

Submersible drainage pumps US 73-253 30/40 mm free passage

Application

The 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 dish-washers and washing machines can be handled by this pump range. For hot water in the industrial and commercial market we recommend the US 73 HE/HES and US 103 HE/HES.

This range of pumps is suitable for stationary and portable 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.

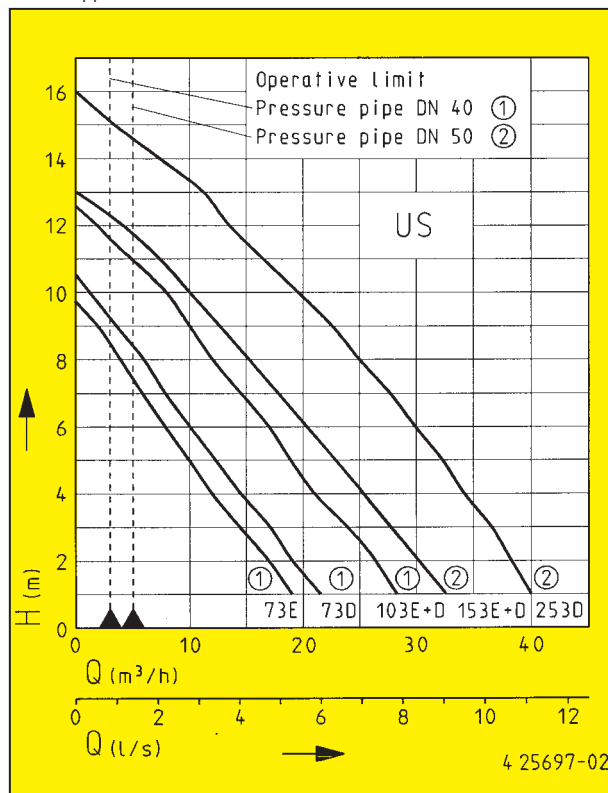
Cable length is 10 m. The 3-phase pumps with built-in level control (US 153 and US 253) have a CEE-plug with phase inverter.

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

Pumps must not be used for pumping sewage from domestic toilets and urinals.



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.



- ▶ Safe to run dry
- ▶ Easy to maintain with guide rail system
- ▶ 30 mm free passage (US 73+103)
- ▶ 40 mm free passage (US 153+253)
- ▶ Controllable oil chamber
- ▶ SiC mechanical seal independent of rotation direction
- ▶ Moisture sealed cable inlet



We reserve the right to change specifications without notice. Pump performance is subject to ISO 9906 tolerances.

Submersible drainage pumps US 73-253

Type	Height x Width x Depth	Discharge branch	Free passage	Cable quality HO7RN-F-	Cable with plug	Cable without plug	Weight	Code No
Pumps without level control								
US 73 E	380 x 195 x 210 mm	1 1/2"	30 mm	3G1,0	10 m		12,5 kg	00676
US 73 D	380 x 195 x 210 mm	1 1/2"	30 mm	4G1,0	10 m		12,5 kg	00677
US 103 E	410 x 195 x 210 mm	1 1/2"	30 mm	3G1,0	10 m		14,0 kg	09280
US 103 D	410 x 195 x 210 mm	1 1/2"	30 mm	4G1,0	10 m		14,5 kg	09258
US 153 E	435 x 195 x 210 mm	1 1/2"	30 mm	3G1,0		10 m	16,5 kg	09311
US 153 D	435 x 195 x 210 mm	1 1/2"	30 mm	4G1,0		10 m	17,0 kg	09302
Pumps with built-in level control								
US 73 ES	380 x 230 x 330 mm	1 1/2"	30 mm	3G1,0	10 m		12,5 kg	00678
US 73 DS	380 x 230 x 330 mm	1 1/2"	30 mm	4G1,0	10 m		13,0 kg	00679
US 103 ES	410 x 230 x 330 mm	1 1/2"	30 mm	3G1,0	10 m		14,0 kg	09281
US 103 DS	410 x 230 x 330 mm	1 1/2"	30 mm	4G1,0	10 m		15,0 kg	09259
US 153 ES	435 x 230 x 210 mm	1 1/2"	30 mm	3G1,0	10 m		17,0 kg	09247
US 153 DS*	435 x 230 x 210 mm	1 1/2"	30 mm	4G1,0	10 m		18,0 kg	09249
Pumps without level control								
US 253 D	400 x 190 x 280 mm	2"	40 mm	6G1,5		10 m	26,5 kg	09303
Pumps with built-in level control								
US 253 DS*	400 x 190 x 280 mm	2"	40 mm	6G1,5	10 m		28,0 kg	09251

