I-STAR II VS

DE Pumpendatenblatt
EN Data sheet
FR Fiche technique pompe
NL Pompgegevens
IT Documentazione pompa
ES Ficha técnica de la bomba

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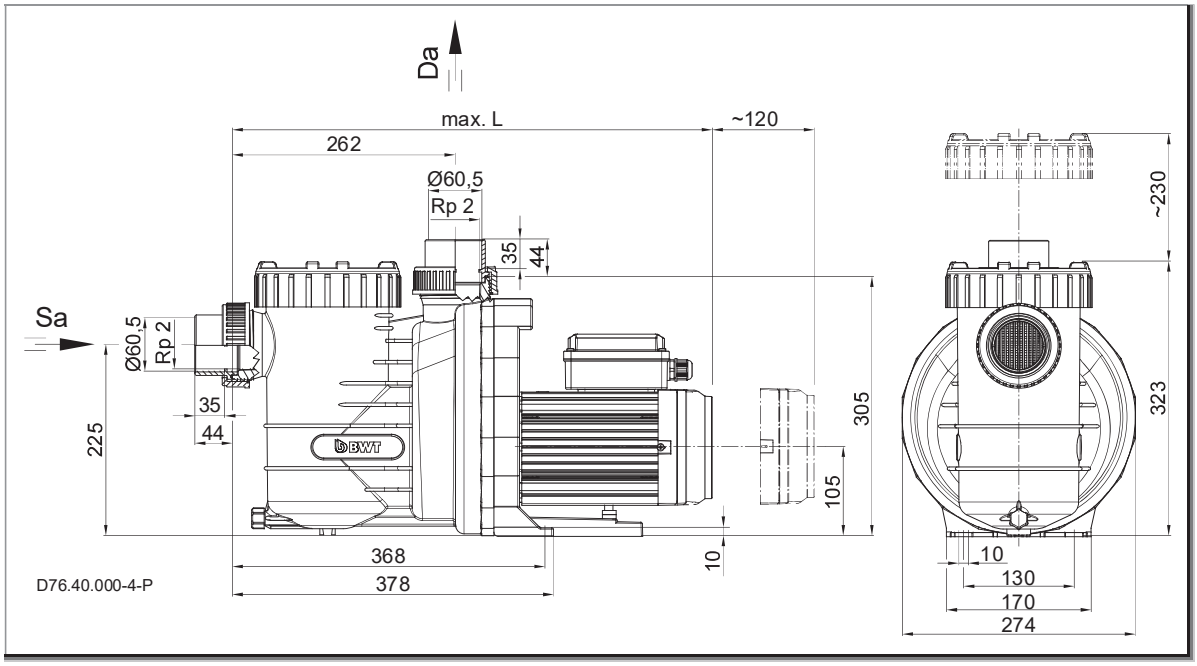
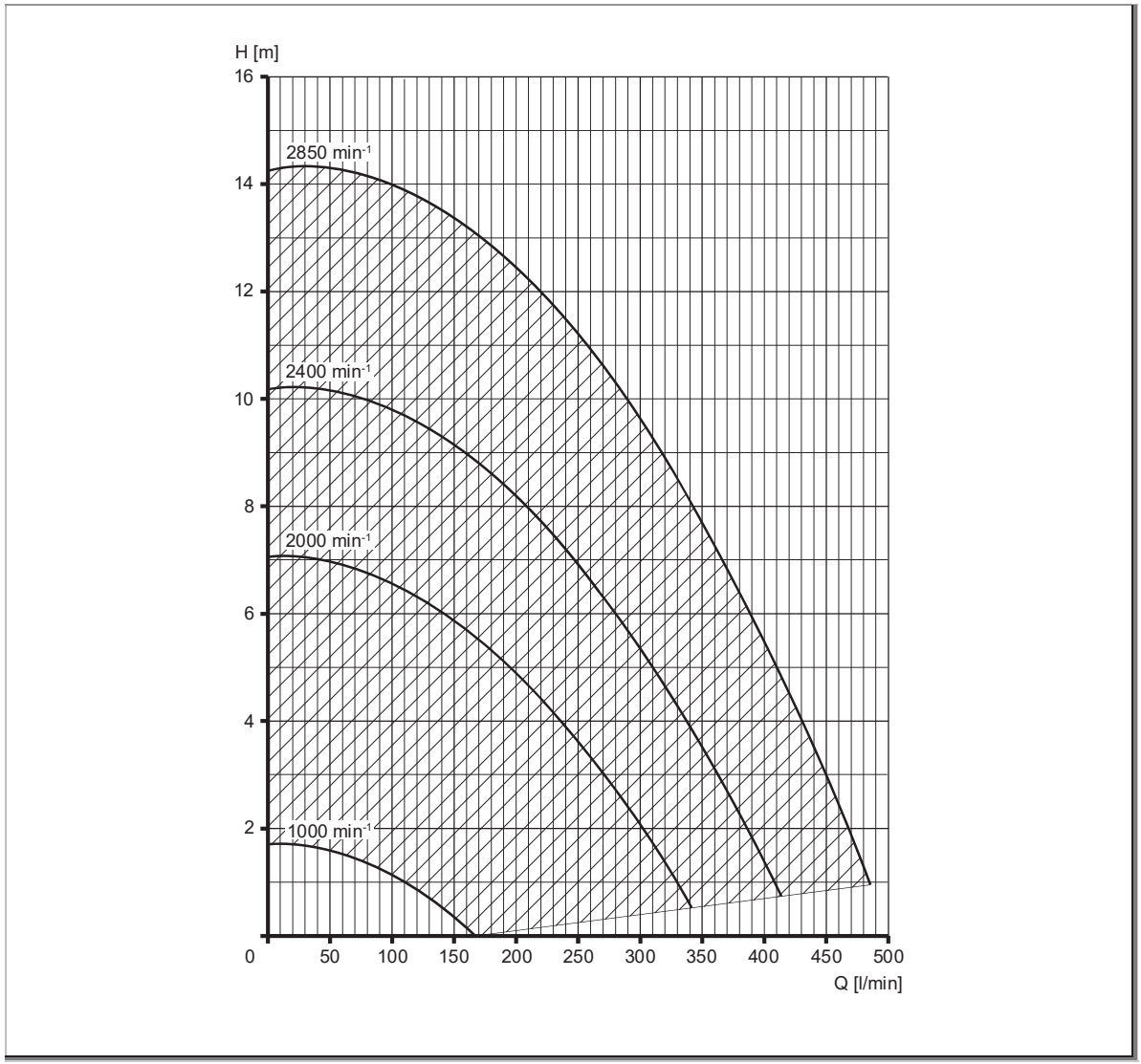

