

# SuperBetsy

## Independent pump system

### Main application areas

Construction / Industry / Municipality / Emergency services

- Sewer renovation
- Emergencies (Overpumping)
- Sewer rerouting
- Wastewater treatment
- Dewatering / Drainage of flooded areas
- Pumping of high viscous media (bentonite, sludge, etc.)



### Operating principle

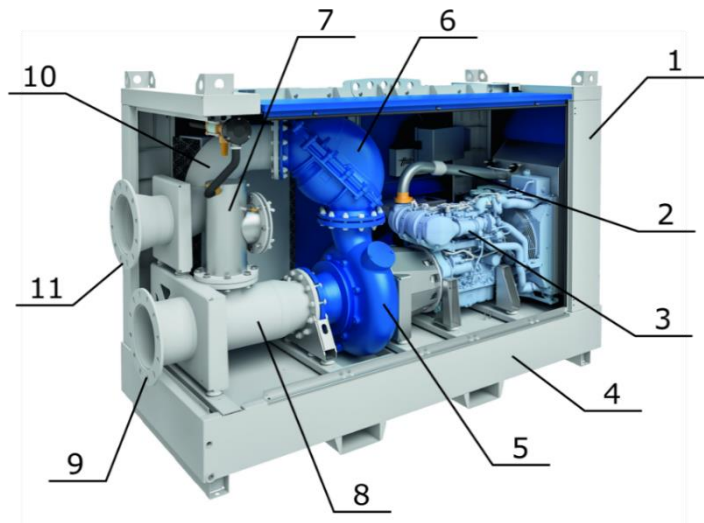
The environmentally friendly diesel engine of the independent pump system drives the hydraulics as well as the rotary vane vacuum pump connected via a maintenance-free V-ribbed belt. Following the controlled activation of the magnetic clutch of the vacuum pump the system will start priming until the medium to be pumped reaches the impeller of the Hidrostat screw centrifugal impeller pump. When the defined level is reached in the vacuum chamber, the electronically controlled magnetic clutch will be disconnected and the screw centrifugal impeller pump will pump the medium independently. This combined system is fast and energy-efficient and provides very large superior suction heights. In automatic mode external probes control the cycles of operation of the SuperBetsy. The machine starts and stops reliably when it reaches preset level in the pump reservoir.

### Main properties

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>→ Powerful</li> <li>→ Excellent pump efficiency</li> <li>→ Maximum clog resistance</li> <li>→ Fish-friendly</li> <li>→ Flow optimized suction and pressure pipes</li> <li>→ Manual and automatic operating mode</li> <li>→ Corrosion-free fuel tank made of Polyethylene</li> <li>→ Latest engine technology according to valid emission regulations</li> </ul> | <ul style="list-style-type: none"> <li>→ Low-maintenance</li> <li>→ Low total weight</li> <li>→ Max solids passage</li> <li>→ Low sound emission</li> <li>→ Large suction heights</li> <li>→ Remote control via GPS/GSM</li> <li>→ Trailer capable</li> <li>→ Hidrostat hydraulics with original screw centrifugal impeller</li> </ul> |
|--|--|

## Main components

- 1 Sound proof canopy
- 2 Exhaust system
- 3 Diesel engine
- 4 Leakage pan with fuel tank
- 5 Hidrostat screw centrifugal impeller pump
- 6 Ball check valve
- 7 Priming chamber
- 8 Suction pipe
- 9 Suction flange
- 10 Discharge pipe
- 11 Discharge flange



## Technical details

### Hydraulics

|  |                          |     |
|--|--------------------------|-----|
| Model  | D04R-SMN3R + DDM1W-MQFFT |     |
| Flow rate max. (at 1500 min <sup>-1</sup> )      | m <sup>3</sup> /h        | 155 |
| Flow rate max. (at 2100 min <sup>-1</sup> )      | m <sup>3</sup> /h        | 216 |
| Discharge head max. (at 1500 min <sup>-1</sup> ) | m                        | 15  |
| Discharge head max. (at 2100 min <sup>-1</sup> ) | m                        | 29  |
| Free ball passage                                | mm                       | 100 |
| Maximum suction height                           | m                        | 8.5 |



