

Water supply



HP / HPC
HP-E / HPC-E

High pressure centrifugal pumps

More than pumps



Biral – With all our heart



Biral Vision

Four core thoughts determine the way we think and act:

We are the leading supplier of innovative and efficient pump solutions.

Technical competence, proximity to the customer and flexibility in solving special customer concerns create perceptible customer benefits.

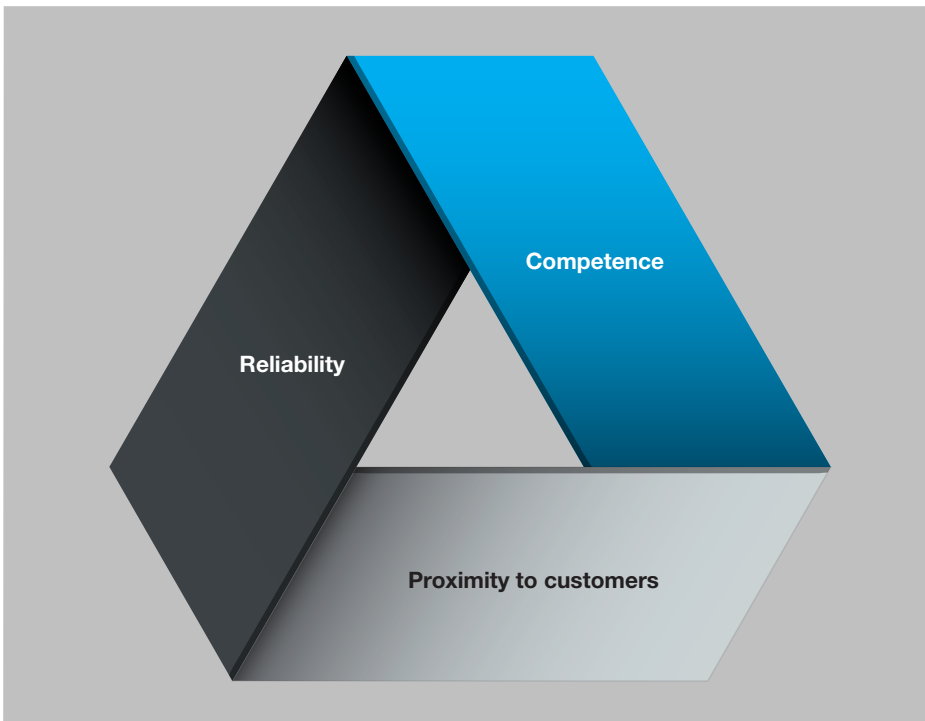
We constantly maintain a respectful and trustworthy partnership with our customers and partners to achieve this.

Our work fills us with pride and is the incentive to consistently pursue this level of reliability and durability.

We build upon competent employees, who put all their energy and passion into Biral.



Biral – your leading partner for innovative and efficient pump solutions



More than pumps

Where vision, values and responsibility become palpable to you.

Competence

- Competent consultation as required
- Biral campus – the new Swiss pump competence centre

Reliability

- Innovative products of the highest quality
- A full range for all areas of use
- Logistics that respond without delay

Proximity to customers

- Virtual planning support
- User-friendly documentation and data sources

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Biral ECO Design

HP pumps from Biral are energy optimised and fulfil the efficiency requirement of **the commission regulation (EU) No 547/2012** which comes into effect from 1 January 2013.

From this date onwards, all pumps will be marked / tagged using a new energy-efficiency index (MEI).

«Minimum Efficiency Index» (MEI) means the dimensionless scale unit for hydraulic pump efficiency at best efficiency point, part load and overload.

Efficiency Requirements

From 1st January 2015 MEI ≥ 0.4

Benchmark MEI ≥ 0.70

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.

The operation of a 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.

For further information with regard to the new regulation, please visit:

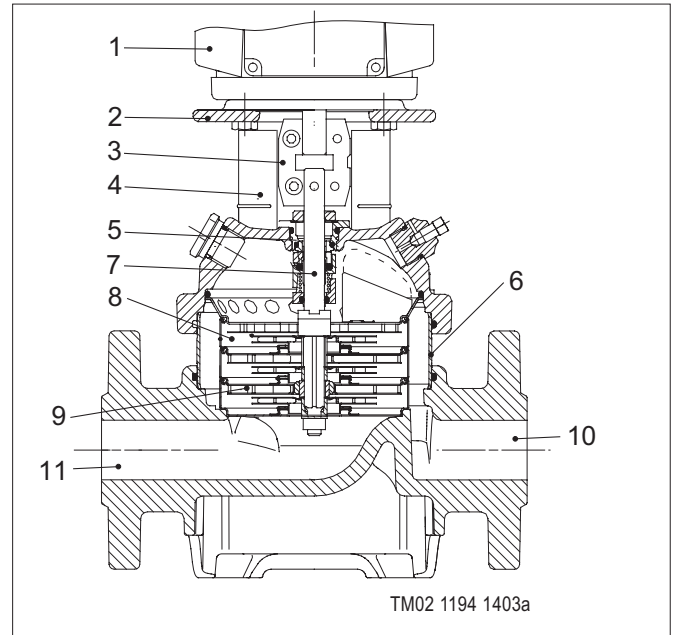
www.biral.ch

europump.eu/efficiencycharts

Minimum efficiency index (MEI) for HP pumps:

HP 3-25-XX	HP-E 4-25-XX	≥ 0.70
HP 5-32-XX	HP-E 6-32-XX	≥ 0.57
HP 10-40-XX	HP-E 12-40-XX	≥ 0.70
HP 15-50-XX	HP-E 18-50-XX	≥ 0.70
HP 20-50-XX	HP-E 24-50-XX	≥ 0.70
HP 32-65-XX	HP-E 38-65-XX	≥ 0.70
HP 45-80-XX	HP-E 54-80-XX	≥ 0.70
HP 64-100-XX	HP-E 77-100-XX	≥ 0.70
HP 95-100-XX	HP-E 114-100-XX	≥ 0.70

Sectional drawing



1	Motor
2	Pump head with motor support
3	Coupling
4	Coupling protection
5	Shaft seal
6	Outer sleeve
7	Shaft
8	Intermediate chamber
9	Impeller
10	Suction branch
11	Suction branch

Form of construction

Vertical high-pressure pump of compact construction. Opposing suction and discharge branches.

Various connection possibilities:

- Oval flange (HP)
- DIN flange (HP/HPC)
- PJE branch (HPC) (on request)

Finely graded programme

Application

HP series

Suitable for conveying drinking water. Pump head and base of cast iron. All other parts in contact with the water are of stainless steel (1.4301). See the "Materials" section.

HPC series

Suitable for aggressive water, osmosis processes, demineralized water and various chemicals.

All parts in contact with the water are of stainless steel (1.4401, 1.4408). See the "Materials" section.

HP-E, HPC-E serie

Execution like HP or HPC, but with integrated frequency converter. If required with additional pressure sensor. Adaptation of the pump capacity to various requirements.

Shaft seal

A floating ring seal is fitted. The seal can easily be fitted and removed as a complete unit. Suitable up to 50% glycol proportion up to 50 °C.

Drive

Form of construction:	V 18, V 1
Type of protection:	IP 55
Insulation class:	F

HP/HPC

Technology:	Surface-cooled, three-phase asynchronous motors
Efficiency class:	≥0.75 kW IE3
Speed:	2900 rpm
Frequency:	50 Hz
Connection:	3 x 400 V
Motor protection:	Motors must be protected with a suitable motor protection switch. (Protect against possible undervoltage, phase failure.)

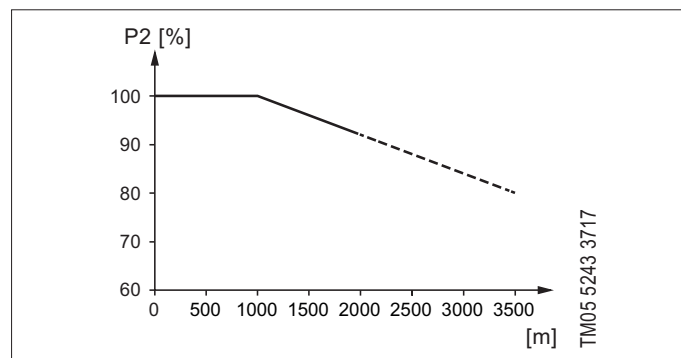
HP-E/HPC-E

Technology ≤ 11 kW:	Surface-cooled, three-phase synchronous motors
Technology ≥ remaining kW:	Surface-cooled, three-phase asynchronous motors
Efficiency class: ≤ 11 kW:	IE5 ultra premium classification
Efficiency class: übrige kW:	IE3
Speed: ≤ 11 kW:	3600 rpm
Speed: übrige kW:	3480 rpm
Frequency:	50 Hz
Connection ≤ 1.1 kW:	1 x 230 V
Connection remaining kW:	3 x 400 V
Motor protection:	integrated

Ambient temperature/ a.s.l.

HP-E

Max. ambient temperature max. 40 °C
Place of installation up to 1000 m a.s.l.
A larger motor must be used for higher values.



Motor capacity P_2 depending on ambient temperature t or place of installation above sea level.

Pos.	Speed [kW]
1	0.37 - 0.55
2	0.75 - 22
3	30 - 75

HP-E/HPC-E pumps with integrated frequency converter:
Max. ambient temperature strictly 40 °C.

Viscosity/density

Designed for water values.
A larger motor must be used for media with other densities or kinematic viscosity.
Please consult Biral.

Design of electronic pumps

HP-E pumps

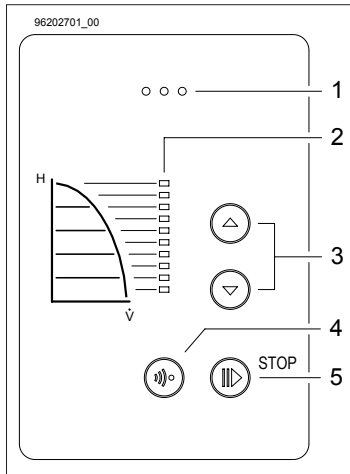
The frequency converter permits fully variable speed control and therefore a pump output suitable for requirements.
Standard version configured for external target value specification 0-10 V.

HP-E Pumps with additional pressure sensor

HP-E pumps can be equipped on request in our works with an additional pressure sensor to measure the pressure at the pump output.

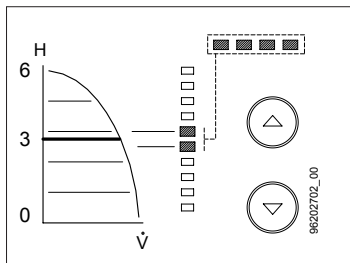
HP-E pumps always provide an optimum solution when it is necessary to supply consumers with variable volumes. The pumps are particularly suitable for water supplies and pressure boosting, as well as for industrial applications and water treatment plants. Their wide range of possibilities also makes them ideal elements in cooling and heating circuits.

User interfaces ≤ 11 kW



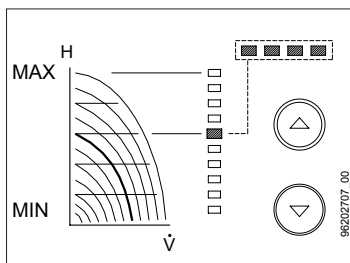
- Shows the operating status of the individual pump.
- Light fields for indication of setpoint.
- Changes the setpoint and reset of alarms and warnings.
- Enables radio communication.
- Makes the pump ready for operation/ starts and stops the pump.

Pump in "regulated" (constant characteristic curve) mode



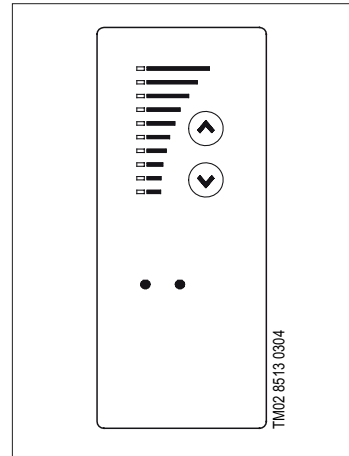
The light fields 5 and 6 are activated, indicating a desired setpoint of 3 bar with a sensor measuring range from 0 to 6 bar. The setting range is equal to the sensor measuring range.

Pump in "unregulated" (constant characteristic curve) mode



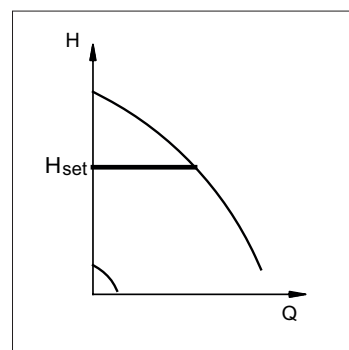
With the "constant characteristic curve" regulation type, the pump output is between the pump's MAX. and MIN. characteristic curve.

User interfaces ≥ 15 kW

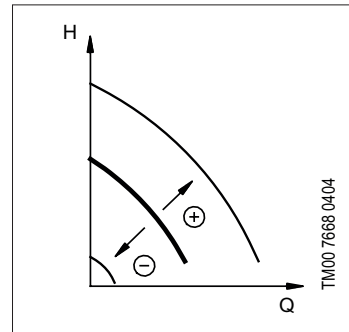


- Operating buttons
- Light fields
- Indicator lights

Pump in "regulated" (constant characteristic curve) mode



Pump in "unregulated" (constant characteristic curve) mode



Further possibilities

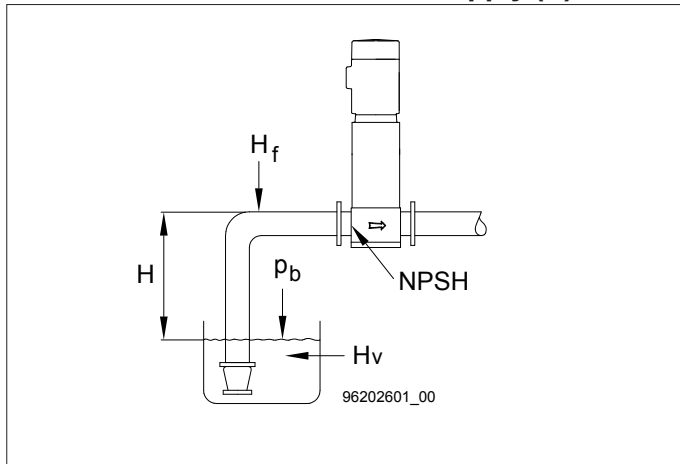
Required value setting:

- 0-10 V
- 0-20 mA
- 4-20 mA

Required value setting:

- 0-10 V
- 0-20 mA
- 4-20 mA

Calculation of suction head or supply (H)



Example

$p_b = 1$ bar

Pump type: HP 15, 50 Hz

Flow rate: 15 m³/h

NPSH (See HP catalogue): 1.1 m

$H_f = 3.0$ m

Liquid temperature: +60 °C.

$H_v = 2.1$ m

$H = p_b \times 10,2 - \text{NPSH} - H_f - H_v - H_s$ [m]

$H = 1 \times 10,2 - 1.1 - 3.0 - 2.1 - 0.5 = 3.5$ m.

This means that each pump can operate at a suction lift of maximum 3.5 m metres head.

Pressure calculated in bar:

$3.5 \times 0,0981 = 0.343$ bar

Pressure calculated in kPa:

$3.5 \times 9,81 = 34.3$ kPa

The minimum inlet pressure “H” in metres head required to avoid cavitation in the pumps can be calculated as follows:

$$H = p_b \times 10,2 - \text{NPSH} - H_f - H_v - H_s$$

p_b = Barometric pressure in bar. (Barometric pressure can be set to 1 bar.) In closed systems, p_b indicates the system pressure in bar.

NPSH = Net Positive Suction Head in metres head (to be read from the NPSH curves in the installation and operating instructions for the pumps).

H_f = Friction loss in suction manifold in metres head at the highest flow the individual pump will be delivering.

Note: If a non-return valve is installed on the suction side of the pump, the friction loss in the valve must be added. See the manufacturer’s data.

H_v = Vapour pressure in metres head.

t_m = liquid temperature.

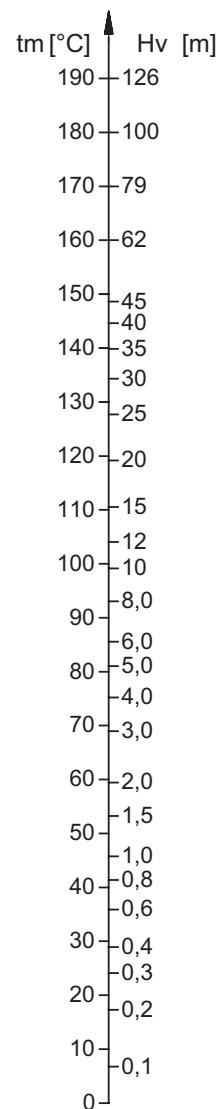
H_s = Safety margin = minimum 0.5 metres head.

If the calculated “H” is positive, the individual pump can operate at a suction lift of maximum “H” metres head.

If the calculated “H” is negative, a minimum suction head of “H” metres is required during operation.

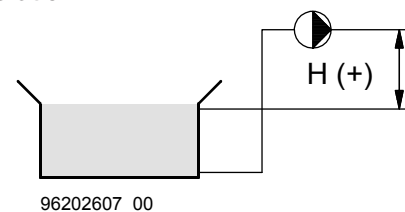
Note: To avoid cavitation, do not select a pump with a duty point too far to the right on the NPSH curve. Always check the NPSH value of the pump at the highest possible flow.

Vapour pressure H_v [m], liquid temperature [°C]

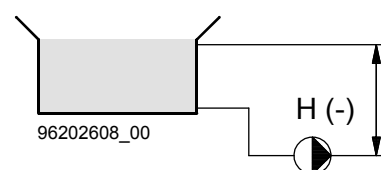


TM02 7445 3503

Suction operation



Supply operation

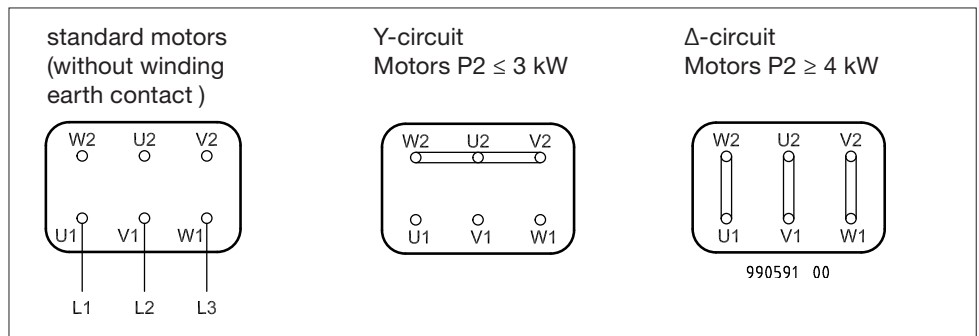


Electrical connection

HP/HPC

Caution:

The data on the motor nameplate are exclusively binding for all motors!



HP-E/HPC-E

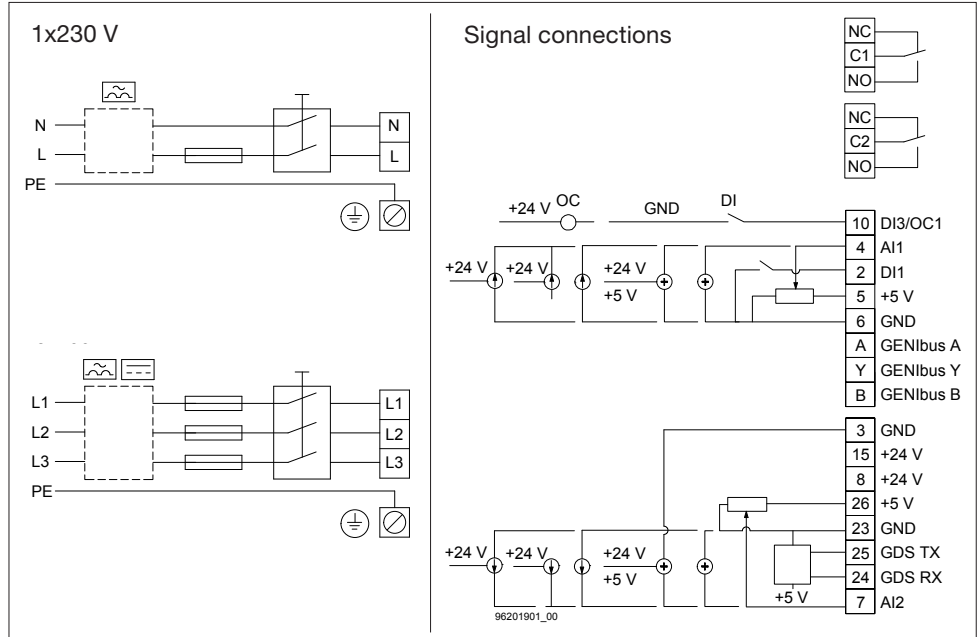
≤ 11 kW

Caution:

The pump must only be switched on and off three or four times per hour from the mains supply!

If the pump is switched on/off more frequently, the input for external ON/OFF should be used to switch the pump.

When switched on from the mains the pump only starts after 20 secs.



HP-E/HPC-E

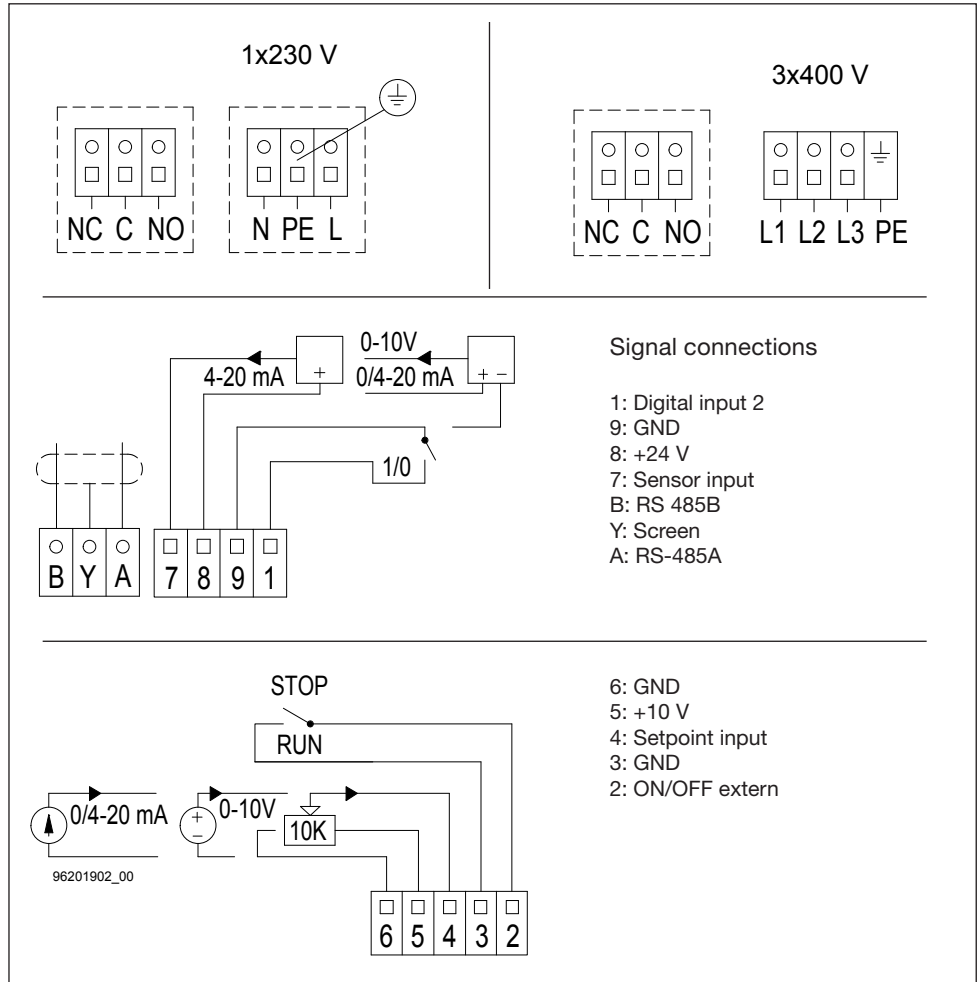
≥ 15 kW

Caution:

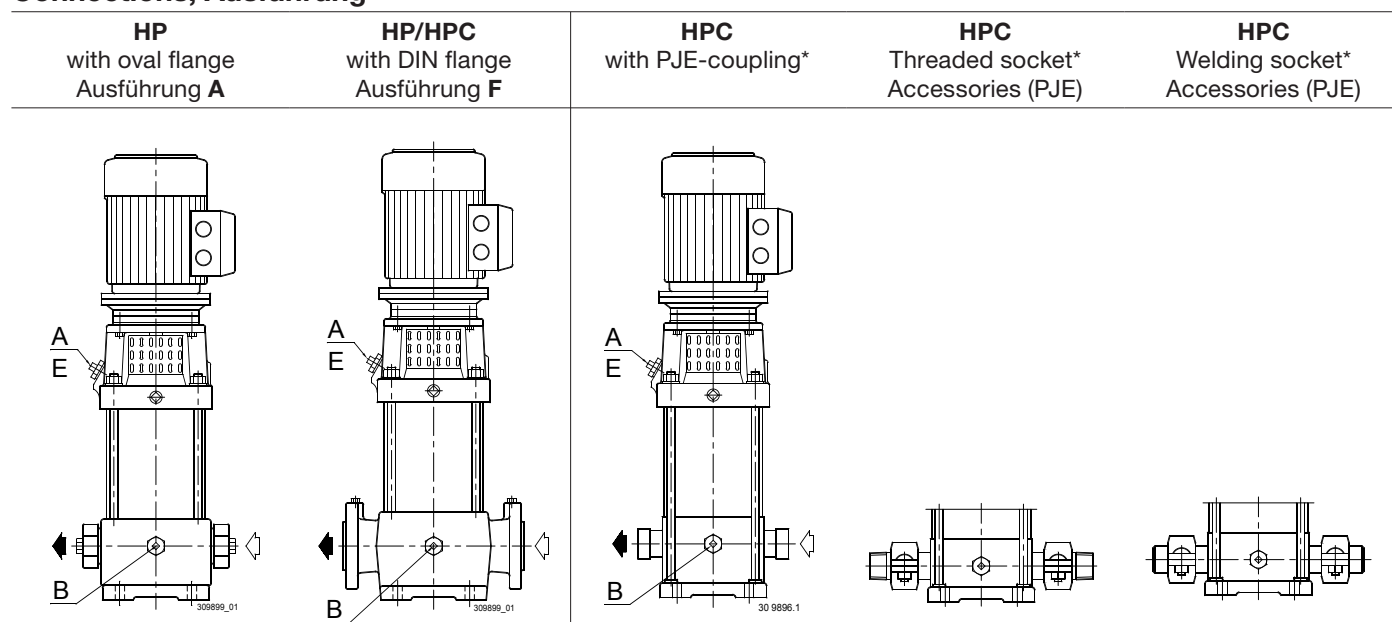
The pump must only be switched on and off three or four times per hour from the mains supply!

If the pump is switched on/off more frequently, the input for external ON/OFF should be used to switch the pump.

When switched on from the mains the pump only starts after 20 secs.



Connections, Ausführung



Legend:

A Filling

B Drain

E Vent

* Special version

Materials

designation	HP 3, 5, 10, 15, 20	HPC 3, 5, 10, 15, 20	HP 32, 45, 64	HPC 32, 45, 64	HP 95, 125, 155	HPC 95, 125, 155
	HP-E 4, 6, 12, 18, 24	HPC-E 4, 6, 12, 18, 24	HP-E 38, 54, 77	HPC-E 38, 54, 77	HP-E 114, 150, 186	HPC-E 114, 150, 186
	Material / DIN/EN	Material / DIN/EN	Material / DIN/EN	Material / DIN/EN	Material / DIN/EN	Material / DIN/EN
headpiece	grey cast iron EN-GJL-200	grey cast iron EN-GJL-200	-	-	-	-
Upper pump cover	-	Stainless steel 1.4408	Spheroidal graphite iron EN-GJS-500-7	Stainless steel 1.4408	Spheroidal graphite iron EN-GJS-500-7	Stainless steel 1.4408
motor lamp	-	-	Grey cast iron EN-GJL-200	Grey cast iron EN-GJL-200	Spheroidal graphite iron EN-GJS-500-7	Spheroidal graphite iron EN-GJS-500-7
shaft	Stainless steel 1.4401 ¹⁾ 1.4057 ²⁾	Stainless steel 1.4401 ¹⁾ 1.4060 ²⁾	Stainless steel 1.4057	Stainless steel 1.4462	Stainless steel 1.4057 ³⁾ 1.4462 ⁴⁾	Stainless steel 1.4462
impeller	Stainless steel 1.4301	Stainless steel 1.4401	Stainless steel 1.4301	Stainless steel 1.4401	Stainless steel 1.4301 1.4401	Stainless steel 1.4401
impeller chamber	Stainless steel 1.4301	Stainless steel 1.4401	Stainless steel 1.4301	Stainless steel 1.4401	Stainless steel 1.4301 1.4401	Stainless steel 1.4401
pump casing	Stainless steel 1.4301	Stainless steel 1.4401	Stainless steel 1.4301	Stainless steel 1.4401	Stainless steel 1.4301 1.4401	Stainless steel 1.4401
O-ring for pump casing	EPDM or FKM	EPDM or FKM	EPDM or FKM	EPDM or FKM	EPDM or FKM	EPDM or FKM
foot piece	Grey cast iron EN-GJL-250	Stainless steel 1.4408	Spheroidal graphite iron EN-GJS-500-7	Stainless steel 1.4408	Spheroidal graphite iron EN-GJS-500-7	Stainless steel 1.4408
split ring	PTFE	PTFE	PTFE	PTFE	PEEK	PEEK
Sealing surfaces of GLRD	Silicon carbide/ Silicon carbide	Silicon carbide/ Silicon carbide	Silicon carbide/ Silicon carbide	Silicon carbide/ Silicon carbide	Silicon carbide/ Silicon carbide	Silicon carbide/ Silicon carbide
bearing ring	-	-	Silicon carbide/ Silicon carbide	Silicon carbide/ Silicon carbide	Tungsten carbide/ Tungsten carbide	Tungsten carbide/ Tungsten carbide
support bearing	-	-	PTFE	PTFE	PTFE	PTFE
base	-	Grey cast iron EN-GJL-200	Spheroidal graphite iron EN-GJS-500-7	Spheroidal graphite iron EN-GJS-500-7	Spheroidal graphite iron EN-GJS-500-7	Spheroidal graphite iron EN-GJS-500-7
elastomers	EPDM or FKM	EPDM or FKM	EPDM or FKM	EPDM or FKM	EPDM or FKM	EPDM or FKM

¹⁾ 3, 5 ²⁾ 10, 15, 20

³⁾ 95 ⁴⁾ 125, 155

List of pumped liquids

A number of typical liquids are listed below.