Da
max. L
~120
262
Ø60,5
Rp 2
35
44
Sa
Ø60,5
Rp 2
35
44
225
305
105
10
368
378
D76.40.000-4-P
~230
323
10
130
170
274

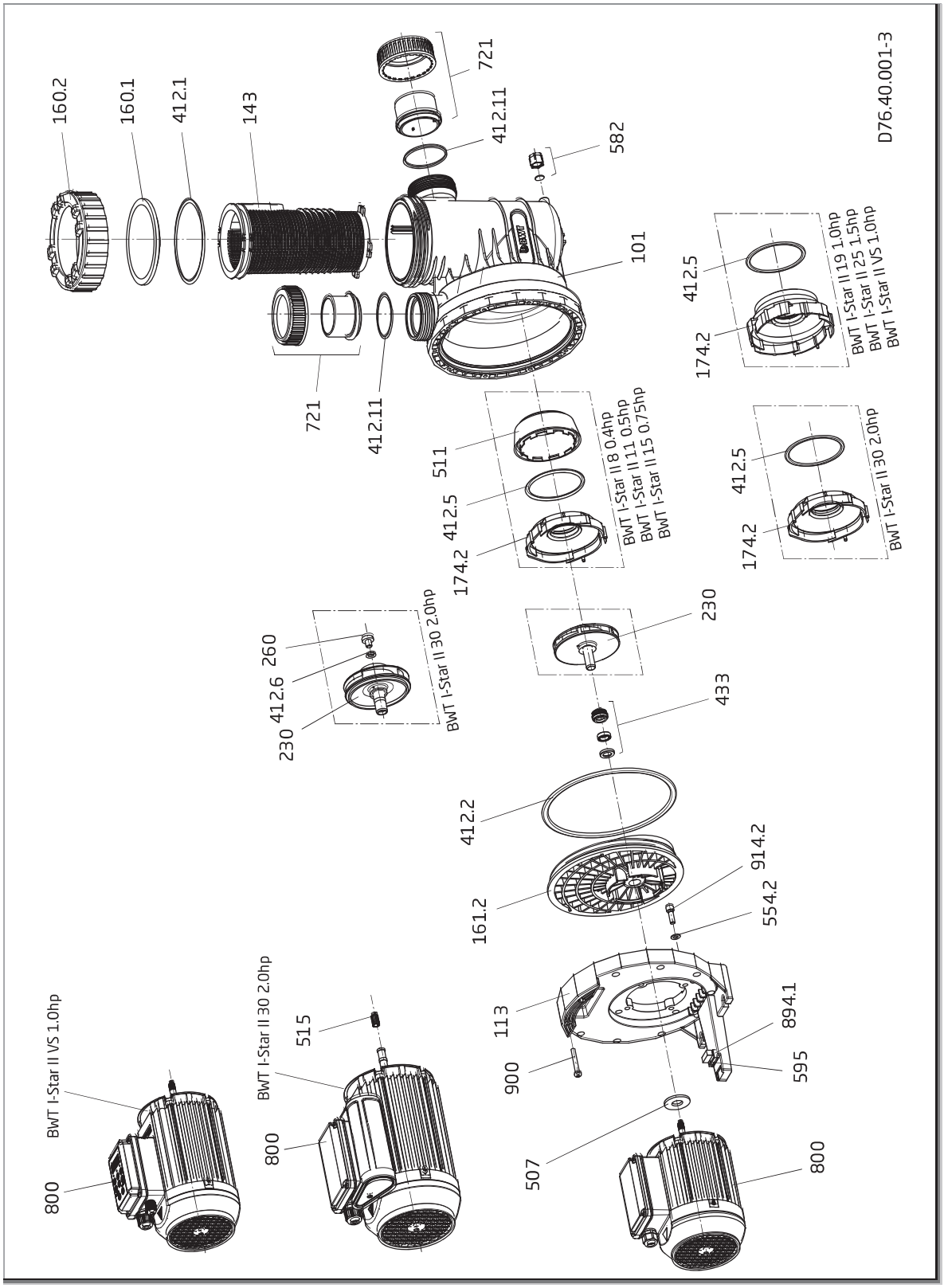

H [m]
16
14
12
10
8
6
4
2
0
2850 min-1
2400 min-1
2000 min-1
1000 min-1
50
100
150
200
250
300
350
400
450
500
Q [l/min]

TD 50 Hz	Sa [mm/Rp]	Da [mm/Rp]	d-Saug [inch]	d-Druck [inch]	max. L [mm]
BWT I-Star II VS 1.0hp	60.5/2	60.5/2	2	2	564

1~ 230 - 240 V

TD 50 Hz	n [min^{-1}]	P_1 [kW]	P_2 [kW]	I [A]	Lpa (1m) [dB(A)]	Lwa [dB(A)]	m [kg]	WSK/PTC
BWT I-Star II VS 1.0hp	1000	0,07	0,04	0,40	38,6	47	9,70	●/○
BWT I-Star II VS 1.0hp	2850	1,10	0,75	3,90	57,7	66	9,70	●/○

TD 50 Hz	n [min^{-1}]	$H_{max.}$ [m]	SP	Hs [m]	Hz [m]	IP	W-KI	T [°C]	P-GHI [bar max.]
BWT I-Star II VS 1.0hp	1000	2,0	●	3	3	X5	B	40(60)	2,5
BWT I-Star II VS 1.0hp	2850	14,1	●	3	3	X5	B	40(60)	2,5


D76.40.001-3
160.2
160.1
412.1
143
721
412.11
582
101
511
412.5
174.2
BwT I-Star II 8 0.4hp
BwT I-Star II 11 0.5hp
BwT I-Star II 15 0.75hp
BwT I-Star II 19 1.0hp
BwT I-Star II 25 1.5hp
BwT I-Star II VS 1.0hp
BwT I-Star II 30 2.0hp
260
412.6
230
433
412.2
161.2
914.2
554.2
113
894.1
900
595
507
515
800

