



Similar to figure

## Data sheet

### Hydraulic data

Minimum efficiency index (MEI)	≥0.4
Max. operating pressure $p$	10 bar
Maximum operating pressure $PN$	10 bar
Min. fluid temperature $T_{\min}$	-20 °C
Max. fluid temperature $T_{\max}$	120 °C
Max. ambient temperature $T_{\max}$	40 °C
Flow max $Q_{\max}$	80.0 m³/h
Opt. volume flow $Q_{\text{opt}}$	58.3 m³/h
Head max $H_{\max}$	16.1 m
Opt. delivery head $H_{\text{opt}}$	10.5 m
Height $H_{Q\min}$	16.1 m
Height $H_{20}$	15.2
Height $H_{40}$	13.3
Height $H_{60}$	10.2
Height $H_{80}$	5.3

### Motor data

Mains connection	3~400 V, 50 Hz
Voltage tolerance	±10 %
Motor efficiency class	IE3
Rated power $P_2$	2.2 kW
Rated current $I_N$	4.5 A
Rated speed $n$	2900 1/min
Power factor $\cos \varphi_{100}$	0.81
Motor efficiency 50% $\eta_M 50\%$	84.5 %
Motor efficiency 75% $\eta_M 75\%$	85.9 %
Motor efficiency 100% $\eta_M 100\%$	85.9 %
Motor winding up to 3 kW	-
Motor winding from 4 kW	-
Insulation class	F
Protection class motor	IP55
Integrated full motor protection	-

