



Data sheet

Hydraulic data

Minimum efficiency index (MEI)	≥ 0.4
Min. fluid temperature T_{\min}	-20 °C
Max. fluid temperature T_{\max}	140 °C
Max. ambient temperature T_{\max}	40 °C
Maximum operating pressure PN	16 bar
Note on dimensioning	16 bar to 120 °C, 13 bar to 140 °C

Motor data

Mains connection	3~400 V, 50 Hz
Voltage tolerance	$\pm 10\%$
Motor efficiency class	IE2
Rated power P_2	4 kW
Rated current I_N	8.5 A
Rated speed n	1450 1/min
Power factor $\cos \varphi_{100}$	0.79
Motor efficiency 50% $\eta_M 50\%$	84.1 %
Motor efficiency 75% $\eta_M 75\%$	86.4 %
Motor efficiency 100% $\eta_M 100\%$	86.6 %
Motor winding up to 3 kW	-
Motor winding from 4 kW	-
Insulation class	F
Protection class motor	IP55
Motor protection	PTC integrated

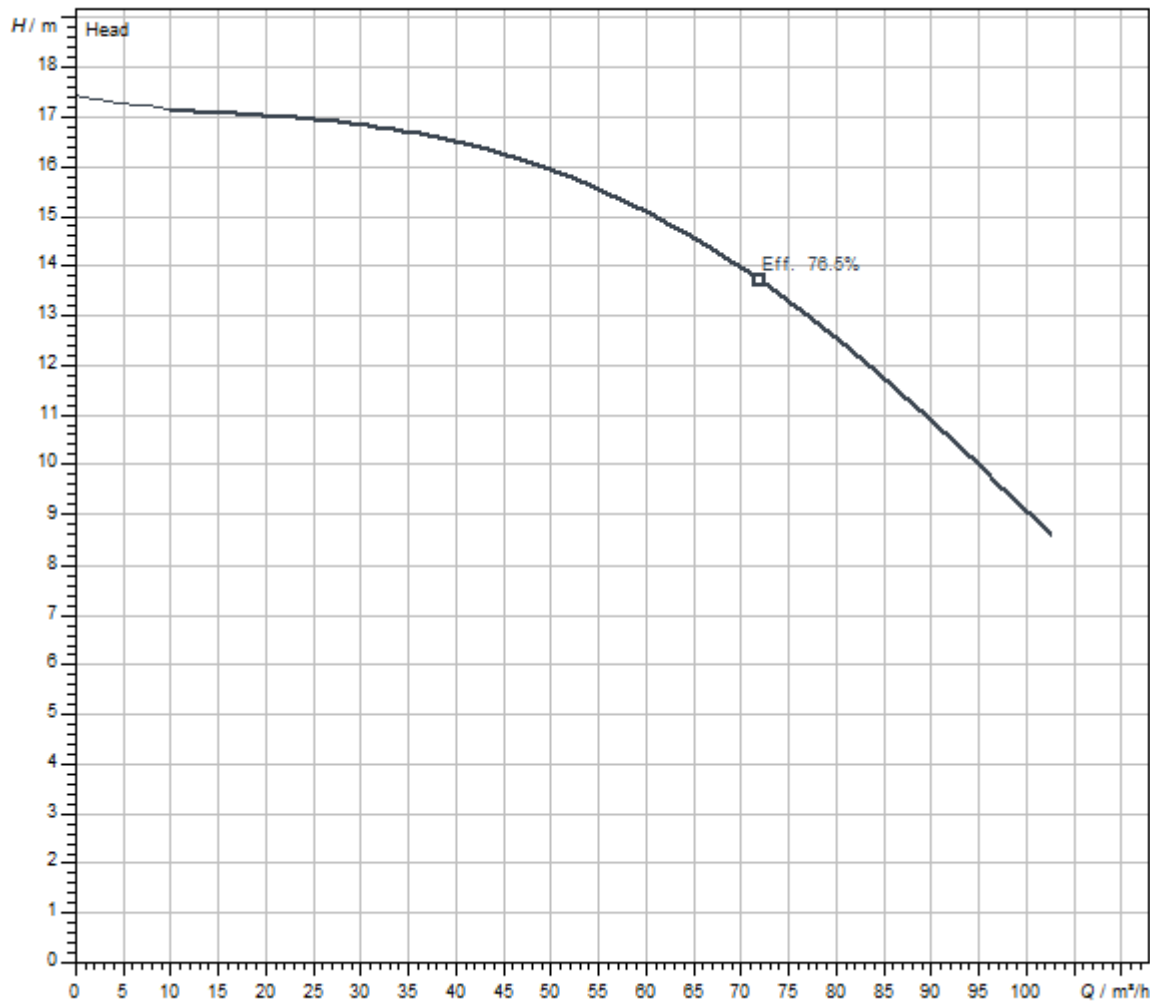
Materials

Pump housing	5.1301/EN-GJL-250 KTL-coated
Impeller	Grey cast iron EN-GJL-200
Shaft	Stainless steel
Mechanical seal	AQ1EGG
Lantern	5.1301/EN-GJL-250 KTL-coated

Installation dimensions

Pipe connection on the suction side DNs	DN 80
Pipe connection on the discharge side DNd	DN 80
Port-to-port length $L0$	500 mm

Pump curves

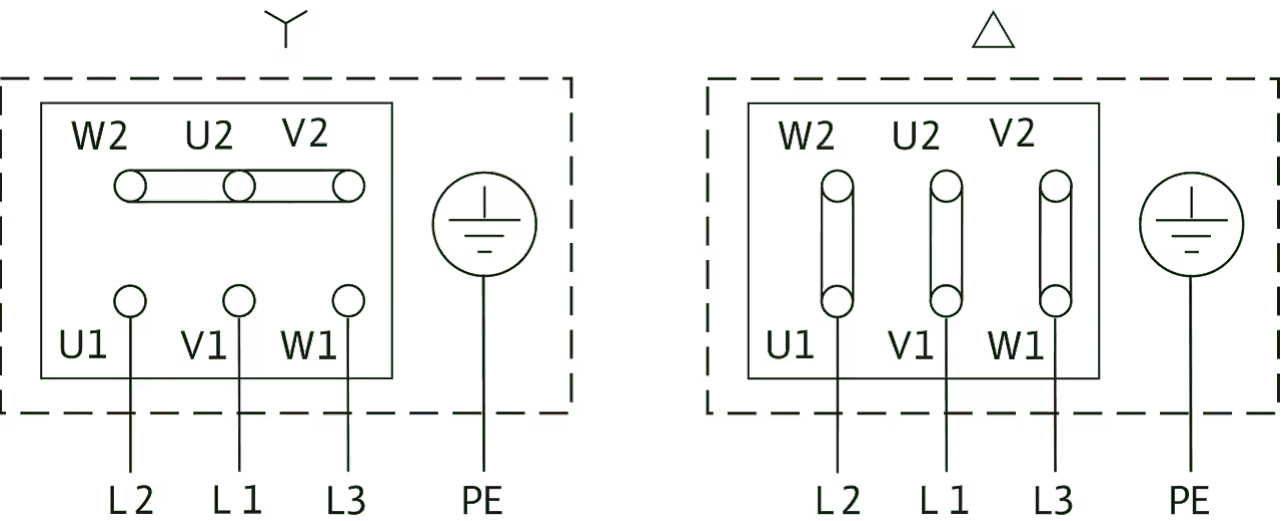


Fluid media	Water 100 %
Fluid temperature <i>T</i>	20.00 °C
speed at duty point <i>n hydr. @ OP</i>	1,450 1/min
Impeller diameter <i>d imp.</i>	223 mm

Dimensions and dimensions drawings

CronoLine-IL 80/220-4/4

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	CronoLine-IL 80/220-4/4
Article number	2786066
Colour	Green
Minimum order quantity	1
Date of sales availability	2015-09-01

Packaging

Packaging type	Euro pallet
Packaging property	Transport packaging
Pieces per pallet	1
Number per layer	1

Dimension, weight

Length with packaging	1200 mm
Length <i>L</i>	781 mm
Height with packaging	644 mm
Height <i>H</i>	500 mm
Width with packaging	800 mm
Width <i>W</i>	339 mm
Gross weight, approx. <i>m</i>	121.8 kg
Net weight, approx. <i>m</i>	97 kg

Tender text

Single-stage glanded centrifugal pump with in-line design for pipe installation or installation on a base. Low-vibration and low-noise monobloc design with lantern and rigidly connected standard flange motor. With forced-flow circulation, bidirectional bellows

mechanical seal and cavitation-reducing impeller. Flange with R 1/8 pressure measuring connections.

Pump housing and lantern are cathaphoretic-coated. Pump are equipped as standard with a PTC thermistor sensor for motor protection.

