

- 30 mm free passage (US 73-153)
- 40 mm free passage (US 253)
- Safe to run dry
- Controllable oil chamber
- SiC mechanical seal independent of sense of rotation
- Replaceable moisture sealed cable inlet



**DESCRIPTION**

The centrifugal submersible drainage pumps US 73-253 are suitable for dealing with contaminated water and capable of handling solids up to 30 and 40 mm particle size without stones. Fibrous waste water, as found in laundries or automatic launderettes and waste water from domestic dishwashers and washing machines can be handled by this pump range. For hot water in the industrial and commercial market we recommend the US 73 and US 103 HE/HES.

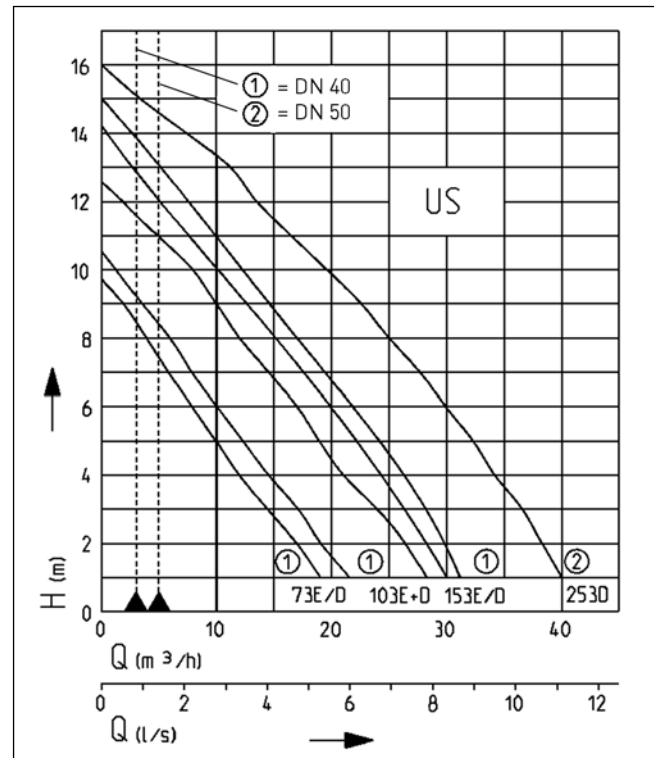
This range of pumps is suitable for stationary use. For easy removal of the pumps from deep sumps we recommend the use of our guide rail systems which provide ease of maintenance and inspection.

For automatic monitoring of the oil chamber a seal leak control can be connected.

The cable length is 10 m. The 3-phase pumps with built-in level control (US 153 DS and US 253 DS) have a CEE-plug with phase inverter.

The sewage pumps are tested by the German Institute for Construction Engineering and correspond to the valid construction and test principles.

**PERFORMANCE**



| Type             | Delivery head H [m] | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
|------------------|---------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| US 73 E/ES       | Flow rate Q [m³/h]  | 19 | 17 | 15 | 12 | 10 | 8  | 6  | 4  | 2  |    |    |    |    |    |
| US 73 D/DS       |                     | 22 | 20 | 17 | 15 | 12 | 10 | 8  | 6  | 4  |    |    |    |    |    |
| US 103 E/D/ES/DS |                     | 28 | 26 | 23 | 21 | 19 | 17 | 15 | 12 | 10 | 8  | 5  | 2  |    |    |
| US 153 E/ES      |                     | 30 | 29 | 27 | 24 | 22 | 20 | 18 | 15 | 13 | 11 | 8  | 6  | 3  | 1  |
| US 153 D/DS      |                     | 31 | 30 | 28 | 26 | 23 | 21 | 19 | 17 | 14 | 12 | 10 | 8  | 5  | 3  |
| US 253 D/DS      |                     | 40 | 38 | 36 | 34 | 32 | 30 | 28 | 25 | 23 | 20 | 17 | 14 | 10 | 7  |

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.

VDE-Certification for US 73 E/ES, US 103 E/ES



# US 73-US 253

## SUBMERSIBLE DRAINAGE PUMPS

### SCOPE OF SUPPLY

Pump according to DIN EN 12050 ready for connection with 10 m cable. US 73 and US 103 with safety plug (1-phase) or CEE-Plug (3-phase).

US 153 and 253: Pumps without level control with free lead end. Pump with level control with CEE-motor protective plug and phase inverter (3-phase) or safety-plug (1-phase).