* CEE-Motorprotection with phase inverter

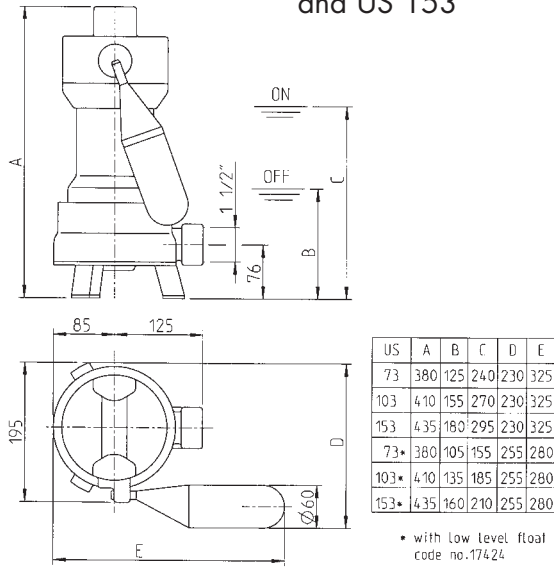
Performance

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 [m ³ /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/ES/D/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 253 D/DS		40	38	36	34	32	30	28	25	23	20	17	14	10	7

Electrical data

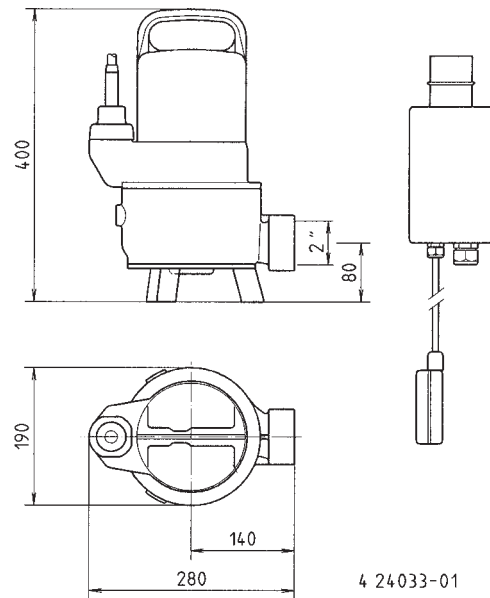
Type	Type of current	Voltage Volt	Motor rating kW		RPM min ⁻¹	F.L.C. Amp.	Motorprotection	Plug
			P ₁	P ₂				
US 73 E/ES	1- phase	1/N/PE~230	0,83	0,50	2510	3,9	in motor	Safety-
US 73 D/DS	3- phase	3/PE~400	0,85	0,60	2800	1,4	in motor	CEE-
US 103 E/ES	1- phase	1/N/PE~230	1,37	0,98	2700	6,0	in motor	Safety-
US 103 D/DS	3- phase	3/PE~400	1,36	1,06	2740	2,4	in motor	CEE-
US 153 E	1- phase	1/N/PE~230	1,60	1,21	2814	7,5	in motor	-
US 153 ES	1- phase	1/N/PE~230	1,60	1,21	2814	7,5	in motor and plug	Safety-
US 153 D	3- phase	3/N/PE~400	1,70	1,41	2815	3,1	in motor	-
US 153 DS	3- phase	3/N/PE~400	1,70	1,41	2815	3,1	in motor and plug	CEE
US 253 D	3- phase	3/N/PE~400	2,60	2,10	2860	4,4	external	-
US 253 DS	3- phase	3/N/PE~400	2,60	2,10	2860	4,4	integrated	CEE