Operating Data

Min. fluid temperature T_{\min}	-20 °C
Max. fluid temperature T_{\max}	140 °C
Min. ambient temperature T_{\min}	-15 °C
Max. ambient temperature T_{\max}	40 °C
Maximum operating pressure P_N	16 bar
Note on dimensioning	16 bar to 120 °C, 13 bar to 140 °C
Minimum efficiency index (MEI)	≥0.4

Motor data

Motor efficiency class	IE2
Mains connection	3~400 V, 50 Hz
Voltage tolerance	±10 %
Rated power P_2	4000 W
Rated speed n	1450 1/min
Rated current I_N	8.5 A
Power factor $\cos \varphi_{100}$	0.79
Motor efficiency 50% η_M 50%	84.1 %
Motor efficiency 75% η_M 75%	86.4 %
Motor efficiency 100% η_M 100%	86.6 %
Insulation class	F
Protection class	IP55


Materials

Pump housing	5.1301/EN-GJL-250 KTL-coated
Impeller	Grey cast iron
Shaft	Stainless steel
Shaft seal	AQ1EGG
Lantern	5.1301/EN-GJL-250 KTL-coated

Installation dimensions

Pipe connection on the suction side D_Ns	DN 80
Pipe connection on the discharge side D_Nd	DN 80

Ordering information

Brand	Wilo
Product description	CronoLine-IL 80/220-4/4
Net weight, approx. m	97 kg
Article number	2786066 

Installation type

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

CC-HVAC system

CC-HVAC-System 1x10A-T34-DOL-FC-WM	2527824
CC-HVAC-System 2x10A-T34-DOL-FC-WM	2527825
CC-HVAC-System 3x10A-T34-DOL-FC-WM	2527826
CC-HVAC-System 4x10A-T34-DOL-FC-WM	2527827

Antenna GSM/GPRS

D-network dual-band antenna with 3 m cable	2533862
D-network tri-band antenna 10 m cable	2533863
D-network tri-band antenna 15 m cable	2533864

Outdoor temperature sensor Pt 100

Outdoor temperature sensor Pt 100	2533772
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DDG impulse selector

DDG impulse selector	2533770
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BMS base module

BMS base module	2533800
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CC communication module BACnet

CC-communication module BACnet IP (slave)	2537051
CC-communication module BACnet MS/TP (slave)	2537050

Communication module LON

Communication module LON	2533868
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Communication module ModBus

Communication module Modbus RTU	2533869
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Communication module Profibus

Communication module Profibus DP	2533866
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Communication module GSM

GSM module	2533861
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Pump signalling module

Signalling module pump 1-2	2533812
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Signalling module pump 3-6	2533836
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Signal converter retrofit kit

Signal converter 0-10 V / 0-20 mA	2534992
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Connection cable control modules/signalling modules

Control modules connecting cable	2533790
Signalling modules connecting cable	2533890

DDG (4-20mA)

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

PTC thermistor tripping unit

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

CC-HVAC system

CC-HVAC-System 1x10A-T34-DOL-FC-WM	2527824
CC-HVAC-System 2x10A-T34-DOL-FC-WM	2527825
CC-HVAC-System 3x10A-T34-DOL-FC-WM	2527826
CC-HVAC-System 4x10A-T34-DOL-FC-WM	2527827

Antenna GSM/GPRS

D-network dual-band antenna with 3 m cable	2533862
D-network tri-band antenna 10 m cable	2533863
D-network tri-band antenna 15 m cable	2533864

Outdoor temperature sensor Pt 100

Outdoor temperature sensor Pt 100	2533772
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BMS base module

BMS base module	2533800
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CC communication module BACnet

CC-communication module BACnet IP (slave)	2537051
CC-communication module BACnet MS/TP (slave)	2537050

Communication module LON

Communication module LON	2533868
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Communication module ModBus

Communication module Modbus RTU	2533869
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Communication module Profibus

Communication module Profibus DP	2533866
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Communication module GSM

GSM module	2533861
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Pump signalling module

Signalling module pump 1-2	2533812
Signalling module pump 3-6	2533836

Signal converter retrofit kit

Signal converter 0-10 V / 0-20 mA	2534992
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Temperature module

Temperature module for systems with 1-3 pumps	2534991
Temperature module for systems with 4-6 pumps	2533771

Connection cable control modules/signalling modules

Control modules connecting cable	2533790
Signalling modules connecting cable	2533890

