

# US 75-US 155

## SUBMERSIBLE DRAINAGE PUMPS

- 50 mm free passage
- 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 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!

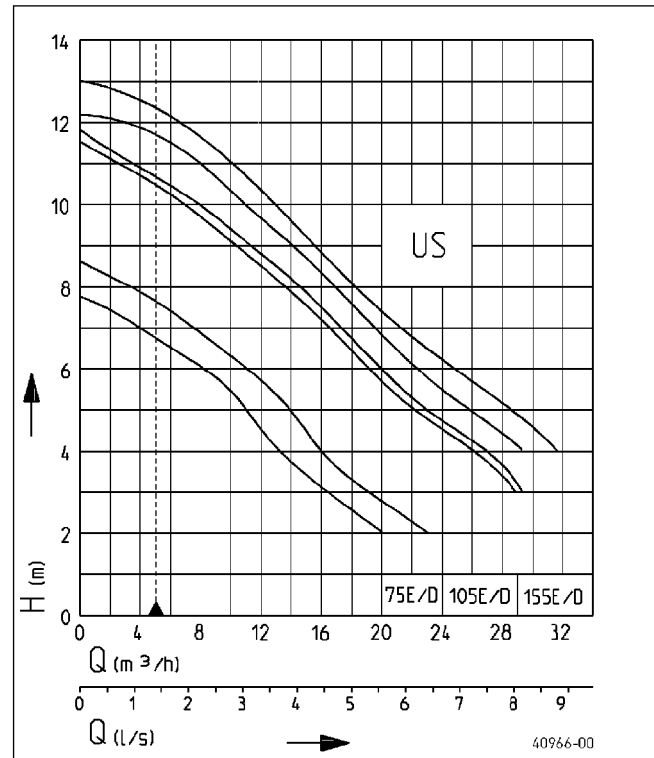
For easy removal of the pumps from deep sumps we recommend the use of our guide rail systems which provide ease of maintenance and inspection. A controllable oil chamber and wear-resistant special mechanical seal ensure a long service life. The integrated winding thermostats protect the motor from overload.

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	

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/GS-Certification for US 75 E/ES, US 105 E/ES



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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

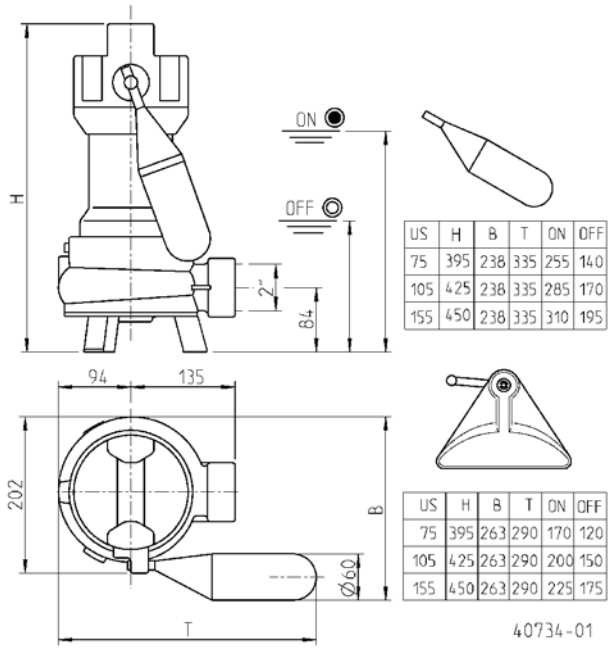
Type	Code No.	Voltage	Motor rating		Current	Wires	Motor protection	Plug	Weight
			P1	P2					
<b>Without level control</b>									
US 75 E	<b>JP09406</b>	1/N/PE~230 V	0.83 kW	0.50 kW	3.9 A	3G1,0	Integrated	Safety	13.0 kg
US 75 D	<b>JP09404</b>	3/PE~400 V	0.85 kW	0.60 kW	1.4 A	4G1,0	Integrated	CEE	13.1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

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

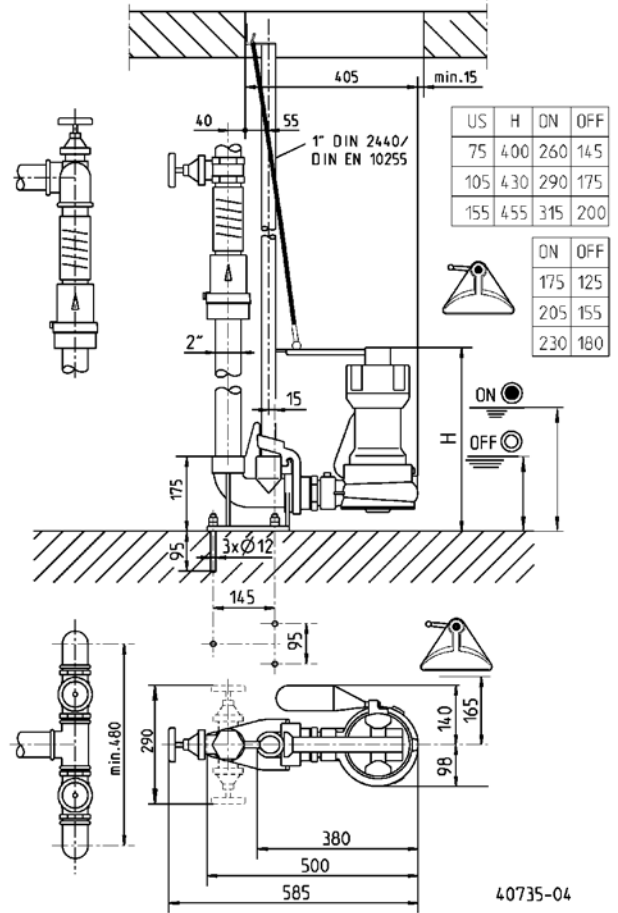
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## SUBMERSIBLE DRAINAGE PUMPS