### MECHANICAL DATA

|                     |                                  |                 |                                  |
|---------------------|----------------------------------|-----------------|----------------------------------|
| Pump                | Vertical single-stage            | Shaft           | Stainless steel                  |
| Bearing             | Ball bearings, grease-lubricated | Impeller        | Vortex impeller, GFK             |
| Seal on motor side  | Duplex rotary shaft seals        | Motor housing   | stainless steel (253: cast iron) |
| Oil chamber         | Yes                              | Pump housing    | Grey cast iron                   |
| Seal on medium side | SiC mechanical seal              | Submersible     | Yes                              |
| Run dry protection  | Yes                              | Pressure outlet | IG 1 1/2" (US253: 2")            |

### ELECTRICAL DATA

|                   |             |                    |           |
|-------------------|-------------|--------------------|-----------|
| Power line        | 10m H07RN-F | Insulation class   | B (253:F) |
| Type of enclosure | IP 68       | Winding thermostat | Yes       |

### US 73-US 253

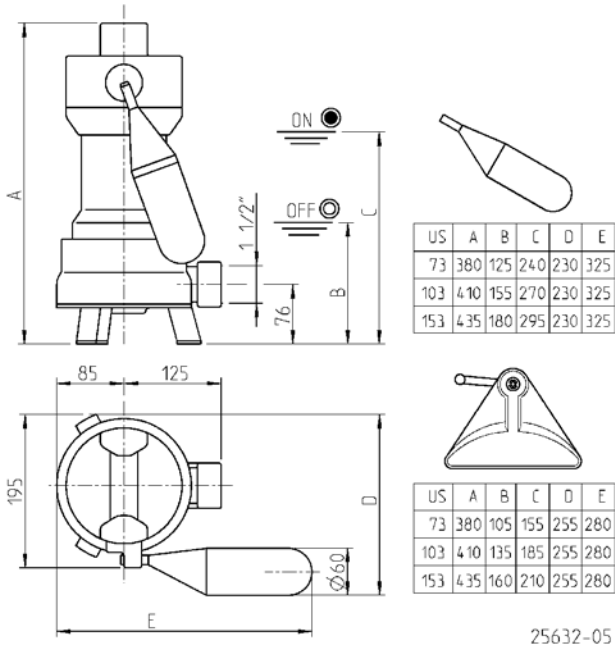
| Type                               | Code No. | Voltage      | Motor rating |         | Current | Wires | Motor protection        | Plug    | Free passage | Weight  |
|------------------------------------|----------|--------------|--------------|---------|---------|-------|-------------------------|---------|--------------|---------|
|                                    |          |              | P1           | P2      |         |       |                         |         |              |         |
| <b>Without level control</b>       |          |              |              |         |         |       |                         |         |              |         |
| US 73 E                            | JP00676  | 1/N/PE~230 V | 0.83 kW      | 0.50 kW | 3.9 A   | 3G1,0 | Integrated              | Safety  | 30 mm        | 12.5 kg |
| US 73 D                            | JP00677  | 3/PE~400 V   | 0.85 kW      | 0.60 kW | 1.4 A   | 4G1,0 | Integrated              | CEE     | 30 mm        | 12.5 kg |
| US 103 E                           | JP09280  | 1/N/PE~230 V | 1.37 kW      | 0.98 kW | 6.0 A   | 3G1,0 | Integrated              | Safety  | 30 mm        | 14.0 kg |
| US 103 D                           | JP09258  | 3/PE~400 V   | 1.36 kW      | 1.06 kW | 2.4 A   | 4G1,0 | Integrated              | CEE     | 30 mm        | 14.5 kg |
| US 153 E                           | JP09311  | 1/N/PE~230 V | 1.60 kW      | 1.21 kW | 7.5 A   | 3G1,0 | on request <sup>1</sup> | Without | 30 mm        | 14.5 kg |
| US 153 D                           | JP09302  | 3/PE~400 V   | 1.70 kW      | 1.41 kW | 3.1 A   | 4G1,0 | on request <sup>1</sup> | Without | 30 mm        | 15.0 kg |
| <b>With built-in level control</b> |          |              |              |         |         |       |                         |         |              |         |
| US 73 ES                           | JP00678  | 1/N/PE~230 V | 0.83 kW      | 0.50 kW | 3.9 A   | 3G1,0 | Integrated              | Safety  | 30 mm        | 12.5 kg |
| US 73 DS                           | JP00679  | 3/PE~400 V   | 0.85 kW      | 0.60 kW | 1.4 A   | 4G1,0 | Integrated              | CEE     | 30 mm        | 13.0 kg |
| US 103 ES                          | JP09281  | 1/N/PE~230 V | 1.37 kW      | 0.98 kW | 6.0 A   | 3G1,0 | Integrated              | Safety  | 30 mm        | 14.0 kg |
| US 103 DS                          | JP09259  | 3/PE~400 V   | 1.36 kW      | 1.06 kW | 2.4 A   | 4G1,0 | Integrated              | CEE     | 30 mm        | 15.0 kg |
| US 153 ES                          | JP09247  | 1/N/PE~230 V | 1.60 kW      | 1.21 kW | 7.5 A   | 3G1,0 | Integrated              | Safety  | 30 mm        | 16.0 kg |
| US 153 DS                          | JP09249  | 3/PE~400 V   | 1.70 kW      | 1.41 kW | 3.1 A   | 4G1,0 | Integrated              | CEE     | 30 mm        | 17.0 kg |
| <b>Without level control</b>       |          |              |              |         |         |       |                         |         |              |         |
| US 253 D                           | JP09303  | 3/N/PE~400 V | 2.60 kW      | 2.10 kW | 4.4 A   | 6G1,5 | on request <sup>1</sup> | Without | 40 mm        | 26.5 kg |
| <b>With built-in level control</b> |          |              |              |         |         |       |                         |         |              |         |
| US 253 DS                          | JP09251  | 3/N/PE~400 V | 2.60 kW      | 2.10 kW | 4.4 A   | 6G1,5 | Integrated              | CEE     | 40 mm        | 28.0 kg |