PTC thermistor tripping unit

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

SC/SC-FC-HVAC system

SC-FC-HVAC system 1x10A-FC-WM (direct starting)	2545442
SC-FC-HVAC system 2x10A-FC-WM (direct starting)	2545443
SC-FC-HVAC system 3x10A-FC-WM (direct starting)	2545444
SC-FC-HVAC system 4x10A-FC-WM (direct starting)	2545445
SC-HVAC system 1x10A-WM (direct starting)	2545326
SC-HVAC system 2x10A-WM (direct starting)	2545327
SC-HVAC system 3x10A-WM (direct starting)	2545328
SC-HVAC system 4x10A-WM (direct starting)	2545329

Antenna GSM/GPRS

D-network dual-band antenna with 3 m cable	2533862
D-network tri-band antenna 10 m cable	2533863
D-network tri-band antenna 15 m cable	2533864

Outdoor temperature sensor Pt 100

Outdoor temperature sensor Pt 100	2533772
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DDG impulse selector

DDG impulse selector	2533770
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Communication module LON (SC)

Communication module LON (SC)	2538243
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SC communication module BACnet

SC-communication module BACnet MS/TP (slave)	2538242
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Communication module GSM (SC)

Communication module GSM (SC)	2542216
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Pump signalling module

Signalling module pump 1-2	2533812
Signalling module pump 3-6	2533836

SC-HVAC signal board

SC-HVAC signal board	2119646
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DDG (4-20mA)

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

PTC thermistor tripping unit

PTC thermistor tripping unit	509275993
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Continuous, infinitely variable control, temperature-dependent SC-HVAC system**SC/SC-FC-HVAC system**

SC-FC-HVAC system 1x10A-FC-WM (direct starting)	2545442
SC-FC-HVAC system 2x10A-FC-WM (direct starting)	2545443

SC-FC-HVAC system 3x10A-FC-WM (direct starting)	2545444
SC-FC-HVAC system 4x10A-FC-WM (direct starting)	2545445
SC-HVAC system 1x10A-WM (direct starting)	2545326
SC-HVAC system 2x10A-WM (direct starting)	2545327
SC-HVAC system 3x10A-WM (direct starting)	2545328
SC-HVAC system 4x10A-WM (direct starting)	2545329

Antenna GSM/GPRS

D-network dual-band antenna with 3 m cable	2533862
D-network tri-band antenna 10 m cable	2533863
D-network tri-band antenna 15 m cable	2533864

Outdoor temperature sensor Pt 100

Outdoor temperature sensor Pt 100	2533772
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Communication module LON (SC)

Communication module LON (SC)	2538243
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SC communication module BACnet

SC-communication module BACnet MS/TP (slave)	2538242
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Communication module GSM (SC)

Communication module GSM (SC)	2542216
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Pump signalling module

Signalling module pump 1-2	2533812
Signalling module pump 3-6	2533836

SC-HVAC signal board

SC-HVAC signal board	2119646
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PTC thermistor tripping unit

PTC thermistor tripping unit	509275993
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Mechanical accessories

Pipe installation, adapter fitting

Adapter set glanded pumps

Adapter A80-50 Set, DN 80x50mm, PN 16	2085212
Adapter A80-60 SET, DN 80x60mm, PN 16	2085213
Adapter A80-10 Set, DN 80x10mm, PN 16	2085472

Intermediate flange connecting piece F

Intermediate flange pieces F 30, DN 80x25mm, PN 10/16	110681991
Intermediate flange pieces F 42, DN 80x140mm, PN 10/16	2101158

Wall fixation/installation on a base

Mounting bracket kit

Mounting bracket F 3-14 SET	2040968
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Electrical accessories

Pump control

SK-712/d

SK-712/d-1-7,5 (18A) / EL	2785069
SK-712/d-3-7,5 (18A)	2895810
SK-712/d-4-7,5 (18A)	2895863

SK-712/sd

SK-712/sd-1-7,5 (17A) / EL	2785070
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SK-712/d

SK-712/d-5-7,5 (18A)	2895883
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SK-712/sd

SK-712/sd-2-7,5 (17A)	2895012
SK-712/sd-3-7,5 (17A)	2895302
SK-712/sd-5-7,5 (17A)	2895360

SK-712/ss

SK-712/ss-1-5,5 (12A) / EL	2785169
SK-712/ss-2-5,5 (12A)	2895629
SK-712/ss-3-5,5 (12A)	2895649
SK-712/ss-4-5,5 (12A)	2895663

