



Data sheet

Hydraulic data

Maximum operating pressure p	2.4 bar
Discharge port	DN 150
Free ball passage of the hydraulics	100 mm
Impeller type	Single-channel impeller
Max. immersion depth	20 m
Max. delivery head H_{\max}	15.8 m
Max. volume flow Q_{\max}	385.2 m³/h
Min. fluid temperature T_{\min}	3 °C
Max. fluid temperature T_{\max}	40 °C
Min. ambient temperature T_{\min}	3 °C
Max. ambient temperature T_{\max}	40 °C

Motor data

Motor Identifier	T 20.1-4/22GEx 15kW
Mains connection	3~400 V, 50 Hz
Voltage tolerance	±10 %
Rated power P_2	15 kW
Power consumption $P_{1 \max}$	18.10 kW
Rated current I_N	30.5 A
Starting current I	30 A
Operating mode (immersed)	S1
Operating mode (non-immersed)	S2-15 min
Rated speed n	1425 1/min
Power factor $\cos \varphi_{100}$	0.86
Activation type	Star-Delta (YΔ)
Number of poles	4
Max. switching frequency t	15 1/h
Insulation class	H
Protection class motor	IP68

Cable

Connection cable length L	10 m
Cable type	NSSHÖU-J
Cable cross-section	7x2,5 + 7x1,5 mm²
Type of connection cable	Non-detachable

Equipment/function

Mains plug	no
Float switch	no
Macerator	no
Explosion protection type	ATEX
Motor protection	Bimetall
Motor, leakage detection	yes
Sealing chamber, leakage detection	optional
Leakage chamber, leakage detection	yes