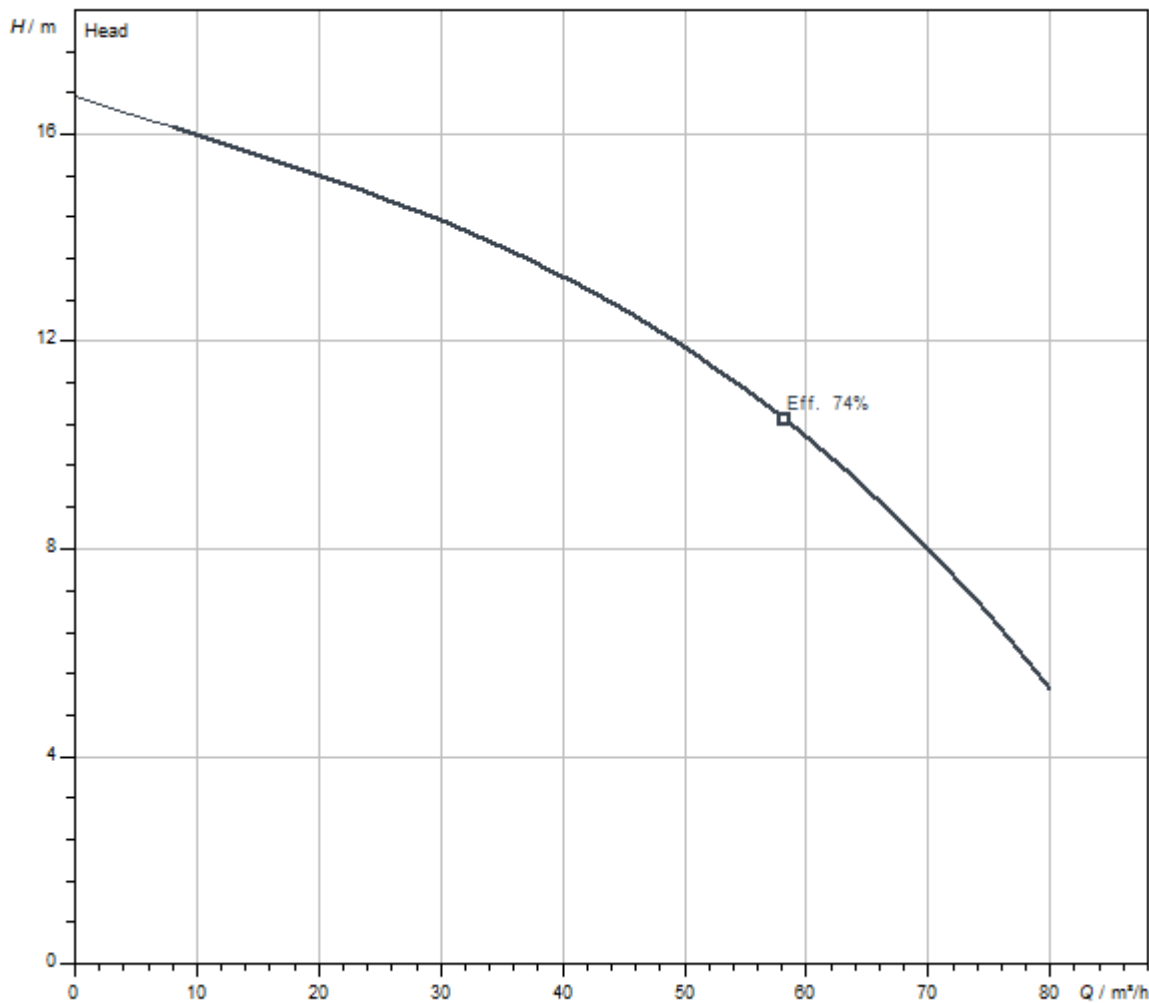
### Materials

Pump housing	Grey cast iron
Impeller	PPE/PS-GF30
Shaft	Stainless steel
Mechanical seal	AQ1EGG
Lantern	Grey cast iron

Installation dimensions

Pipe connection on the suction side <i>DN<sub>s</sub></i>	DN 80
Pipe connection on the discharge side <i>DN<sub>d</sub></i>	DN 80
Port-to-port length <i>L<sub>0</sub></i>	360 mm

