

US 75-US 155

SUBMERSIBLE DRAINAGE PUMPS

- 50 mm free passage
- Run dry protection
- Controllable oil chamber
- SiC mechanical seal
- independent of sense of rotation
- Replaceable moisture sealed cable inlet



DESCRIPTION

The centrifugal submersible drainage pumps US 75-155 are suitable for dealing with notably contaminated water and capable of handling solids up to 50 mm particle size. With their free passage of 50 mm, these pumps are able to pump solids and fibers quickly, reliably and above all without blockage!

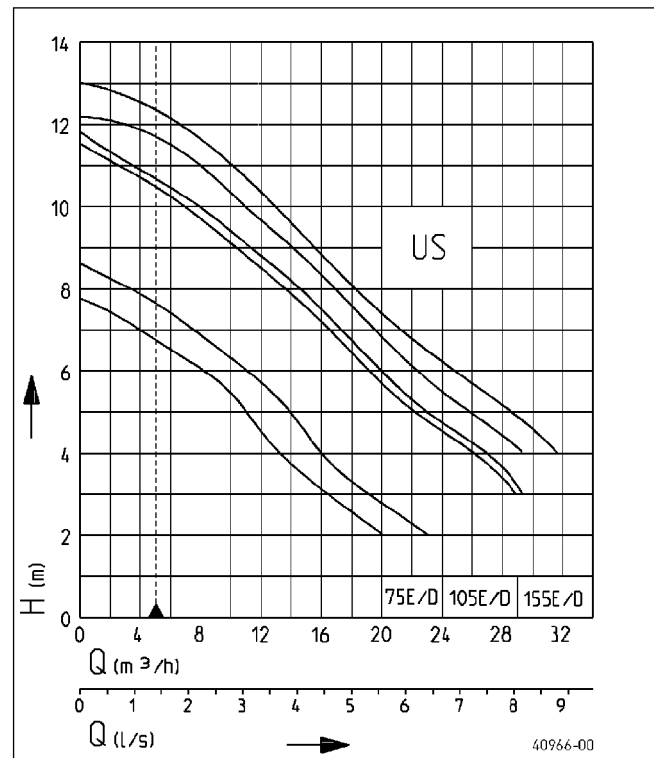
For easy removal of the pumps from deep sumps we recommend the use of our guide rail systems which provide ease of maintenance and inspection. A controllable oil chamber and wear-resistant special mechanical seal ensure a long service life. The integrated winding thermostats protect the motor from overload.

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

Maximum cable length is 10 m. The US 155 DS 3-phase pump with level control has 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]	2	3	4	5	6	7	8	9	10	11	12
US 75 E/ES	Flow rate Q [m³/h]	20	16	13	10	7	4					
US 75 D/DS		23	19	16	12	10	7	3				
US 105 E/ES			28	25	22	19	16	13	10	7	3	
US 105 D/DS			29	26	23	20	17	14	11	8	4	
US 155 E/ES				29	26	22	20	16	14	11	8	2
US 155 D/DS				31	28	25	21	19	16	13	10	6

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.



US 75-US 155

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SCOPE OF SUPPLY

Pump according to EN 12050 ready for connection with 10 m cable. Foot strainer made of GRP enclosed.

US 155: Pumps without level control with free lead end. Pump with level control with CEE-Plug and phase inverter (3-phase) or safety-plug (1-phase).

MECHANICAL DATA

Pump	Vertical single-stage	Seal on medium side	SiC mechanical seal
Free passage	50 mm	Run dry protection	Yes
Bearing	Ball bearings, grease-lubricated	Impeller	Vortex impeller, GFK
Seal on motor side	Duplex rotary shaft seals	Submersible	Yes
Oil chamber	Yes	Pressure outlet	IG 2"

ELECTRICAL DATA

Power line	10m H07RN-F	Insulation class	B
Type of enclosure	IP 68	Winding thermostat	Yes