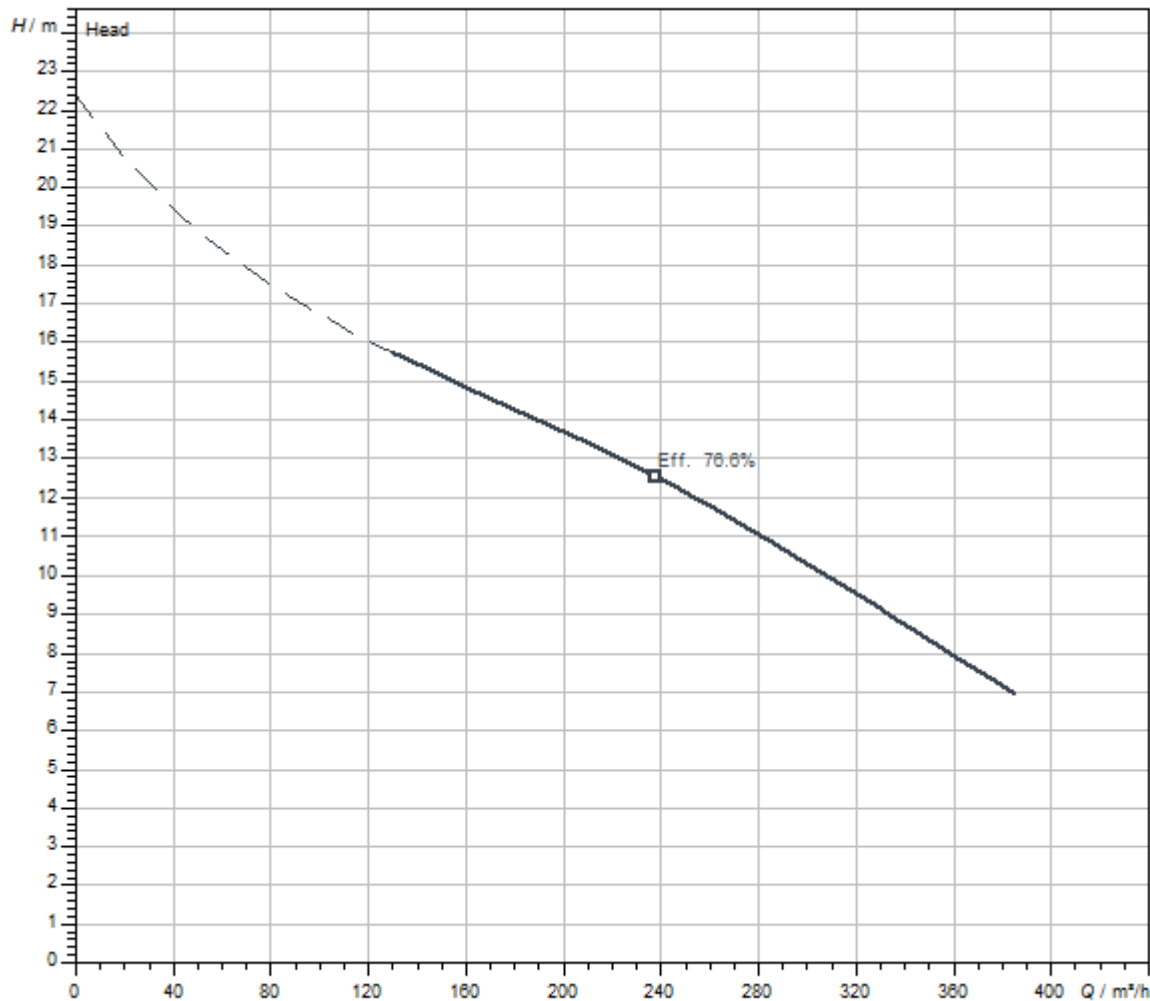
Materials

Pump housing	Grey cast iron
Impeller	Grey cast iron
Shaft	Stainless steel
Sealing on pump side	Silicon carbide
Sealing on motor side	NBR
Gasket material	NBR
Motor housing	Grey cast iron

Installation dimensions

Inlet connection	DN 150
Outlet connection	DN 150

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>	260 mm

Tender text

Fully submersible sewage pump for vertical wet well installation, for pumping sewage containing faeces, as well as municipal and industrial sewage. Unit made entirely of cast iron; on pump-side seal made of SiC/SiC, seal on the motor side is a rotary shaft seal or mechanical seal. Pressure connection with horizontal pressure port and flange connection. Surface-cooled

motor in three-phase current version with thermal motor monitoring, sealing and leakage chamber and Ex rating. The leakage chamber is monitored using a float switch. As an option, the sealing chamber can be monitored by an external pencil electrode. Longitudinally watertight connection cable with bare cable end.

Operating Data

Product data

Impeller type	Single-channel impeller
Free ball passage of the hydraulics	100 mm
Maximum operating pressure P_N	2 bar
Max. immersion depth	20 m
Fluid temperature T	3 °C

Motor data

Motor design	Submersible motor – surface-cooled
Mains connection	3~400 V, 50 Hz
Voltage tolerance	±10 %
Power factor $\cos \varphi_{100}$	0.86
Rated power P_2	15 kW
Power consumption $P_{1 \max}$	18.10 kW
Rated current I_N	30.5 A
Starting current I	30 A
Activation type	Star-Delta (YΔ)
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Max. switching frequency t	15 1/h
Insulation class	H
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Operating mode (immersed)	S1
Operating mode (non-immersed)	S2-15 min

Cable

Connection cable length L	10 m
Cable type	NSSHÖU-J
Cable cross-section	7x2,5 + 7x1,5 mm²
Mains plug	no
Type of connection cable	Non-detachable

Equipment/function

Float switch	no
Macerator	no
Explosion protection type	ATEX
Motor protection	Bimetall
Motor, leakage detection	yes
Sealing chamber, leakage detection	optional
Leakage chamber, leakage detection	yes


Materials

Pump housing	Grey cast iron
Impeller	Grey cast iron
Shaft	Stainless steel
Sealing on pump side	QQPGG
Sealing on motor side	BXPFF
Gasket material	NBR
Motor housing	Grey cast iron

Installation dimensions

Pipe connection on the suction side DNs	DN 150
Pipe connection on the discharge side DNd	DN 150

Ordering information

Brand	Wilo
Product description	EMU FA 15.52-260E + T 20.1-4/22GEx
Net weight, approx. <i>m</i>	249 kg
Article number	6047734 

Installation type

Level control with float switch

Level measurement using a level sensor with various measurement ranges, including high water alarm and dry-running protection.