The table is intended as a general guide only, and cannot replace actual testing of the pumped liquids and pump materials under specific working conditions.

Safety precautions must be made when pumping dangerous liquids.

The type HQQE floating-ring seal is permitted for all pumping media listed. The media delivered not listed require special designs with other sealing materials.

Liquids	Formula	Liquid properties	Note	HP/HP-E	HPC/HPC-E
Liquid properties	CH ₃ COOH	5%, +20 °C			X
Acetone	CH ₃ COCH ₃	100%, +20 °C	d, e		X
Alkaline degreasing agent			c, d	X	
Ammonium bicarbonate	NH ₄ HCO ₃	20%, +30 °C	a		X
Ammonium hydroxide	NH ₄ OH	20%, +40 °C		X	
Boiler water		<+120 °C		X	
Calcareous water		<+90 °C		X	
Calcium acetate (as coolant with inhibitor)	Ca(CH ₃ COO) ₂	30%, +50 °C	a, c	X	
Calcium hydroxide	Ca(OH) ₂	Saturated solution +50 °C	a	X	
Chloride-containing water		<+30 °C, max. 500 ppm	d		X
Citric acid	HOC(CH ₂ CO ₂ H) ₂ COOH	5%, +40 °C	b		X
Completely desalinated water (demineralized water)		<+120 °C			X
Condensate		<+120 °C		X	
Copper sulphate	CuSO ₄	10%, +50 °C	a		X
Domestic hot water (potable water)		<+120 °C		X	
Ethanol (ethyl alcohol)	C ₂ H ₅ OH	100%, +20 °C	d, e	X	
Ethylene glycol	HOCH ₂ CH ₂ OH	50%, +50 °C	a, c	X	
Formic acid	HCOOH	5%, +20 °C			X
Glycerine (glycerol)	OHCH ₂ CH(OH)CH ₂ OH	50%, +50 °C	a, c	X	
Isopropyl alcohol	CH ₃ CHOHCH ₃	100%, +20 °C	d, e	X	
Methanol (methyl alcohol)	CH ₃ OH	100%, +20 °C	d, e	X	
Nitric acid	HNO ₃	1%, +20 °C	d		X
Oxalic acid	(COOH) ₂	1%, +20 °C	b		X
Water containing ozone	(O ₃)	<+100 °C			X
Phosphoric acid	H ₃ PO ₄	20%, +20 °C	a		X
Propanol	C ₃ H ₇ OH	100%, +20 °C	d, e	X	
Propylene glycol	CH ₃ CH(OH)CH ₂ OH	50%, +90 °C	a, c	X	
Potassium carbonate	K ₂ CO ₃	20%, +50 °C	a	X	
Potassium formate (as coolant with inhibitor)	KOOCH	30%, +50 °C	a, c	X	
Potassium hydroxide	KOH	20%, +50 °C	a		X
Potassium permanganate	KMnO ₄	5%, +20 °C			X
Salicylic acid	C ₆ H ₄ (OH)COOH	0,1%, +20 °C	b		X
Sodium bicarbonate	NaHCO ₃	10%, +60 °C	a		X
Sodium chloride (as coolant)	NaCl	30%, <+5 °C, pH>8	a, c	X	
Sodium hydroxide	NaOH	20%, +50 °C	a		X
Sodium nitrate	NaNO ₃	10%, +60 °C	a		X
Sodium phosphate	Na ₃ PO ₄	10%, +60 °C	a, b, e		X
Sodium sulphate	Na ₂ SO ₄	10%, +60 °C	a, b, e		X
Softened water		<+120%			X
Sulphurous acid	H ₂ SO ₃	1%, +20 °C			X
Unsalted swimming pool water		Approx. 2 ppm free chlorine		X	

Legend:

- a Density and/or viscosity differ from that of water. Allow for this when calculating motor output and pump performance.
- b Risk of crystallisation /precipitation in floating-ring seal.
- c The pumped medium often contains additional substances.
- d Please contact Biral for a consultation.
- e The pumped medium is slightly flammable.

How to read the curve charts

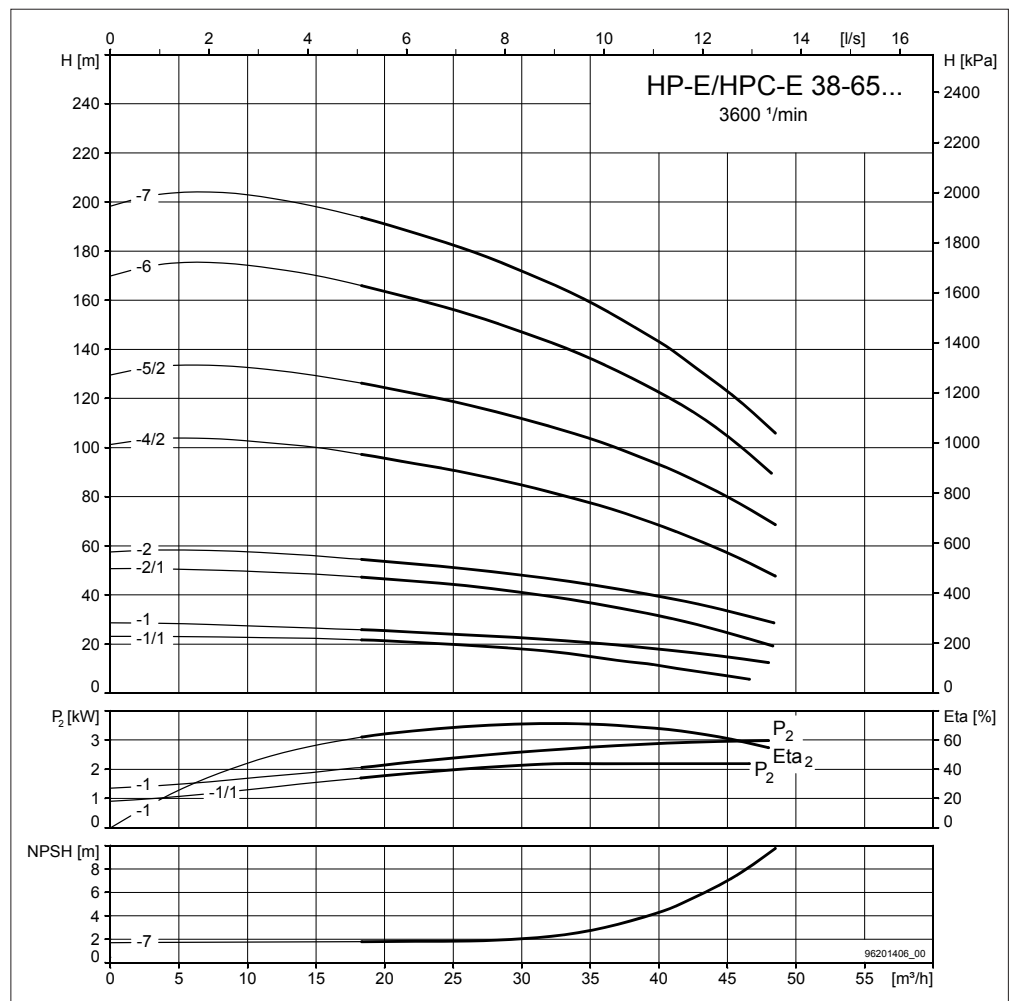
Curve Tolerances to ISO 9906:1999, Annex A,

QH curve for the individual pump.
The bold curves indicate the recommended duty range for best efficiency.

The power curves indicate pump input power per stage.
Curves are shown for complete (-1) and for reduced-diameter (-1/1) impellers.

The eta curve shows the efficiency of the pump.
The efficiency of pumps with reduced-diameter impellers is approx. 2 % lower than the eta curve shown in the chart.

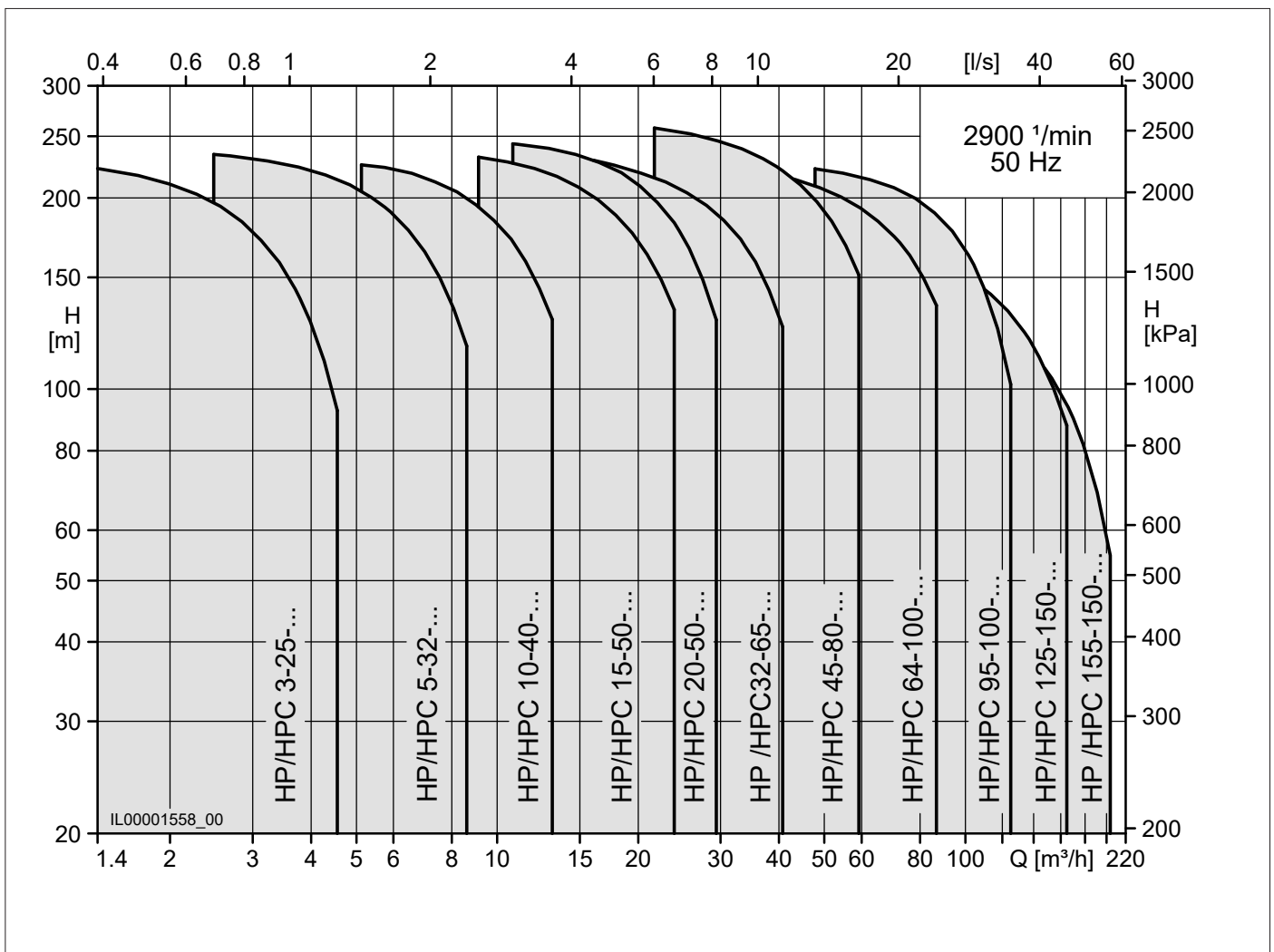
NPSH value for air-free water.
A safety clearance of 0.5 to 1.0 m is required.

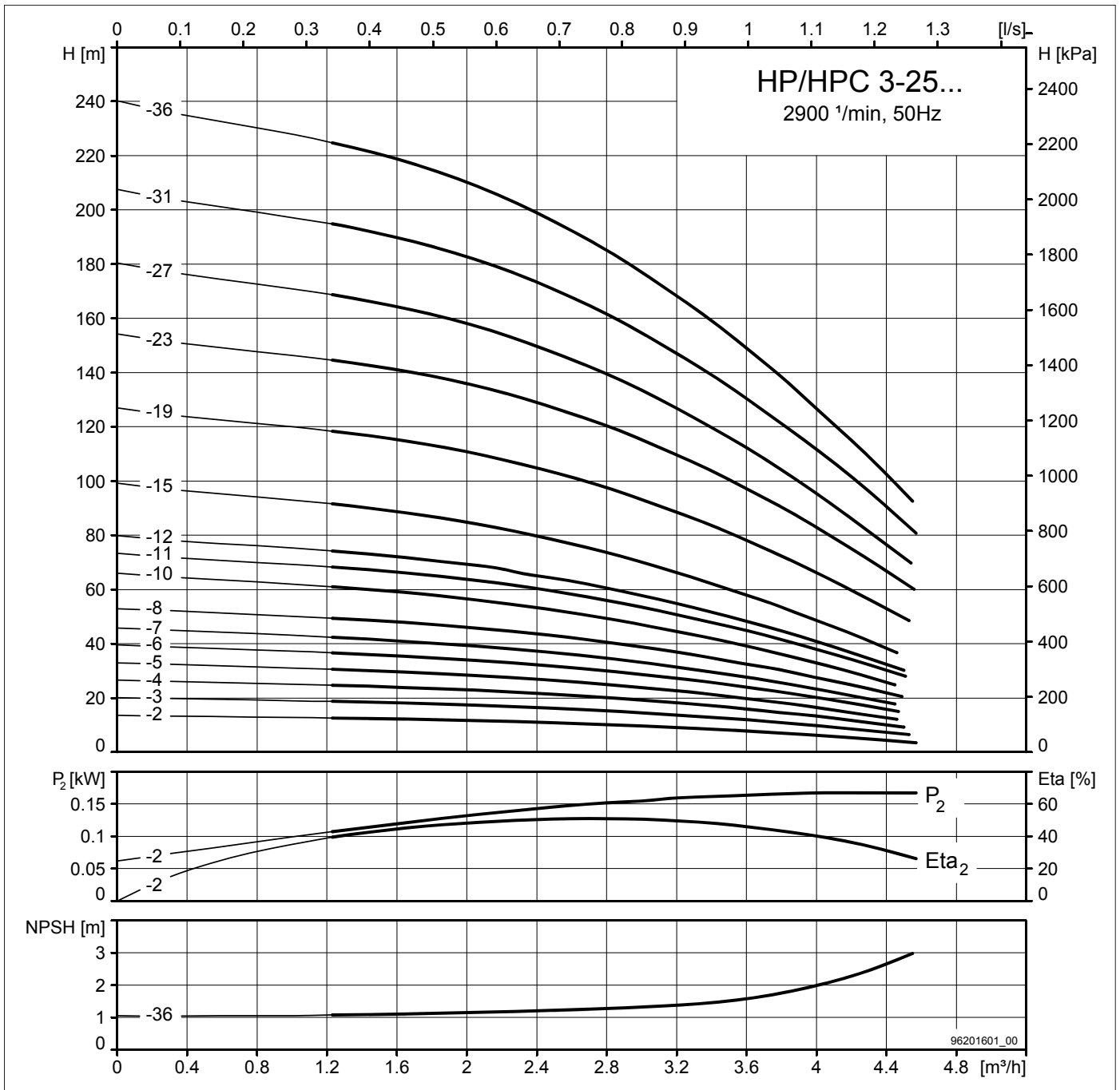


High pressure centrifugal pumps

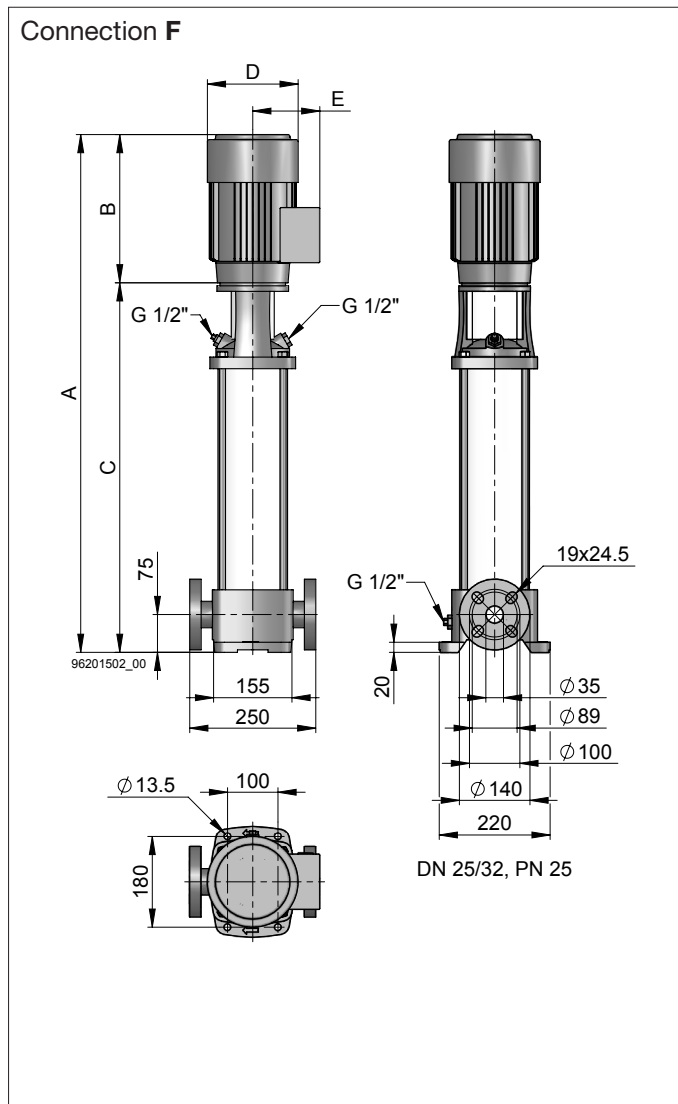
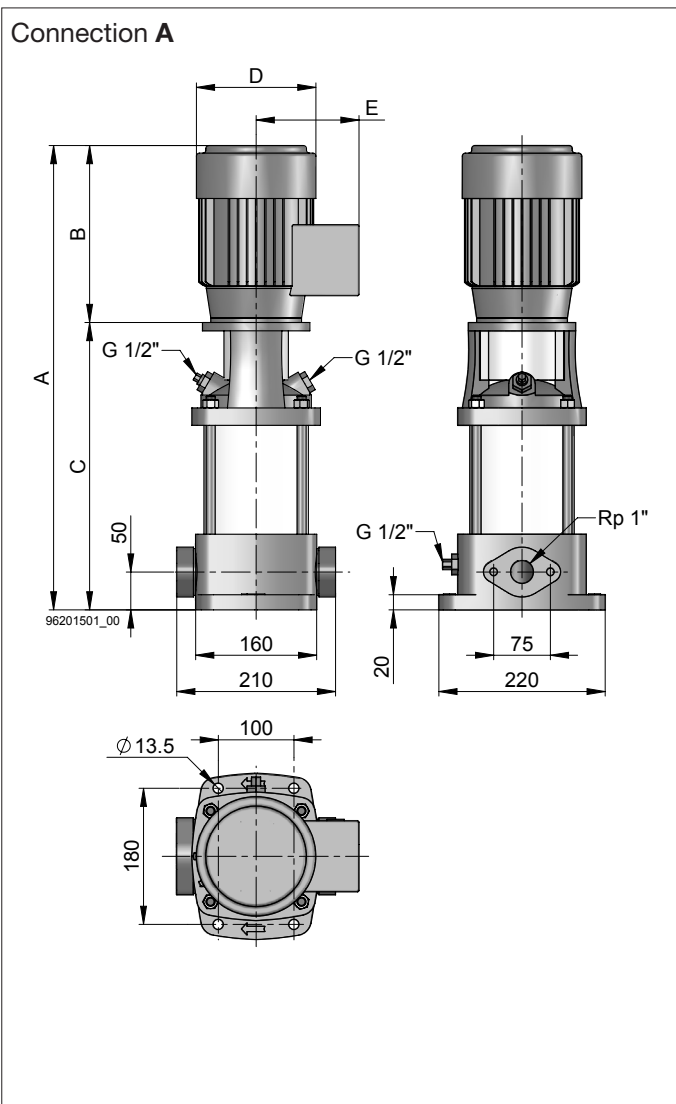
HP.../HPC...
3 × 400 V

Type designation	HP C	32 - 65 - 8 / 2
High-pressure pump		
Series with increased corrosion resistance		
Nominal flow rate in m ³ /h		
Suction branch / Discharge branch rated diameter		
Number of stages		
8 = Stage		
2 = Number of impellers with reduced diameter		

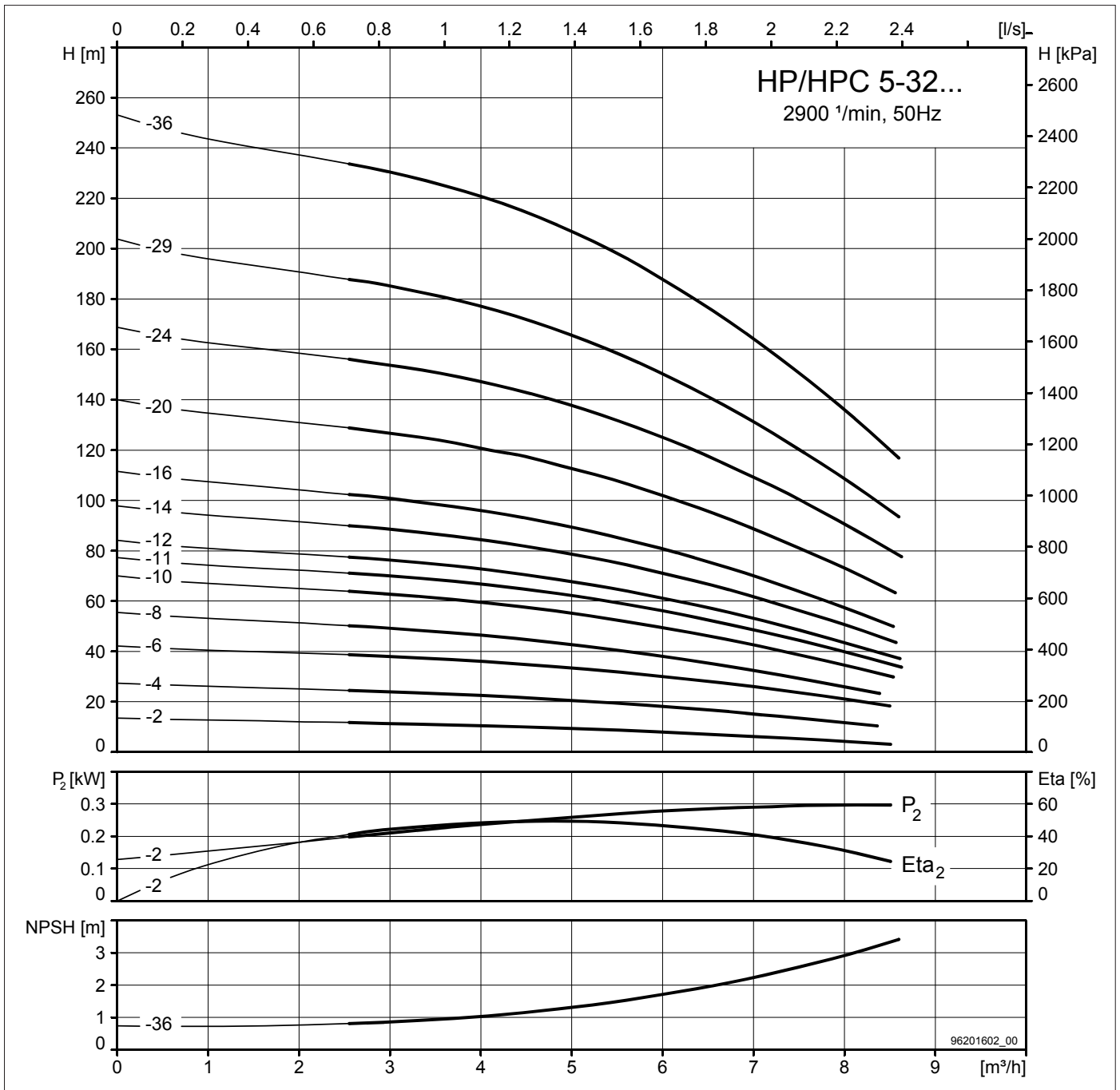




Pump Typ	Motor			Maximum permissible				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	operating pressure		inlet pressure			HP	HPC
				HP [bar]	HPC [bar]	HP [bar]	HPC [bar]			
HP/HPC 3-25-2	0.37	3x400	1.00	16	25	10	10	-20 to 120	3018708202	3019701202
HP/HPC 3-25-3	0.37	3x400	1.00	16	25	10	10	-20 to 120	3018708203	3019701203
HP/HPC 3-25-4	0.37	3x400	1.00	16	25	10	10	-20 to 120	3018708204	3019701204
HP/HPC 3-25-5	0.37	3x400	1.00	16	25	10	10	-20 to 120	3018708205	3019701205
HP/HPC 3-25-6	0.55	3x400	1.36	16	25	10	10	-20 to 120	3018708206	3019701206
HP/HPC 3-25-7	0.55	3x400	1.36	16	25	10	10	-20 to 120	3018708207	3019701207
HP/HPC 3-25-8	0.75	3x400	1.73	16	25	10	10	-20 to 120	3018708208	3019701208
HP/HPC 3-25-10	0.75	3x400	1.73	16	25	9.6	10	-20 to 120	3018708210	3019701210
HP/HPC 3-25-11	1.1	3x400	2.40	16	25	8.8	10	-20 to 120	3018708211	3019701211
HP/HPC 3-25-12	1.1	3x400	2.40	16	25	8.3	10	-20 to 120	3018708212	3019701212
HP/HPC 3-25-15	1.1	3x400	2.40	16	25	6.4	10	-20 to 120	3018708215	3019701215
HP/HPC 3-25-19	1.5	3x400	3.25	16	25	3.8	10	-20 to 120	3018708219	3019701219
HP/HPC 3-25-23	2.2	3x400	4.55	16	25	1	10	-20 to 120	3018708223	3019701223
HP/HPC 3-25-27	2.2	3x400	4.55	25	25	7.4	7.4	-20 to 120	3018708227	3019701227
HP/HPC 3-25-31	3	3x400	6.10	25	25	4.8	4.8	-20 to 120	3018708231	3019701231
HP/HPC 3-25-36	3	3x400	6.10	25	25	1.5	1.5	-20 to 120	3018708236	3019701236

