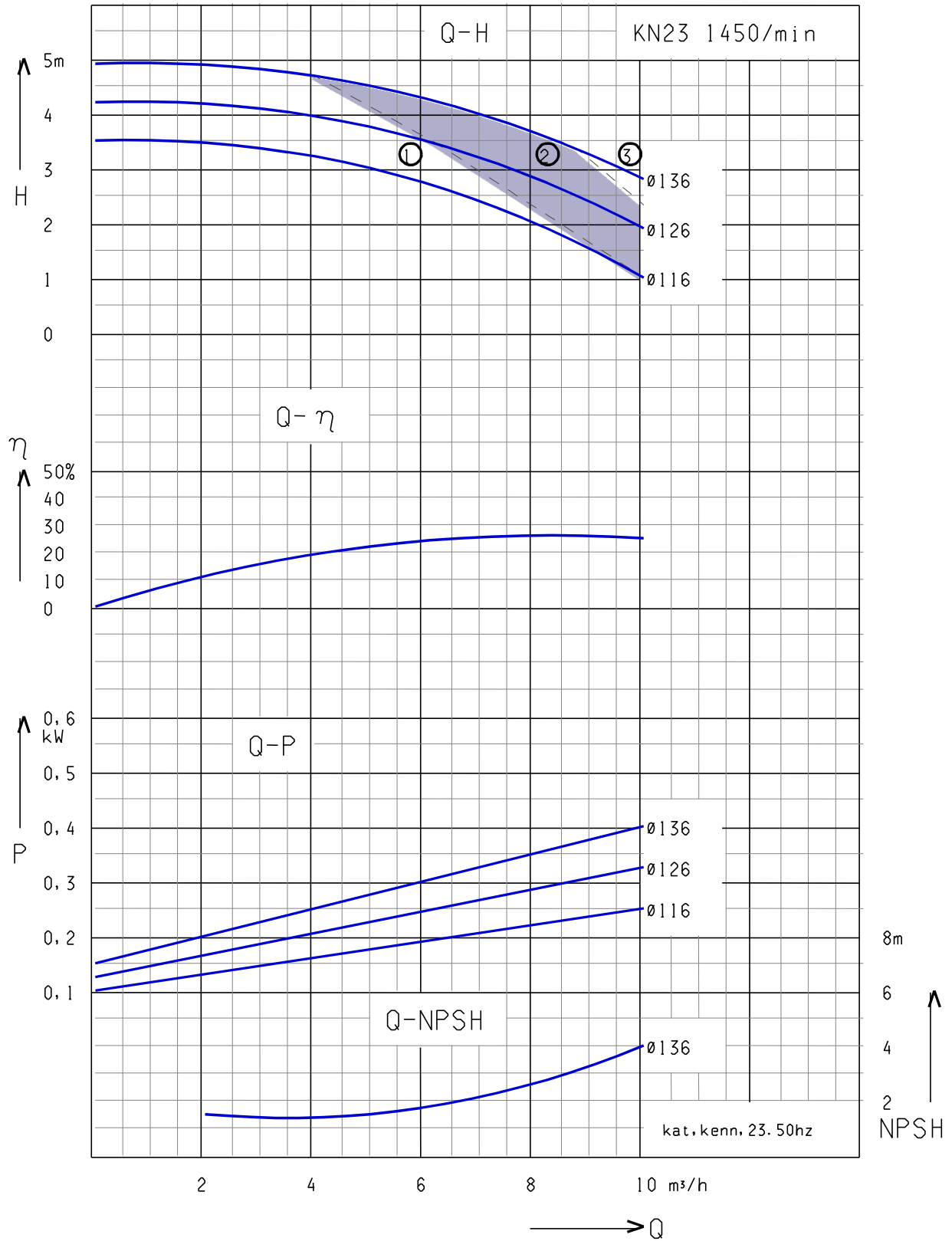
Type	Weights [kg]			kW	rpm		Motor IEC
	Design A+DV	Design B+D	Design C		50Hz	60Hz	
KN 23/1	19	17	15	0,25	1450		080
KN 23/2	19	17	15	0,37	1450	1750	080
KN 23/3	19	17	15	0,55	1450	1750	080
KN 23/4	21	19	17	0,75		1750	080
KN 25/1	19	17	15	0,55	2900		080
KN 25/2	19	17	15	0,75	2900	3500	080
KN 25/3	21	19	17	1,1	2900	3500	080
KN 25/4	22	20	18	1,5	2900	3500	080

Inlet	25	32	32	40	40	40	50	50
Outlet	25	25	32	25	32	40	32	40
a	70	65	65	48	48	48	63	63
h2	109	109	110	109	110	109	110	109

Reserved for technical alteration!  
02 / 2005

# Characteristics KN 23

50 Hz

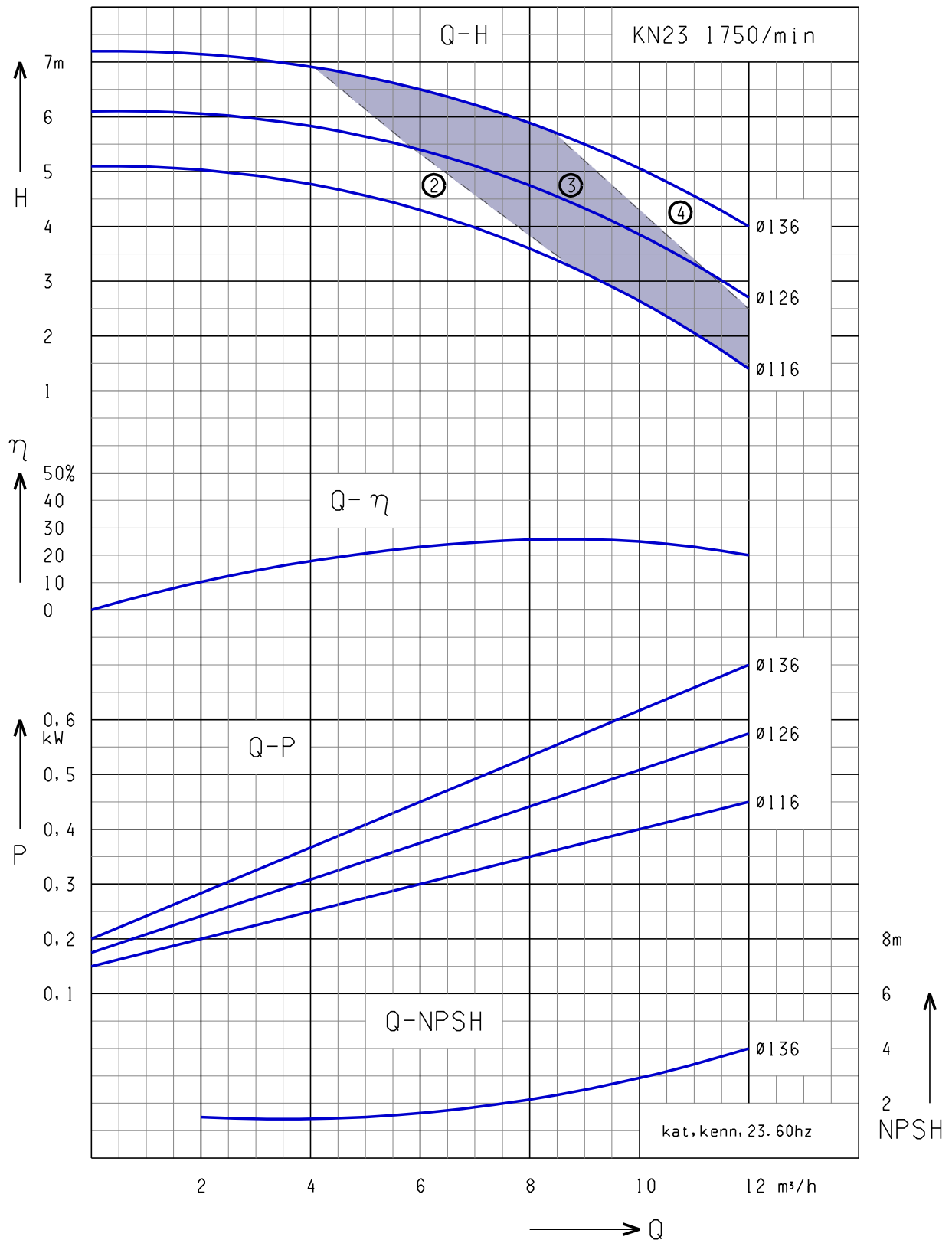


- ①: KN 23/1 - 0,25 kW
- ②: KN 23/2 - 0,37 kW
- ③: KN 23/3 - 0,55 kW

Water: 68°F (20°C)

# Characteristics KN 23

60 Hz



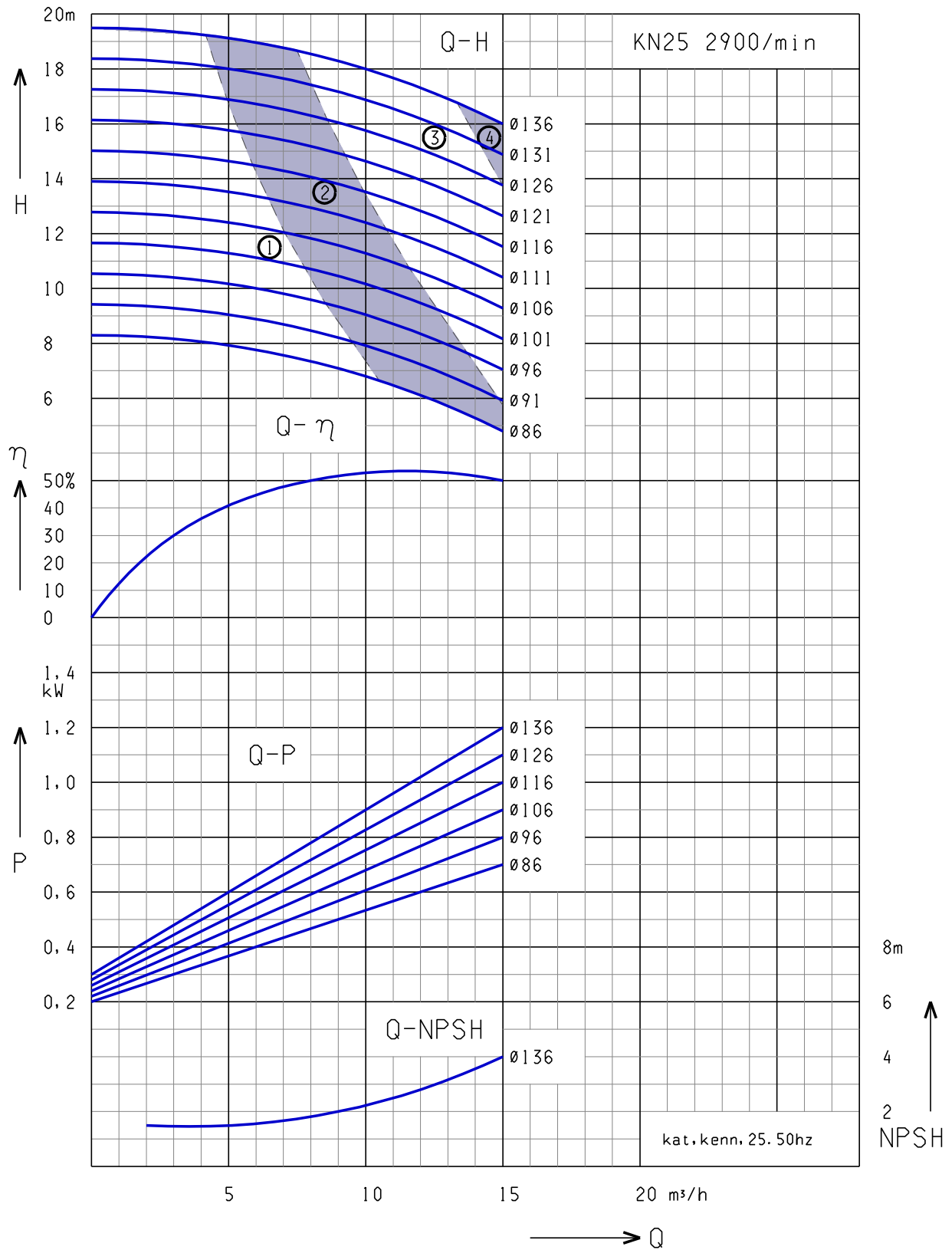
- ② KN 23/2 - 0,37 kW    ③ KN 23/3 - 0,55 kW
- ④ KN 23/4 - 0,75 kW

Water: 68°F (20°C)



# Characteristics KN 25

50 Hz

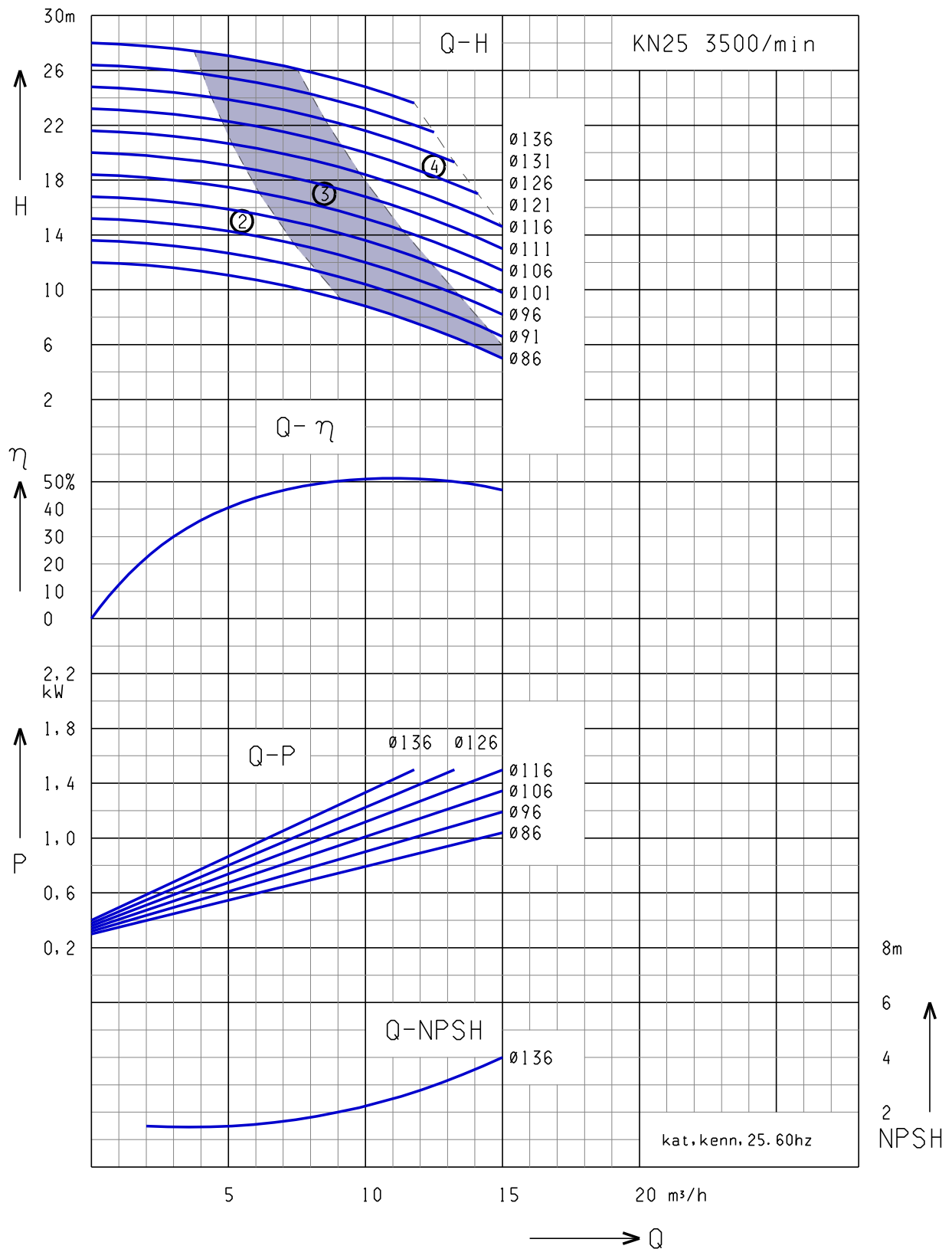


- ①: KN 25/1 - 0,55 kW    ②: KN 25/2 - 0,75 kW
- ③: KN 25/3 - 1,1 kW    ④: KN 25/4 - 1,5 kW

Water: 68°F (20°C)

# Characteristics KN 25

60 Hz

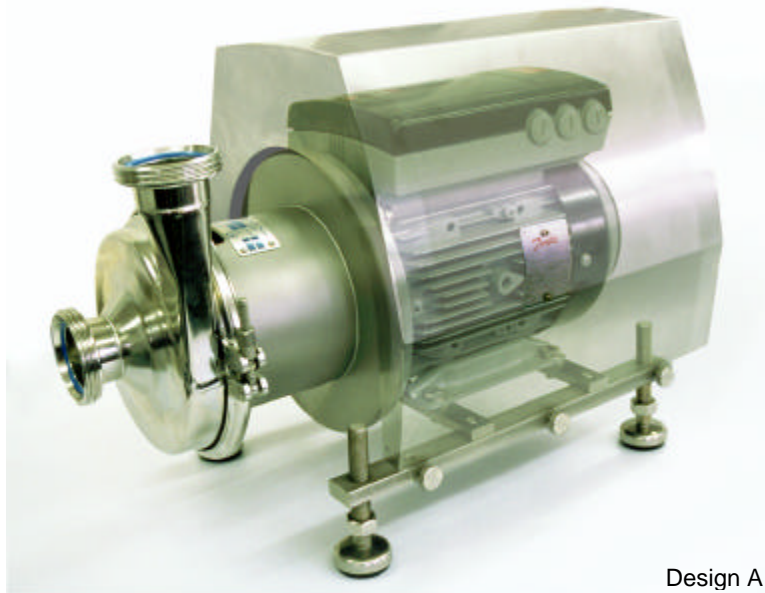


②: KN 25/2 - 0,75 kW    ③: KN 25/3 - 1,1 kW  
 ④: KN 25/4 - 1,5 kW

Water: 68°F (20°C)

# Sanitary non self-priming pump

KN 3 series



Design A

... for the brewery and beverage industry

## Design

Deep drawn, thick-walled CrNiMo rolled steel casing, forged CrNiMo stainless steel casing cover, open CrNiMo stainless steel impeller on a strong dimensioned stub shaft, sturdy quick-release clamp ring with sanitary chambered O-ring seal

## Construction arrangements

A..... on adjustable stainless steel machine feet, stainless steel motor cover,  
 B..... on adjustable stainless steel machine feet,  
 C..... on motor foot  
 D..... on stainless steel foot  
 DV.. on stainless steel foot incl. stainless steel motor cover

## Materials

All parts in contact with product correspond to the materials AISI316L (1.4404, 1.4435, 1.4581), stainless steel motor lantern, various process seal materials to suit application

## Shaft seal

Adjusted self cleaning and self rinsing single or double mechanical seal with uniform shaft diameter of 25mm for aseptic applications and with material combinations depending on product

## Parameter

- Flow rate : max. 50.000 l/h @50Hz
- Discharge head : max. 40 mWC @50Hz
- Motor power : max. 9,5 kW
- Working temperature : max. 130°C
- Operating pressure : max. 16 bar

## Motor

IEC-standard motor IP 55 hoseproof and with cold inducters, NEMA-standard motor on request

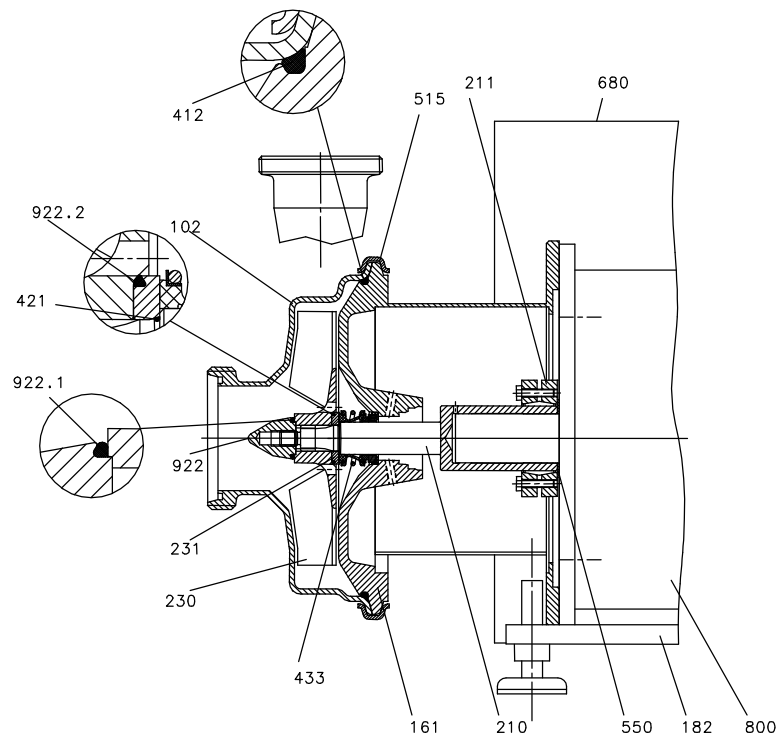
## Optional features

- internal frequency converter FCM 300
- trolley with breaker and cable
- pump head heating/cooling jacket
- seal steam sterilisation
- explosion proof EExelIT3 or EExdelICT4
- pole changing electric motor
- alternative paint for motor (standard RAL 5015)
- casing with drainage connection or diaphragm valve

## Connections

Connection in diameters from DN40 up to DN80 or 1,5" up to 3" according to the following standards: DIN, IDF, Clamp, RJT, SMS, small flanges (other on request)

## SECTION KN 3



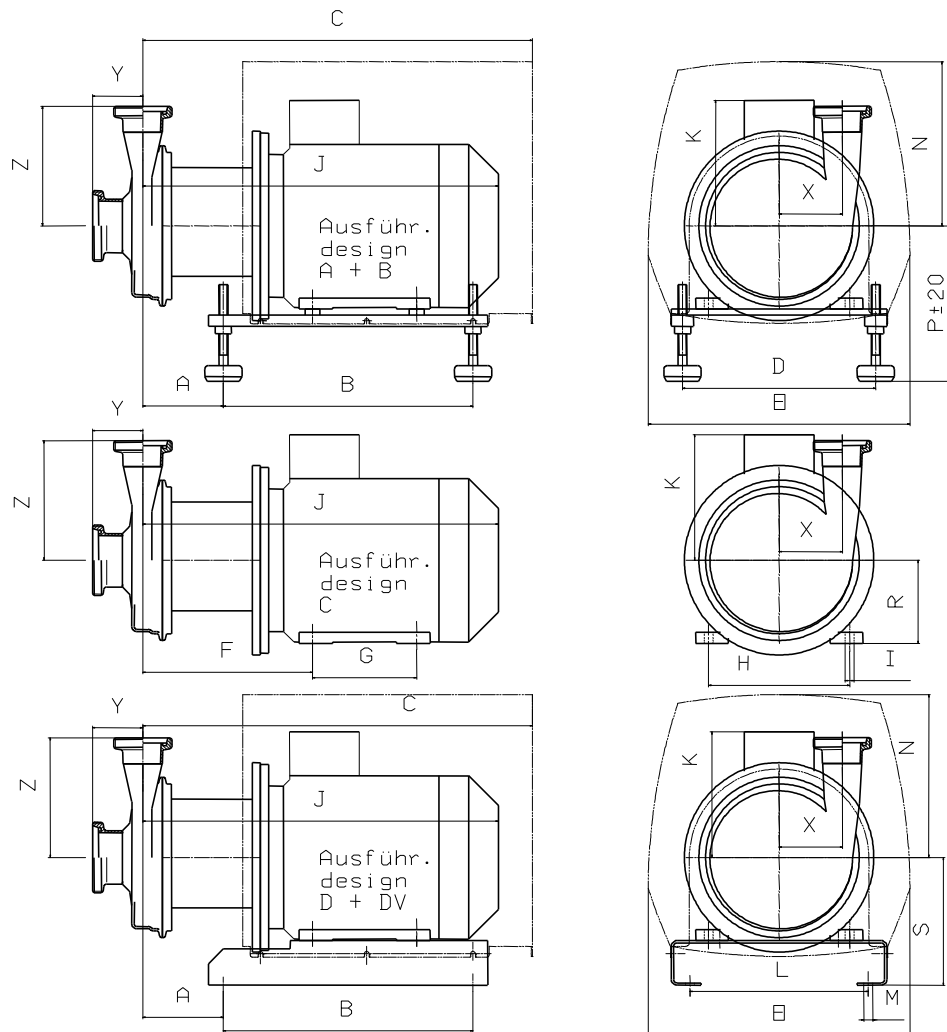
Technische Änderungen vorbehalten!

