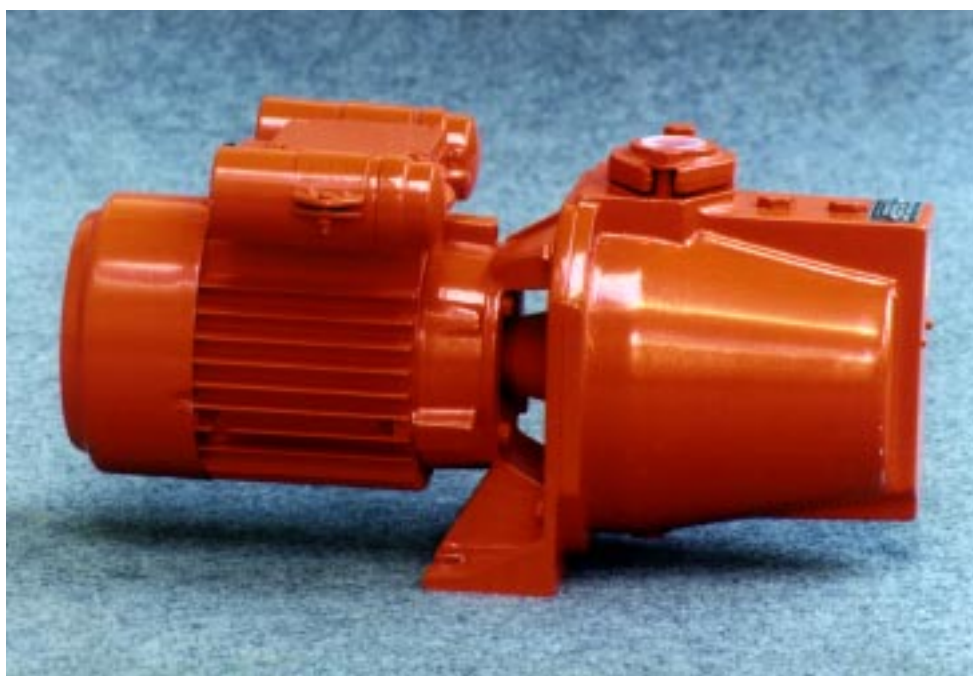




SIGMA PUMPY HRANICE



JET PUMPS

25-OVE

SIGMA PUMPY HRANICE, s.r.o.

Tovární 605, 753 01 Hranice, Czech Republic
tel.: +420/642/261 267, fax: +420/642/203 019
Email: sigmahra@sigmahra.cz

426	17.03
2.98	

Jet pumps type 25-OVE

Applications

Jet pumps 25-OVE are used to handle clean drinking or service water without solids, of temperature up to 50°C, with the concentration of hydrogen ions of pH range 5.8 - 8.5 and wherever the suction lift is not exceeding the value $H_s = 8.5$ m.W.clm. Although these jet pumps are self-priming, it is advised to use a suction strainer to increase efficiency of pumping. When a polluted liquid being pumped, a shorter life time of mechanical seal has to be taken into account.

Advantages

- Perfect self-priming effect
- Low weight
- Monoblock design
- Use of mechanical seal

Description

a) The Jet pump driven with an electric motor.

The jet pump 25-OVE consists of a pump, a bracket and an electric motor.

An ejector built-in the pump's casing provides during operation the self-priming effect. The impeller is fixed overhung on the elongated shaft of the electric motor and secured by a nut. The shaft is sealed off by a mechanical seal.

The bracket connects the pump's casing and the electric motor into one unit and at the same time makes mounting and fixing of the pumping set into foundation possible.

Before being used for the first time, pump must be flooded with the pumped liquid. After starting-up of the pump, part of the liquid is carried by the impeller through the ejector which makes an under-pressure in suction space of the pump and thus ensures the self-priming capability.

The electric motor is of an flanged design, of an output 0.55 kW at voltage 230 V and frequency 50 Hz.

To eliminate an overload there is built-in a thermal protective element. If the motor is overloaded, the thermal protective element cuts off the current for a period of approximately 45 seconds. After cooling of the thermal protective element (approx. 3 minutes), the electric current is cut in again. Any manipulation with the jet pump 25-OVE must therefore be carried out together with the electric motor disconnected from the network.

b) The pump driven with a drive via a belt pulley

The jet pump type 25-OVE-02 is modified for drive via a belt pulley. It can be driven via V-belt 10x6.