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



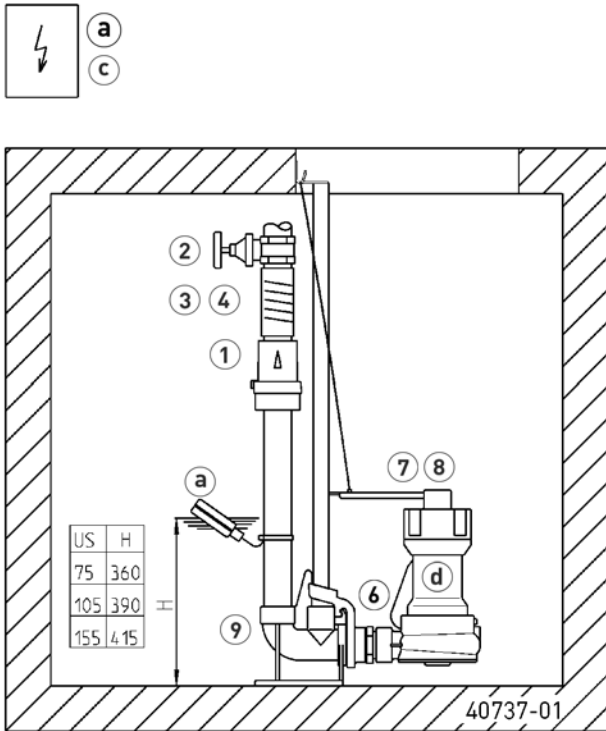
### Dimensions and switching points with GR 50 S (mm)



# US 75-US 155

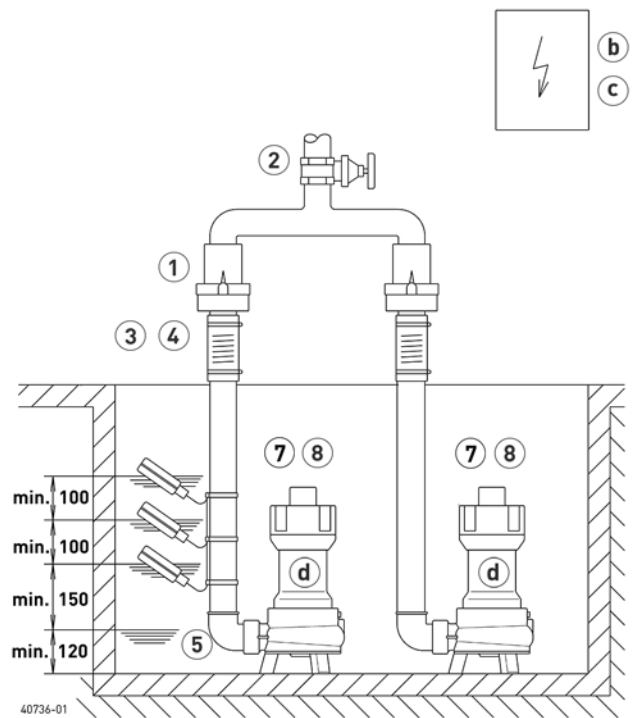
## SUBMERSIBLE DRAINAGE PUMPS

### 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

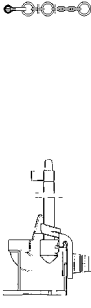
### MECHANICAL ACCESSORY

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

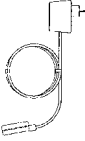

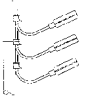




# US 75-US 155

## SUBMERSIBLE DRAINAGE PUMPS

### MECHANICAL ACCESSORY

			Code No.
	<b>7 Chain</b>	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
	<b>8 Webbing</b>	with shackle	JP45168
	<b>9 Guide rail system</b>	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
<b>10 Strainer base</b>	10 mm free passage	JP45957	
<b>Bases</b>	stainless steel, 50 mm free passage	JP40632	

### 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
	<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
	Weight	to stabilize the subm. ball contact switch	JP44803
	<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 2.5-4.0 A	400 V, mandatory for pumps with integrated motor protection	JP44754
	<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