

## US 73 HE-US 103 HE

SUBMERSIBLE DRAINAGE PUMPS FOR HOT WATER OPERATION

- Safe to run dry
- 30 mm free passage
- Hot water up to 194 °F (90 °C)
- Controllable oil chamber
- SiC mechanical seal independent of sense of rotation
- Replaceable moisture sealed cable inlet



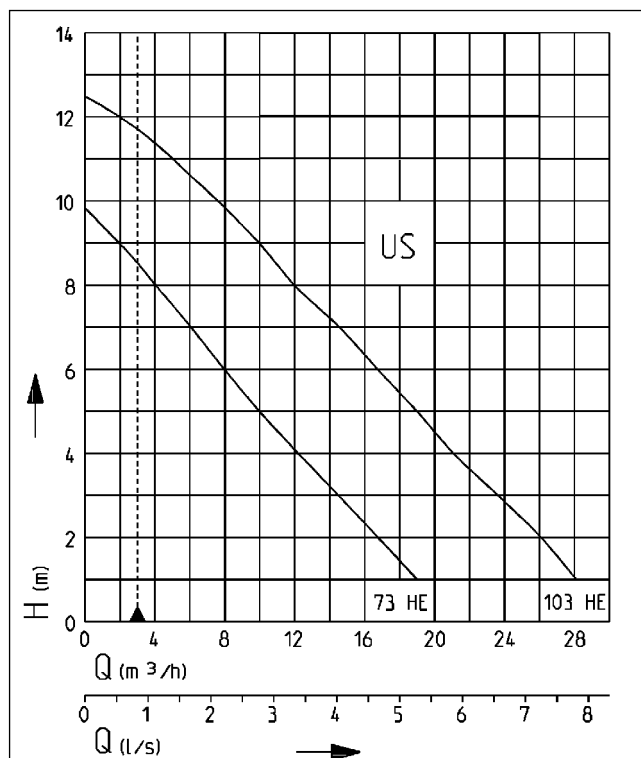
### DESCRIPTION

The heavy duty centrifugal submersible drainage pumps US 73 and 103 HE/HES are suitable for dealing with very contaminated water and capable of handling solids up to 30 mm particle size without stones. These pumps can be used wherever wastewater up to 194°F (90°C) is involved, such as in laundries or automatic laundrettes, or in industrial dishwashers and washing machines or for the emergency overflow of heating systems.

This range of pumps is suitable for stationary use. For easy removal of the pumps from deep sumps we recommend the use of our guide rail systems which provide ease of maintenance and inspection. A controllable oil chamber and wear-resistant special mechanical seal ensure a long service life. The integrated winding thermostats protect the motor from overload.

In conjunction with the drain master Hebefix 100 H, it provides a ready to install solution for conveying wastewater up to 176°F (80°C).

### PERFORMANCE



| Type          | Delivery head H [m] | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 12 |
|---------------|---------------------|----|----|----|----|----|----|----|----|----|----|----|
| US 73 HE/HES  | Flow rate Q [m³/h]  | 19 | 17 | 15 | 12 | 10 | 8  | 6  | 4  | 2  |    |    |
| US 103 HE/HES |                     | 28 | 26 | 23 | 21 | 19 | 17 | 15 | 12 | 10 | 8  | 2  |

Specifications can be changed without notice. Performance subject to ISO 9906 tolerances.

The minimum flow velocity in the pressure piping must be 0.7 m/s according to EN 12056. This data is represented in the performance curve as a limit of application.