- |  |  |
|--|--|
| <p><b>102 Volute casing</b><br/>material AISI 316L; 3 mm; variable connections</p> <p><b>161 Casing cover</b><br/>thick-walled forging in material AISI 316L, resistant to pressure surges</p> <p><b>182 Base frame</b><br/>height-adjustable machine feet of stainless steel</p> <p><b>210 Shaft</b><br/>push-on shaft with uniform diameter for shaft seal of 25 mm in AISI 316Ti</p> <p><b>211 Shrink disc</b><br/>shaft fastening for IEC standard motor</p> <p><b>230 Impeller</b><br/>open or closed, precision casting in AISI 316Ti</p> <p><b>231 Sealing bush</b></p> <p><b>412 O-ring</b><br/>fully flushed, hygienic O-ring in EPDM, NBR, FKM or perfluorinated rubber</p> <p><b>421 Radial seal</b><br/>O-ring in various seal materials</p> | <p><b>433 Mechanical seal</b><br/>single or double mechanical seal of various designs in SiC/SiC, SiC/carbon, carbon/stainless steel or precision shaft packing ring with PTFE sealing lip</p> <p><b>515 Clamping ring</b><br/>quick-release fastener in stainless steel up to PN 16</p> <p><b>550 Disc</b></p> <p><b>680 Enclosure</b><br/>Stainless steel cover</p> <p><b>800 IEC or NEMA standard motor</b></p> <p><b>922 Impeller nut</b><br/>material AISI 316L</p> <p><b>922.1 Impeller seal</b><br/>fully flushed, hygienic O-ring in EPDM, NBR, FKM or perfluorinated rubber</p> <p><b>922.2 Impeller seal</b><br/>fully flushed, hygienic O-ring in EPDM, NBR, FKM or perfluorinated rubber</p> |
|--|--|



# Dimensions / connections acc. to DIN 11851

# KN 33, KN 35



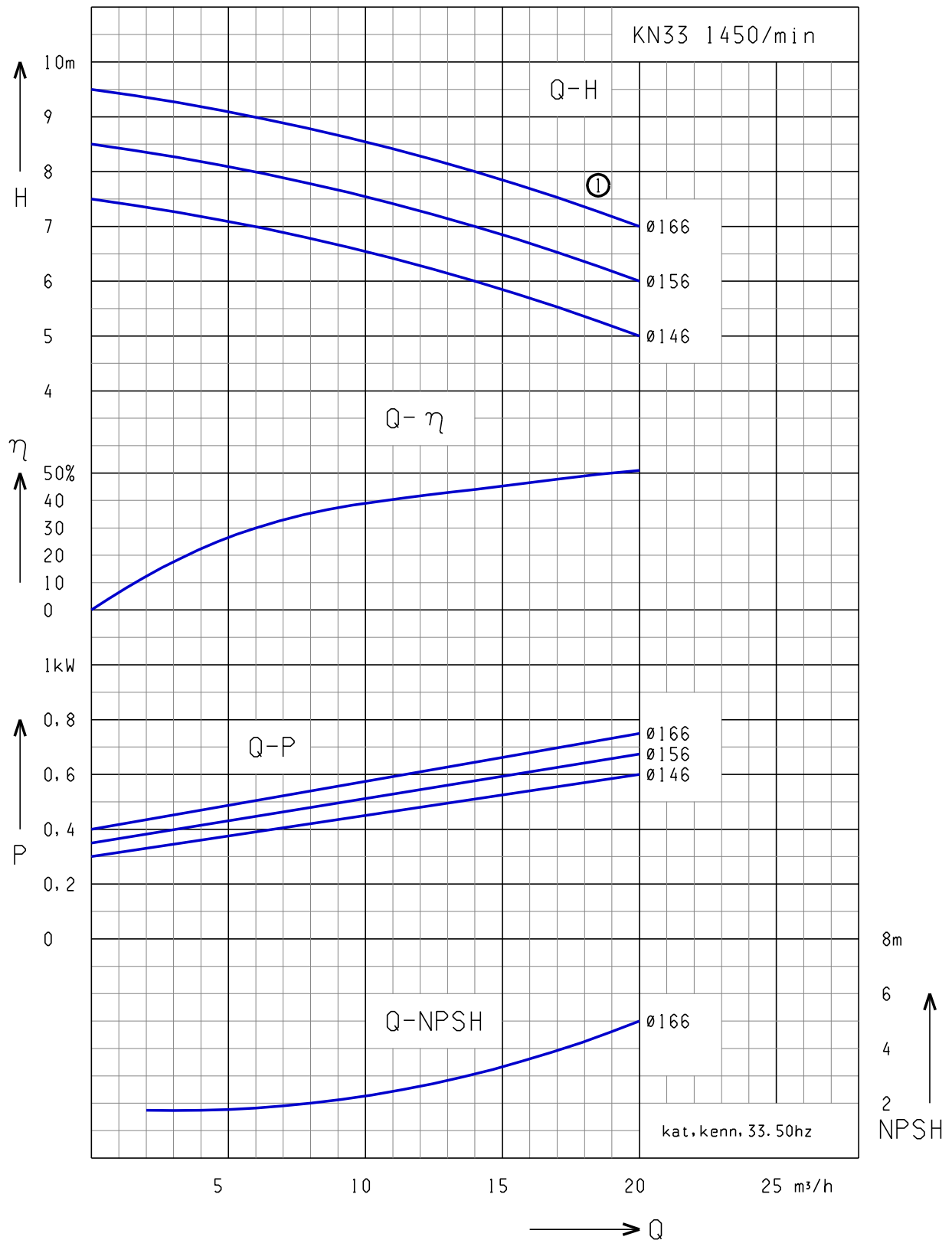
Type	Weights [kg]			kW	rpm		Motor IEC	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	R	S
	Design. A+DV	Design. B+D	Design. C		50Hz	60Hz																		
<b>KN 33/1</b>	31	28	25	<b>1,1</b>	1450		090S	99	286	462	220	302	205	100	140	9	393	149	200	9	191	187	90	160
<b>KN 35/1</b>	31	28	25	<b>1,5</b>	2900		090S	99	286	462	220	302	205	100	140	9	393	149	200	9	191	187	90	160
<b>KN 33/2</b>	34	31	28	<b>1,5</b>		1750	090L	99	286	462	220	302	205	125	140	9	418	149	200	9	191	187	90	160
<b>KN 35/2</b>	34	31	28	<b>2,2</b>	2900	3500	090L	99	286	462	220	302	205	125	140	9	418	149	200	9	191	187	90	160
<b>KN 35/3</b>	43	37	33	<b>3,0</b>	2900	3500	100L	102	336	518	260	352	222	140	160	12	462	153	240	12	233	197	100	160
<b>KN 35/4</b>	46	40	36	<b>4,0</b>	2900	3500	112M	109	336	518	260	352	229	140	190	12	479	169	240	12	221	209	112	172
<b>KN 35/5.1</b>	63	55	51	<b>5,5</b>	2900	3500	112M	109	336	518	260	352	229	140	190	12	479	169	240	12	221	209	112	172
<b>KN 35/6.1</b>	58	50	46	<b>7,5</b>	2900	3500	112M	129	400	649	290	423	268	140	216	12	584	188	270	12	289	230	132	200
<b>KN 35/5.2</b>	72	64	60	<b>5,5</b>	2900	3500	132S	129	400	649	290	423	268	140	216	12	584	188	270	12	289	230	132	200
<b>KN 35/6.2</b>	75	67	63	<b>7,5</b>	2900	3500	132S	129	400	649	290	423	268	140	216	12	584	188	270	12	289	230	132	200
<b>KN 35/7</b>	82	84	70	<b>9,2</b>		3500	132M	129	400	649	290	423	268	178	216	12	584	188	270	12	289	230	132	200

Inlet	32	40	40	50	50	50	65	65	65	80	80	80
Outlet	32	32	40	32	40	50	40	50	65	50	65	80
X	85	85	85	85	85	85	85	85	85	85	85	85
Y	74	69	69	70	70	70	67	67	67	66	66	66
Z	164	164	159	164	159	161	159	161	166	161	166	171

Reserved for technical alteration!  
02 / 2005

# Characteristics KN 33

50 Hz

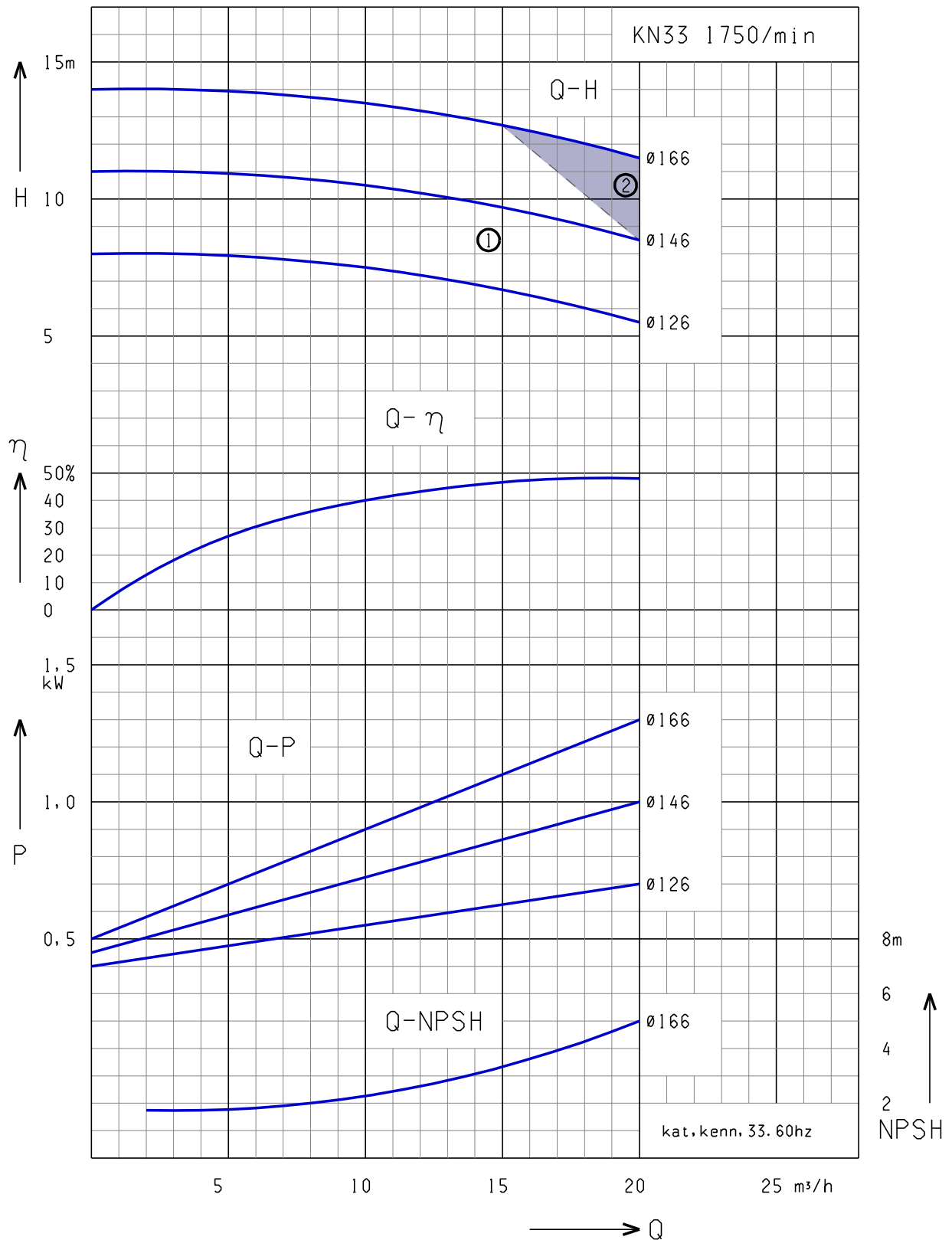


① KN 33/1 - 1,1 kW

Water: 68°F (20°C)

# Characteristics KN 33

60 Hz

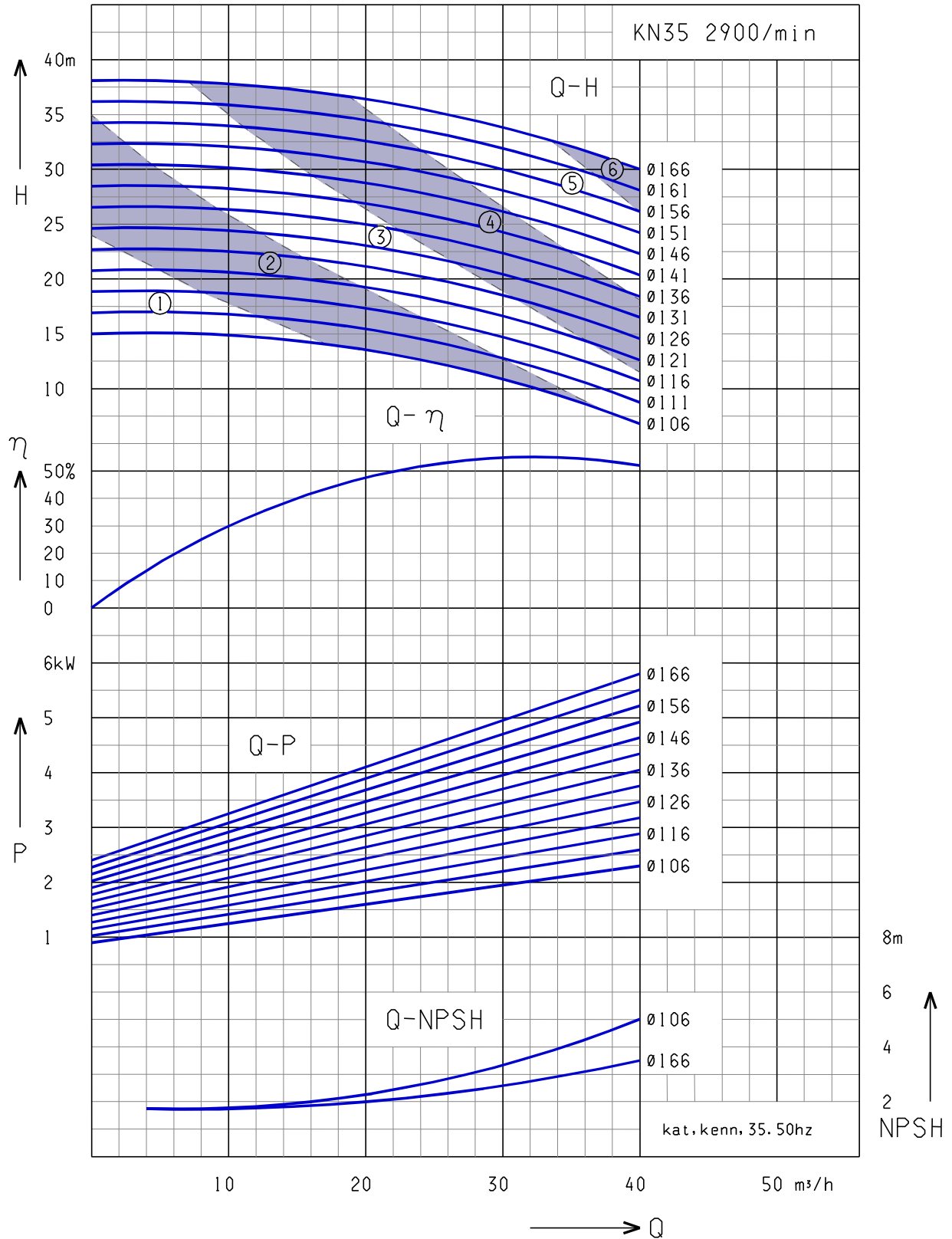


© KN 33/2 - 1,5 kW

Water: 68°F (20°C)

# Characteristics KN 35

50 Hz

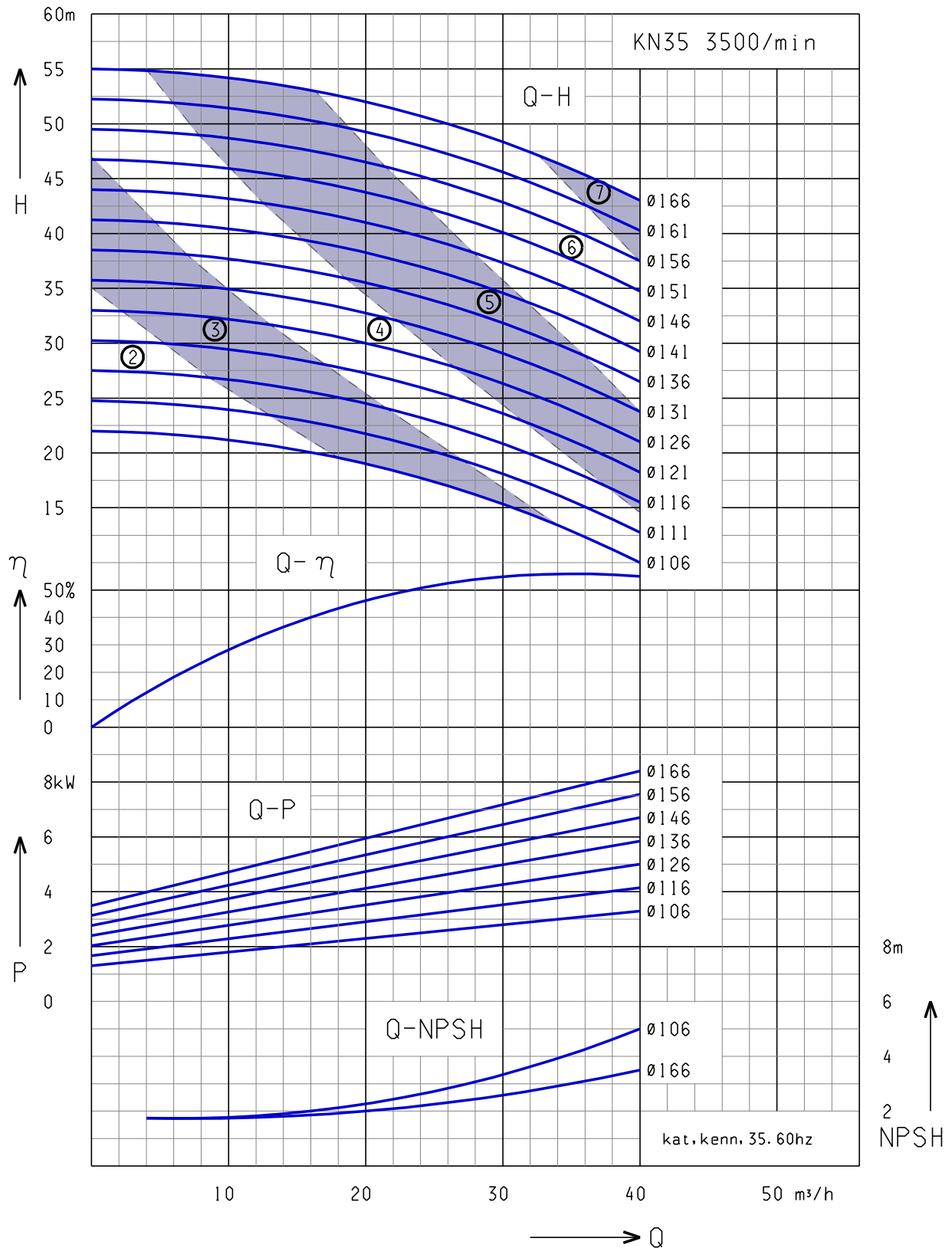


- ① KN 35/1 - 1,5 kW    ② KN 35/2 - 2,2 kW
- ③ KN 35/3 - 3,0 kW    ④ KN 35/4 - 4,0 kW
- ⑤ KN 35/5 - 5,5 kW    ⑥ KN 35/6 - 7,5 kW

Water: 68°F (20°C)

# Characteristics KN 35

60 Hz



- ② KN 35/2 - 2,2 kW    ③ KN 35/3 - 3,0 kW
- ④ KN 35/4 - 4,0 kW    ⑤ KN 35/5 - 5,5 kW
- ⑥ KN 35/6 - 7,5 kW    ⑦ KN 35/7 - 9,2 kW

Water: 68°F (20°C)

# Sanitary non self-priming pump

## KN 3H series



Design B

## ... for the brewery and beverage industry

### Design

Deep drawn, thick-walled CrNiMo rolled steel casing, forged CrNiMo stainless steel casing cover, opened CrNiMo stainless steel impeller on a strong dimensioned stub shaft, sturdy quick-release clamp ring with sanitary chambered O-ring seal

### Construction arrangements

- A..... on adjustable stainless steel machine feet, stainless steel motor cover,
- B..... on adjustable stainless steel machine feet,
- C..... on motor foot
- D..... on stainless steel foot
- DV.. on stainless steel foot incl. stainless steel motor cover

### Materials

All parts in contact with product correspond to the materials AISI316L (1.4404, 1.4435, 1.4581), stainless steel motor lantern, various process seal materials to suit application

### Shaft seal

Adjusted self cleaning and self rinsing single or double mechanical seal with uniform shaft diameter of 25mm for aseptic applications and with material combinations depending on product

### Parameter

- Flow rate : max. 50.000 l/h @50Hz
- Discharge head : max. 48 mWC @50Hz
- Motor power : max. 9,5 kW
- Working temperature : max. 130°C
- Operating pressure : max. 16 bar

### Motor

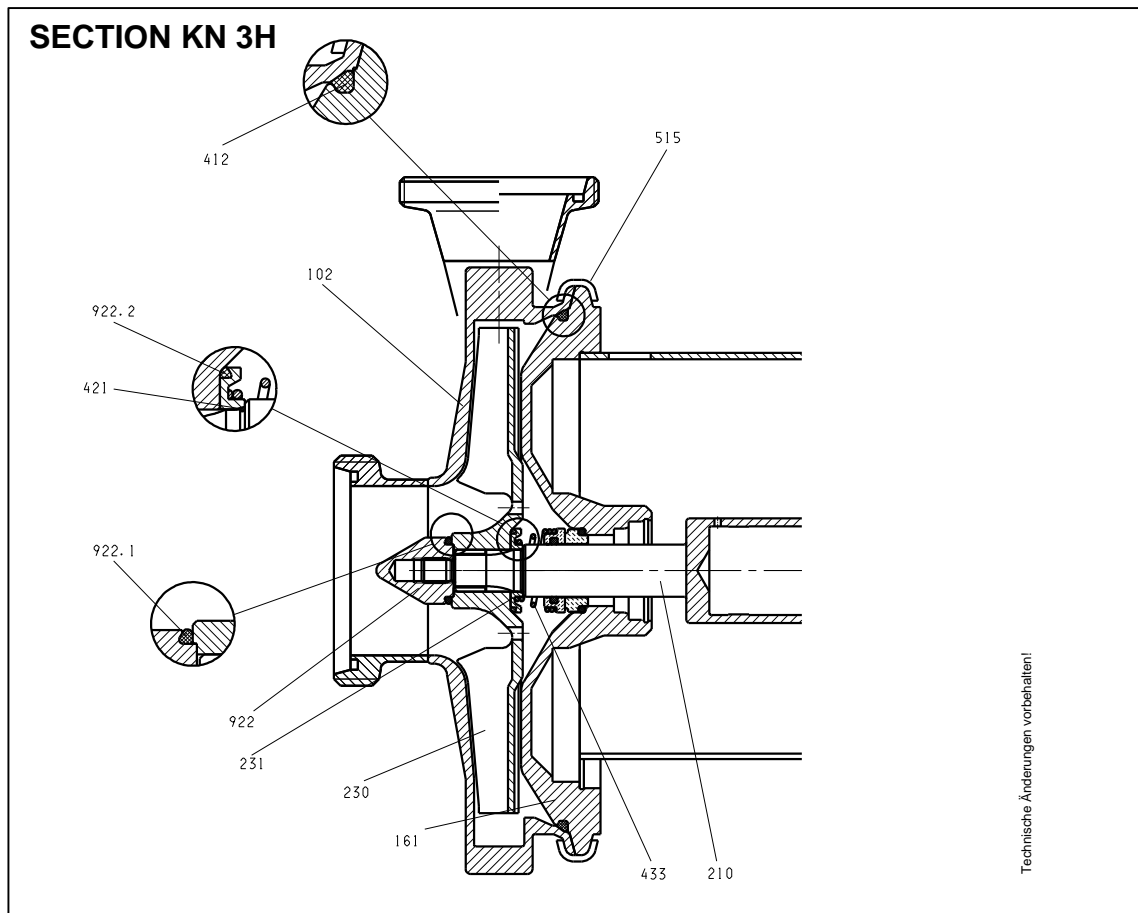
IEC-standard motor IP 55 hoseproof and with cold inducters, NEMA-standard motor on request

### Optional features

- internal frequency converter FCM 300 (up to 7,5kW)
- trolley with breaker and cable
- pump head heating/cooling jacket
- seal steam sterilisation
- explosion proof EExelIT3 or EExdelICT4
- pole changing electric motor
- alternative paint for motor (standard RAL 5015)
- casing with drainage connection or diaphragm valve

### Connections

Connection in diameters from DN50 up to DN80 or 2" up to 3" according to the following standards: DIN, IDF, Clamp, RJT, SMS, small flanges (other on request)

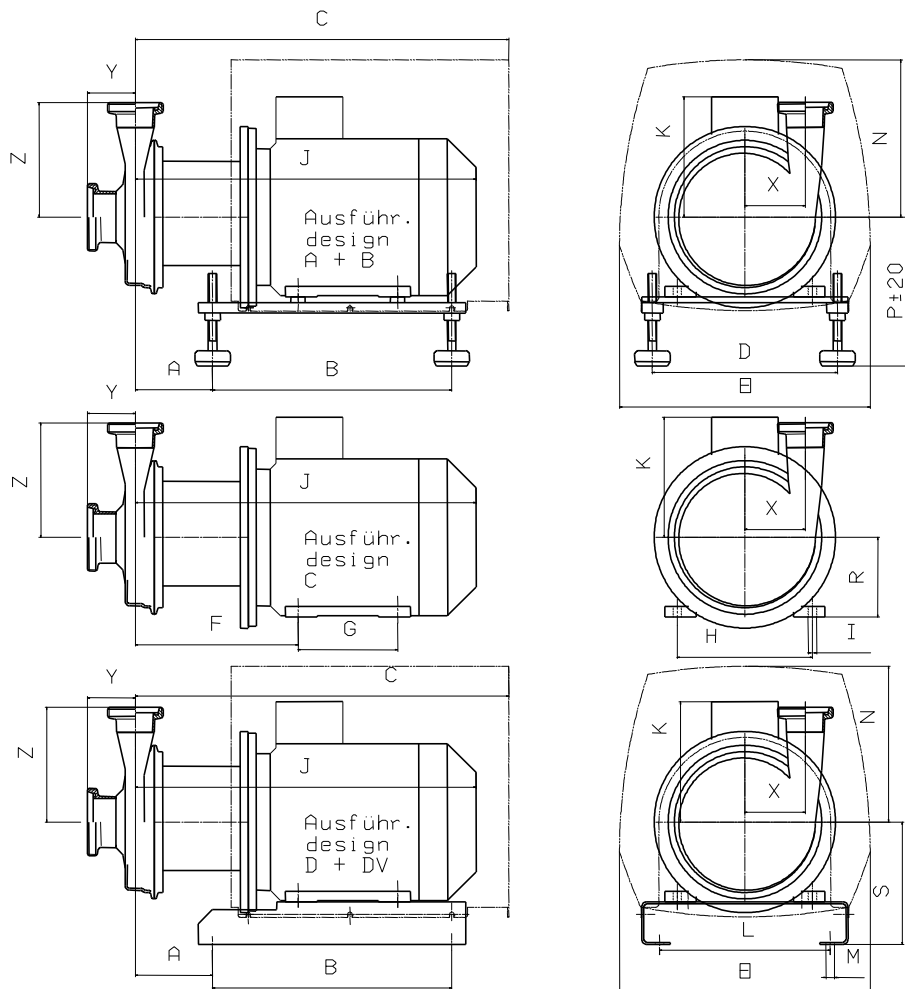


- |   |   |
|---|---|
| <p><b>102 Volute casing</b><br/>thick-walled forging in material AISI 316L, resistant to pressure surges</p> <p><b>161 Casing cover</b><br/>thick-walled forging in material AISI 316L, resistant to pressure surges</p> <p><b>182 Base frame</b><br/>height-adjustable machine feet of stainless steel</p> <p><b>210 Shaft</b><br/>push-on shaft with uniform diameter for shaft seal of 25 mm</p> <p><b>211 Shrink disc</b><br/>shaft fastening for IEC standard motor</p> <p><b>230 Impeller</b><br/>half-open, precision casting in AISI 316Ti</p> <p><b>Sealing bush</b></p> <p><b>231 O-ring</b></p> <p><b>412</b> fully flushed, hygienic O-ring in EPDM, NBR, FKM or perfluorinated rubber</p> <p><b>Radial seal</b></p> <p><b>421</b> O-ring in various seal materials</p> | <p><b>433 Mechanical seal</b><br/>single or double mechanical seal of various designs in SiC/SiC, SiC/carbon, carbon/stainless steel or precision shaft packing ring with PTFE sealing lip</p> <p><b>515 Clamping ring</b><br/>quick-release fastener in stainless steel up to PN 16</p> <p><b>550 Disc</b></p> <p><b>680 Enclosure</b><br/>Stainless steel cover AISI 304</p> <p><b>800 IEC or NEMA standard motor</b></p> <p><b>922 Impeller nut</b><br/>material AISI 316L</p> <p><b>922.1 Impeller seal</b><br/>fully flushed, hygienic O-ring in EPDM, NBR, FKM or perfluorinated rubber</p> <p><b>922.2 Impeller seal</b><br/>fully flushed, hygienic O-ring in EPDM, NBR, FKM or perfluorinated rubber</p> |
|---|---|