### Pipe connections

|                        |                        |     |
|------------------------|------------------------|-----|
| Suction flange         | DN                     | 150 |
| Discharge flange       | DN                     | 100 |
| Nominal pressure stage | PN                     | 10  |
| Flange connection      | Universal (DIN / ANSI) |     |

### Vacuum pump

|                       |                   |    |
|-----------------------|-------------------|----|
| Type                  | Rotary vane       |    |
| Nominal pumping speed | m <sup>3</sup> /h | 40 |



### Engine

|   |                   |                  |
|---|-------------------|------------------|
| Manufacturer                                    | Hatz              |                  |
| Model   | 3H50T             |                  |
| Emission level                                  | EU / EPA          | V / Tier 4 final |
| Maximum power                                   | kW                | 18.4             |
| Power at 1500 min <sup>-1</sup>                 | kW                | 17               |
| Speed range                                     | min <sup>-1</sup> | 1500 - 2100      |
| Capacity fuel tank                              | l                 | 360              |
| Operating time at 1500 min <sup>-1</sup> at BEP | h                 | 116              |



## Technical details (continuation)

### Control

|                |                      |
|----------------|----------------------|
| Manufacturer   | Deep Sea Electronics |
| Model          | E800                 |
| Operating mode | Manual / Automatic   |
| Speed control  | Electronically       |

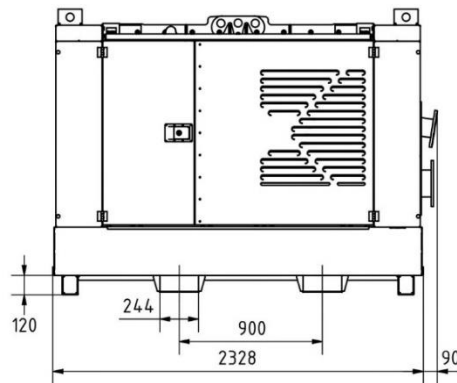
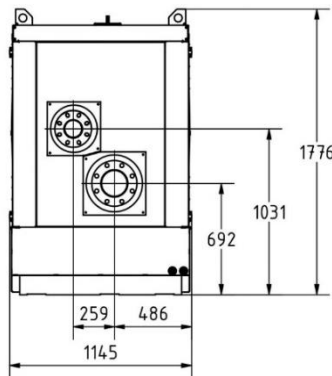


### Canopy

|   |        |                    |
|---|--------|--------------------|
| Global dimension (lxbxh)                                    | mm     | 2418 x 1145 x 1776 |
| Sound pressure level Lp in 7 m (at 2100 min <sup>-1</sup> ) | dB (A) | 58                 |
| Weight with fuel  | kg     | 1525               |
| Lifting point   |        | Central crane eye  |
| Stackability  |        | Yes                |
| Lashing eye   |        | 4 pieces           |