<sup>1</sup>Protective motor plug necessary see accessory

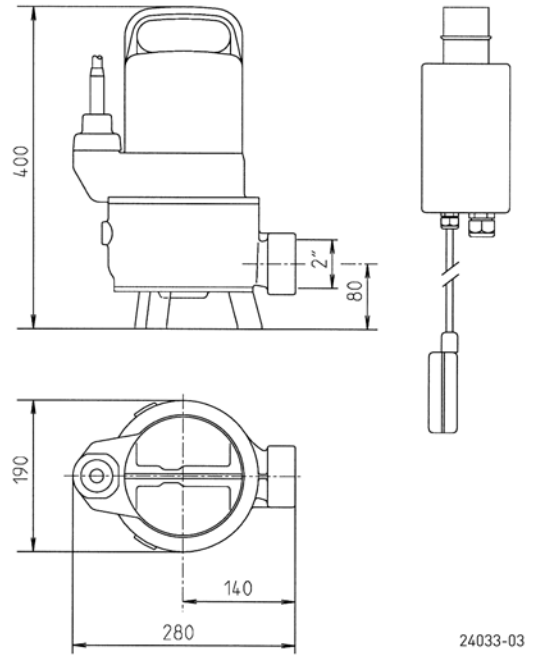
# US 73-US 253

## SUBMERSIBLE DRAINAGE PUMPS

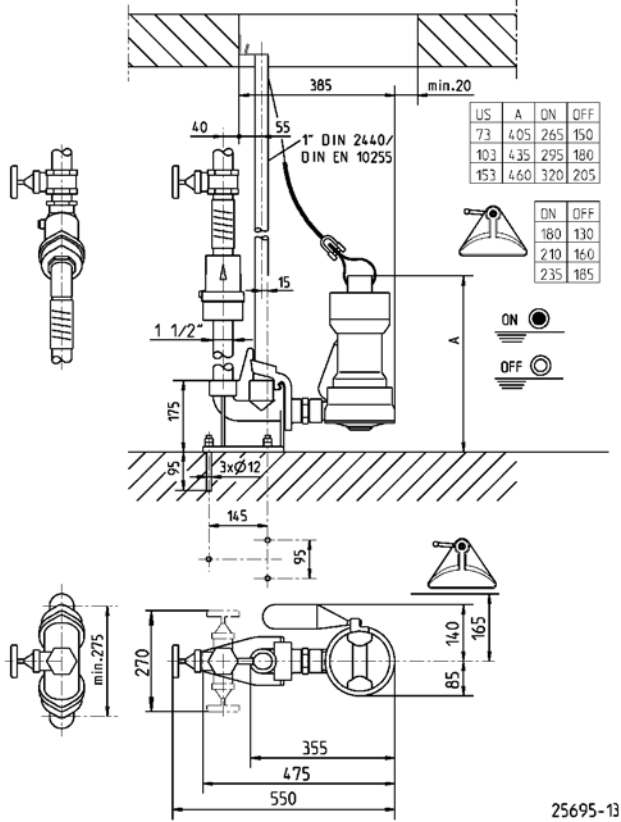
### Dimensions and switching points US 73, US 103, US 153 (mm)