# Dimensions / connections acc. to DIN 11851

# KN 33/H, KN 35/H



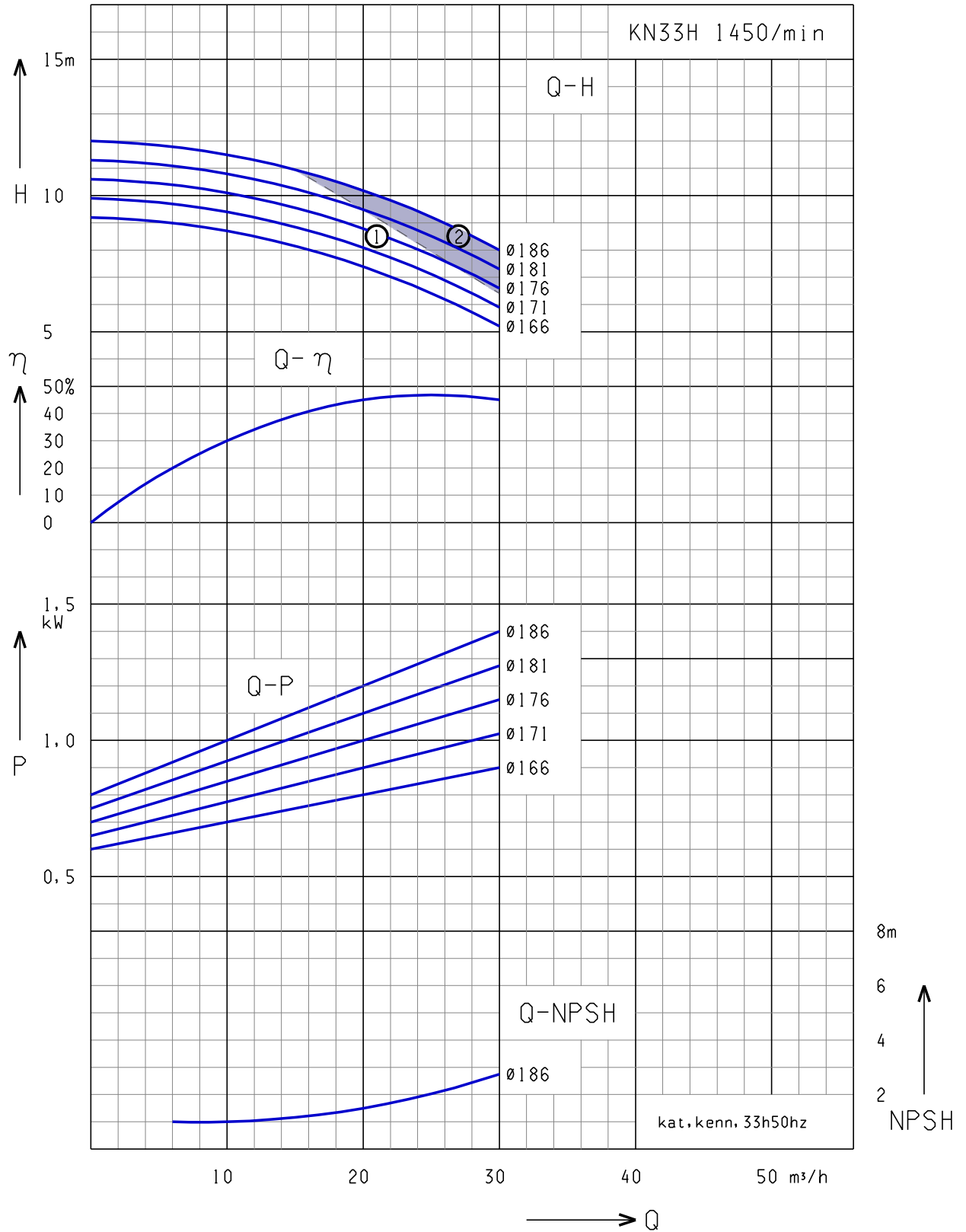
Type	Weights [kg]			kW	rpm		Motor IEC	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	R	S
	Design. A+DV	Design. B+D	Design. C		50Hz	60Hz																		
KN 33H/1	30	27	24	1,1	1450	1750	090S	102	286	464	220	302	207	100	140	9	395	149	200	9	191	187	90	160
KN 33H/2	33	30	27	1,5	1450	1750	090L	102	286	464	220	302	207	125	140	9	420	149	200	9	191	187	90	160
KN 33H/3	36	33	29	2,2	1450		100L	104	336	520	260	352	224	140	160	12	464	153	240	12	233	197	100	160
KN 35H/1	48	42	38	4,0	2900		112M																	
KN 35H/2.1	55	49	45	5,5	2900	3500	112M	111	336	520	260	352	231	140	190	12	481	169	240	12	221	209	112	172
KN 35H/3.1	60	54	50	7,5	2900	3500	112M																	
KN 35H/2.2	74	66	62	5,5	2900	3500	132S																	
KN 35H/3.2	77	69	65	7,5	2900	3500	132S	131	400	651	290	423	270	140	216	12	586	188	270	12	289	230	132	200
KN 35H/4	84	76	72	9,2	2900	3500	132M																	
KN 35H/5	89	83	77	11,0		3500	132M	131	400	651	290	423	270	178	216	12	586	188	270	12	289	230	132	200

Inlet	32	40	40	50	50	50	65	65	65	80	80	80
Outlet	32	32	40	32	40	50	40	50	65	50	65	80
X	108	108	108	108	108	108	108	108	108	108	108	108
Y	114	106	106	90	90	90	78	78	78	78	78	78
Z	177	177	172	177	172	174	172	174	179	174	179	184

Reserved for technical alteration!  
02 / 2005

# Characteristics KN 33H

50 Hz

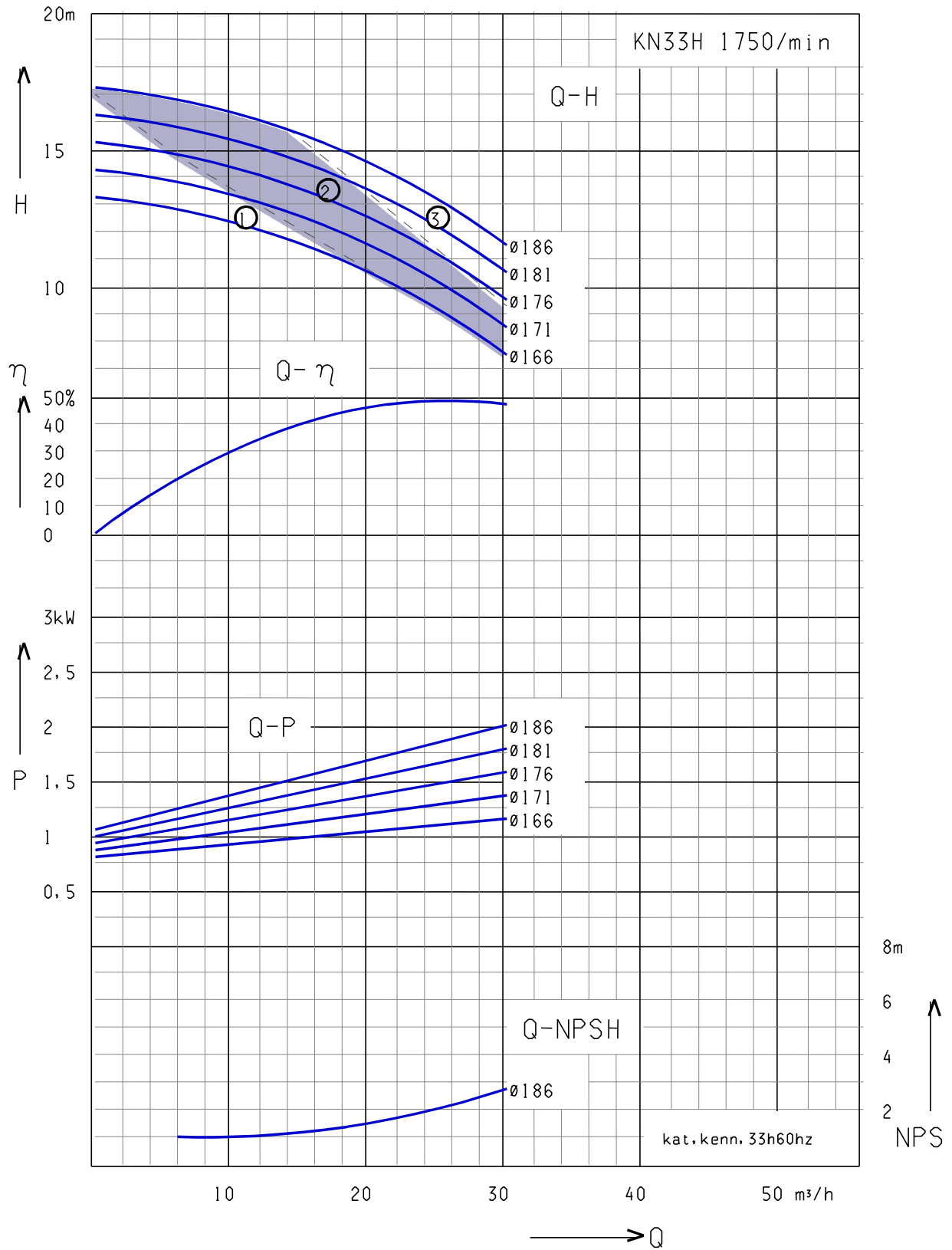


① KN 33H/1 - 1,1 kW    ② KN 33H/2 - 1,5 kW

Water: 68°F (20°C)

# Characteristics KN 33H

60 Hz

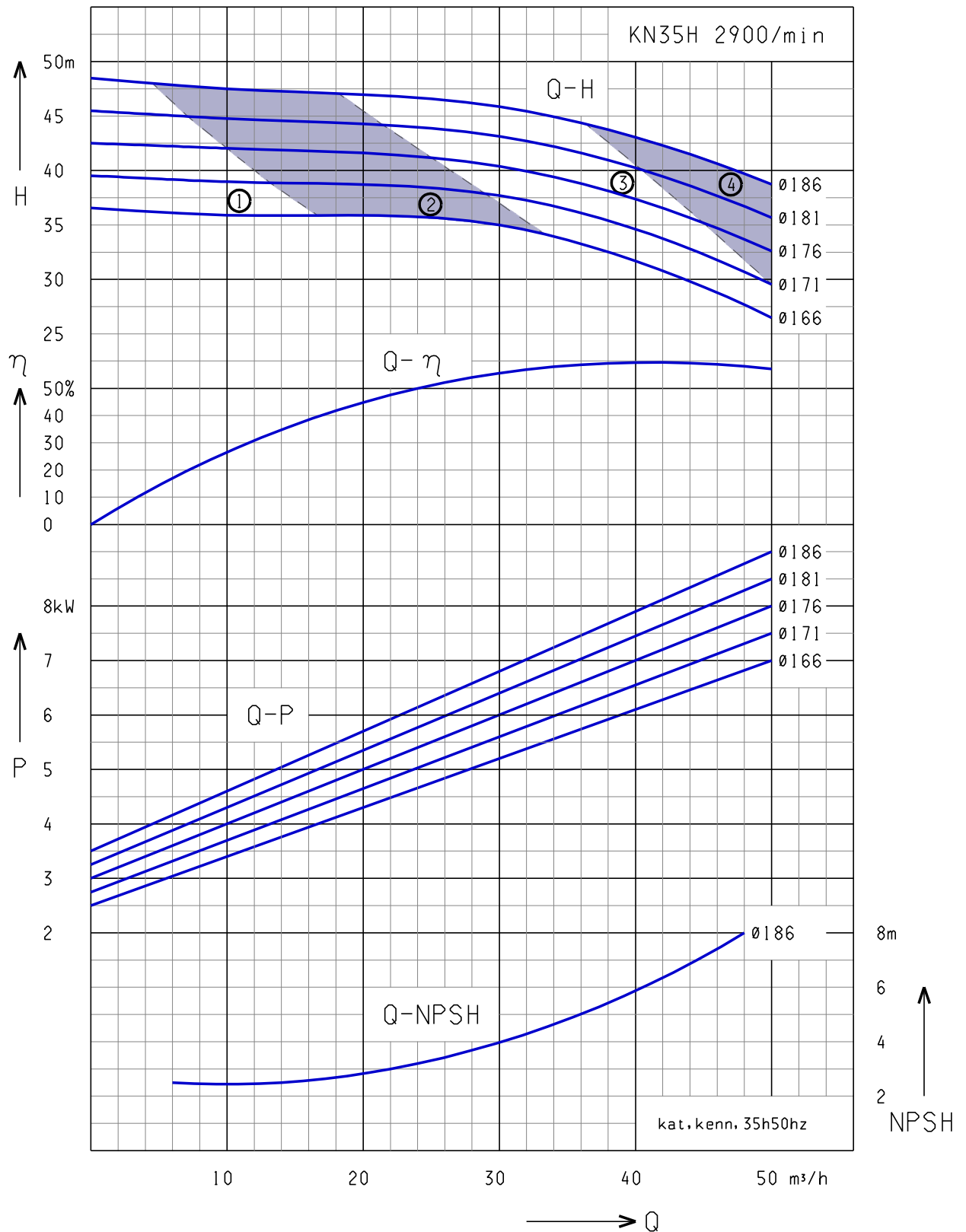


- ① KN 33H/1 - 1,1 kW
- ② KN 33H/2 - 1,5 kW
- ③ KN 33H/3 - 2,2 kW

Water: 68°F (20°C)

# Characteristics KN 35H

50 Hz

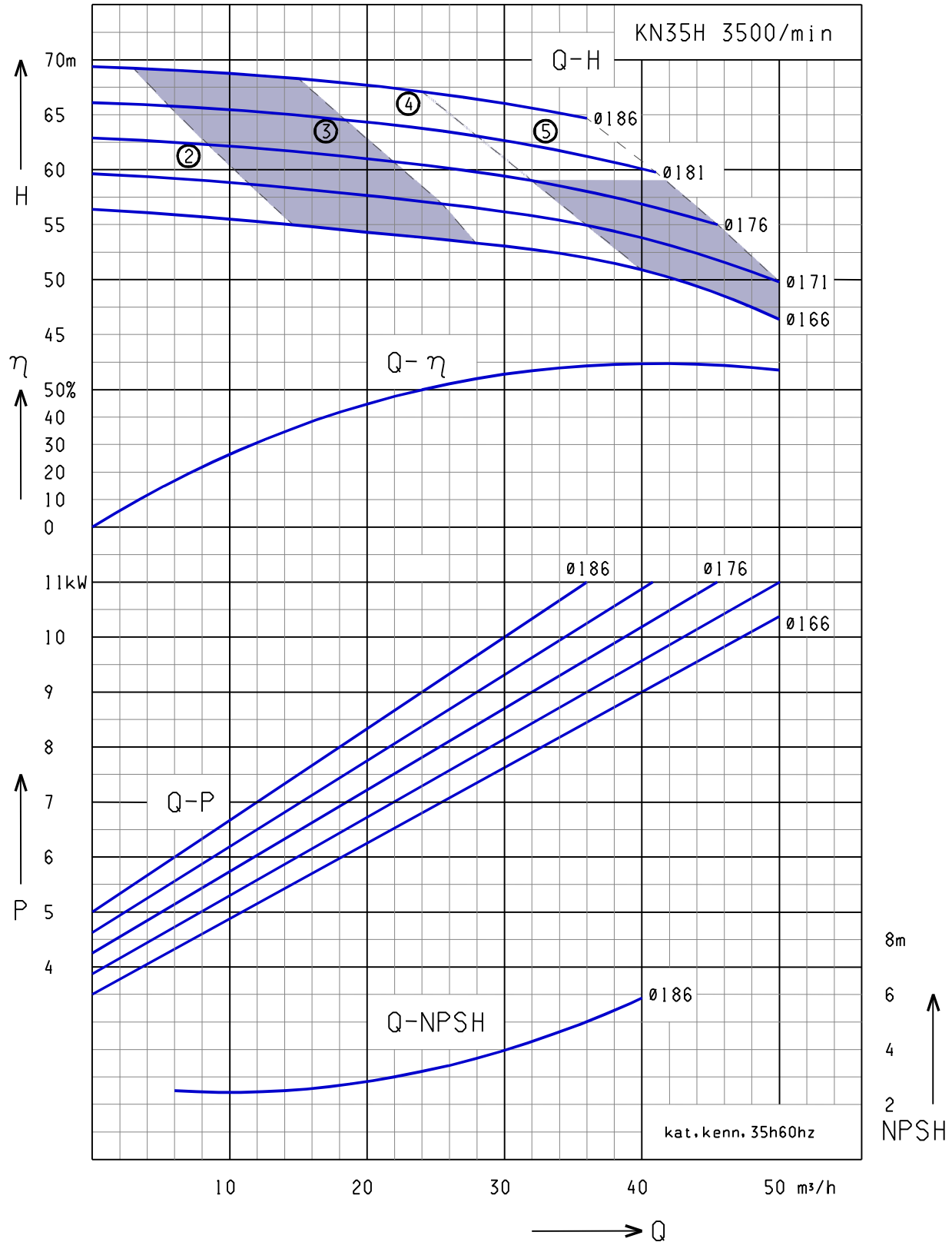


- ① KN 35H/1 - 4,0 kW    ② KN 35H/2 - 5,5 kW
- ③ KN 35H/3 - 7,5 kW    ④ KN 35H/4 - 9,2 kW

Water: 68°F (20°C)

# Characteristics KN 35H

60 Hz



- ② KN 35H/2 - 5,5 kW    ③ KN 35H/3 - 7,5 kW
- ④ KN 35H/4 - 9,2 kW    ⑤ KN 35H/5 - 11,0 kW

Water: 68°F (20°C)

# Sanitary non self-priming pump

KN 4 series



Design A

... for the brewery and beverage industry

## Design

Deep drawn, thick-walled CrNiMo rolled steel casing, forged CrNiMo stainless steel casing cover, opened CrNiMo stainless steel impeller on a strong dimensioned stub shaft, sturdy quick-release clamp ring with sanitary chambered O-ring seal

## Construction arrangements

A..... on adjustable stainless steel machine feet, stainless steel motor cover,  
 B..... on adjustable stainless steel machine feet,  
 C..... on motor foot  
 D..... on stainless steel foot  
 DV.. on stainless steel foot incl. stainless steel motor cover

## Materials

All parts in contact with product correspond to the materials AISI316L (1.4404, 1.4435, 1.4581), stainless steel motor lantern, various process seal materials to suit application

## Shaft seal

Adjusted self cleaning and self rinsing single or double mechanical seal with uniform shaft diameter of 25mm for aseptic applications and with material combinations depending on product

## Parameter

- Flow rate : max.120.000 l/h@50Hz
- Discharge head : max. 60 mWC @50Hz
- Motor power : max. 22 kW
- Working temperature : max. 130°C
- Operating pressure : max. 16 bar

## Motor

IEC-standard motor IP 55 hoseproof and with cold inducters, NEMA-standard motor on request

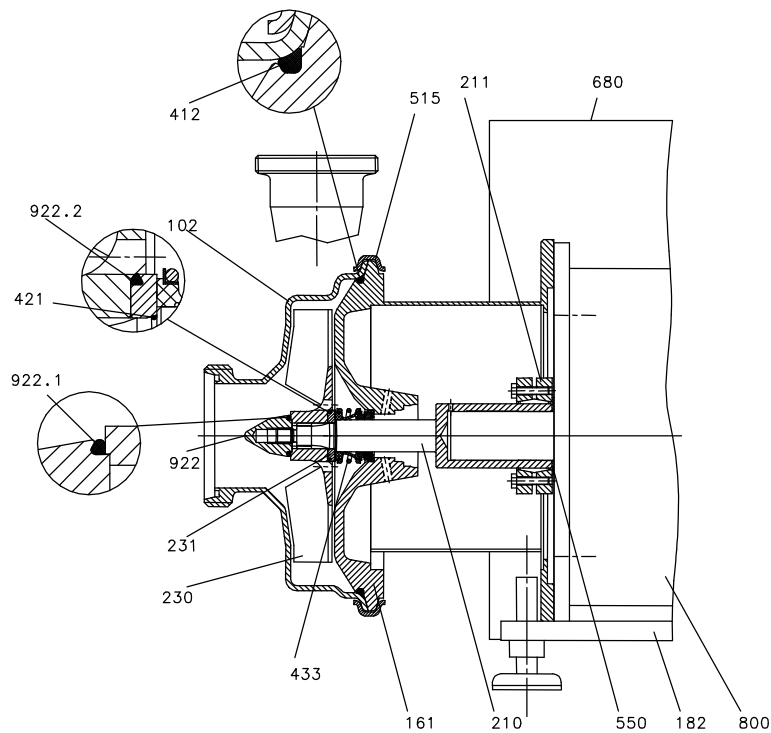
## Optional features

- internal frequency converter FCM 300 (up to 7,5kW)
- trolley with breaker and cable
- pump head heating/cooling jacket
- seal steam sterilisation
- explosion proof EExelIT3 or EExdelICT4
- pole changing electric motor
- alternative paint for motor (standard RAL 5015)
- casing with drainage connection or diaphragm valve

## Connections

Connection in diameters from DN50 up to DN100 or 2" up to 4" according to the following standards: DIN, IDF, Clamp, RJT, SMS, small flanges (other on request)

## SECTION KN 4



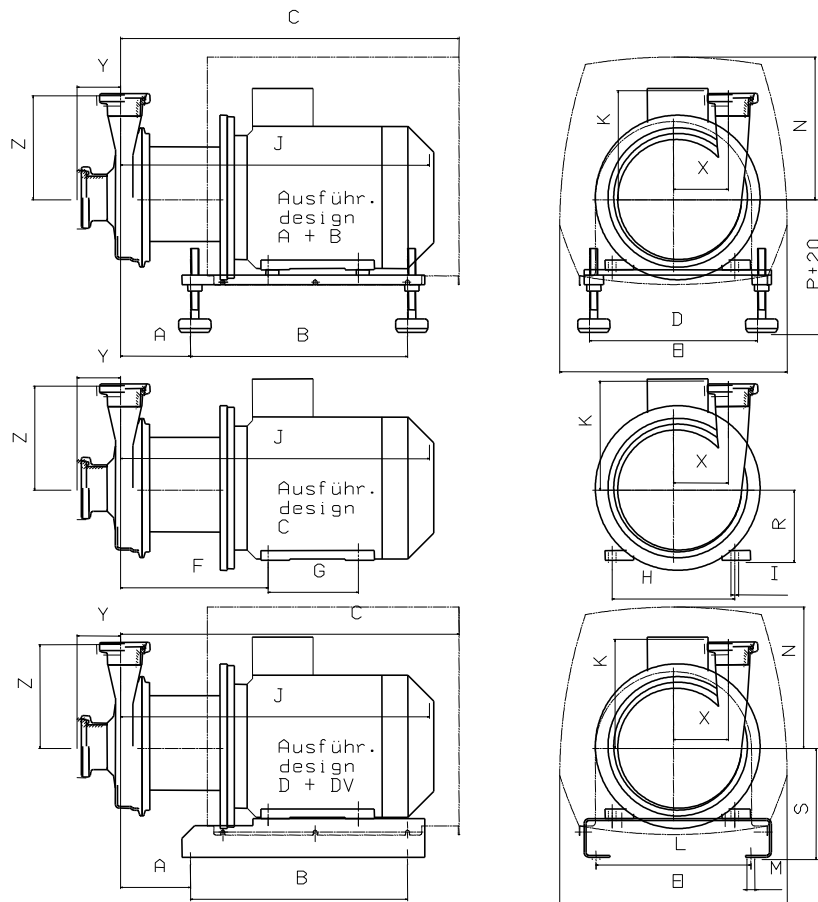
Technische Änderungen vorbehalten!