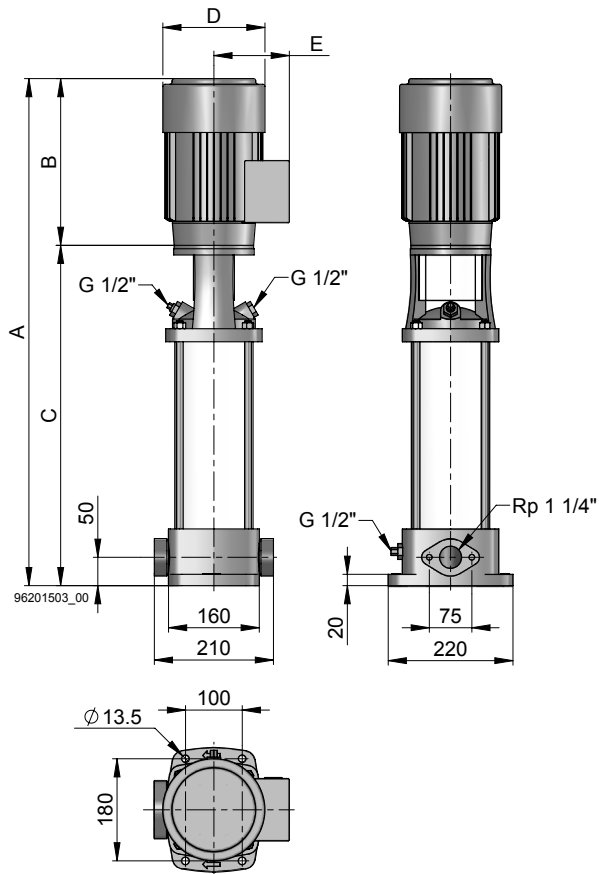


Pump Type	Dimensions in [mm]											Execution		Weight [kg]
	HP			HPC			HP / HPC					HP Connections	HPC Connections	
	A	B	C	A	B	C	D	D2	E	F				
HP/HPC 3-25-2	476	222	254	504	222	282	138	-	102	-	A: 1"	F: DN 25/32, PN 25	20	
HP/HPC 3-25-3	476	222	254	504	222	282	138	-	102	-	A: 1"	F: DN 25/32, PN 25	21	
HP/HPC 3-25-4	494	222	272	522	222	300	138	-	102	-	A: 1"	F: DN 25/32, PN 25	21	
HP/HPC 3-25-5	512	222	290	540	222	318	138	-	102	-	A: 1"	F: DN 25/32, PN 25	21	
HP/HPC 3-25-6	530	222	308	558	222	336	138	-	102	-	A: 1"	F: DN 25/32, PN 25	23	
HP/HPC 3-25-7	548	222	326	576	222	354	138	-	102	-	A: 1"	F: DN 25/32, PN 25	23	
HP/HPC 3-25-8	578	228	350	606	228	378	158	-	136	-	A: 1"	F: DN 25/32, PN 25	26	
HP/HPC 3-25-10	614	228	386	642	228	414	158	-	136	-	A: 1"	F: DN 25/32, PN 25	26	
HP/HPC 3-25-11	632	228	404	660	228	432	158	-	136	-	A: 1"	F: DN 25/32, PN 25	29	
HP/HPC 3-25-12	650	228	422	678	228	450	158	-	136	-	A: 1"	F: DN 25/32, PN 25	29	
HP/HPC 3-25-15	704	228	476	732	228	504	158	-	136	-	A: 1"	F: DN 25/32, PN 25	31	
HP/HPC 3-25-19	858	294	564	886	294	592	180	-	133	-	A: 1"	F: DN 25/32, PN 25	39	
HP/HPC 3-25-23	930	294	636	958	294	664	180	-	133	-	A: 1"	F: DN 25/32, PN 25	41	
HP/HPC 3-25-27	1027	294	733	1030	294	736	180	-	133	-	F: DN 25/32, PN 25	F: DN 25/32, PN 25	45	
HP/HPC 3-25-31	1148	339	809	1152	339	813	200	160	155	-	F: DN 25/32, PN 25	F: DN 25/32, PN 25	53	
HP/HPC 3-25-36	1238	339	899	1242	339	903	200	160	155	-	F: DN 25/32, PN 25	F: DN 25/32, PN 25	55	

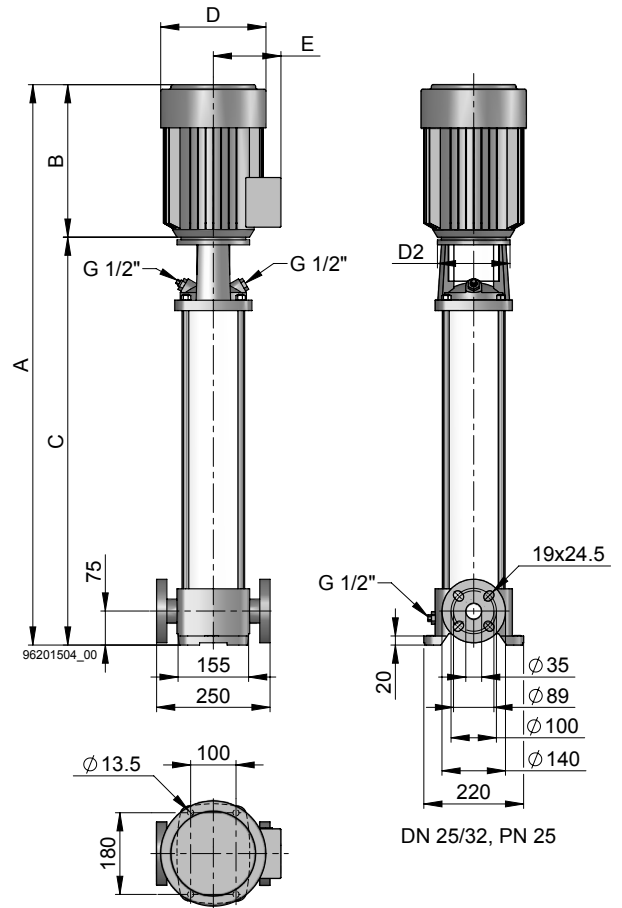


Pump	Motor			Maximum permissible				Liquid temperature	Article no.	
	P ₂ [kW]	U [V]	I [A]	operating pressure	inlet pressure	HP [bar]	HPC [bar]		HP	HPC
Typ				HP [bar]	HPC [bar]	HP [bar]	HPC [bar]	[°C]		
HP/HPC 5-32-2	0.37	3x400	1.00	16	25	10	10	-20 to 120	3018708302	3019701302
HP/HPC 5-32-4	0.55	3x400	1.36	16	25	10	10	-20 to 120	3018708304	3019701304
HP/HPC 5-32-6	1.1	3x400	2.40	16	25	10	10	-20 to 120	3018708306	3019701306
HP/HPC 5-32-8	1.1	3x400	2.40	16	25	10	10	-20 to 120	3018708308	3019701308
HP/HPC 5-32-10	1.5	3x400	3.25	16	25	9.2	10	-20 to 120	3018708310	3019701310
HP/HPC 5-32-11	2.2	3x400	4.55	16	25	8.4	10	-20 to 120	3018708311	3019701311
HP/HPC 5-32-12	2.2	3x400	4.55	16	25	7.9	10	-20 to 120	3018708312	3019701312
HP/HPC 5-32-14	2.2	3x400	4.55	16	25	6.7	10	-20 to 120	3018708314	3019701314
HP/HPC 5-32-16	2.2	3x400	4.55	16	25	5.4	10	-20 to 120	3018708316	3019701316
HP/HPC 5-32-20	3	3x400	6.10	16	25	2.7	11.7	-20 to 120	3018708320	3019701320
HP/HPC 5-32-24	4	3x400	7.80	25	25	9	9	-20 to 120	3018708324	3019701324
HP/HPC 5-32-29	4	3x400	7.80	25	25	5.6	5.6	-20 to 120	3018708329	3019701329
HP/HPC 5-32-36	5.5	3x400	10.3	25	25	0.7	0.7	-20 to 120	3018708336	3019701336

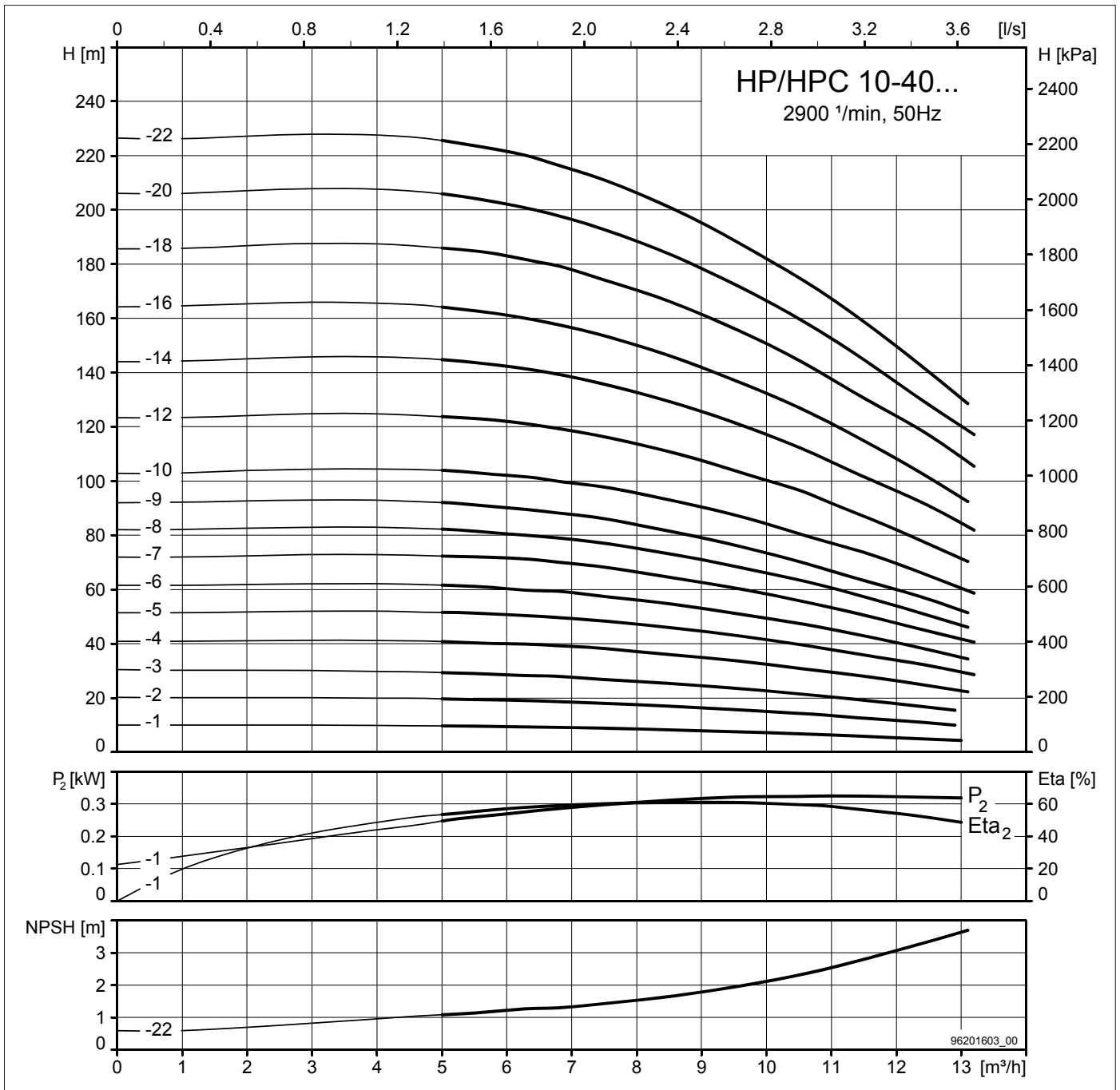
Connection A



Connection F

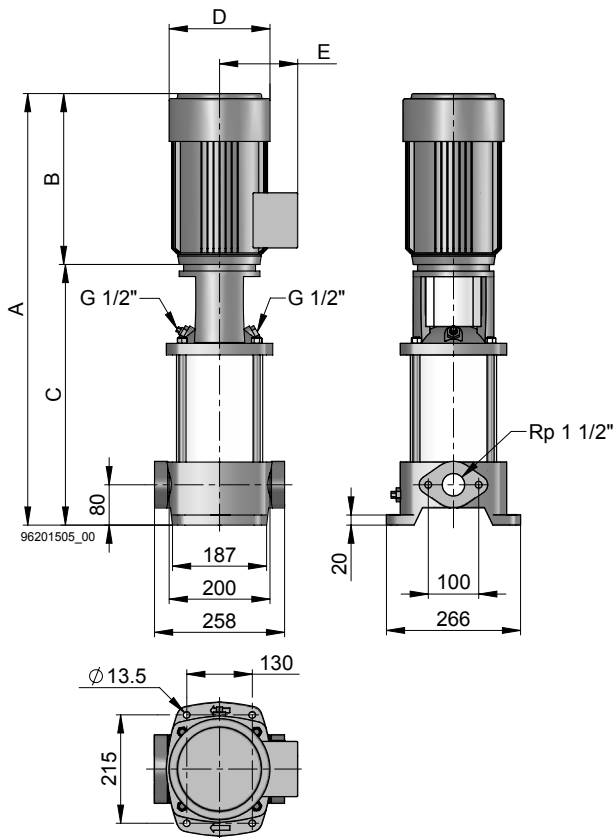


Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP			HPC			HP / HPC				HP	HPC	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP/HPC 5-32-2	476	222	254	504	222	282	138	-	102	-	A: 1 1/4"	F: DN 25/32, PN 25	21
HP/HPC 5-32-4	530	222	308	558	222	336	138	-	102	-	A: 1 1/4"	F: DN 25/32, PN 25	22
HP/HPC 5-32-6	596	228	368	624	228	396	158	-	136	-	A: 1 1/4"	F: DN 25/32, PN 25	28
HP/HPC 5-32-8	650	228	422	678	228	450	158	-	136	-	A: 1 1/4"	F: DN 25/32, PN 25	29
HP/HPC 5-32-10	786	294	492	814	294	520	180	-	133	-	A: 1 1/4"	F: DN 25/32, PN 25	37
HP/HPC 5-32-11	813	294	519	841	294	547	180	-	133	-	A: 1 1/4"	F: DN 25/32, PN 25	38
HP/HPC 5-32-12	840	294	546	868	294	574	180	-	133	-	A: 1 1/4"	F: DN 25/32, PN 25	38
HP/HPC 5-32-14	894	294	600	922	294	628	180	-	133	-	A: 1 1/4"	F: DN 25/32, PN 25	40
HP/HPC 5-32-16	948	294	654	976	294	682	180	-	133	-	A: 1 1/4"	F: DN 25/32, PN 25	41
HP/HPC 5-32-20	1105	339	766	1134	339	795	200	160	155	-	A: 1 1/4"	F: DN 25/32, PN 25	49
HP/HPC 5-32-24	1235	336	899	1239	336	903	232	160	149	-	F: DN 25/32, PN 25	F: DN 25/32, PN 25	63
HP/HPC 5-32-29	1370	336	1034	1374	336	1038	232	160	149	-	F: DN 25/32, PN 25	F: DN 25/32, PN 25	66
HP/HPC 5-32-36	1613	360	1253	1616	360	1256	277	300	182	-	F: DN 25/32, PN 25	F: DN 25/32, PN 25	84

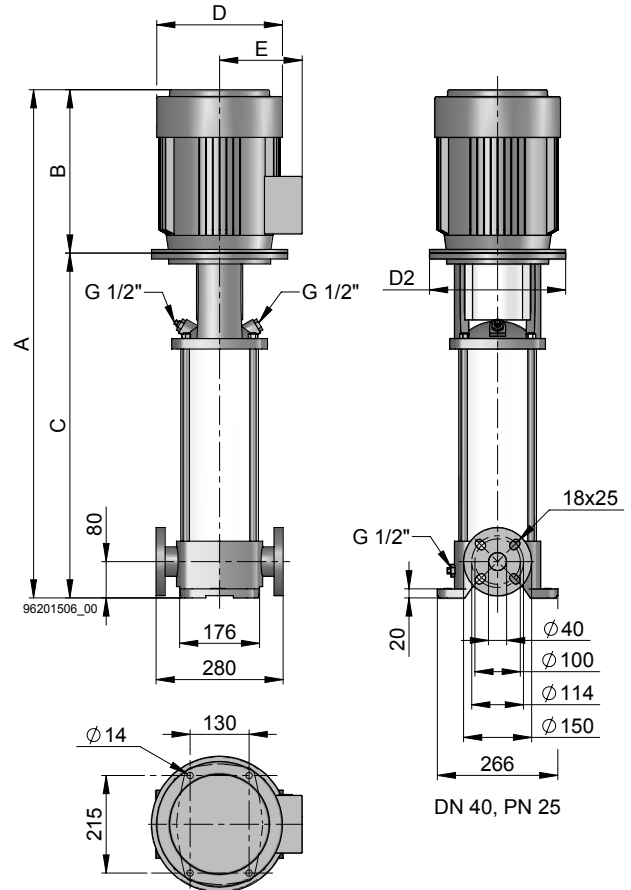


Pump Typ	Motor			Maximum permissible				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	operating pressure HP [bar]	HPC [bar]	inlet pressure HP [bar]	HPC [bar]		HP	HPC
HP/HPC 10-40-1	0.37	3x400	1.00	16	25	8	8	-20 to 120	3018700401	3019701401
HP/HPC 10-40-2	0.75	3x400	1.73	16	25	8	8	-20 to 120	3018700402	3019701402
HP/HPC 10-40-3	1.1	3x400	2.40	16	25	8	8	-20 to 120	3018700403	3019701403
HP/HPC 10-40-4	1.5	3x400	3.25	16	25	8	8	-20 to 120	3018700404	3019701404
HP/HPC 10-40-5	2.2	3x400	4.55	16	25	8	8	-20 to 120	3018700405	3019701405
HP/HPC 10-40-6	2.2	3x400	4.55	16	25	8	8	-20 to 120	3018700406	3019701406
HP/HPC 10-40-7	3	3x400	6.10	16	25	9	10	-20 to 120	3018700407	3019701407
HP/HPC 10-40-8	3	3x400	6.10	16	25	8	10	-20 to 120	3018700408	3019701408
HP/HPC 10-40-9	3	3x400	6.10	16	25	7	10	-20 to 120	3018700409	3019701409
HP/HPC 10-40-10	4	3x400	7.80	16	25	6	10	-20 to 120	3018700410	3019701410
HP/HPC 10-40-12	4	3x400	7.80	16	25	4	10	-20 to 120	3018700412	3019701412
HP/HPC 10-40-14	5.5	3x400	10.3	25	25	10	10	-20 to 120	3018700414	3019701414
HP/HPC 10-40-16	5.5	3x400	10.3	25	25	9	9	-20 to 120	3018700416	3019701416
HP/HPC 10-40-18	7.5	3x400	13.8	25	25	6.9	6.9	-20 to 120	3018700418	3019701418
HP/HPC 10-40-20	7.5	3x400	13.8	25	25	5	5	-20 to 120	3018700420	3019701420
HP/HPC 10-40-22	7.5	3x400	13.8	25	25	3	3	-20 to 120	3018700422	3019701422

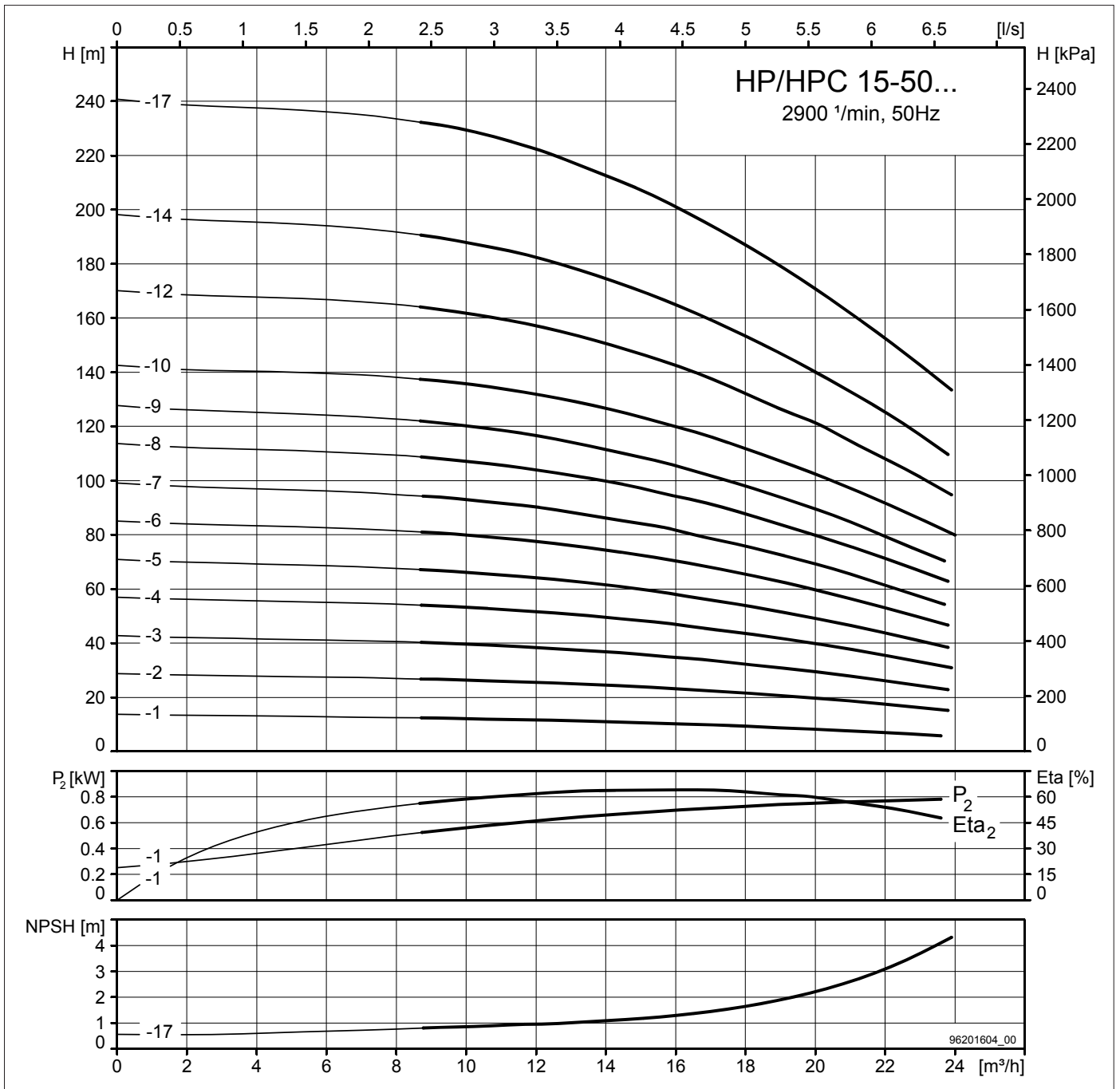
Connection A



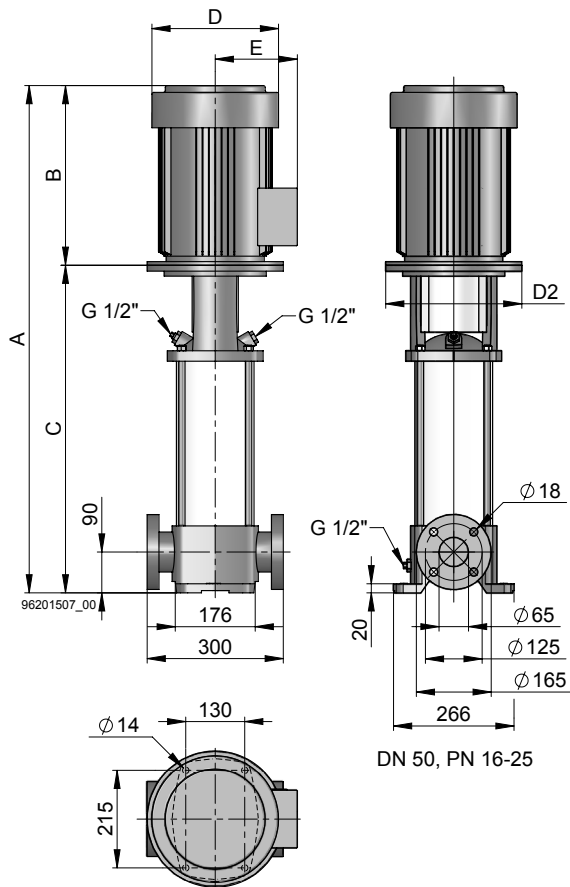
Connection F



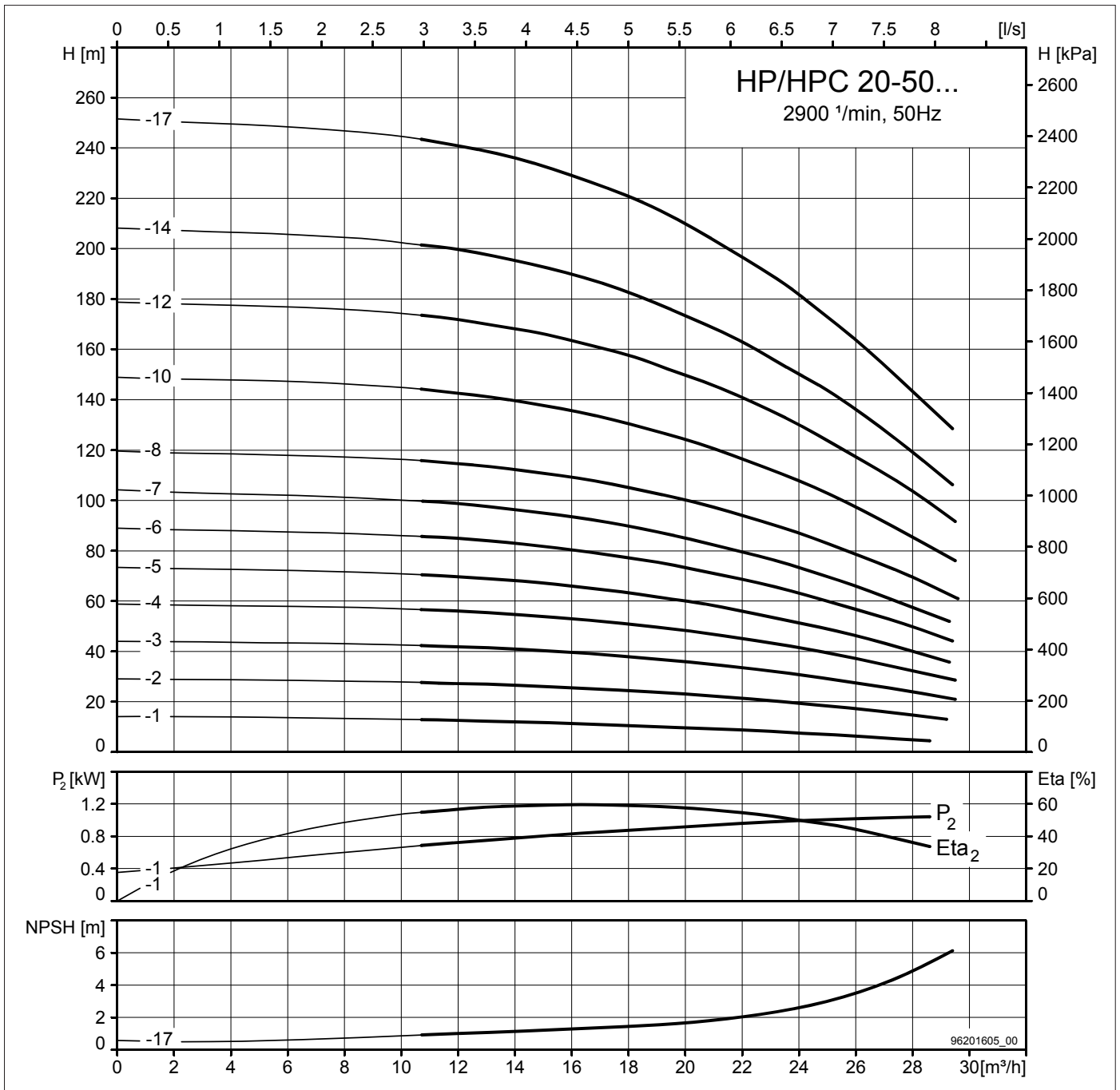
Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP			HPC			HP / HPC				HP	HPC	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP/HPC 10-40-1	565	222	343	575	222	353	138	-	102	-	A: 1 1/2"	F: DN 40, PN 25	32
HP/HPC 10-40-2	575	228	347	585	228	357	158	-	136	-	A: 1 1/2"	F: DN 40, PN 25	34
HP/HPC 10-40-3	605	228	377	615	228	387	158	-	136	-	A: 1 1/2"	F: DN 40, PN 25	38
HP/HPC 10-40-4	717	294	423	727	294	433	180	-	133	-	A: 1 1/2"	F: DN 40, PN 25	46
HP/HPC 10-40-5	747	294	453	757	294	463	180	-	133	-	A: 1 1/2"	F: DN 40, PN 25	48
HP/HPC 10-40-6	777	294	483	787	294	493	180	-	133	-	A: 1 1/2"	F: DN 40, PN 25	49
HP/HPC 10-40-7	857	339	518	867	339	528	200	160	155	-	A: 1 1/2"	F: DN 40, PN 25	56
HP/HPC 10-40-8	887	339	548	897	339	558	200	160	155	-	A: 1 1/2"	F: DN 40, PN 25	57
HP/HPC 10-40-9	917	339	578	927	339	588	200	160	155	-	A: 1 1/2"	F: DN 40, PN 25	58
HP/HPC 10-40-10	944	336	608	954	336	618	232	160	149	-	A: 1 1/2"	F: DN 40, PN 25	68
HP/HPC 10-40-12	1004	336	668	1014	336	678	232	160	149	-	A: 1 1/2"	F: DN 40, PN 25	70
HP/HPC 10-40-14	1120	360	760	1130	360	770	277	300	182	-	F: DN 40, PN 25	F: DN 40, PN 25	93
HP/HPC 10-40-16	1180	360	820	1190	360	830	277	300	182	-	F: DN 40, PN 25	F: DN 40, PN 25	95
HP/HPC 10-40-18	1276	396	880	1286	396	890	279	300	181	-	F: DN 40, PN 25	F: DN 40, PN 25	109
HP/HPC 10-40-20	1336	396	940	1346	396	950	279	300	181	-	F: DN 40, PN 25	F: DN 40, PN 25	112
HP/HPC 10-40-22	1396	396	1000	1406	396	1010	279	300	181	-	F: DN 40, PN 25	F: DN 40, PN 25	114