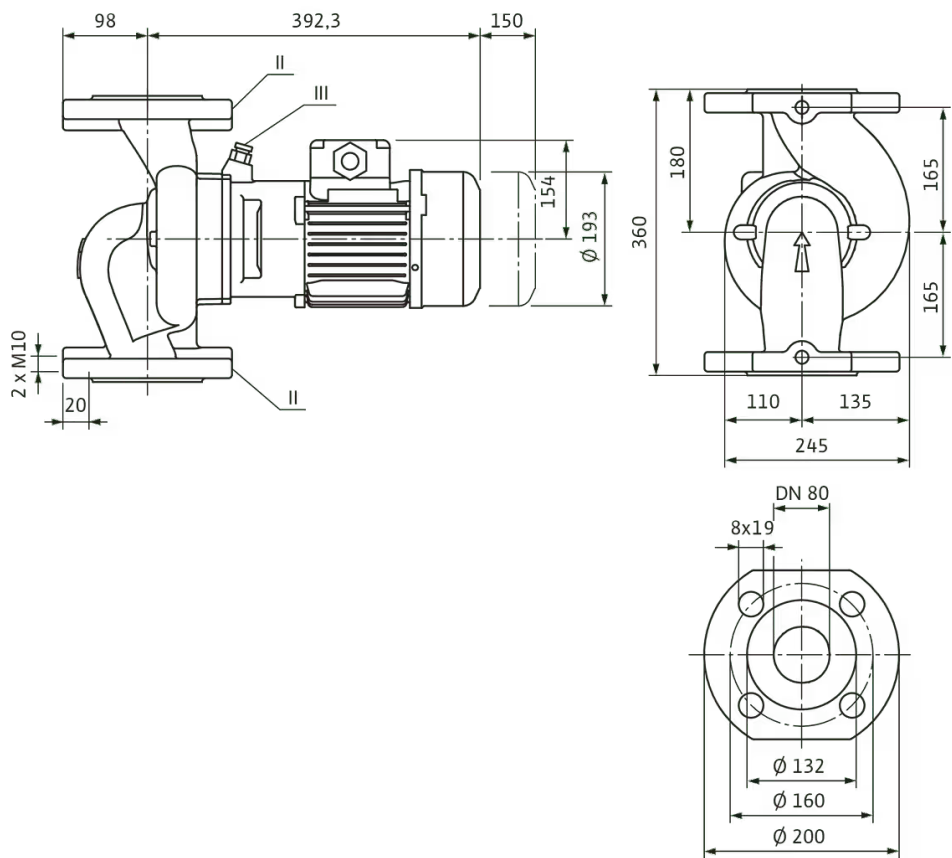
Pump curves



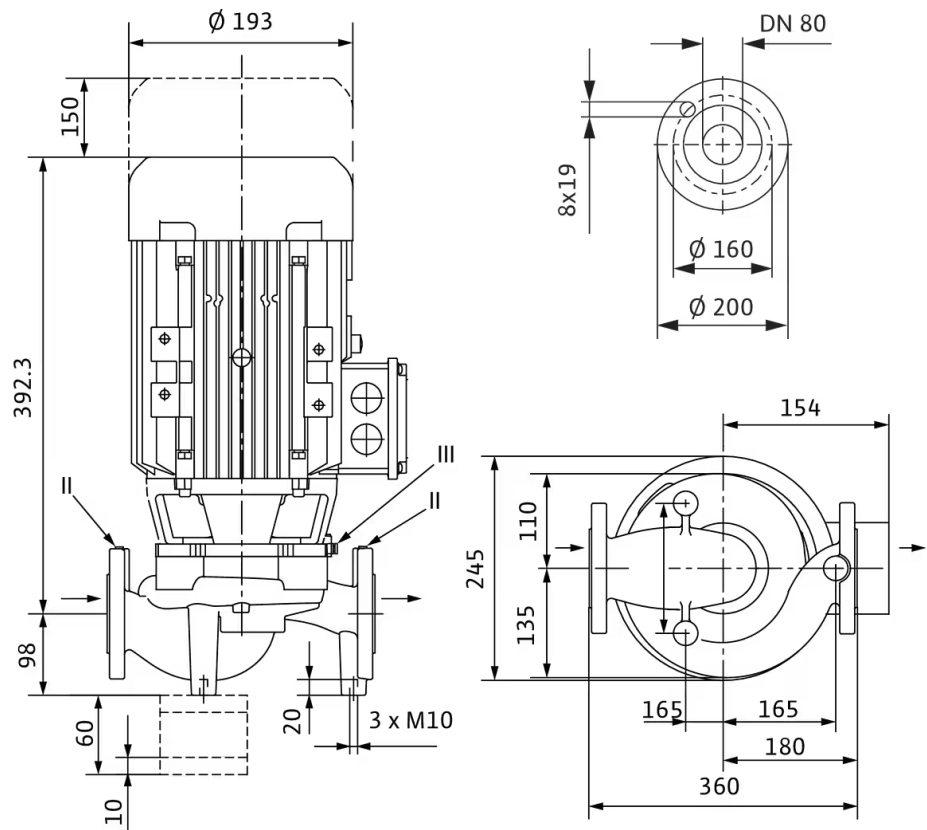
Fluid media	Water 100 %
Fluid temperature <i>T</i>	20,00 °C
speed at duty point <i>n hydr. @ OP</i>	2.900 1/min
Impeller diameter <i>d imp.</i>	119,3 mm