Communication module GSM (SC)

Communication module GSM (SC)	2542216
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Battery 9V,200mA

NiMh rechargeable battery, 9 V/200 mAh	2522850
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Float switch MS1

Float switch MS1 with 10 m cable	2004593
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Ex-rated cut-off relay

Ex-rated cut-off relay (2-circuit)	2513059
Ex-rated cut-off relay (3-circuit)	2510698
Ex-rated cut-off relay (4-circuit)	2510699
Ex-rated cut-off relay (5-circuit)	2510674

Signal horn

Signal horn 1~230 V	501459398
Signal horn 12-24 VDC	2017208

Flash light

Flash light 1~230 VAC	2551613
Flash light 24 VDC	2551612

Level control with level sensor

Level measurement using a level sensor with various measurement ranges, including high water alarm and dry-running protection. The breakdown barrier and the Ex cut-off relays are not required except for the connection of signal transmitters in potentially explosive areas! These can also be dispensed with when the SC-L..-Ex switchgear is used!

Communication module GSM (SC)

Communication module GSM (SC)	2542216
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Level sensor

Level sensor 0-1.0 mWS with 10 m cable	6088842
Level sensor 0-1.0 mWS with 30 m cable	6088841
Level sensor 0-1.0 mWS with 50 m cable	6088840
Level sensor 0-2.5 mWS with 10 m cable	6088839
Level sensor 0-2.5 mWS with 30 m cable	6088837

Level sensor 0-2.5 mWS with 50 m cable	6088836
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Cable clamp

Cable clamp	2519927
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Zener barrier

Zener barrier	2541372
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Signal horn

Signal horn 1~230 V	501459398
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Flash light

Flash light 1~230 VAC	2551613
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Level control with dynamic pressure system

Level measurement via an open dynamic pressure system with the option of a separate dynamic pressure bell for the high water level.

Battery 9V,200mA

NiMh rechargeable battery, 9 V/200 mAh	2522850
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Dynamic pressure system

Bubbling-through system	2516977
Dynamic pressure bell with 10 m hose	2516976

Signal horn

Signal horn 1~230 V	501459398
Signal horn 12-24 VDC	2017208

Flash light

Flash light 1~230 VAC	2551613
Flash light 24 VDC	2551612

Mains-independent alarm signal

Alarm signal for detection of flooding in rooms and buildings. The alarm signal is acoustic, optical or wireless. In addition, other consumers can be controlled directly.

Zener barrier

Zener barrier	2541372
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Float switch MS1

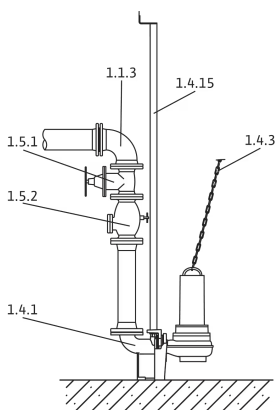
Float switch MS1 with 10 m cable	2004593
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Ex-rated cut-off relay

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Ex-rated cut-off relay (2-circuit)	2513059
DrainAlarm	
DrainAlarm	2545133
Signal horn	
Signal horn 1~230 V	501459398
Flash light	
Flash light 1~230 VAC	2551613

Stationary wet well installation DN 150



Installation drawing

The pumps are immersed in the fluid. Connection to the discharge pipe is normally by a suspension unit. For maintenance purposes, the pumps can be removed from the top of the chamber. There is no need to loosen any screws or drain the water.