US 75-US 155

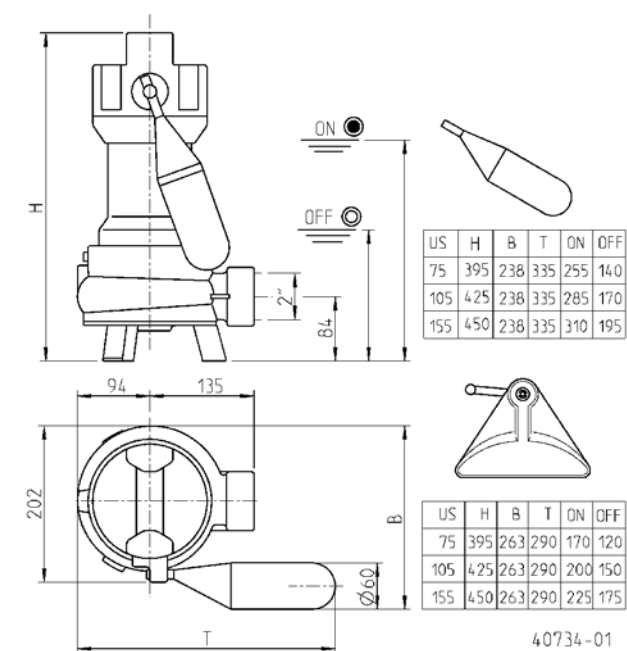
Type	Code No.	Voltage	Motor rating P1	P2	Current	Wires	Motor protec- tion	Plug	Weight
Without level control									
US 75 E	JP09406	1/N/PE~230 V	0.83 kW	0.50 kW	3.9 A	3G1,0	Integrated	Safety	13.0 kg
US 75 D	JP09404	3/PE~400 V	0.85 kW	0.60 kW	1.4 A	4G1,0	Integrated	CEE	13.1 kg
US 105 E	JP09410	1/N/PE~230 V	1.37 kW	0.98 kW	6.0 A	3G1,0	Integrated	Safety	14.5 kg
US 105 D	JP09408	3/PE~400 V	1.36 kW	1.06 kW	2.4 A	4G1,0	Integrated	CEE	15.1 kg
US 155 E	JP09388	1/N/PE~230 V	1.60 kW	1.21 kW	7.5 A	3G1,0	on request ¹	Without	16.0 kg
US 155 D	JP09390	3/PE~400 V	1.70 kW	1.41 kW	3.1 A	4G1,0	on request ¹	Without	16.5 kg
With built-in level control									
US 75 ES	JP09407	1/N/PE~230 V	0.83 kW	0.50 kW	3.9 A	3G1,0	Integrated	Safety	13.0 kg
US 75 DS	JP09405	3/PE~400 V	0.85 kW	0.60 kW	1.4 A	4G1,0	Integrated	CEE	13.2 kg
US 105 ES	JP09411	1/N/PE~230 V	1.37 kW	0.98 kW	6.0 A	3G1,0	Integrated	Safety	14.6 kg
US 105 DS	JP09409	3/PE~400 V	1.36 kW	1.06 kW	2.4 A	4G1,0	Integrated	CEE	15.2 kg
US 155 ES	JP09389	1/N/PE~230 V	1.60 kW	1.21 kW	7.5 A	3G1,0	Integrated	Safety	16.3 kg
US 155 DS	JP09391	3/PE~400 V	1.70 kW	1.41 kW	3.1 A	4G1,0	Integrated	CEE	17.2 kg