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### SCOPE OF SUPPLY

Pump acc. to EN 12050 ready for connection with cable and safety plug

### MECHANICAL DATA

|                     |                                  |                    |                      |
|---------------------|----------------------------------|--------------------|----------------------|
| Pump                | Vertical single-stage            | Run dry protection | Yes                  |
| Free passage        | 30 mm                            | Shaft              | Stainless steel      |
| Bearing             | Ball bearings, grease-lubricated | Impeller           | Vortex impeller, GFK |
| Seal on motor side  | Duplex rotary shaft seals        | Motor housing      | Stainless steel      |
| Oil chamber         | Yes                              | Pump housing       | Grey cast iron       |
| Seal on medium side | SiC mechanical seal              | Submersible        | Yes                  |
|                     |                                  | Pressure outlet    | IG 1 1/2"            |

### ELECTRICAL DATA

|                   |              |                    |            |
|-------------------|--------------|--------------------|------------|
| Voltage           | 1/N/PE~230 V | Insulation class   | F          |
| Power line        | 10m H07RN-F  | Winding thermostat | Yes        |
| Wires             | 3G1,0        | Motor protection   | Integrated |
| Type of enclosure | IP 68        | Plug               | Safety     |

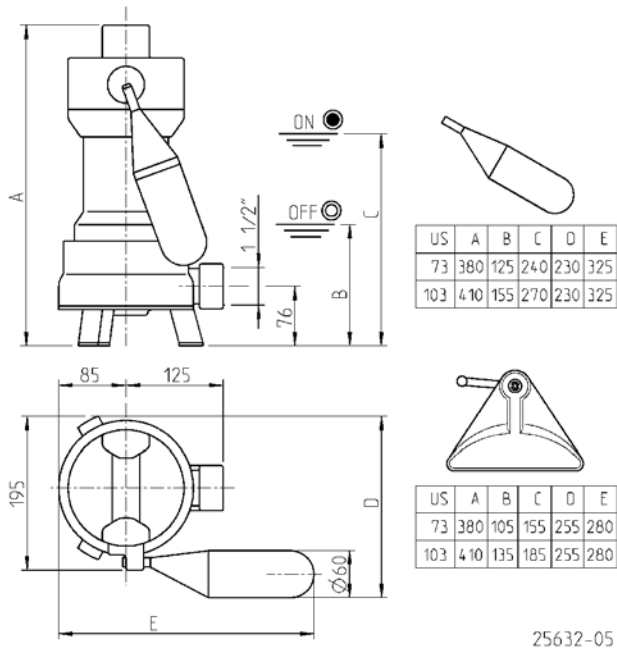
### US 73 HE-US 103 HE

| Type                        | Code No. | Motor rating |         | Current | Weight  |
|-----------------------------|----------|--------------|---------|---------|---------|
|                             |          | P1           | P2      |         |         |
| Without level control       |          |              |         |         |         |
| US 73 HE                    | JP09267  | 0.83 kW      | 0.50 kW | 3.9 A   | 12.4 kg |
| US 103 HE                   | JP09307  | 1.37 kW      | 0.98 kW | 6.0 A   | 14.0 kg |
| With built-in level control |          |              |         |         |         |
| US 73 HES                   | JP09264  | 0.83 kW      | 0.50 kW | 3.9 A   | 12.5 kg |
| US 103 HES                  | JP09308  | 1.37 kW      | 0.98 kW | 6.0 A   | 14.1 kg |