Teil Part	St Qty	Pumpe Pump	Benennung	Description	Artikel-Nr. article no.
101	1	all	Gehäuse kpl., grau	Housing cpl., grey	290.1410.154
113	1	all	Zwischengehäuse	Intermediate housing	290.1411.300
143	1	all	Saugsieb, weiß	Strainer basket, white	290.1114.301
160.1	1	all	Klarsichteinsatz, transparent	Transparent lid	290.1116.010
160.2	1	all	Gewindering, magenta	Ring for lid, magenta	290.1416.027
161.2	1	8 0.4hp	Dichtungsgehäuse	Gland housing	290.1416.100
		11 0.5hp	Dichtungsgehäuse	Gland housing	290.1416.100
		15 0.75hp	Dichtungsgehäuse	Gland housing	290.1416.100
		19 1.0hp	Dichtungsgehäuse	Gland housing	290.1416.100
		25 1.5hp	Dichtungsgehäuse	Gland housing	290.1416.100
		30 2.0hp	Dichtungsgehäuse	Gland housing	290.1416.101
		VS 1.0hp	Dichtungsgehäuse	Gland housing	290.1416.100
174.2	1	8 0.4hp	Leitschaufeleinsatz	Diffuser	292.0117.420
		11 0.5hp	Leitschaufeleinsatz	Diffuser	292.0117.420
		15 0.75hp	Leitschaufeleinsatz	Diffuser	292.0117.420
		19 1.0hp	Leitschaufeleinsatz	Diffuser	292.1117.412
		25 1.5hp	Leitschaufeleinsatz	Diffuser	292.1117.412
		30 2.0hp	Leitschaufeleinsatz	Diffuser	292.1317.421
		VS 1.0hp	Leitschaufeleinsatz	Diffuser	292.1117.412
230	1	8 0.4hp	Laufrad, d = 112 mm, b = 4,5 mm	Impeller, d = 112 mm, b = 4.5 mm	292.1123.028
		11 0.5hp	Laufrad, d = 112 mm, b = 6,5 mm	Impeller, d = 112 mm, b = 6.5 mm	292.1123.029
		15 0.75hp	Laufrad, d = 112 mm, b = 8,5 mm	Impeller, d = 112 mm, b = 8.5 mm	292.1123.030
		19 1.0hp	Laufrad, d = 112 mm, b = 9,5 mm	Impeller, d = 112 mm, b = 9.5 mm	292.0723.059
		25 1.5hp	Laufrad, d = 110 mm, b = 13,5 mm	Impeller, d = 110 mm, b = 13.5 mm	292.0723.056
		30 2.0hp	Laufrad, d = 115 mm, b = 13,5 mm	Impeller, d = 115 mm, b = 13.5 mm	290.1423.006
		VS 1.0hp	Laufrad, d = 112 mm, b = 9,5 mm	Impeller, d = 112 mm, b = 9.5 mm	292.0723.059
260	1	30 2.0hp	Laufradkappe, PP, M10x12	Impeller hub cap, PP, M10x12	292.0326.000
412.1	1	all	O-Ring, 137 x 5 mm	O-Ring, 137 x 5 mm	292.1141.210
412.2	1	all	O-Ring, 225 x 6 mm	O-Ring, 225 x 6 mm	290.1441.220
412.5	1	8 0.4hp	O-Ring für Leitschaufeleinsatz 97,8 x 5,33 mm	O-Ring for diffuser 97,8 x 5,33 mm	292.1141.255
		11 0.5hp	O-Ring für Leitschaufeleinsatz 97,8 x 5,33 mm	O-Ring for diffuser 97,8 x 5,33 mm	292.1141.255