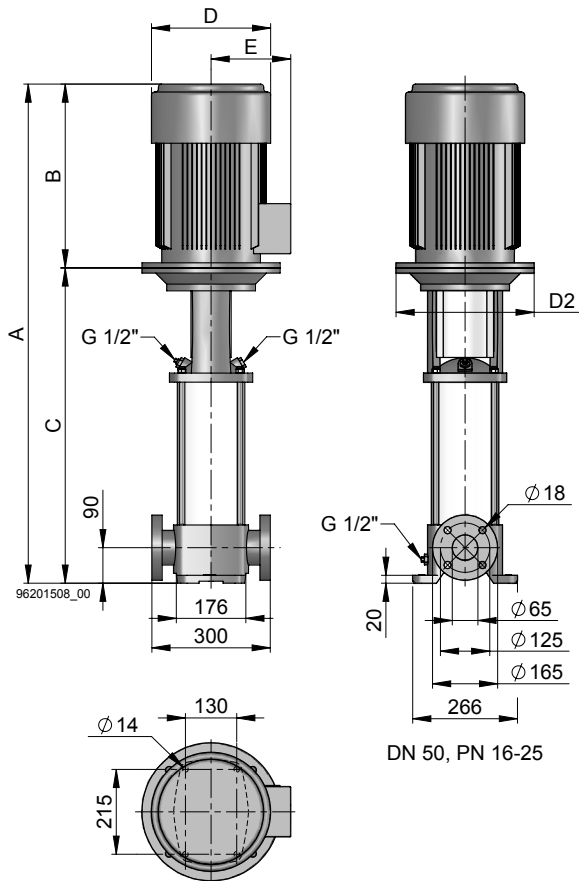
Pump	Motor			Maximum permissible				Liquid temperature [°C]	Article no.	
	P ₂ [kW]	U [V]	I [A]	operating pressure HP [bar]	operating pressure HPC [bar]	inlet pressure HP [bar]	inlet pressure HPC [bar]		HP	HPC
HP/HPC 15-50-1	1.1	3x400	2.40	16	25	8	8	-20 to 120	3018700501	3019701501
HP/HPC 15-50-2	2.2	3x400	4.55	16	25	8	8	-20 to 120	3018700502	3019701502
HP/HPC 15-50-3	3	3x400	6.10	16	25	8	8	-20 to 120	3018700503	3019701503
HP/HPC 15-50-4	4	3x400	7.80	16	25	10	10	-20 to 120	3018700504	3019701504
HP/HPC 15-50-5	4	3x400	7.80	16	25	9.1	10	-20 to 120	3018700505	3019701505
HP/HPC 15-50-6	5.5	3x400	10.3	16	25	7.7	10	-20 to 120	3018700506	3019701506
HP/HPC 15-50-7	5.5	3x400	10.3	16	25	6.3	10	-20 to 120	3018700507	3019701507
HP/HPC 15-50-8	7.5	3x400	13.8	16	25	4.9	10	-20 to 120	3018700508	3019701508
HP/HPC 15-50-9	7.5	3x400	13.8	16	25	3.6	10	-20 to 120	3018700509	3019701509
HP/HPC 15-50-10	11	3x400	20.0	16	25	2.2	10	-20 to 120	3018700510	3019701510
HP/HPC 15-50-12	11	3x400	20.0	25	25	8.4	8.4	-20 to 120	3018700512	3019701512
HP/HPC 15-50-14	11	3x400	20.0	25	25	5.7	5.7	-20 to 120	3018700514	3019701514
HP/HPC 15-50-17	15	3x400	26.5	25	25	1.6	1.6	-20 to 120	3018700517	3019701517

Connection F


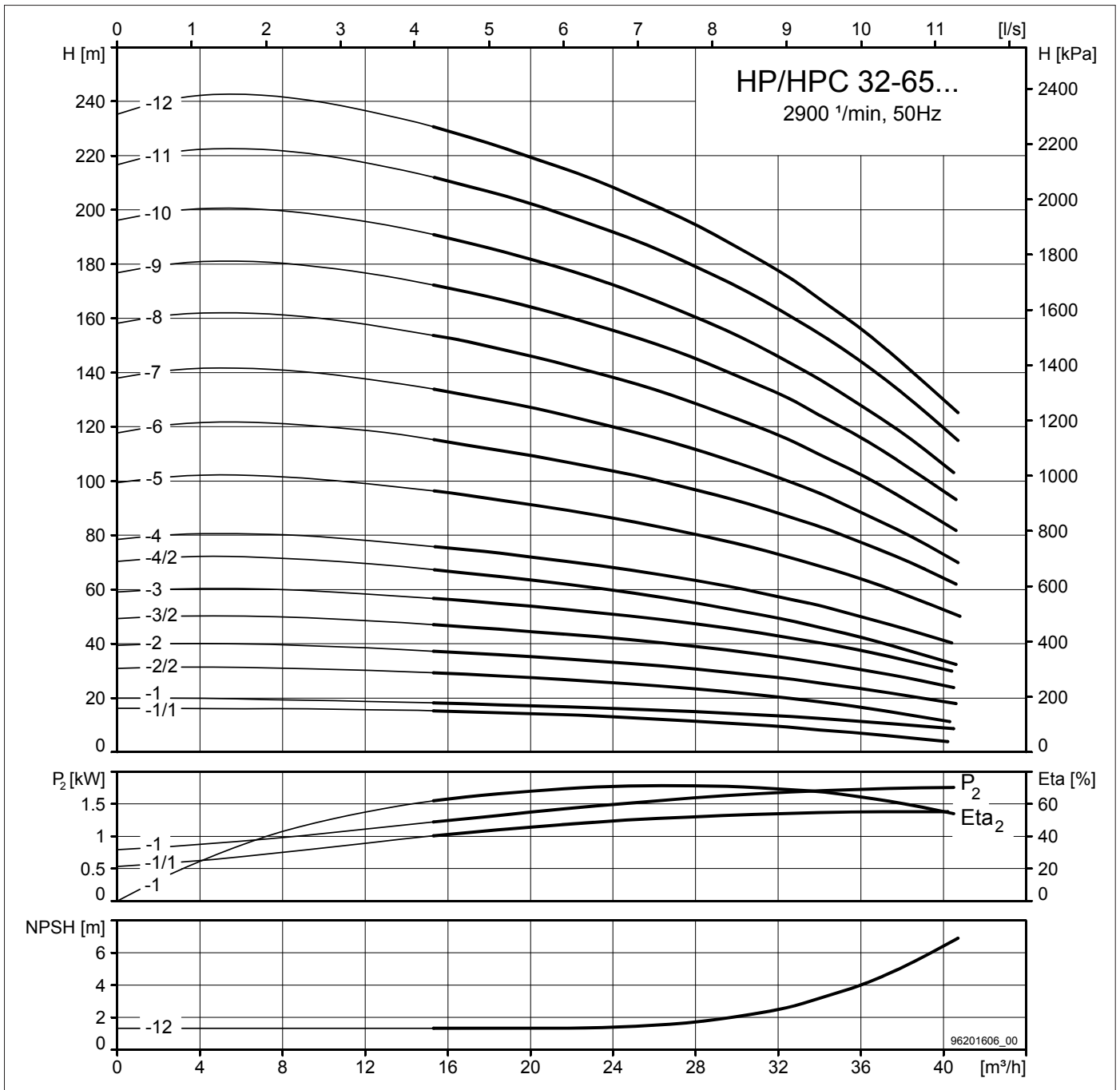
Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP			HPC			HP / HPC				HP	HPC	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP/HPC 15-50-1	628	228	400	625	228	397	158	-	136	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	41
HP/HPC 15-50-2	709	294	415	707	294	413	180	-	133	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	49
HP/HPC 15-50-3	804	339	465	802	339	463	200	160	155	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	56
HP/HPC 15-50-4	846	336	510	844	336	508	232	160	149	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	67
HP/HPC 15-50-5	891	336	555	889	336	553	232	160	149	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	68
HP/HPC 15-50-6	992	360	632	990	360	630	277	300	182	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	90
HP/HPC 15-50-7	1037	360	677	1035	360	675	277	300	182	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	92
HP/HPC 15-50-8	1118	396	722	1116	396	720	279	300	181	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	105
HP/HPC 15-50-9	1163	396	767	1161	396	765	279	300	181	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	107
HP/HPC 15-50-10	1355	466	889	1353	466	887	302	350	202	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	149
HP/HPC 15-50-12	1445	466	979	1443	466	977	302	350	202	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	153
HP/HPC 15-50-14	1535	466	1069	1533	466	1067	302	350	202	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	157
HP/HPC 15-50-17	1670	466	1204	1668	466	1202	302	350	202	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	175



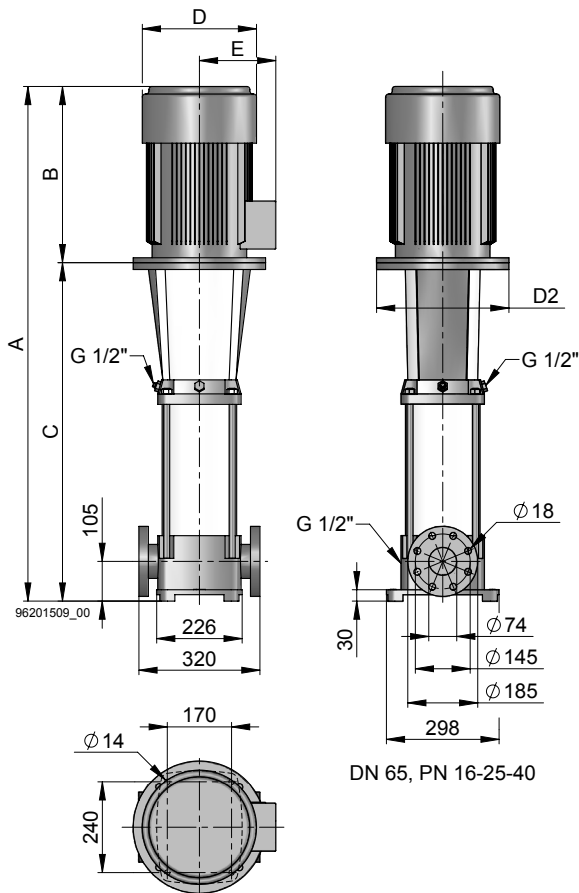
Pump	Motor			Maximum permissible				Liquid temperature [°C]	Article no.	
	P_2 [kW]	U [V]	I [A]	operating pressure HP [bar]	HPC [bar]	inlet pressure HP [bar]	HPC [bar]		HP	HPC
HP/HPC 20-50-1	1.1	3x400	2.40	16	25	8	8	-20 to 120	3018700601	3019701601
HP/HPC 20-50-2	2.2	3x400	4.55	16	25	8	8	-20 to 120	3018700602	3019701602
HP/HPC 20-50-3	4	3x400	7.80	16	25	8	8	-20 to 120	3018700603	3019701603
HP/HPC 20-50-4	5.5	3x400	10.3	16	25	10	10	-20 to 120	3018700604	3019701604
HP/HPC 20-50-5	5.5	3x400	10.3	16	25	8.8	10	-20 to 120	3018700605	3019701605
HP/HPC 20-50-6	7.5	3x400	13.8	16	25	7.3	10	-20 to 120	3018700606	3019701606
HP/HPC 20-50-7	7.5	3x400	13.8	16	25	5.9	10	-20 to 120	3018700607	3019701607
HP/HPC 20-50-8	11	3x400	20.0	16	25	4.4	10	-20 to 120	3018700608	3019701608
HP/HPC 20-50-10	11	3x400	20.0	16	25	1.5	10	-20 to 120	3018700610	3019701610
HP/HPC 20-50-12	15	3x400	26.5	25	25	7.6	7.6	-20 to 120	3018700612	3019701612
HP/HPC 20-50-14	15	3x400	26.5	25	25	4.7	4.7	-20 to 120	3018700614	3019701614
HP/HPC 20-50-17	18.5	3x400	32.5	25	25	0.3	0.3	-20 to 120	3018700617	3019701617

Connection F


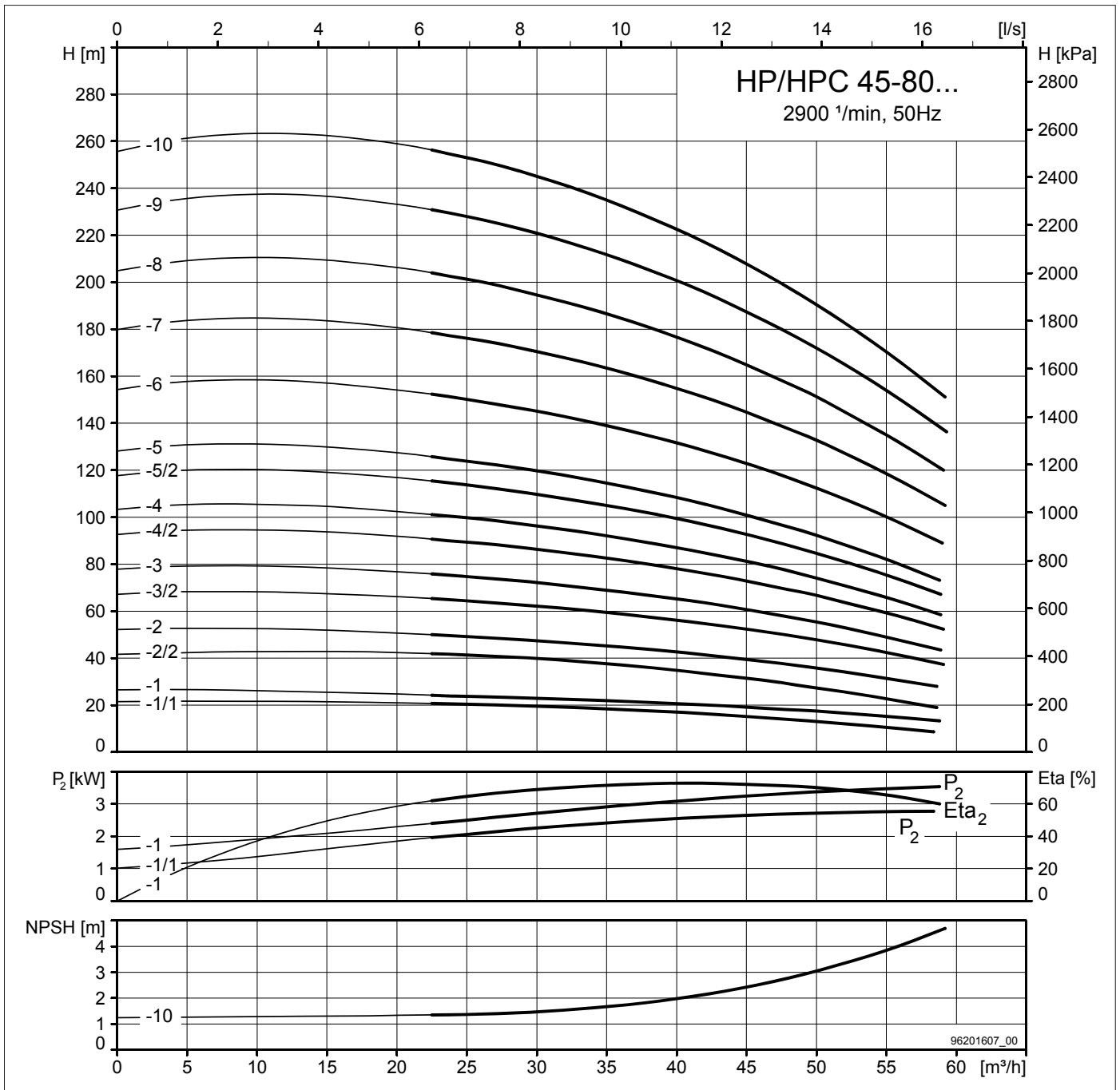
Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP			HPC			HP / HPC				HP	HPC	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP/HPC 20-50-1	628	228	400	625	228	397	158	-	136	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	41
HP/HPC 20-50-2	709	294	415	707	294	413	180	-	133	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	49
HP/HPC 20-50-3	801	336	465	799	336	463	232	160	149	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	65
HP/HPC 20-50-4	902	360	542	900	360	540	277	300	182	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	87
HP/HPC 20-50-5	947	360	587	945	360	585	277	300	182	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	89
HP/HPC 20-50-6	1028	396	632	1026	396	630	279	300	181	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	101
HP/HPC 20-50-7	1073	396	677	1071	396	675	279	300	181	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	103
HP/HPC 20-50-8	1265	466	799	1263	466	797	302	350	202	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	146
HP/HPC 20-50-10	1355	466	889	1353	466	887	302	350	202	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	149
HP/HPC 20-50-12	1445	466	979	1443	466	977	302	350	202	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	166
HP/HPC 20-50-14	1535	466	1069	1533	466	1067	302	350	202	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	170
HP/HPC 20-50-17	1670	466	1204	1668	466	1202	302	350	202	-	F: DN 50, PN 16-25	F: DN 50, PN 16-25	188



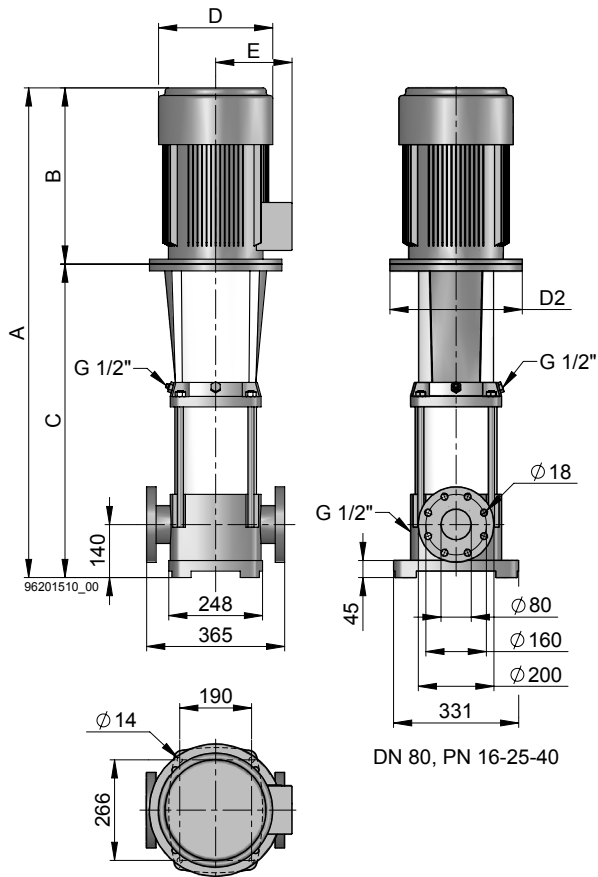
Pump	Motor			Maximum permissible				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	operating pressure HP [bar]	HPC [bar]	inlet pressure HP [bar]	HPC [bar]		HP	HPC
HP/HPC 32-65-1/1	1.5	3x400	3.25	16	16	4	4	-30 to 120	3018601011	3018611011
HP/HPC 32-65-1	2.2	3x400	4.55	16	16	4	4	-30 to 120	3018601010	3018611010
HP/HPC 32-65-2/2	3	3x400	6.10	16	16	4	4	-30 to 120	3018601022	3018611022
HP/HPC 32-65-2	4	3x400	7.80	16	16	4	4	-30 to 120	3018601020	3018611020
HP/HPC 32-65-3/2	5.5	3x400	10.3	16	16	4	4	-30 to 120	3018601032	3018611032
HP/HPC 32-65-3	5.5	3x400	10.3	16	16	4	4	-30 to 120	3018601030	3018611030
HP/HPC 32-65-4/2	7.5	3x400	13.8	16	16	4	4	-30 to 120	3018601042	3018611042
HP/HPC 32-65-4	7.5	3x400	13.8	16	16	4	4	-30 to 120	3018601040	3018611040
HP/HPC 32-65-5	11	3x400	20.0	16	16	6.3	6.3	-30 to 120	3018601050	3018611050
HP/HPC 32-65-6	11	3x400	20.0	16	16	4.3	4.3	-30 to 120	3018601060	3018611060
HP/HPC 32-65-7	15	3x400	26.5	16	16	2.4	2.4	-30 to 120	3018601070	3018611070
HP/HPC 32-65-8	15	3x400	26.5	30	30	10	10	-30 to 120	3018601080	3018611080
HP/HPC 32-65-9	18.5	3x400	32.5	30	30	10	10	-30 to 120	3018601090	3018611090
HP/HPC 32-65-10	18.5	3x400	32.5	30	30	10	10	-30 to 120	3018601100	3018611100
HP/HPC 32-65-11	22	3x400	37.5	30	30	8.6	8.6	-30 to 120	3018601110	3018611110
HP/HPC 32-65-12	22	3x400	37.5	30	30	6.7	6.7	-30 to 120	3018601120	3018611120

Connection F


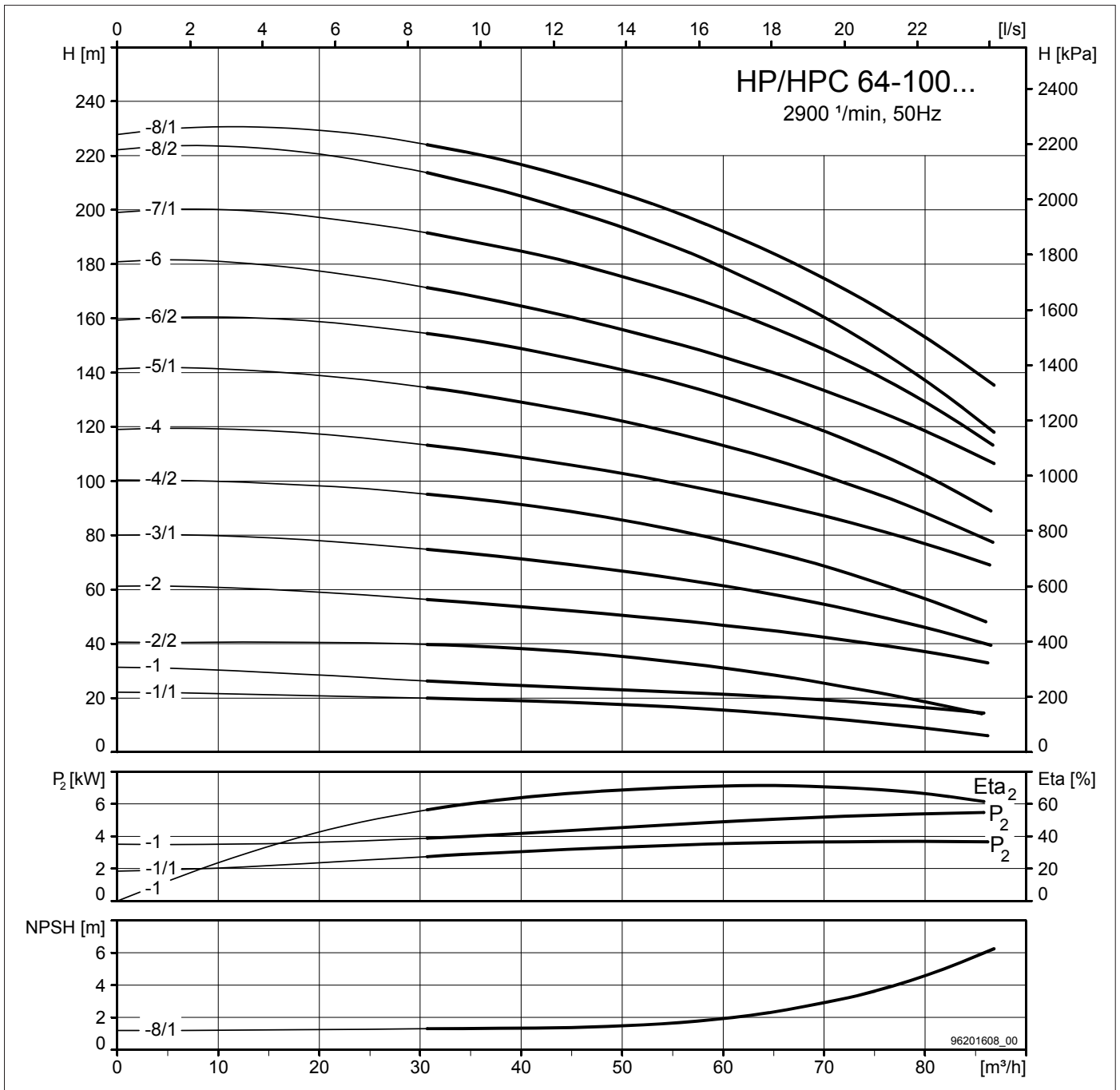
Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP			HPC			HP / HPC				HP	HPC	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP/HPC 32-65-1/1	799	294	505	799	294	505	180	-	133	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	66
HP/HPC 32-65-1	799	294	505	799	294	505	180	-	133	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	66
HP/HPC 32-65-2/2	914	339	575	914	339	575	200	160	155	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	75
HP/HPC 32-65-2	911	336	575	911	336	575	232	160	149	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	84
HP/HPC 32-65-3/2	1005	360	645	1005	360	645	277	300	182	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	99
HP/HPC 32-65-3	1005	360	645	1005	360	645	277	300	182	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	99
HP/HPC 32-65-4/2	1111	396	715	1111	396	715	279	300	181	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	112
HP/HPC 32-65-4	1111	396	715	1111	396	715	279	300	181	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	112
HP/HPC 32-65-5	1361	466	895	1361	466	895	302	350	202	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	160
HP/HPC 32-65-6	1431	466	965	1431	466	965	302	350	202	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	163
HP/HPC 32-65-7	1501	466	1035	1501	466	1035	302	350	202	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	179
HP/HPC 32-65-8	1571	466	1105	1571	466	1105	302	350	202	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	185
HP/HPC 32-65-9	1641	466	1175	1641	466	1175	302	350	202	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	202
HP/HPC 32-65-10	1711	466	1245	1711	466	1245	302	350	202	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	205
HP/HPC 32-65-11	1894	579	1315	1894	579	1315	348	350	272	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	222
HP/HPC 32-65-12	1964	579	1385	1964	579	1385	348	350	272	-	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	226



Pump	Motor			Maximum permissible				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	operating pressure		inlet pressure			HP	HPC
Typ				HP [bar]	HPC [bar]	HP [bar]	HPC [bar]			
HP/HPC 45-80-1/1	3	3x400	6.10	16	16	4	4	-30 to 120	3018602011	3018612011
HP/HPC 45-80-1	4	3x400	7.80	16	16	4	4	-30 to 120	3018602010	3018612010
HP/HPC 45-80-2/2	5.5	3x400	10.3	16	16	4	4	-30 to 120	3018602022	3018612022
HP/HPC 45-80-2	7.5	3x400	13.8	16	16	4	4	-30 to 120	3018602020	3018612020
HP/HPC 45-80-3/2	11	3x400	20.0	16	16	9.6	9.6	-30 to 120	3018602032	3018612032
HP/HPC 45-80-3	11	3x400	20.0	16	16	8.4	8.4	-30 to 120	3018602030	3018612030
HP/HPC 45-80-4/2	15	3x400	26.5	16	16	6.9	6.9	-30 to 120	3018602042	3018612042
HP/HPC 45-80-4	15	3x400	26.5	16	16	6	6	-30 to 120	3018602040	3018612040
HP/HPC 45-80-5/2	18.5	3x400	32.5	16	16	4.5	4.5	-30 to 120	3018602052	3018612052
HP/HPC 45-80-5	18.5	3x400	32.5	16	16	3.5	3.5	-30 to 120	3018602050	3018612050
HP/HPC 45-80-6	22	3x400	37.5	30	30	15	15	-30 to 120	3018602060	3018612060
HP/HPC 45-80-7	30	3x400	51.5	30	30	12.5	12.5	-30 to 120	3018602070	3018612070
HP/HPC 45-80-8	30	3x400	51.5	30	30	10	10	-30 to 120	3018602080	3018612080
HP/HPC 45-80-9	37	3x400	64.0	30	30	7.4	7.4	-30 to 120	3018602090	3018612090
HP/HPC 45-80-10	37	3x400	64.0	30	30	5	5	-30 to 120	3018602100	3018612100

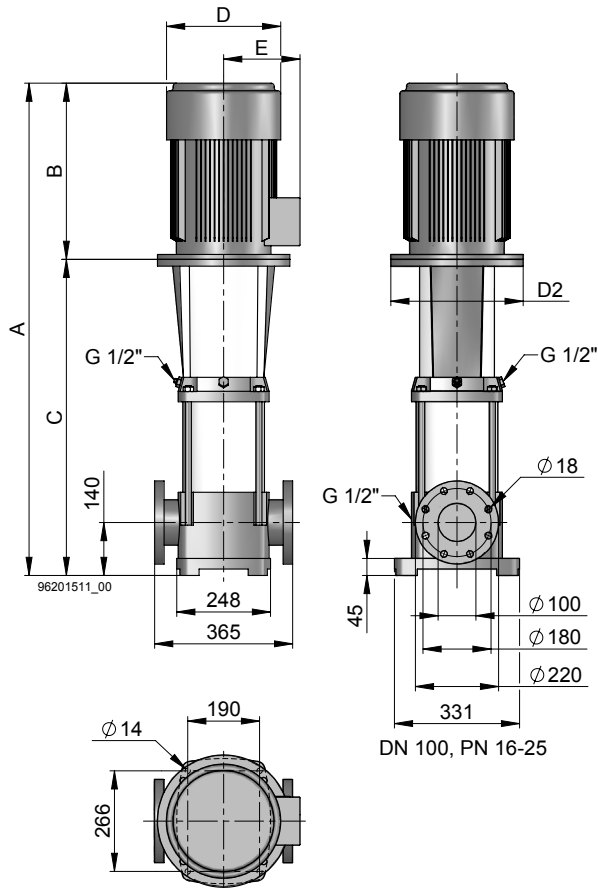
Connection F


Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP			HPC			HP / HPC				HP	HPC	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP/HPC 45-80-1/1	898	339	559	898	339	559	200	160	155	-	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	80
HP/HPC 45-80-1	895	336	559	895	336	559	232	160	149	-	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	89
HP/HPC 45-80-2/2	999	360	639	999	360	639	277	300	182	-	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	104
HP/HPC 45-80-2	1035	396	639	1035	396	639	279	300	181	-	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	114
HP/HPC 45-80-3/2	1295	466	829	1295	466	829	302	350	202	-	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	164
HP/HPC 45-80-3	1295	466	829	1295	466	829	302	350	202	-	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	164
HP/HPC 45-80-4/2	1375	466	909	1375	466	909	302	350	202	-	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	180
HP/HPC 45-80-4	1375	466	909	1375	466	909	302	350	202	-	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	180
HP/HPC 45-80-5/2	1455	466	989	1455	466	989	302	350	202	-	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	197
HP/HPC 45-80-5	1455	466	989	1455	466	989	302	350	202	-	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	197
HP/HPC 45-80-6	1648	579	1069	1648	579	1069	348	350	272	-	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	218
HP/HPC 45-80-7	1738	589	1149	1738	589	1149	351	400	271	-	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	339
HP/HPC 45-80-8	1818	589	1229	1818	589	1229	351	400	271	-	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	343
HP/HPC 45-80-9	1898	589	1309	1898	589	1309	351	400	271	-	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	363
HP/HPC 45-80-10	1978	589	1389	1978	589	1389	351	400	271	-	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	367