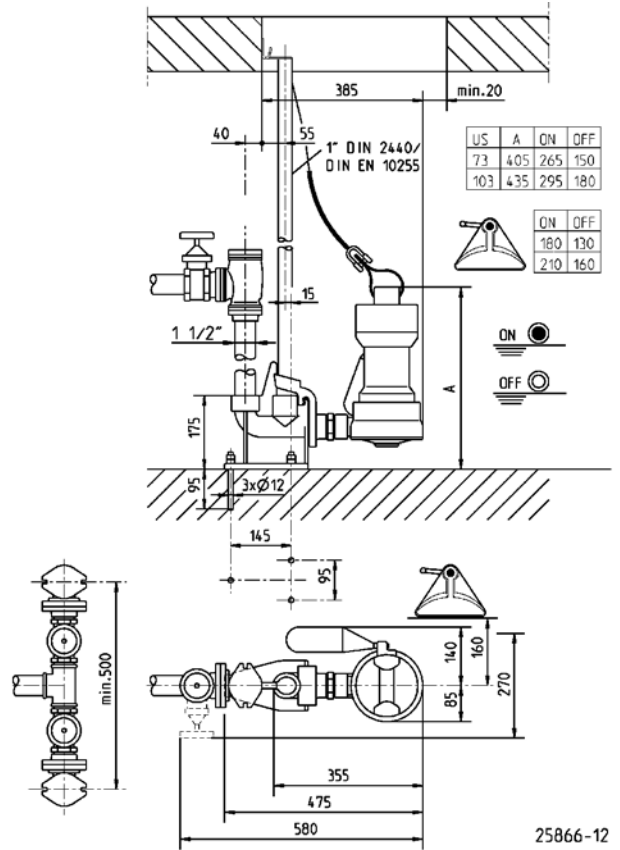
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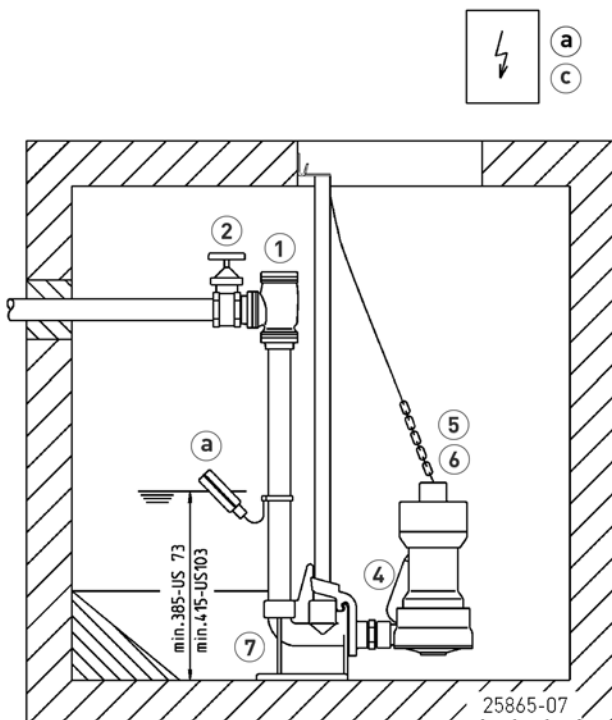
Dimensions/switching points US 73 + 103 HES (mm)



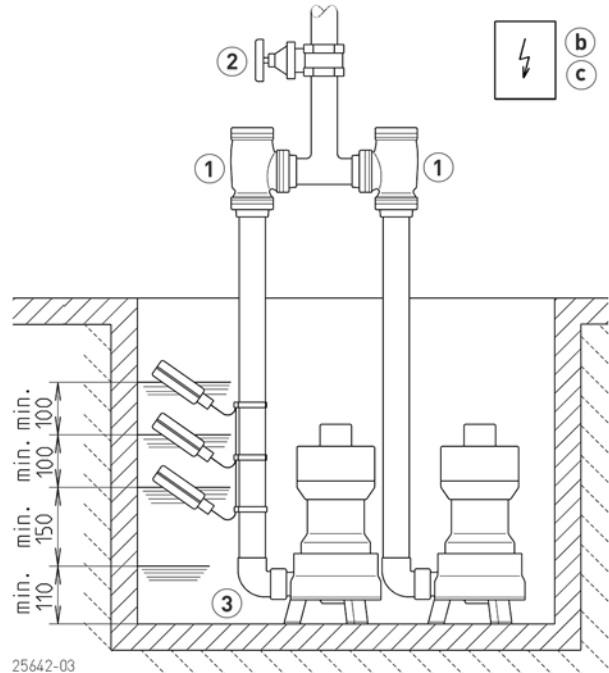
Dimensions/switching points US 73+103 HES with GR 40 (mm)



Example of single pump installation with GR



Example of duplex pump installation



# US 73 HE-US 103 HE

## SUBMERSIBLE DRAINAGE PUMPS FOR HOT WATER OPERATION

Single unit US-H with GR 40: sump area min. 40x65 cm  
Single unit US-H without GR: sump area min. 40x40 cm

Duplex unit US-H with GR 40: sump area min. 65x80 cm  
Duplex unit US-H without GR: sump area min. 40x80 cm

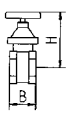
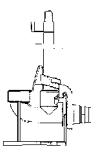
In case of installation beneath the backpressure level the pressure tube must be taken in a

loop over the local backup level acc. to EN 12056. Besides, it must be secured with an EN 12050-4-proofed swing-type check valve. Additionally we recommend an alarm system.