		15 0.75hp	O-Ring für Leitschaufeleinsatz 97,8 x 5,33 mm	O-Ring for diffuser 97,8 x 5,33 mm	292.1141.255
		19 1.0hp	O-Ring für Leitschaufeleinsatz 90 x 5 mm	O-Ring for diffuser 90 x 5 mm	292.0141.210
		25 1.5hp	O-Ring für Leitschaufeleinsatz 90 x 5 mm	O-Ring for diffuser 90 x 5 mm	292.0141.210
		30 2.0hp	O-Ring für Leitschaufeleinsatz 90 x 5 mm	O-Ring for diffuser 90 x 5 mm	292.0141.210
		VS 1.0hp	O-Ring für Leitschaufeleinsatz 90 x 5 mm	O-Ring for diffuser 90 x 5 mm	292.0141.210
412.6	1	30 2.0 hp	O-Ring für Laufradkappe, 11 x 2,5 mm	O-Ring for impeller hub cap, 11 x 2,5 mm	292.0141.241
412.11	2	all	O-Ring für Rohranschlüsse, 68 x 3,5 mm	O-Ring for inlet/outlet connections, 68 x 3,5 mm	292.1441.210
433	1	8 0.4hp	Gleitringdichtung kpl., 14mm	Mechanical seal cpl., 14 mm	292.0143.320
		11 0.5hp	Gleitringdichtung kpl., 14mm	Mechanical seal cpl., 14 mm	292.0143.320
		15 0.75hp	Gleitringdichtung kpl., 14mm	Mechanical seal cpl., 14 mm	292.0143.320
		19 1.0hp	Gleitringdichtung kpl., 14mm	Mechanical seal cpl., 14 mm	292.0143.320
		25 1.5hp	Gleitringdichtung kpl., 14mm	Mechanical seal cpl., 14 mm	292.0143.320
		30 2.0hp	Gleitringdichtung kpl., 20mm	Mechanical seal cpl., 20 mm	292.0343.318
		VS 1.0hp	Gleitringdichtung kpl., 14mm	Mechanical seal cpl., 14 mm	292.0143.320
507	1	8 0.4hp	Spritzring, 12,2 x 45 x 4 mm	Splash ring, 12.2 x 45 x 4 mm	292.0850.700
		11 0.5hp	Spritzring, 12,2 x 45 x 4 mm	Splash ring, 12.2 x 45 x 4 mm	292.0850.700
		15 0.75hp	Spritzring, 12,2 x 45 x 4 mm	Splash ring, 12.2 x 45 x 4 mm	292.0850.700
		19 1.0hp	Spritzring, 12,2 x 45 x 4 mm	Splash ring, 12.2 x 45 x 4 mm	292.0850.700
		25 1.5hp	Spritzring, 12,2 x 45 x 4 mm	Splash ring, 12.2 x 45 x 4 mm	292.0850.700
		30 2.0hp	Spritzring, 16 x 45 x 4 mm	Splash ring, 16 x 45 x 4 mm	292.0850.701
		VS 1.0hp	Spritzring, 12,5 x 45 x 4 mm	Splash ring, 12.5 x 45 x 4 mm	292.1150.700
511	1	8 0.4hp	Zentrierring	Centring ring	292.1151.105
		11 0.5hp	Zentrierring	Centring ring	292.1151.105
		15 0.75hp	Zentrierring	Centring ring	292.1151.105
515	2	30 2.0hp	Toleranzring	Star-ring	292.0651.510
554.2	4	all	Unterlegscheibe, d = 8,4 mm, A 2	Washer, d = 8,4 mm, A 2	587.1250.802
582	1	all	Verschlusskappe, schwarz, mit NBR-Dichtung	Drain cap, black, with NBR gasket	292.1658.203