Dimensions and dimensions drawings

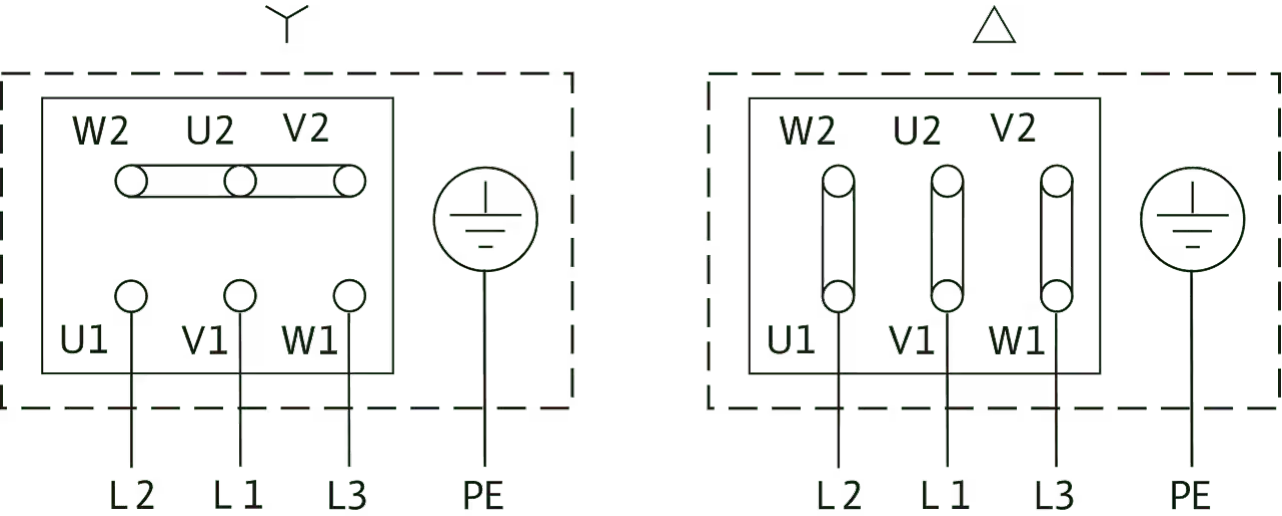
VeroLine-IPL 80/115-2,2/2



VeroLine-IPL 80/115-2,2/2



Wiring diagram



Δ: Connection diagram delta connection

Y: Connection diagram star connection

Motor protection switch required on-site. Check the direction of rotation! To change the direction of rotation, exchange any two phases.

$P_2 \leq 3 \text{ kW}$  3~400 V Y  
3~230 V Δ  
 $P_2 \geq 4 \text{ kW}$  3~690 V Y  
3~400 V Δ

After removing the bridges, Y-Δ start is possible.

Ordering information

Product data

Brand	Wilo
Product description	VeroLine-IPL 80/115-2,2/2
Article number	2121228
EAN number	4048482215006
Colour	Green
Minimum order quantity	1
Date of sales availability	2015-09-01

Packaging

Packaging type	Cardboard box
Packaging property	Transport packaging
Pieces per pallet	1
Number per layer	1

Dimension, weight

Length with packaging	800 mm
Length <i>L</i>	490.3 mm
Height with packaging	525 mm
Height <i>H</i>	360 mm
Width with packaging	600 mm
Width <i>W</i>	245 mm
Gross weight, approx. <i>m</i>	52.2 kg
Net weight, approx. <i>m</i>	43.3 kg

## Tender text

Single-stage glanded centrifugal pump with compact in-line design with directly flanged three-phase current motor and one-piece shaft or with lantern and standard motor rigidly connected by coupling (N version). The IPL series is suitable for pipe installation or installation on a base. Mounting brackets are available as accessories. With force-flushed circulation, bidirectional bellows

mechanical seal and cavitation-reducing plastic impeller.

Flanges with pressure measuring connections R 1/8. The pump housing and lantern are cathophoretic-coated.

The motor terminal box can be made of metal or plastic. If a metal terminal box is absolutely necessary, please order the appropriate special variant.

## Operating Data

Min. fluid temperature $T_{\min}$	-20 °C
Max. fluid temperature $T_{\max}$	120 °C
Min. ambient temperature $T_{\min}$	-15 °C
Max. ambient temperature $T_{\max}$	40 °C
Maximum operating pressure $PN$	10 bar
Minimum efficiency index (MEI)	≥0.4

## Motor data

Motor efficiency class	IE3
Mains connection	3~400 V, 50 Hz
Voltage tolerance	±10 %
Rated power $P_2$	2200 W
Rated speed $n$	2900 1/min
Rated current $I_N$	4.5 A
Power factor $\cos \varphi_{100}$	0.81
Motor efficiency 50% $\eta_M 50\%$	84.5 %
Motor efficiency 75% $\eta_M 75\%$	85.9 %
Motor efficiency 100% $\eta_M 100\%$	85.9 %
Insulation class	F
Protection class	IP55


