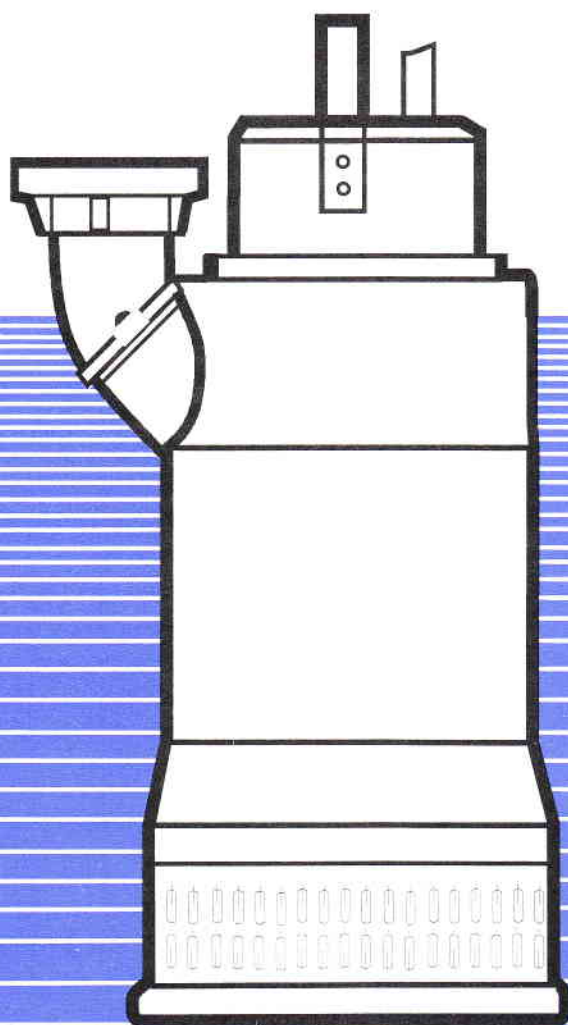




Submersible sludge explosion-proof pump

# KDDF 080-01-E



## Application

**Pump is intended for installation into a wet pit in explosive risk environments, into the zone 1, according to the Czech Standard ČSN 332320 and for installation in mines where methane may be found.** It has proved successful in drainage at every workplace suffered from seepage, inrush, flooding, and so on. However, this pump is intended namely pro workplaces suffered from flammable gases in mines, tunnels, geological survey, etc. A pumped liquid may contain abrasive particles, that is, sand, mud, coal dust, chips, and so on amounting to 30 percent of a pumped liquid mass. Maximum grain size of solids 5 mm, max. density of a pumped liquid  $1,150 \text{ kg.m}^{-3}$ , max. temperature of a liquid may be  $40^\circ\text{C}$  and pH 5-8.

## Design

Pump is of a submersible centrifugal single-stage type, being provided with a multi-vane impeller of close coupled arrangement, with a canned electric motor being cooled with a pumped liquid. Explosion-proof workmanship Eexd/IIBT6 – a fixed closure, according to the Czech Standards ČSN EN 50014 and 50018.

**Hydraulic parts** being subjected to abrasive effects of solids in a pumped liquid are protected by a rubber layer. Against penetration of water from the hydraulic part the motor is protected by a pair of mechanical seals being cooled and lubricated by oil filling.

### Material options

- castings ..... mostly cast iron 422420
- shaft, nuts, bolts ..... corrosion-proof steel
- hydraulic parts ..... rubberized, using abrasion-proof rubber

## Discharge

Pump discharge is provided with a neck quick coupler 75 or hose socket 75.

