

JUNG PUMPEN US 73-253

SUBMERSIBLE DRAINAGE PUMPS

30/40 MM FREE PASSAGE

APPLICATION

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 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.

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.



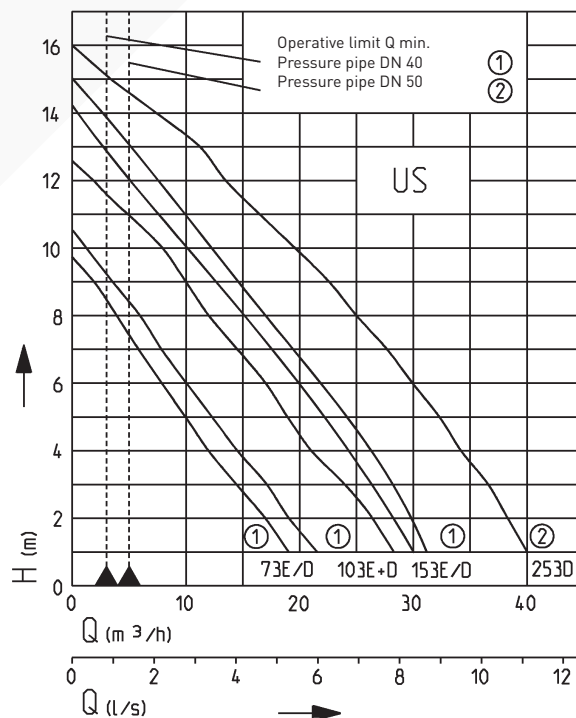
US 253 D



US 73 ES

- Safe to run dry
- Easy to maintain due to guide rail systems
- 30 mm free passage (US 73, 103+153)
- 40 mm free passage (US 253)
- Controllable oil chamber
- SiC mechanical seal independent of rotation direction
- Replaceable moisture sealed cable inlet

PERFORMANCE



25697-03

We reserve the right to change specifications without notice

Pump performance is 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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Type	Maximum Height x Width x Depth	Dis-charge branch	Free passage	Cable quality H07RN-F-	Cable length with plug	Cable length without plug	Weight approx.	Code No.
Pump without level control								
US 73 E	380 x 195 x 210 mm	1½"	30 mm	3G1.0	10 m		12.5 kg	JP00676
US 73 D	380 x 195 x 210 mm	1½"	30 mm	4G1.0	10 m		12.5 kg	JP00677
US 103 E	410 x 195 x 210 mm	1½"	30 mm	3G1.0	10 m		14.0 kg	JP09280
US 103 D	410 x 195 x 210 mm	1½"	30 mm	4G1.0	10 m		14.5 kg	JP09258
US 153 E	435 x 195 x 210 mm	1½"	30 mm	3G1.0		10 m	14.5 kg	JP09311
US 153 D	435 x 195 x 210 mm	1½"	30 mm	4G1.0		10 m	15.0 kg	JP09302
Pumps with level control								
US 73 ES	380 x 230 x 325 mm	1½"	30 mm	3G1.0	10 m		12.5 kg	JP00678
US 73 DS	380 x 230 x 325 mm	1½"	30 mm	4G1.0	10 m		13.0 kg	JP00679
US 103 ES	410 x 230 x 325 mm	1½"	30 mm	3G1.0	10 m		14.0 kg	JP09281
US 103 DS	410 x 230 x 325 mm	1½"	30 mm	4G1.0	10 m		15.0 kg	JP09259
US 153 ES	435 x 230 x 325 mm	1½"	30 mm	3G1.0	10 m		16.0 kg	JP09247
US 153 DS*	435 x 230 x 325 mm	1½"	30 mm	4G1.0	10 m		17.0 kg	JP09249
Pumps without level control								
US 253 D	400 x 190 x 280 mm	2"	40 mm	6G1.5		10 m	26.5 kg	JP09303
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	JP09251

* 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		19	17	15	12	10	8	6	4	2		Flow rate Q [m³/h]			
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 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

ELECTRICAL DATA

Type	Type of current	Voltage Volt	Motor rating kW		RPM min ⁻¹	Current Ampere	Motor protection	Plug
			P ₁	P ₂				
US 73 E/ES	1-phase	1/N/PE~230	0.83	0.50	2510	3.9	integrated	Safety-
US 73 D/DS	3-phase	3/PE~400	0.85	0.60	2800	1.4	integrated	CEE-
US 103 E/ES	1-phase	1/N/PE~230	1.37	0.98	2700	6.0	integrated	Safety-
US 103 D/DS	3-phase	3/PE~400	1.36	1.06	2740	2.4	integrated	CEE-
US 153 E	1-phase	1/N/PE~230	1.60	1.21	2814	7.5	on site*	-
US 153 ES	1-phase	1/N/PE~230	1.60	1.21	2814	7.5	integrated	Safety-**
US 153 D	3-phase	3/PE~400	1.70	1.41	2815	3.1	on site*	-
US 153 DS	3-phase	3/PE~400	1.70	1.41	2815	3.1	integrated	CEE-**
US 253 D	3-phase	3/N/PE~400	2.60	2.10	2860	4.4	on site*	-
US 253 DS	3-phase	3/N/PE~400	2.60	2.10	2860	4.4	integrated	CEE-**