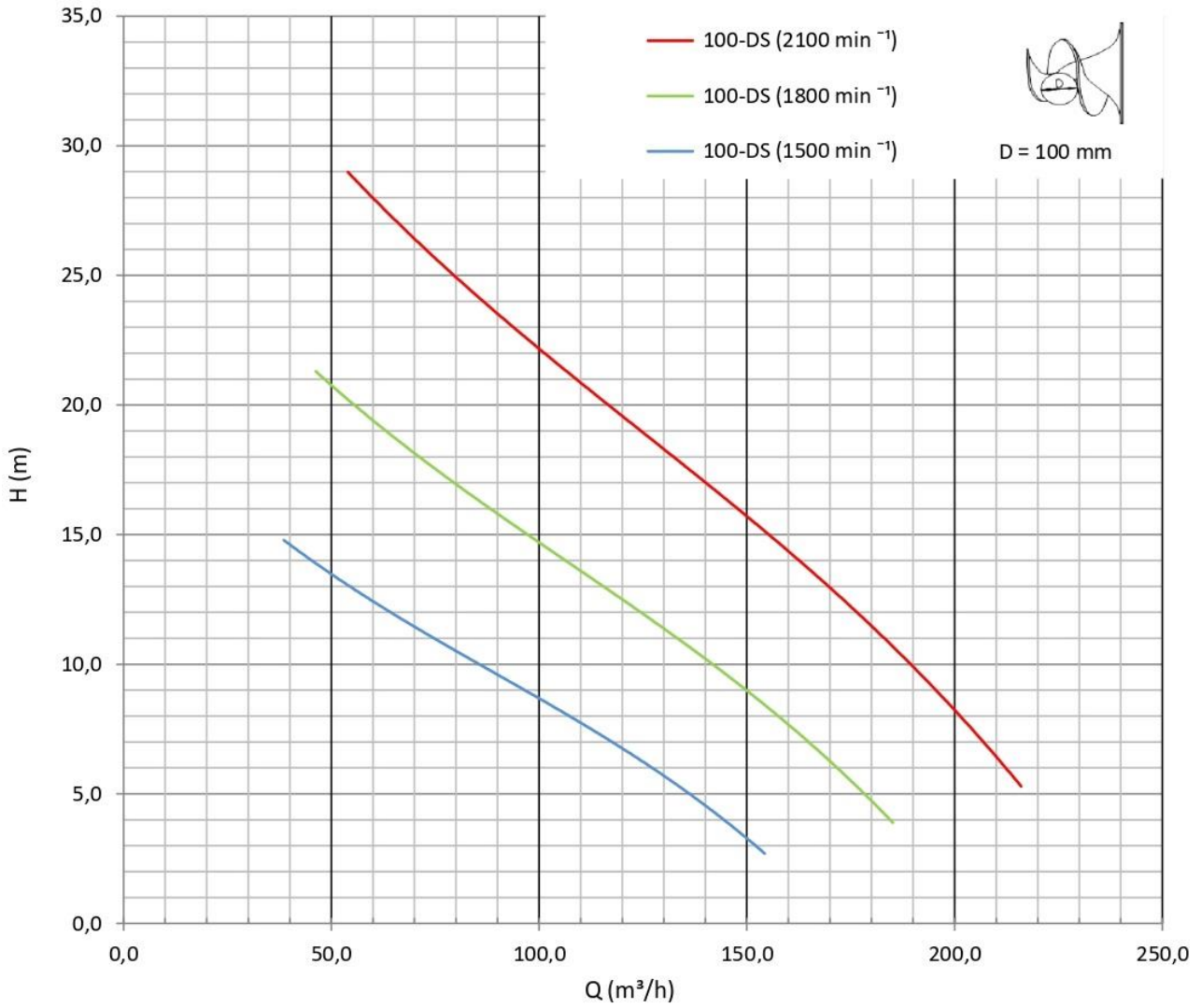
## Sketch of the main dimensions



## Selectable options

- Package sensors - (GPS/GSM modul and antenna, pressure sensors [suction- / discharge pipe])
- Package operation safety - (additives to protect the diesel engine, battery master switch, battery charger)
- Package light - (LED periphery lighting for night use, LED interior lighting, reinforced battery)
- Package maintenance - (filters [engine, vacuum pump, vacuum chamber], oil [engine, vacuum pump])
- Trailer
- Changeover valve for connecting an external fuel tank
- Fuel tank in special size (material steel)
- Vibration sensor
- Canopy in special paintwork
- Auxiliary heating for use in cold areas
- Additional elements for level monitoring in automatic mode (float switch set, flood probe)
- Extended warranty (2 or 4 years)

## Pump curve



The pictured curve shows the real performance curve of the SuperBetsy between the suction- and discharge sides. The pressure losses in the machine are considered!