## Materials

Pump housing	Grey cast iron
Impeller	PPE/PS-GF30
Shaft	Stainless steel
Shaft seal	AQ1EGG
Lantern	Grey cast iron

## Installation dimensions

Pipe connection on the suction side $DN_s$	DN 80
Pipe connection on the discharge side $DN_d$	DN 80
Port-to-port length $L_0$	360 mm

## Ordering information

Brand	Wilo
Product description	VeroLine-IPL 80/115-2,2/2
Net weight, approx. $m$	43.3 kg
Article number	<b>2121228</b> 

## Installation type

### Continuous, infinitely variable control, differential pressure-sensitive CC-HVAC system

#### CC-HVAC system

CC-HVAC-System 2x5.6A-T34-DOL-FC-WM	2527813	EUR 12,266.-
CC-HVAC-System 3x5.6A-T34-DOL-FC-WM	2527814	EUR 12,877.-

#### Antenna GSM/GPRS

D-network dual-band antenna with 3 m cable	2533862	EUR 213.-
D-network tri-band antenna 10 m cable	2533863	EUR 640.-
D-network tri-band antenna 15 m cable	2533864	EUR 709.-

#### Outdoor temperature sensor Pt 100

Outdoor temperature sensor Pt 100	2533772	EUR 159.-
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#### DDG impulse selector

DDG impulse selector	2533770	EUR 691.-
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#### BMS base module

BMS base module	2533800	EUR 876.-
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#### CC communication module BACnet

CC-communication module BACnet IP (slave)	2537051	EUR 2,051.-
CC-communication module BACnet MS/TP (slave)	2537050	EUR 2,468.-

#### Communication module LON

Communication module LON	2533868	EUR 4,323.-
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#### Communication module ModBus

Communication module Modbus RTU	2533869	EUR 1,027.-
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#### Communication module Profibus

Communication module Profibus DP	2533866	EUR 1,504.-
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#### Communication module GSM

GSM module	2533861	EUR 1,663.-
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#### Pump signalling module

Signalling module pump 1-2	2533812	EUR 535.-
Signalling module pump 3-6	2533836	EUR 517.-

#### Signal converter retrofit kit

Signal converter 0-10 V / 0-20 mA	2534992	EUR 318.-
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#### Connection cable control modules/signalling modules

Control modules connecting cable	2533790	EUR 235.-
Signalling modules connecting cable	2533890	EUR 235.-

#### DDG (4-20mA)

Wilo-DDG 10 Signal Trans.(4-20mA)2G VP.	2136454	EUR 1,297.-
Wilo-DDG 100 Signal Trans.(4-20mA)	2211740	EUR 1,297.-
Wilo-DDG 20 Signal Trans.(4-20mA)2G VP.	2136456	EUR 1,297.-
Wilo-DDG 40 Signal Trans.(4-20mA)2G VP.	2136458	EUR 1,297.-
Wilo-DDG 60 Signal Trans.(4-20mA)2G VP.	2136460	EUR 1,297.-

#### PTC thermistor tripping unit

PTC thermistor tripping unit	509275993	EUR 728.-
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### Continuous, infinitely variable control, temperature-dependent CC-HVAC system

#### CC-HVAC system

CC-HVAC-System 2x5.6A-T34-DOL-FC-WM	2527813	EUR 12,266.-
CC-HVAC-System 3x5.6A-T34-DOL-FC-WM	2527814	EUR 12,877.-

#### Antenna GSM/GPRS

D-network dual-band antenna with 3 m cable	2533862	EUR 213.-
D-network tri-band antenna 10 m cable	2533863	EUR 640.-
D-network tri-band antenna 15 m cable	2533864	EUR 709.-

#### Outdoor temperature sensor Pt 100

Outdoor temperature sensor Pt 100	2533772	EUR 159.-
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#### BMS base module

BMS base module	2533800	EUR 876.-
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#### CC communication module BACnet