595	1	all	Gummipuffer, 10 x 12,5 x 27 mm	Rubber buffer, 10 x 12.5 x 27 mm	290.1259.500
721	2	all	Überwurfmutter, für Bundbuchse, d = 63 + 75 mm, schwarz	Union nut for glue socket dia 63 + 75 mm, black	292.1472.111
	2	all	Bundbuchse d-innen = 60,3 mm, schwarz	Glue socket dia-inner = 60.3 mm, black	292.1472.145
800	1	8 0.4hp	We-Motor 0,30 kW, 0.40 hp	1~ motor 0.30 kW, 0.40 hp	60210300-01AB
		11 0.5hp	We-Motor 0,45 kW, 0.50 hp	1~ motor 0.45 kW, 0.50 hp	60210450-01AB
		15 0.75hp	We-Motor 0,65 kW, 0.75 hp	1~ motor 0.65 kW, 0.75 hp	60210650-01AB
		19 1.0hp	We-Motor 0,75 kW, 1.00 hp	1~ motor 0.75 kW, 1.00 hp	70210750-01AB
		25 1.5hp	We-Motor 1,10 kW, 1.50 hp	1~ motor 1.10 kW, 1.50 hp	70211100-01AB
		30 2.0hp	We-Motor 1,50 kW, 2.00 hp	1~ motor 1.50 kW, 2.00 hp	70211500-01AB
		VS 1.0hp	We-Motor 0,75 kW, VS, 1.00 hp	1~ motor 0.75 kW, VS, 1.00 hp	7B830750-01AB
894.1	4	8 0.4hp	Adapter für Motorfuß	Adapter for motor foot	292.0389.410
	4	11 0.5hp	Adapter für Motorfuß	Adapter for motor foot	
	4	15 0.75hp	Adapter für Motorfuß	Adapter for motor foot	
	2	19 1.0hp	Adapter für Motorfuß	Adapter for motor foot	
	2	25 1.5hp	Adapter für Motorfuß	Adapter for motor foot	
	3	30 2.0hp	Adapter für Motorfuß	Adapter for motor foot	
	2	VS 1.0hp	Adapter für Motorfuß	Adapter for motor foot	
900	10	all	Schneidschraube, 7 x 48,4 mm, A2	Screw, 7 x 48.4 mm, A2	292.1690.002
914.2	4	all	Innensechsk.-Schraube, M8x25, A2	Hexagon socket screw, M8 x 25, A 2	587.9120.825
412.11 + 721	1	all	Anschluss-Set kpl.	Connection set cpl.	292.1472.147
	1	all	Öffnungsgriff, PP	Handle for rid ring lock, PP	292.1157.700