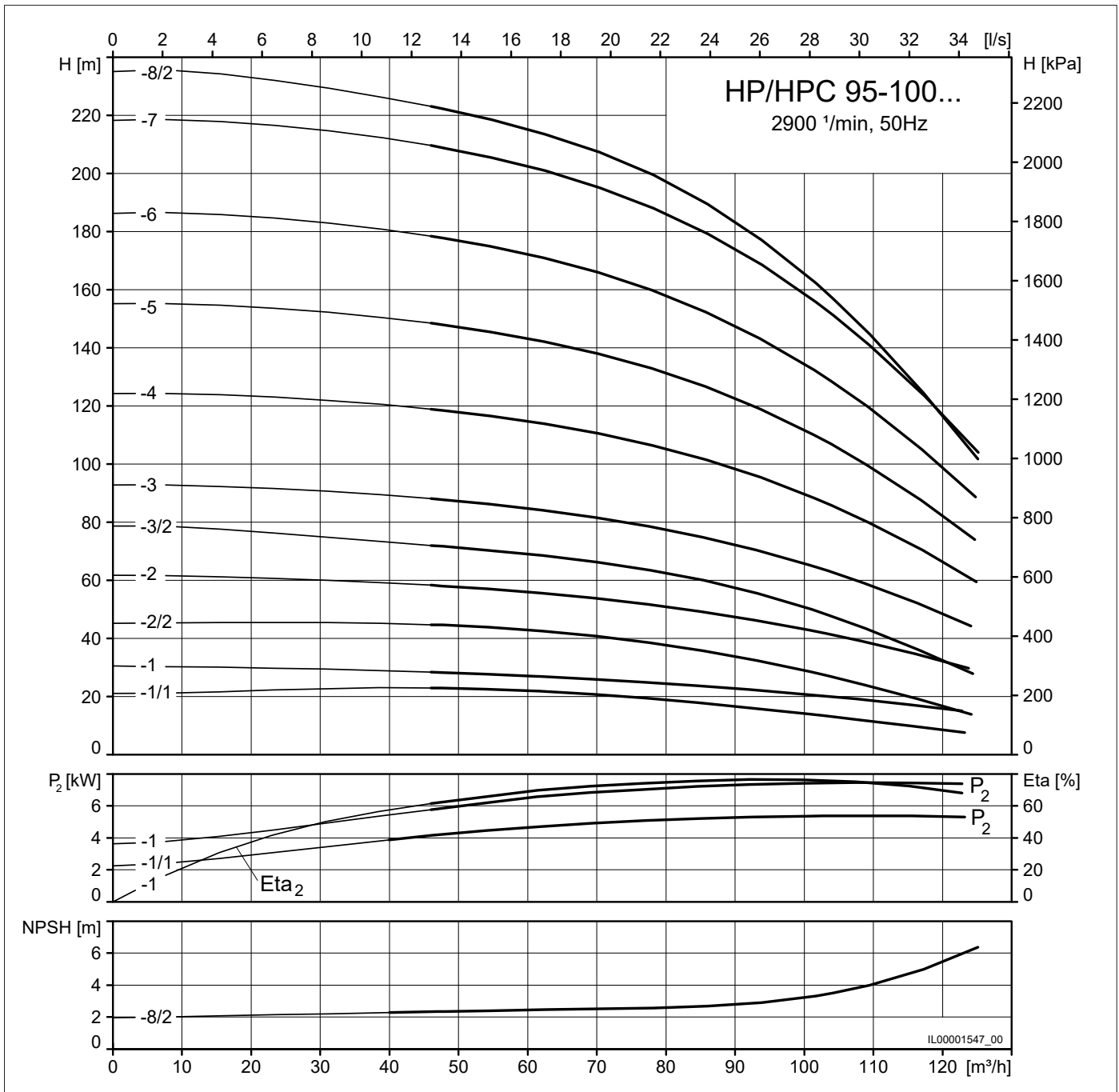


Pump	Motor			Maximum permissible				Liquid temperature	Article no.	
	P2	U	I	operating pressure	inlet pressure	HP	HPC		HP	HPC
Typ	[kW]	[V]	[A]	HP	HPC	HP	HPC	[°C]		
HP/HPC 64-100-1/1	4	3x400	7.80	16	16	4	4	-30 to 120	3018603011	3018613011
HP/HPC 64-100-1	5.5	3x400	10.3	16	16	4	4	-30 to 120	3018603010	3018613010
HP/HPC 64-100-2/2	7.5	3x400	13.8	16	16	4	4	-30 to 120	3018603022	3018613022
HP/HPC 64-100-2	11	3x400	20.0	16	16	10	10	-30 to 120	3018603020	3018613020
HP/HPC 64-100-3/1	15	3x400	26.5	16	16	8.2	8.2	-30 to 120	3018603031	3018613031
HP/HPC 64-100-4/2	18.5	3x400	32.5	16	16	6.3	6.3	-30 to 120	3018603042	3018613042
HP/HPC 64-100-4	22	3x400	37.5	16	16	4.4	4.4	-30 to 120	3018603040	3018613040
HP/HPC 64-100-5/1	30	3x400	51.5	16	16	2.4	2.4	-30 to 120	3018603051	3018613051
HP/HPC 64-100-6/2	30	3x400	51.5	30	30	14.5	14.5	-30 to 120	3018603062	3018613062
HP/HPC 64-100-6	37	3x400	64.0	30	30	12.6	12.6	-30 to 120	3018603060	3018613060
HP/HPC 64-100-7/1	37	3x400	64.0	30	30	10.7	10.7	-30 to 120	3018603071	3018613071
HP/HPC 64-100-8/2	45	3x400	77.5	30	30	8.9	8.9	-30 to 120	3018603082	3018613082
HP/HPC 64-100-8/1	45	3x400	77.5	30	30	8	8	-30 to 120	3018603081	3018613081

Connection F

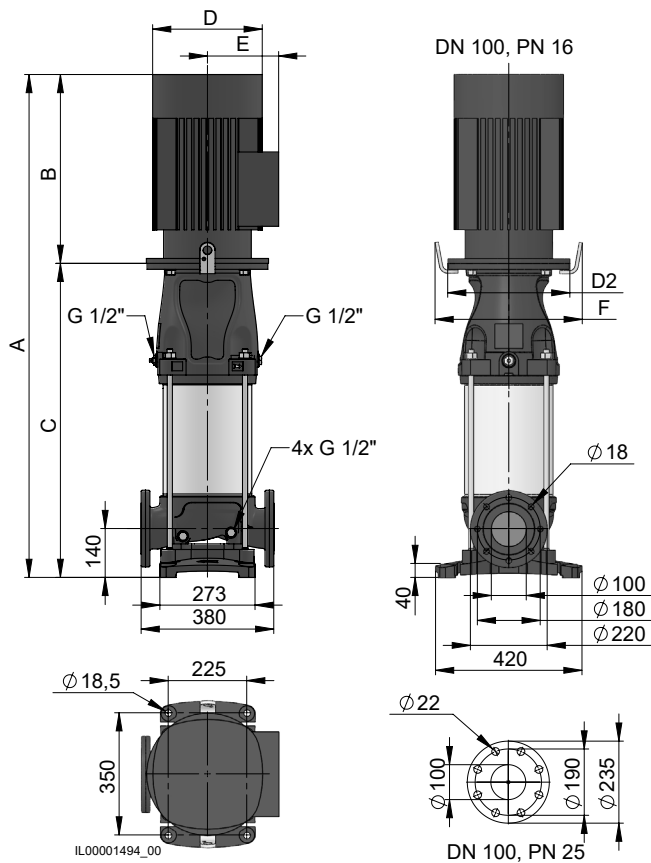


Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP			HPC			HP / HPC				HP	HPC	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP/HPC 64-100-1/1	897	336	561	897	336	561	232	160	149	-	F: DN 100, PN 16	F: DN 100, PN 16	91
HP/HPC 64-100-1	921	360	561	921	360	561	277	300	182	-	F: DN 100, PN 16	F: DN 100, PN 16	102
HP/HPC 64-100-2/2	1040	396	644	1040	396	644	279	300	181	-	F: DN 100, PN 16	F: DN 100, PN 16	117
HP/HPC 64-100-2	1220	466	754	1220	466	754	302	350	202	-	F: DN 100, PN 16	F: DN 100, PN 16	162
HP/HPC 64-100-3/1	1302	466	836	1302	466	836	302	350	202	-	F: DN 100, PN 16	F: DN 100, PN 16	180
HP/HPC 64-100-4/2	1385	466	919	1385	466	919	302	350	202	-	F: DN 100, PN 16	F: DN 100, PN 16	197
HP/HPC 64-100-4	1498	579	919	1498	579	919	348	350	272	-	F: DN 100, PN 16	F: DN 100, PN 16	211
HP/HPC 64-100-5/1	1590	589	1001	1590	589	1001	351	400	271	-	F: DN 100, PN 16	F: DN 100, PN 16	333
HP/HPC 64-100-6/2	1673	589	1084	1673	589	1084	351	400	271	-	F: DN 100, PN 25	F: DN 100, PN 25	340
HP/HPC 64-100-6	1673	589	1084	1673	589	1084	351	400	271	-	F: DN 100, PN 25	F: DN 100, PN 25	355
HP/HPC 64-100-7/1	1755	589	1166	1755	589	1166	351	400	271	-	F: DN 100, PN 25	F: DN 100, PN 25	359
HP/HPC 64-100-8/2	1899	650	1249	1899	650	1249	445	450	325	-	F: DN 100, PN 25	F: DN 100, PN 25	448
HP/HPC 64-100-8/1	1899	650	1249	1899	650	1249	445	450	325	-	F: DN 100, PN 25	F: DN 100, PN 25	448

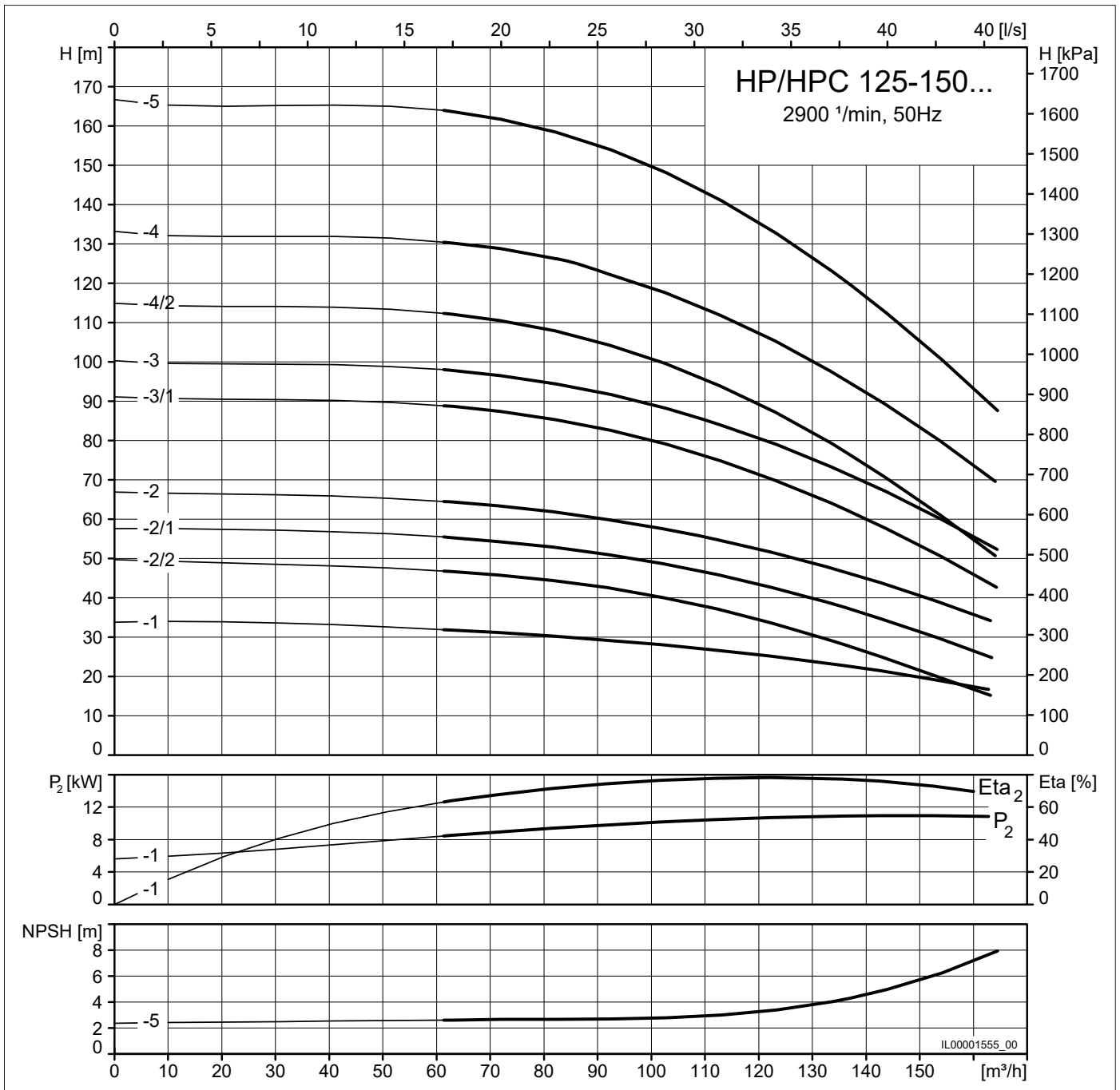


Pump Typ	Motor			Maximum permissible				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	operating pressure		inlet pressure			HP	HPC
				HP [bar]	HPC [bar]	HP [bar]	HPC [bar]			
HP/HPC 95-100-1/1	5.5	3x400	11	16	16	4	4	-20 to +120	7000000522	7000000549
HP/HPC 95-100-1	7.5	3x400	14.2	16	16	4	4	-20 to +120	7000000523	7000000550
HP/HPC 95-100-2/2	11	3x400	20.3	16	16	10	10	-20 to +120	7000000524	7000000551
HP/HPC 95-100-2	15	3x400	27	16	16	10	10	-20 to +120	7000000525	7000000552
HP/HPC 95-100-3/2	18.5	3x400	33	16	16	8.5	8.5	-20 to +120	7000000526	7000000553
HP/HPC 95-100-3	22	3x400	39.5	16	16	7	7	-20 to +120	7000000527	7000000554
HP/HPC 95-100-4	30	3x400	53.5	16	16	3.9	3.9	-20 to +120	7000000528	7000000555
HP/HPC 95-100-5	37	3x400	65.5	16	16	0.9	0.9	-20 to +120	7000000529	7000000556
HP/HPC 95-100-6	45	3x400	77.5	25	25	6.8	6.8	-20 to +120	7000000530	7000000557
HP/HPC 95-100-7	55	3x400	94.5	25	25	3.7	3.7	-20 to +120	7000000531	7000000558
HP/HPC 95-100-8/2	55	3x400	94.5	25	25	2.1	2.1	-20 to +120	7000000532	7000000559

Connection F

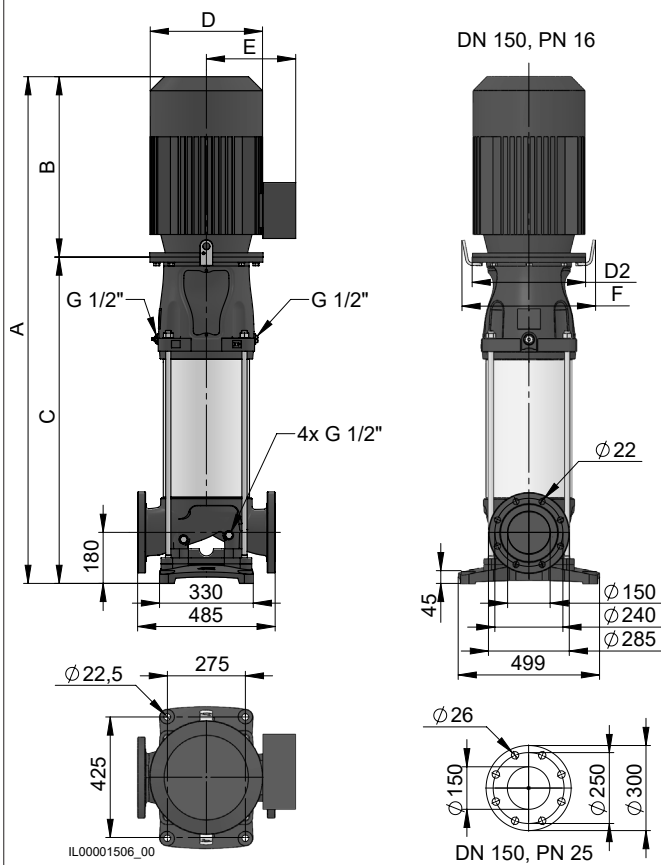


Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP			HPC			HP / HPC				HP	HPC	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP/HPC 95-100-1/1	1080	391	689	1080	391	689	220	300	134	370	F: DN 100, PN 16	F: DN 100, PN 16	137
HP/HPC 95-100-1	1068	379	689	1068	379	689	260	300	159	370	F: DN 100, PN 16	F: DN 100, PN 16	147
HP/HPC 95-100-2/2	1266	471	795	1266	471	795	314	350	204	421	F: DN 100, PN 16	F: DN 100, PN 16	194
HP/HPC 95-100-2	1266	471	795	1266	471	795	314	350	204	421	F: DN 100, PN 16	F: DN 100, PN 16	206
HP/HPC 95-100-3/2	1415	515	900	1415	515	900	314	350	204	421	F: DN 100, PN 16	F: DN 100, PN 16	224
HP/HPC 95-100-3	1441	541	900	1441	541	900	314	350	204	421	F: DN 100, PN 16	F: DN 100, PN 16	239
HP/HPC 95-100-4	1620	611	1009	1620	611	1009	396	400	315	471	F: DN 100, PN 16	F: DN 100, PN 16	348
HP/HPC 95-100-5	1750	636	1114	1750	636	1114	396	400	315	471	F: DN 100, PN 16	F: DN 100, PN 16	379
HP/HPC 95-100-6	1946	708	1238	1946	708	1238	449	450	338	582	F: DN 100, PN 25/40	F: DN 100, PN 25/40	480
HP/HPC 95-100-7	2089	747	1342	2089	747	1342	497	550	410	727	F: DN 100, PN 25/40	F: DN 100, PN 25/40	598
HP/HPC 95-100-8/2	2193	747	1446	2193	747	1446	497	550	410	727	F: DN 100, PN 25/40	F: DN 100, PN 25/40	604

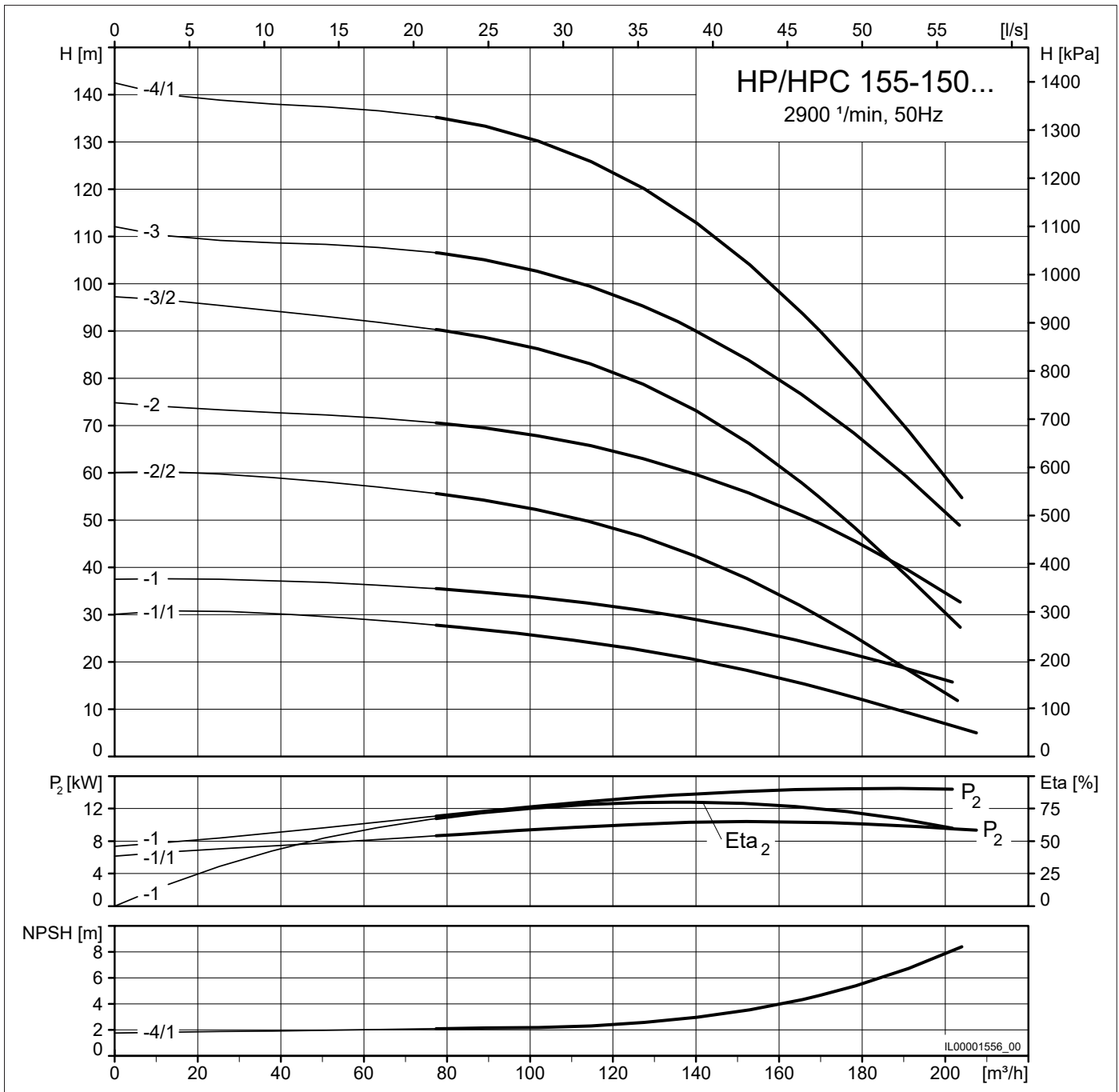


Pump	Motor			Maximum permissible				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	operating pressure HP [bar]	HPC [bar]	inlet pressure HP [bar]	HPC [bar]		HP	HPC
HP/HPC 125-150-1	11	3x400	20.3	16	16	10	10	-20 to +120	7000000533	7000000560
HP/HPC 125-150-2/2	15	3x400	27	16	16	10	10	-20 to +120	7000000534	7000000561
HP/HPC 125-150-2/1	18.5	3x400	33	16	16	10	10	-20 to +120	7000000535	7000000562
HP/HPC 125-150-2	22	3x400	39.5	16	16	9.5	9.5	-20 to +120	7000000536	7000000563
HP/HPC 125-150-3/1	30	3x400	53.5	16	16	7.1	7.1	-20 to +120	7000000537	7000000564
HP/HPC 125-150-3	37	3x400	65.5	16	16	6.2	6.2	-20 to +120	7000000538	7000000565
HP/HPC 125-150-4/2	37	3x400	65.5	16	16	4.7	4.7	-20 to +120	7000000539	7000000566
HP/HPC 125-150-4	45	3x400	77.5	16	16	3	3	-20 to +120	7000000540	7000000567
HP/HPC 125-150-5	55	3x400	94.5	25	25	8.7	8.7	-20 to +120	7000000541	7000000568

Connection F

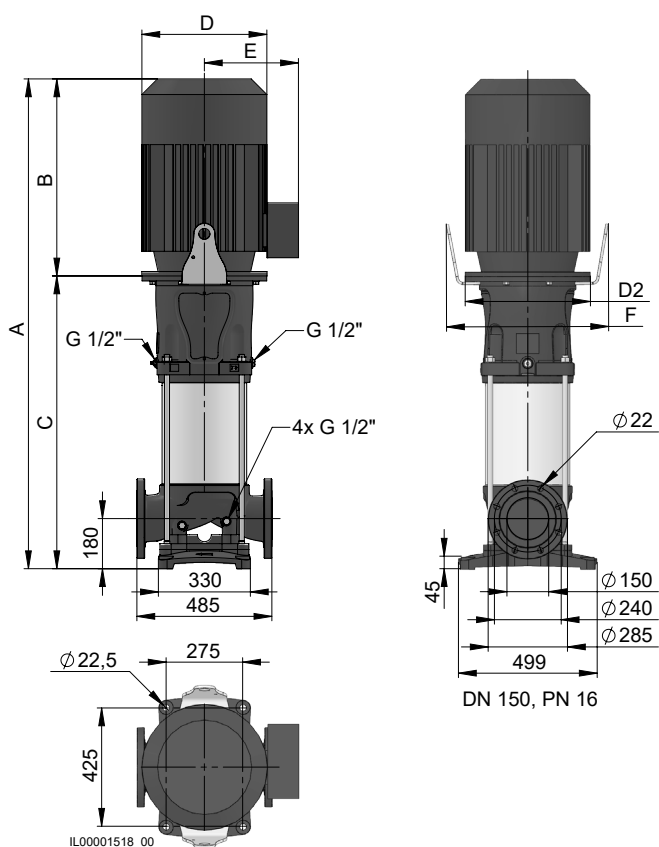


Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP			HPC			HP / HPC				HP	HPC	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP/HPC 125-150-1	1254	471	783	1254	471	783	314	350	204	421	F: DN 150, PN 16	F: DN 150, PN 16	233
HP/HPC 125-150-2/2	1376	471	905	1376	471	905	314	350	204	421	F: DN 150, PN 16	F: DN 150, PN 16	255
HP/HPC 125-150-2/1	1420	515	905	1420	515	905	314	350	204	421	F: DN 150, PN 16	F: DN 150, PN 16	268
HP/HPC 125-150-2	1446	541	905	1446	541	905	314	350	204	421	F: DN 150, PN 16	F: DN 150, PN 16	283
HP/HPC 125-150-3/1	1640	611	1029	1640	611	1029	396	400	315	471	F: DN 150, PN 16	F: DN 150, PN 16	396
HP/HPC 125-150-3	1665	636	1029	1665	636	1029	396	400	315	471	F: DN 150, PN 16	F: DN 150, PN 16	421
HP/HPC 125-150-4/2	1787	636	1151	1787	636	1151	396	400	315	471	F: DN 150, PN 16	F: DN 150, PN 16	432
HP/HPC 125-150-4	1882	708	1174	1882	708	1174	449	450	338	582	F: DN 150, PN 16	F: DN 150, PN 16	526
HP/HPC 125-150-5	2042	747	1295	2042	747	1295	497	550	410	727	F: DN 150, PN 25/40	F: DN 150, PN 25/40	647



Pump	Motor			Maximum permissible				Liquid temperature [°C]	Article no.	
	P_2 [kW]	U [V]	I [A]	operating pressure HP [bar]	operating pressure HPC [bar]	inlet pressure HP [bar]	inlet pressure HPC [bar]		HP	HPC
HP/HPC 155-150-1/1	11	3x400	20.3	16	16	10	10	-20 to +120	7000000542	7000000569
HP/HPC 155-150-1	15	3x400	27	16	16	10	10	-20 to +120	7000000543	7000000570
HP/HPC 155-150-2/2	22	3x400	39.5	16	16	10.1	10.1	-20 to +120	7000000544	7000000571
HP/HPC 155-150-2	30	3x400	53.5	16	16	8.7	8.7	-20 to +120	7000000545	7000000572
HP/HPC 155-150-3/2	37	3x400	65.5	16	16	6.5	6.5	-20 to +120	7000000546	7000000573
HP/HPC 155-150-3	45	3x400	77.5	16	16	5	5	-20 to +120	7000000547	7000000574
HP/HPC 155-150-4/1	55	3x400	94.5	16	16	2	2	-20 to +120	7000000548	7000000574

Connection F



Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP			HPC			HP / HPC				HP	HPC	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP/HPC 155-150-1/1	1254	471	783	1254	471	783	314	350	204	421	F: DN 150, PN 16	F: DN 150, PN 16	234
HP/HPC 155-150-1	1254	471	783	1254	471	783	314	350	204	421	F: DN 150, PN 16	F: DN 150, PN 16	245
HP/HPC 155-150-2/2	1446	541	905	1446	541	905	314	350	204	421	F: DN 150, PN 16	F: DN 150, PN 16	284
HP/HPC 155-150-2	1518	611	907	1518	611	907	396	400	315	471	F: DN 150, PN 16	F: DN 150, PN 16	396
HP/HPC 155-150-3/2	1665	636	1029	1665	636	1029	396	400	315	471	F: DN 150, PN 16	F: DN 150, PN 16	423
HP/HPC 155-150-3	1760	708	1052	1760	708	1052	449	450	338	582	F: DN 150, PN 16	F: DN 150, PN 16	517
HP/HPC 155-150-4/1	1920	747	1173	1920	747	1173	497	550	410	727	F: DN 150, PN 16	F: DN 150, PN 16	637

High pressure centrifugal pumps with infinitely variable speed adjustment

HP-E.../HPC-E...