- |  |  |
|--|--|
| <p><b>102 Volute casing</b><br/>material AISI 316L; 4 mm; variable connections</p> <p><b>161 Casing cover</b><br/>thick-walled forging in material AISI 316L, resistant to pressure surges</p> <p><b>182 Base frame</b><br/>height-adjustable machine feet of stainless steel</p> <p><b>210 Shaft</b><br/>push-on shaft with uniform diameter for shaft seal of 25 mm in AISI 316Ti</p> <p><b>211 Shrink disc</b><br/>shaft fastening for IEC standard motor</p> <p><b>230 Impeller</b><br/>open or closed, precision casting in AISI 316Ti</p> <p><b>Sealing bush</b></p> <p><b>231 O-ring</b></p> <p><b>412</b> fully flushed, hygienic O-ring in EPDM, NBR, FKM or perfluorinated rubber</p> <p><b>Radial seal</b></p> <p><b>421</b> O-ring in various seal materials</p> | <p><b>433 Mechanical seal</b><br/>single or double mechanical seal of various designs in SiC/SiC, SiC/carbon, carbon/stainless steel or precision shaft packing ring with PTFE sealing lip</p> <p><b>515 Clamping ring</b><br/>quick-release fastener in stainless steel up to PN 16</p> <p><b>550 Disc</b></p> <p><b>680 Enclosure</b><br/>Stainless steel cover</p> <p><b>800 IEC or NEMA standard motor</b></p> <p><b>922 Impeller nut</b><br/>material AISI 316L</p> <p><b>922.1 Impeller seal</b><br/>fully flushed, hygienic O-ring in EPDM, NBR, FKM or perfluorinated rubber</p> <p><b>922.2 Impeller seal</b><br/>fully flushed, hygienic O-ring in EPDM, NBR, FKM or perfluorinated rubber</p> |
|--|--|



# Dimensions / connections acc. to DIN 11851

# KN 43, KN 45



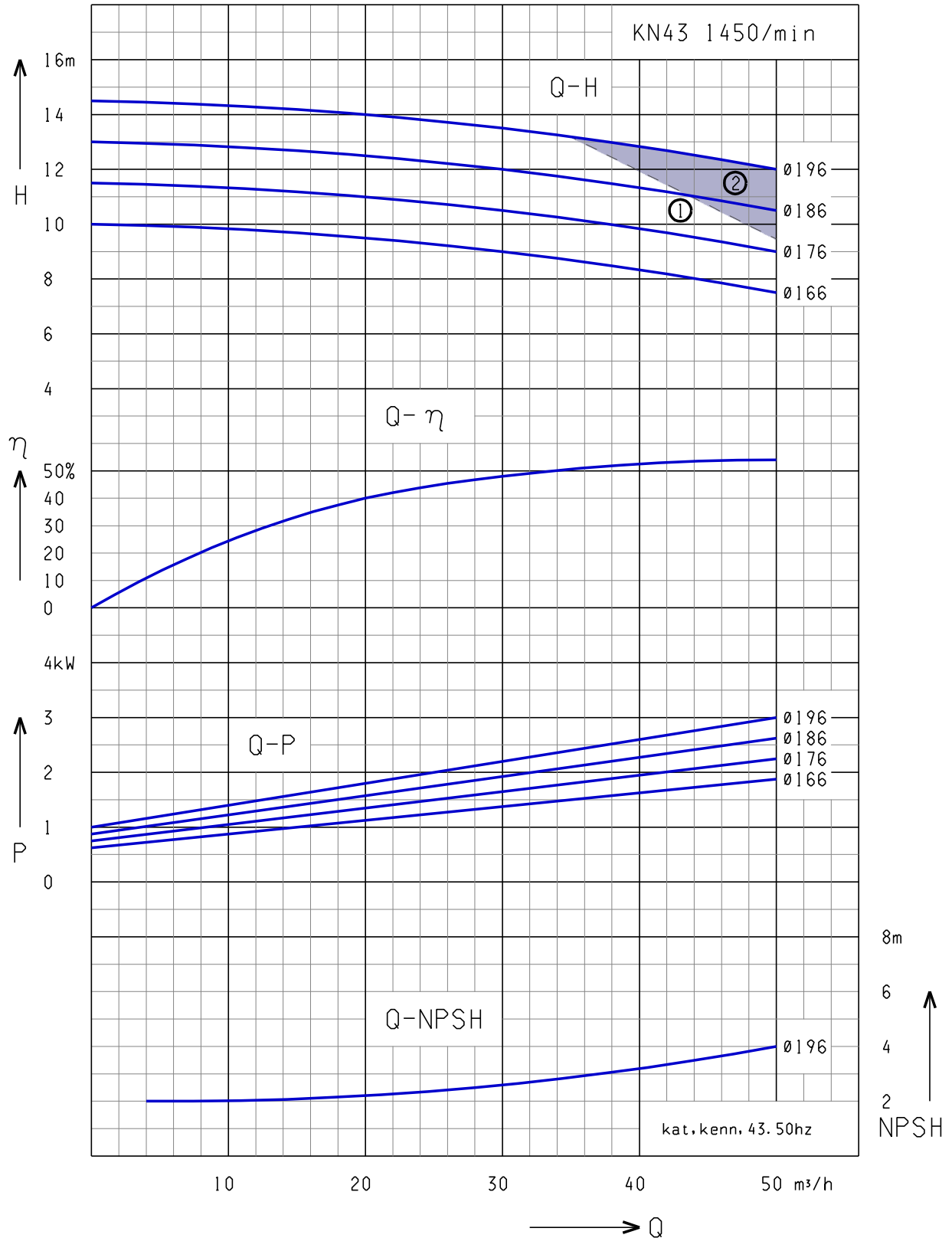
Type	Weights [kg]			kW	rpm		Motor IEC	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	R	S
	Design A+DV	Design B+D	Design C		50Hz	60Hz																		
	<b>KN 43/1</b>	48	39		32	<b>2,2</b>																		
<b>KN 43/2</b>	56	47	40	<b>3,0</b>	1450	1750	100L																	
<b>KN 43/3</b>	60	51	44	<b>4,0</b>		1750	112M																	
<b>KN 45/1.1</b>	63	54	47	<b>5,5</b>	2900		112M	114	336	530	260	352	234	140	190	12	484	169	240	12	221	209	112	172
<b>KN 45/2.1</b>	65	56	49	<b>7,5</b>	2900	3500	112M																	
<b>KN 43/4</b>	79	70	63	<b>5,5</b>		1750	132S																	
<b>KN 45/1.2</b>	79	70	63	<b>5,5</b>	2900		132S	134	400	654	290	423	273	140	216	12	589	188	270	12	289	230	132	200
<b>KN 45/2.2</b>	82	73	66	<b>7,5</b>	2900	3500	132S																	
<b>KN 45/3</b>	89	80	71	<b>9,2</b>	2900	3500	132M																	
<b>KN 45/4.1</b>	97	88	79	<b>11,0</b>	2900	3500	132M	134	400	654	290	423	273	178	216	12	589	188	270	12	289	230	132	200
<b>KN 45/4.2</b>	130	120	111	<b>11,0</b>	2900	3500	160M																	
<b>KN 45/5</b>	139	129	120	<b>15,0</b>	2900	3500	160M																	
<b>KN 45/6</b>	139	129	120	<b>18,5</b>	2900	3500	160L	169	500	814	340	423	327	210	254	14	737	222	310	13	283	264	160	230
<b>KN 45/7.1</b>	147	137	128	<b>22,0</b>	2900	3500	160L																	
<b>KN 45/7.2</b>	212	202	193	<b>22,0</b>	2900	3500	180M																	
<b>KN 45/8</b>	230	220	211	<b>30,0</b>	2900	3500	180M	232	562	929	340	463	340	241	279	15	749	321	310	13	350	284	180	250

Inlet	50	65	65	80	80	80	100	100	100
Outlet	50	50	65	50	65	80	65	80	100
X	102	102	102	102	102	102	102	102	102
Y	90	90	90	86	86	86	87	87	87
Z	218	218	218	218	218	223	218	223	233

Reserved for technical alteration!  
02 / 2005

# Characteristics KN 43

50 Hz

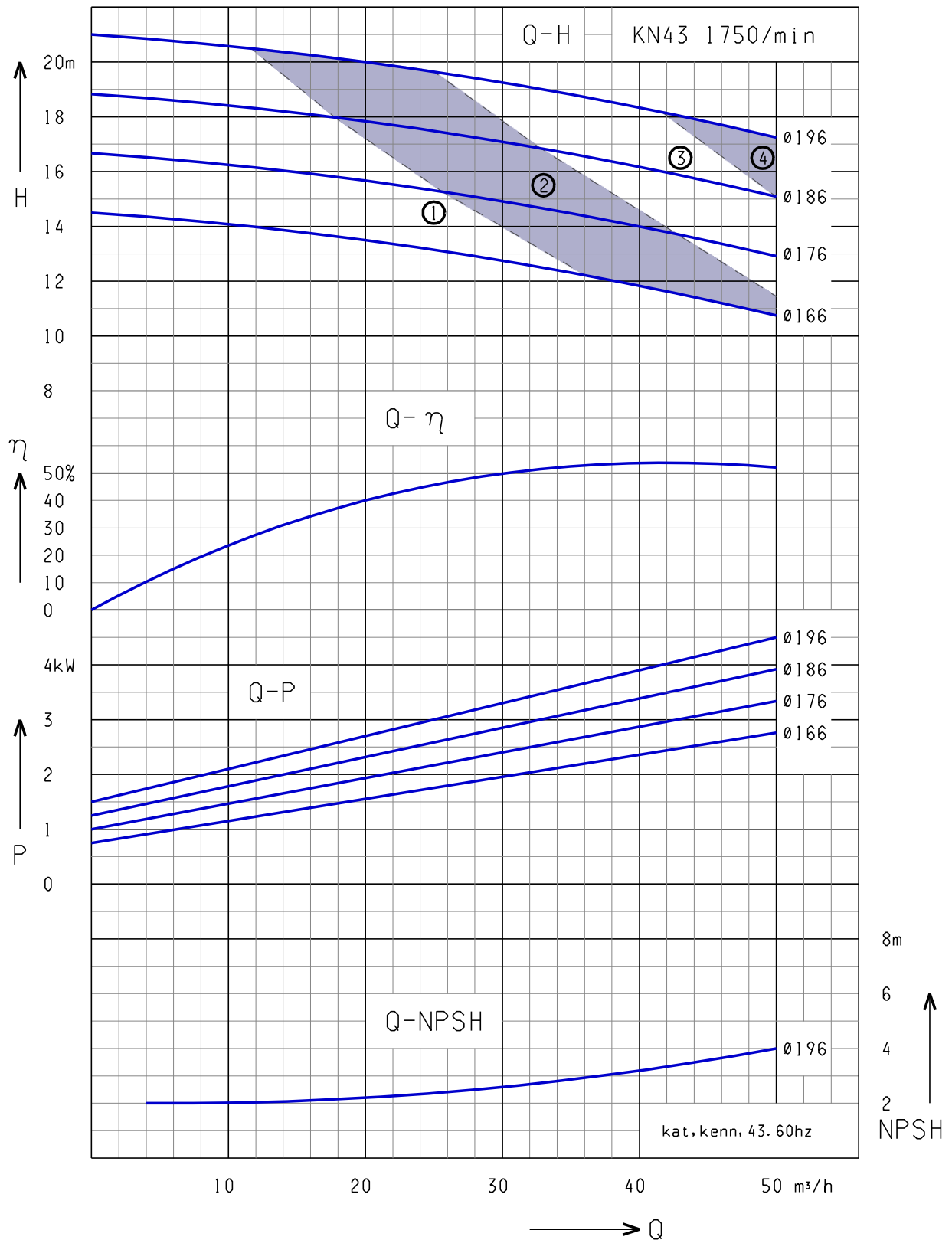


① KN 43/1 - 2,2 kW    ② KN 43/2 - 3,0 kW

Water: 68°F (20°C)

# Characteristics KN 43

60 Hz

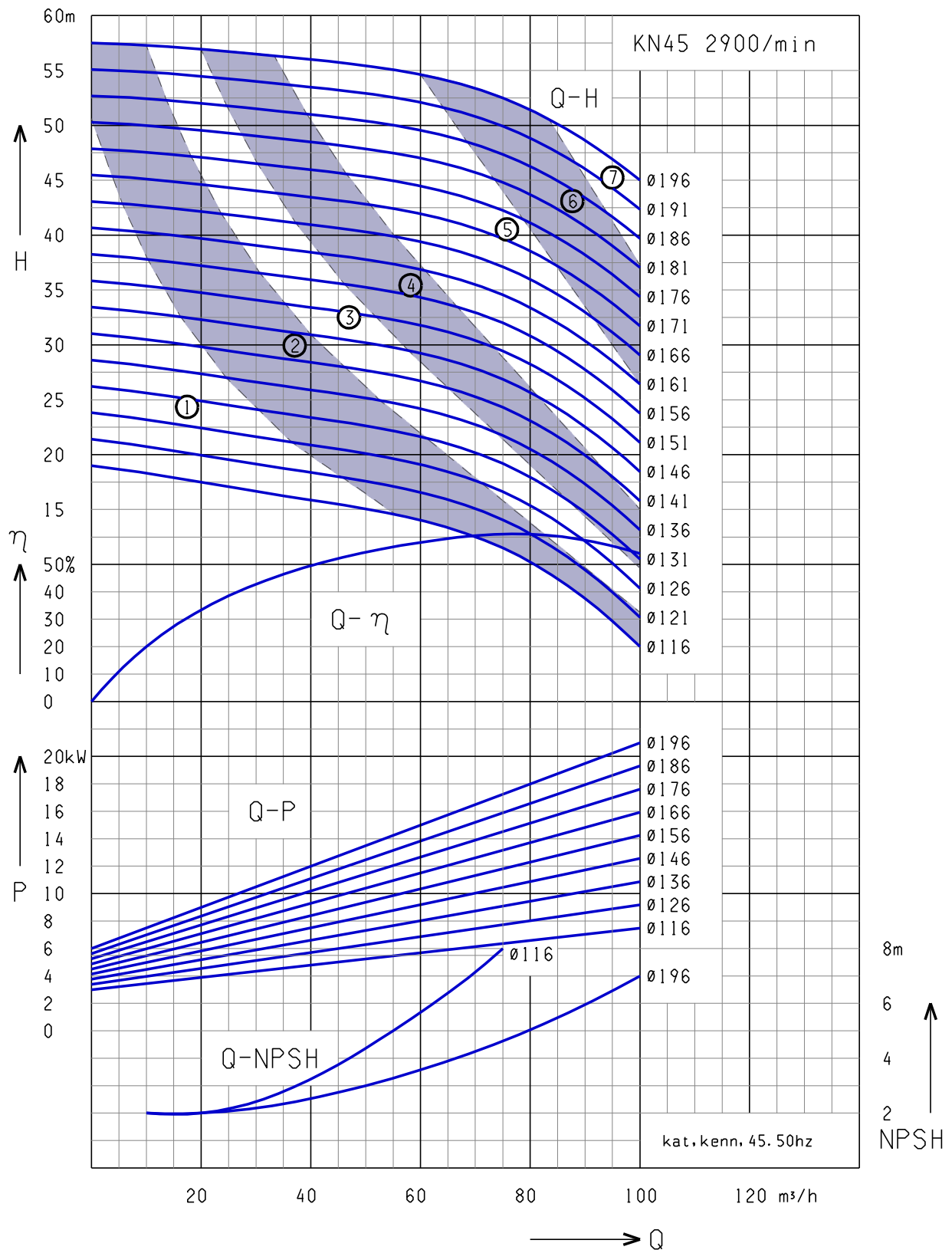


- ① KN 43/1 - 2,2 kW    ② KN 43/2 - 3,0 kW
- ③ KN 43/3 - 4,0 kW    ④ KN 43/4 - 5,5 kW

Water: 68°F (20°C)

# Characteristics KN 45

50 Hz

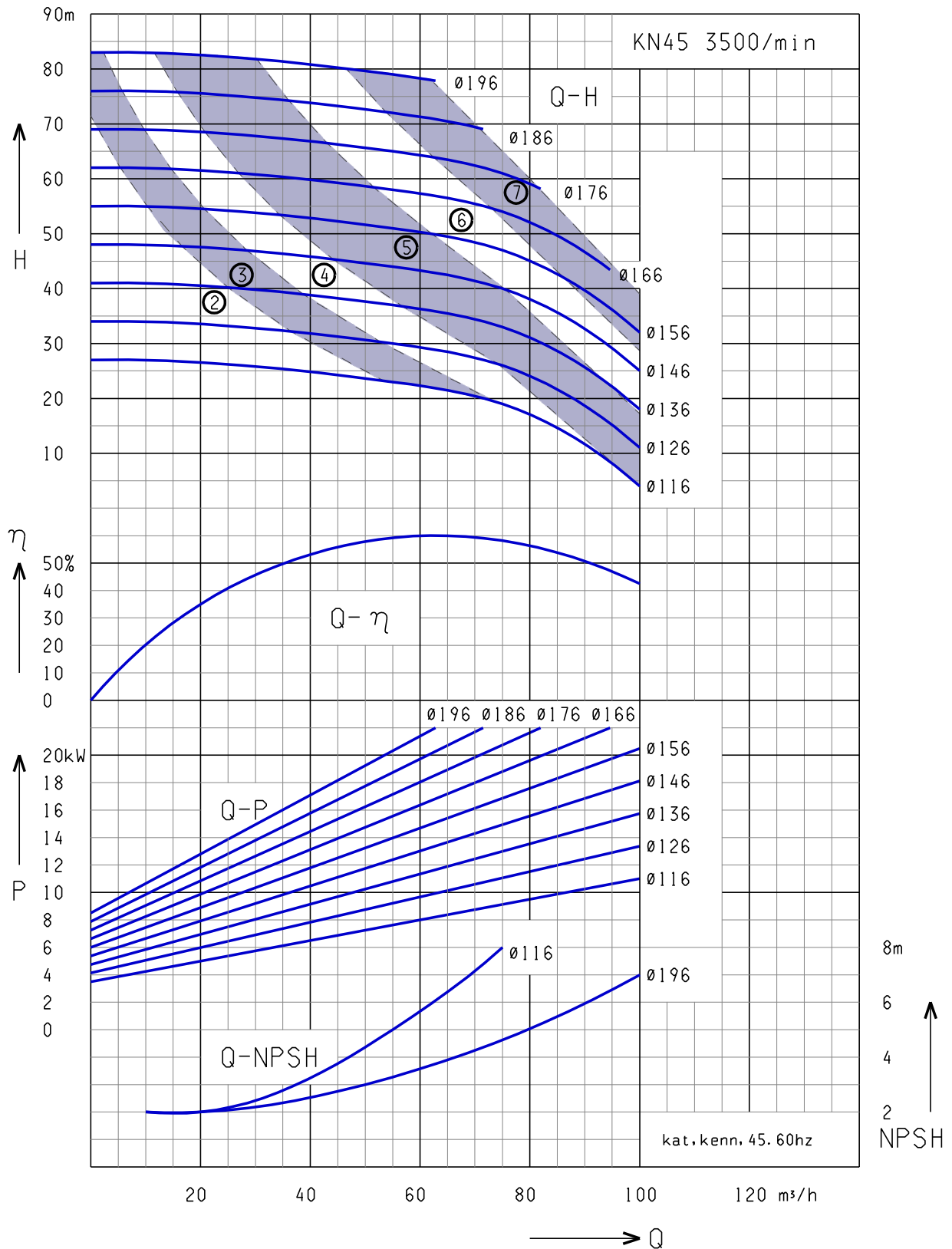


- ① KN 45/1 - 5,5 kW    ② KN 45/2 - 7,5 kW
- ③ KN 45/3 - 9,2 kW    ④ KN 45/4 - 11,0 kW
- ⑤ KN 45/5 - 15,0 kW    ⑥ KN 45/6 - 18,5 kW
- ⑦ KN 45/7 - 22,0 kW

Water: 68°F (20°C)

# Characteristics KN 45

60 Hz

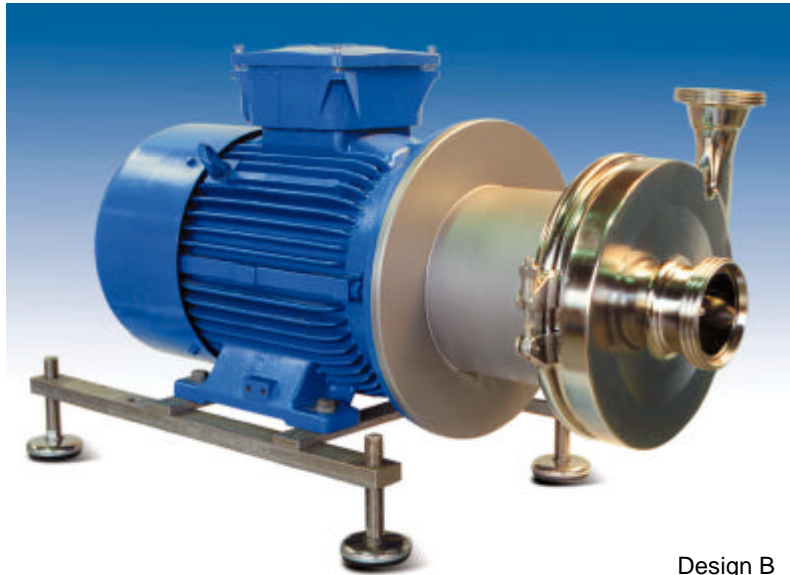


- ② KN 45/2 - 7,5 kW    ③ KN 45/3 - 9,2 kW
- ④ KN 45/4 - 11,0 kW    ⑤ KN 45/5 - 15,0 kW
- ⑥ KN 45/6 - 18,5 kW    ⑦ KN 45/7 - 22,0 kW
- ⑧ KN 45/8 - 30,0 kW

Water: 68°F (20°C)

# Sanitary non self-priming pump

KN 4H series



Design B

... for the brewery and beverage industry

## Design

Deep drawn, thick-walled CrNiMo rolled steel casing, forged CrNiMo stainless steel casing cover, opened CrNiMo stainless steel impeller on a strong dimensioned stub shaft, sturdy quick-release clamp ring with sanitary chambered O-ring seal

## Construction arrangements

- A..... on adjustable stainless steel machine feet, stainless steel motor cover,
- B..... on adjustable stainless steel machine feet,
- C..... on motor foot
- D..... on stainless steel foot
- DV.. on stainless steel foot incl. stainless steel motor cover

## Materials

All parts in contact with product correspond to the materials AISI316L (1.4404, 1.4435, 1.4581), stainless steel motor lantern, various process seal materials to suit application

## Shaft seal

Adjusted self cleaning and self rinsing single or double mechanical seal with uniform shaft diameter of 25mm for aseptic applications and with material combinations depending on product

## Parameter

- Flow rate : max. 50.000 l/h @50Hz
- Discharge head : max. 77 mWC @50Hz
- Motor power : max. 18,5 kW
- Working temperature : max. 130°C
- Operating pressure : max. 16 bar

## Motor

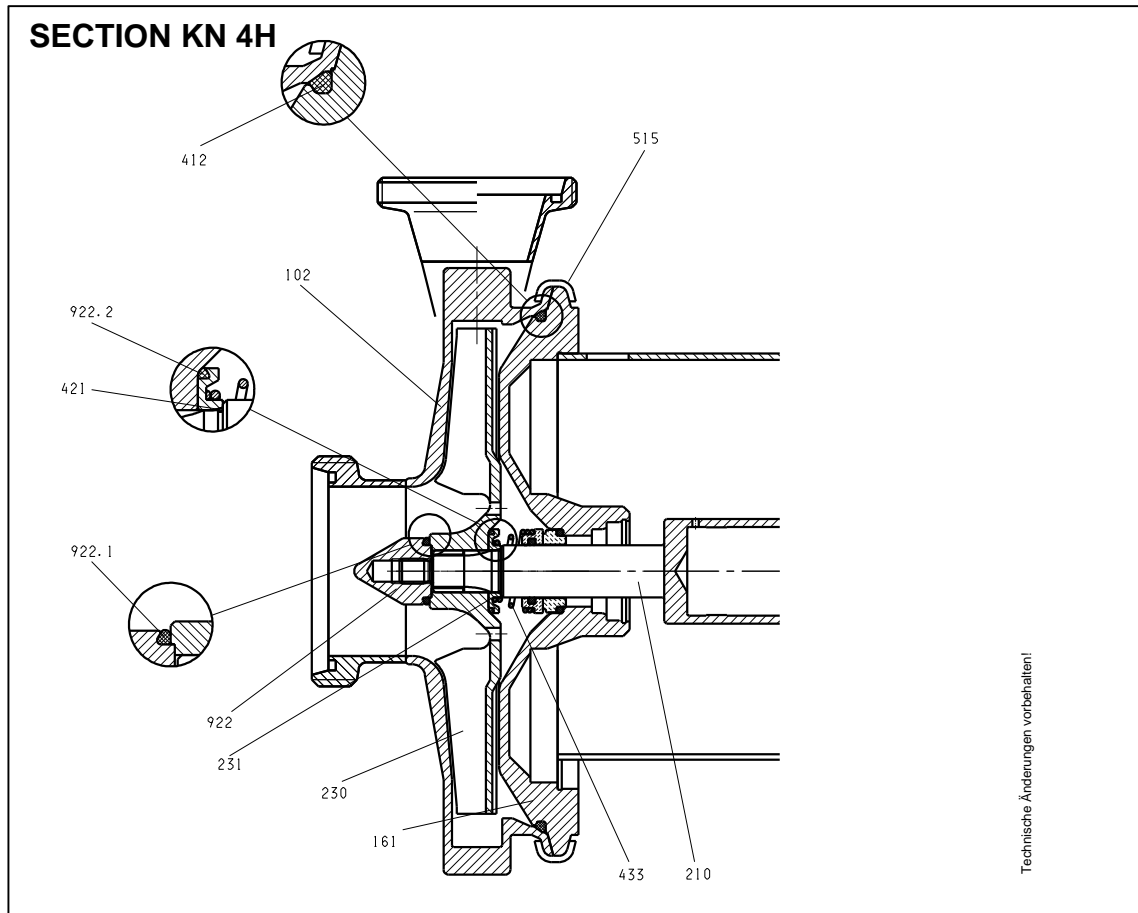
IEC-standard motor IP 55 hoseproof and with cold inducters, NEMA-standard motor on request

## Optional features

- internal frequency converter FCM 300 (up to 7,5kW)
- trolley with breaker and cable
- pump head heating/cooling jacket
- seal steam sterilisation
- explosion proof EExelIT3 or EExdeIICT4
- pole changing electric motor
- alternative paint for motor (standard RAL 5015)
- casing with drainage connection or diaphragm valve

## Connections

Connection in diameters from DN50 up to DN80 or 2" up to 3" according to the following standards: DIN, IDF, Clamp, RJT, SMS, small flanges (other on request)