For a correct operation of the pumps, it is necessary to know the switching volume. The switching volume is calculated as the difference between the ON and OFF switching points. The OFF-switching point will define by the operating mode for submerged and non-submerged operation of the motor.

Pipe elbow 90° flange/flange 1.1.3

90° pipe elbow DN 150	2017186
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Y-piece 1.1.5

DN 150 Y-piece	2017181
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Suspension unit 1.4.1

Suspension unit DN 150/2RK	6085396
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Sling chain, galvanized steel 1.4.3

Sling chain kit PCS-CE, galvanised steel, 400 kg, 10 m	6063142
Sling chain kit PCS-CE, galvanised steel, 400 kg, 3 m	6063139
Sling chain kit PCS-CE, galvanised steel, 400 kg, 5 m	6063140

Sling chain, stainless steel 1.4.3

Sling chain kit PCS-CE, stainless steel, 400 kg, 10 m	6063138
Sling chain kit PCS-CE, stainless steel, 400 kg, 3 m	6063135
Sling chain kit PCS-CE, stainless steel, 400 kg, 5 m	6063136

Guide tube 1.4.15

Guide pipe Ø42.4x2mm 6m 1.4301	6031565
Guide pipe Ø42.4x2mm 6m 1.4571	6031566

Shut-off device for wastewater and sewage 1.5.1

Gate valve DN 150, EN-GJL-250	2017164
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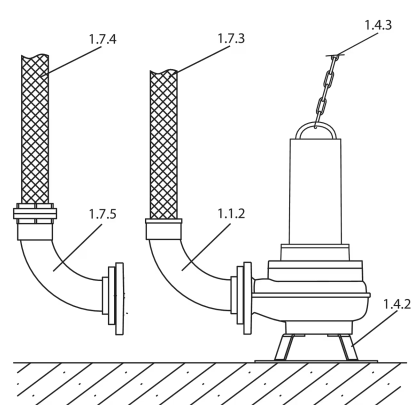
Non-return valve 1.5.2

Non-return valve DN 150	2017170
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Portable wet well installation DN 150



Installation example



Installation drawing

The pump is equipped with a pump foot (integrated in the pump housing or separately as an accessory). With this pump foot, the pump can be easily and flexibly installed in any operating space. Hoses are used as discharge pipes. Connection is with a hose nipple or Storz coupling. For a level-dependent operation, it is recommended to use a pump with a float switch.

Pump foot 1.4.2

Floor supporting foot FA 15.52	6024243
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Sling chain, galvanized steel 1.4.3

Sling chain kit PCS-CE, galvanised steel, 400 kg, 10 m	6063142
Sling chain kit PCS-CE, galvanised steel, 400 kg, 5 m	6063140

Sling chain, stainless steel 1.4.3

Sling chain kit PCS-CE, stainless steel, 400 kg, 10 m	6063138
Sling chain kit PCS-CE, stainless steel, 400 kg, 5 m	6063136

Synthetic fibre hose with coupling 1.7.4

Synthetic fibre pressure hose 10 m, with Storz F	6003648
Synthetic fibre pressure hose 20 m, with Storz F	6003647

Storz-pipe coupling with 90° pipe elbow 1.7.5

Fixed coupling set Storz F/DN 150	6040247
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Mechanical accessories

Fittings

Non-return valve

Non-return valve DN 150	2017170
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Shut-off device for wastewater and sewage

Gate valve DN 150, EN-GJL-250	2017164
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Hoses / hose joints

Storz-pipe coupling with 90° pipe elbow

Fixed coupling set Storz F/DN 150	6040247
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Synthetic fibre hose with coupling