Material execution

Pump casing, inter-wall,	- grey cast iron
bracket, bearing's body, flange	- plastic
impeller, ejector	- stainless steel
shaft	- aluminium alloy
Belt pulley	

Direction of rotation

Jet pumps 25-OVE turn clockwise when viewing from the drive's side.

Conditions of duty

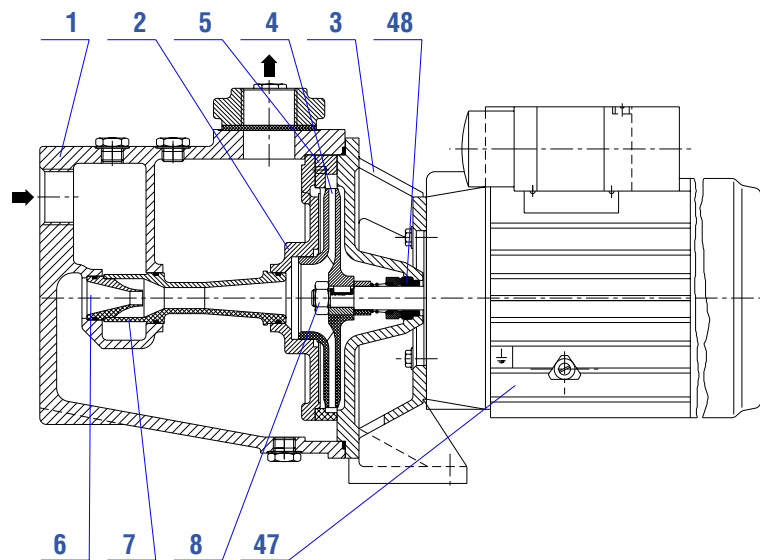
Jet pumps can be installed in usual and also humid places protected against flooding and freezing.

List of spare parts for 5-years operation

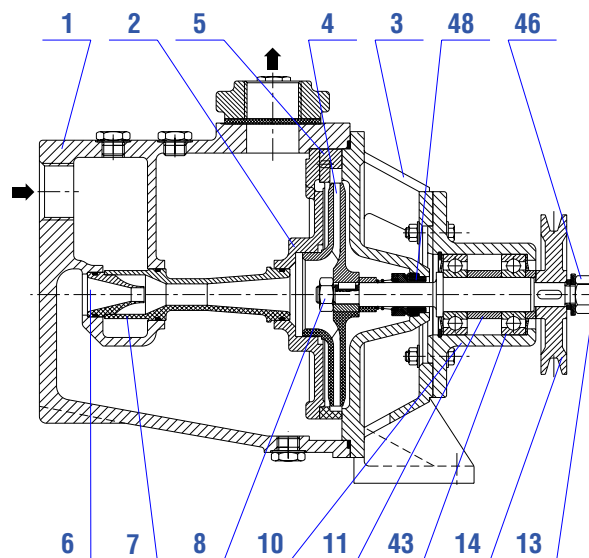
Item No.	Name	Qty	Note
1	Pump casing	1	
2	Bracket	1	
3	Inter-wall	1	
4	Impeller	1	
5	Converter	1	
6	Nozzle	1	
7	Diffuser	1	
8	Mechanical seal	1	
9	Bearing's body	1	25-OVE-02
10	Shaft	1	25-OVE-02
11	Belt pulley	1	25-OVE-02

Informative sectional drawing

25-OVE-01



25-OVE-02



- | | | | |
|---|-------------|----|-----------------|
| 1 | Pump casing | 10 | Bearing's body |
| 2 | Inter-wall | 11 | Sleeve |
| 3 | bracket | 13 | Shaft |
| 4 | Impeller | 14 | Belt pulley |
| 5 | Inverter | 43 | Bearing |
| 6 | Nozzle | 46 | Nut |
| 7 | Diffuser | 47 | El. motor |
| 8 | Nut | 48 | Mechanical seal |

