DAB®

MAKING WATER EASY

FX

# SUBMERSIBLE PUMPS

## IMPELLER SELECTION GUIDE

| PUMP | IMPELLER TYPE | IMPELLER PROPERTIES | RECOMMENDED APPLICATIONS |
|---|---|---|---|
|  **DRENAG FX** |  Close-clearance open impeller | High head | Unscreened rainwater |
|  **FX C** |  Channel impeller | High flow rate | Flooding prevention for critical applications |
|  **FEKA FX V** |  Vortex Impeller | Maximum free passage | Unscreened wastewater as covered under standard EN12050-1 |
|  **FEKA FX S** |  Screw impeller | Unbeatable efficiency | Unscreened wastewater as covered under EN12050-1<br>Dense or viscous liquids |
|  **GRINDER FX** |  Close-clearance open impeller with shredder | High head with shredder | Unscreened wastewater as covered under EN12050-1<br>Wastewater containing long fibres<br>Systems with pipework that has a small diameter or is partially clogged |

## TECHNICAL DATA

**Liquid pumped:** Clearwater and rainwater, greywater and sandy water from construction sites.
**Free passage:** 10 mm.
**Liquid temperature range:**
+50°C (+60°C for short periods);
+40°C for ATEX version
**Outlet connection:**
1 1/2" BSP threaded;
DN 32 and DN 40 flanged
**Outlet direction:** horizontal and vertical with 1 1/2" bend kit accessory.
**Impeller:** cast iron open
**Maximum submerged depth:** 7 metres
**Possible mounting positions:** portable placed on ground, fixed on coupling device

DRENAG FX is a submersible drainage pump designed to handle clearwater and greywater from drains in residential, institutional and commercial settings, as well as groundwater or rainwater; suitable for high-head applications. The pump is certified to standard EN 12050-2 for wastewater. For fixed installations with a coupling device, or portable installations when placed directly on the bottom of the tank. Design solution chosen for quick maintenance, featuring easy access to the pump's main components. Automatic versions with an output of up to 1,5 kW. Also comes in an ATEX version for use in potentially explosive atmospheres. (ATEX certifications: II2G Ex db IIB T4 GB).

### PUMP DESIGN FEATURES

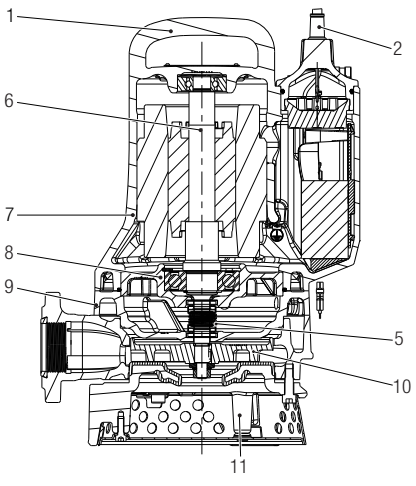
Close-clearance open impeller and wear-resistant rubber-coated disc allowing the pump to handle even fluids containing abrasive particles. Spheroidal cast iron pump casing and impeller. AISI 304 stainless steel motor shaft. Double SiC-SiC/SiC-C mechanical seal running in an oil chamber not in contact with the liquid being pumped. Both flanged and threaded outlet port.

### MOTOR DESIGN FEATURES

Single-phase (MA/MNA versions) and three-phase (TNA versions) asynchronous motor. Rotor mounted on long-life lubricated watertight bearings. S1 continuous duty with motor fully submerged. Dry run for a maximum of 10 minutes. Overtemperature sensors in motor windings with a trip point of 130°C. Epoxy-sealed cable entry, quick-connect power cable 07RN8-F. Single-phase versions have a built-in capacitor and can be supplied with a float for automatic operation (MA version) with outputs up to 1,5 kW. In three-phase motors, it is the installer's job to connect the built-in thermal overload protection.

## MATERIALS

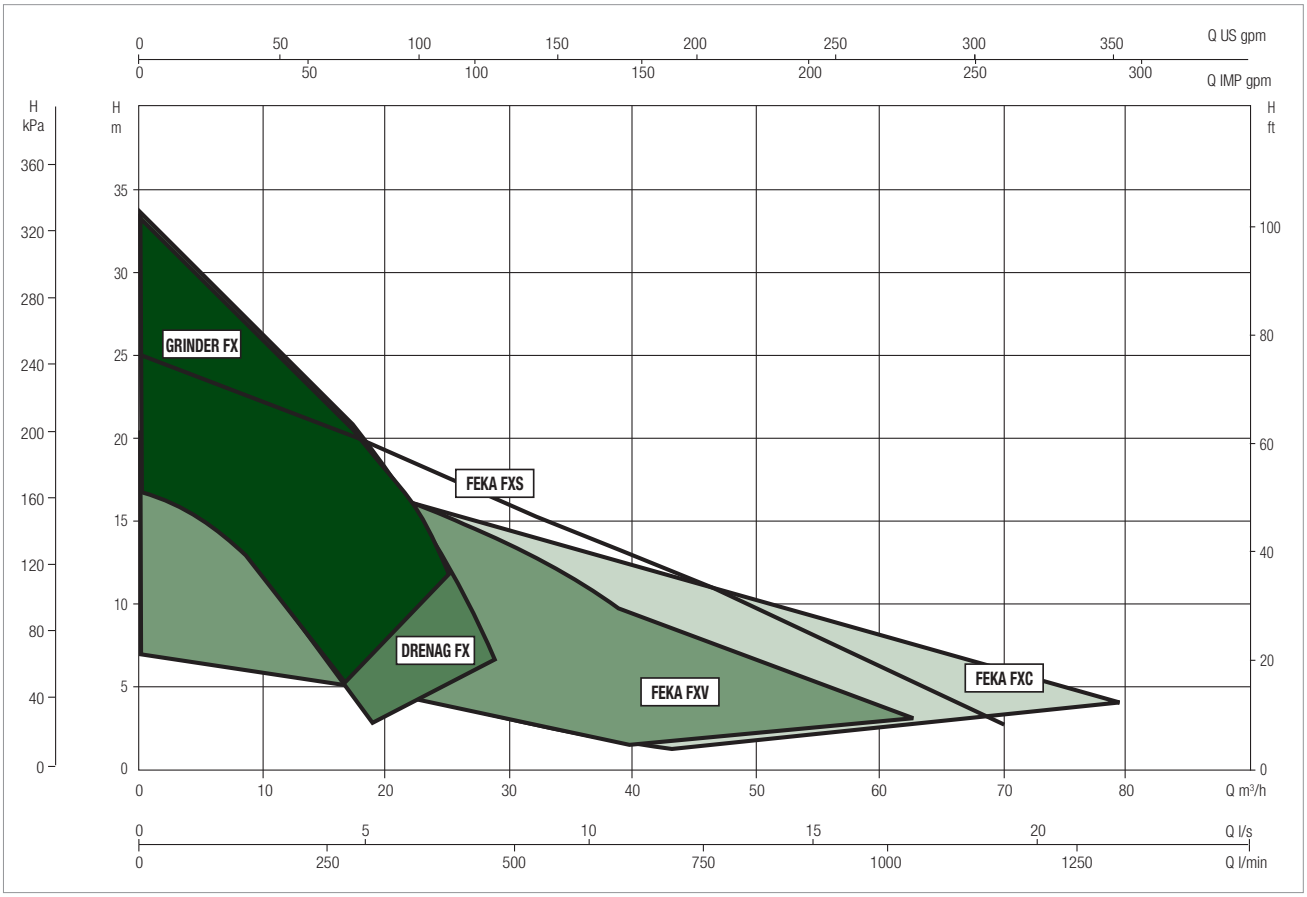
| No. | PARTS | MATERIALS |
|---|---|---|
| 1 | HANDLE | CAST IRON EN GJL 200 |
| 2 | ELECTRIC CABLE | 07RN8-F |
| 3 | SCREWS | AISI 304 STEEL |
| 4 | OR | NBR |
| 5 | COMP. MECH. SEAL PUMP SIDE | SiC-SiC/SiC-C |
| | COMP. MECH. SEAL MOTOR SIDE | SiC/CARBON |
| 6 | MOTOR SHAFT | AISI 304 STEEL (P2>1,5kW)<br>AISI 431 (P2<1,2kW) |
| 7 | PUMP CASING / MOTOR HOUSING | CAST IRON EN GJL 200 |
| 8 | INTERNAL BEARING FLANGE | ALUMINIUM ALLOY EN AC 46100 |
| 9 | FLANGE | CAST IRON EN GJL 200 |
| 10 | IMPELLER | CAST IRON EN GJL 250 |
| 11 | BASE | CAST IRON EN GJL 200 + NATURAL RUBBER |
| 13 | COATING | ELECTROPHORETIC and 2-PACK ACRYLIC 50µm |



# PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and a density of 1000 kg/m³. Curve tolerance to ISO 9906.

### SELECTION GUIDE GRAPH

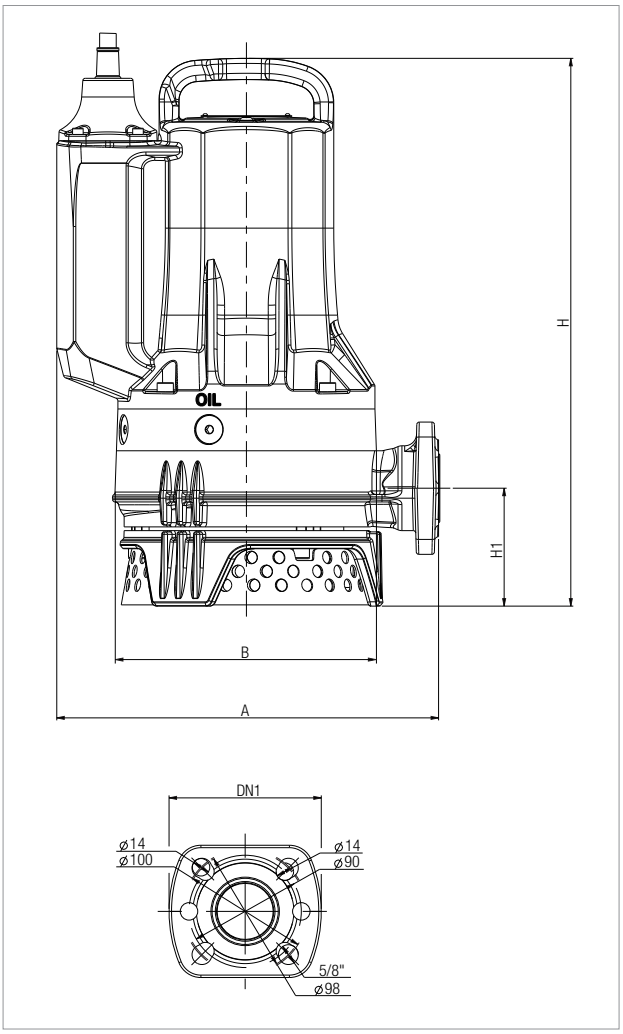


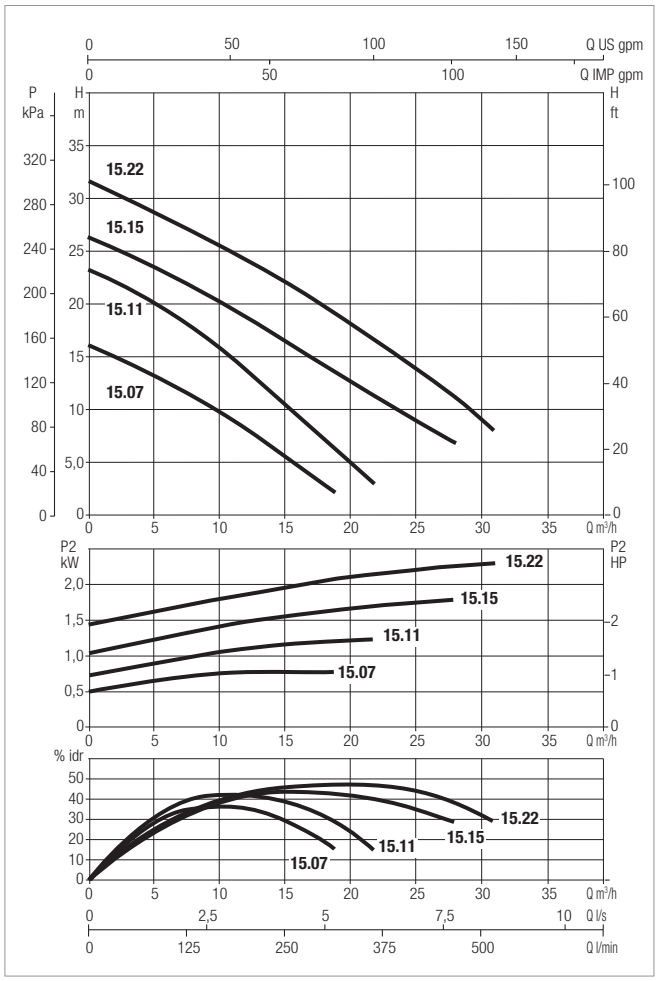

## DRENAG FX 15 SELECTION GUIDE

| MODEL | Q=m³/h | 0 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q=l/min | 0 | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| **DRENAG FX 15.07** | H (m) | 16,2 | 14,5 | 12,6 | 10,5 | 8,1 | 5,5 | 2,8 | | | | |
| **DRENAG FX 15.11** | | 23,3 | 21,5 | 19,3 | 16,7 | 13,8 | 10,6 | 7,3 | 3,8 | | | |
| **DRENAG FX 15.15** | | 26,4 | 24,9 | 23,1 | 21,1 | 18,9 | 16,6 | 14,2 | 11,8 | 9,5 | 7,4 | |
| **DRENAG FX 15.22** | | 31,8 | 30,0 | 28,2 | 26,3 | 24,3 | 22,1 | 19,8 | 17,4 | 14,8 | 12,0 | 9,0 |

# **DRENAG FX 15** - SUBMERSIBLE PUMPS

Pumped liquid temperature range: 0° to +50°C. For higher temperatures, please contact our sales network.




The performance curves are based on kinematic viscosity values = 1 mm²/s and a density of 1000 kg/m³. Curve tolerance to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | POWER SUPPLY 50 Hz | P1 MAX. kW | P2 RATED | | In A | Is A | CAPACITOR µF | RATED SPEED rpm |
| | | | Kw | HP | | | | |
| **DRENAG FX 15.07 MA** | 1x230V | 1,1 | 0,8 | 1,1 | 5,1 | 29 | 25 | 2870 |
| **DRENAG FX 15.07 MNA*** | 1x230V | 1,1 | 0,8 | 1,1 | 5,1 | 29 | 25 | 2870 |
| **DRENAG FX 15.07 S TNA*** | 3x400V | 1 | 0,8 | 1,1 | 2,1 | 22 | - | 2870 |
| **DRENAG FX 15.11 MA** | 1x230V | 1,5 | 1,2 | 1,6 | 6,8 | 29 | 25 | 2870 |
| **DRENAG FX 15.11 MNA*** | 1x230V | 1,5 | 1,2 | 1,6 | 6,8 | 29 | 25 | 2870 |
| **DRENAG FX 15.11 S TNA*** | 3x400V | 1,5 | 1,2 | 1,6 | 2,8 | 19 | - | 2870 |
| **DRENAG FX 15.15 MA** | 1x230V | 2,3 | 1,8 | 2,4 | 10,6 | 36 | 40 | 2870 |
| **DRENAG FX 15.15 MNA*** | 1x230V | 2,3 | 1,8 | 2,4 | 10,6 | 36 | 40 | 2870 |
| **DRENAG FX 15.15 S TNA*** | 3x400V | 2,5 | 1,8 | 2,4 | 4,3 | 25 | - | 2870 |
| **DRENAG FX 15.22 S TNA*** | 3x400V | 3,1 | 2,3 | 3,1 | 5,2 | 35 | - | 2870 |

*Also comes in ATEX version
**S**: Oil sensor

| MODEL | FREE PASSAGE (mm) | A | B | H | | H1 | OUTLET | | | | PACKAGING DIMENSIONS | | | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MA/MNA | TNA | | BSP | DN1 | HOLES | D | L/A | L/B | H | |
| **DRENAG FX 15.07*** | 10 | 306 | 215 | 430 | 412 | 95 | Rp 1" 1/2 | DN32 PN10 / 6<br>DN40 PN6 | 4<br>2 | 100-90<br>90 | 660 | 370 | 400 | 35 |
| **DRENAG FX 15.11*** | 10 | 306 | 215 | 430 | 430 | 95 | Rp 1" 1/2 | DN32 PN10 / 6<br>DN40 PN6 | 4<br>2 | 100-90<br>90 | 660 | 370 | 400 | 35 |
| **DRENAG FX 15.15*** | 10 | 306 | 215 | 457 | 439 | 95 | Rp 1" 1/2 | DN32 PN10 / 6<br>DN40 PN6 | 4<br>2 | 100-90<br>90 | 660 | 370 | 400 | 38 |
| **DRENAG FX 15.22*** | 10 | 306 | 215 | - | 457 | 95 | Rp 1" 1/2 | DN32 PN10 / 6<br>DN40 PN6 | 4<br>2 | 100-90<br>90 | 660 | 370 | 400 | 39 |

*Also comes in ATEX version

## TECHNICAL DATA

**Liquid pumped:** clearwater and rainwater, greywater and sandy water from construction sites
**Free passage:** 50 mm
**Liquid temperature range:**
+50°C (+60°C for short periods);
+40°C for ATEX version
**Outlet connection:**
FX C 20 threaded 2", flanged DN 50;
FX C 25 flanged DN 65.
**Outlet direction:** horizontal and vertical with bend kit accessory
**Impeller:** cast iron channels
**Maximum submerged depth:** 7 metres
**Possible mounting positions:** portable placed on ground, fixed on coupling device

FEKA FX C is a submersible drainage pump designed to handle solids-laden water from drains in residential, institutional and commercial settings. The pump is certified to standard EN 12050-2 for wastewater. Pump suitable for fixed installations with a coupling device, or portable installations when placed directly on the bottom of the tank. Suitable for wastewater and solids-laden water not containing long fibres, as well as rainwater and groundwater Pump suitable for drainage applications to remove water from areas prone to flooding, where high flow rates are required. Design solution chosen for quick maintenance, featuring easy access to the main components. Certified to standard EN 12050-1 for wastewater. Automatic versions with an output of up to 1,5 kW. Also comes in an ATEX version for use in potentially explosive atmospheres. (ATEX certifications: II2G Ex db IIB T4 GB).

### PUMP DESIGN FEATURES

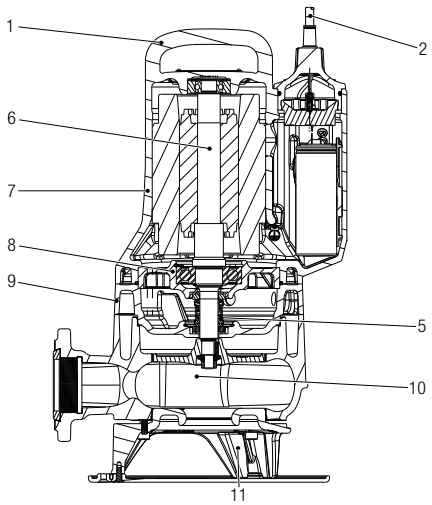
Channel impeller with non-clog system, free passage 50 mm. Cast iron pump casing and impeller. AISI 304 stainless steel motor shaft.
Double SiC-SiC/SiC-C mechanical seal running in an oil chamber not in contact with the liquid being pumped. Both flanged and threaded outlet port.

### MOTOR DESIGN FEATURES

Single-phase (MA/MNA versions) and three-phase (TNA versions) asynchronous motor. Rotor mounted on long-life lubricated watertight bearings. S1 continuous duty with motor fully submerged. Dry run for a maximum of 10 minutes. Overtemperature sensors in motor windings with a trip point of 130°C. Epoxy-sealed cable entry, quick-connect power cable 07RN8-F. Single-phase versions have a built-in capacitor and can be supplied with a float for automatic operation (MA version) with outputs up to 1,5 kW. In three-phase motors, it is the installer's job to connect the built-in thermal overload protection.

## MATERIALS

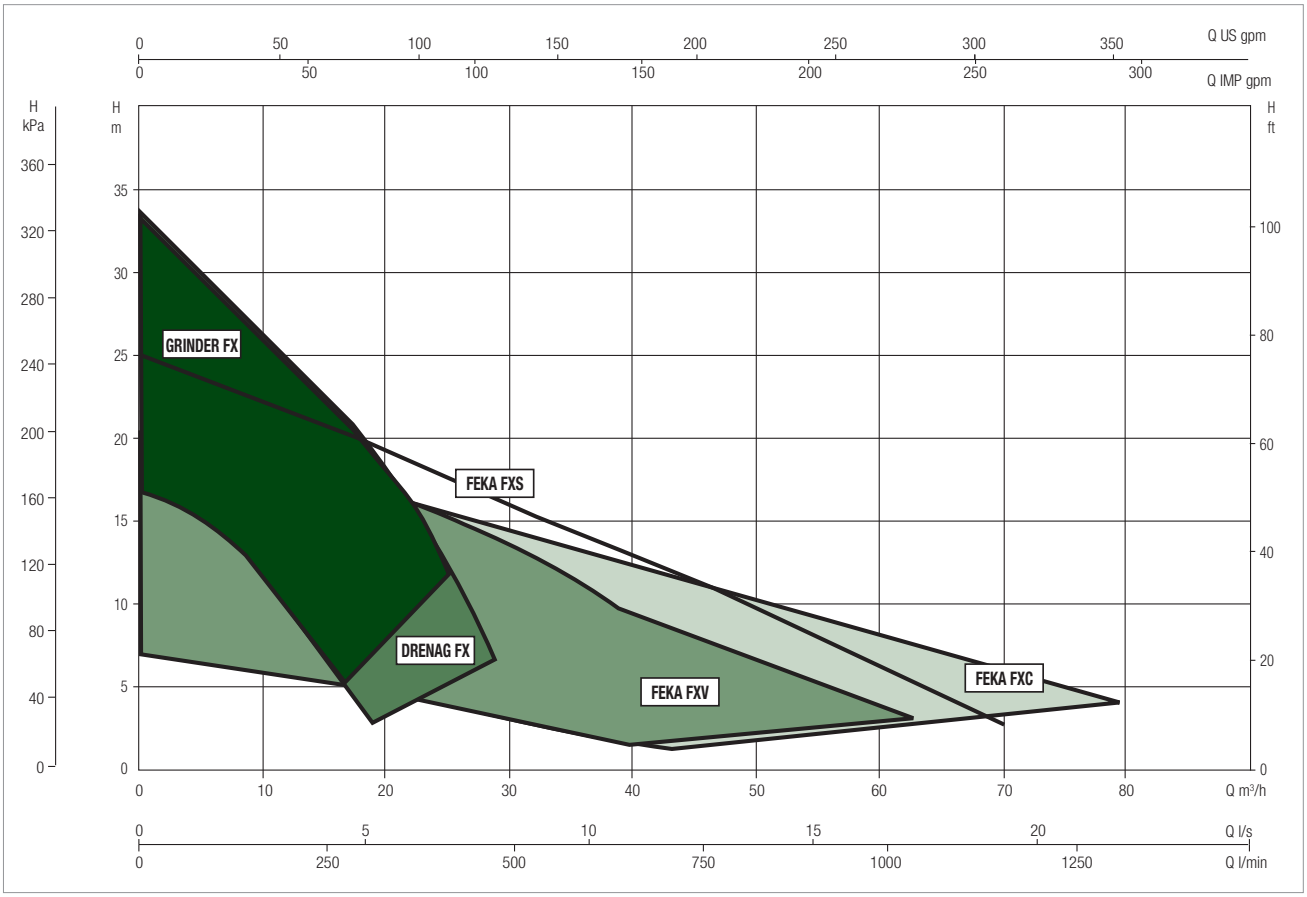
| No. | PARTS | MATERIALS |
|---|---|---|
| 1 | HANDLE | CAST IRON EN GJL 200 |
| 2 | ELECTRIC CABLE | 07RN8-F |
| 3 | SCREWS | AISI 304 STEEL |
| 4 | OR | NBR |
| 5 | COMP. MECH. SEAL PUMP SIDE | SiC-SiC/SiC-C |
| | COMP. MECH. SEAL MOTOR SIDE | SiC/CARBON |
| 6 | MOTOR SHAFT | AISI 304 STEEL (P2>1,5kW)<br>AISI 431 (P2<1,2kW) |
| 7 | PUMP CASING / MOTOR HOUSING | CAST IRON EN GJL 200 |
| 8 | INTERNAL BEARING FLANGE | ALUMINIUM ALLOY EN AC 46100 |
| 9 | FLANGE | CAST IRON EN GJL 200 |
| 10 | IMPELLER | CAST IRON EN GJL 250 |
| 11 | BASE | CAST IRON EN GJL 200 |
| 13 | COATING | ELECTROPHORETIC and 2-PACK ACRYLIC 50µm |



# PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and a density of 1000 kg/m³. Curve tolerance to ISO 9906.

### SELECTION GUIDE GRAPH

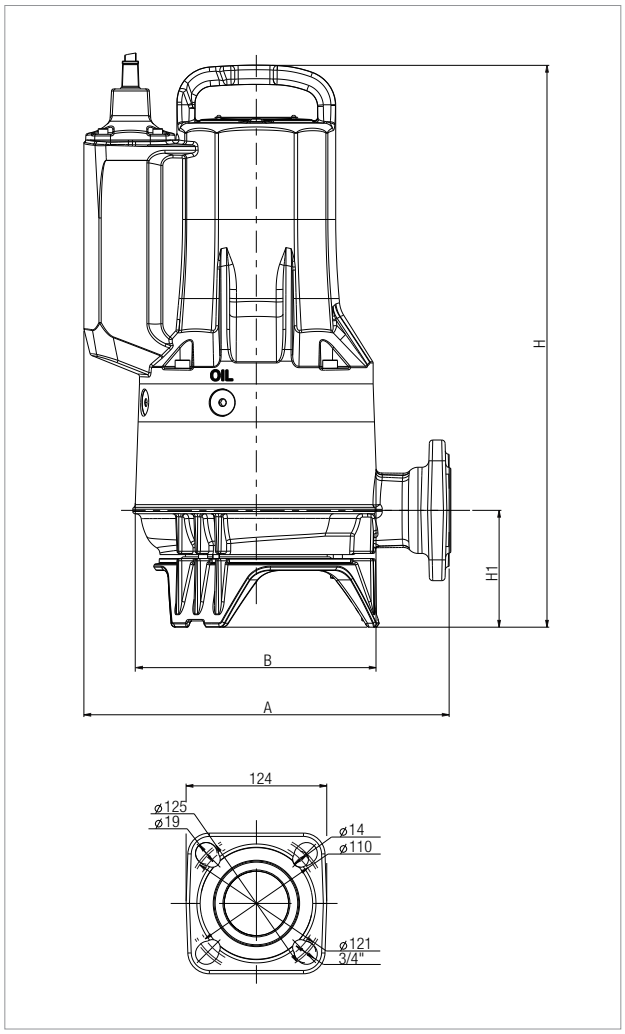


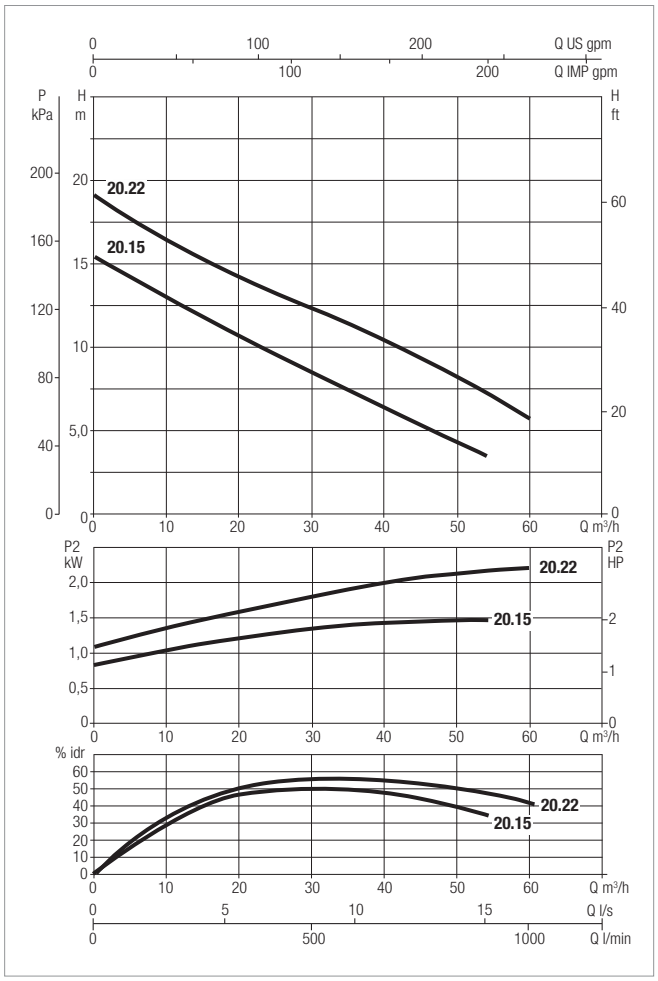

## FEKA FX C 20 - 25 SELECTION GUIDE

| MODEL | Q=m³/h | 0 | 7 | 14 | 22 | 29 | 36 | 43 | 50 | 58 | 65 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q=l/min | 0 | 120 | 240 | 360 | 480 | 600 | 720 | 840 | 960 | 1080 |
| **FEKA FX C 20.15** | H (m) | 15,3 | 13,5 | 11,8 | 10,2 | 8,7 | 7,1 | 5,7 | 4,2 | | |
| **FEKA FX C 20.22** | | 19,1 | 17,2 | 15,5 | 14,0 | 12,6 | 11,2 | 9,8 | 8,1 | 6,2 | |
| **FEKA FX C 25.15** | | 15,1 | 13,5 | 11,8 | 10,3 | 8,8 | 7,3 | 5,8 | 4,5 | 3,1 | |
| **FEKA FX C 25.22** | | 18,9 | 16,9 | 15,2 | 13,8 | 12,4 | 11,1 | 9,8 | 8,4 | 6,9 | 5,1 |

# **FX C 20** - SUBMERSIBLE PUMPS

**Pumped liquid temperature range:** 0° to +50°C. For higher temperatures, please contact our sales network.




The performance curves are based on kinematic viscosity values = 1 mm²/s and a density of 1000 kg/m³. Curve tolerance to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | POWER SUPPLY 50 Hz | P1 MAX, kW | P2 RATED | | In A | Is A | CAPACITOR µF | RATED SPEED rpm |
| | | | Kw | HP | | | | |
| **FEKA FX C 20,15 MA** | 1x230V | 2 | 1,5 | 2,0 | 9,1 | 36 | 40 | 2870 |
| **FEKA FX C 20,15 MNA*** | 1x230V | 2 | 1,5 | 2,0 | 9,1 | 36 | 40 | 2870 |
| **FEKA FX C 20,15 S TNA*** | 3x400V | 1,8 | 1,5 | 2,0 | 3,5 | 25 | - | 2870 |
| **FEKA FX C 20,22 S TNA*** | 3x400V | 2,8 | 2,2 | 2,9 | 4,9 | 35 | - | 2870 |

*Also comes in ATEX version

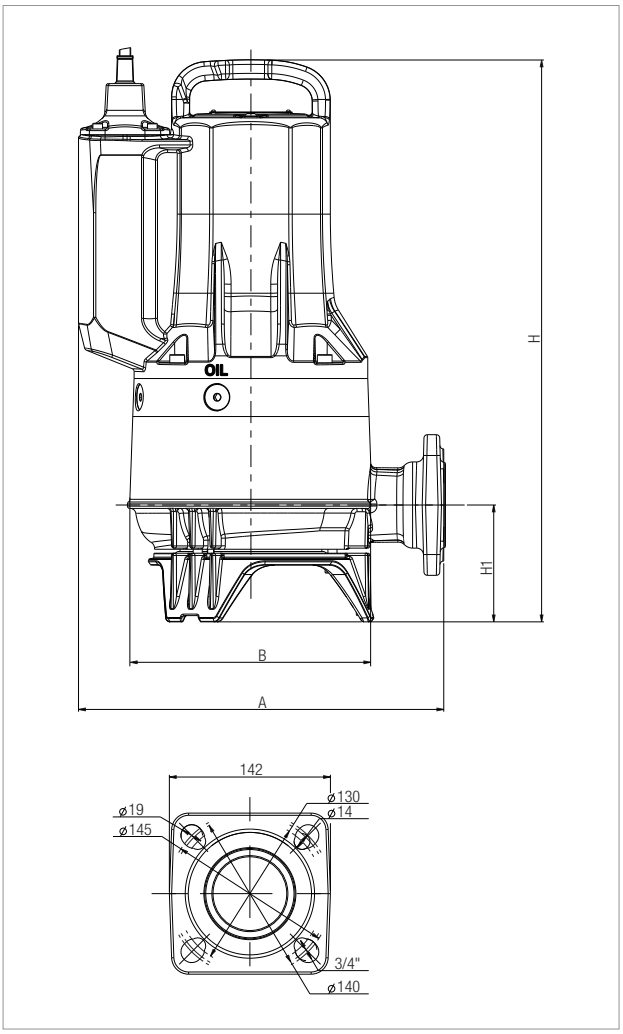
**S**: Oil sensor

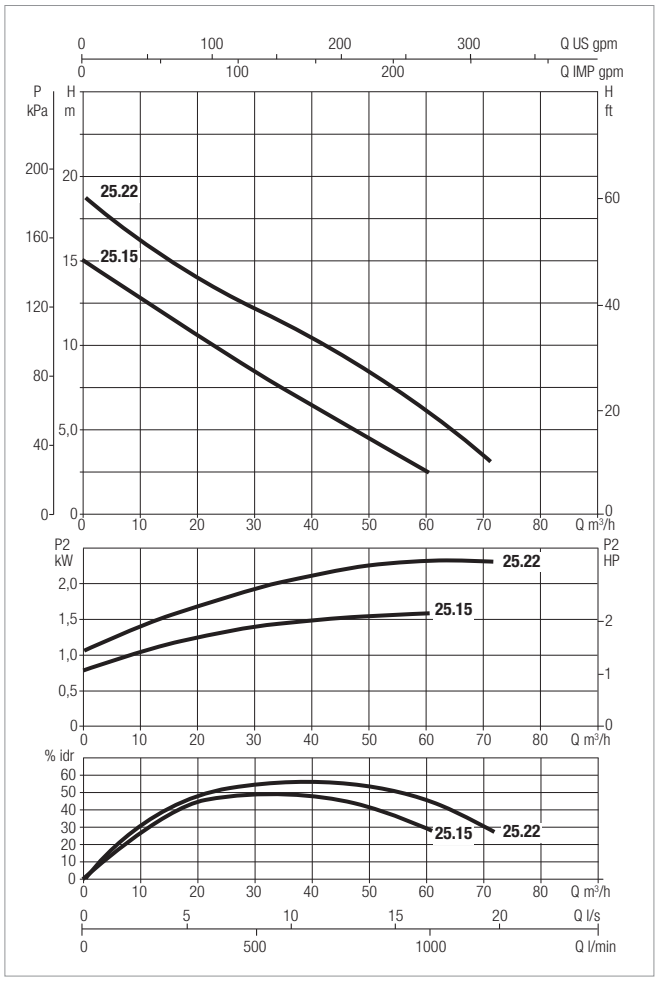
| MODEL | FREE PASSAGE (mm) | A | B | H | | H1 | OUTLET | | | | PACKAGING DIMENSIONS | | | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MA/MNA | TNA | | BSP | DN1 | HOLES | D | L/A | L/B | H | |
| **FEKA FX C 20.15*** | 50 | 322 | 218 | 514 | 496 | 103 | Rp 2" | 50 PN10/6 | 4 | 125-110 | 660 | 370 | 400 | 42 |
| **FEKA FX C 20.22 *** | 50 | 322 | 218 | - | 514 | 103 | Rp 2" | 50 PN10/6 | 4 | 125-110 | 660 | 370 | 400 | 43 |

*Also comes in ATEX version

# **FX C 25** - SUBMERSIBLE PUMPS

Pumped liquid temperature range: 0° to +50°C. For higher temperatures, please contact our sales network.