Synthetic fibre pressure hose 20 m, with Storz B	6003050
Synthetic fibre pressure hose 10 m, with Storz B	6003051
Synthetic fibre pressure hose 5 m, with Storz B	6003052
Synthetic fibre pressure hose 20 m, with Storz F	6003647
Synthetic fibre pressure hose 10 m, with Storz F	6003648
Synthetic fibre pressure hose 20 m, with Storz C	6003649
Synthetic fibre pressure hose 10 m, with Storz C	6003650
Synthetic fibre pressure hose 5 m, with Storz C	6003651
Synthetic fibre pressure hose 5 m, with Storz A	6022391
Synthetic fibre pressure hose 10 m, with Storz A	6022392
Synthetic fibre pressure hose 20 m, with Storz A	6022393

Installation/setup

Guide tube

Guide pipe Ø42.4x2mm 6m 1.4301	6031565
Guide pipe Ø42.4x2mm 6m 1.4571	6031566
Guide pipe Ø60.3x3.25mm 6m 1.4571	6038803
Guide pipe Ø60.3x3.65mm 6m 1.0026	6048988

Pump foot

Floor supporting foot FA 15.52	6024243
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Sling chain, galvanized steel

Sling chain kit PCS-CE, galvanised steel, 400 kg, 3 m	6063139
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Sling chain kit PCS-CE, galvanised steel, 400 kg, 5 m	6063140
Sling chain kit PCS-CE, galvanised steel, 400 kg, 6 m	6063141
Sling chain kit PCS-CE, galvanised steel, 400 kg, 10 m	6063142
Sling chain kit PCS-CE, galvanised steel, 800 kg, 3 m	6063147
Sling chain kit PCS-CE, galvanised steel, 800 kg, 5 m	6063148
Sling chain kit PCS-CE, galvanised steel, 800 kg, 6 m	6063149
Sling chain kit PCS-CE, galvanised steel, 800 kg, 10 m	6063150
Sling chain kit PCS-CE, galvanised steel, 2000 kg, 10 m	6063152
Sling chain kit PCS-CE, galvanised steel, 5000 kg, 10 m	6063154
Sling chain kit PCS-CE, galvanised steel, 7000 kg, 10 m	6063156
Sling chain kit PCS-CE, galvanised steel, 9000 kg, 10 m	6063518

Sling chain, stainless steel

Sling chain kit PCS-CE, stainless steel, 400 kg, 3 m	6063135
Sling chain kit PCS-CE, stainless steel, 400 kg, 5 m	6063136
Sling chain kit PCS-CE, stainless steel, 400 kg, 6 m	6063137
Sling chain kit PCS-CE, stainless steel, 400 kg, 10 m	6063138
Sling chain kit PCS-CE, stainless steel, 800 kg, 3 m	6063143
Sling chain kit PCS-CE, stainless steel, 800 kg, 5 m	6063144
Sling chain kit PCS-CE, stainless steel, 800 kg, 6 m	6063145
Sling chain kit PCS-CE, stainless steel, 800 kg, 10 m	6063146
Sling chain kit PCS-CE, stainless steel, 2000 kg, 10 m	6063151
Sling chain kit PCS-CE, stainless steel, 5000 kg, 10 m	6063153
Sling chain kit PCS-CE, stainless steel, 7000 kg, 10 m	6063155

Suspension unit

Suspension unit DN 150/2RK	6085396
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Pipes/pipe joints

Pipe elbow 90° flange/flange

90° pipe elbow DN 150	2017186
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Y-piece

DN 150 Y-piece	2017181
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Electrical accessories

Pump control/accessories

Battery 9V,200mA

NiMh rechargeable battery, 9 V/200 mAh	2522850
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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 (SC)

Communication module LON (SC)	2538243
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Electrode relay

Evaluation relay NIV 105/S	6003270
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Evaluation relay NIV 101/A	6085388
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Phase asymmetry relay

Phase asymmetry relay PS2DF	6067141
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SC communication module BACnet