I-STAR Efficiency 1P

EN Data sheet

Related Documentation

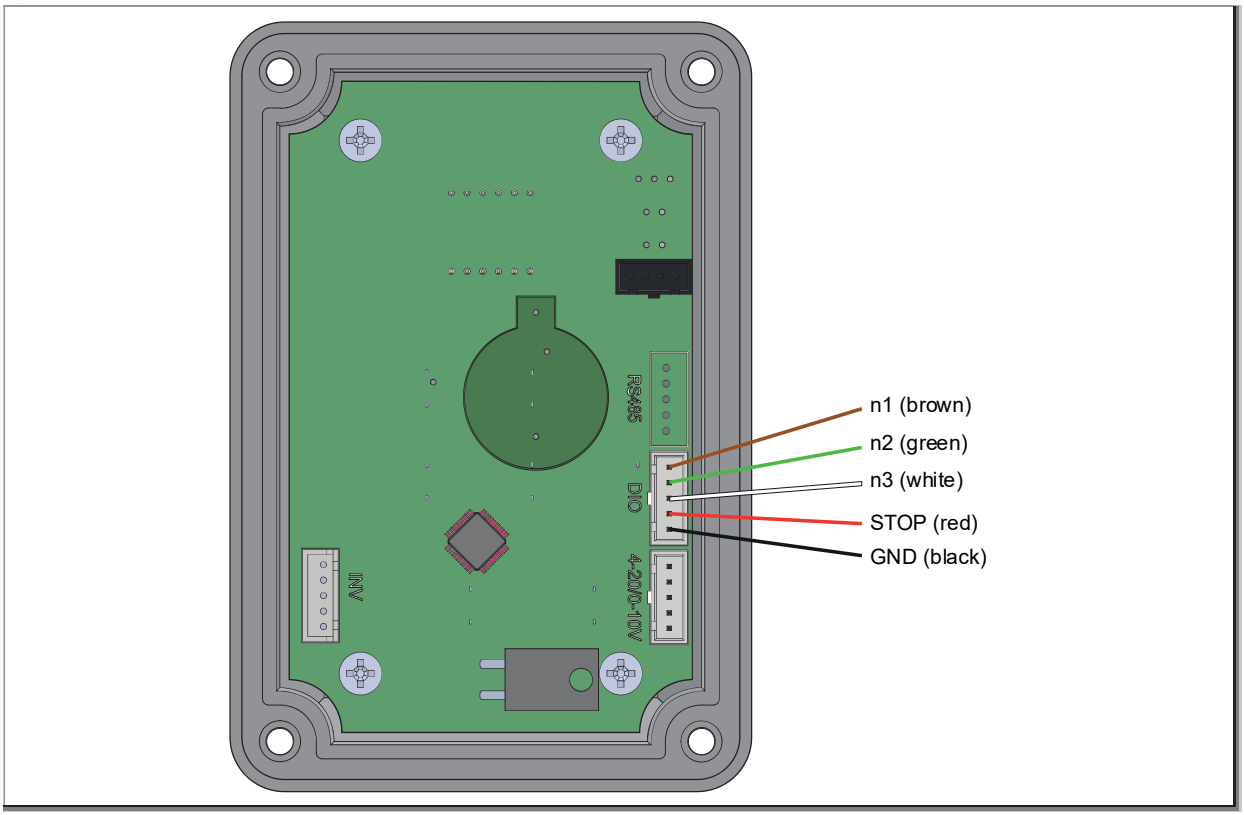
The additional information complied in this data sheet must be kept together with the original operation manual for „Non-self-priming and self-priming pumps with/without plastic lanterns“ and must be accessible to the relevant personnel at all times.