The performance curves are based on kinematic viscosity values = 1 mm²/s and a density of 1000 kg/m³. Curve tolerance to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | POWER SUPPLY 50 Hz | P1 MAX. kW | P2 RATED | | In A | Is A | CAPACITOR µF | RATED SPEED rpm |
| | | | Kw | HP | | | | |
| **FEKA FX C 25.15 MA** | 1x230V | 2 | 1,6 | 2,1 | 9,3 | 36 | 40 | 2870 |
| **FEKA FX C 25.15 MNA*** | 1x230V | 2 | 1,6 | 2,1 | 9,3 | 36 | 40 | 2870 |
| **FEKA FX C 25.15 S TNA*** | 3x400V | 1,9 | 1,6 | 2,1 | 3,6 | 25 | - | 2870 |
| **FEKA FX C 25.22 S TNA*** | 3x400V | 2,9 | 2,3 | 3,1 | 5 | 35 | - | 2870 |

*Also comes in ATEX version
**S**: Oil sensor

| MODEL | FREE PASSAGE (mm) | A | B | H | | H1 | OUTLET | | | | PACKAGING DIMENSIONS | | | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MA/MNA | TNA | | BSP | DN1 | HOLES | D | L/A | L/B | H | |
| **FEKA FX C 25.15*** | 50 | 322 | 218 | 514 | 496 | 103 | - | 65 PN10/6 | 4 | 145-130 | 660 | 370 | 400 | 43 |
| **FEKA FX C 25.22 *** | 50 | 322 | 218 | - | 514 | 103 | - | 65 PN10/6 | 4 | 145-130 | 660 | 370 | 400 | 44 |

*Also comes in ATEX version

## TECHNICAL DATA

**Liquid pumped:** untreated wastewater
**Free passage:**
FX V 20: 50 mm;
FX V 25: 65 mm
**Liquid temperature range:**
+50°C (+60°C for short periods);
+40°C for ATEX version
**Outlet connection:**
FX V 20: threaded 2", flanged DN 50;
FX V 25: flanged DN 65
**Outlet direction:** horizontal and vertical with bend kit accessory
**Impeller:** cast iron vortex
**Maximum submerged depth:** 7 metres
**Possible mounting positions:** portable placed on ground, fixed on coupling device

FEKA FX V is a submersible drainage pump designed to handle solids-laden water from drains in residential, institutional and commercial settings. Certified to standard EN 12050-1 for wastewater. Pump suitable for fixed installations with a coupling device, or portable installations when placed directly on the bottom of the tank. Featuring a high-performance super vortex impeller designed to maximize free passage, the pump is suitable for handling liquids laden with suspended solids and long fibres. With its small footprint and both flanged and threaded outlet ports, the pump is ideal as a replacement. Design solution chosen for quick maintenance, featuring easy access to the pump's main components. Automatic versions with an output of up to 1,5 kW. Also comes in an ATEX version for use in potentially explosive atmospheres. (ATEX certifications: II2G Ex db IIB T4 GB).

### PUMP DESIGN FEATURES

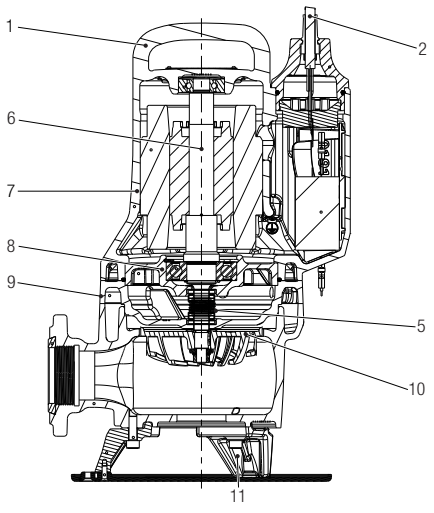
Cast iron pump casing and impeller. AISI 304 stainless steel motor shaft. Double SiC-SiC/SiC-C mechanical seal running in an oil chamber not in contact with the liquid being pumped, regardless of the direction of rotation. Both flanged and threaded outlet port.

### MOTOR DESIGN FEATURES

Single-phase (MA/MNA versions) and three-phase (TNA versions) asynchronous motor. Rotor mounted on long-life lubricated watertight bearings. S1 continuous duty with motor fully submerged. Dry run for a maximum of 10 minutes. Overtemperature sensors in motor windings with a trip point of 130°C. Epoxy-sealed cable entry, quick-connect power cable 07RN8-F. Single-phase versions have a built-in capacitor and can be supplied with a float for automatic operation (MA) with outputs up to 1,5 kW. In three-phase motors, it is the installer's job to connect the built-in thermal overload protection.

## MATERIALS

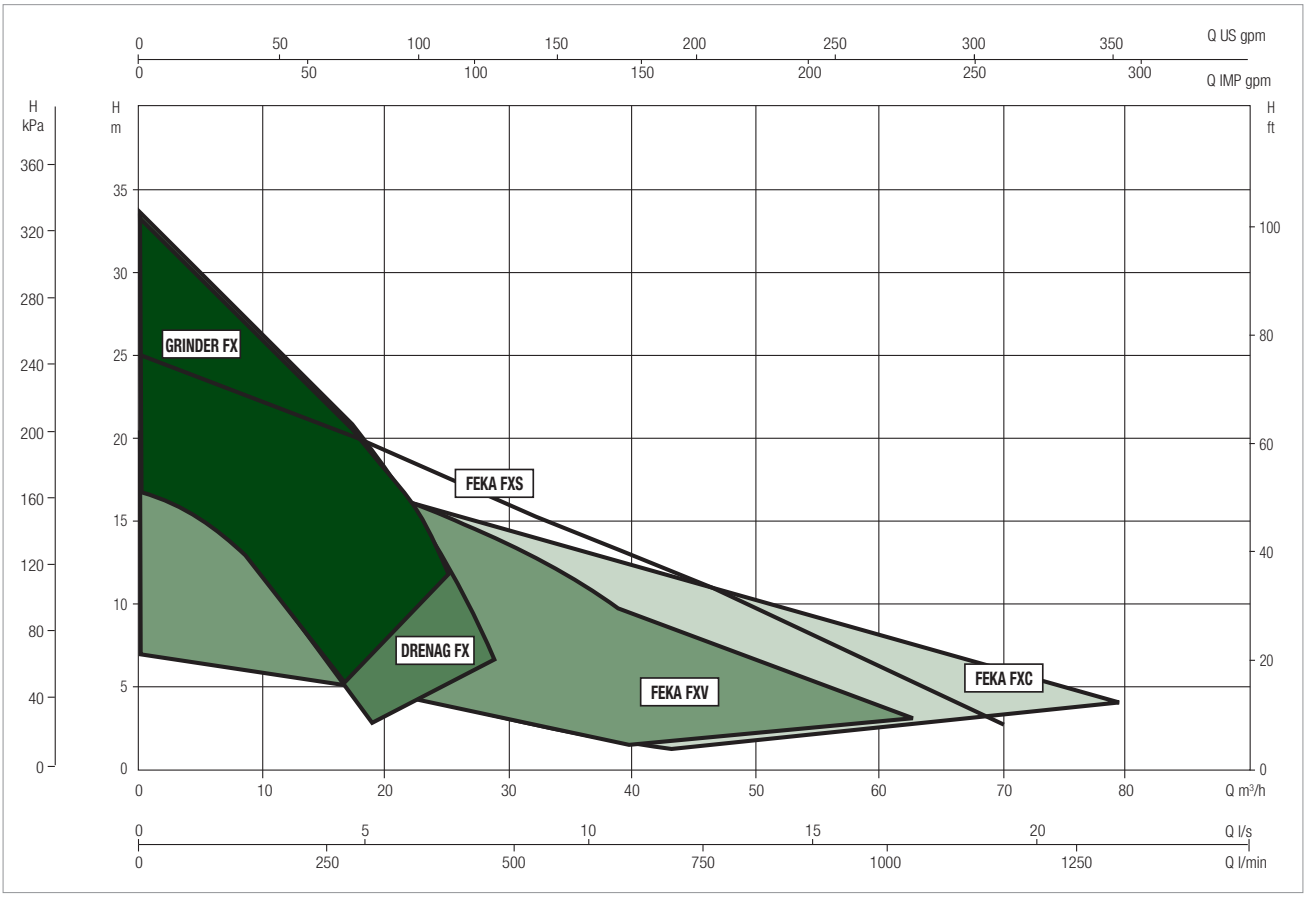
| No. | PARTS | MATERIALS |
|---|---|---|
| 1 | HANDLE | CAST IRON EN GJL 200 |
| 2 | ELECTRIC CABLE | 07RN8-F |
| 3 | SCREWS | AISI 304 STEEL |
| 4 | OR | NBR |
| 5 | COMP. MECH. SEAL PUMP SIDE | SiC-SiC/SiC-C |
| | COMP. MECH. SEAL MOTOR SIDE | SiC/CARBON |
| 6 | MOTOR SHAFT | AISI 304 STEEL (P2>1,5kW and 4-pole)<br>AISI 431 (P2<1,2kW) |
| 7 | PUMP CASING / MOTOR HOUSING | CAST IRON EN GJL 200 |
| 8 | INTERNAL BEARING FLANGE | ALUMINIUM ALLOY EN AC 46100 |
| 9 | FLANGE | CAST IRON EN GJL 200 |
| 10 | IMPELLER | CAST IRON EN GJL 250 |
| 11 | BASE | CAST IRON EN GJL 200 |
| 13 | COATING | ELECTROPHORETIC and 2-PACK ACRYLIC 50µm |



# PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and a density of 1000 kg/m³. Curve tolerance to ISO 9906.

### SELECTION GUIDE GRAPH

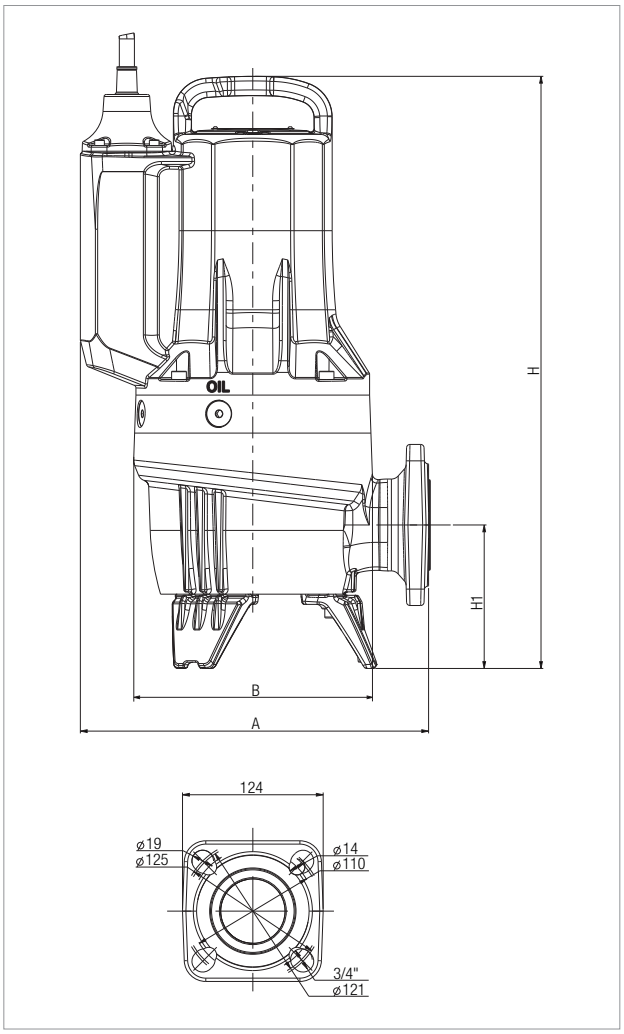


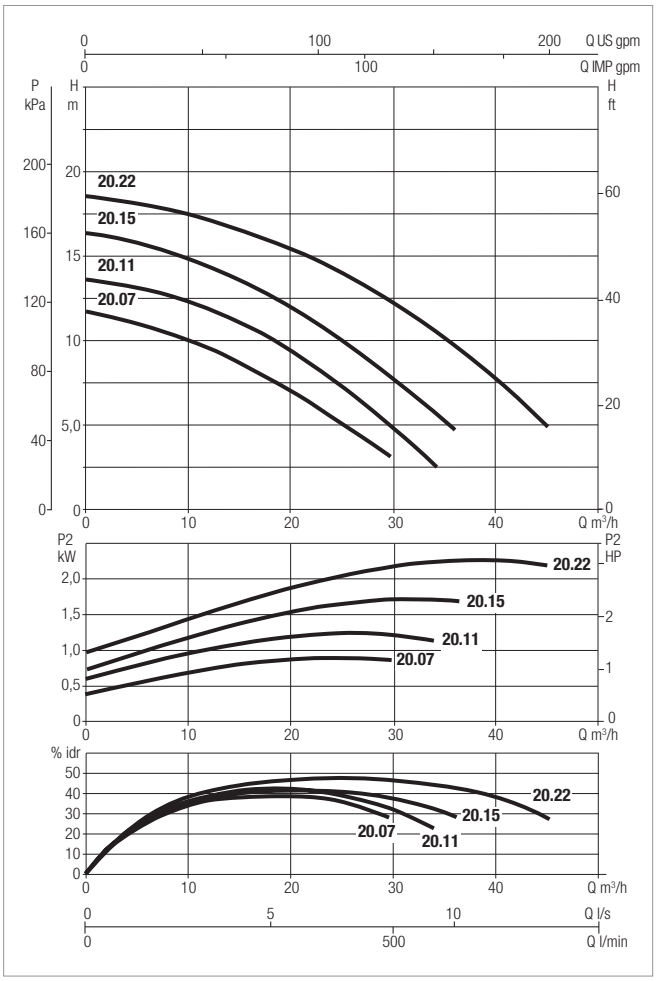

## FEKA FX V 20 - 25 SELECTION GUIDE

| MODEL | Q=m³/h | 0 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q=l/min | 0 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 |
| **FEKA FX V 20.07** | H (m) | 11,7 | 10,9 | 9,6 | 7,7 | 5,4 | 2,9 | | | | |
| **FEKA FX V 20.11** | | 13,1 | 12,9 | 11,9 | 10,1 | 7,7 | 4,8 | | | | |
| **FEKA FX V 20.15** | | 16,2 | 15,6 | 14,4 | 12,6 | 10,4 | 7,7 | 4,7 | | | |
| **FEKA FX V 20.22** | | 18,5 | 18,0 | 17,1 | 15,9 | 14,3 | 12,2 | 9,7 | 6,6 | | |
| **FEKA FX V 25.07** | | 8,8 | 8,1 | 7 | 5,7 | 4,3 | 3 | 1,8 | | | |
| **FEKA FX V 25.11** | | 11,3 | 10,7 | 9,6 | 8,2 | 6,6 | 4,9 | 3,4 | 2,2 | | |
| **FEKA FX V 25.15** | | 13,7 | 13,4 | 12,4 | 11,0 | 9,2 | 7,4 | 5,5 | 3,9 | 2,5 | |
| **FEKA FX V 25.22** | | 16,5 | 16,3 | 15,6 | 14,5 | 13,0 | 11,3 | 9,4 | 7,5 | 5,6 | 3,8 |
| **FEKA FX V 25.30** | | 20 | 19,5 | 18,9 | 18,0 | 16,7 | 14,8 | 13 | 11 | 8,5 | 6,8 |

# **FEKA FX V 20** - SUBMERSIBLE PUMPS

**Pumped liquid temperature range:** 0° to +50°C. For higher temperatures, please contact our sales network.




The performance curves are based on kinematic viscosity values = 1 mm²/s and a density of 1000 kg/m³. Curve tolerance to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | POWER SUPPLY 50 Hz | P1 MAX. kW | P2 RATED | | In A | Is A | CAPACITOR µF | RATED SPEED rpm |
| | | | Kw | HP | | | | |
| **FEKA FX V 20.07 MA** | 1x230V | 1,4 | 0,9 | 1,2 | 6,4 | 29 | 25 | 2870 |
| **FEKA FX V 20.07 MNA*** | 1x230V | 1,4 | 0,9 | 1,2 | 6,4 | 29 | 25 | 2870 |
| **FEKA FX V 20.07 S TNA*** | 3x400V | 1,4 | 0,9 | 1,2 | 2,4 | 22 | - | 2870 |
| **FEKA FX V 20.11 MA** | 1x230V | 1,7 | 1,2 | 1,6 | 8 | 29 | 25 | 2870 |
| **FEKA FX V 20.11 MNA*** | 1x230V | 1,7 | 1,2 | 1,6 | 8 | 29 | 25 | 2870 |
| **FEKA FX V 20.11 S TNA*** | 3x400V | 1,6 | 1,2 | 1,6 | 2,9 | 19 | - | 2870 |
| **FEKA FX V 20.15 MA** | 1x230V | 2,3 | 1,7 | 2,3 | 10,5 | 36 | 40 | 2870 |
| **FEKA FX V 20.15 MNA*** | 1x230V | 2,3 | 1,7 | 2,3 | 10,5 | 36 | 40 | 2870 |
| **FEKA FX V 20.15 S TNA*** | 3x400V | 2,2 | 1,7 | 2,3 | 4 | 25 | - | 2870 |
| **FEKA FX V 20.22 S TNA*** | 3x400V | 2,9 | 2,2 | 2,9 | 5 | 35 | - | 2870 |

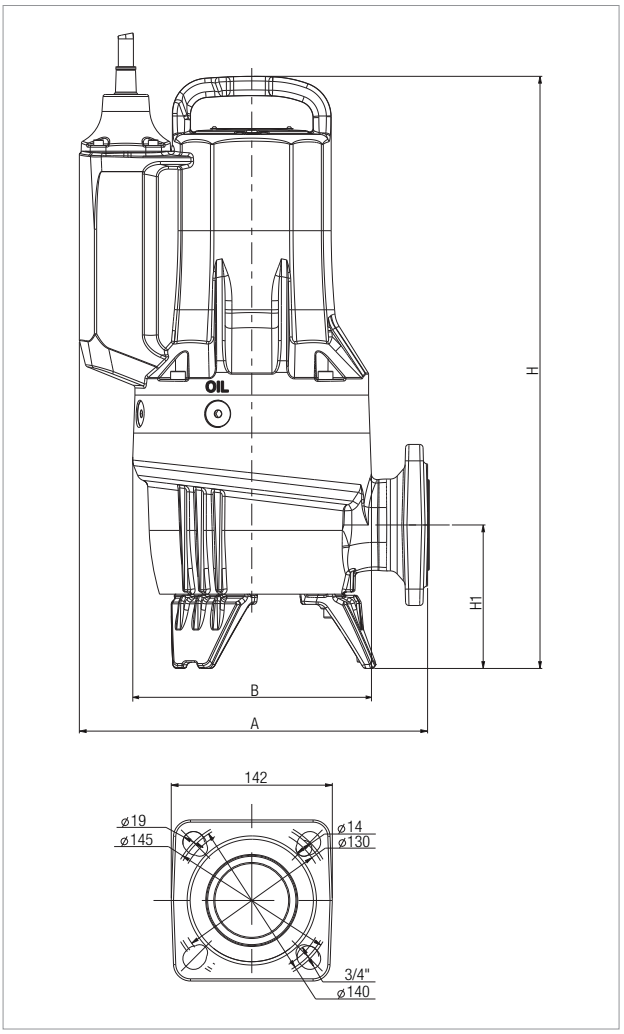
*Also comes in ATEX version
**S**: Oil sensor

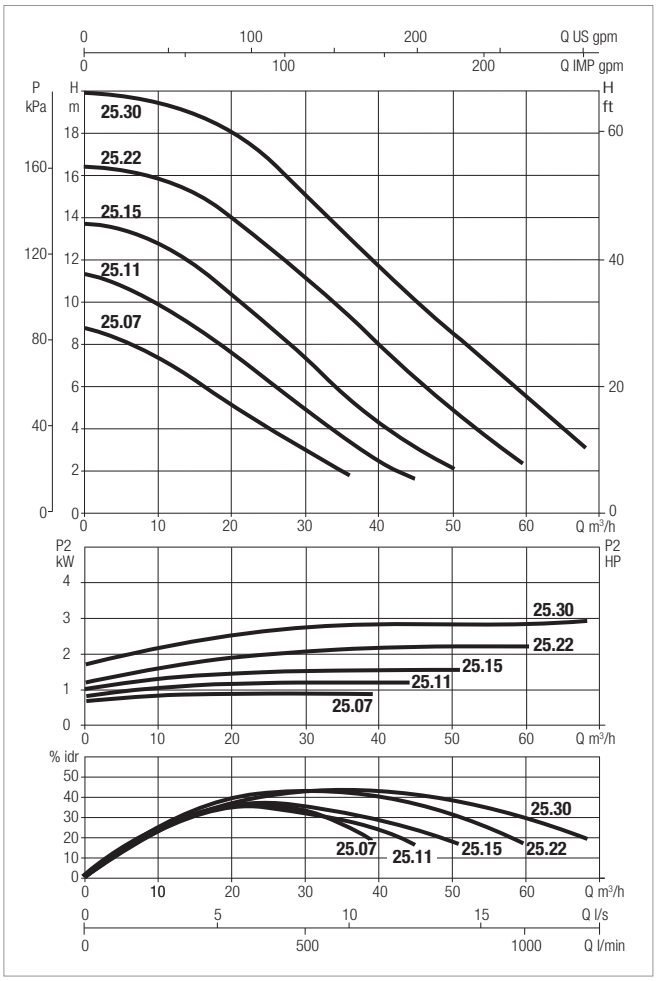
| MODEL | FREE PASSAGE (mm) | A | B | H | | H1 | OUTLET | | | | PACKAGING DIMENSIONS | | | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MA/MNA | TNA | | BSP | DN1 | HOLES | D | L/A | L/B | H | |
| **FEKA FX V 20.07*** | 50 | 307 | 211 | 497 | 479 | 104 | Rp 2" | 50 PN10/6 | 4 | 125-110 | 660 | 370 | 400 | 35 |
| **FEKA FX V 20.11*** | 50 | 307 | 211 | 497 | 497 | 104 | Rp 2" | 50 PN10/6 | 4 | 125-110 | 660 | 370 | 400 | 35 |
| **FEKA FX V 20.15 MA** | 50 | 307 | 211 | 525 | 507 | 104 | Rp 2" | 50 PN10/6 | 4 | 125-110 | 660 | 370 | 400 | 39 |
| **FEKA FX V 20.15 MNA-TNA*** | 50 | 307 | 211 | 525 | 507 | 104 | Rp 2" | 50 PN10/6 | 4 | 125-110 | 660 | 370 | 400 | 39 |
| **FEKA FX V 20.22*** | 50 | 307 | 211 | - | 525 | 104 | Rp 2" | 50 PN10/6 | 4 | 125-110 | 660 | 370 | 400 | 40 |

*Also comes in ATEX version

# **FEKA FX V 25** - SUBMERSIBLE PUMPS

Pumped liquid temperature range: 0° to +50°C. For higher temperatures, please contact our sales network.