SC-communication module BACnet MS/TP (slave)	2538242
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BACnet IP SC communication module	2553366
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Alarm signal

DrainAlarm

DrainAlarm	2545133
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DrainAlarm FIRST	2550526
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Flash light

Mounted Flash light 1~230 VAC	2510429
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Flash light 24 VDC	2551612
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Flash light 1~230 VAC	2551613
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Signal horn

Signal horn 12-24 VDC	2017208
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Signal horn 1~230 V	501459398
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Cable

Pencil electrode

Pencil electrode (210 mm) with 10 m cable	6042222
Pencil electrode (30 mm) with 10 m cable	6065216

Cable distribution

Cable distribution cabinet

UCHRSD cable distribution cabinet, size 00	2523672
UCHRSD cable distribution cabinet, size 0	2523673
UCHRSD cable distribution cabinet, size 1	2523674
UCHRSD cable distribution cabinet, size 2	2523675
FCHE cable distribution cabinet, size 00	2523791

Level control

Dynamic pressure system

Dynamic pressure bell with 10 m hose	2516976
Bubbling-through system	2516977

Float switch MS1

Float switch MS1 with 10 m cable	2004593
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Float switch WA

Float switch WA65 with 5 m cable	503211390
Float switch WA65 with 10 m cable	503211893
Float switch WA65 with 20 m cable	2004431
Float switch WA65 with 30 m cable	2004432
Float switch WA KR1 S with 5 m cable	6082806
Float switch WA KR1 S with 10 m cable	6082807
Float switch WA65 (PSN-X) with 20 m cable	6088843
Float switch WA65 (PSN-X) with 10 m cable	6088844
Float switch WA65 (PSN-X) with 5 m cable	6088845

Float switch WAO

Float switch WAO 65, 5 m cable	503211595
Float switch WAO 65, 10 m cable	2006027
Float switch WAO 65, 20 m cable	2004429
Float switch WAO 65, 30 m cable	2004430

Level sensor

Level sensor 0-10 mWS with 50 m cable	6088831
Level sensor 0-10 mWS with 30 m cable	6088832
Level sensor 0-10 mWS with 20 m cable	6088833
Level sensor 0-2.5 mWS with 50 m cable	6088836
Level sensor 0-2.5 mWS with 30 m cable	6088837
Level sensor 0-2.5 mWG, cable length: 20 m	6088838
Level sensor 0-2.5 mWS with 10 m cable	6088839
Level sensor 0-1.0 mWS with 50 m cable	6088840
Level sensor 0-1.0 mWS with 30 m cable	6088841
Level sensor 0-1.0 mWS with 10 m cable	6088842

Level control/accessories

Cable clamp

Cable clamp	2519927
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Dynamic pressure system

Bubbling-through system	2516977
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Ex-rated cut-off relay

Ex-rated cut-off relay (5-circuit)	2510674
Ex-rated cut-off relay (3-circuit)	2510698
Ex-rated cut-off relay (4-circuit)	2510699
Ex-rated cut-off relay (2-circuit)	2513059
Ex-rated cut-off relay XR-42x	6069164

Zener barrier

Zener barrier	2541372
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Motor protection

Pencil electrode

Pencil electrode (210 mm) with 10 m cable	6042222
Pencil electrode (30 mm) with 10 m cable	6065216

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 Drainage pumps	2219491
Wilo-Live Assistant Service	2216415
Maintenance BASIC Drainage pumps	2219540
Maintenance COMFORT Drainage pumps	2219514
Maintenance PREMIUM Drainage pumps	2219567

More suitable services

Service Package L Drainage pumps	2219719
Service Package M Drainage pumps	2219690
Extended Warranty Drainage pumps	2219465
Supervision Drainage pumps	2219348
Installation Drainage pumps	2219383
System Optimisation Drainage pumps	2219278
Energy Solutions Drainage pumps	2219313
Repair Drainage pumps	2219632