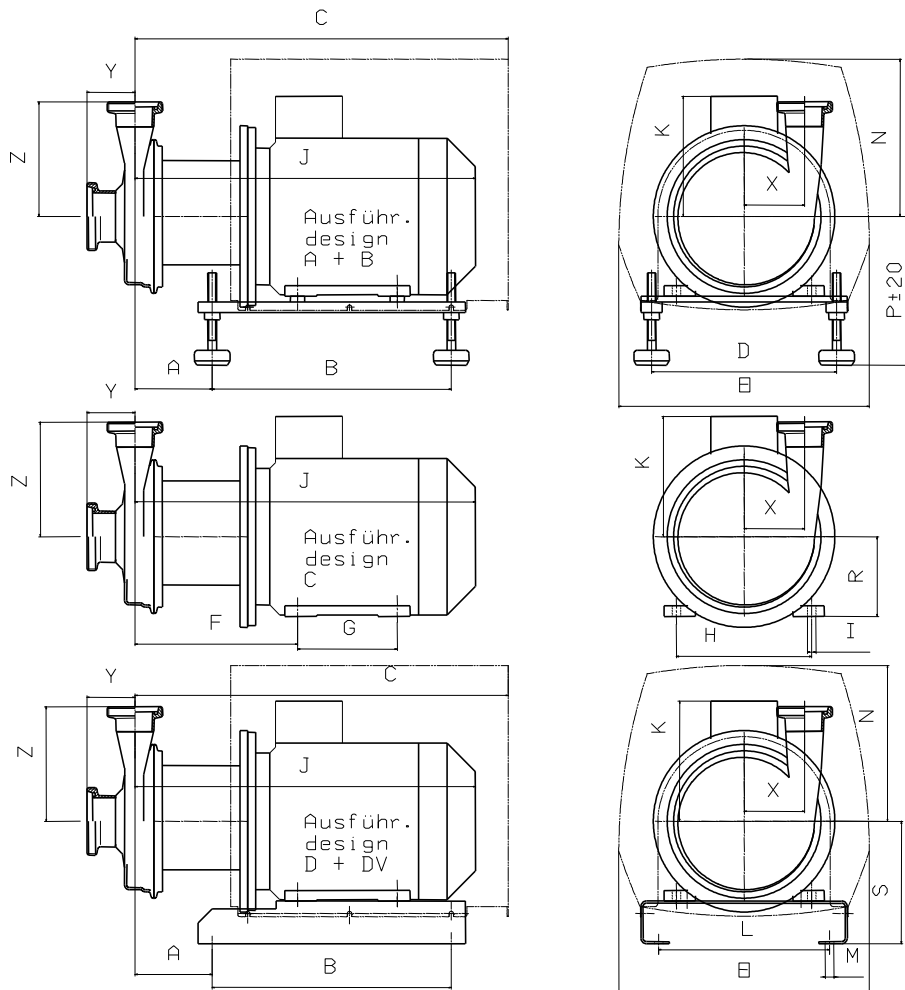


- |   |  |
|---|--|
| <p><b>102 Volute casing</b><br/>thick-walled forging in material AISI 316L, resistant to pressure surges</p> <p><b>161 Casing cover</b><br/>thick-walled forging in material AISI 316L, resistant to pressure surges</p> <p><b>182 Base frame</b><br/>height-adjustable machine feet of stainless steel</p> <p><b>210 Shaft</b><br/>push-on shaft with uniform diameter for shaft seal of 25 mm in AISI 316Ti</p> <p><b>211 Shrink disc</b><br/>shaft fastening for IEC standard motor</p> <p><b>230 Impeller</b><br/>half-open, precision casting in AISI 316Ti</p> <p><b>Sealing bush</b></p> <p><b>231 O-ring</b></p> <p><b>412</b> fully flushed, hygienic O-ring in EPDM, NBR, FKM or perfluorinated rubber</p> <p><b>Radial seal</b></p> <p><b>421</b> O-ring in various seal materials</p> | <p><b>433 Mechanical seal</b><br/>single or double mechanical seal of various designs in SiC/SiC, SiC/carbon, carbon/stainless steel or precision shaft packing ring with PTFE sealing lip</p> <p><b>515 Clamping ring</b><br/>quick-release fastener in stainless steel up to PN 16</p> <p><b>550 Disc</b></p> <p><b>680 Enclosure</b><br/>Stainless steel cover</p> <p><b>800 IEC or NEMA standard motor</b></p> <p><b>922 Impeller nut</b><br/>material AISI 316L</p> <p><b>922.1 Impeller seal</b><br/>fully flushed, hygienic O-ring in EPDM, NBR, FKM or perfluorinated rubber</p> <p><b>922.2 Impeller seal</b><br/>fully flushed, hygienic O-ring in EPDM, NBR, FKM or perfluorinated rubber</p> |
|---|--|



# Dimensions / connections acc. to DIN 11851

# KN 43/H, KN 45/H



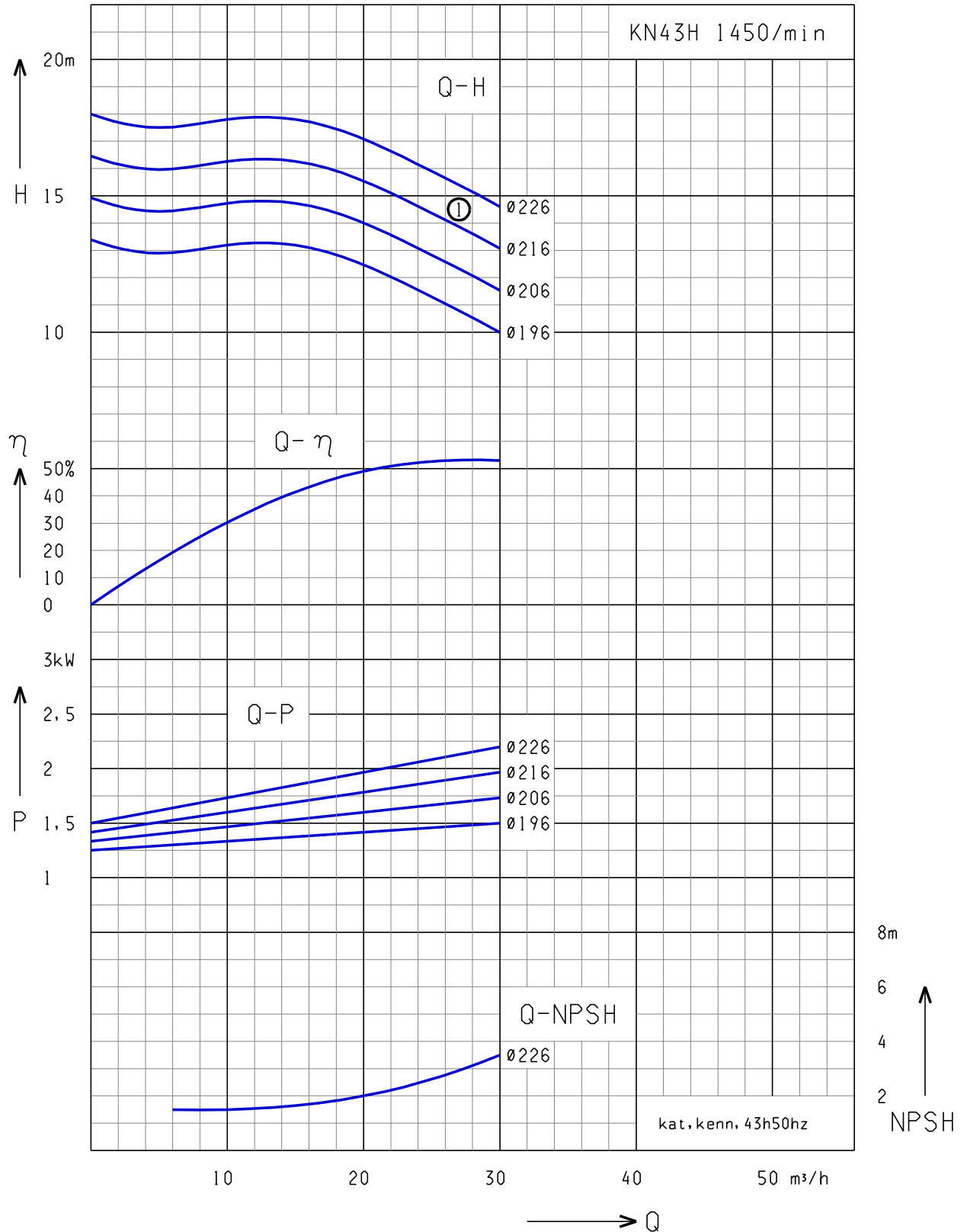
Type	Weights [kg]			kW	rpm		Motor IEC	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	R	S
	Design A+DV	Design B+D	Design C		50Hz	60Hz																		
KN 43H/1	51	42	35	2,2	1450	1750	100L	103	336	519	260	352	223	140	160	12	463	153	240	12	233	197	100	160
KN 43H/2	59	50	43	3,0		1750	100L																	
KN 43H/3	64	55	48	4,0		1750	112M																	
KN 45H/1.1	67	58	51	5,5	2900		112M	110	336	526	260	352	230	140	190	12	480	169	240	12	221	209	112	172
KN 45H/2.1	69	60	53	7,5	2900	3500	112M																	
KN 45H/2.2	82	73	66	5,5	2900		132S	130	400	650	290	423	269	140	216	12	585	188	270	12	289	230	132	200
KN 45H/3	92	83	76	9,2	2900	3500	132M	130	400	650	290	423	269	178	216	12	585	188	270	12	289	230	132	200
KN 45H/4.1	100	91	84	11,0	2900	3500	132M																	
KN 45H/4.2	133	123	114	11,0	2900	3500	160M	165	500	810	340	423	323	210	254	14	733	222	310	13	283	264	160	230
KN 45H/5	142	132	123	15,0	2900	3500	160M																	
KN 45H/6	142	132	123	18,5	2900	3500	160L	165	500	810	340	423	323	254	254	14	733	222	310	13	283	264	160	230
KN 45H/7.1	152	142	133	22,0		3500	160L																	
KN 45H/7.2	217	207	198	22,0		3500	180M	228	562	925	340	463	336	241	279	15	745	321	310	13	350	284	180	250

Inlet	32	40	40	50	50	50	65	65	65	80	80	80
Outlet	32	32	40	32	40	50	40	50	65	50	65	80
X	128	128	128	128	128	128	128	128	128	128	128	128
Y	115	107	107	91	91	91	79	79	79	79	79	79
Z	186	186	181	186	181	183	181	183	188	183	188	193

Reserved for technical alteration!  
02 / 2005

# Characteristics KN 43H

50 Hz

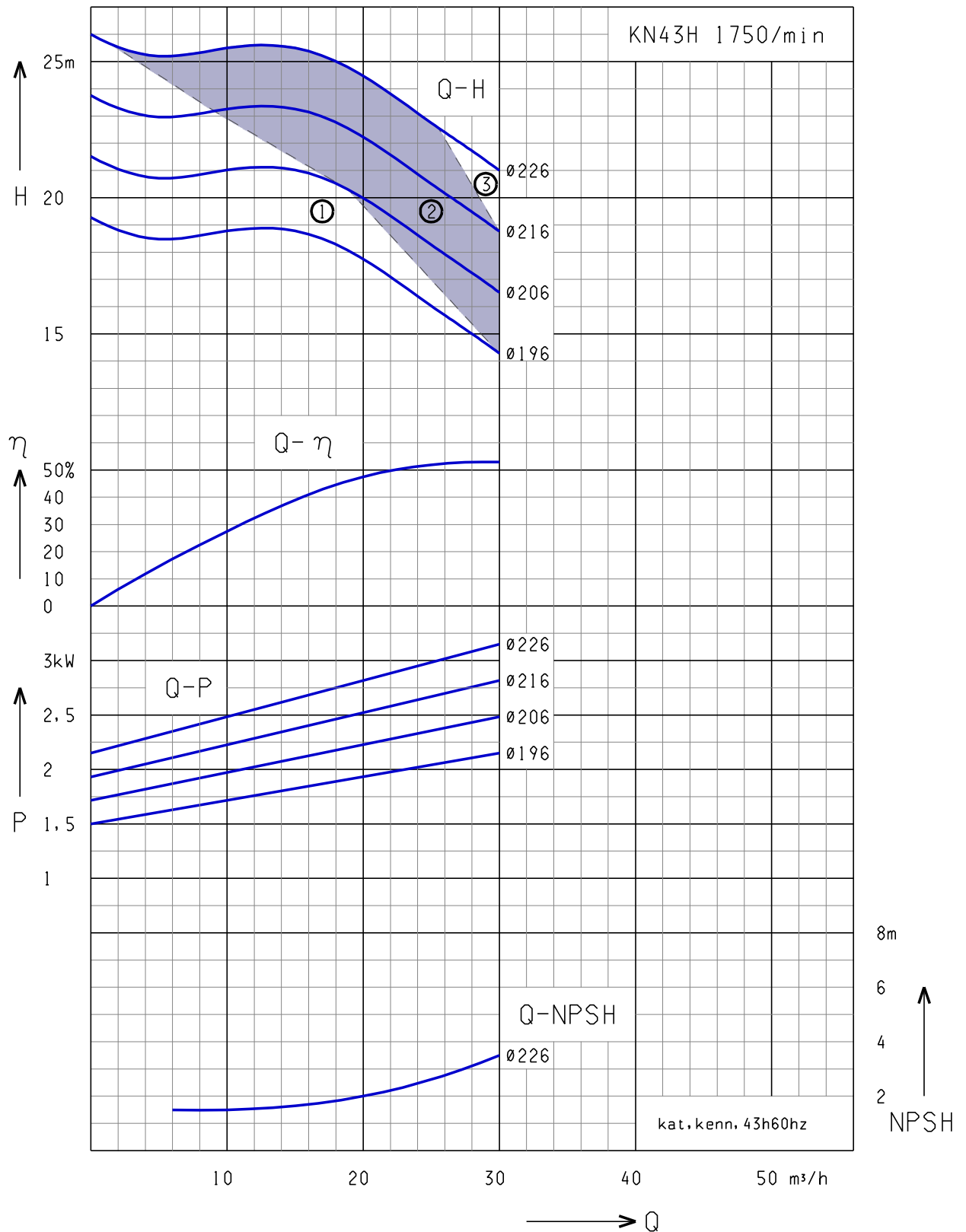


① KN 43H/1 - 2,2 kW

Water: 68°F (20°C)

# Characteristics KN 43H

60 Hz

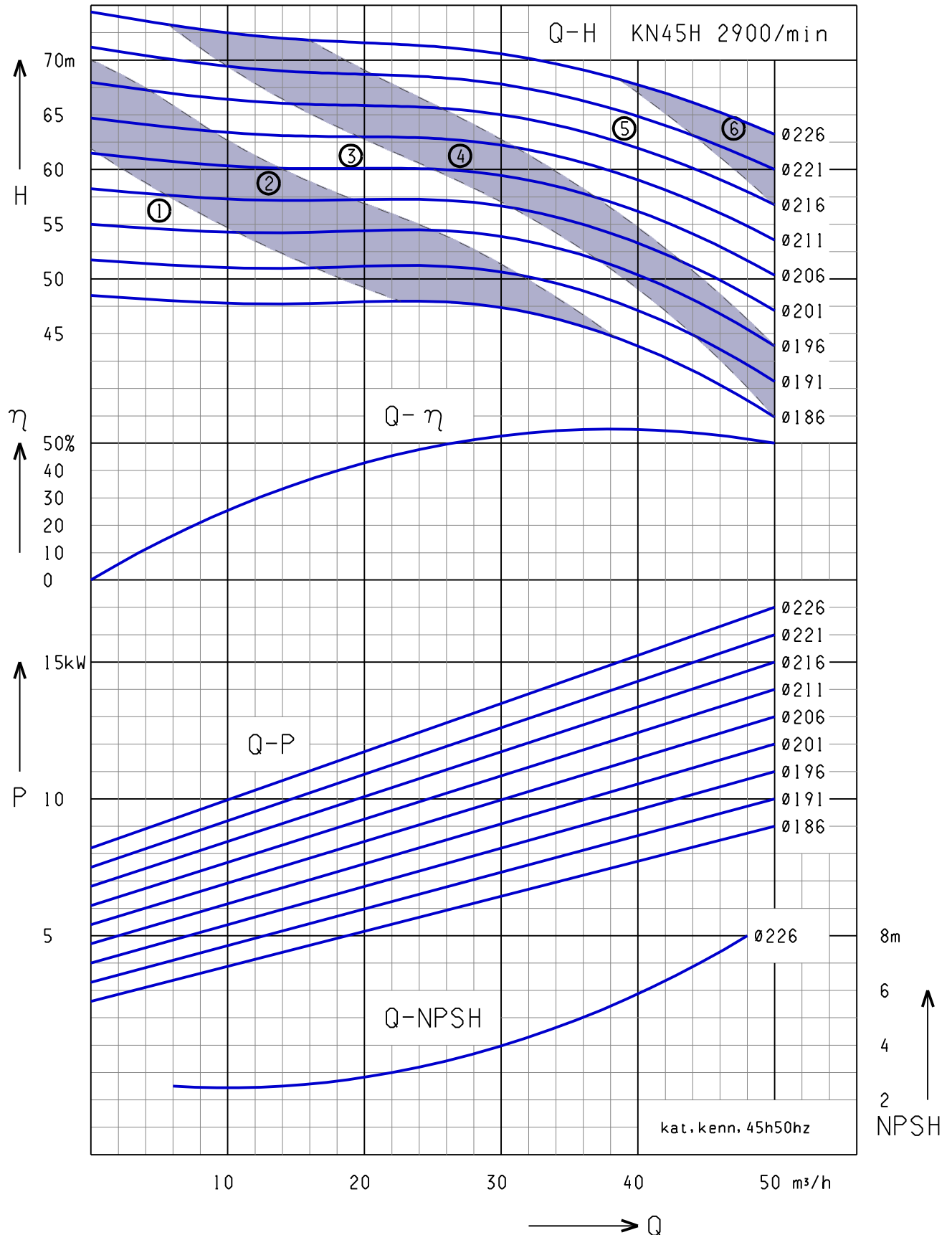


- ① KN 43H/1 - 2,2 kW
- ② KN 43H/2 - 3,0 kW
- ③ KN 43H/3 - 4,0 kW

Water: 68°F (20°C)

# Characteristics KN 45H

50 Hz

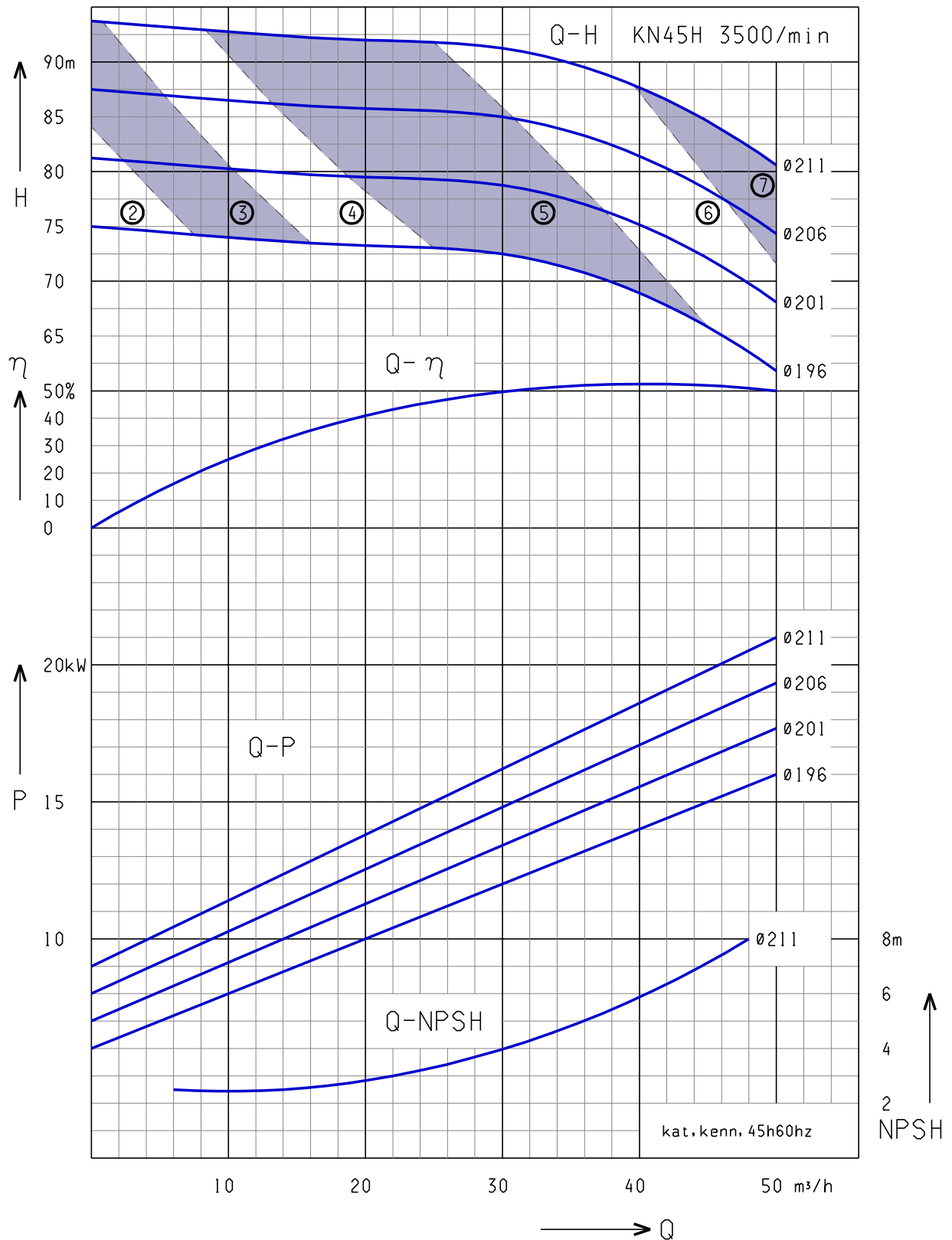


- ① KN 45H/1 - 5,5 kW      ② KN 45H/2 - 7,5 kW
- ③ KN 45H/3 - 9,2 kW    ④ KN 45H/4 - 11,0 kW
- ⑤ KN 45H/5 - 15,0 kW   ⑥ KN 45H/6 - 18,5 kW

Water: 68°F (20°C)

# Characteristics KN 45H

60 Hz

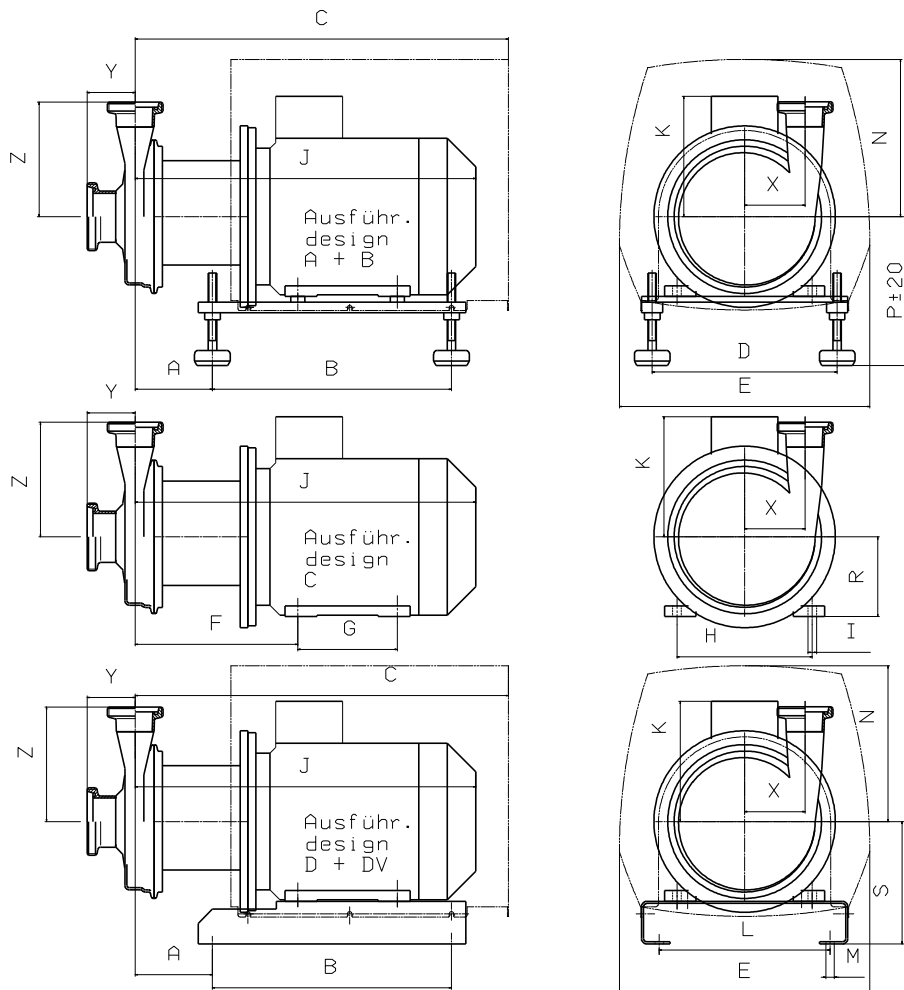


- ② KN 45H/2 - 7,5 kW      ③ KN 45H/3 - 9,2 kW
- ④ KN 45H/4 - 11,0 kW    ⑤ KN 45H/5 - 15,0 kW
- ⑥ KN 45H/6 - 18,5 kW    ⑦ KN 45H/7 - 22,0 kW

Water: 68°F (20°C)

# Dimensions / connections acc. to DIN 11851

# KN 45/Q



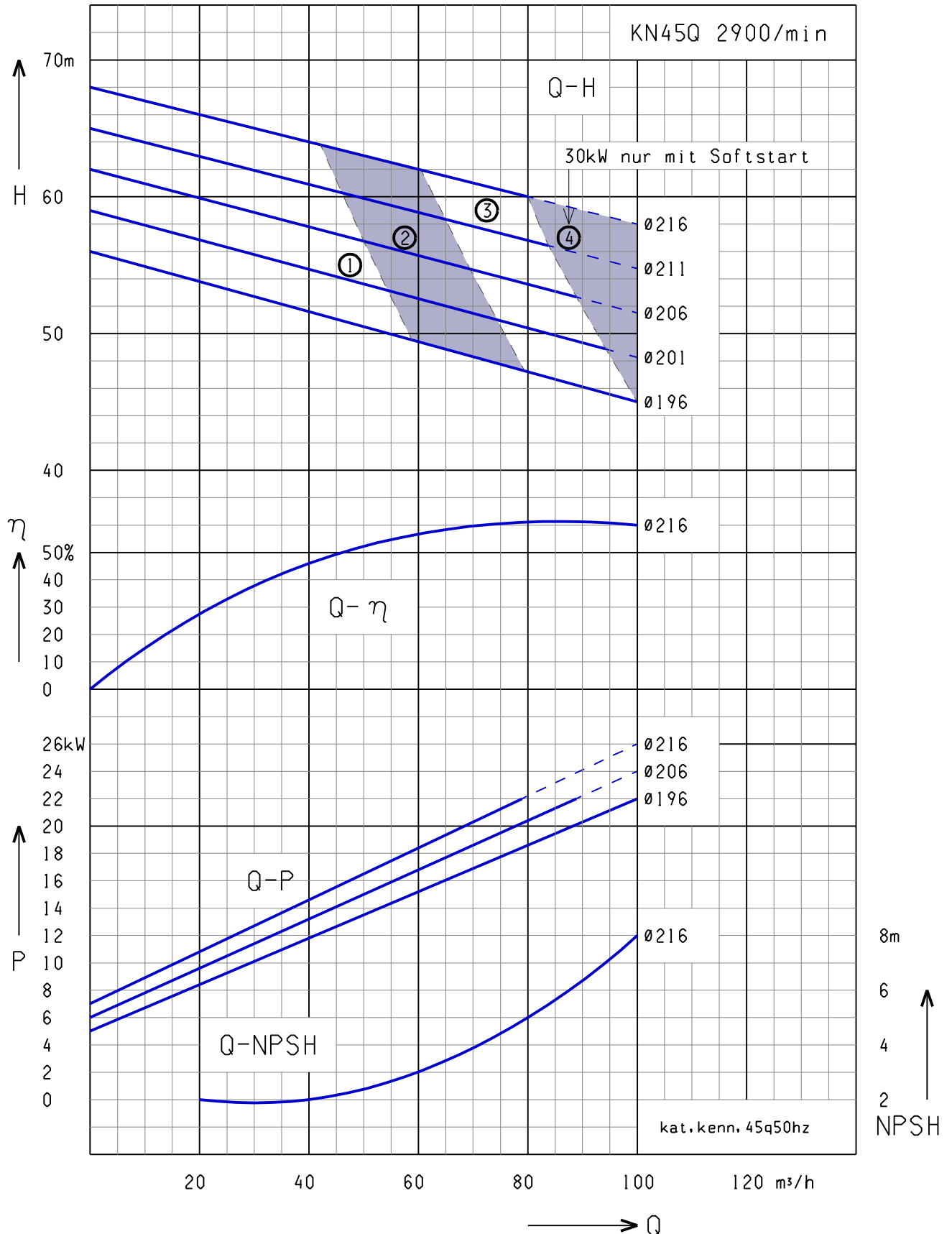
Type	Weights [kg]			kW	rpm		Motor IEC	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	R	S
	Design A+DV	Design B+D	Design C		50Hz	60Hz																		
<b>KN 45Q/1</b>	150	140	128	<b>15,0</b>	2900	3500	160M	173	500	818	340	423	331	210	254	14	741	222	310	13	283	264	160	230
<b>KN 45Q/2</b>	155	145	133	<b>18,5</b>	2900	3500	160L	173	500	818	340	423	331	254	254	14	741	222	310	13	283	264	160	230
<b>KN 45Q/3.1</b>	158	148	136	<b>22,0</b>	2900	3500	160L	236	562	933	340	463	344	241	279	15	753	321	310	13	350	284	180	250
<b>KN 45Q/3.2</b>	230	207	198	<b>22,0</b>	2900	3500	180M																	
<b>KN 45Q/4</b>	235	212	203	<b>30,0</b>	2900	3500	180M																	