SK-FC

SK-FC-4,0 (10A)	2895220
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Switchgear _AMP-S (RU)

Wilo-AMP-S-0,4/30(61,5A)/-1x1/1(F1)	2460024
Wilo-AMP-S-0,4/37(74,5A)/-1x1/1(F1)	2460025
Wilo-AMP-S-0,4/45(88A)/-1x1/1(F1)	2460026
Wilo-AMP-S-0,4/55(106A)/-1x1/1(F1)	2460027
Wilo-AMP-S-0,4/75(145A)/-1x1/1(F1)	2460028
Wilo-AMP-S-0,4/90(173A)/-1x1/1(F1)	2460029
Wilo-AMP-S-0,4/30(61,5A)/-1x2/2(F2)	2460030
Wilo-AMP-S-0,4/37(74,5A)/-1x2/2(F2)	2460031
Wilo-AMP-S-0,4/45(88A)/-1x2/2(F2)	2460032
Wilo-AMP-S-0,4/55(106A)/-1x2/2(F2)	2460033

Wilo-AMP-S-0,4/75(145A)/-1x2/2(F2)	2460034
Wilo-AMP-S-0,4/90(173A)/-1x2/2(F2)	2460035
Wilo-AMP-S-0,4/30(61,5A)/-2x3/3(F3)	2460036
Wilo-AMP-S-0,4/37(74,5A)/-2x3/3(F3)	2460037
Wilo-AMP-S-0,4/45(88A)/-2x3/3(F3)	2460038
Wilo-AMP-S-0,4/55(106A)/-2x3/3(F3)	2460039
Wilo-AMP-S-0,4/75(145A)/-2x3/3(F3)	2460040
Wilo-AMP-S-0,4/90(173A)/-2x3/3(F3)	2460041
Wilo-AMP-S-0,4/30(61,5A)/-2x4/4(F4)	2460042
Wilo-AMP-S-0,4/37(74,5A)/-2x4/4(F4)	2460043
Wilo-AMP-S-0,4/45(88A)/-2x4/4(F4)	2460044
Wilo-AMP-S-0,4/55(106A)/-2x4/4(F4)	2460045
Wilo-AMP-S-0,4/75(145A)/-2x4/4(F4)	2460046
Wilo-AMP-S-0,4/90(173A)/-2x4/4(F4)	2460047
Wilo-AMP-S-0,4/30(61,5A)/-3x5/5(F5)	2460048
Wilo-AMP-S-0,4/37(74,5A)/-3x5/5(F5)	2460049
Wilo-AMP-S-0,4/45(88A)/-3x5/5(F5)	2460050
Wilo-AMP-S-0,4/55(106A)/-3x5/5(F5)	2460051
Wilo-AMP-S-0,4/75(145A)/-3x5/5(F5)	2460052
Wilo-AMP-S-0,4/90(173A)/-3x5/5(F5)	2460053
Wilo-AMP-S-0,4/30(61,5A)/-3x6/6(F6)	2460054
Wilo-AMP-S-0,4/37(74,5A)/-3x6/6(F6)	2460055
Wilo-AMP-S-0,4/45(88A)/-3x6/6(F6)	2460056
Wilo-AMP-S-0,4/55(106A)/-3x6/6(F6)	2460057
Wilo-AMP-S-0,4/75(145A)/-3x6/6(F6)	2460058
Wilo-AMP-S-0,4/90(173A)/-3x6/6(F6)	2460059

Switchgear AMP

AMP example	
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W-CTRL-SK-712_w

W-CTRL-SK-712/w-2-4 (9A)-PKG	2461005
W-CTRL-SK-712/w-3-4 (9A)-PKG	2461017
W-CTRL-SK-712/w-4-4 (9A)-PKG	2461029
W-CTRL-SK-712/w-5-4 (9A)-PKG	2461041
W-CTRL-SK-712/w-6-4 (9A)-PKG	2461053
W-CTRL-SK-712/w-2-4 (9,2A)	2461690
W-CTRL-SK-712/w-3-4 (9,2A)	2461700

W-CTRL-SK-712/w-4-4 (9.2A)	2461710
W-CTRL-SK-712/w-5-4 (9.2A)	2461720
W-CTRL-SK-712/w-6-4 (9.2A)	2461730

Wilo-EFC

EFC4 3x380-480V 50/60Hz IP55	2193436
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Pump control/accessories