## Main performance data

Rate of flow	$Q_r$	$9.55 \text{ l.s}^{-1}$
Delivery head	$H$	16.9 m
Pump-set power input	$P_{1\text{max}}$	4 KW
Speed	$n$	$2,870 \text{ min}^{-1}$
Voltage – as standard U		500 V
- on request U		400 V
Thermal receptor – disconnecting contact		2.5 A, 250 V
Frequency	$f$	50 HZ
Cut-out current	$I$	5.6 A for 500 V
Cut-out current	$I$	7 A for 400 V
Short-circuit current	$I_k$	46 A
Insulation and covering class		F, IP 68
Cable		NSSHöu J 7x1.5
Maximum submersion		10 m
Pump weight without accessory		56 kg
Max. temperature of a pumped liquid		$40^\circ\text{C}$

## Pump-set control

To control and protect the pump it is necessary to use a device conformable to demands for its location. More detailed information are given in Operation Instructions. Suppliers of devices in explosion-proof versions: e.g. Genezi s.r.o., Šumperk, Ex-Technik s.r.o., Ostrava, Gares s.r.o. Brno, and so on.

## Accessories

As an integral part of every pump delivery the following accessory may be found:

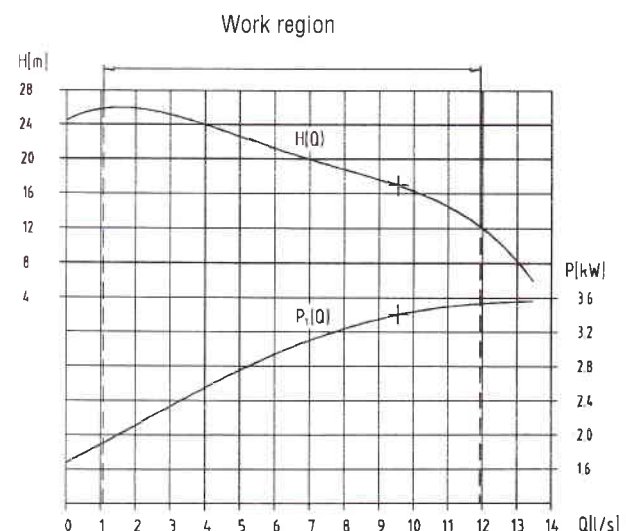
### a) Basic accessory

- seven-core cable is delivered in length of 50 m; it conforms to requirements for best mechanical ruggedness, when using in industrial construction works, opencut mining (in quarries), as well as in mining (underground). Outer mantle is oil-proof, according to DIN VDE 0472.
- Fire discharge hose DN 75 of polyamide fibre with internal rubber liner, in length of 10 m or in multiples of 10 m on the customer wish, inclusive of a quick coupler.

### b) Assembly tools

- hook spanner for a quick coupler of a discharge hose
- barrel spanner with handles