¹Protective motor plug necessary see accessory

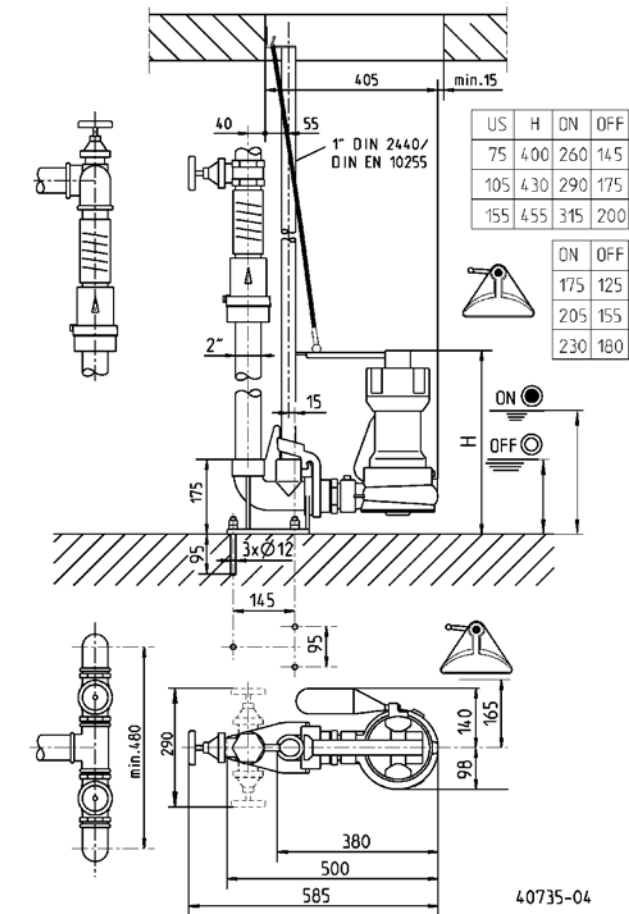
US 75-US 155

SUBMERSIBLE DRAINAGE PUMPS

Dimensions and switching points US 75 up to US 155 (mm)



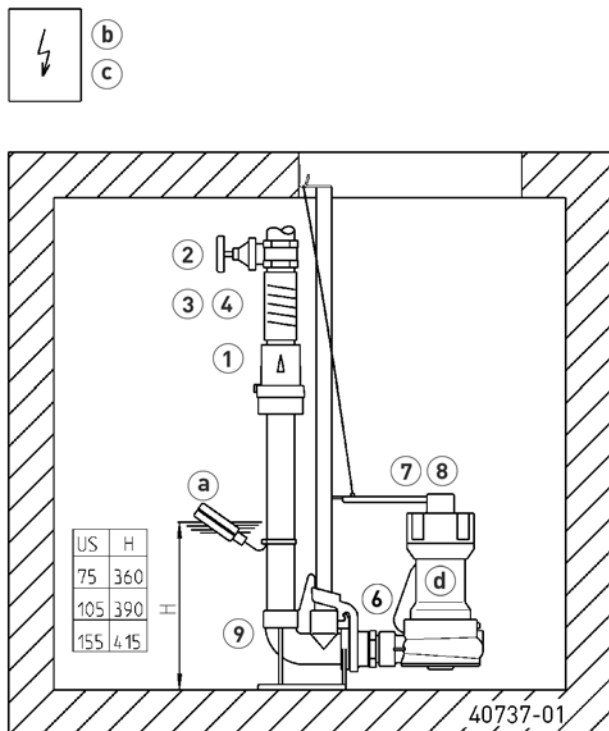
Dimensions and switching points with GR 50 S (mm)



US 75-US 155

SUBMERSIBLE DRAINAGE PUMPS

Example of single installation with GR

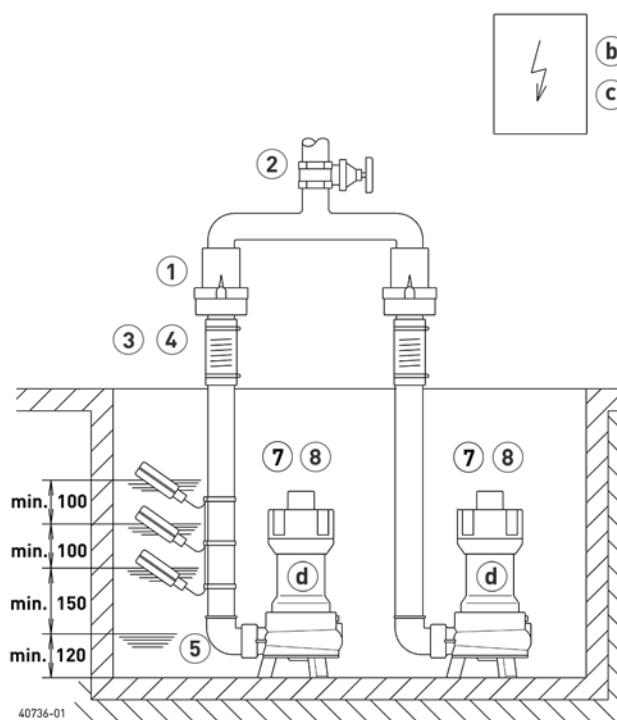


Single unit 2" with GR 50 S: sump area min. 40x65 cm
Single unit 2" without GR: sump area min. 40x50 cm

Duplex unit 2" with GR 50 S: sump area min. 65x70 cm
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

Example of duplex installation

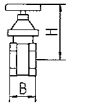
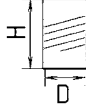


loop over the local backup level acc. to EN 12056. Besides, it must be secured with an EN 12050-4-proofed swing-type check valve. Additionally we recommend an alarm system.