Antenna GSM/GPRS

D-network dual-band antenna with 3 m cable	2533862
D-network tri-band antenna 10 m cable	2533863
D-network tri-band antenna 15 m cable	2533864
SMA/FME adapter	2545548

BMS base module

BMS base module	2533800
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CC communication module BACnet

CC-communication module BACnet MS/TP (slave)	2537050
CC-communication module BACnet IP (slave)	2537051

Communication module CC

CC communication module	2533850
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Communication module GSM

GSM module	2533861
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Communication module GSM (SC)

Communication module GSM (SC)	2542216
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Communication module LON

Communication module LON	2533868
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Communication module LON (SC)

Communication module LON (SC)	2538243
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Communication module ModBus

Communication module Modbus RTU	2533869
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Communication module Profibus

Communication module Profibus DP	2533866
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Connection cable control modules/signalling modules

Control modules connecting cable	2533790
Signalling modules connecting cable	2533890

DDG impulse selector

DDG impulse selector	2533770
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Outdoor temperature sensor Pt 100

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

10 A sin IP54 Wilo-EFC filter	6084562
10 A sin IP00 Wilo-EFC filter	6084577
10 A sin IP20 Wilo-EFC filter	6084903

Pump signalling module

Signalling module pump 1-2	2533812
Signalling module pump 3-6	2533836

SC communication module BACnet

SC-communication module BACnet MS/TP (slave)	2538242
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SC-HVAC signal board

SC-HVAC signal board	2119646
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Signal converter retrofit kit

Signal converter 0-10 V / 0-20 mA	2534992
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SK-AV

SK-AV-12A	2785008
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Temperature module

Temperature module for systems with 4-6 pumps	2533771
Temperature module for systems with 1-3 pumps	2534991

Pump control/Comfort control system

CC-HVAC system

CC-HVAC-System 1x10A-T34-DOL-FC-WM	2527824
CC-HVAC-System 2x10A-T34-DOL-FC-WM	2527825
CC-HVAC-System 3x10A-T34-DOL-FC-WM	2527826
CC-HVAC-System 4x10A-T34-DOL-FC-WM	2527827

Pump control/Smart control system

SC/SC-FC-HVAC system

SC-HVAC system 1x10A-WM (direct starting)	2545326
SC-HVAC system 2x10A-WM (direct starting)	2545327
SC-HVAC system 3x10A-WM (direct starting)	2545328
SC-HVAC system 4x10A-WM (direct starting)	2545329
SC-FC-HVAC system 1x10A-FC-WM (direct starting)	2545442
SC-FC-HVAC system 2x10A-FC-WM (direct starting)	2545443
SC-FC-HVAC system 3x10A-FC-WM (direct starting)	2545444
SC-FC-HVAC system 4x10A-FC-WM (direct starting)	2545445

Differential pressure detection

DDG (4-20mA)

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

Motor protection

PTC thermistor tripping unit

PTC thermistor tripping unit	509275993
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Surcharge for thermistor sensor (single pumps)

Surcharge for thermistor sensor <7.5 kW	KLF_7_EP
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Steuerung und Automatisierung

SK-712/d

SK-712/d-1-7,5 (18A) / EL	2785069
SK-712/d-3-7,5 (18A)	2895810
SK-712/d-4-7,5 (18A)	2895863

SK-712/sd

SK-712/sd-1-7,5 (17A) / EL	2785070
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SK-712/d

SK-712/d-5-7,5 (18A)	2895883
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SK-712/sd

SK-712/sd-2-7,5 (17A)	2895012
SK-712/sd-3-7,5 (17A)	2895302
SK-712/sd-5-7,5 (17A)	2895360

SK-712/ss

SK-712/ss-1-5,5 (12A) / EL	2785169
SK-712/ss-2-5,5 (12A)	2895629
SK-712/ss-3-5,5 (12A)	2895649
SK-712/ss-4-5,5 (12A)	2895663

Switchgear AMP

AMP example	
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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

Wilo-Live Assistant Service	2216415
Supervision Glanded pumps	2219321
Commissioning Glanded pumps	2219391
Maintenance BASIC Glanded pumps	2219531
Maintenance COMFORT Glanded pumps	2219493
Maintenance PREMIUM Glanded pumps	2219546

More suitable services

Extended Warranty Glanded pumps	2219590
System Optimisation Glanded pumps	2219251
Energy Solutions Glanded pumps	2219240
Repair Glanded pumps	2219610