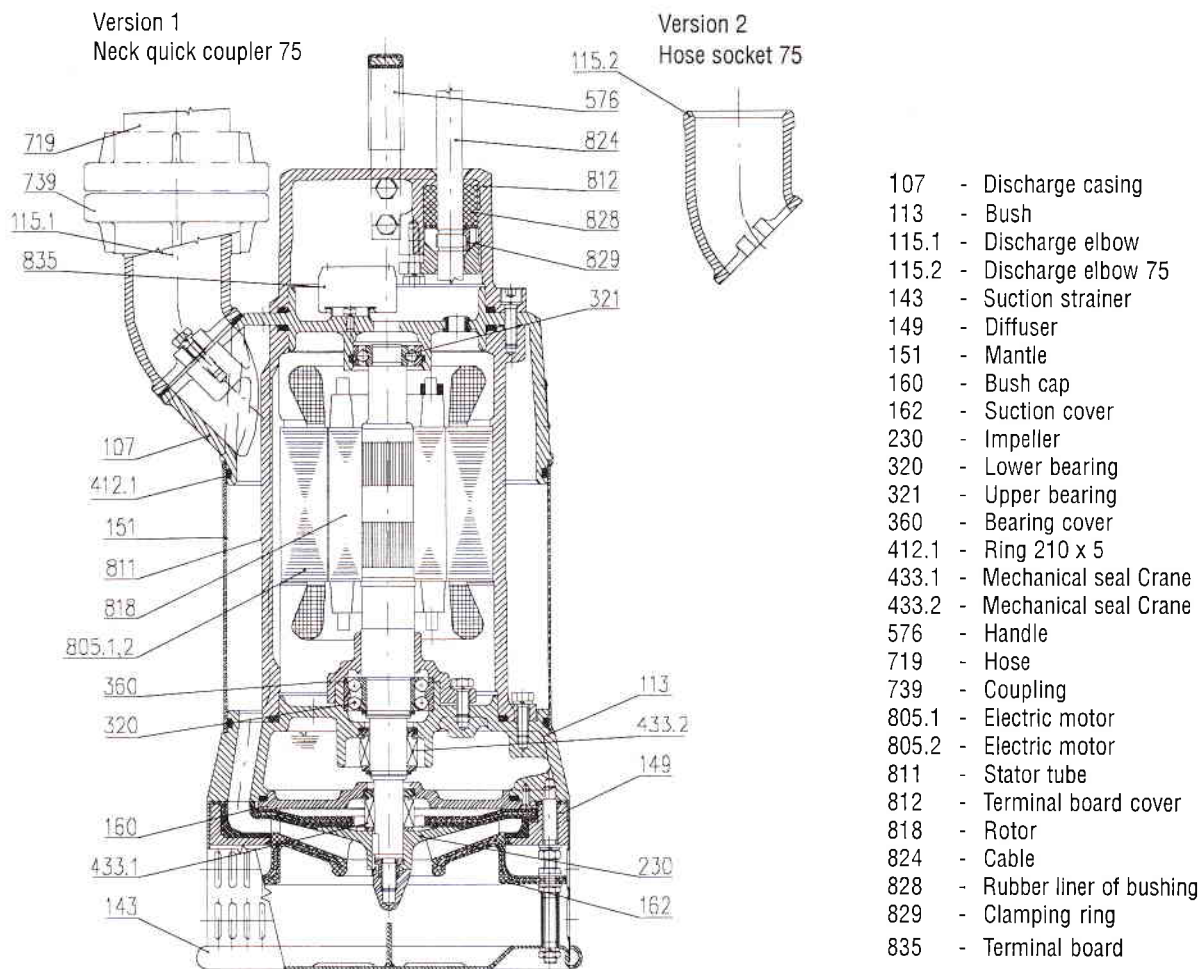
## Selection Chart



Pump total performance characteristic is given in the informative chart.

Informative entire characteristics  $Q-H$ ,  $Q-P$  conforms to pumping clean water of density  $p = 1,000 \text{ kg.m}^{-3}$ . With rising density of a pumped liquid the power input  $P_1$  may increase.

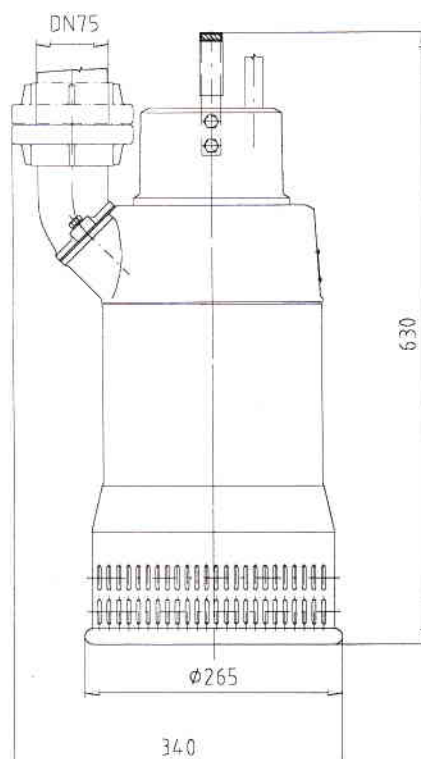
## Section through pump



## Pump dimensions

Version 1  
Neck quick coupler 75

Version 2  
Hose socket 75



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