CC-communication module BACnet IP (slave)	2537051	EUR 2,051.-
CC-communication module BACnet MS/TP (slave)	2537050	EUR 2,468.-

#### Communication module LON

Communication module LON	2533868	EUR 4,323.-
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#### Communication module ModBus

Communication module Modbus RTU	2533869	EUR 1,027.-
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#### Communication module Profibus

Communication module Profibus DP	2533866	EUR 1,504.-
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#### Communication module GSM

GSM module	2533861	EUR 1,663.-
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#### Pump signalling module

Signalling module pump 1-2	2533812	EUR 535.-
Signalling module pump 3-6	2533836	EUR 517.-

#### Signal converter retrofit kit

Signal converter 0-10 V / 0-20 mA	2534992	EUR 318.-
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#### Temperature module

Temperature module for systems with 1-3 pumps	2534991	EUR 1,371.-
Temperature module for systems with 4-6 pumps	2533771	EUR 1,085.-

#### Connection cable control modules/signalling modules

Control modules connecting cable	2533790	EUR 235.-
Signalling modules connecting cable	2533890	EUR 235.-

#### PTC thermistor tripping unit

PTC thermistor tripping unit	509275993	EUR 728.-
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### Continuous, infinitely variable control, differential pressure-sensitive SC-HVAC system

#### SC/SC-FC-HVAC system

SC-FC-HVAC system 1x6,3A-FC-WM (direct starting)	2545438	EUR 9,915.-
SC-FC-HVAC system 2x6,3A-FC-WM (direct starting)	2545439	EUR 10,548.-
SC-FC-HVAC system 3x6,3A-FC-WM (direct starting)	2545440	EUR 11,161.-
SC-FC-HVAC system 4x6,3A-FC-WM (direct starting)	2545441	EUR 11,930.-
SC-HVAC system 1x6,3A-WM (direct starting)	2545322	EUR 4,496.-
SC-HVAC system 2x6,3A-WM (direct starting)	2545323	EUR 4,899.-
SC-HVAC system 3x6,3A-WM (direct starting)	2545324	EUR 5,417.-
SC-HVAC system 4x6,3A-WM (direct starting)	2545325	EUR 5,762.-

#### Antenna GSM/GPRS

D-network dual-band antenna with 3 m cable	2533862	EUR 213.-
D-network tri-band antenna 10 m cable	2533863	EUR 640.-
D-network tri-band antenna 15 m cable	2533864	EUR 709.-

### Outdoor temperature sensor Pt 100

Outdoor temperature sensor Pt 100	2533772	EUR 159.-
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### DDG impulse selector

DDG impulse selector	2533770	EUR 691.-
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### Communication module LON (SC)

Communication module LON (SC)	2538243	EUR 814.-
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### SC communication module BACnet

SC-communication module BACnet MS/TP (slave)	2538242	EUR 814.-
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### Communication module GSM (SC)

Communication module GSM (SC)	2542216	EUR 772.-
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### Pump signalling module

Signalling module pump 1-2	2533812	EUR 535.-
Signalling module pump 3-6	2533836	EUR 517.-

### SC-HVAC signal board

SC-HVAC signal board	2119646	EUR 279.-
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### DDG (4-20mA)

Wilo-DDG 10 Signal Trans.(4-20mA)2G VP.	2136454	EUR 1,297.-
Wilo-DDG 100 Signal Trans.(4-20mA)	2211740	EUR 1,297.-
Wilo-DDG 20 Signal Trans.(4-20mA)2G VP.	2136456	EUR 1,297.-
Wilo-DDG 40 Signal Trans.(4-20mA)2G VP.	2136458	EUR 1,297.-
Wilo-DDG 60 Signal Trans.(4-20mA)2G VP.	2136460	EUR 1,297.-

### PTC thermistor tripping unit

PTC thermistor tripping unit	509275993	EUR 728.-
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## Continuous, infinitely variable control, temperature-dependent SC-HVAC system