1 x 230 V

3 x 400 V

Type designation

HP C -E 38 - 65 -5 / 2

High-pressure pump

Series with increased corrosion resistance

With integrated frequency converter

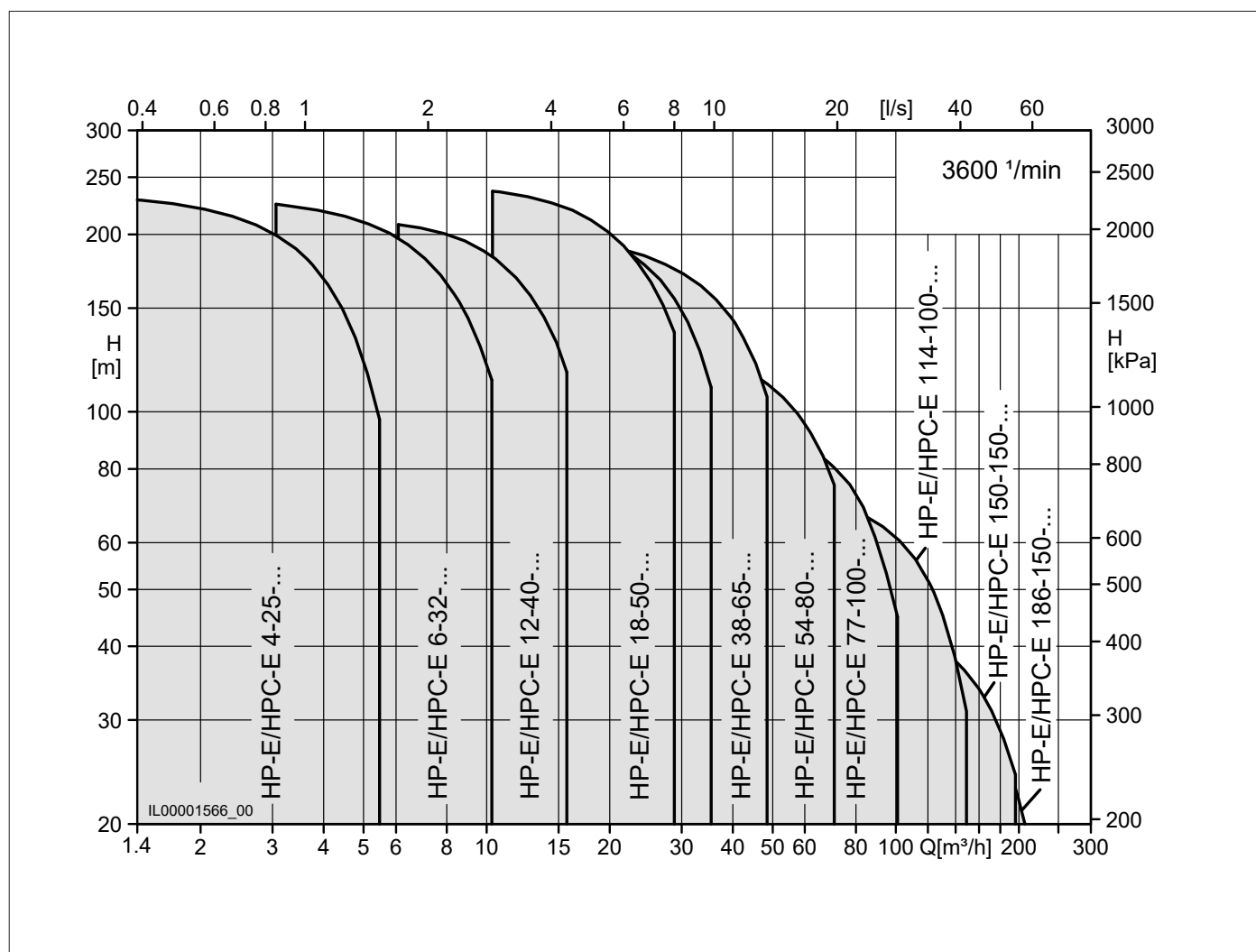
Nominal flow rate in m³/h

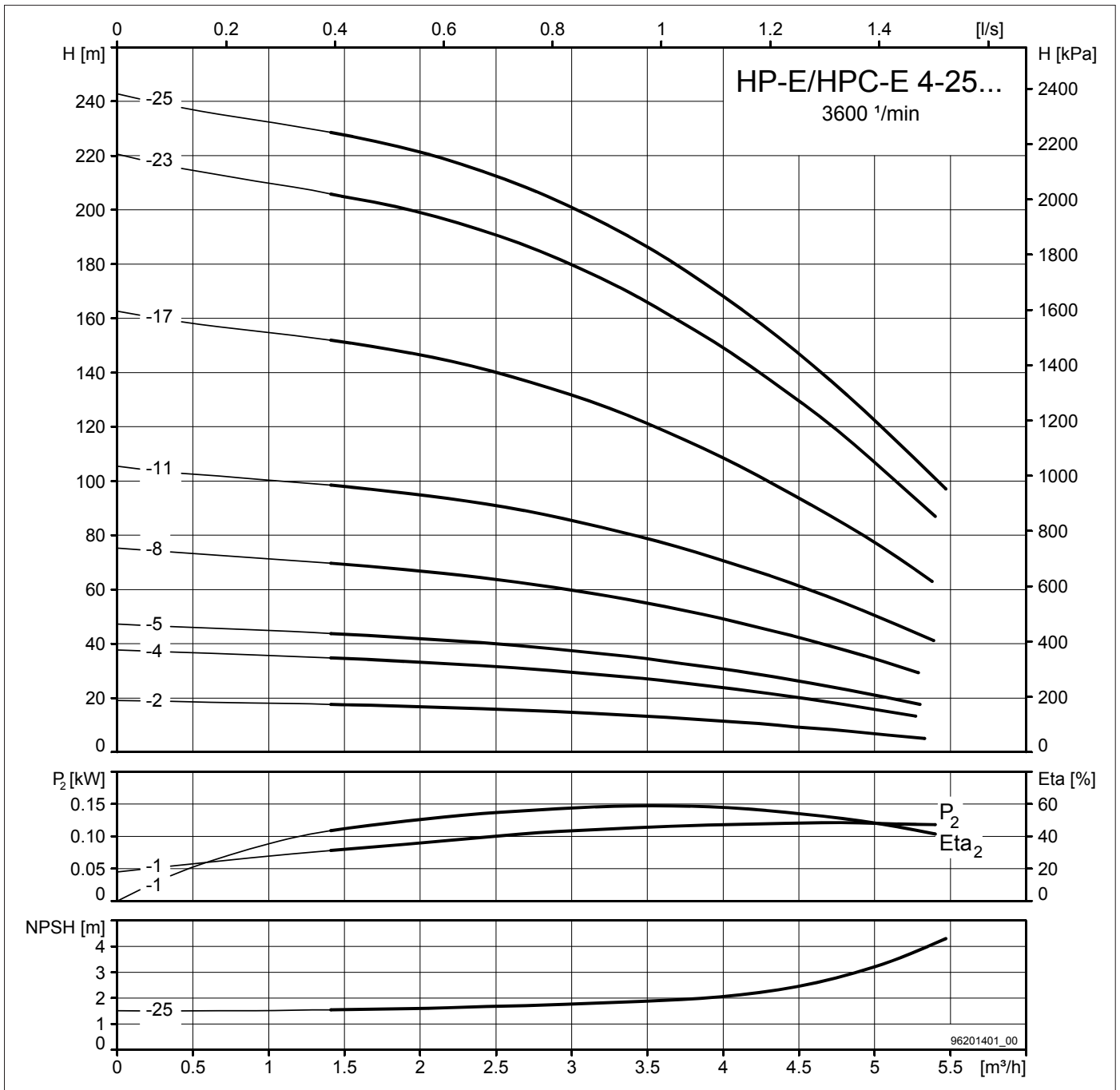
Suction branch / Discharge branch rated diameter

Number of stages

5 = Stage

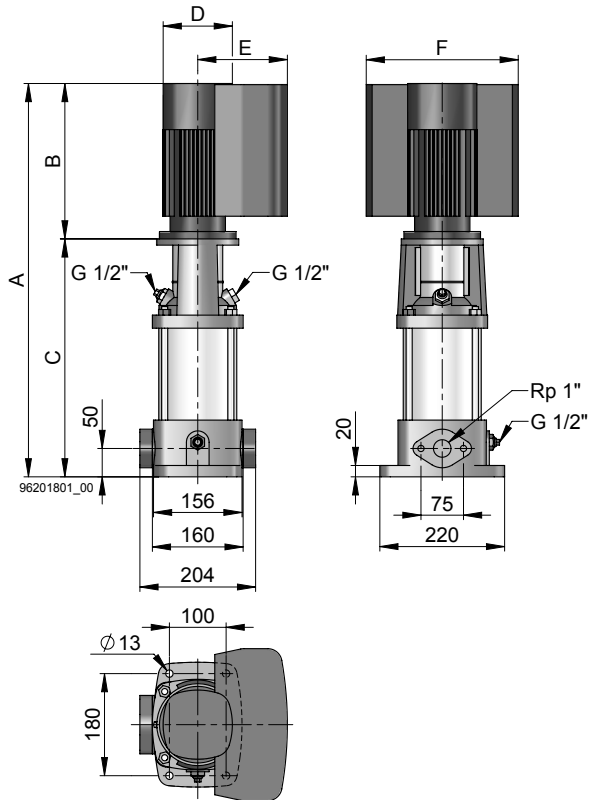
2 = Number of impellers with reduced diameter



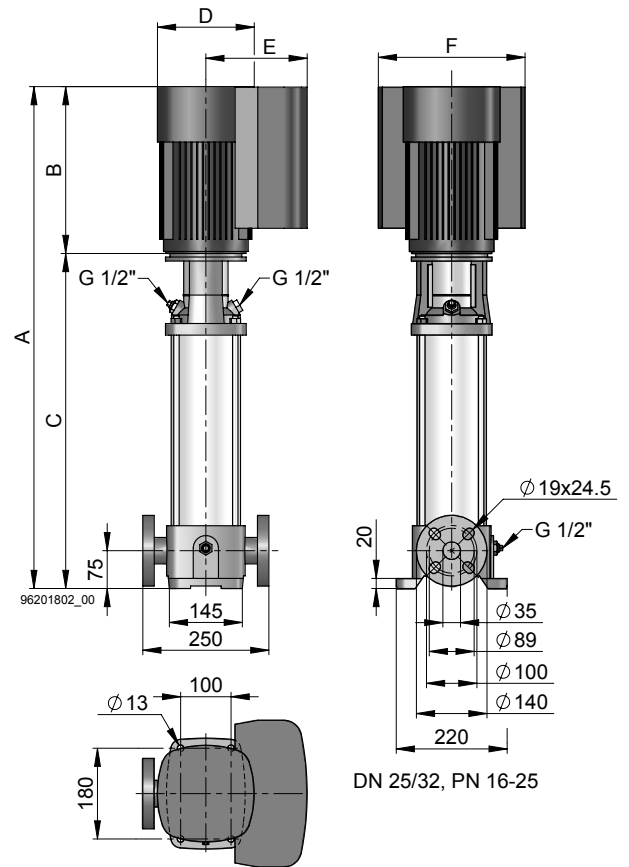


Pump Type	Motor			Maximum permissible operating pressure				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	HP-E [bar]	HPC-E [bar]	HP-E [bar]	HPC-E [bar]		HP-E	HPC-E
HP-E / HPC-E 4-25-2	0.37	1x230	2.4	16	25	10	10	-20 to 120	3020000202	3021000202
HP-E / HPC-E 4-25-4	0.55	1x230	3.5	16	25	10	10	-20 to 120	3020000204	3021000204
HP-E / HPC-E 4-25-5	0.75	1x230	4.7	16	25	10	10	-20 to 120	3020000205	3021000205
HP-E / HPC-E 4-25-8	1.1	1x230	6.7	16	25	8.6	10	-20 to 120	3020000208	3021000208
HP-E / HPC-E 4-25-11	1.5	3x400	2.9	16	25	5.7	10	-20 to 120	3020000211	3021000211
HP-E / HPC-E 4-25-17	2.2	3x400	4.2	16	25	0	9.1	-20 to 120	3020000217	3021000217
HP-E / HPC-E 4-25-23	3	3x400	5.8	25	25	3.4	3.4	-20 to 120	3020000223	3021000223
HP-E / HPC-E 4-25-25	4	3x400	7.6	25	25	1.2	1.2	-20 to 120	3020000225	3021000225

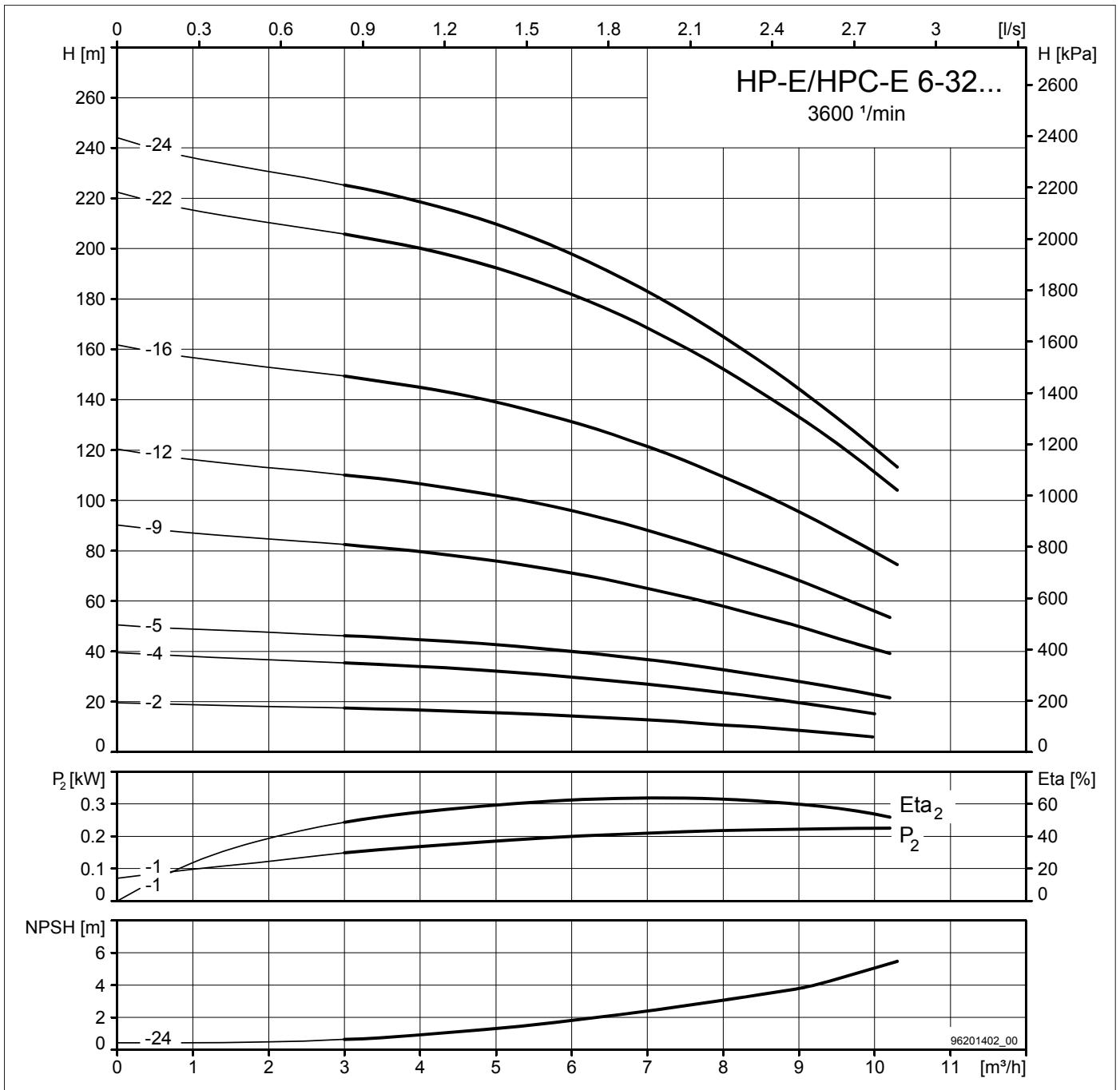
Connection A



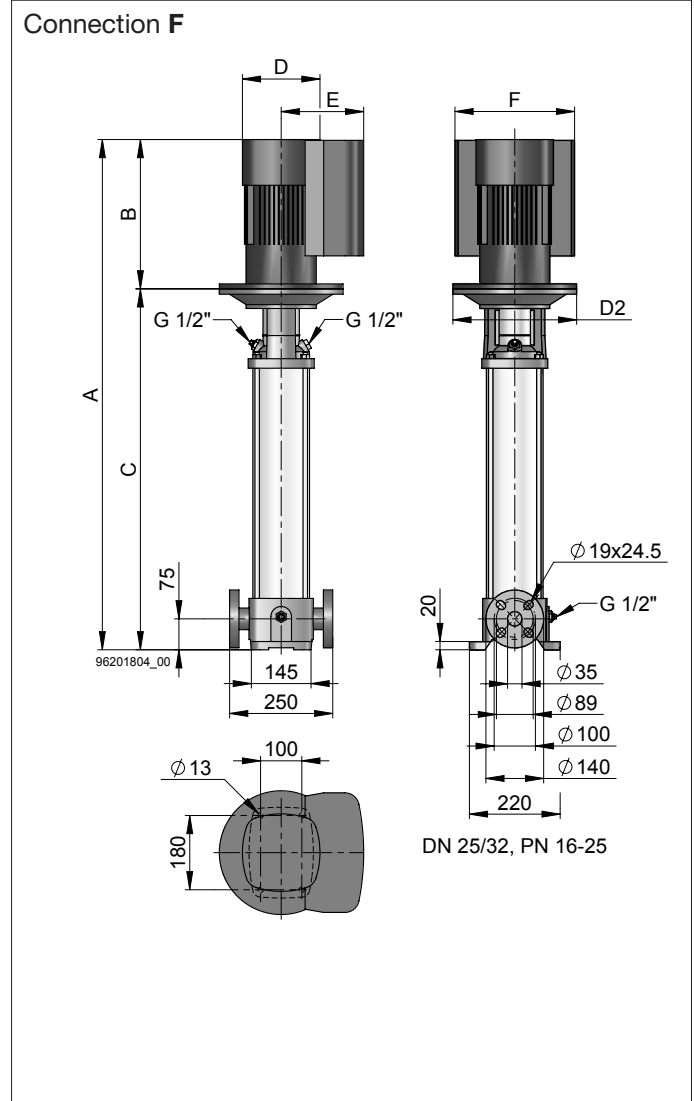
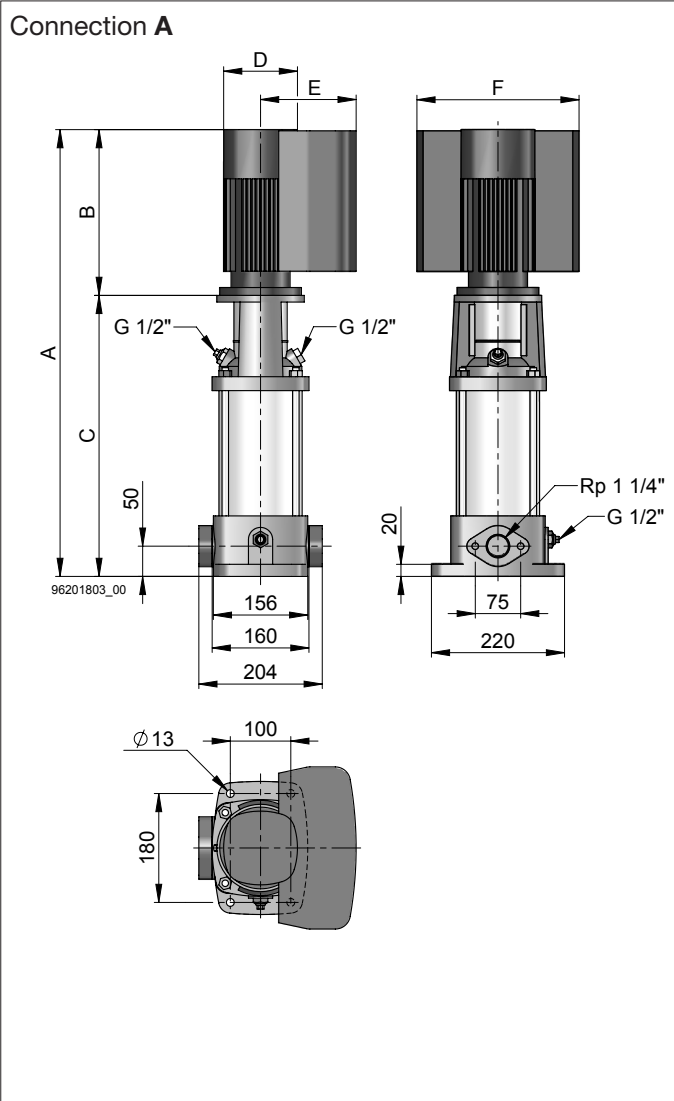
Connection F



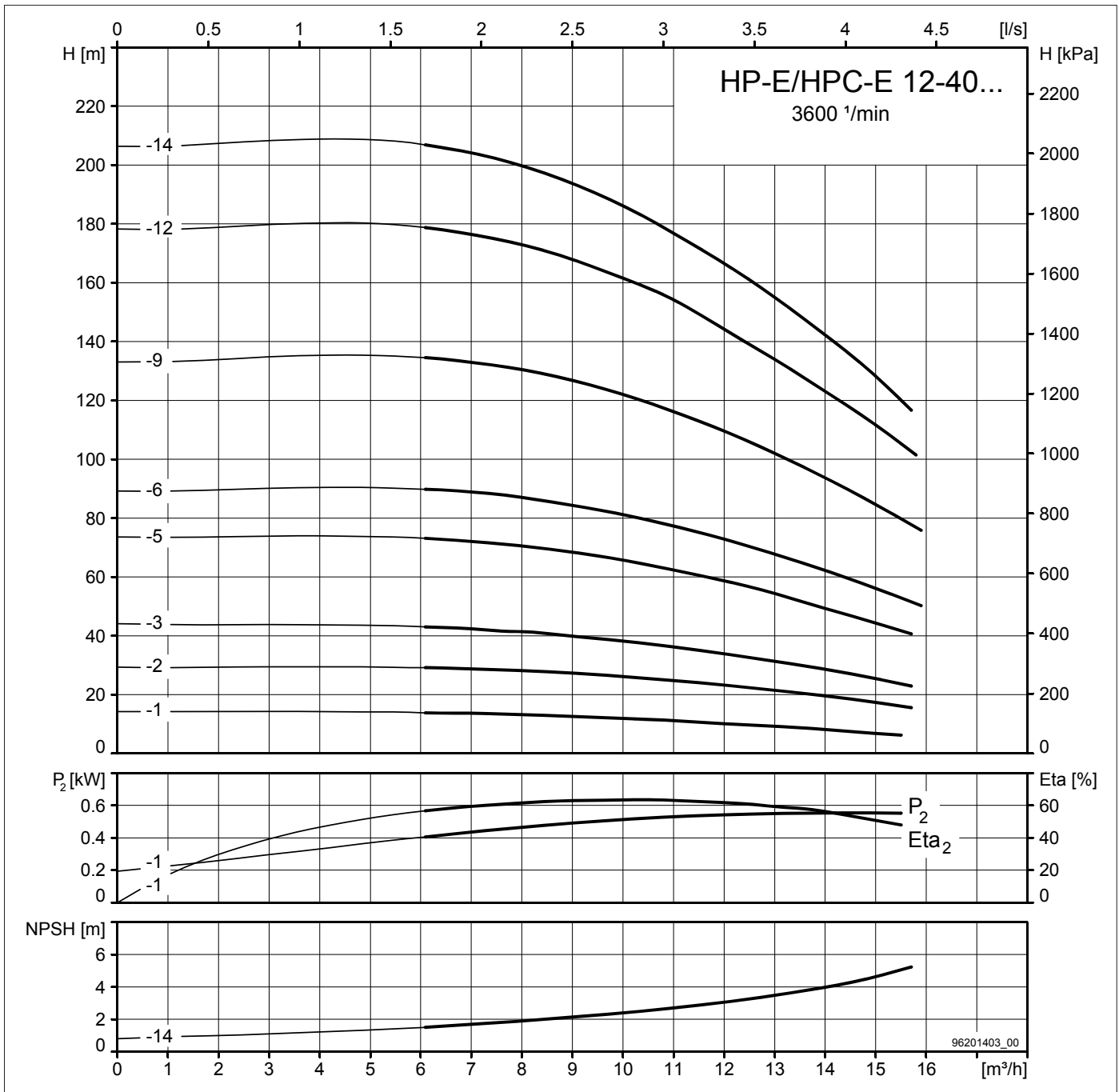
Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP-E			HPC-E			HP-E / HPC-E				HP-E	HPC-E	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP-E / HPC-E 4-25-2	468	214	254	496	214	282	122	-	158	212	A: Rp 1"	F: DN 25/32, PN 16-25	23
HP-E / HPC-E 4-25-4	486	214	272	514	214	300	122	-	158	212	A: Rp 1"	F: DN 25/32, PN 16-25	24
HP-E / HPC-E 4-25-5	510	214	296	538	214	324	122	-	158	212	A: Rp 1"	F: DN 25/32, PN 16-25	26
HP-E / HPC-E 4-25-8	564	214	350	592	214	378	122	-	158	212	A: Rp 1"	F: DN 25/32, PN 16-25	28
HP-E / HPC-E 4-25-11	694	274	420	682	234	448	122	-	158	268	A: Rp 1"	F: DN 25/32, PN 16-25	31
HP-E / HPC-E 4-25-17	827	274	553	830	274	556	122	-	158	268	F: DN 25/32, PN 16-25	F: DN 25/32, PN 16-25	39
HP-E / HPC-E 4-25-23	1069	331	665	1073	331	669	192	-	201	291	F: DN 25/32, PN 16-25	F: DN 25/32, PN 16-25	57
HP-E / HPC-E 4-25-25	1032	331	701	1036	331	705	192	-	201	291	F: DN 25/32, PN 16-25	F: DN 25/32, PN 16-25	69



Pump Type	Motor			Maximum permissible				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	operating pressure HP-E [bar]	operating pressure HPC-E [bar]	inlet pressure HP-E [bar]	inlet pressure HPC-E [bar]		HP-E	HPC-E
HP-E/HPC-E 6-32-2	0.55	1x230	3.5	16	25	10	10	-20 to 120	3020000302	3021000302
HP-E/HPC-E 6-32-4	1.1	1x230	6.7	16	25	10	10	-20 to 120	3020000304	3021000304
HP-E/HPC-E 6-32-5	1.5	3x400	2.9	16	25	10	10	-20 to 120	3020000305	3021000305
HP-E/HPC-E 6-32-9	2.2	3x400	4.2	16	25	7.2	10	-20 to 120	3020000309	3021000309
HP-E/HPC-E 6-32-12	3	3x400	5.8	16	25	4.2	13.2	-20 to 120	3020000312	3021000312
HP-E/HPC-E 6-32-16	4	3x400	7.6	16	25	0.1	9.1	-20 to 120	3020000316	3021000316
HP-E/HPC-E 6-32-22	5.5	3x400	10.3	25	25	3.2	3.2	-20 to 120	3020000322	3021000322
HP-E/HPC-E 6-32-24	7.5	3x400	14.1	25	25	1.1	1.1	-20 to 120	3020000324	3021000324

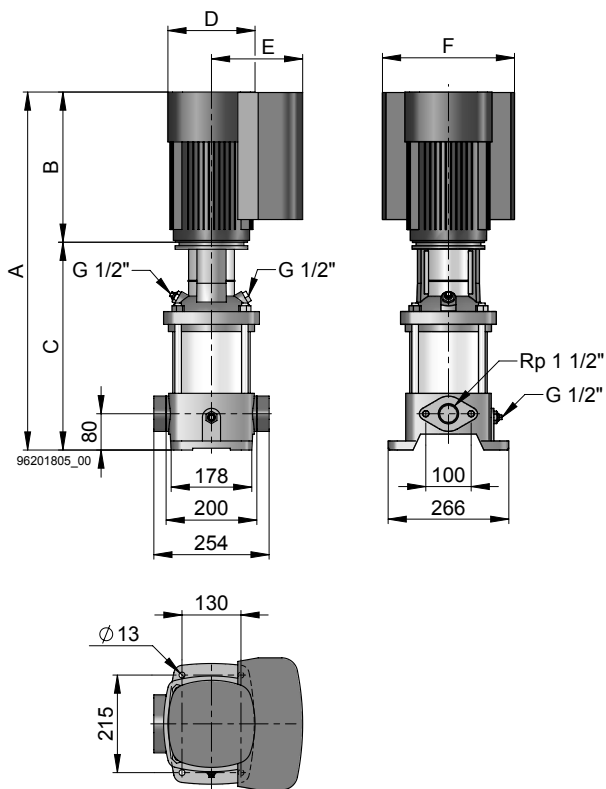


Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP-E			HPC-E			HP-E / HPC-E				HP-E	HPC-E	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP-E/HPC-E 6-32-2	468	214	254	496	214	282	122	-	158	212	A: Rp 1 1/4"	F: DN 25/32, PN 16-25	23
HP-E/HPC-E 6-32-4	528	214	314	556	214	342	122	-	158	212	A: Rp 1 1/4"	F: DN 25/32, PN 16-25	27
HP-E/HPC-E 6-32-5	631	274	357	659	274	385	122	-	158	268	A: Rp 1 1/4"	F: DN 25/32, PN 16-25	31
HP-E/HPC-E 6-32-9	739	274	465	767	274	493	122	145	158	268	A: Rp 1 1/4"	F: DN 25/32, PN 16-25	35
HP-E/HPC-E 6-32-12	881	331	550	910	331	579	192	160	201	291	A: Rp 1 1/4"	F: DN 25/32, PN 16-25	53
HP-E/HPC-E 6-32-16	989	331	658	1018	331	687	192	160	201	291	A: Rp 1 1/4"	F: DN 25/32, PN 16-25	66
HP-E/HPC-E 6-32-22	1237	362	875	1240	362	878	192	300	201	291	F: DN 25/32, PN 16-25	F: DN 25/32, PN 16-25	83
HP-E/HPC-E 6-32-24	1320	391	929	1323	391	932	255	300	237	346	F: DN 25/32, PN 16-25	F: DN 25/32, PN 16-25	87