Dimensions (mm) US 73, US 103 and US 153



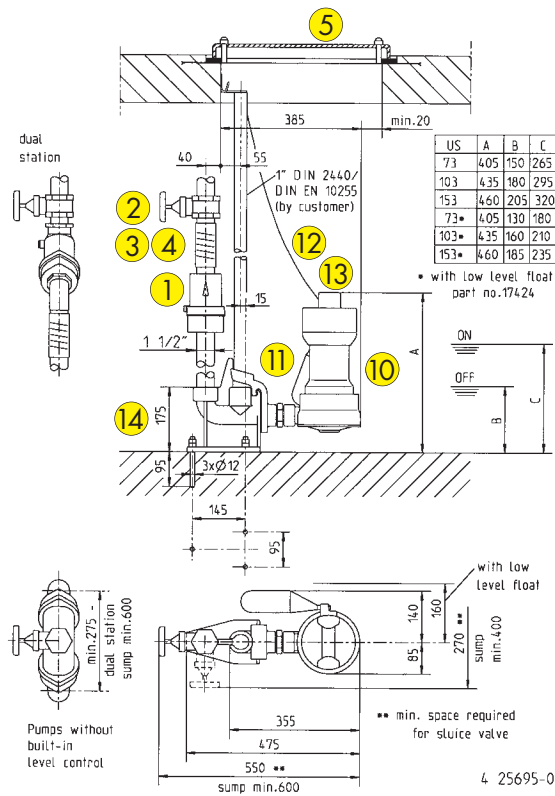
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Dimensions (mm) US 253



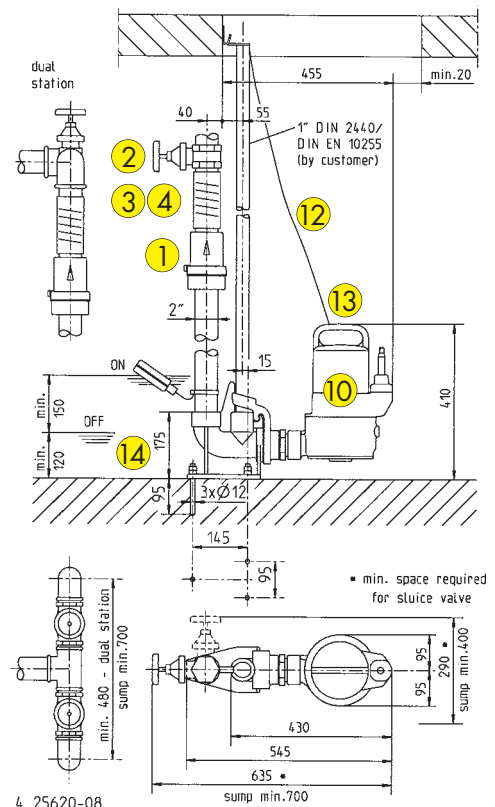
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Dimensions (mm) US 73, US 103 and US 153 with GR 40



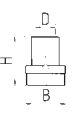






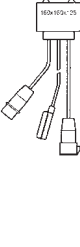
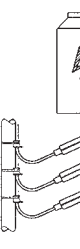




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Dimensions (mm) US 253 with GR 50