### SC/SC-FC-HVAC system

SC-FC-HVAC system 1x6,3A-FC-WM (direct starting)	2545438	EUR 9,915.-
SC-FC-HVAC system 2x6,3A-FC-WM (direct starting)	2545439	EUR 10,548.-
SC-FC-HVAC system 3x6,3A-FC-WM (direct starting)	2545440	EUR 11,161.-
SC-FC-HVAC system 4x6,3A-FC-WM (direct starting)	2545441	EUR 11,930.-
SC-HVAC system 1x6,3A-WM (direct starting)	2545322	EUR 4,496.-
SC-HVAC system 2x6,3A-WM (direct starting)	2545323	EUR 4,899.-

SC-HVAC system 3x6,3A-WM (direct starting)	2545324	EUR 5,417.-
SC-HVAC system 4x6,3A-WM (direct starting)	2545325	EUR 5,762.-

#### Antenna GSM/GPRS

D-network dual-band antenna with 3 m cable	2533862	EUR 213.-
D-network tri-band antenna 10 m cable	2533863	EUR 640.-
D-network tri-band antenna 15 m cable	2533864	EUR 709.-

#### Outdoor temperature sensor Pt 100

Outdoor temperature sensor Pt 100	2533772	EUR 159.-
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#### Communication module LON (SC)

Communication module LON (SC)	2538243	EUR 814.-
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#### SC communication module BACnet

SC-communication module BACnet MS/TP (slave)	2538242	EUR 814.-
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#### Communication module GSM (SC)

Communication module GSM (SC)	2542216	EUR 772.-
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#### Pump signalling module

Signalling module pump 1-2	2533812	EUR 535.-
Signalling module pump 3-6	2533836	EUR 517.-

#### SC-HVAC signal board

SC-HVAC signal board	2119646	EUR 279.-
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#### PTC thermistor tripping unit

PTC thermistor tripping unit	509275993	EUR 728.-
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## Mechanical accessories

### Pipe installation, adapter fitting

#### Adapter set glanded pumps

Adapter A80-50 Set, DN 80x50mm, PN 16	2085212	EUR 344.-
Adapter A80-60 SET, DN 80x60mm, PN 16	2085213	EUR 367.-
Adapter A80-10 Set, DN 80x10mm, PN 16	2085472	EUR 322.-

#### Intermediate flange connecting piece F

Intermediate flange pieces F 30, DN 80x25mm, PN 10/16	110681991	EUR 116.-
Intermediate flange pieces F 42, DN 80x140mm, PN 10/16	2101158	EUR 740.-

### Wall fixation/installation on a base

#### Mounting bracket kit

Mounting bracket F 2-12 SET	2085234	EUR 112.-
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## Electrical accessories

### Pump control

#### Wilo-EFC

EFC2.2 3x380-480V 50/60Hz IP55	2193434	EUR 2,774.-
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### Pump control/accessories

#### Antenna GSM/GPRS

D-network dual-band antenna with 3 m cable	2533862	EUR 213.-
D-network tri-band antenna 10 m cable	2533863	EUR 640.-
D-network tri-band antenna 15 m cable	2533864	EUR 709.-
SMA/FME adapter	2545548	EUR 72.-

#### BMS base module

BMS base module	2533800	EUR 876.-
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#### CC communication module BACnet

CC-communication module BACnet MS/TP (slave)	2537050	EUR 2,468.-
CC-communication module BACnet IP (slave)	2537051	EUR 2,051.-

#### Communication module CC

CC communication module	2533850	EUR 339.-
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#### Communication module GSM

GSM module	2533861	EUR 1,663.-
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#### Communication module GSM (SC)

Communication module GSM (SC)	2542216	EUR 772.-
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#### Communication module LON

Communication module LON	2533868	EUR 4,323.-
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#### Communication module LON (SC)

Communication module LON (SC)	2538243	EUR 814.-
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#### Communication module ModBus

Communication module Modbus RTU	2533869	EUR 1,027.-
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#### Communication module Profibus

Communication module Profibus DP	2533866	EUR 1,504.-
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### Connection cable control modules/signalling modules