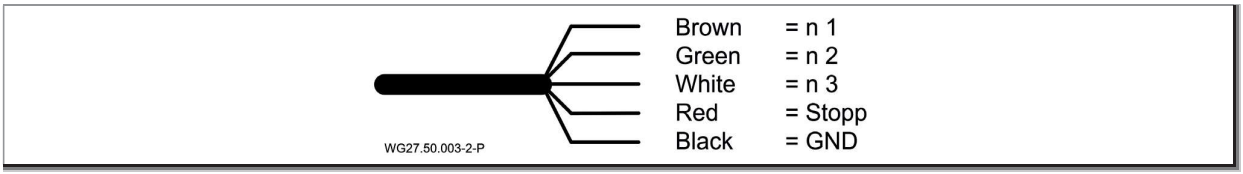
Glossary	
TD	Technical data
Sa	Inlet connection
Da	Outlet connection
d-Saug	Recommended diameter of the suction line up to 5 m
d-Druck	Recommended diameter of the pressure line up to 5 m
max. L	Maximum length of the pump
D	Density
P_1	Power input
P_2	Power output
I	Rated current
Lpa $_{(1\ m)}$	Sound pressure level at 1 m measured in accordance with DIN 45635
Lwa	Acoustic capacity
m	Weight
WSK	Built-in or external overload switch
PTC	PTC resistor
$H_{max.}$	Total dynamic head
SP	Self-priming
Hs; Hz	Geodetic head between water level and pump
Hs	Total suction head
Hz	Total dynamic head with flooded suction
IP	Type of motor enclosure
W-Kl	Class of insulation
n	Motor speed
P-GHI	2.5 bar max. casing pressure/system pressure
T	Water temperature
●	Yes
○	No
T/°C	Clarification of the max. water temperature 40 °C (60 °C): 40 °C = the max. water temperature allowed according to the GS approval. (60 °C) = the pump is designed to withstand a max. water temperature of 60 °C.
1~/3~	Suitable for continuous operation at 1~ 220 - 240 V ± 5% 3~ Y/Δ 380 - 420 V/220 - 240 V ± 5% 3~ Y/Δ 660 - 725 V/380 - 420 V ± 5% For standard voltage in accordance with DIN IEC 60038; DIN EN 60034

The pump has a permanent magnetic motor and is electronically protected against overload.

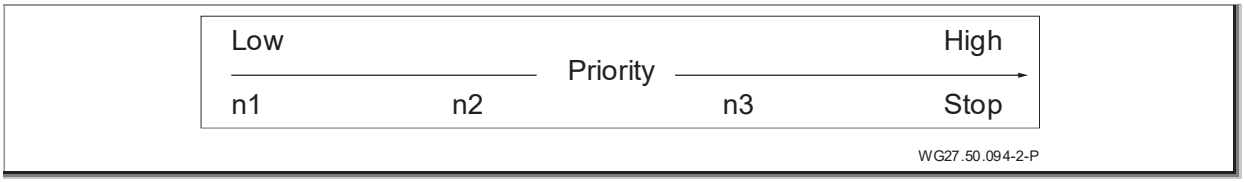
Connecting external switch contacts

The pump has a 5-wire cable with open ends for external control. Assignment of the cables to the individual speeds is as follows:





The cables must be connected potential free. Only switch the contacts individually (observe priority of the contacts). Otherwise the desired speed is not activated. The digital inputs must be activated accordingly in the Setup menu for external activation.



NOTICE

If the control cable is missing, defective or damaged, it is possible to connect an external control cable. Open the four screws on the terminal box lid for this purpose and remove the lid carefully. Feed the grey control cable through the cable gland and attach the white plug in the lid to the upper socket with the "DIO" designation. Close the terminal box lid again and tighten the four screws firmly.

➔ The control cable can be ordered from the manufacturer.

NOTICE

If the pump starts from a standstill, it starts up in priming mode and then with the selected programme.

During operation the pump is started up to the programme directly, without priming time.