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Accessories

		Code No.	73 E	73 ES	73 D	73 DS
	1 Swing-type check valve 1½" (DN 40), PN 4 $\frac{H}{150}$ $\frac{B}{120}$ $\frac{D}{1\frac{1}{2}"}$ 317					
	EN 12050-4 2" (DN 50), PN 4 150 120 2" 326					
	Ball check valve 2" (DN 50), PN 6 185 155 2" 9857					
	EN 12050-4 Elbow ball check valve 1½" (DN 40), PN 6, EN 12050-4 22442					
	Duplex swing-type check valve 1½" (DN 40), PN 4 200 280 1½" 9155 for double pump station, EN 12050-4					
	2 Stop valve 1½" (DN 40), PN 16 $\frac{H}{125}$ $\frac{L}{\max.60}$ $\frac{D}{1\frac{1}{2}"}$ 11837					
	2" (DN 50), PN 16 140 $\frac{L}{\max.67}$ 2" 11838					
	3 Elastic connection 1½" (DN 40), PN 4 $\frac{H}{120}$ $\frac{D}{50}$ 20368					
	2" (DN 50), PN 4 150 63 17194					
	4 Hose band clamp 1½" 3571					
	2" 3572					
	5 Cover plate* c/w frame, seal and pipe conduct LW 420 1256					
	Blind plate* c/w frame and seal LW 420 322					
	6 Elbow 90° 1½" 17894					
	Elbow 90° 2" 14230					
	7 Alarm system with submersible ball contact switch with 3 m cable, separate, mainsdependent, with potential free contact 16723					
	Alarm system ditto. with 9,5 m cable 24434					
	Alarm system for washing-machines AW 3 with submersible ball contact switch with 3 m cable, separate, mainsdependent 25090					
	Alarm system for washing-machines AW 10 ditto, with 9,5 m cable 25091					
	8 Separate level controls for single unit					
	NE 1 (1-phase) with sub. ball contact switch 3,0 m 16710					
	NE 2 (1-phase) with sub. ball contact switch 9,5 m 16711					
	ND 1 (3-phase) with sub. ball contact switch 3,0 m 16712					
	ND 3 (3-phase) with sub. ball contact switch 9,5 m 16713					
	NE 1A (1-phase) with sub. ball contact switch 3,0 m and alarm system 16714					
	NE 2A (1-phase) with sub. ball contact switch 9,5 m and alarm system 16715					
	ND 1A (3-phase) with sub. ball contact switch 3,0 m and alarm system 16716					
	ND 3A (3-phase) with sub. ball contact switch 9,5 m and alarm system 16717					
	Counterweight (1 piece) 17541					
	Duplex control unit					
	BD 00 E (1-phase) 482					
	BD 00 (3-phase) 299					
	BD 25 (3-phase) 302					
	BD 46 (3-phase) 14358					
Subm. switch pack B with 3 level switches, 9,5 m and fixing devices 16725						
Subm. switch pack BmG with 3 level switches, with 9,5 m and counterweight 16726						
Safety motor protection plug – 8A, 230V (without level control) 40770						
Safety motor protection plug – 2,5 – 4A, 400V (without level control) 40773						
CEE motor protection plug – 3,7 – 5,5 A, 400V (without level control) 12266						
	9 Rechargeable battery for off the line operation of the alarm system 7562					
	10 Seal leak control DKG 252					
	11 Special float for low switching points 17424					
	Switching points US 73 ON/OFF US 103 ON/OFF US 153 ON/OFF					
	without GR 155/105 mm 185/135 mm 210/160 mm					
with GR 180/130 mm 210/160 mm 235/185 mm						
	12 Chain with 2 rings DIN 766, 2,5 m, 320 kg 19189					
	Chain stainless steel with 5 rings, 1 shackle NG 10, DIN 766, 2,5 m, 200 kg 23986					
	13 Shackle A 0,6 13402					
	14 Guide rail system GR 40 25592					
	Guide rail system GR 50 25593					

* only for single units ■ only in connection with an additional motor protection plug

Technical data

Pump

Vertical, single stage, submersible, open centrifugal impeller, volute casing with free inlet.

US 73, US 103 and US 153: free passage 30 mm, horizontal discharge branch with 1½" female thread.

US 253: free passage 40 mm, horizontal discharge branch with 2" female thread.

Bearings

Common shaft for pump and motor, with ball bearings, deep groove ball bearing with grease chamber (US 253 with angular ball bearings).

Seal

Silicon carbide mechanical seal, oil chamber and duplex rotary seal towards the motor section, safe to run dry, a seal leak control can be connected.

Motor

Submersible, motor type of enclosure IP 68, insulation class B or F (US 153 and US 253), winding thermostat protects the motor from overload, starting via plug, automatically via mounted circuit or submersible ball contact switches.

US 153:

The pump must be protected by a suitable protective motor switch, provided by the customer and adjusted to the nominal current of the pump motor.

Material

Volute casing made of GG grey cast iron, power supply through rubber insulated flexible cable.

US 73, 103 and 153: terminal board lid, vortex impeller, wear plate and foot strainer made of GRP, motor casing and shaft in stainless steel.

US 253: motor casing, volute casing and cable inlet made of GG grey cast iron, foot strainer and vortex impeller made of GRP, shaft from C 45 steel encapsulated.

Installation

Pump can be installed free standing or in connection with guide rail system GR 40 or GR 50.

Supply

Pump acc. to 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 built-in level control with CEE-Plug and phase inverter (3-phase) or safety-plug (1-phase).