In accordance with EN 12056-4 section 5.1, it has a built-in automatic spare pump or a double attachment included, which ensures that sewage drainage is not interrupted.

Suspend control unit in a dry room

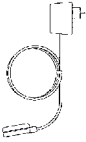
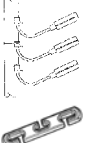
### MECHANICAL ACCESSORY

|                                                                                     | Code No.                        |                                                 |               |                |
|-------------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------|---------------|----------------|
|    | ① <b>Swing-type check valve</b> |                                                 |               |                |
|                                                                                     | for hot water                   | 1½" (DN 40)                                     | 80x85 (HxB)   | <b>JP44784</b> |
|    | <b>Ball-type check valve</b>    |                                                 |               |                |
|                                                                                     | KE40 EN 12050-4                 | 1½" (DN 40), PN 6                               | 170x125 (HxB) | <b>JP47974</b> |
|    | ② <b>Stop valve</b>             | brass, 1½" (DN 40), PN 16                       | 125x60 (HxB)  | <b>JP44786</b> |
|                                                                                     | ③ <b>Elbow</b>                  | 1½"                                             |               | <b>JP45953</b> |
|    | ④ <b>Special float</b>          | for lower switching points                      |               | <b>JP44795</b> |
|   | ⑤ <b>Chain</b>                  | certified, 2.5 m, 320 kg, 5 rings (EN 818 mod.) |               | <b>JP45901</b> |
|                                                                                     |                                 | certified, 5.0 m, 320 kg, 8 rings (EN 818 mod.) |               | <b>JP45902</b> |
|                                                                                     | ⑥ <b>Webbing</b>                | with shackle                                    |               | <b>JP45168</b> |
|  | ⑦ <b>Guide rail system</b>      | GR 40                                           |               | <b>JP25592</b> |

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## ELECTRICAL ACCESSORY

|                                                                                     |                                   |                                                                                 | Code No. |
|-------------------------------------------------------------------------------------|-----------------------------------|---------------------------------------------------------------------------------|----------|
|    | <b>a Alarm unit</b>               |                                                                                 |          |
|                                                                                     | AG3                               | subm. ball contact switch, mains dependent, potential-free contact, 3 m cable   | JP44891  |
|                                                                                     | AG10                              | subm. ball contact switch, mains dependent, potential-free contact, 9.5 m cable | JP44892  |
|                                                                                     | <b>Washing machine stop</b>       |                                                                                 |          |
|    | AW3                               | subm. ball contact switch, mains dependent, 3 m cable                           | JP44895  |
|                                                                                     | AW0                               | for alarm forwarding in case of several washing machines                        | JP44899  |
|                                                                                     | <b>b Control for duplex units</b> |                                                                                 |          |
|                                                                                     | Control unit HIGHLOGO 2-00 E      | 230 V                                                                           | JP47996  |
|    | Control unit BD 00 E              | 230 V, for pumps U3-U6, US 62-105, UV3, UV 300, 08/2 ME                         | JP45735  |
|                                                                                     | <b>Level control</b>              |                                                                                 |          |
|                                                                                     | Submersible switch pack BHmG      | Submersible ball contact switch 9.5 m with counterweight                        | JP24769  |
|                                                                                     | Weight                            | to stabilize the subm. ball contact switch                                      | JP44803  |
|   | <b>c Rechargeable battery</b>     | 9 V, for mains independent alarm                                                | JP44850  |
|  | <b>d Smart Home</b>               | FTJP radio transmitter                                                          | JP47209  |