Control modules connecting cable	2533790	EUR 235.-
Signalling modules connecting cable	2533890	EUR 235.-

### DDG impulse selector

DDG impulse selector	2533770	EUR 691.-
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### Outdoor temperature sensor Pt 100

Outdoor temperature sensor Pt 100	2533772	EUR 159.-
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### Output filter EFC (150-500 m cable length)

7,5 A sin IP54 Wilo-EFC filter	6084561	EUR 1,991.-
8 A sin IP00 Wilo-EFC filter	6084576	EUR 682.-
8 A sin IP20 Wilo-EFC filter	6084902	EUR 680.-

### Pump signalling module

Signalling module pump 1-2	2533812	EUR 535.-
Signalling module pump 3-6	2533836	EUR 517.-

### SC communication module BACnet

SC-communication module BACnet MS/TP (slave)	2538242	EUR 814.-
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### SC-HVAC signal board

SC-HVAC signal board	2119646	EUR 279.-
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### Signal converter retrofit kit

Signal converter 0-10 V / 0-20 mA	2534992	EUR 318.-
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### Temperature module

Temperature module for systems with 4-6 pumps	2533771	EUR 1,085.-
Temperature module for systems with 1-3 pumps	2534991	EUR 1,371.-

## Pump control/Comfort control system

### CC-HVAC system

CC-HVAC-System 2x5.6A-T34-DOL-FC-WM	2527813	EUR 12,266.-
CC-HVAC-System 3x5.6A-T34-DOL-FC-WM	2527814	EUR 12,877.-

## Pump control/Smart control system

### SC/SC-FC-HVAC system

SC-HVAC system 1x6,3A-WM (direct starting)	2545322	EUR 4,496.-
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SC-HVAC system 2x6,3A-WM (direct starting)	2545323	EUR 4,899.-
SC-HVAC system 3x6,3A-WM (direct starting)	2545324	EUR 5,417.-
SC-HVAC system 4x6,3A-WM (direct starting)	2545325	EUR 5,762.-
SC-FC-HVAC system 1x6,3A-FC-WM (direct starting)	2545438	EUR 9,915.-
SC-FC-HVAC system 2x6,3A-FC-WM (direct starting)	2545439	EUR 10,548.-
SC-FC-HVAC system 3x6,3A-FC-WM (direct starting)	2545440	EUR 11,161.-
SC-FC-HVAC system 4x6,3A-FC-WM (direct starting)	2545441	EUR 11,930.-

## Differential pressure detection

### DDG (4-20mA)

Wilo-DDG 10 Signal Trans.(4-20mA)2G VP.	2136454	EUR 1,297.-
Wilo-DDG 20 Signal Trans.(4-20mA)2G VP.	2136456	EUR 1,297.-
Wilo-DDG 40 Signal Trans.(4-20mA)2G VP.	2136458	EUR 1,297.-
Wilo-DDG 60 Signal Trans.(4-20mA)2G VP.	2136460	EUR 1,297.-
Wilo-DDG 100 Signal Trans.(4-20mA)	2211740	EUR 1,297.-

## Motor protection

### PTC thermistor tripping unit

PTC thermistor tripping unit	509275993	EUR 728.-
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### Surcharge for thermistor sensor (single pumps)

Surcharge for thermistor sensor <7.5 kW	KLF_7_EP	EUR 307.-
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Services

With Wilo as your partner, you can not only be sure of choosing high-quality product solutions, but also of benefiting from a comprehensive, worry-free package of well thought-out services. We collaborate to develop a service concept tailored to your individual needs; with our expertise and personal consultancy, we make sure that the operation of your systems is as energy-efficient, reliable and economical as possible. All the while our competent Wilo service technicians are ready to assist you with fast, reliable and on-time support.

Recommended services

Commissioning Glanded pumps	2219391
Maintenance COMFORT Glanded pumps	2219493

More suitable services

Extended Warranty Glanded pumps	2219590
WiloCare Comfort	2222876
WiloCare Comfort Plus	2222877