Inlet	100	100	100
Outlet	65	80	100
X	123	123	123
Y	93	93	93
Z	228	233	243

Reserved for technical alteration!  
02 / 2005

# Characteristics KN 45Q

50 Hz

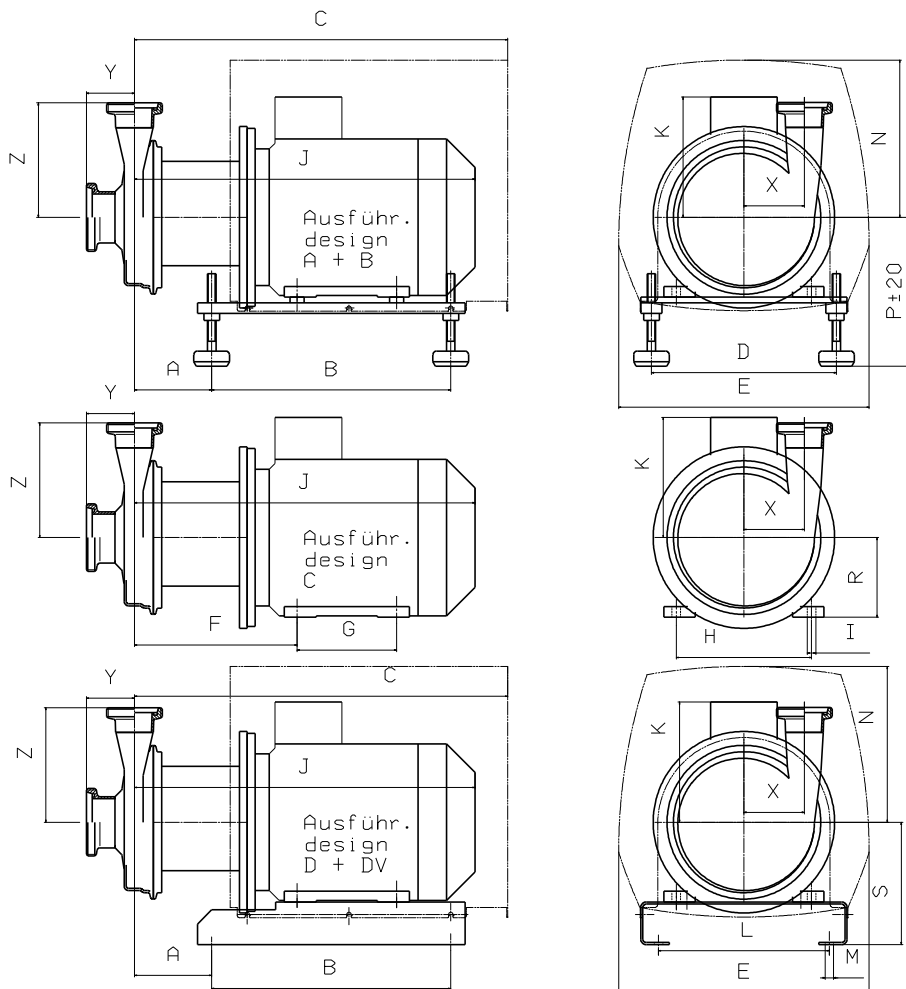


- ① KN 45Q/1 - 15,0 kW      ② KN 45Q/2 - 18,5 kW
- ③ KN 45Q/3 - 22,0 kW      ④ KN 45Q/4 - 30,0 kW

Water: 68°F (20°C)

# Dimensions / connections acc. to DIN 11851

## KN 43/R



Type	Weights [kg]			kW	rpm		Motor IEC	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	R	S
	Design A+DV	Design B+D	Design C		50Hz	60Hz																		
	<b>KN 43R/1</b>	101	91		85	<b>7,5</b>																		
<b>KN 43R/2</b>	132	122	113	<b>11,0</b>	1450	1750	160M	187	500	832	340	423	345	210	254	14	755	222	310	13	283	264	160	230
<b>KN 43R/3</b>	151	141	132	<b>15,0</b>	1450	1750	160L	187	500	832	340	423	345	254	254	14	755	222	310	13	283	264	160	230
<b>KN 43R/4</b>	209	199	190	<b>18,5</b>		1750	180M	250	562	947	340	463	358	241	279	15	767	321	310	13	350	284	180	250
<b>KN 43R/5</b>	219	209	200	<b>22,0</b>		1750	180M																	

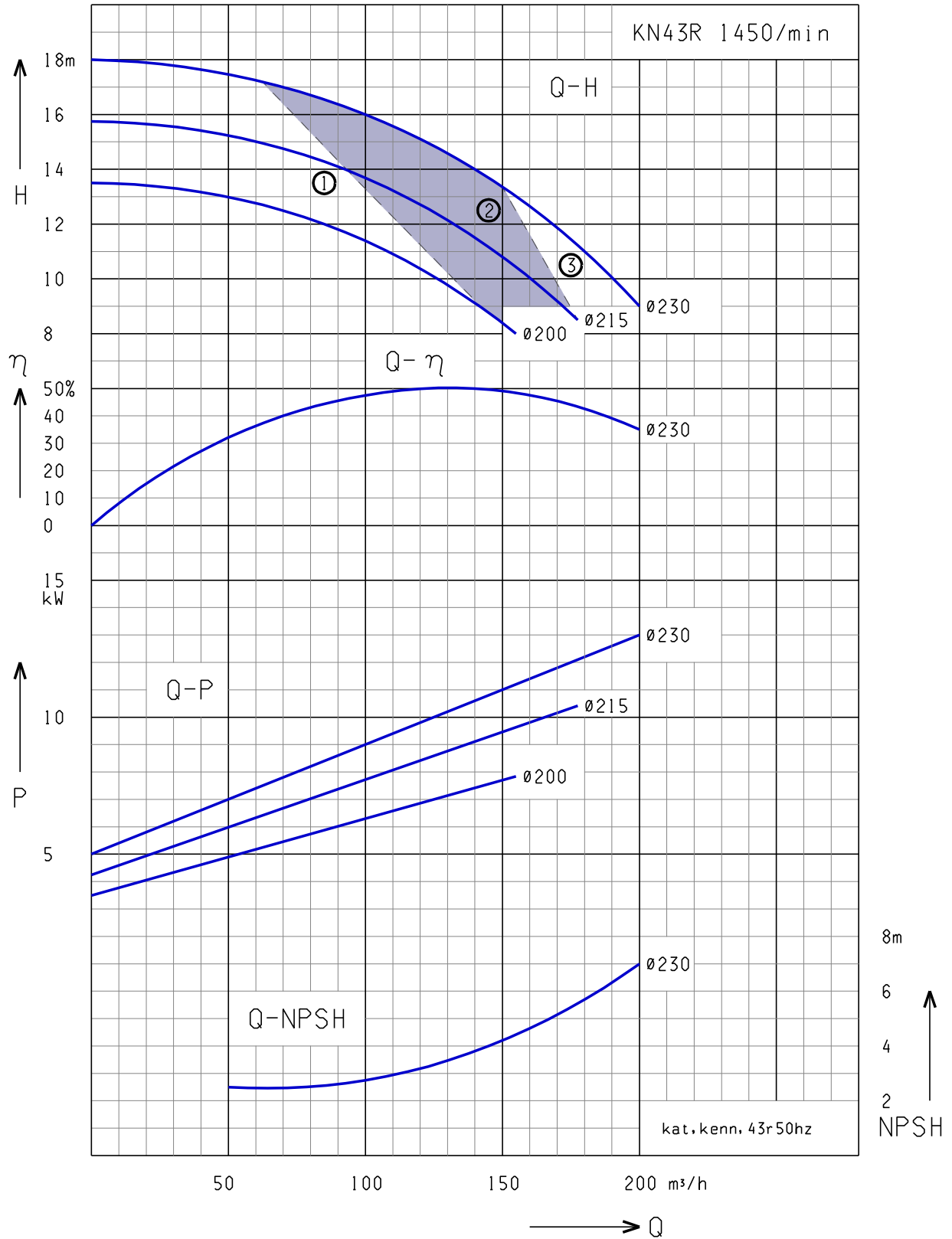
Inlet	125	125	150	150
Outlet	100	125	100	125
X	115	115	115	115
Y	93	93	140	140
Z	264	265	264	265

Reserved for technical alteration!  
02 / 2005



# Characteristics KN 43R

50 Hz

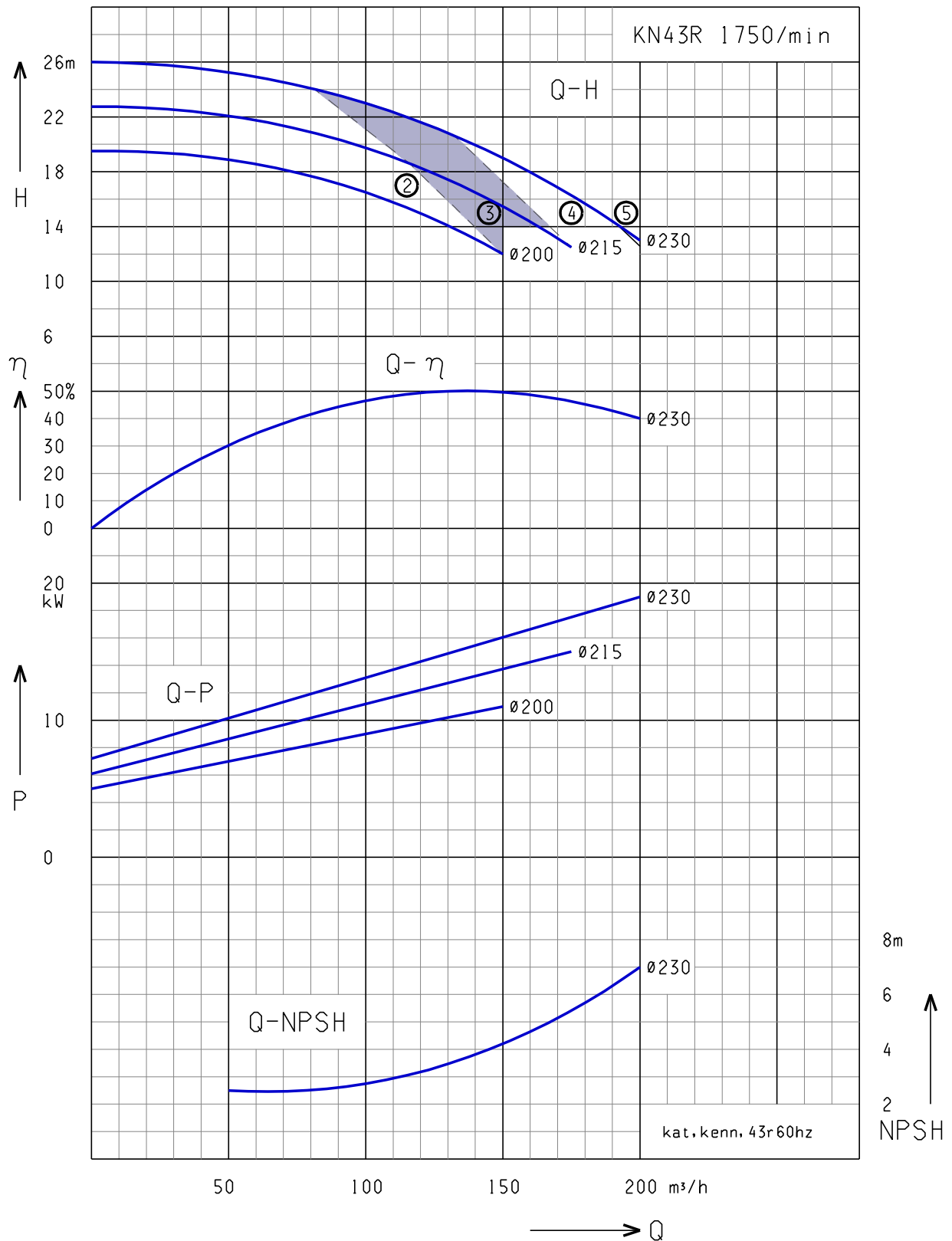


- ① KN 43R/1 - 7,5 kW
- ② KN 43R/2 - 11,0 kW
- ③ KN 43R/3 - 15,0 kW

Water: 68°F (20°C)

# Characteristics KN 43R

60 Hz

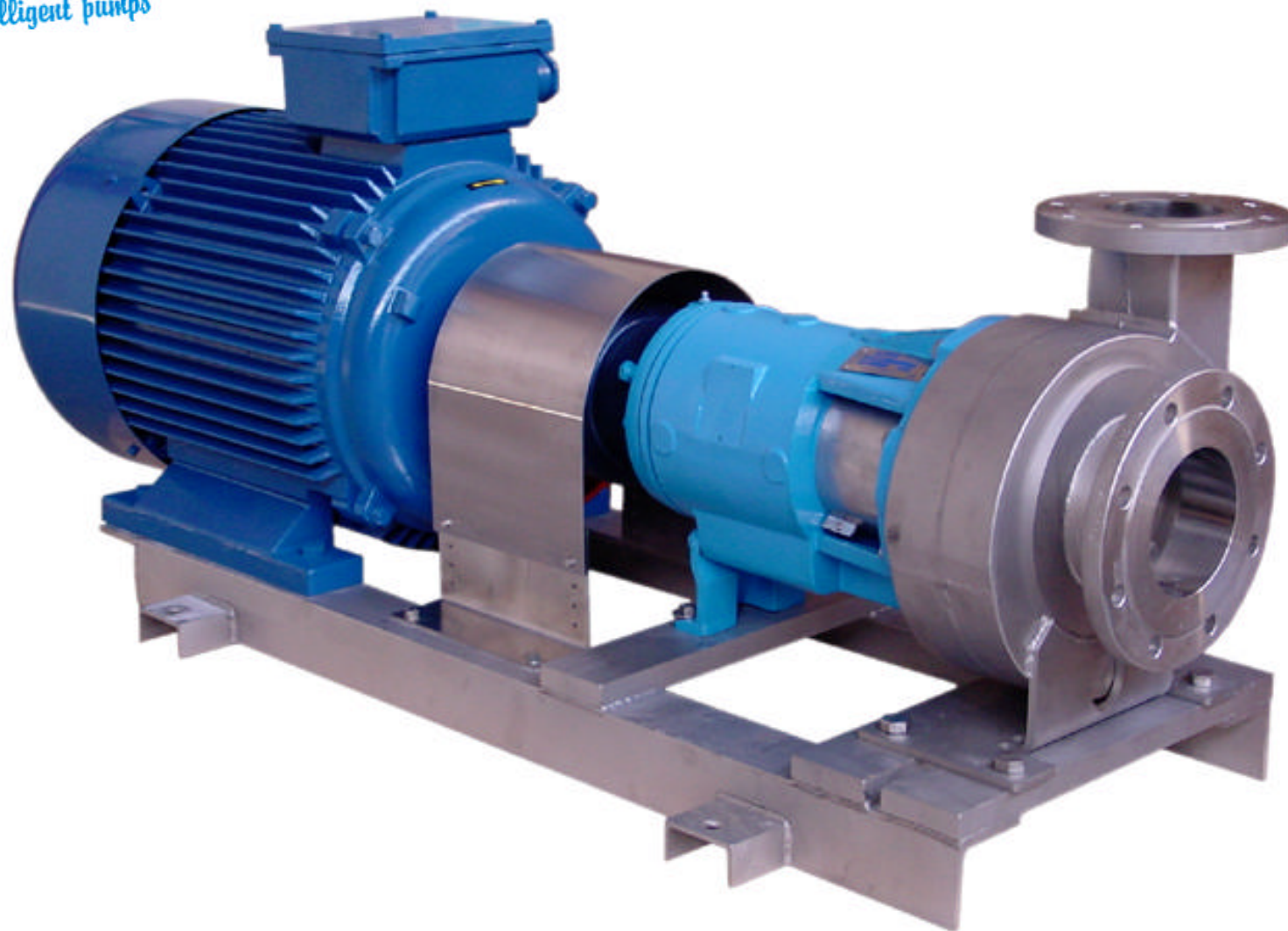


- ② KN 43R/2 – 11,0 kW      ③ KN 43R/3 – 15,0 kW
- ④ KN 43R/4 - 18,5 kW    ⑤ KN 43R/5 – 22,0 kW

Water: 68°F (20°C)



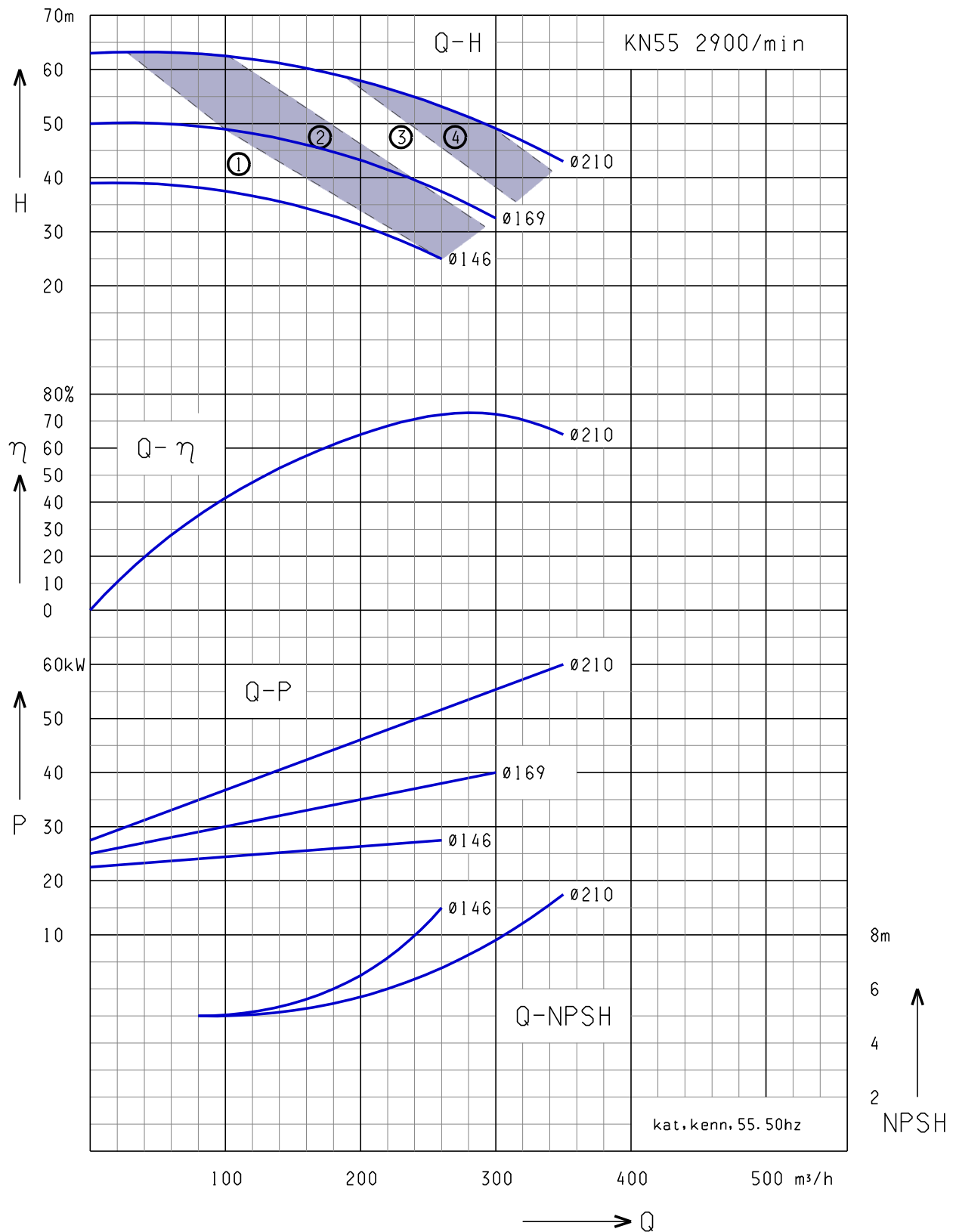
**KN 5E Series**



**Design KN 5E**

# Characteristics KN 55

50 Hz

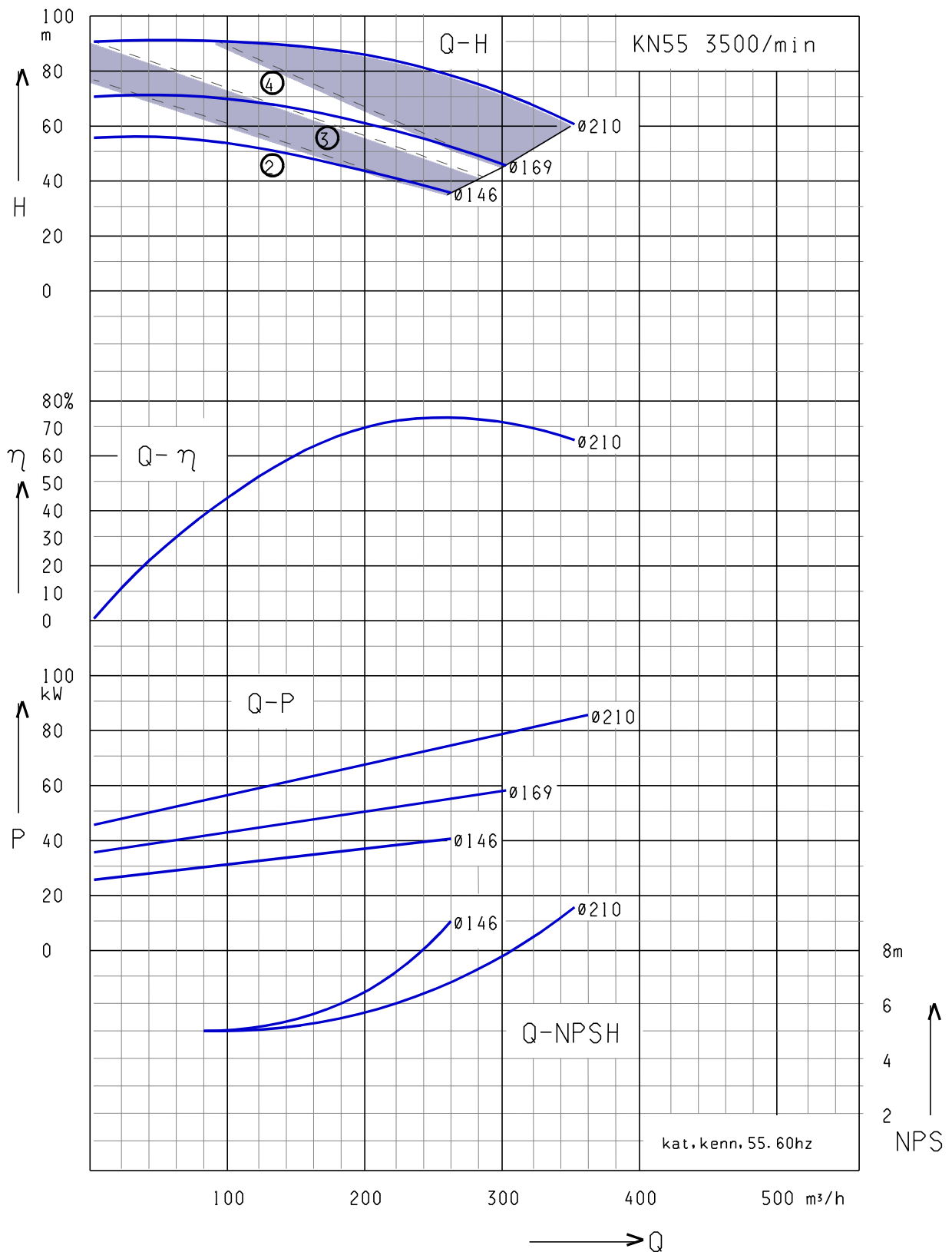


- ① KN 55/1 – 30,0 kW    ② KN 55/2 – 37,0 kW
- ③ KN 55/3 – 45,0 kW    ④ KN 55/4 – 55,0 kW

Water: 68°F (20°C)

# Characteristics KN 55

60 Hz



- ② KN 55/2 - 37,0 kW    ③ KN 55/3 - 45,0 kW
- ④ KN 55/4 - 55,0 kW

Water: 68°F (20°C)

# Sanitary Multistage centrifugal pump

KM 2 Series



Desian A

... for the brewery and beverage industry

## Design

Thick-walled CrNiMo steel casing and casing cover, open CrNiMo stainless steel impeller on a strong dimensioned stub shaft, hygienic chambered O-ring seal, from 2stage up to 5stage available

## Construction arrangements

A..... on adjustable stainless steel machine feet, stainless steel motor cover,  
 B..... on adjustable stainless steel machine feet,  
 C..... on motor foot  
 D..... on stainless steel foot  
 DV.. on stainless steel foot incl. stainless steel motor cover

## Materials

All parts in contact with product correspond to the materials AISI 316L (1.4404) stainless steel motor lantern, various process seal materials acc. FDA suit to application

## Shaft seal

Adjusted self cleaning and self rinsing single or double mechanical seal with uniform shaft diameter of 25mm for aseptic applications and with material combinations depending on product