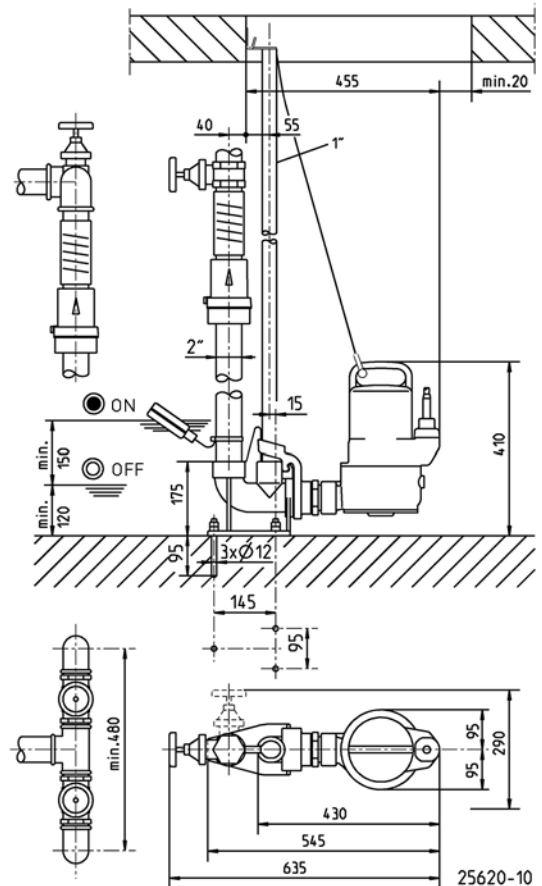
### Dimensions US 253 (mm)



### Dimensions and switching points with GR 40 (mm)



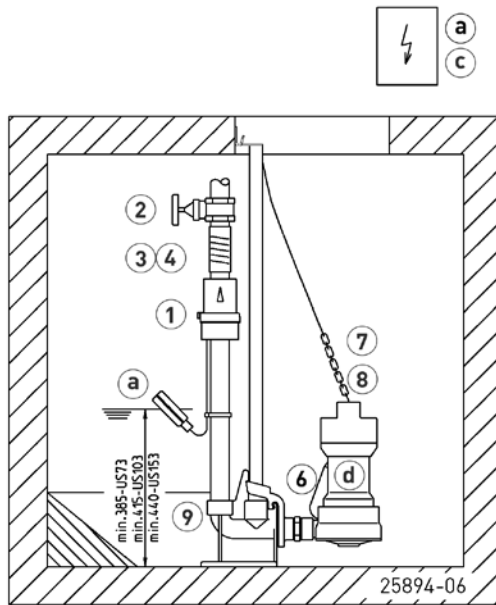
### Dimensions with GR 50 (mm)



# US 73-US 253

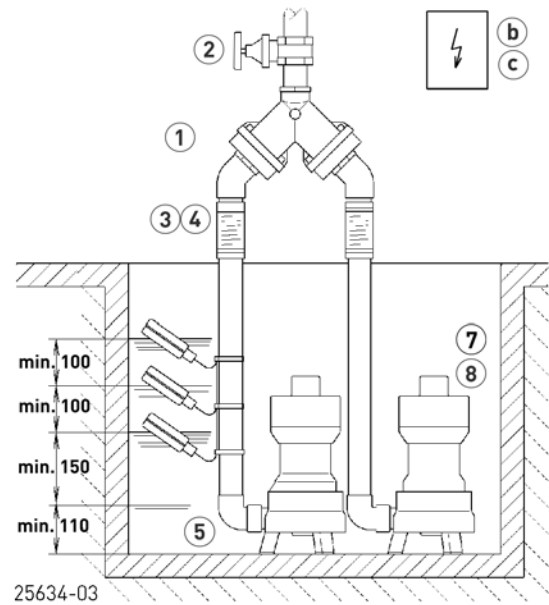
## SUBMERSIBLE DRAINAGE PUMPS

Example of single pump station with GR



Single unit 1½" with GR 40: sump area min. 40x60 cm  
 Single unit 1½" without GR: sump area min. 40x40 cm  
 Single unit 2" with GR 50 S: sump area min. 40x65 cm  
 Single unit 2" without GR: sump area min. 40x50 cm  
 Duplex unit 1½" with GR 40: sump area min. 60x60 cm  
 Duplex unit 1½" without GR: sump area min. 40x60 cm  
 Duplex unit 2" with GR 50: sump area min. 70x70 cm

Example of duplex pump station



Duplex unit 2" without GR: sump area min. 50x70 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