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

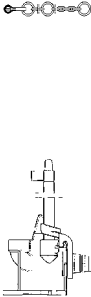
MECHANICAL ACCESSORY

	Code No.			
	① Swing-type check valve			
	R50 EN 12050-4	2" (DN 50), PN 4	150x120 (HxB)	JP00326
	Ball-type check valve			
	K50 EN 12050-4	2" (DN 50), PN 6	185x155 (HxB)	JP44782
	② Stop valve	brass, 2" (DN 50), PN 16	140x70 (HxB)	JP44787
	③ Elastic connection	2" (DN 50), PN 4	150x63 (HxD)	JP44775
	④ Hose band clamp	2"		JP44764
	⑤ Elbow	2"		JP44771
	⑥ Special float	for lower switching points		JP44795

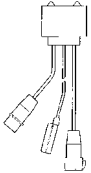
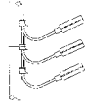
US 75-US 155

SUBMERSIBLE DRAINAGE PUMPS

MECHANICAL ACCESSORY

			Code No.
	7 Chain	certified, 2.5 m, 320 kg, 5 rings (EN 818 mod.)	JP45901
		certified, 5.0 m, 320 kg, 8 rings (EN 818 mod.)	JP45902
		certified, 7.5 m, 320 kg, 11 rings (EN 818 mod.)	JP47365
	8 Webbing	with shackle	JP45168
	9 Guide rail system	GR 50	JP25593
	Securing lever	US 75-155	JP41024
	Guide rail 1"	1500 mm	JP48937
	Guide rail 1"	2000 mm	JP48938
	Guide rail 1"	2500 mm	JP48939
	Guide rail 1"	3000 mm	JP48940
	10 Strainer base	10 mm free passage	JP45957
	Bases	stainless steel, 50 mm free passage	JP40632

ELECTRICAL ACCESSORY

			Code No.
	a Alarm unit		
	PTS.SA1	Level alarm system with battery backup 320x240x150mm (WxDxH)	PTS.SA1
	PTS.HLA	High Level alarm unit. 182x180x111mm (HxWxD)	PTS.HLA
	Power Isolation Alarm	Isolate appliance - in event of alarm no more water will be fed into the alarm system	P734
	b Control for single units		
	Control unit NE 1	230 V, subm. ball contact switch 3.0 m	JP16710
	Control unit NE 1A	230 V, subm. ball contact switch 3.0 m, alarm	JP16714
	Control unit NE 2	230 V, subm. ball contact switch 9.5 m	JP16711
	Control unit NE 2A	230 V, subm. ball contact switch 9.5 m, alarm	JP16715
	Control unit ND 1	400 V, subm. ball contact switch 3.0 m	JP16712
	Control unit ND 1A	400 V, subm. ball contact switch 3.0 m, alarm	JP16716
	Control unit ND 3	400 V, subm. ball contact switch 9.5 m	JP16713
	Control unit ND 3A	400 V, subm. ball contact switch 9.5 m, alarm	JP16717
	Control for duplex units		
	Control unit BD 00 E	230 V, for pumps U3-U6, US 62-105, UV 300, 08/2 ME	JP45735
	Control unit HIGHLOGO 2-00 E	230 V	JP47996
	Control unit BD 00	400 V, for pumps U6, US 62-105, UV 300	JP45993
	Control unit HIGHLOGO 2-00	400 V	JP47997
	Control unit BD 25	400 V, for pumps US 151-155	JP45737
	Control unit HIGHLOGO 2-25	400 V	JP47998
	Level control		
	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 to stabilize the subm. ball contact switch	JP16726
	Protective motor plug		
	Protective motor plug, 8 A	230 V, for pumps without integrated motor protection	JP44753
	CEE motor protection 2,5-4,0 A	400 V, mandatory for pumps without integrated motor protection	JP44754
	c Rechargeable battery	for mains independent alarm	JP44850

US 75-US 155

SUBMERSIBLE DRAINAGE PUMPS

ELECTRICAL ACCESSORY

			Code No.
	d Seal leak detector	DKG	JP44900
	e Smart Home	FTJP radio transmitter	JP47209