## Parameter

- Flow rate : max. 15.000 l/h @50Hz
- Discharge head : max. 100 mWC @50Hz
- Motor power : max. 7,5 kW
- Working temperature : max. 130°C
- Operating pressure : max. 20 bar

## Motor

IEC-standard motor IP 55 hoseproof and with PTC, NEMA-standard motor on request

## Optional features

- internal frequency converter FCM 300
- trolley with breaker and cable
- explosion proof EExelIT3 or EExdeIICT4
- pole changing electric motor
- alternative paint for motor (standard RAL 5015)
- vertical design

## Connections

Connection in diameters from DN25 up to DN50 or 1" up to 2" according to the following standards: DIN, IDF, Clamp, RJT, SMS, small flanges (other on request)

# Sanitary Multistage centrifugal pump

KM 2 Series



Desian CV

... for the pharmaceutical, biotec and cosmetic area

## Design

Thick-walled CrNiMo steel casing and casing cover, open CrNiMo stainless steel impeller on a strong dimensioned stub shaft, hygienic chambered O-ring seal, from 2stage up to 5stage available

## Construction arrangements

A..... on adjustable stainless steel machine feet, stainless steel motor cover,  
 B..... on adjustable stainless steel machine feet,  
 C..... on motor foot  
 D..... on stainless steel foot  
 DV.. on stainless steel foot incl. stainless steel motor cover

## Materials

All parts in contact with product correspond to the materials AISI 316L (1.4404, 1.4435, 1.4851) stainless steel motor lantern, various process seal materials acc. FDA suit to application

## Shaft seal

Adjusted self cleaning and self rinsing single or double mechanical seal with uniform shaft diameter of 25mm for aseptic applications and with material combinations depending on product

## Parameter

- Flow rate : max. 15.000 l/h @50Hz
- Discharge head : max. 100 mWC @50Hz
- Motor power : max. 7,5 kW
- Working temperature : max. 130°C
- Operating pressure : max. 20 bar

## Motor

IEC-standard motor IP 55 hoseproof and with cold inducters, NEMA-standard motor on request

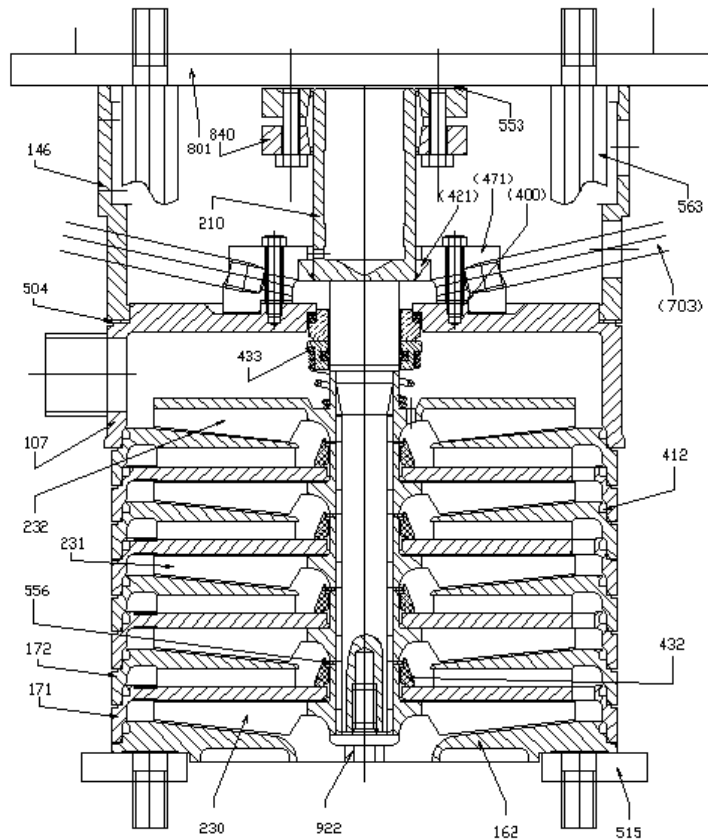
## Optional features

- internal frequency converter FCM 300
- trolley with breaker and cable
- explosion proof EExelIT3 or EExdeIICT4
- pole changing electric motor
- alternative paint for motor (standard RAL 5015)
- vertical design

## Connections

Connection in diameters from DN25 up to DN50 or 1" up to 2" according to the following standards: DIN, IDF, Clamp, RJT, SMS, small flanges (other on request)

## SECTION KM 25



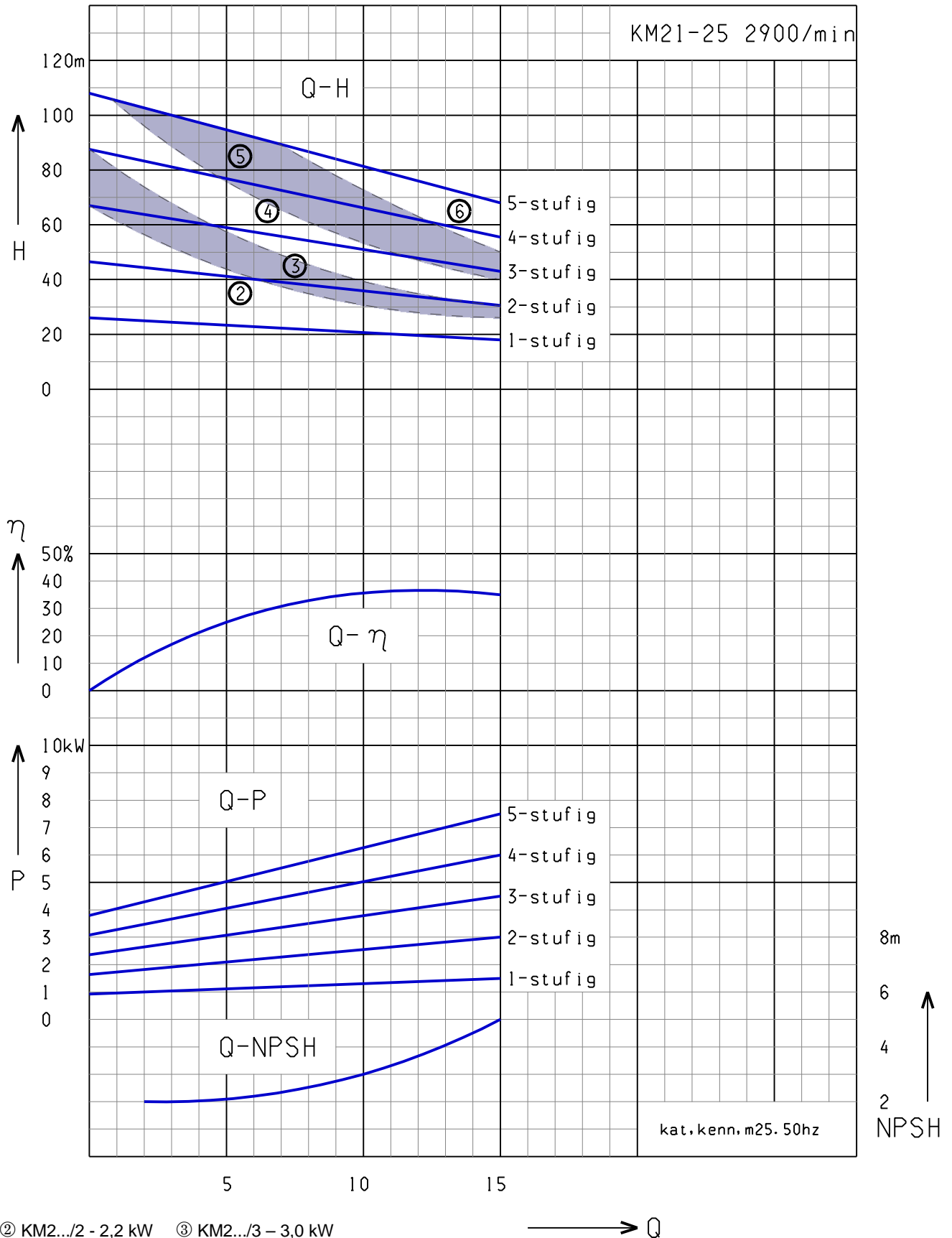
Reserved for technical alterations!

<b>107 Pressure casing</b>	<b>432 PTFE-disc</b>
<b>146 Lantern</b>	<b>433 Mechanical seal</b>
<b>162 Suction cover</b>	<b>471 Socket</b>
<b>171 Leading casing</b>	<b>504 Distance disc</b>
<b>172 Back casing</b>	<b>515 Clamping disc</b>
<b>210 Shaft</b>	<b>553 Supporting disc</b>
<b>230 Impeller – suction stage</b>	<b>556 Adjusting disc</b>
<b>231 Impeller – middle stage</b>	<b>563 Bolt</b>
<b>232 Impeller – end stage</b>	<b>703 Pipe for flushing (only double shaft seal)</b>
<b>400 Seal</b>	<b>801 Motor</b>
<b>412 O-Ring</b>	<b>840 Shrink disc</b>
<b>421 PTFE lip seal (only double shaft seal)</b>	<b>922 Impeller screw</b>



# Characteristics KM 21-25

50 Hz



- ② KM2.../2 - 2,2 kW    ③ KM2.../3 - 3,0 kW
- ④ KM2.../4 - 4,0 kW    ⑤ KM2.../5 - 5,5 kW
- ⑥ KM2.../6 - 7,5 kW

Water: 68°F (20°C)

# Sanitary Multistage centrifugal pump

KM 34 series



Design B

... for the brewery and beverage industry

## Design

Forged thick-walled CrNiMo steel volute casing and casing, forged CrNiMo stainless steel casing cover, open/semi open CrNiMo stainless steel impeller on a strong dimensioned stub shaft, sturdy quick-release clamp ring with hygienic chambered O-ring seal

## Construction arrangements

- A..... on adjustable stainless steel machine feet, stainless steel motor cover,
- B..... on adjustable stainless steel machine feet,
- C..... on motor foot
- D..... on stainless steel foot
- DV.. on stainless steel foot incl. stainless steel motor cover

## Materials

All parts in contact with product correspond to the materials AISI316L (1.4404, 1.4435, 1.4581), stainless steel motor lantern, various process seal materials to suit application

## Shaft seal

Adjusted self cleaning and self rinsing single or double mechanical seal with uniform shaft diameter of 25mm for aseptic applications and with material combinations depending on product

## Parameter

- Flow rate : max. 45.000 l/h @50Hz
- Discharge head : max. 105mWC @50Hz
- Motor power : max. 30 kW
- Working temperature : max. 130°C
- Operating pressure : max. 16 bar

## Motor

IEC-standard motor IP 55 hoseproof and with cold inducters, NEMA-standard motor on request

## Optional features

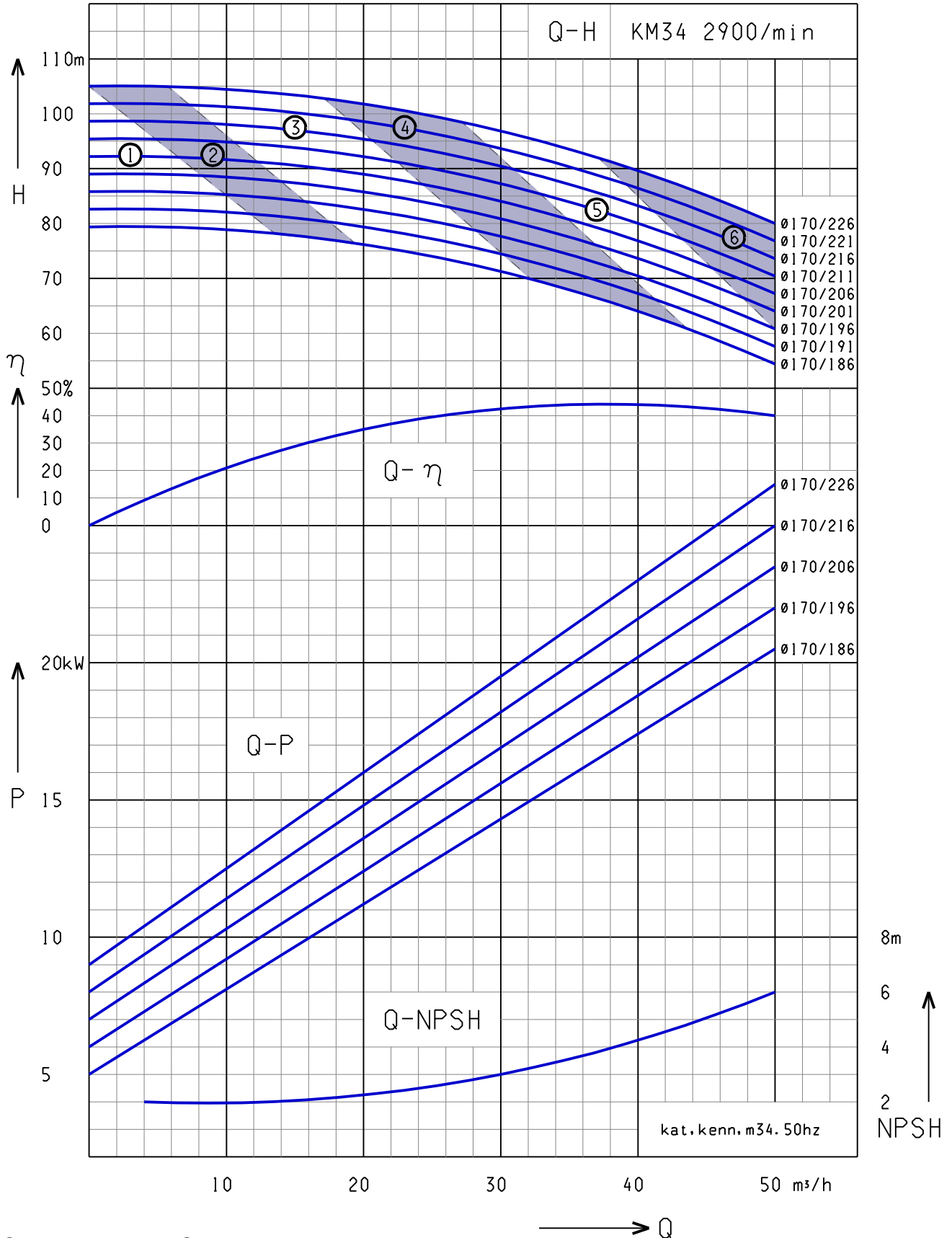
- internal frequency converter FCM 300 (up to 7,5kW)
- trolley with breaker and cable
- pump head heating/cooling jacket
- seal steam sterilisation
- explosion proof EExelIT3 or EExdelICT4
- pole changing electric motor
- alternative paint for motor (standard RAL 5015)
- casing with drainage connection or diaphragm valve

## Connections

Connection in diameters from DN50 up to DN80 or 2" up to 3" according to the following standards: DIN, IDF, Clamp, RJT, SMS, small flanges (other on request)

# Characteristics KM 34

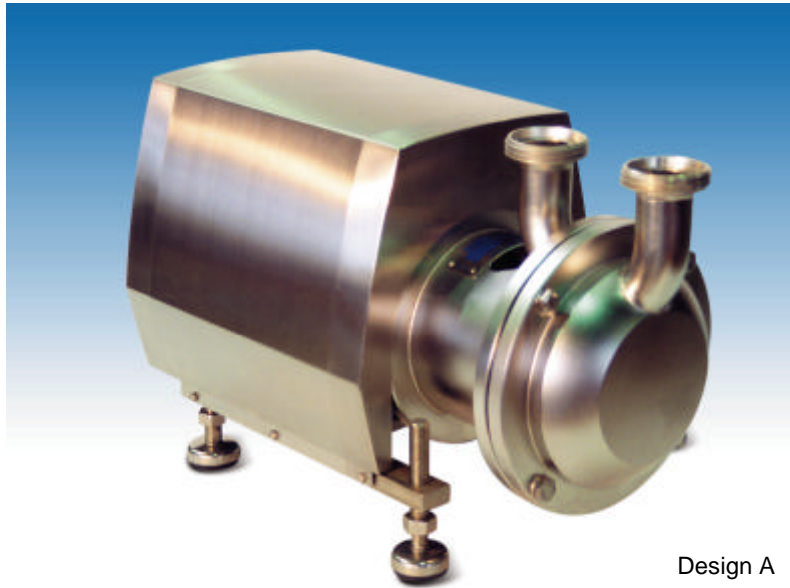
50 Hz



- ① KM 34/1 - 9,2 kW    ② KM 34/2 - 11,0 kW
- ③ KM 34/3 - 15,0 kW    ④ KM 34/4 - 18,5 kW
- ⑤ KM 34/5 - 22,0 kW    ⑥ KM 34/6 - 30,0 kW

# Sanitary self-priming pump

**SZ series**



Design A

**... for the brewery and beverage industry**

## Design

Suction and pressure casing made of forged, thickwalled stainless steel, chanelwall inserts and impeller made of investment-cast stainless steel

## Construction arrangements

A..... on adjustable stainless steel machine feet, stainless steel motor cover,  
 B..... on adjustable stainless steel machine feet,  
 C..... on motor foot  
 D..... on stainless steel foot  
 DV.. on stainless steel foot incl. stainless steel motor cover

## Materials

All parts in contact with product correspond to the materials AISI 316L (1.4404) or AISI 304 (1.4301), stainless steel motor lantern, various process seal materials to suit application

## Shaft seal

Depending on the application and the product to be pumped single mechanical seal with various sliding materials as well as shaft diameters of 25 - 30 - 35mm and a DIN-standard gland-ring location

## Parameter

- Flow rate : max. 40.000 l/h @50Hz
- Discharge head : max. 30 mWC @50Hz
- Motor power : max. 11 kW
- Working temperature : max. 100°C
- Operating pressure : max. 10 bar

## Motor

IEC-standard motor IP 55 hoseproof and with cold inducters, NEMA-standard motor on request

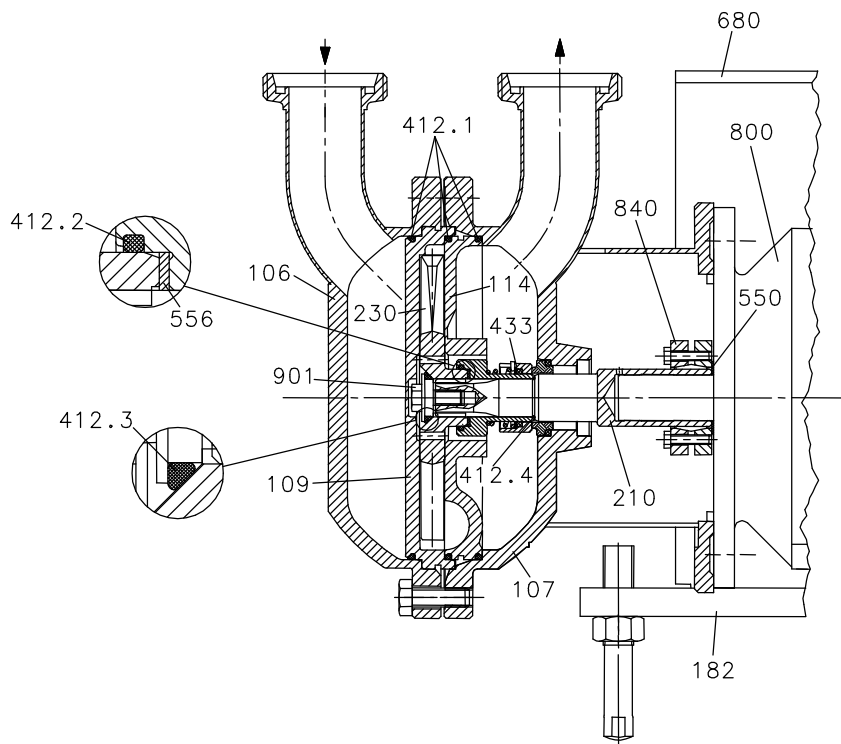
## Optional features

- vertical or central suction connection
- double mechanical seal with shaft seal ring
- trolley with breaker and cable
- explosion proof EExelIIT3 or EExdeIICT4
- alternative paint for motor (standard RAL 5015)
- casing with drainage connection or diaphragm valve

## Connections

Connection in diameters from DN 40 up to DN 80 or 2" up to 3" according to the following standards: DIN, IDF, Clamp, RJT, SMS, small flanges (other on request)

## SECTION SZ

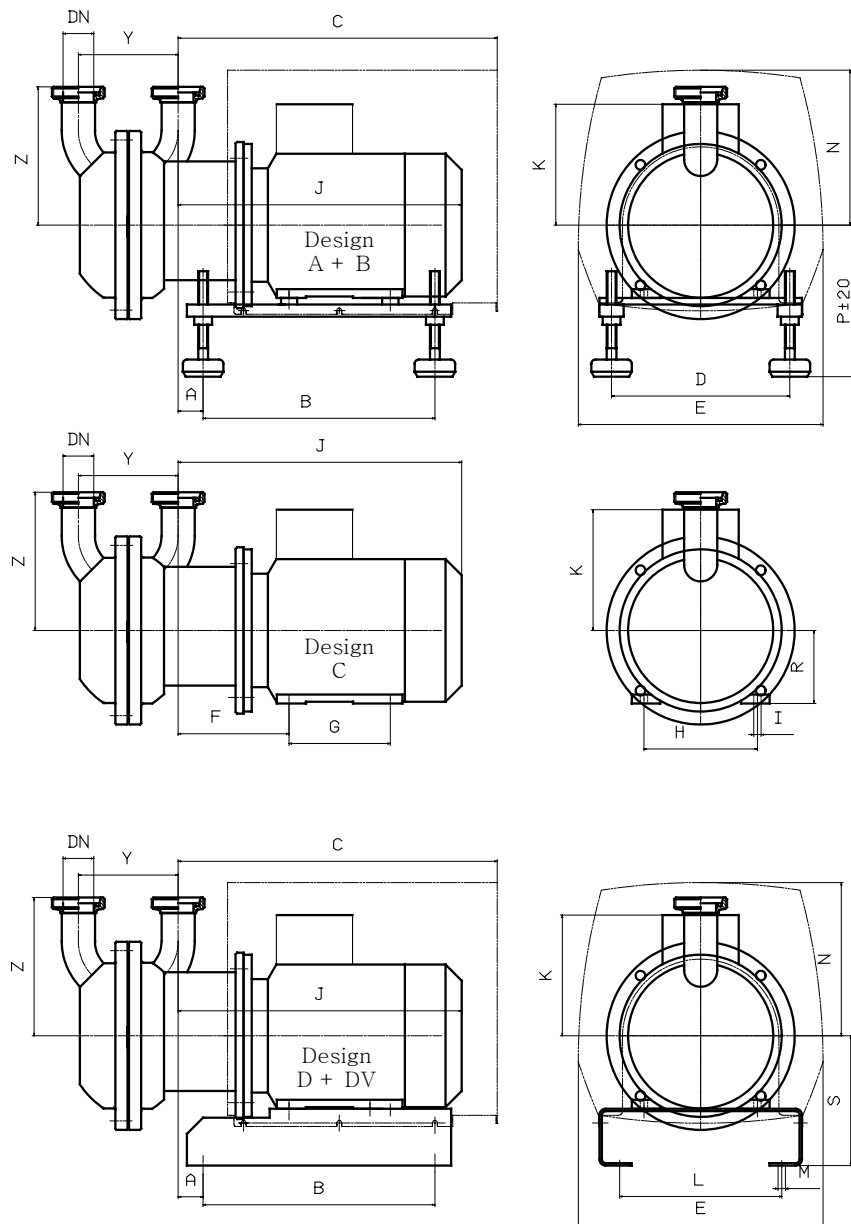


Technische Änderungen vorbehalten!