Technical data

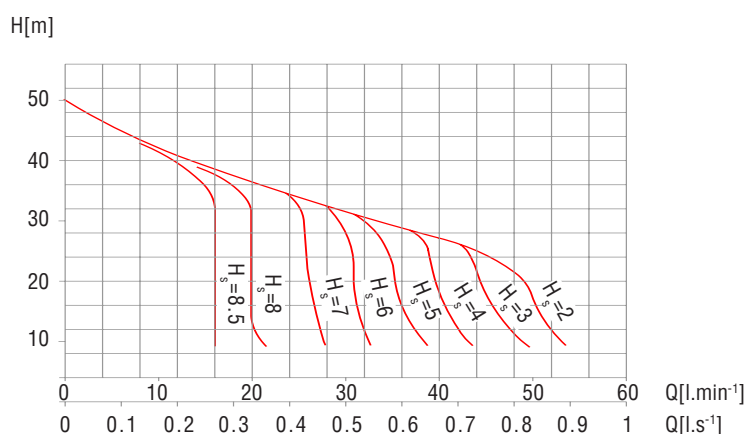
Max. suction head H_s	m	8.5
Electric motor Type Voltage Output Speeds	V kW R.P.M	3 APC 80-2s (1ATEC 71 - 2) 230 0.55 2840 (2790)
Power input of pumping set	kW	0.8
Suction connection	DN	G 1"
Discharge connection	DN	G 1"
Weight of pumping set type 25-OVE-01	kg	approx. 24
Weight of pumping set type 25-OVE-02	kg	approx. 17.5

Due to the fact that with the increasing value of the suction lift including resistance, the flow rate is decreased, the following table gives the informative values of Flow capacity and Delivery head for various values of the reduced suction lift including resistance.

Delivery head H (m)	10	15	20	25	30	35	40	45
Suction lift including resistance H_s (m)	Flow capacity Q (l.s ⁻¹)							
2	0.88	0.85	0.82	0.75	0.54	0.38	0.21	0.1
4	0.74	0.69	0.69	0.67	0.54	0.38	0.21	0.1
6	0.54	0.53	0.53	0.53	0.5	0.38	0.21	0.1
8	0.33	0.33	0.33	0.33	0.33	0.38	0.21	0.1

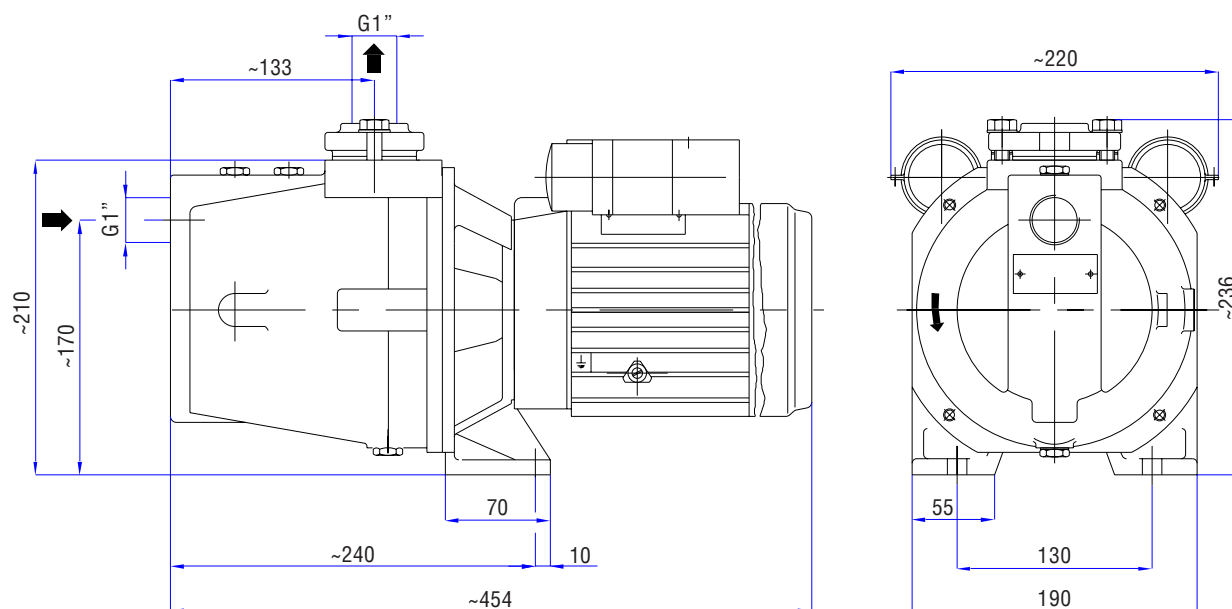
Parameters above are valid for water of temperature $t = 20\text{ }^{\circ}\text{C}$, density $\rho = 1000\text{ kg.m}^{-3}$, speeds $n = 2900\text{ R.P.M.}$

Informative Performance curve of the pump 25-OVE (02)



Dimensional chart

25-OVE-01



25-OVE-02