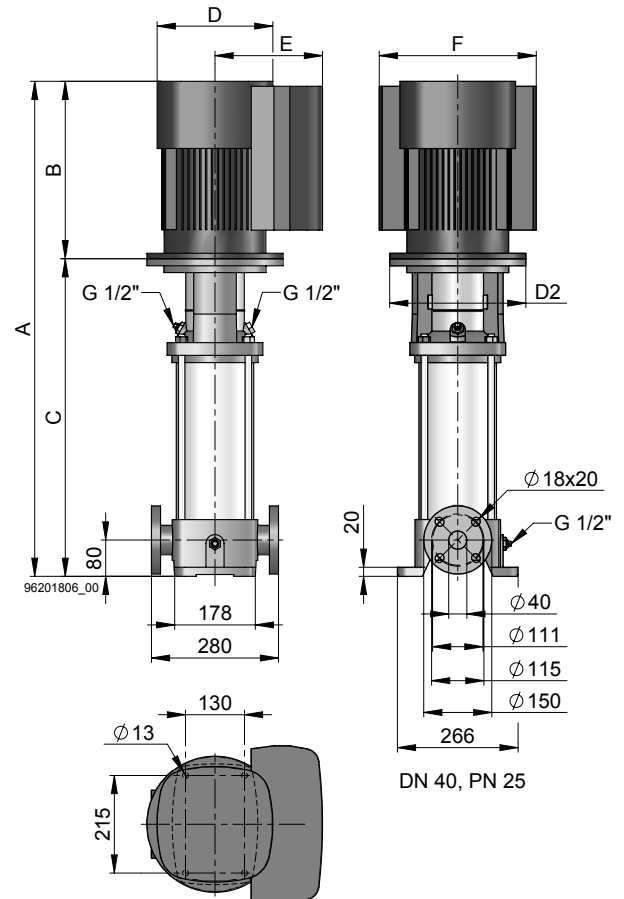


Pump Type	Motor			Maximum permissible operating pressure				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	HP-E [bar]	HPC-E [bar]	HP-E [bar]	HPC-E [bar]		HP-E	HPC-E
HP-E/HPC-E 12-40-1	0.75	1x230	4.7	16	25	8	8	-20 to 120	3020000401	3021000401
HP-E/HPC-E 12-40-2	1.5	3x400	2.9	16	25	8	8	-20 to 120	3020000402	3021000402
HP-E/HPC-E 12-40-3	2.2	3x400	4.2	16	25	8	8	-20 to 120	3020000403	3021000403
HP-E/HPC-E 12-40-5	3	3x400	5.8	16	25	8	8	-20 to 120	3020000405	3021000405
HP-E/HPC-E 12-40-6	4	3x400	7.6	16	25	7.3	10	-20 to 120	3020000406	3021000406
HP-E/HPC-E 12-40-9	5.5	3x400	10.3	16	25	3	10	-20 to 120	3020000409	3021000409
HP-E/HPC-E 12-40-12	7.5	3x400	14.1	25	25	7.5	7.5	-20 to 120	3020000412	3021000412
HP-E/HPC-E 12-40-14	11	3x400	20.3	25	25	10	10	-20 to 120	3020000414	3021000414

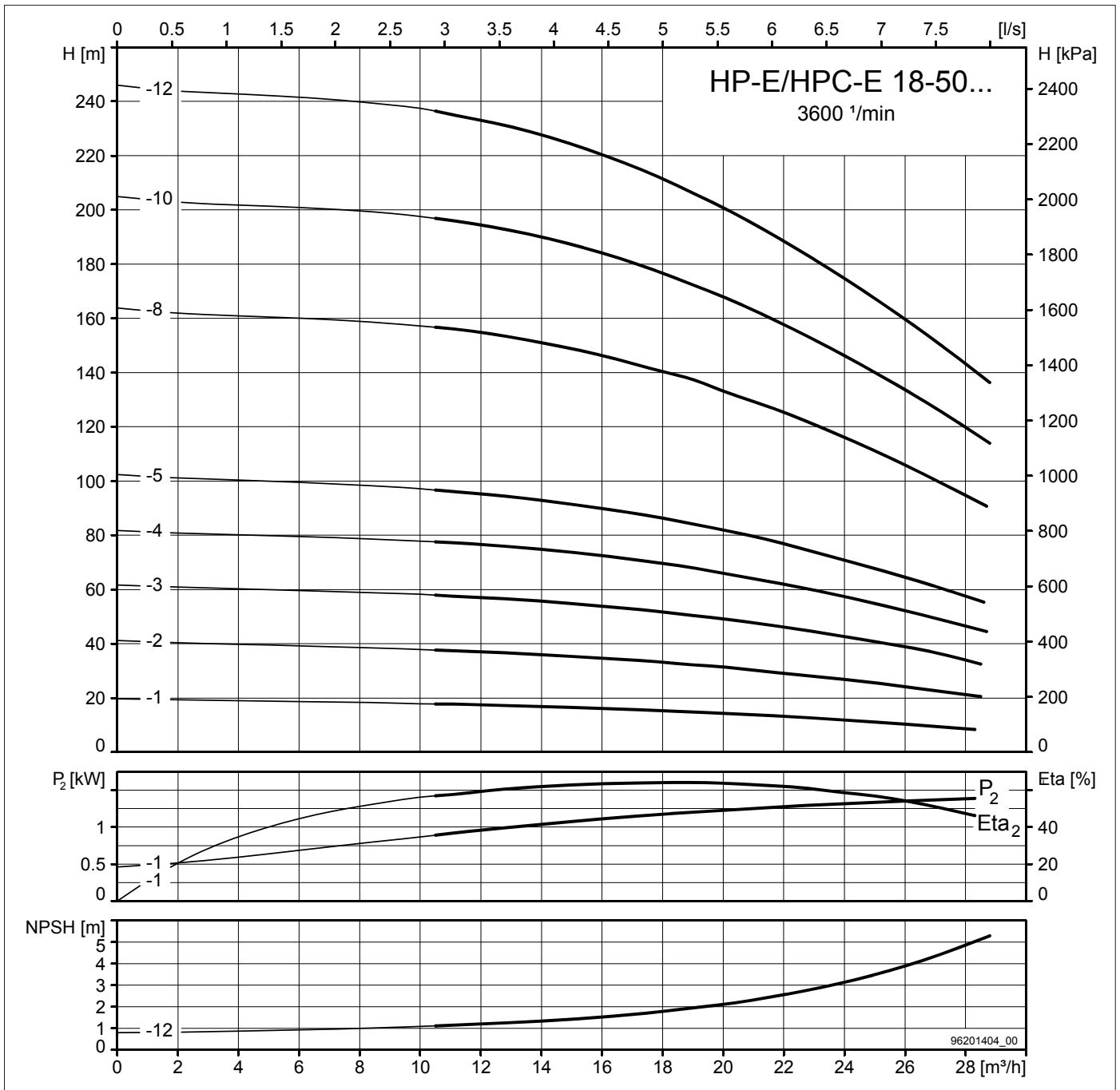
Connection A



Connection F

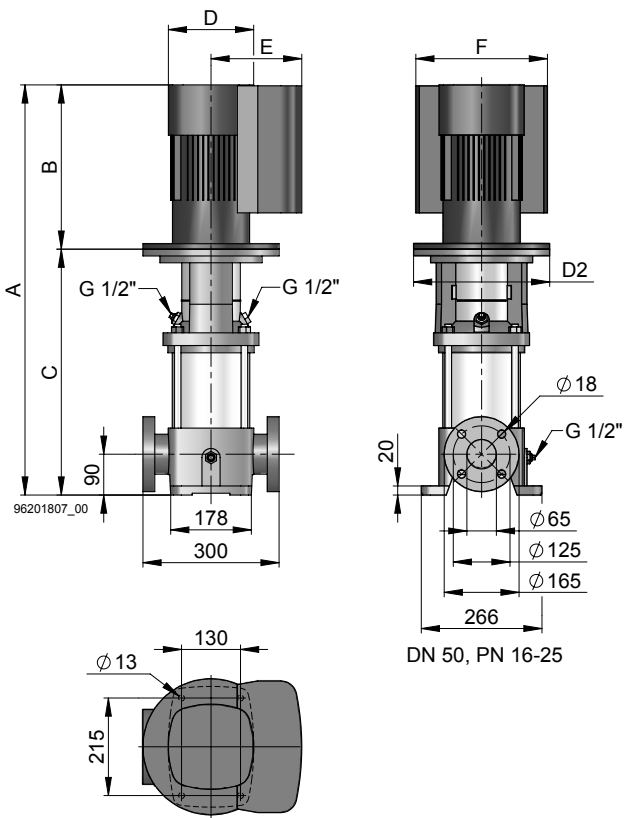


Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP-E			HPC-E			HP-E / HPC-E				HP-E	HPC-E	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP-E/HPC-E 12-40-1	561	214	347	571	214	357	122	-	158	212	A: Rp 1 1/2"	F: DN 40, PN 25	35
HP-E/HPC-E 12-40-2	637	274	363	647	274	373	122	-	158	268	A: Rp 1 1/2"	F: DN 40, PN 25	41
HP-E/HPC-E 12-40-3	667	274	393	677	274	403	122	145	158	268	A: Rp 1 1/2"	F: DN 40, PN 25	44
HP-E/HPC-E 12-40-5	789	331	458	799	331	468	192	160	201	291	A: Rp 1 1/2"	F: DN 40, PN 25	62
HP-E/HPC-E 12-40-6	819	331	488	829	331	498	192	160	201	291	A: Rp 1 1/2"	F: DN 40, PN 25	74
HP-E/HPC-E 12-40-9	972	362	610	982	362	620	192	300	201	291	A: Rp 1 1/2"	F: DN 40, PN 25	94
HP-E/HPC-E 12-40-12	1091	391	700	1101	391	710	255	300	237	346	F: DN 40, PN 25	F: DN 40, PN 25	102
HP-E/HPC-E 12-40-14	1168	408	760	1178	408	770	255	350	237	346	F: DN 40, PN 25	F: DN 40, PN 25	132

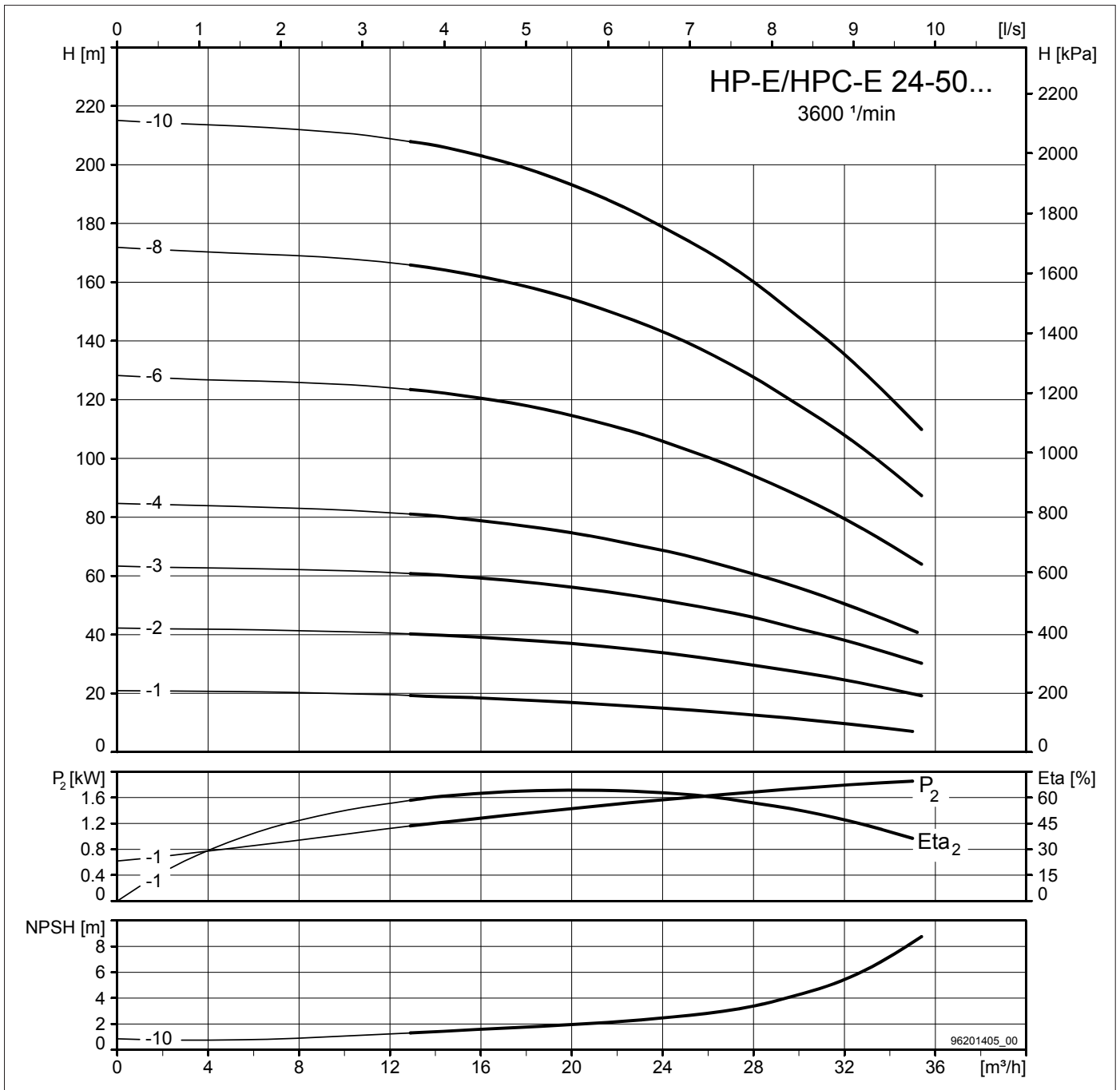


Pump Type	Motor			Maximum permissible				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	operating pressure HP-E [bar]	operating pressure HPC-E [bar]	inlet pressure HP-E [bar]	inlet pressure HPC-E [bar]		HP-E	HPC-E
HP-E/HPC-E 18-50-1	1.5	3x400	2.9	16	25	8	8	-20 to 120	3020000501	3021000501
HP-E/HPC-E 18-50-2	3	3x400	5.8	16	25	8	8	-20 to 120	3020000502	3021000502
HP-E/HPC-E 18-50-3	4	3x400	7.6	16	25	8	8	-20 to 120	3020000503	3021000503
HP-E/HPC-E 18-50-4	5.5	3x400	10.3	16	25	8	10	-20 to 120	3020000504	3021000504
HP-E/HPC-E 18-50-5	7.5	3x400	14.1	16	25	6	10	-20 to 120	3020000505	3021000505
HP-E/HPC-E 18-50-8	11	3x400	20.3	16	25	0	8.9	-20 to 120	3020000508	3021000508
HP-E/HPC-E 18-50-10	15	3x400	30	25	25	4.9	4.9	-20 to 120	3020000510	3021000510
HP-E/HPC-E 18-50-12	18.5	3x400	37	25	25	0.9	0.9	-20 to 120	3020000512	3021000512

Connection F

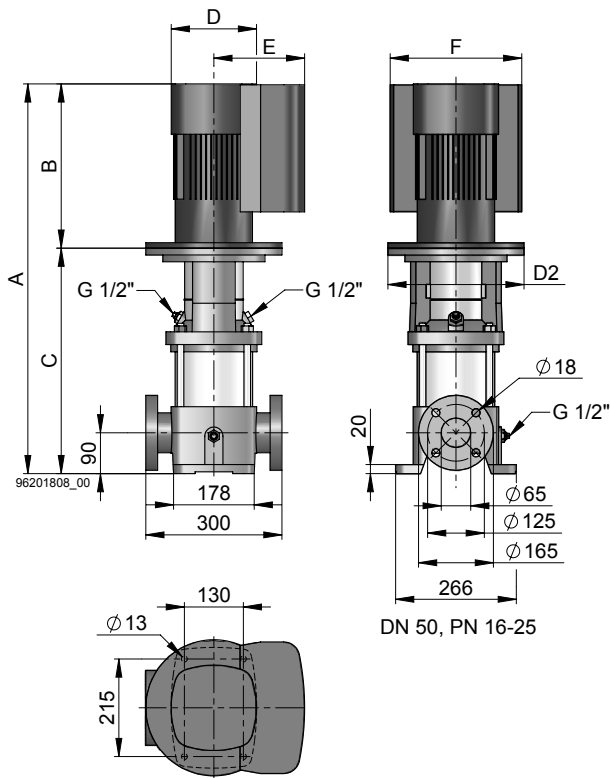


Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP-E			HPC-E			HP-E / HPC-E				HP-E	HPC-E	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP-E/HPC-E 18-50-1	689	274	415	687	274	413	122	135	158	268	F: DN 50, PN 16	F: DN 50, PN 25	47
HP-E/HPC-E 18-50-2	751	331	420	749	331	418	192	160	201	291	F: DN 50, PN 16	F: DN 50, PN 25	64
HP-E/HPC-E 18-50-3	796	331	465	794	331	463	192	160	201	291	F: DN 50, PN 16	F: DN 50, PN 25	76
HP-E/HPC-E 18-50-4	904	362	542	902	362	540	192	300	201	291	F: DN 50, PN 16	F: DN 50, PN 25	95
HP-E/HPC-E 18-50-5	978	391	587	976	391	585	255	300	237	346	F: DN 50, PN 16	F: DN 50, PN 25	97
HP-E/HPC-E 18-50-8	1207	408	799	1205	408	797	255	350	237	346	F: DN 50, PN 16	F: DN 50, PN 25	191
HP-E/HPC-E 18-50-10	1360	471	889	1358	471	887	314	350	308	420	F: DN 50, PN 25	F: DN 50, PN 25	211
HP-E/HPC-E 18-50-12	1494	515	979	1492	515	977	314	350	308	420	F: DN 50, PN 25	F: DN 50, PN 25	226

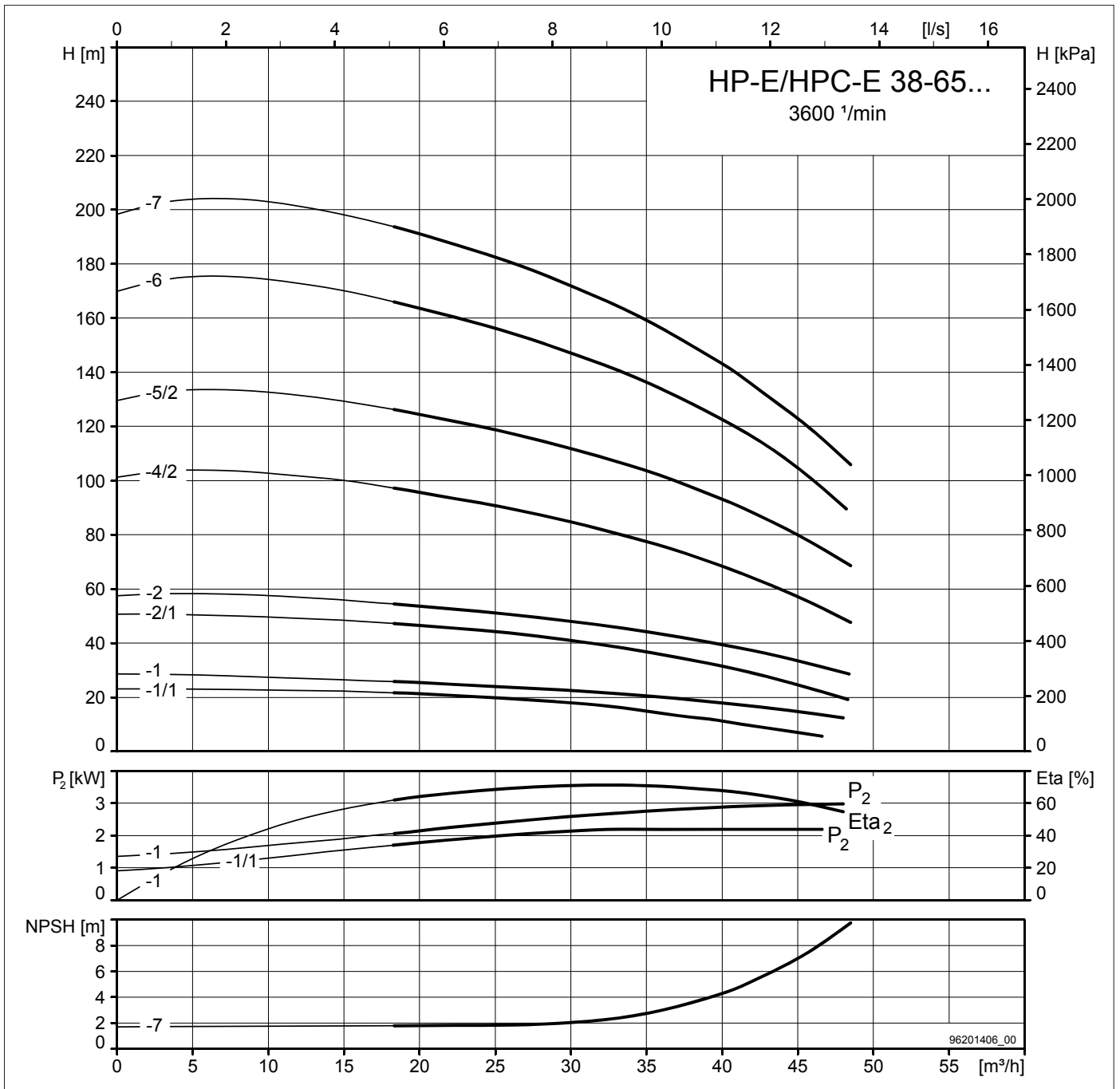


Pump Type	Motor			Maximum permissible				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	operating pressure HP-E [bar]	operating pressure HPC-E [bar]	inlet pressure HP-E [bar]	inlet pressure HPC-E [bar]		HP-E	HPC-E
HP-E/HPC-E 24-50-1	2.2	3x400	4.2	16	25	8	8	-20 to 120	3020000601	3021000601
HP-E/HPC-E 24-50-2	4	3x400	7.6	16	25	8	10	-20 to 120	3020000602	3021000602
HP-E/HPC-E 24-50-3	5.5	3x400	10.3	16	25	8	10	-20 to 120	3020000603	3021000603
HP-E/HPC-E 24-50-4	7.5	3x400	14.1	16	25	7.7	10	-20 to 120	3020000604	3021000604
HP-E/HPC-E 24-50-6	11	3x400	20.3	16	25	3.4	10	-20 to 120	3020000606	3021000606
HP-E/HPC-E 24-50-8	15	3x400	30	25	25	8.1	8.2	-20 to 120	3020000608	3021000608
HP-E/HPC-E 24-50-10	18.5	3x400	37	25	25	3.9	3.9	-20 to 120	3020000610	3021000610

Connection F

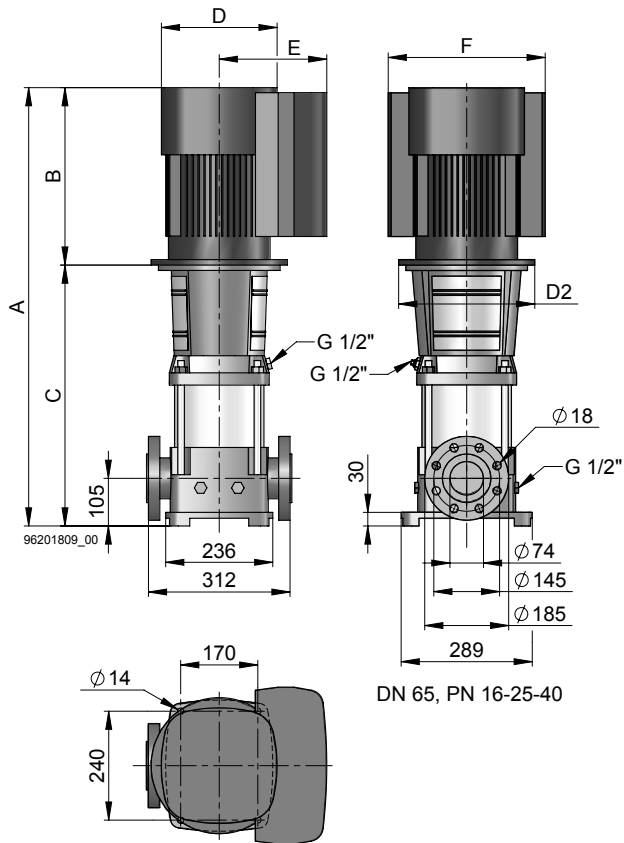


Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP-E			HPC-E			HP-E / HPC-E				HP-E	HPC-E	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP-E/HPC-E 24-50-1	689	274	415	687	274	413	122	145	158	268	F: DN 50, PN 16	F: DN 50, PN 25	48
HP-E/HPC-E 24-50-2	751	331	420	749	331	418	192	160	201	291	F: DN 50, PN 16	F: DN 50, PN 25	75
HP-E/HPC-E 24-50-3	859	362	497	857	362	495	192	300	201	291	F: DN 50, PN 16	F: DN 50, PN 25	93
HP-E/HPC-E 24-50-4	933	391	542	931	391	542	255	300	237	346	F: DN 50, PN 16	F: DN 50, PN 25	98
HP-E/HPC-E 24-50-6	1117	408	709	1115	408	707	255	350	237	346	F: DN 50, PN 16	F: DN 50, PN 25	188
HP-E/HPC-E 24-50-8	1270	471	799	1268	471	797	314	350	308	420	F: DN 50, PN 25	F: DN 50, PN 25	207
HP-E/HPC-E 24-50-10	1404	515	889	1402	515	887	314	350	308	420	F: DN 50, PN 25	F: DN 50, PN 25	223

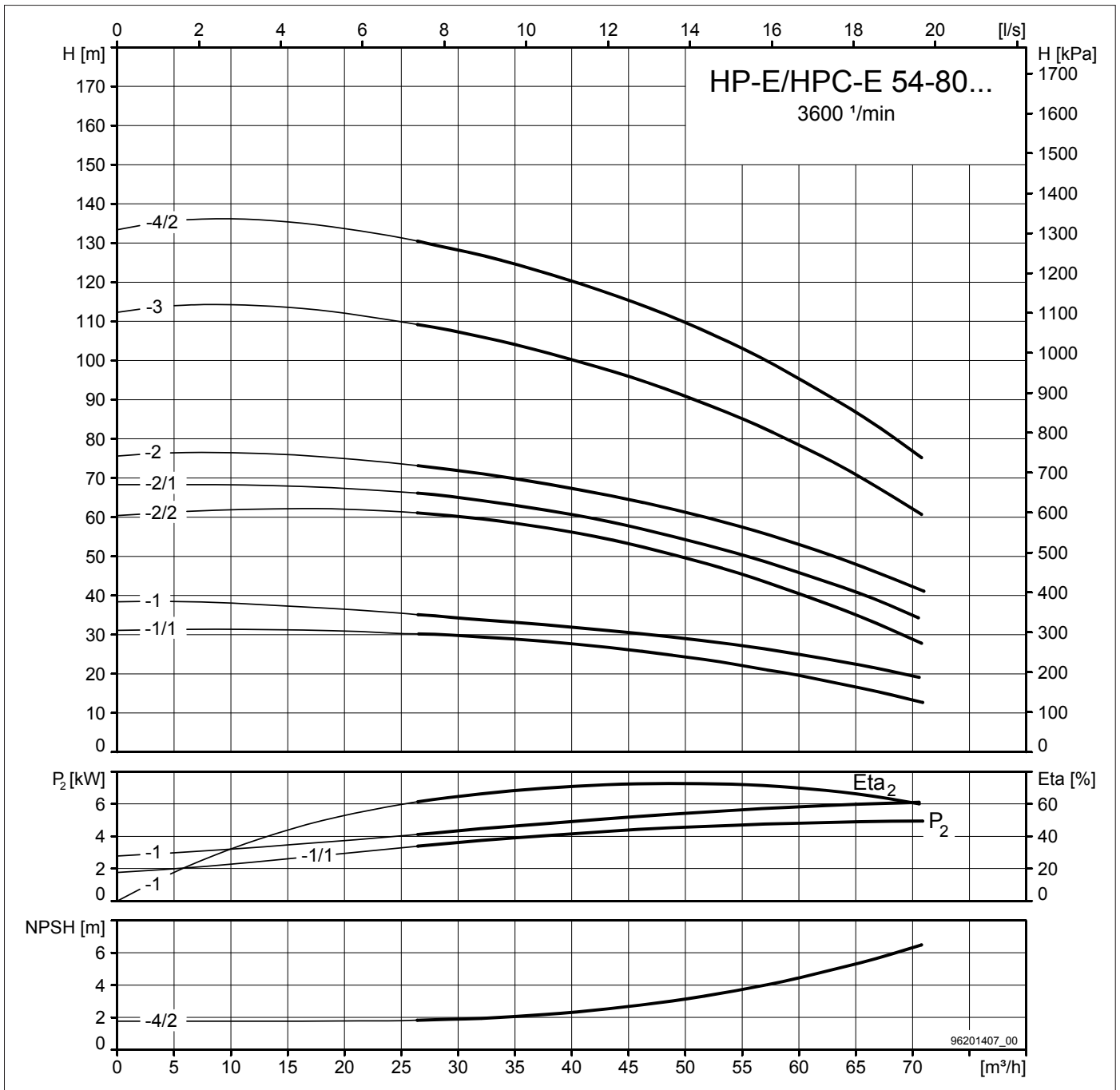


Pump Type	Motor			Maximum permissible operating pressure				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	HP-E [bar]	HPC-E [bar]	HP-E [bar]	HPC-E [bar]		HP-E	HPC-E
HP-E/HPC-E 38-65-1/1	2.2	3x400	4.2	16	16	4	4	-30 to 120	3020000711	3021000711
HP-E/HPC-E 38-65-1	3	3x400	5.8	16	16	4	4	-30 to 120	3020000701	3021000701
HP-E/HPC-E 38-65-2/1	5.5	3x400	10.3	16	16	4	4	-30 to 120	3020000721	3021000721
HP-E/HPC-E 38-65-2	7.5	3x400	14.1	16	16	4	4	-30 to 120	3020000702	3021000702
HP-E/HPC-E 38-65-4/2	11	3x400	20.3	16	16	4	4	-30 to 120	3020000742	3021000742
HP-E/HPC-E 38-65-5/2	15	3x400	30	16	16	3.3	3.3	-30 to 120	3020000752	3021000752
HP-E/HPC-E 38-65-6	18.5	3x400	37	30	30	10	10	-30 to 120	3020000706	3021000706
HP-E/HPC-E 38-65-7	22	3x400	44	30	30	10.6	10.6	-30 to 120	3020000707	3021000707