- |   |   |
|---|---|
| <p><b>106 Suction casing</b><br/>intensive against hammer power</p> <p><b>107 Pressure casing</b><br/>intensive against hammer power</p> <p><b>109 Suction part</b><br/>investment cast</p> <p><b>114 Pressure part</b><br/>investment cast</p> <p><b>182 Base frame</b><br/>height-adjustable machine feet of stainless steel</p> <p><b>210 shaft of stainless steel</b></p> <p><b>Star-impeller</b></p> <p><b>230</b><br/>investment cast</p> <p><b>O-ring</b></p> <p><b>412</b> fully flushed, hygienic O-rings in EPDM, NBR, FKM etc.</p> | <p><b>433 Mechanical seal</b><br/>single mechanical seal in various versions and material combinations, Quench possible</p> <p><b>550 Supporting disc</b></p> <p><b>556 Adjusting disc</b><br/>adjust the impeller</p> <p><b>680 Enclosure</b><br/>Stainless steel cover</p> <p><b>800 IEC standard motor</b></p> <p><b>840 Shrink disc</b><br/>shaft fixing for the motor</p> <p><b>901 Star impeller fixing screw</b></p> |
|---|---|

# Dimensions / connections acc. to DIN 11851

## SZ

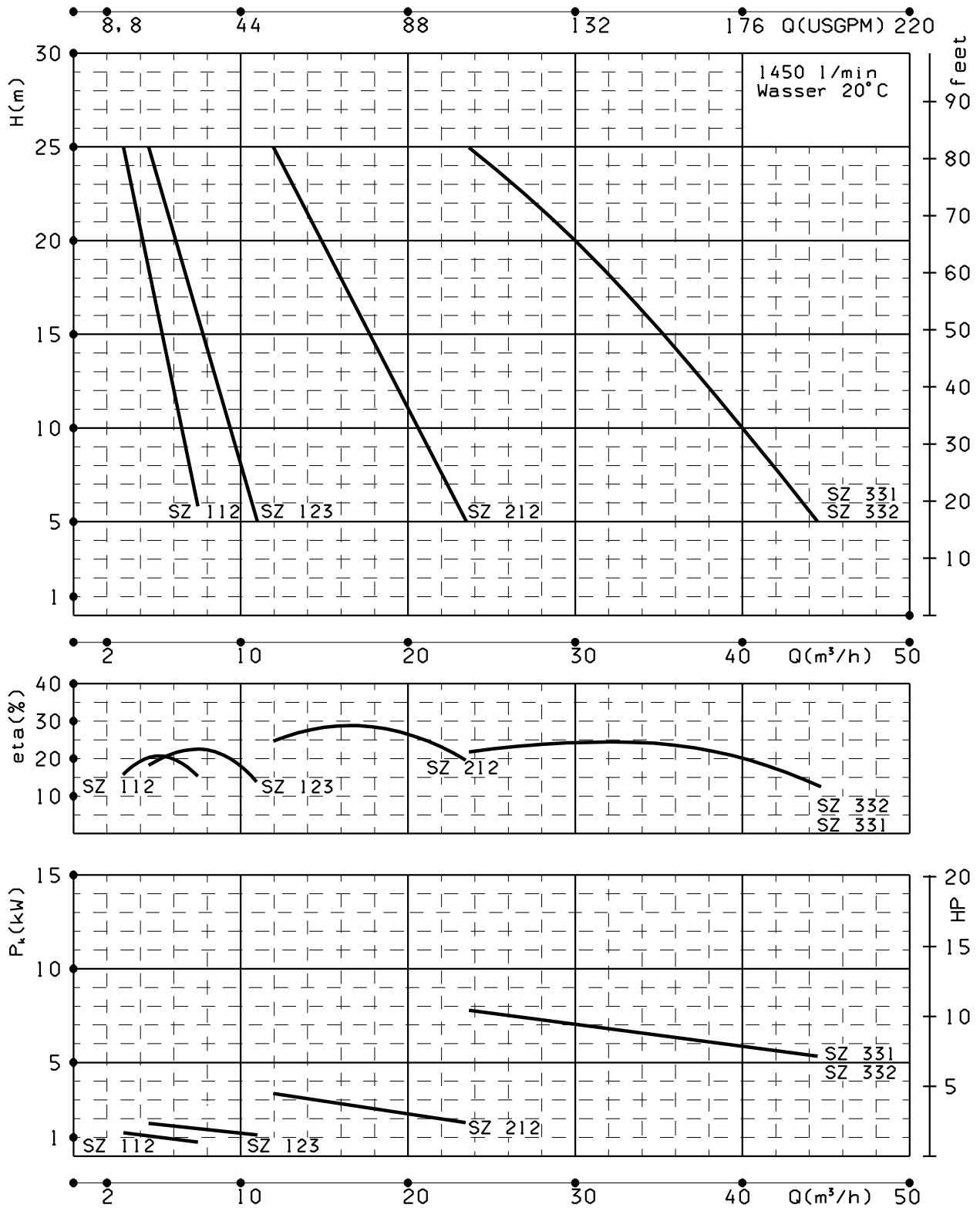


Type	Weights [kg]			kW	rpm 50Hz	Motor IEC	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	R	S	Y	Standard	Sonder.
	Design A+DV	Design B+D	Design C																						DN Z	(DN) (Z)
<b>SZ112</b>	42	40	37	<b>1,5</b>	1450	090L	31	286	394	220	302	137	125	140	9	350	149	200	9	191	187	90	160	123	<b>40</b> 171	<b>(50)</b> (187)
<b>SZ123</b>	63	50	47	<b>2,2</b>	1450	100L	34	336	450	260	352	154	140	160	12	394	153	240	12	233	197	100	160	123	<b>40</b> 171	<b>(50)</b> (187)
<b>SZ212</b>	74	69	66	<b>4,0</b>	1450	112M	42	336	458	260	352	162	140	190	12	412	169	240	12	221	209	112	172	156	<b>50</b> 200	<b>(65)</b> (221)
<b>SZ331</b>	110	100	94	<b>7,5</b>	1450	132M	65	400	585	290	423	204	178	216	12	520	188	270	12	288	230	132	200	172	<b>65</b> 228	<b>(80)</b> (249)
<b>SZ332</b>	122	112	106	<b>11,0</b>	1450	132M	65	400	585	290	423	204	178	216	12	520	188	270	12	288	230	132	200	172	<b>65</b> 228	<b>(80)</b> (249)

Reserved for technical alteration!  
02 / 2005

# Characteristics SZ

50 Hz



**SZ 112** : 1,5 kW      **SZ 123** : 2,2 kW      **SZ 212** : 4,0 kW  
**SZ 331** : 7,5 kW      **SZ 332** : 11,0 kW

Water: 68°F (20°C)



## ➤ Intelligent pumping of sensible liquids

frequency converter (FC):

optionally manual operation or  
integrate in automatic control systems (SPS)

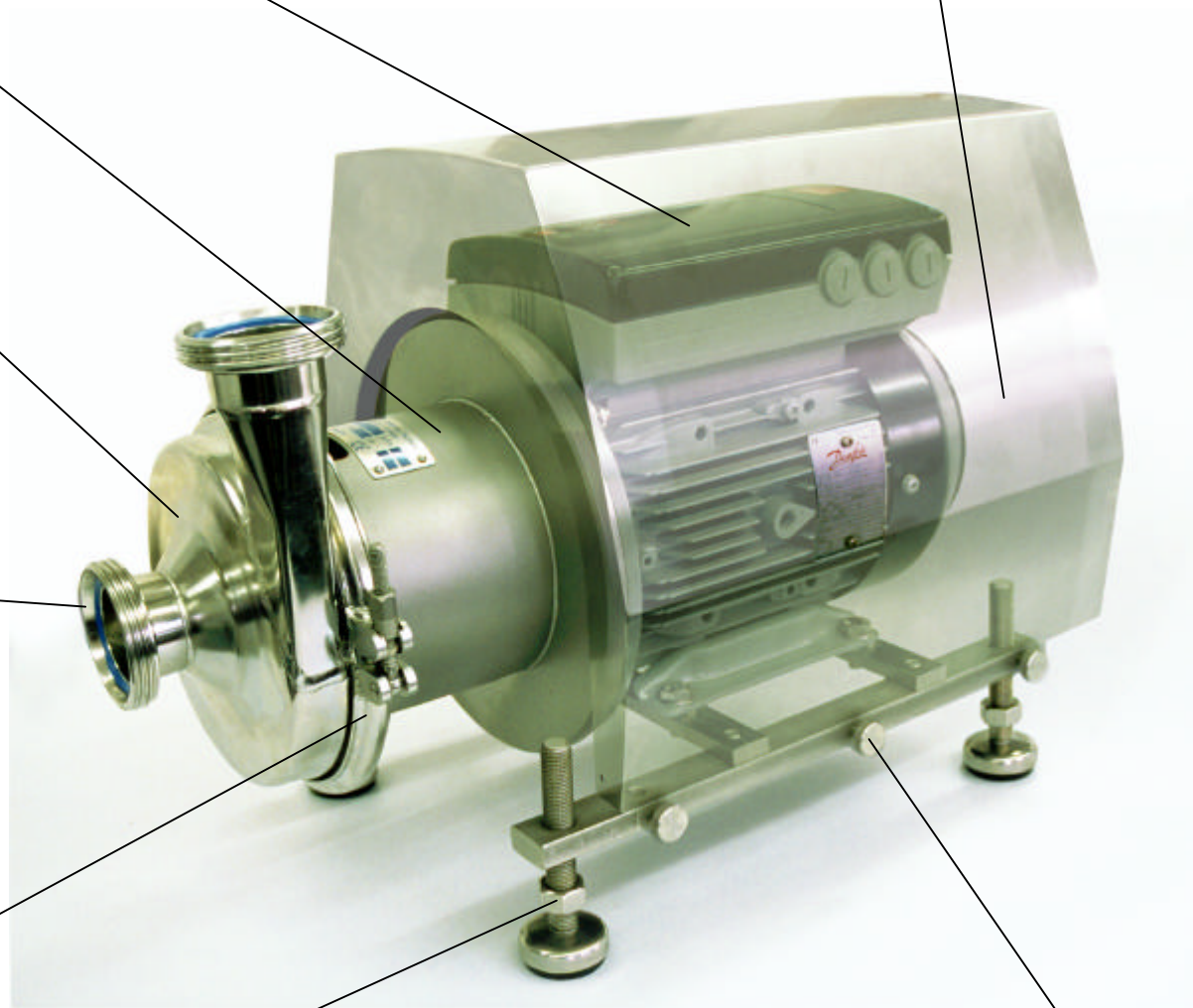
standard motor cover in stainless steel,  
protection against jet

pump complete  
in stainless steel,  
no varnished parts

volute casing guarantee  
optimum efficiency

connections in  
various nominal  
diameters and  
designs

pressure proofed  
clamping ring guarantee a  
disassembly without  
any difficulties,  
pipes can remain mounted



stainless steel machine feet, safe hold

cover easily removable

### **Centrifugal pump** with integrated frequency converter

#### *Gentle pumping*

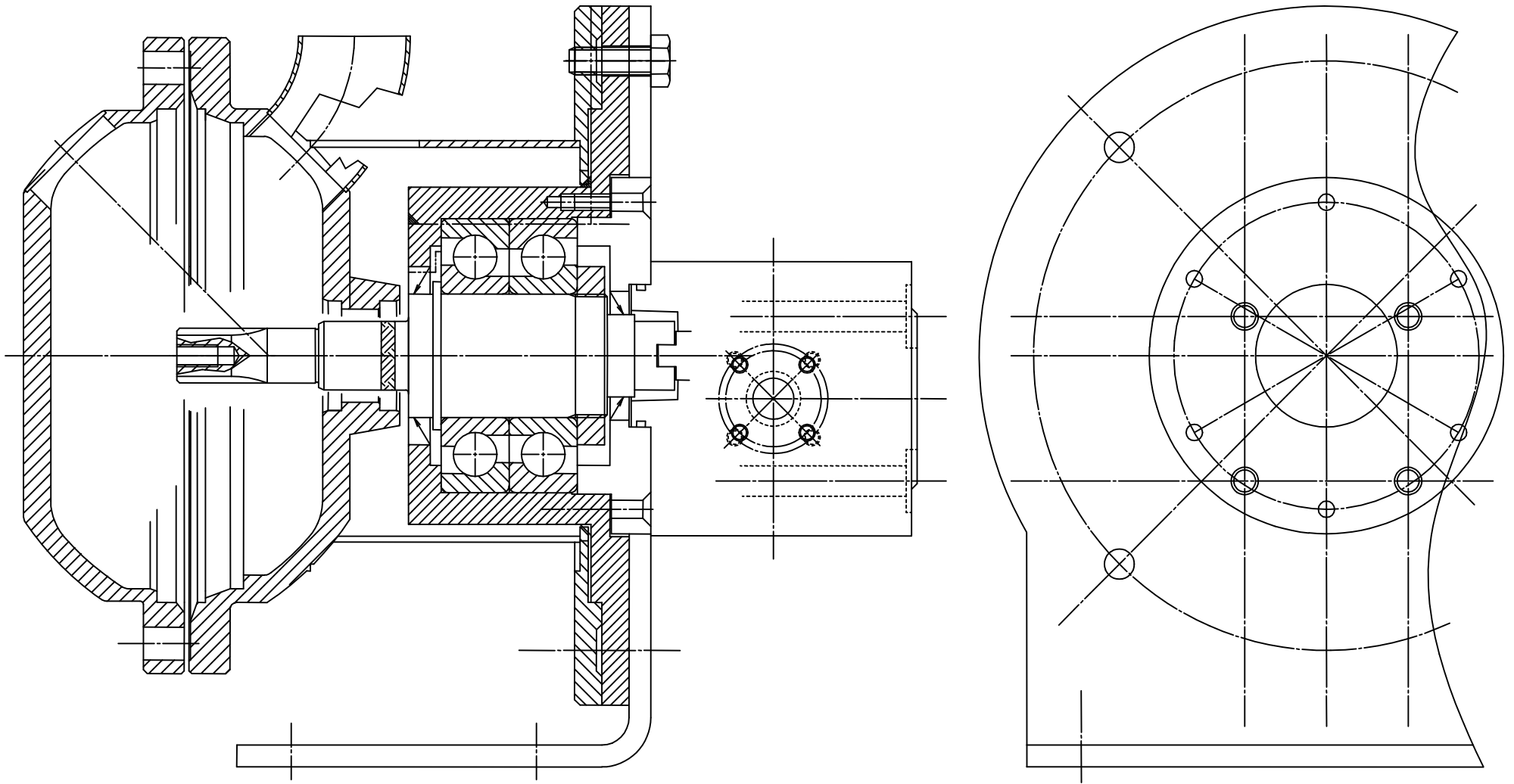
no choking in the pressure pipe  
stepless flow control  
no heat transfer into the product  
flow control in case of changing  
viscosities  
low shearing forces  
exchange to multistage pumps

#### *Cost saving*

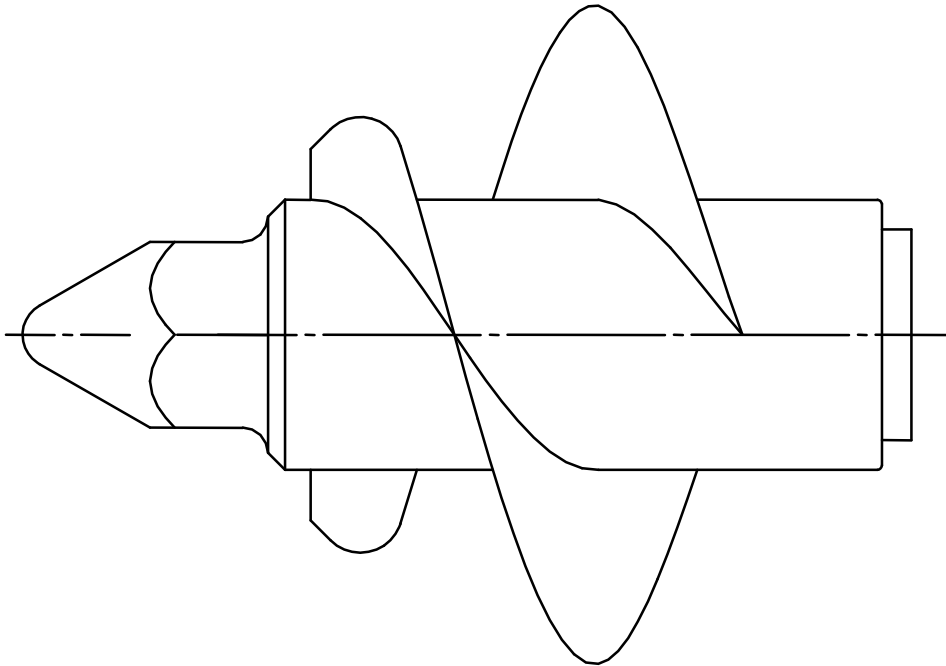
elimination of FC in control panel  
with protected motor cable  
integrated radio screened filter  
elimination of butterfly valves  
optimum efficiency by adaption on  
existing parameters



➤ **selfpriming pump with hydraulic drive**



# Inducer



- Inducer werden bei Kavitationsgefahr eingesetzt
- Sie erhöhen den Druck im Eintrittsbereich des Laufrades
- Zulaufhöhen heißer Flüssigkeiten können gering gehalten werden
- Kavitationsgeräusche werden gemindert oder vermieden
- Bauhöhen von Anlagen können minimiert werden

### Breweries:

#### Germany:

- Andreasbräu / Eggenstein
- Altenburger Brauerei / Altenburg
- Berliner Pilsner Brauerei / Berlin
- Brauerei Dessow / Dessow
- Brauerei Gotha GmbH /Gotha
- Brauerei Landsberg / Landsberg
- Brauerei Martens / Bocholt
- Brauerei Kundmüller / Viereth-Trunstadt
- Brauerei Schumacher GmbH / Düsseldorf
- Brauhaus Eutin / Eutin
- Brauhaus Preußen Pils / Pritzwalk
- Braustolz / Chemnitz
- Böhmisches Brauhaus / Großröhrsdorf
- Bürgerliches Brauhaus / Saalfeld
- Erzquellbrauerei / Siegtal
- Garley Spezialitäten Brauerei / Gardelegen
- Feldschlößchen AG / Braunschweig
- Hausbrauerei Lemke /Berlin
- Klosterbrauerei / Neuzelle
- Königsbacher Brauerei AG / Koblenz
- Landskron Brauerei / Görlitz
- Leipziger Brauhaus zu Reudnitz / Leipzig
- Martini Brauerei / Kassel
- Meininger Privatbrauerei / Meiningen
- Museumsbrauerei Wippra / Wippra
- Oderland Brauerei / Frankfurt Oder
- Postbräu Thannhausen / Thannhausen
- Privatbrauerei Moritz Fiege / Bochum
- Privatbrauerei Scherdel / Hof
- Ricklinger Landbrauerei / Rickling
- Rheinisch-Bergische Brauerei / Köln
- Rosenbrauerei Pößneck / Pößneck/Weimar
- Schwerter Brauerei / Meißen
- Sternquellbrauerei / Plauen
- Thüringer Tannenbräu / Hessberg
- Vereinsbrauerei Apolda / Apolda
- Vereinsbrauerei Greiz / Greiz

#### World-wide:

- Aruba Brewery / Venezuela
- Amstar Brewery / Russia
- Astika AD, Haskovo / Bulgaria
- Brahma / Argentina
- Bianca Interbrew, Blaj / Romania
- Brouwarij Haacht / Belgium
- CCU, Santa Fe / Argentina
- Cervecerias Dorada y Cusco / Peru
- Cerveceria Paraguayo S.A. / Paraguay
- Cerveria Taquina / Bolivia
- Coca-Cola-Davao Plant / Philippines
- EL Gouna Beverages Co. / Estonia
- INTERBREW / Belgium
- Interbrew Proberco S. A. / Romania
- Jagodinska Pivara / Yugoslavia
- Kamenitza AD Plovdiv / Bulgaria
- Klein Brewery, Joint-Stock Company / Russia
- Liyang Tianmuhu Brewery / China
- McCullan Brewery / Sri Lanka
- Nikolaev Yanter Brewery / Ukraine
- Olivaria Brewery Minsk / Bela Russ
- Orval Brewery / Belgium
- Österreichische Brau AG / Austria
- Pilsner Urquell / Czech Republic
- Riedel Drankenindustrie /Netherland
- San Miguel / Philippines
- Steam Whistle Brewing Toronto / Canada
- Zheijang Shiliang Brewery / China





### Plant engineering companies:

- Apparatebau Nordhausen / Germany
- ATM Bönen / Germany
- BdB Altmannstein / Germany
- Brautenco / Germany
- Briggs of Burton / Great Britain
- Della Toffola SPA / Italia
- Edmund Erdmann GmbH / Germany
- GEA Diessel Hildesheim / Germany
- GEA Tuchenhagen / Germany, China
- German Standard Shanghai / China
- Glatt / Germany, China
- GPCC Shanghai / China
- Holvrieka / Danmark
- Intro Service Dortmund / Germany
- KHS Maschinen & Anlagenbau Dortmund / Germany
- KSA Artern / Germany
- Levent OY / Finland
- LP Project Service Nördlingen / Germany
- Mette Beverage / Germany
- Neumo Aseptec Technologie Aalen / Germany
- Neumo / Vietnam
- Regom Prag / Czech Republik
- Salm GmbH Wien / Austria
- Steinecker / Germany
- Tonig / Kroatien
- UNITEC / Belgium
- UNIVALVE S. A. / France
- Van der Molen / Germany
- VLB Berlin / Germany
- Wachsmann / Germany
- Westfalia / Germany



### Dairies:

#### Germany:

- Allerstedter Käserei / Wohlmirstedt
- Boreg Zeulenroda / Zeulenroda
- Bundesforschungsanstalt f. Ernährung / Karlsruhe
- Bützower Molkerei u. Dauermilchwerk / Bützow
- Cambell's Germany / Lübeck
- Fraunhofer Institut / Oberhausen
- Hansano Molkerei Leetzen / Leetzen
- Harzmolkerei Wernigerode / Wernigerode
- Heinrichtaler Milchwerke / Radeberg
- Hemme Milch / Wedemark / Schmargendorf
- Hipp GmbH / Pfaffenhofen
- Hochland AG / Heimenkirch
- Hofkäserei Fachdorf / Obermaßfeld
- Inselmilch Rügen / Rügen
- Lehr & Ausbildungsmolkerei / Oranienburg
- Life Food Freiburg / Freiburg
- Meggle GmbH / Reitmehring
- Milchwerke Oberfranken West e.G. / Meeder / Wiesenfeld
- Molkerei Lindenberg / Kassel
- Molkerei Niesky / Niesky
- Molkerei Prenzlau / Prenzlau
- Molkerei Rostock / Rostock
- Molkerei Schmachtenhagen / Schmachtenhagen
- Molkerei und Dauermilchwerk GmbH / Bützow
- Molkerei Wiedergeltingen / Wiedergeltingen
- Molkereigenossenschaft Bad Bibra e.G. / Bad Bibra
- Molkereigenossenschaft Karstädt e.G. / Karstädt
- Molkereigenossenschaft Schwarza / Rudolstadt
- Parmalatmolkerei / Gransee
- Nestlé / Biessenhofen
- Ökodorf Brodowin Meierei / Brodowin
- Onken GmbH Oderaue / Eisenhüttenstadt
- Schwarzwaldmilch / Offenburg
- Synanon Schmerwitz g GmbH / Schmerwitz
- Thüringer Milchwerke / Erfurt
- Ziegenkäserei Falkenhain / Falkenhain
- Ziegenkäserei Großbraunshain / Großbraunshain

#### World-wide:

- Corporacion Alimentaria Penasanta S.A / Spanien
- Feinkäserei Geschw. Bantel & Möggers / Österreich
- Molkerei Aschradad / Turkmenistan
- Molkerei Brjansk / Rußland
- Molkerei Gomel / Weißrußland
- Molkerei Minsk / Weißrußland
- Molkerei Mogilew / Weißrußland





---

**Plant engineering companies:**

- AAD Trading Bautzen / Germany, Kuba
- Edmund Erdmann GmbH / Germany
- KSA / Germany
- MHG Bad Aibling / Germany
- Schaeco Hagen / Germany
- Sulbana AG / Switzerland
- Tsinghua Tongfang Beijing / China
- Westfalia / Germany



### Germany:

- Apfelweinkelterei Herberth / Kronberg
- Aqua Römer GmbH / Göppingen
- Beckers Bester / Lutherstadt-Eisleben
- Blaue Quellen / Rhens
- Coca – Cola / Halle/Saale
- Coca – Cola / München
- Coca – Cola / Weimar
- Elmenhorster Fruchtsäfte GmbH / Rostock
- Fahner Frucht / Gierstedt
- Fruchtquell / Dodow
- Glockengold / Laucha
- Großkellerei / Rötha
- Gölschtal Kellerei / Mühlau
- Haarmann & Reimer GmbH / Holzminden
- Heil & Mineralbrunnen / Bad Lauchstädt
- Kellerei Burkhard / Zeitz
- Kellerei Biederman / Mauna
- Libehna / Raguhn
- Mosterei / Hohenseefeld
- Mosterei / Satow
- Mosterei Apfel / Teistungen
- Mosterei Breitbarth / Berlin
- Mosterei Börner & Hermann / Freital
- Mosterei Kühne / Reichenbach-Zschöplitz
- Mosterei Mehlhorn / Langenwernsdorf
- Mosterei Oertel / Dürweitschen
- Mosterei Schulz / Biesdorf
- Spreewälder Fruchtsäfte / Burg (Spreewald)
- Südthüringer Mineralbrunnen KG / Heßberg
- Süßmosterei Linke / Neugersdorf
- Tegut Mineralwasser / Fulda
- Aqua 5 GmbH / Jessen

### World-wide:

- Coca – Cola / Beijing, Xiamen, Chengdu, Kunming, Port Louis, Minsk, Kiew, Sevilla
- Elmenhorster Fruchtsäfte / Litauen
- JV – EL KOL / Taschkent (Usbekistan)
- Pepsi – Cola / Cairo

### Plant engineering companies:

- Contec Altenweddingen / Germany
- B & S Technical Consulting / R.S.A.
- Flottweg GmbH Vilsbiburg / Germany
- Fructa Costa Rica S.A. / Costa Rica
- Guth engineering GmbH Landau / Germany
- KSA GmbH Artern / Germany
- Lieder Maschinenbau Schwarmstedt / Germany
- Machcom Maschinen Handel & Planung München / Germany
- PAT GmbH Kirchheim / München / Germany
- Seppelec / Spain
- STW / Utzmemmingen / Germany
- Terlet / Netherland
- UNITEC NVSA / Belgien
- VAN DER MOLEN GmbH Kissing / Germany



### Germany:

- Aventis Pharma Deutschland GmbH
- Azopharma GmbH / Gerlingen
- Bayer / Leverkusen
- BASF AG / Ludwigshafen
- Brennerei Dettmannsdorf
- Brenneigenossenschaft / Uthmöden
- Chemiewerk / Bad Köstritz
- Chrion Behring GmbH / Marburg
- Ciba Vision / Großwallstadt
- Engelhard Arzneimittel Fabrik / Frankfurt/M.
- Fresenius Kabi Deutschland GmbH
- Glaxo Smith Kline Consumer Healthcare / Herrenberg
- Henkel / Düsseldorf, Genthin, Wassertrödingen
- Hofmann La Roche / Penzberg
- Initial Textil Service GmbH / Trossingen
- Leipziger Arzneimittelwerk / Leipzig
- Membrana GmbH / Wuppertal
- Merck KGaA / Darmstadt
- Microzellulose / Weißenborn
- Nordbrand / Nordhausen
- Plauener Spinnhütte / Plauen
- R & P Scherer / Eberbach/Baden
- Roche / Penzberg
- Sächsisches Serumwerk / Dresden
- Schwenk Baustoffwerke / Glöthe
- SERUM-Werk AG / Bernburg
- Spirituosenfabrik Aromatique / Neudietendorf
- Strothmann Spirituosen / Minden

### World-wide:

- Boehringer Ingelheim / Germany, Spain, Greece
- Baxter Bioscience Bohumil / Czech Republic
- claro products GmbH Mondsee / Austria
- Crown Labs Las Vegas / USA
- EBEWE Pharma Ges. Muterach / Austria
- SERONO Laboratories Vevey / Switzerland
- Sovay / Netherland
- Glaxo Smith Kline / Belgien
- Tianjin Tasly Pharmaceutical Group Co. Ltd., China
- Lonza S.R.O / Chech.Republik





---

**Plant engineering companies:**

- Acordis Industrial Fibers / Obernburg
- Chemietechnik Muttenz / Schweiz
- Christ GmbH / Vaihingen Enz
- Cognis / Illertissen
- Enigma Las Pinas / Philippinen
- Ensysta / Belgien
- Forster Wheeler Mailand / Italien
- Glatt Ingenieurtechnik GmbH / Weimar
- Guth Engineering GmbH, Landau
- Hecht GmbH Reinmedientechnik / Bodnegg
- KCA Linde / Dresden
- Küsters Maschinenfabrik GmbH / Zittau
- Läufer International AG, Meersburg
- Letzner Pharmawasseraufbereitung / Hückeswagen
- LSMW / Stuttgart
- Lurgi Life Sciences / Chemnitz
- Netzsch Feinmahltechnik GmbH / Selb
- Neumo / Türkei
- OOO Liman / Rußland
- Pall Seitz Schenk / Germany, Frankreich
- Philipp Müller + Hager & Elsässer GmbH / Stuttgart
- planttec engineering GmbH / Selm
- Pharmaplan International GmbH, Oberursel
- Pharmatec International
- Pumpentechnik / Erkrath
- SPCC Shanghai / China
- SÜDMO Projects GmbH / Riesbürg
- Telstar / Spanien
- UNITEC GmbH / Unna
- Vogelbusch GmbH Wien / Österreich
- Wilhelm Werner GmbH / Leverkusen
- YTRON GmbH & Co. KG / Bernau