* additional requirements. see technical data or accessories

** Protective motor plug

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

US	A	B	C	D	E
73	380	125	240	230	325
103	410	155	270	230	325
153	435	180	295	230	325
73*	380	105	155	255	280
103*	410	135	185	255	280
153*	435	160	210	255	280

* with low level float code no. JP44759

25632-04

Dimensions US 253 (mm)

US253 DS
CEE motor
protection plug
with built-in
level control
(ball contact switch)

24033-03

Dimensions with GR 40 (mm)

US	A	B	C
73	405	150	265
103	435	180	295
153	460	205	320
73*	405	130	180
103*	435	160	210
153*	460	185	235

* with low level float part no. 44759

with low level float
sump min. 400

with low level float
sump min. 600

min. space required for sluice valve

25695-11

Dimensions with GR 50 (mm)

min. space required for sluice valve

min. 480 - dual station
sump min. 700

min. 480 - dual station
sump min. 400

25620-10

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ACCESSORIES

		H	W	D	Code No.	73 E	73 ES	73 D	73 DS	
	1 Swing-type check valve DIN EN 12050-4 Ball check valve DIN EN 12050-4 Elbow ball check valve DIN EN 12050-4 Duplex swing-type check valve for duplex pump stations, DIN EN 12050-4	1½"(DN 40), PN 4 2"(DN 50), PN 4 2"(DN 50), PN 6 1½"(DN 40), PN 6, 1½"(DN 40), PN 4	150 150 185 170 200	120 120 155 125 280	1½" 2" 2" 1½" 1½"	JP00317 JP00326 JP44782 JP44783 JP09155	•	•	•	•
	2 Stop valve	1½"(DN 40), PN 16 2"(DN 50), PN 16	H 125 max. 60	W max. 60	D 1½" 2"	JP44786 JP44787	•	•	•	•
	3 Elastic connection	1½"(DN 40), PN 4 2"(DN 50), PN 4	H 120	D 50 63	JP44777 JP44775	•	•	•	•	
	4 Hose band clamp	1½" 2"			JP44763 JP44764	•	•	•	•	
	5 Elbow 1½" Elbow 2"				JP45953 JP44771	•	•	•	•	
	6 Alarm unit AG3 with submersible ball contact switch, separate, mains-dependent, with potential-free contact and 3 m cable Alarm unit AG10 ditto, with 9.5 m cable Alarm unit washing machine stop AW3 with submersible ball contact switch with 3 m cable, separate, mains-dependent				JP44891 JP44892 JP44895		•		•	
	7 Separate level controls for single units (see level controls for description)									
	NE 1 (Single-phase current) with sub. ball contact switch 3.0 m NE 2 (Single-phase current) with sub. ball contact switch 9.5 m ND 1 (3-phase current) with sub. ball contact switch 3.0 m ND 3 (3-phase current) with sub. ball contact switch 9.5 m NE 1A (Single-phase current) with sub. ball contact switch 3.0 m and alarm system NE 2A (Single-phase current) with sub. ball contact switch 9.5 m and alarm system ND 1A (3-phase current) with sub. ball contact switch 3.0 m and alarm system ND 3A (3-phase current) with sub. ball contact switch 9.5 m and alarm system Counterweight (1 piece)	ND 1				JP16710 JP16711 JP16712 JP16713 JP16714 JP16715 JP16716 JP16717 JP44803	•			
	Duplex control units [see section on level controls for description]									
	BD 00 E (Single-phase current) BD 00 (3-phase current) BD 25 (3-phase current) BD 46 (3-phase current)	BD				JP45735 JP45993 JP45737 JP45739	•			
	Subm. switch pack B with 3 subm. ball contact switches with 9.5 m cable a. fixing devices BmG with 3 subm. ball contact switches with 9.5 m cable and counterweight	B				JP16725 JP16726	•			•
	Protective motor plug - 8 A, 230 V (without level control) Protective motor plug - 2.5-4 A, 400 V (without level control) CEE-Protective motor plug - 400 V (without level control) 3.7-5.5 A					JP44753 JP44754 JP44751				
	8 Rechargeable battery for off the line operation of the alarm system					JP44850	•	•	•	•
	9 Seal leak detector DKG					JP44900	•	•	•	•
	10 Special float assembly for low switching points * 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					JP44795		•		•
11 Chain certified, stainless steel, 2.5 m, 5 rings, 160 kg, (EN818 mod.) Chain certified, stainless steel, 5.0 m, 8 rings, 160 kg, (EN818 mod.)					JP45901 JP45902	•	•	•	•	
12 Webbing with shackle A 0.6 13 Guide rail system GR 40 Guide rail system GR 50					JP45168 JP25592 JP25593	•	•	•	•	

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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 253), winding thermostat protects the motor from overload, starting via plug, automatically via mounted circuit or submersible ball contact switches.

US 153 E/D: To protect the motor, a correct adjusted motor protecting switch has to be provided in the control unit at site by the customer.

US 253 D: To protect the motor, a correct adjusted motor protecting switch has to be provided in the control unit at site by the customer. The winding thermostat must be connected in series with the input side of the motor contactor.

Material

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

US 73, US 103 and US 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.

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).