Connection F

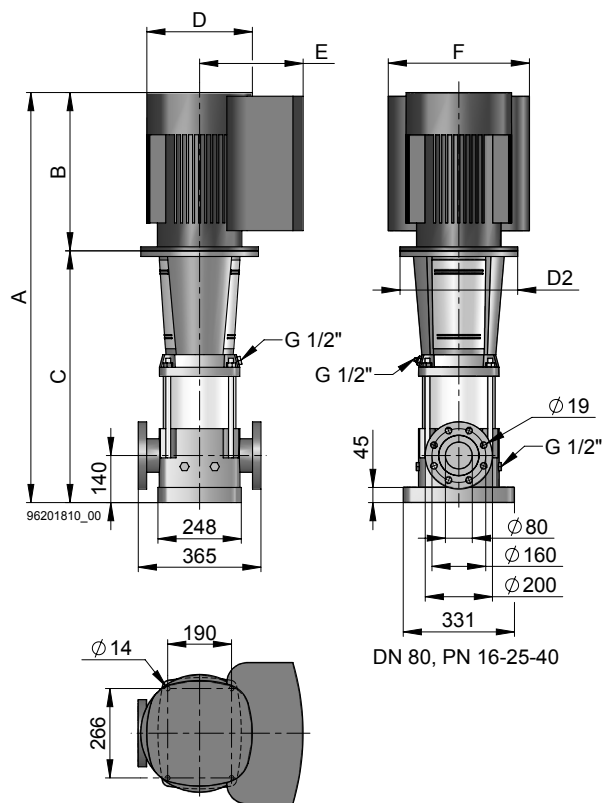


Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP-E			HPC-E			HP-E / HPC-E				HP-E	HPC-E	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP-E/HPC-E 38-65-1/1	779	274	505	779	274	505	122	145	158	268	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	65
HP-E/HPC-E 38-65-1	836	331	505	836	331	505	192	160	201	291	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	80
HP-E/HPC-E 38-65-2/1	937	362	575	937	362	575	192	300	201	291	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	102
HP-E/HPC-E 38-65-2	966	391	575	966	391	575	255	300	237	346	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	105
HP-E/HPC-E 38-65-4/2	1233	408	825	1233	408	825	255	350	237	346	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	187
HP-E/HPC-E 38-65-5/2	1366	471	895	1366	471	895	314	350	308	420	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	205
HP-E/HPC-E 38-65-6	1480	515	965	1480	515	965	314	350	308	420	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	220
HP-E/HPC-E 38-65-7	1576	541	1035	1576	541	1035	314	350	308	420	F: DN 65, PN 16-25-40	F: DN 65, PN 16-25-40	236

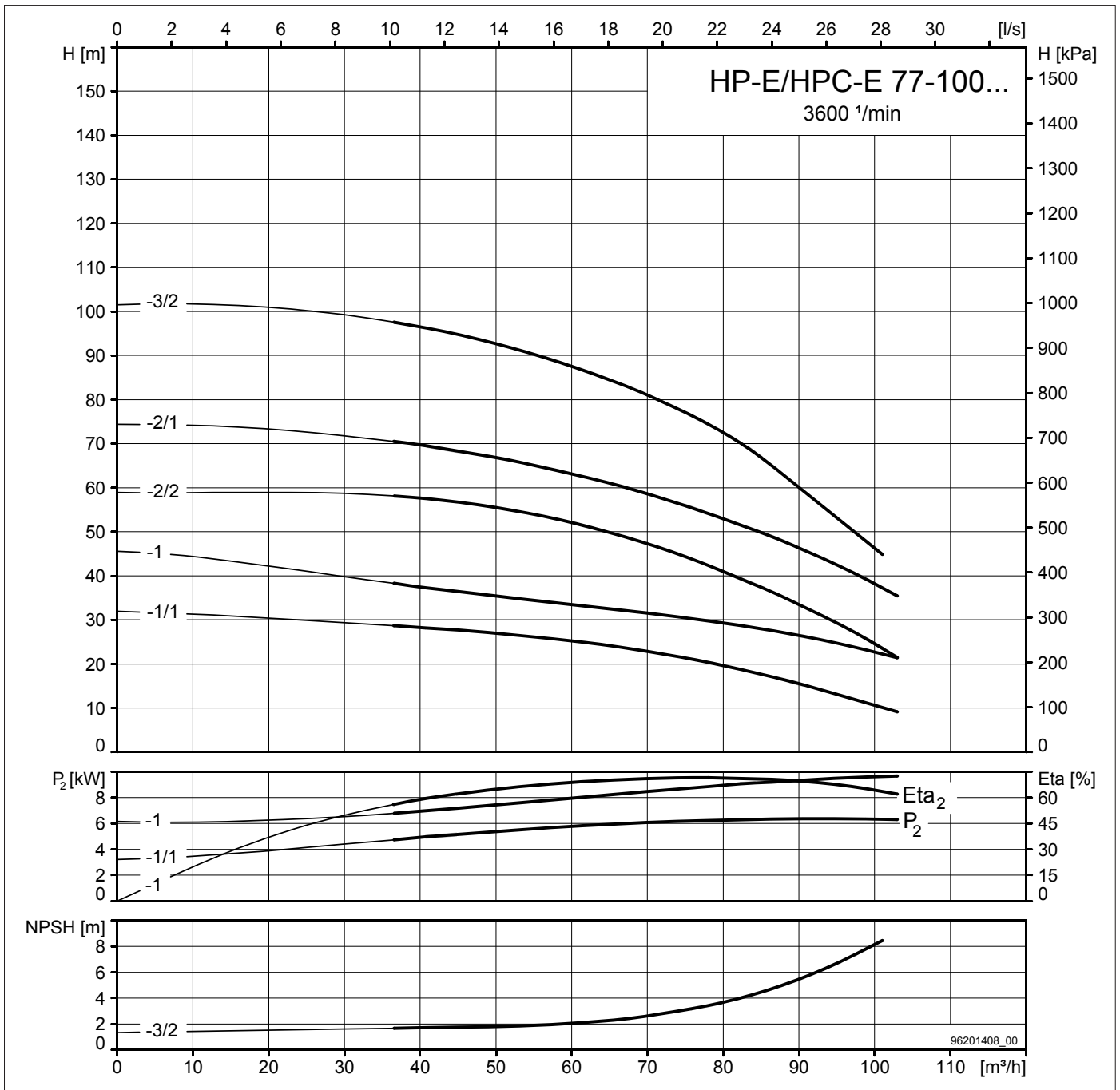


Pump Type	Motor			Maximum permissible operating pressure				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	HP-E [bar]	HPC-E [bar]	HP-E [bar]	HPC-E [bar]		HP-E	HPC-E
HP-E/HPC-E 54-80-1/1	5.5	3x400	10.3	16	16	4	4	-30 to 120	3020000811	3021000811
HP-E/HPC-E 54-80-1	7.5	3x400	14.1	16	16	4	4	-30 to 120	3020000801	3021000801
HP-E/HPC-E 54-80-2/2	11	3x400	20.3	16	16	4	4	-30 to 120	3020000822	3021000822
HP-E/HPC-E 54-80-2/1	11	3x400	20.3	16	16	4	4	-30 to 120	3020000821	3021000821
HP-E/HPC-E 54-80-2	15	3x400	30	16	16	4	4	-30 to 120	3020000802	3021000802
HP-E/HPC-E 54-80-3	18.5	3x400	37	16	16	5	5	-30 to 120	3020000803	3021000803
HP-E/HPC-E 54-80-4/2	22	3x400	44	16	16	2.9	2.9	-30 to 120	3020000842	3021000842

Connection F

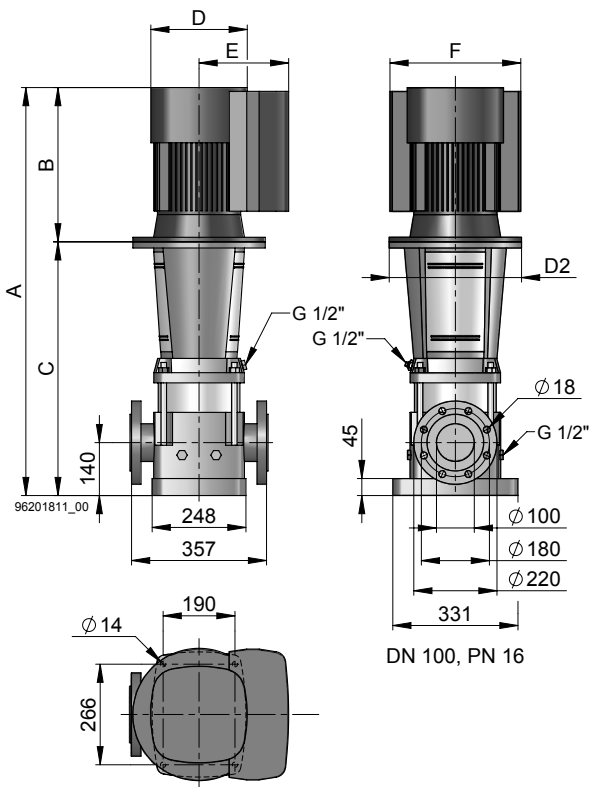


Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP-E			HPC-E			HP-E / HPC-E				HP-E	HPC-E	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP-E/HPC-E 54-80-1/1	921	362	559	921	362	559	192	300	201	291	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	107
HP-E/HPC-E 54-80-1	950	391	559	950	391	559	255	300	237	346	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	110
HP-E/HPC-E 54-80-2/2	1157	408	749	1157	408	749	255	350	237	346	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	190
HP-E/HPC-E 54-80-2/1	1157	408	749	1157	408	749	255	350	237	346	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	190
HP-E/HPC-E 54-80-2	1220	471	749	1220	471	749	314	350	308	420	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	205
HP-E/HPC-E 54-80-3	1344	515	829	1344	515	829	314	350	308	420	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	221
HP-E/HPC-E 54-80-4/2	1450	541	909	1450	541	909	314	350	308	420	F: DN 80, PN 16-25-40	F: DN 80, PN 16-25-40	237

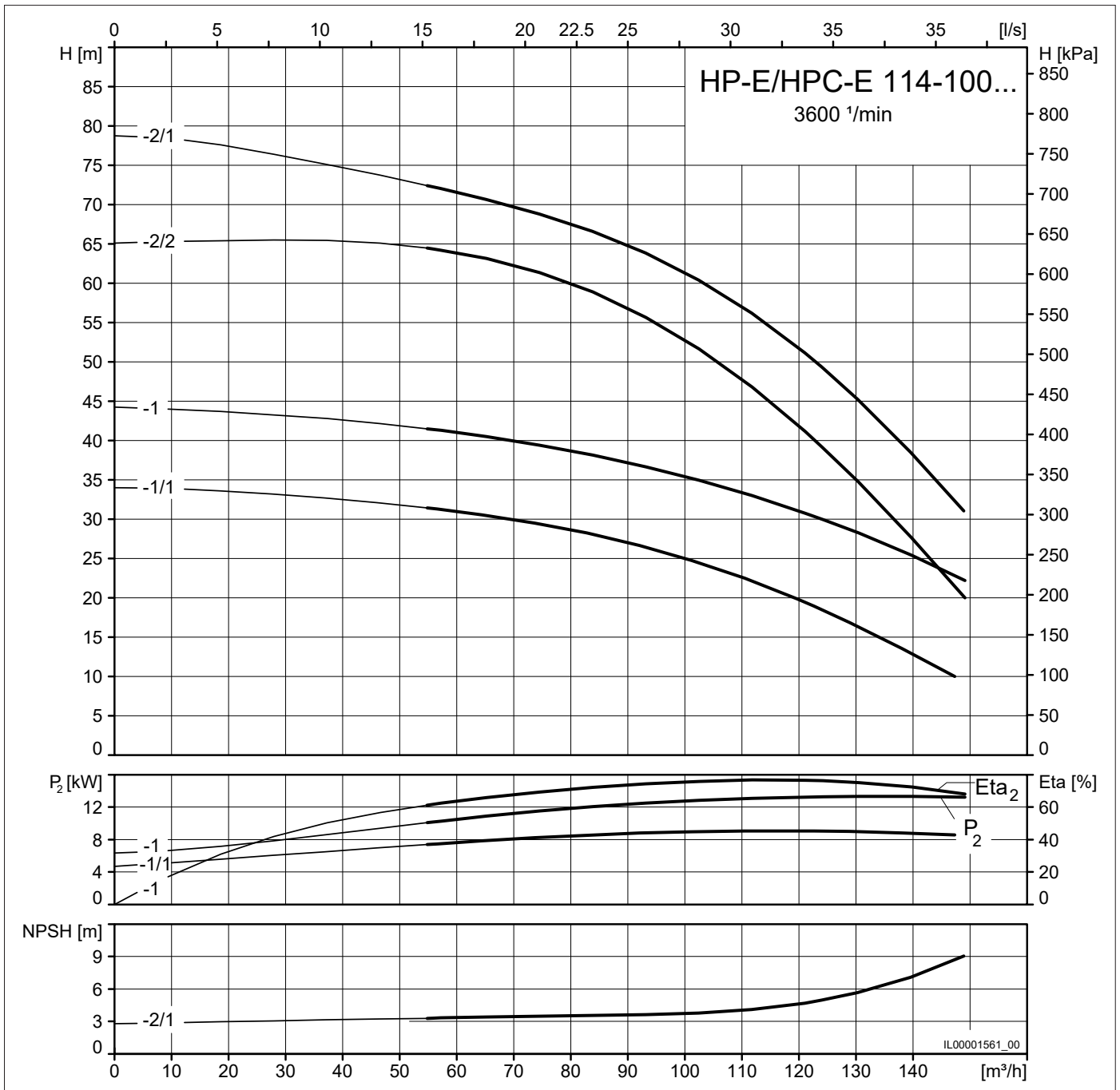


Pump Type	Motor			Maximum permissible operating pressure				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	HP-E [bar]	HPC-E [bar]	HP-E [bar]	HPC-E [bar]		HP-E	HPC-E
HP-E/HPC-E 77-100-1/1	7.5	3x400	14.1	16	16	4	4	-30 to 120	3020000911	3021000911
HP-E/HPC-E 77-100-1	11	3x400	20.3	16	16	4	4	-30 to 120	3020000901	3021000901
HP-E/HPC-E 77-100-2/2	15	3x400	30	16	16	4	4	-30 to 120	3020000922	3021000922
HP-E/HPC-E 77-100-2/1	18.5	3x400	37	16	16	8.7	8.7	-30 to 120	3020000921	3021000921
HP-E/HPC-E 77-100-3/2	22	3x400	44	16	16	6.1	6.1	-30 to 120	3020000932	3021000932

Connection F

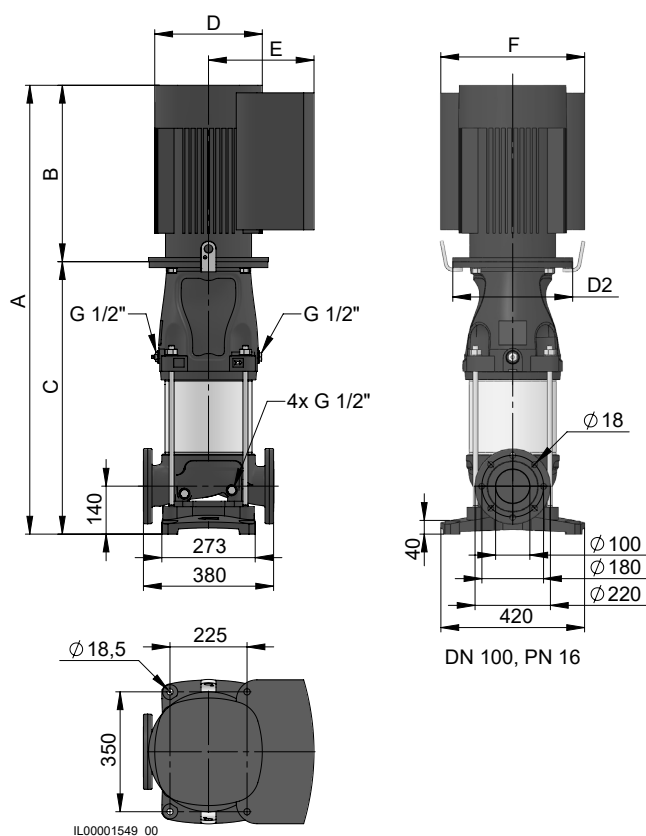


Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP-E			HPC-E			HP-E / HPC-E				HP-E	HPC-E	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP-E/HPC-E 77-100-1/1	952	391	561	952	391	561	255	300	237	346	F: DN 100, PN 16	F: DN 100, PN 16	112
HP-E/HPC-E 77-100-1	1079	408	671	1079	408	671	255	350	237	346	F: DN 100, PN 16	F: DN 100, PN 16	188
HP-E/HPC-E 77-100-2/2	1225	471	754	1225	471	754	314	350	308	420	F: DN 100, PN 16	F: DN 100, PN 16	207
HP-E/HPC-E 77-100-2/1	1269	515	754	1269	515	754	314	350	308	420	F: DN 100, PN 16	F: DN 100, PN 16	219
HP-E/HPC-E 77-100-3/2	1377	541	836	1377	541	836	314	350	308	420	F: DN 100, PN 16	F: DN 100, PN 16	237

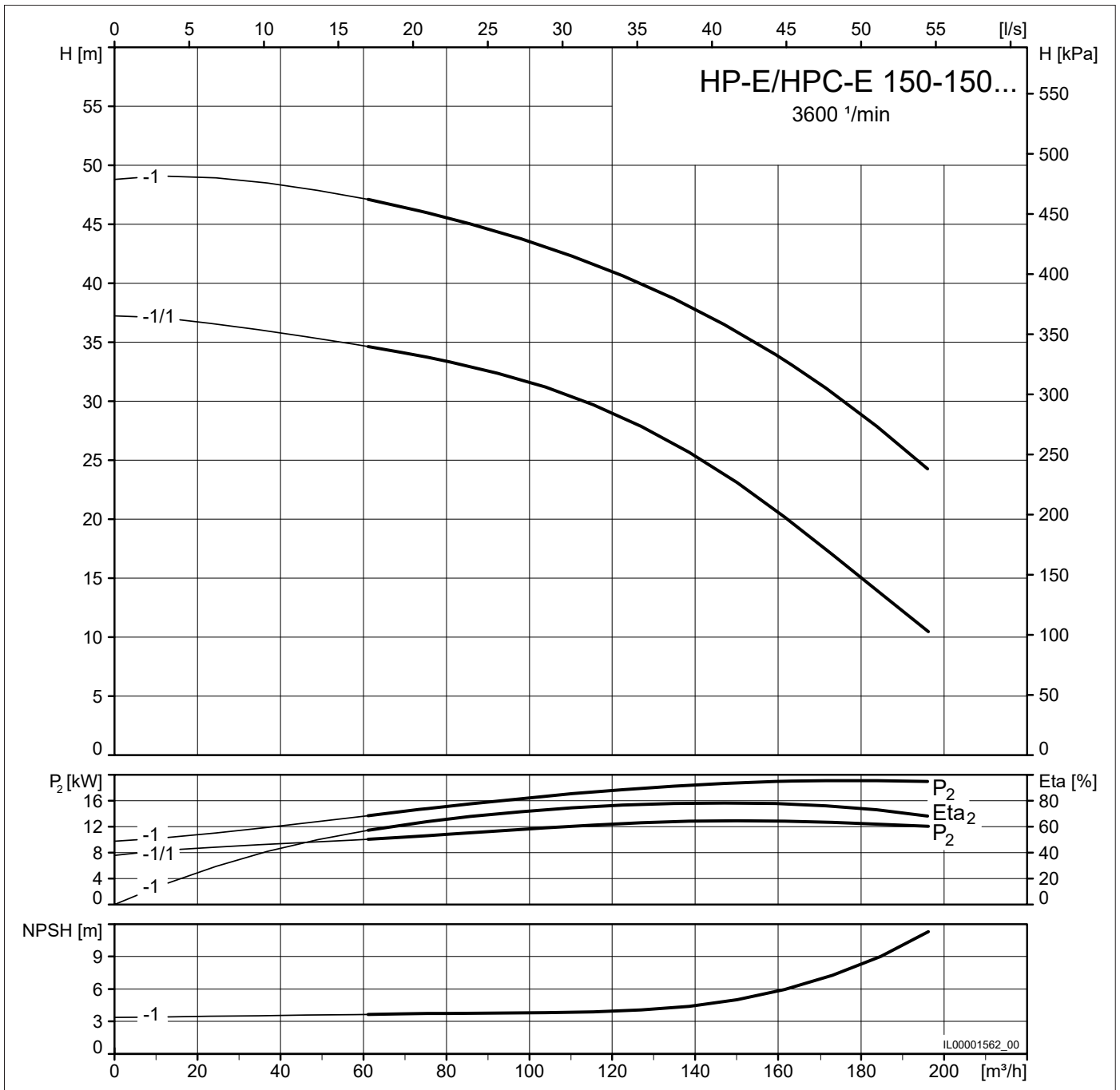


Pump Type	Motor			Maximum permissible operating pressure				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	HP-E [bar]	HPC-E [bar]	HP-E [bar]	HPC-E [bar]		HP-E	HPC-E
HP-E/HPC-E 114-100-1/1	11	3x400	17	16	16	4	4	-20 to +120	7000000576	7000000583
HP-E/HPC-E 114-100-1	15	3x400	26.5	16	16	4	4	-20 to +120	7000000577	7000000584
HP-E/HPC-E 114-100-2/2	18.5	3x400	32	16	16	9.2	9.2	-20 to +120	7000000578	7000000585
HP-E/HPC-E 114-100-2/1	22	3x400	37	16	16	8.5	8.5	-20 to +120	7000000579	7000000586

Connection A

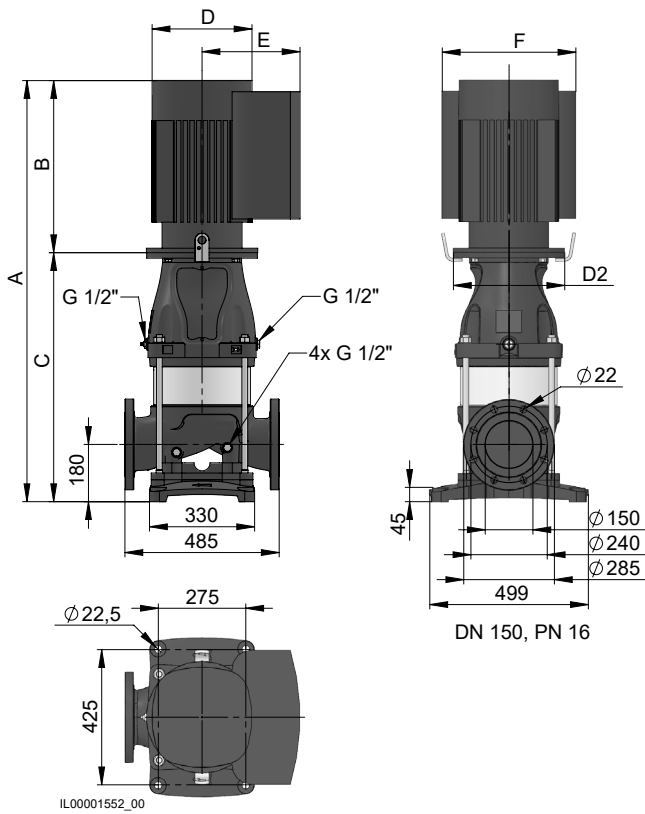


Pump Type	Dimensions in [mm]										Execution		Weight [kg]	
	HP-E			HPC-E			HP-E / HPC-E				HP-E	HPC-E		
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections		
HP-E/HPC-E 114-100-1/1	1097	406	691	1097	406	691	254.9	350	237	346	F: DN 100, PN 16	F: DN 100, PN 16	165	
HP-E/HPC-E 114-100-1	1162	471	691	1162	471	691	314	350	308	420	F: DN 100, PN 16	F: DN 100, PN 16	233	
HP-E/HPC-E 114-100-2/2	1310	515	795	1310	515	795	314	350	308	420	F: DN 100, PN 16	F: DN 100, PN 16	251	
HP-E/HPC-E 114-100-2/1	1336	541	795	1336	541	795	314	350	308	420	F: DN 100, PN 16	F: DN 100, PN 16	264	



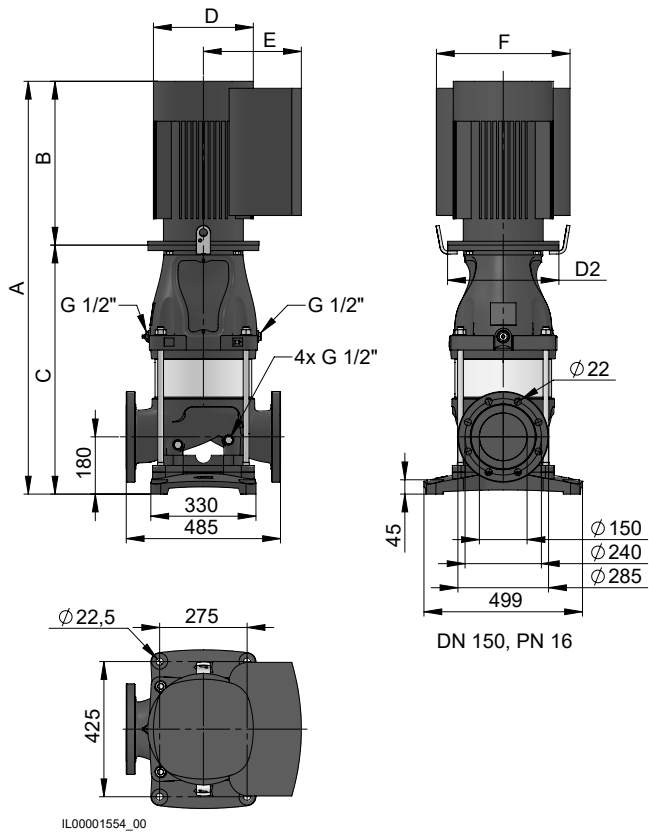
Pump Type	Motor			Maximum permissible				Liquid temperature [°C]	Article no.	
	P2 [kW]	U [V]	I [A]	operating pressure HP-E [bar]	HPC-E [bar]	inlet pressure HP-E [bar]	HPC-E [bar]		HP-E	HPC-E
HP-E/HPC-E 150-150-1/1	15	3x400	26.5	16	16	10	10	-20 to +120	7000000580	7000000587
HP-E/HPC-E 150-150-1	22	3x400	37	16	16	10	10	-20 to +120	7000000581	7000000588

Connection F



Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP-E			HPC-E			HP-E / HPC-E				HP-E	HPC-E	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP-E/HPC-E 150-150-1/1	1254	471	783	1254	471	783	314	350	308	420	F: DN 150, PN 16	F: DN 150, PN 16	278
HP-E/HPC-E 150-150-1	1324	541	783	1324	541	783	314	350	308	420	F: DN 150, PN 16	F: DN 150, PN 16	303

Connection F



Pump Type	Dimensions in [mm]										Execution		Weight [kg]
	HP-E			HPC-E			HP-E / HPC-E				HP-E	HPC-E	
	A	B	C	A	B	C	D	D2	E	F	Connections	Connections	
HP-E/HPC-E 186-150-1/1	1298	515	783	1298	515	783	314	350	308		F: DN 150, PN 16	F: DN 150, PN 16	291



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