The performance curves are based on kinematic viscosity values = 1 mm²/s and a density of 1000 kg/m³. Curve tolerance to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | POWER SUPPLY 50 Hz | P1 MAX. kW | P2 RATED | | In A | Is A | CAPACITOR µF | RATED SPEED rpm |
| | | | Kw | HP | | | | |
| **FEKA FX V 25.07 MA** | 1x230V | 1,5 | 1 | 1,3 | 6,6 | 29 | 25 | 2870 |
| **FEKA FX V 25.07 MNA*** | 1x230V | 1,5 | 1 | 1,3 | 6,6 | 29 | 25 | 2870 |
| **FEKA FX V 25.07 S TNA*** | 3x400V | 1,3 | 1 | 1,3 | 2,3 | 22 | - | 2870 |
| **FEKA FX V 25.11 MA** | 1x230V | 1,7 | 1,2 | 1,6 | 7,6 | 29 | 25 | 2870 |
| **FEKA FX V 25.11 MNA*** | 1x230V | 1,7 | 1,2 | 1,6 | 7,6 | 29 | 25 | 2870 |
| **FEKA FX V 25.11 S TNA*** | 3x400V | 1,7 | 1,2 | 1,6 | 3 | 19 | - | 2870 |
| **FEKA FX V 25.15 MA** | 1x230V | 2,3 | 1,7 | 2,3 | 10,6 | 36 | 40 | 2870 |
| **FEKA FX V 25.15 MNA*** | 1x230V | 2,3 | 1,7 | 2,3 | 10,6 | 36 | 40 | 2870 |
| **FEKA FX V 25.15 S TNA*** | 3x400V | 2,2 | 1,7 | 2,3 | 4 | 25 | - | 2870 |
| **FEKA FX V 25.22 S TNA*** | 3x400V | 2,8 | 2,2 | 2,9 | 4,9 | 35 | - | 2870 |
| **FEKA FX V 25.30 S TNA** | 3x400V | 3,4 | 3 | 4 | 6,8 | 47,6 | - | 2870 |

*Also comes in ATEX version
**S**: Oil sensor

| MODEL | FREE PASSAGE (mm) | A | B | H | | H1 | OUTLET | | | | PACKAGING DIMENSIONS | | | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MA/MNA | TNA | | BSP | DN1 | HOLES | D | L/A | L/B | H | |
| **FEKA FX V 25.07*** | 65 | 307 | 211 | 510 | 492 | 124 | - | 65 PN10/6 | 4 | 145-130 | 660 | 370 | 400 | 36 |
| **FEKA FX V 25.11*** | 65 | 307 | 211 | 510 | 510 | 124 | - | 65 PN10/6 | 4 | 145-130 | 660 | 370 | 400 | 37 |
| **FEKA FX V 25.15*** | 65 | 307 | 211 | 540 | 522 | 127 | - | 65 PN10/6 | 4 | 145-130 | 660 | 370 | 400 | 43 |
| **FEKA FX V 25.22*** | 65 | 307 | 211 | - | 540 | 127 | - | 65 PN10/6 | 4 | 145-130 | 660 | 370 | 400 | 41 |
| **FEKA FX V 25.30** | 65 | 307 | 211 | - | 570 | 127 | - | 65 PN10/6 | 4 | 145-130 | 660 | 370 | 400 | 46 |

*Also comes in ATEX version

## TECHNICAL DATA

**Flow rate:** from 0 to 84 $m^3/h$
**Head:** 25 m
**Liquid pumped:** wastewater, greywater and groundwater
**Max. liquid temperature:** +50°C (+60°C for short periods)
**Free passage:** 50 mm
**Outlet connection:**
FX S 25: DN 65
FX S 30: DN 80
**Outlet direction:** horizontal
**Impeller:** non-clog screw-type
**Motor protection rating:** IP 68
**Motor thermal insulation class:** F
**Power cable:** 07RN8-F for three-phase versions
**Possible mounting positions:** portable placed on ground, fixed on coupling device
**Maximum submerged depth:** 7 m - with standard 10m cable

Submersible pump designed for lifting and transferring wastewater from drains in residential, institutional, commercial and agricultural settings. Certified to standard EN 12050-1 for wastewater. The non-clog screw impeller has been fine-tined to deliver excellent hydraulic performance and makes the pump suitable for handling fluids containing solids measuring up to 50 mm in size, ensuring the pump provides consistently reliable service and peace of mind. Pump suitable for fixed installations with a coupling device, or portable installations when placed directly on the bottom of the tank. Design solution chosen for quick maintenance, featuring easy access to the pump's main components.

### PUMP DESIGN FEATURES

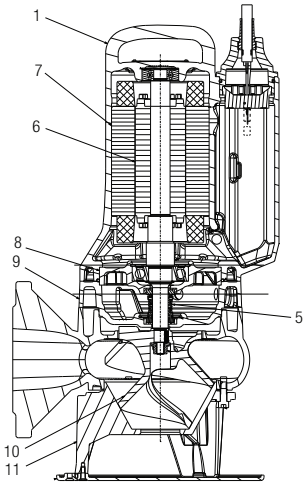
Cast iron screw impeller with non-clog system. Cast iron pump casing. Double SiC-SiC/C-Al mechanical seal running in an oil chamber not in contact with the liquid being pumped. DN 65 or DN 80 flanged outlet.

### MOTOR DESIGN FEATURES

Three-phase asynchronous motor. Rotor mounted on long-life lubricated watertight bearings. S1 continuous duty with motor fully submerged. AISI 304 stainless steel motor shaft. Dry run for a maximum of 10 minutes. Overtemperature sensors in motor windings with a trip point of +130°C. Epoxy-sealed cable entry, quick-connect power cable (07RN8-F for three-phase versions). Protection to be provided by the user.

## MATERIALS

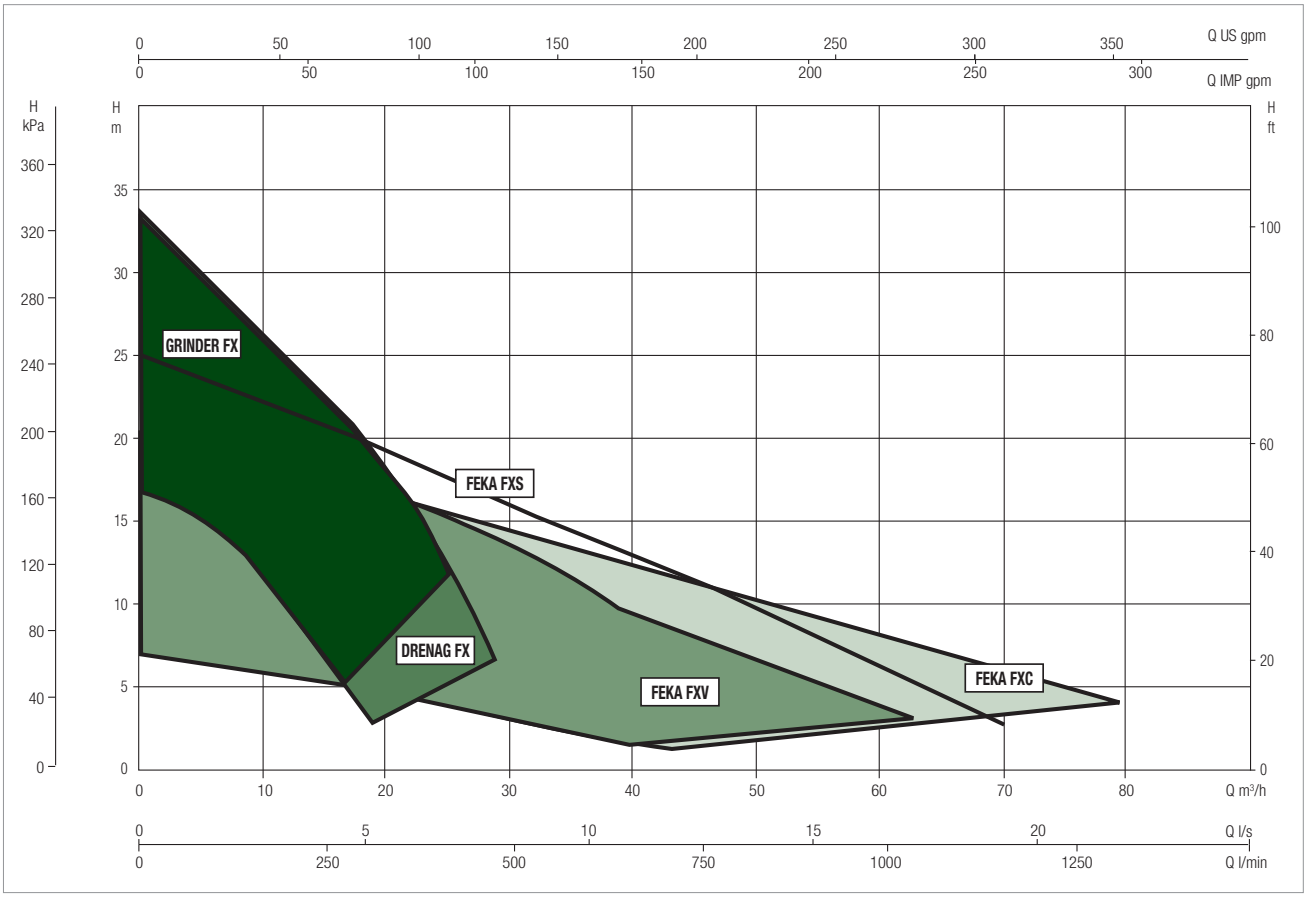
| No. | PARTS | MATERIALS |
|---|---|---|
| 1 | HANDLE | CAST IRON EN GJL 200 |
| 2 | ELECTRIC CABLE | 07RN8-F |
| 3 | SCREWS | AISI 304 STEEL |
| 4 | OR | NBR |
| 5 | COMP. MECH. SEAL PUMP SIDE | SiC-SiC/SiC-C |
| | COMP. MECH. SEAL MOTOR SIDE | SiC/CARBON |
| 6 | MOTOR SHAFT | AISI 304 STEEL (P2>1,5kW) |
| 7 | PUMP CASING / MOTOR HOUSING | CAST IRON EN GJL 200 |
| 8 | INTERNAL BEARING FLANGE | ALUMINIUM ALLOY EN AC 46100 |
| 9 | FLANGE | CAST IRON EN GJL 200 |
| 10 | IMPELLER | CAST IRON EN GJL 250 |
| 11 | BASE | CAST IRON EN GJL 200 |
| 12 | COATING | ELECTROPHORETIC and 2-PACK ACRYLIC 50µm |



# PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and a density of 1000 kg/m³. Curve tolerance to ISO 9906.

### SELECTION GUIDE GRAPH

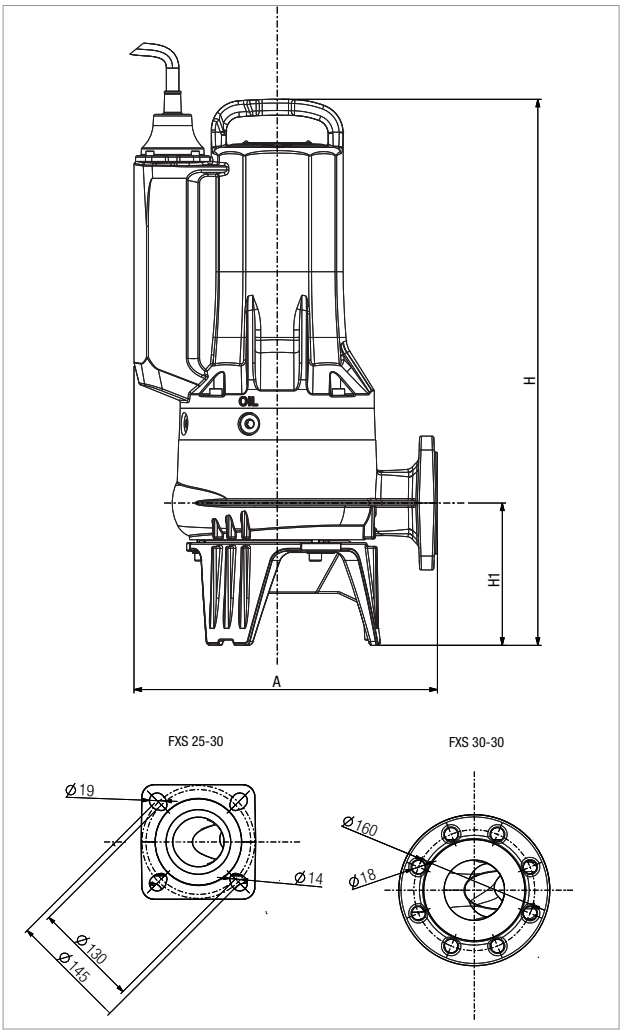


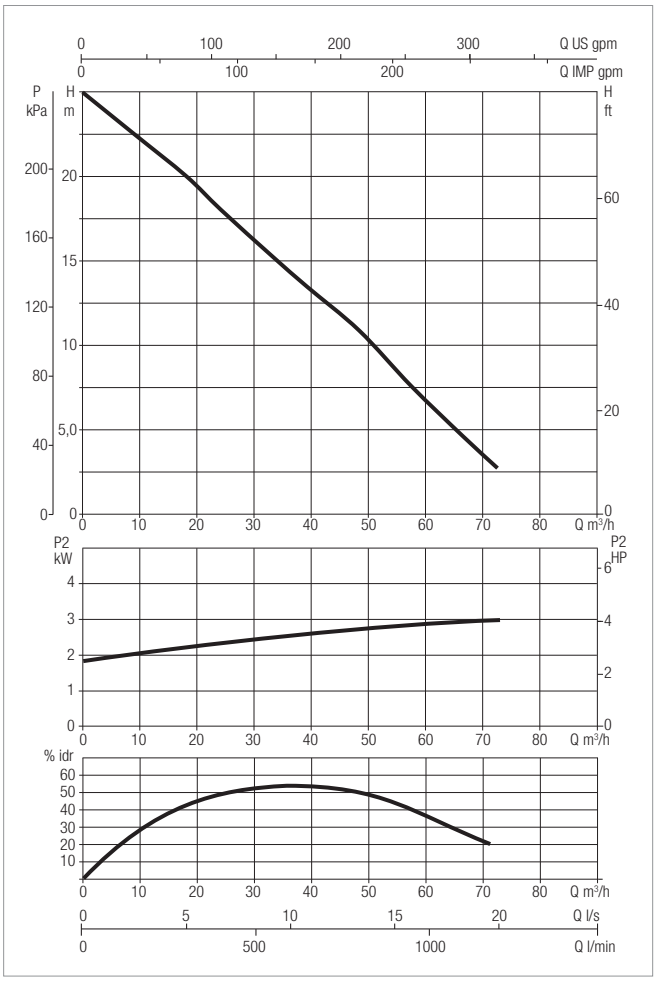

## FX S SELECTION GUIDE

| MODEL | Q=m³/h | 0 | 9 | 18 | 24 | 33 | 39 | 48 | 57 | 66 | 72 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q=l/min | 0 | 150 | 300 | 400 | 550 | 650 | 800 | 950 | 1100 | 1200 |
| **FEKA FX S 25,30** | H (m) | 25 | 22,5 | 20 | 18 | 15,2 | 13,4 | 10,8 | 7,5 | 4,5 | 2,6 |
| **FEKA FX S 30,30** | | 25 | 22,5 | 20 | 18 | 15,2 | 13,4 | 10,8 | 7,5 | 4,5 | 2,6 |

# **FEKA FX S** - SUBMERSIBLE PUMPS

Pumped liquid temperature range: 0° to +50°C. For higher temperatures, please contact our sales network.




The performance curves are based on kinematic viscosity values = 1 $mm^2/s$ and a density of 1000 $kg/m^3$. Curve tolerance to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | POWER SUPPLY 50 Hz | P1 MAX. kW | P2 RATED | | In A | Is A | CAPACITOR µF | RATED SPEED rpm |
| | | | Kw | HP | | | | |
| **FEKA FX S 25.30 S TNA** | 3x400V | 3,4 | 3 | 4 | 6,8 | 47,6 A | - | 2870 |
| **FEKA FX S 30.30 S TNA** | 3x400V | 3,4 | 3 | 4 | 6,8 | 47,6 A | - | 2870 |

**S**: Oil sensor

| MODEL | FREE PASSAGE (mm) | A | H | H1 | OUTLET | | | | PACKAGING DIMENSIONS | | | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | BSP | DN1 | HOLES | D | L/A | L/B | H | |
| **FEKA FX S 25.30** | 50 | 322 | 579 | 151 | - | 65 PN10 / 6 | 4 | 145-130 | 660 | 370 | 400 | 54 |
| **FEKA FX S 30.30** | 50 | 341 | 579 | 151 | - | 80 PN10 / 6 | 8 | 160 | 660 | 370 | 400 | 56 |

## TECHNICAL DATA

**Liquid pumped:** untreated wastewater
**Liquid temperature range:**
+50°C (+60°C for short periods);
+40°C for ATEX version
**Outlet connection:**
1 1/2" BSP threaded;
DN 32 and DN 40 flanged
**Outlet direction:** horizontal and vertical with bend kit accessory
**Impeller:** cast iron open with shredder
**Maximum submerged depth:** 7 metres
**Possible mounting positions:** portable placed on ground, fixed on coupling device

Grinder FX is a submersible drainage pump with shredder designed to handle solids-laden water from drains in residential, institutional and commercial settings. The pump is certified to standard EN 12050-1 for wastewater. Pump suitable for fixed installations with a coupling device, or portable installations when mounted on a base placed directly on the bottom of the tank. With its high-strength shredder, the pump is suitable for systems with small diameter pipework or that require high pressure. Design solution chosen for quick maintenance, featuring easy access to the pump's main components. Automatic versions with an output of up to 1,5 kW. Also comes in an ATEX version for use in potentially explosive atmospheres. (ATEX certifications: II2G Ex db IIB T4 GB).

### PUMP DESIGN FEATURES

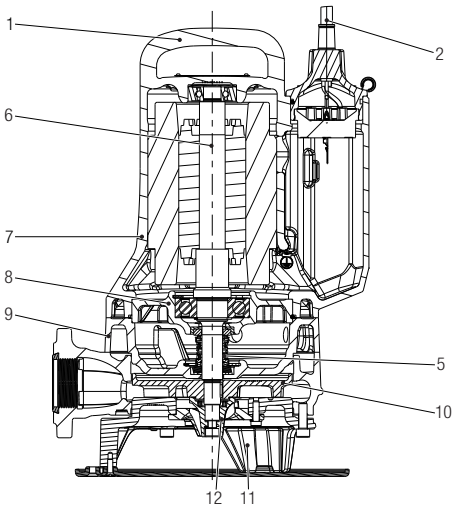
Cast iron pump casing and impeller; AISI 630 steel shredder. AISI 304 stainless steel motor shaft. Double SiC-SiC/SiC-C mechanical seal running in an oil chamber not in contact with the liquid being pumped, regardless of the direction of rotation. Both flanged and threaded outlet port.

### MOTOR DESIGN FEATURES

Single-phase (MA/MNA versions) and three-phase (TNA versions) asynchronous motor. Rotor mounted on long-life lubricated watertight bearings. S1 continuous duty with motor fully submerged. Dry run for a maximum of 10 minutes. Overtemperature sensors in motor windings with a trip point of 130°C. Epoxy-sealed cable entry, quick-connect power cable 07RN8-F. Single-phase versions with run and start capacitor in a separate panel, MA versions with float for automatic operation installed on the pump.
In three-phase motors, it is the installer's job to connect the built-in thermal overload protection.

## MATERIALS

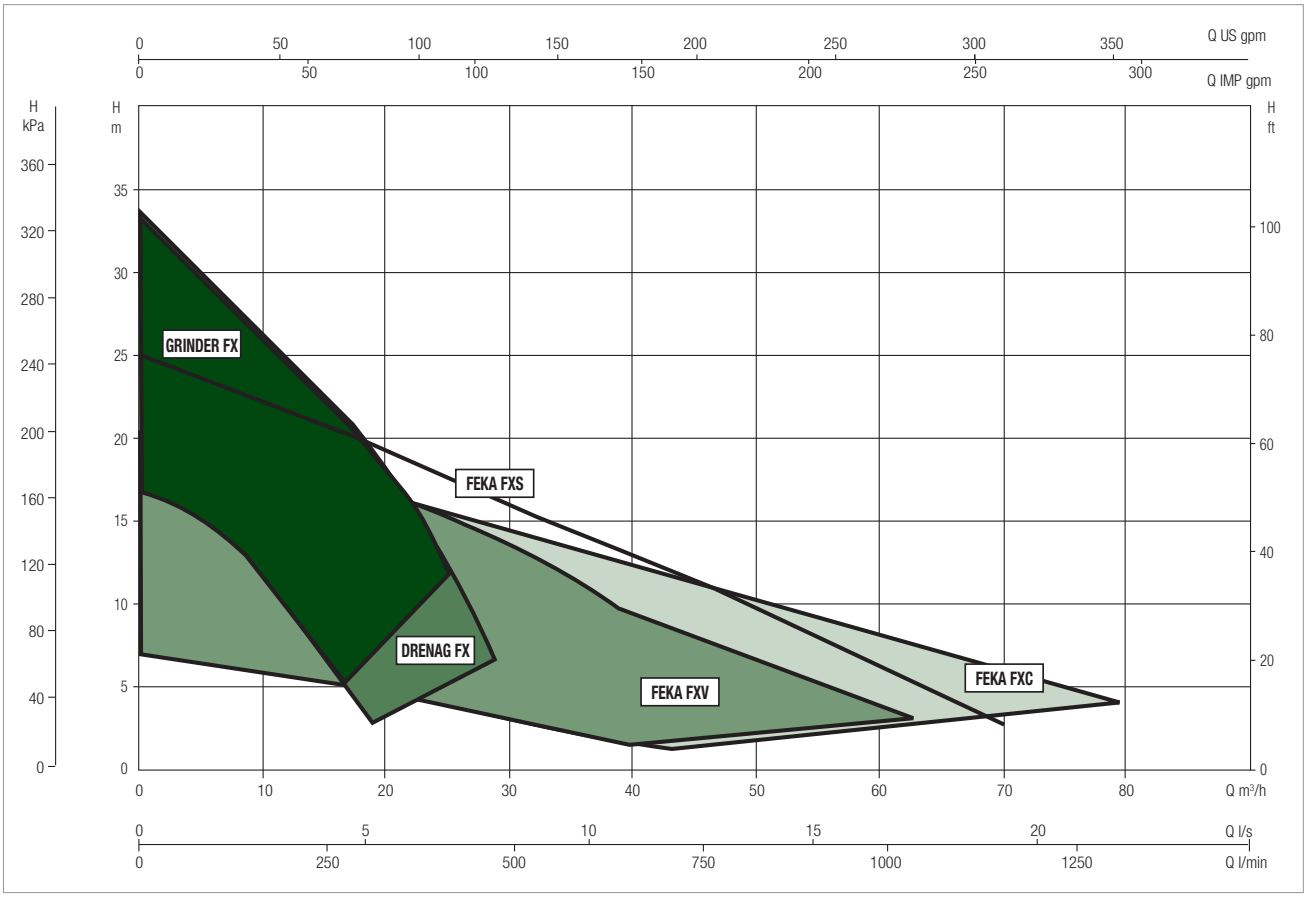
| No. | PARTS | MATERIALS |
|---|---|---|
| 1 | HANDLE | CAST IRON EN GJL 200 |
| 2 | ELECTRIC CABLE | 07RN8-F |
| 3 | SCREWS | AISI 304 STEEL |
| 4 | OR | NBR |
| 5 | COMP. MECH. SEAL PUMP SIDE | SiC-SiC/SiC-C |
| | COMP. MECH. SEAL MOTOR SIDE | SiC/CARBON |
| 6 | MOTOR SHAFT | AISI 304 STEEL (P2>1,5kW)<br>AISI 431 (P2<1,2kW) |
| 7 | PUMP CASING / MOTOR HOUSING | CAST IRON EN GJL 200 |
| 8 | INTERNAL BEARING FLANGE | ALUMINIUM ALLOY EN AC 46100 |
| 9 | FLANGE | CAST IRON EN GJL 200 |
| 10 | IMPELLER | CAST IRON EN GJL 250 |
| 11 | BASE | CAST IRON EN GJL 200 |
| 12 | KNIFE / KNIFE BASE | STEEL EN 1.4542 / AISI 630 |
| 13 | COATING | ELECTROPHORETIC and 2-PACK ACRYLIC 50µm |



# PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and a density of 1000 kg/m³. Curve tolerance to ISO 9906.

### SELECTION GUIDE GRAPH

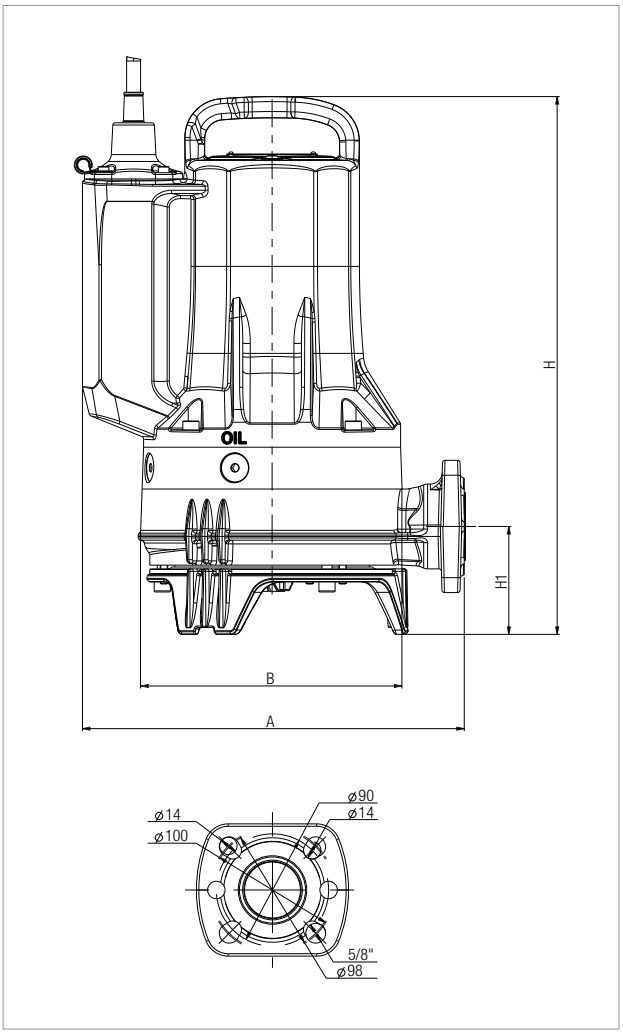


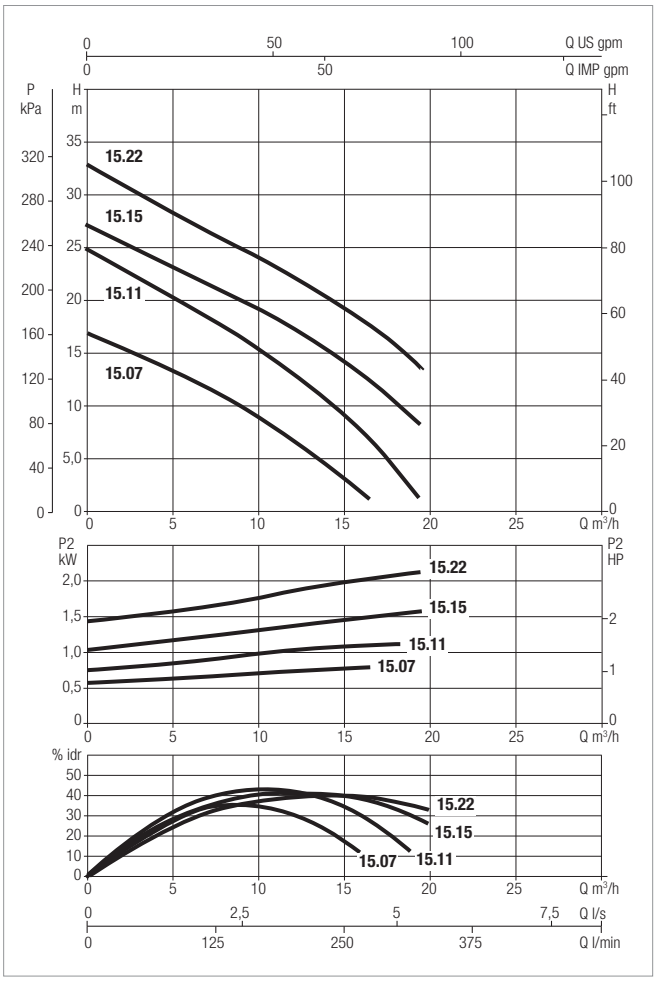

## GRINDER FX 15 SELECTION GUIDE

| MODEL | Q=m³/h | 0 | 2,4 | 4,8 | 7,2 | 9,6 | 12 | 14,4 | 16,8 | 19,2 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q=l/min | 0 | 40 | 80 | 120 | 160 | 200 | 240 | 280 | 320 |
| **GRINDER FX 15.07** | H (m) | 16,9 | 15,2 | 13,4 | 11,4 | 9,2 | 6,7 | 3,9 | | |
| **GRINDER FX 15.11** | | 24,9 | 22,6 | 20,5 | 18,3 | 15,9 | 13,2 | 10,1 | 6,3 | 1,8 |
| **GRINDER FX 15.15** | | 27,3 | 25,2 | 23,3 | 21,4 | 19,5 | 17,3 | 14,8 | 11,9 | 8,5 |
| **GRINDER FX 15.22** | | 32,8 | 30,5 | 28,5 | 26,5 | 24,4 | 22,3 | 19,9 | 17,2 | 14,0 |

# **GRINDER FX 15** - SUBMERSIBLE PUMPS

Pumped liquid temperature range: 0° to +50°C. For higher temperatures, please contact our sales network.




The performance curves are based on kinematic viscosity values = 1 mm²/s and a density of 1000 kg/m³. Curve tolerance to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | POWER SUPPLY 50 Hz | P1 MAX. kW | P2 RATED | | In A | Is A | CAPACITOR µF | RATED SPEED rpm |
| | | | Kw | HP | | | | |
| **GRINDER FX 15.07 MA** | 1x230V | 1,1 | 0,8 | 1,1 | 5,3 | 29 | 25+200 | 2870 |
| **GRINDER FX 15.07 MNA*** | 1x230V | 1,1 | 0,8 | 1,1 | 5,3 | 29 | 25+200 | 2870 |
| **GRINDER FX 15.07 S TNA*** | 3x400V | 1 | 0,8 | 1,1 | 2 | 22 | - | 2870 |
| **GRINDER FX 15.11 MA** | 1x230V | 1,5 | 1,1 | 1,5 | 6,8 | 29 | 25+200 | 2870 |
| **GRINDER FX 15.11 MNA*** | 1x230V | 1,5 | 1,1 | 1,5 | 6,8 | 29 | 25+200 | 2870 |
| **GRINDER FX 15.11 S TNA*** | 3x400V | 1,5 | 1,1 | 1,5 | 2,8 | 19 | - | 2870 |
| **GRINDER FX 15.15 MA** | 1x230V | 2,2 | 1,6 | 2,1 | 9,8 | 36 | 40+100-130 µF | 2870 |
| **GRINDER FX 15.15 MNA*** | 1x230V | 2,2 | 1,6 | 2,1 | 9,8 | 36 | 40+100-130 µF | 2870 |
| **GRINDER FX 15.15 S TNA*** | 3x400V | 2,1 | 1,6 | 2,1 | 3,8 | 25 | - | 2870 |
| **GRINDER FX 15.22 S TNA*** | 3x400V | 2,6 | 2,1 | 2,8 | 4,7 | 35 | - | 2870 |

*Also comes in ATEX version **S**: Oil sensor

| MODEL | FREE PASSAGE (mm) | A | B | H | | H1 | OUTLET | | | | PACKAGING DIMENSIONS | | | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MA/MNA | TNA | | BSP | DN1 | HOLES | D | L/A | L/B | H | |
| **GRINDER FX 15.07*** | - | 306 | 215 | 422 | 404 | 87 | Rp 1" 1/2 | DN32 PN10 / 6<br>DN40 PN6 | 4<br>2 | 100-90<br>90 | 660 | 370 | 400 | 35 |
| **GRINDER FX 15.11*** | - | 306 | 215 | 422 | 422 | 87 | Rp 1" 1/2 | DN32 PN10 / 6<br>DN40 PN6 | 4<br>2 | 100-90<br>90 | 660 | 370 | 400 | 35 |
| **GRINDER FX 15.15*** | - | 306 | 215 | 449 | 431 | 87 | Rp 1" 1/2 | DN32 PN10 / 6<br>DN40 PN6 | 4<br>2 | 100-90<br>90 | 660 | 370 | 400 | 38 |
| **GRINDER FX 15.22*** | - | 306 | 215 | - | 449 | 87 | Rp 1" 1/2 | DN32 PN10 / 6<br>DN40 PN6 | 4<br>2 | 100-90<br>90 | 660 | 370 | 400 | 39 |

*Also comes in ATEX version

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Colchester
ordersuk@dwtgroup.com
Tel. +44 0333 777 5010

**DAB PUMPS IBERICA S.L.**
Calle Verano 18-20-22
28850 - Torrejón de Ardoz - Madrid
Spain
Info.spain@dwtgroup.com
Tel. +34 91 6569545

**DAB PUMPS DE MÉXICO, S.A. DE C.V.**
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Col. Hipódromo Condesa,
Del. Cuauhtémoc CP 06170
Ciudad de México
Tel. +52 55 553 2621

**DAB PUMPS BV**
'tHofveld 6 C1
1702 Groot Bijgaarden - Belgium
info.belgium@dwtgroup.com
Tel. +32 2 4668353

**DAB PUMPS HUNGARY KFT.**
H-8800
Nagykanizsa, Buda Ernő u.5
Hungary
Tel. +36 93501700

**DAB PUMPS SOUTH AFRICA (PTY) LTD**
Twenty One industrial Estate,
16 Purlin Street, Unit B, Warehouse 4
Olifantsfontein -1667 - South Africa
info.sa@dwtgroup.com
Tel. +27 12 361 3997

**DAB PUMPS B.V.**
Statenlaan, 4
5223 LA, 's-Hertogenbosch
Nederland
info.nl@dabpumps.com
Tel. +31 416 387280

**DAB PUMPS POLAND Sp. z o.o.**
Ul. Cieślewskich 35K
03-017 Warszawa - Poland
sprzedaz@dabpumps.com.pl

**DAB PUMPS (QINGDAO) CO. LTD.**
No.10 Xindong Road
Jiulong Town,
Jiaozhou City
266319 Qingdao (Shandong) - China
sales.cn@dwtgroup.com
Tel. +86 400 186 8280

**DAB PUMPS FRANCE SAS**
Tour Ariane, Paris la Défense 9
5, Place de la Pyramide
92800 Puteaux - France
info.fr@dabpumps.com
Tel. +33 (0)6 79 63 05 46
+33 (0)7 89 01 53 35

**DAB PUMPS INC.**
3226 Benchmark Drive
Ladson, SC 29456 - USA
info.usa@dwtgroup.com
Tel. 1- 843-797-5002
Fax 1-843-797-3366

**DAB PUMPS OCEANIA PTY LTD**
426 South Gippsland Highway,
Dandenong South VIC 3175 – Australia
info.oceania@dwtgroup.com
Tel. +61 1300 378 677

**DAB PUMPS GMBH**
Am Nordpark 3
D - 41069 Mönchengladbach - Germany
info.germany@dwtgroup.com
Tel. +49 2161 47388-0
Fax +49 2161 47388-36

**DAB PUMPS CANADA INC.**
333 Bay Street, Suite 4600, Toronto,
Ontario, M5H 2S5, - Canada
orders@dwtgroup.ca
Tel. 1-833-322-7867

**PT DAB PUMPS INDONESIA**
Satrio Tower lantai 26
unit C-D, Jl. Prof. Dr. Satrio Kav. C4,
Kel. Kuningan Timur, Kec. Setiabudi, Kota Adm.
Jakarta Selatan, Prov. DKI Jakarta. - Indonesia
Tel. +62 2129222850

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