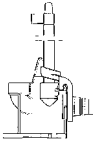
### MECHANICAL ACCESSORY

|  |                                 |                  |                           |               | Code No. |
|--|---------------------------------|------------------|---------------------------|---------------|----------|
|  | <b>① Swing-type check valve</b> | R40 EN 12050-4   | 1½" (DN 40), PN 4         | 150x120 (HxB) | JP00317  |
|  |                                 | DR 40 EN 12050-4 | 1½" (DN 40), PN 4         | 200x280 (HxB) | JP09155  |
|  |                                 | R50 EN 12050-4   | 2" (DN 50), PN 4          | 150x120 (HxB) | JP00326  |
|  | <b>Ball-type check valve</b>    | KE40 EN 12050-4  | 1½" (DN 40), PN 6         | 170x125 (HxB) | JP47974  |
|  |                                 | K50 EN 12050-4   | 2" (DN 50), PN 6          | 185x155 (HxB) | JP44782  |
|  | <b>② Stop valve</b>             |                  | brass, 1½" (DN 40), PN 16 | 125x60 (HxB)  | JP44786  |
|  |                                 |                  | brass, 2" (DN 50), PN 16  | 140x70 (HxB)  | JP44787  |
|  | <b>③ Elastic connection</b>     |                  | 1½" (DN 40), PN 4         | 120x50 (HxD)  | JP44777  |
|  |                                 |                  | 2" (DN 50), PN 4          | 150x63 (HxD)  | JP44775  |
|  | <b>④ Hose band clamp</b>        |                  | 1½"                       |               | JP44763  |
|  |                                 |                  | 2"                        |               | JP44764  |
|  | <b>⑤ Elbow</b>                  |                  | 1½"                       |               | JP45953  |
|  |                                 |                  | 2"                        |               | JP44771  |

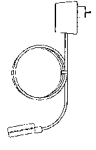




# US 73-US 253

## SUBMERSIBLE DRAINAGE PUMPS

### MECHANICAL ACCESSORY

|   |                            |  | Code No.   |
|---|----------------------------|--|--|
|  | <b>6 Special float</b>     | for lower switching points   | JP44795  |
|  | <b>7 Chain</b>             | certified, 2.5 m, 320 kg, 5 rings (EN 818 mod.)<br>certified, 5.0 m, 320 kg, 8 rings (EN 818 mod.)<br>certified, 7.5 m, 320 kg, 11 rings (EN 818 mod.) | JP45901<br>JP45902<br>JP47365                                  |
|   | <b>8 Webbing</b>           | with shackle   | JP45168  |
|  | <b>9 Guide rail system</b> | GR 40<br>GR 50<br>Guide rail 1"<br>Guide rail 1"<br>Guide rail 1"<br>Guide rail 1"   | JP25592<br>JP25593<br>JP48937<br>JP48938<br>JP48939<br>JP48940 |

### 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  |
|   | Control unit HIGHLOGO 2-00        | 400 V   | JP47997  |
|   | Control unit BD 00                | 400 V, for pumps U6, US 62-105, UV 300  | JP45993  |
|   | Control unit HIGHLOGO 2-25        | 400 V   | JP47998  |
|   | Control unit BD 25                | 400 V, for pumps US 151-155   | JP45737  |
|   | Control unit HIGHLOGO 2-46        | 400 V   | JP47999  |
|   | Control unit BD 46                | 400 V, for pumps US 251-253, UV 620-3, UV 625-3                                 | JP45739  |
|   | <b>Level control</b>              |   |          |
|   | Subm. switch pack B               | 3 subm. ball contact switch with 9.5 m and fixing devices                       | JP16725  |
|   | Subm. switch pack BmG             | 3 subm. ball contact switch with 9.5 m and counterweight                        | JP16726  |
|   | <b>Protective motor plug</b>      |   |          |
|   | Safety protective motor plug      | 230 V, 8 A for pumps without integrated motor protection                        | JP44753  |
|   | CEE-Motorprotection 2.9-4.0 A     | 400 V with level control  | JP09725  |
|   | CEE motor protection 4.5-6.3 A    | 400 V with level control  | JP09726  |
|   | CEE motor protection 2.5-4.0 A    | 400 V, mandatory for pumps with integrated motor protection                     | JP44754  |
|   | CEE motor protection 4.5-6.3 A    | 400 V, mandatory for pumps without integrated motor protection                  | JP44751  |
|  | <b>c Rechargeable battery</b>     | 9 V, for mains independent alarm  | JP44850  |
|  | <b>d Seal leak detector</b>       | DKG   | JP44900  |
|  | <b>e Smart Home</b>               | FTJP radio transmitter  | JP47209  |