



Submersible sludge pump with a disintegrator

1 1/4" EFRU

Application

Pump set 1 1/4" EFRU is destined for pumping polluted water, liquid manure, sewage, raw waste water and thick sludge containing long-fibred stuffs and solids up to their max. size 5 mm in dia., except for sand, metal chips and other abrasive particles.

Pump may be used advantageously for pumping waste water in pressure sewage systems, pumping-out septic tanks with conveying through pressure piping to a recipient or a sewage treatment plant, etc.

Design

Pump set consists of a progressive cavity pump, a submersible electric motor, and a suction casing being provided by a disintegrator destined for cutting and crushing long-fibred stuffs that are contained in a pumped liquid.

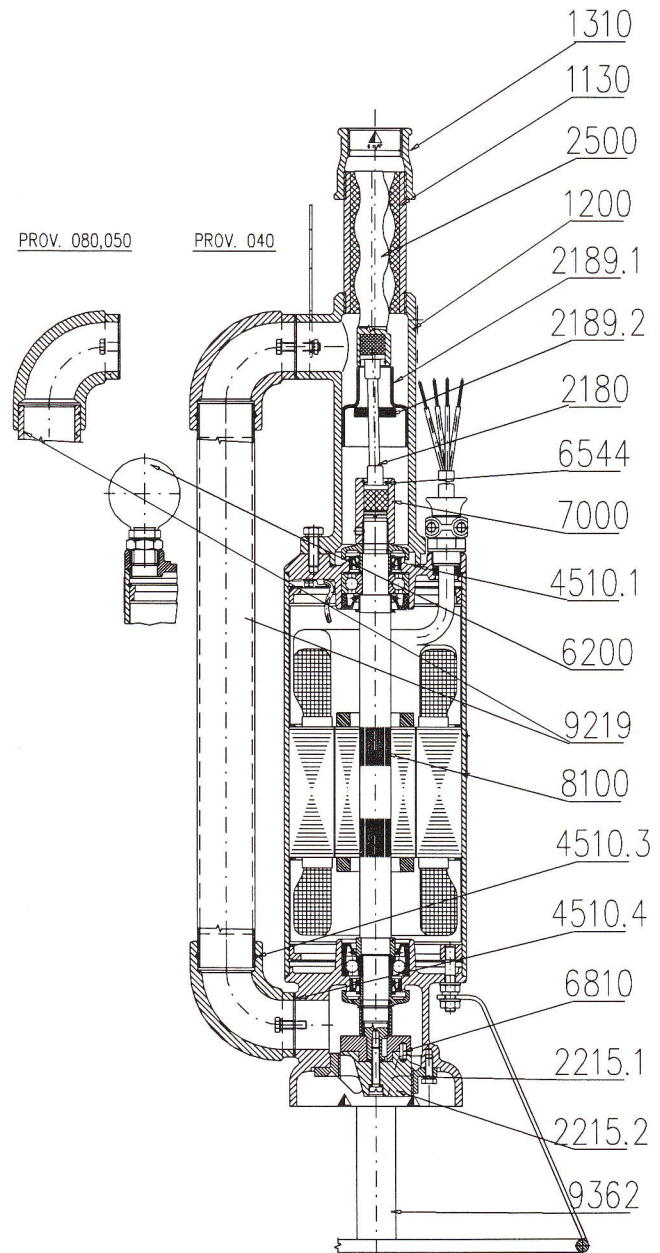
This pump is outstanding for its noticeable simplicity in respect of its design and function. As a progressive cavity pump notable for minimal parts number and excellent quality this pump set may be noted for its small size and weight, easy mobility and easiness of control, as well.

Material options

Pump 1 1/4"-EFRU including the electric motor is available in several material options that can be selected according to real operating conditions.

Pump in its basic material version is destined for pumping waste water without oily and chemical stuffs. Majority of parts is of structural carbon steel and of cast iron, functional hydraulic parts are of stainless steel, metal-rubber parts (stator and joints) are of moulded rubber goods. For pumping waste water containing oily and chemical stuffs the metal-rubber parts are of nitrile rubber and of other special rubbers.

Further design versions are destined for severe and arduous operating conditions in corrosive atmosphere. Some parts of these design versions (frame, motor casing, and so on) are made of stainless steel. Metal-rubber parts can be of moulded rubber goods, nitrile or other special rubber.



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|---------------------------------|-------------------------|
| 1130 - Complete stator | 4510.3 - O-ring |
| 1200 - Pump casing | 4510.4 - Flange packing |
| 1310 - Discharge casing | 6200 - Air chamber |
| 2180 - Connection rod, complete | 6544 - Retaining ring |
| 2189.1 - Packing | 6810 - Pin |
| 2189.2 - Packing ring | 7000 - Coupling |
| 2215.1 - Cutting disc | 8100 - Electric motor |
| 2215.2 - Cutting tool | 9219 - Pipe |
| 2500 - Helix | 9362 - Frame |
| 4510.1 - Ring | |

Main performance data

| | | | |
|--|------------------|-------------------|--------|
| Pump | 1 1/4" EFRU-16-8 | | |
| Guaranteed rate of flow | Q_r | $l \cdot s^{-1}$ | 0,65 |
| Delivery pressure | p_{do} | MPa | 0,8 |
| Delivery head, max. | H_{max} | m | 80 |
| Electric motor | 1P-60112-02 | | |
| Power output | P | kW | 1,1 |
| Voltage | U | V | 400 |
| Rated current (breaking) | I | A | 3,5 |
| Frequency | f | Hz | 50 |
| Speed | n | min^{-1} | 2840 |
| Winding insulation | PVC do 60 °C | | |
| Cable | HO7RN-F 4G 1,5 | | |
| Cable standard length | m | | 10 |
| Pump set max. submersion under water level | m | | 30 |
| Liquid pH range | | pH | 6,5-12 |
| Liquid max. density | | $kg \cdot m^{-3}$ | 1100 |
| Max. temperature of a pumped liquid | t | °C | 30 |
| Pump weight, inclusive of 10 m cable | G | kg | 29 |
| Pump set dimensions | 327 x 865 | | |