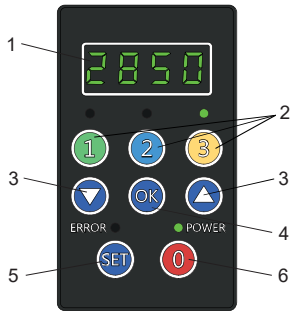
If external control is not necessary, the cable ends need to be insulated.

NOTICE

For easy interaction with peripheral devices such as electric heat exchangers or dosing systems, installing a flow monitor with the appropriate evaluation unit is recommended. This can also output a fault message.

Function

Default settings: Programs:	 1 = 2000 min^{-1} 2 = 2400 min^{-1} 3 = 2850 min^{-1}
Priming speed:	= 2850 min^{-1}
Priming time:	= 5 minutes
Speed which can be set:	1000 - 2850 min^{-1} *(in 50 min^{-1} steps)*
Priming time which can be set:	0 - 10 minutes *(in 1 min steps)*



User interface:

(1) LED display: displays the current motor speed

(2) (1) (2) (3) : used to select the speeds

(3) ▼ ▲ : to change the speed; to change in the programming mode

(4) OK : to confirm the speed; to save in the programming mode

(5) SET : used to enter the programming mode or to reset the control.

(6) 0 : to stop the motor.

Setting control mode/operation mode:

When switching on the power supply (insert the mains plug) and simultaneously pressing the SET button, the display shows two numbers "# #". The number on the left stands for the control mode and the number on the right for the operating mode.
The control mode can be changed with the ▼ button and the operating mode with the ▲ button. Press OK to save.

Control mode ▼		Operating mode ▲	
0	Control via control panel	1	constant speed
1	Control via control panel + external control by potential-free contacts		

Operation:

Press button (1), (2) or (3) to select the preset speed.
If the pump starts from standstill, it starts in suction mode and then runs at the selected speed.
As long as the pump is in the priming phase, the LED of the selected speed range flashes.
During operation the pump is started up to the fixed speed directly, without priming time.
The motor is stopped by pressing the button 0. The "Power" LED flashes and the display shows "OFF".

Setting the speeds:
Press the button for the speed to be changed. The speed can now be changed with the ▼ ▲ button.

Notice: During the suction phase it is not possible to change the speed.

Setting the priming parameters:
The motor has to be stopped (0) to programme the priming time. Press the SET button for at least 3 seconds until the display begins to flash. Now the speed with which the motor is to start up during the priming time can be set. The speed can be changed with the buttons ▼ ▲ and saved with OK. The length of the suction time can be determined following adjustment of the suction speed. The priming time can be set between 0 (=Off) and 10 minutes.

Resetting:
The motor can be reset to the state of delivery by pressing the SET button for at least 15 seconds. The motor stops and the three LEDs of the speeds light up.

The display of the control unit switched off after 3 minutes without action, except if an external control unit for example emits a signal to the pump every minute.

After a voltage drop the pump automatically starts up again with the speed last set, or remains stopped if it had been stopped beforehand.

The pump can be turned on and off using the control cable (potential-free contact) intended for this purpose. The mains voltage should not be interrupted to achieve this. This can be realised via a BADU Blue, BADU OmniTronic, BADU NetLink or a coupling relay. This puts less stress on the electronics.

Overview of possible operating and error messages

If a error occurs, the motor switches off permanently. Exception error: "Undervoltage". The motor automatically switches back on as soon as the voltage is over 209 V for at least 6 seconds.

If an defect occurs, the system must be disconnected from the power supply. See chapter "Faults" of the original operating manual "non self-priming and self-priming pumps with/without plastic lanterns (AK version)".

Error no.	Description
E-01	Overvoltage DC intermediate circuit
E-02	Overvoltage DC intermediate circuit (signal only, motor doesn’t stop)
E-03	Low DC intermediate circuit voltage (motor stops)
E-04	Power module overcurrent – software level
E-07	AC Voltage input is too high
E-08	AC Voltage input is too low
E-11	Motor speed protection
E-13	Power module overheating
E-16	Motor speed not synchronous to control
E-22	Output phase open circuit
E-51	Power module heat sensor error
E-60	Motor blocked
E-63	Digital process signal, error, programme not regulated
E-66	Communication error – terminal box

The following points refer to the related documentation!

Installing or removing the cover/strainer basket