

## Application

The submersible drainage pumps US 62-251 can be used wherever sewage water with solids up to 10 mm particle size occurs, e.g. in collection sumps for ground water, or in permanent draining systems for clean water, or handling solids in suspension. They are also ideal for pumping the sewage water from collection sumps into which dishwashers or washing machines are discharging. For high temperature hot water in the commercial and industrial field we would recommend the use of our US 73 and 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.

Individually the pumps US 62 and US 102 with built-in level control are available with 3 m and 10 m cable. The 3-phase pumps (US 151 and US 251) have a CEE-plug with phase inverter.

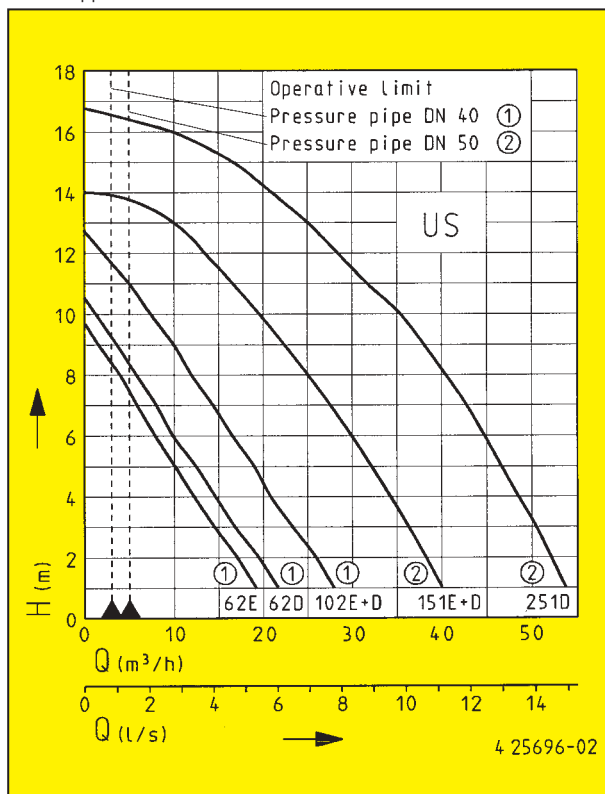
The sump pumps are tested by the German Institute for Construction Engineering and correspond to the valid construction and test principles.

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



US

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
- ▶ 10 mm free passage
- ▶ 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 62-251

Type	Height x Width	Discharge branch	Free passage	Cable quality HO7RN-F-	Cable with plug	Cable with phase inverter	Weight	Code No
<b>Pumps without level control</b>								
US 62 E	380 x 210 mm	1½"	10 mm	3G1,0	10 m		12,5 kg	<b>9812</b>
US 62 D	380 x 210 mm	1½"	10 mm	4G1,0	10 m		13,0 kg	<b>9813</b>
US 102 E	410 x 210 mm	1½"	10 mm	3G1,0	10 m		14,5 kg	<b>9278</b>
US 102 D	410 x 210 mm	1½"	10 mm	4G1,0	10 m		15,0 kg	<b>214</b>
<b>Pumps with built-in level control</b>								
US 62 ES	380 x 330 mm	1½"	10 mm	3G1,0	3 m		12,0 kg	<b>9284</b>
US 62 ES	380 x 330 mm	1½"	10 mm	3G1,0	10 m		12,5 kg	<b>9814</b>
US 62 DS	380 x 330 mm	1½"	10 mm	4G1,0	3 m		12,0 kg	<b>9285</b>
US 62 DS	380 x 330 mm	1½"	10 mm	4G1,0	10 m		13,0 kg	<b>9815</b>
US 102 ES	410 x 330 mm	1½"	10 mm	3G1,0	3 m		13,5 kg	<b>9286</b>
US 102 ES	410 x 330 mm	1½"	10 mm	3G1,0	10 m		14,5 kg	<b>9279</b>
US 102 DS	410 x 330 mm	1½"	10 mm	4G1,0	3 m		14,0 kg	<b>9287</b>
US 102 DS	410 x 330 mm	1½"	10 mm	4G1,0	10 m		15,0 kg	<b>218</b>
<b>Pumps without level control</b>								
US 151 E	360 x 310 mm	2"	10 mm	4G1,0	10 m		27,5 kg	<b>9240</b>
US 151 E*	360 x 310 mm	2"	10 mm	4G1,0	10 m*		27,0 kg	<b>9310</b>
US 151 D	360 x 310 mm	2"	10 mm	5G1,5		10 m	28,0 kg	<b>9242</b>
US 151 D*	360 x 310 mm	2"	10 mm	6G1,5	10 m*		27,5 kg	<b>9300</b>
US 251 D	360 x 310 mm	2"	10 mm	5G1,5		10 m	28,0 kg	<b>9244</b>
US 251 D*	360 x 310 mm	2"	10 mm	6G1,5	10 m*		27,5 kg	<b>9301</b>
<b>Pumps with built-in level control</b>								
US 151 ES	360 x 310 mm	2"	10 mm	4G1,0	10 m		29,0 kg	<b>9241</b>
US 151 DS	360 x 310 mm	2"	10 mm	5G1,5		10 m	29,5 kg	<b>9243</b>
US 251 DS	360 x 310 mm	2"	10 mm	5G1,5		10 m	29,5 kg	<b>9245</b>

\* Cable without plug for duplex pump

## Performance

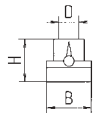






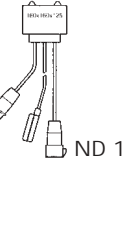
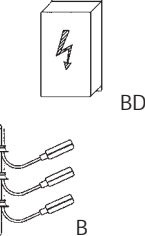



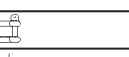


Type	Delivery head H [m]	1	2	3	4	5	6	7	8	9	10	11	12	14	16
US 62 E/ES		19	17	15	12	10	8	6	4	2					
US 62 D/DS		22	20	17	15	12	10	8	6	4					
US 102 E/ES/D/DS		28	26	23	21	19	17	15	12	10	8	5	2		
US 151 E/ES/D/DS		40	39	37	35	33	31	29	26	23	20	17	14		
US 251 D/DS		54	52	51	49	47	45	43	40	38	35	32	29	21	10

## Electrical data

Type	Type of current	Voltage Volt	Motor rating kW		RPM min <sup>-1</sup>	F.L.C. Amp.	Motorprotection	Plug
			P <sub>1</sub>	P <sub>2</sub>				
US 62 E/ES	1- phase	1N~230	0,83	0,50	2510	3,9	in motor	Safety-
US 62 D/DS	3- phase	3~400	0,85	0,60	2800	1,4	in motor	CEE-
US 102 E/ES	1- phase	1N~230	1,37	0,98	2700	6,0	in motor	Safety-
US 102 D/DS	3- phase	3~400	1,36	1,06	2740	2,4	in motor	CEE-
US 151 E/ES	1- phase	1N~230	1,68	1,19	2812	7,6	in plug	Safety-
US 151 D/DS	3- phase	3N~400	1,60	1,30	2925	3,0	in plug	CEE-
US 251 D/DS	3- phase	3N~400	2,60	2,10	2860	4,4	in plug	CEE-



## Accessories

		Code No.	62 E	62 ES	62 D	62 DS			
<b>Pump without plug (for connection with duplex control unit)</b>									
	<b>1</b> <b>Swing-type check valve</b> 1½" (DN 40), PN 4 EN 12050-4	H	B	D	317	●	●	●	●
	<b>Ball check valve</b> 2" (DN 50), PN 4	150	120	1½"	326	●	●	●	●
	<b>Elbow ball check valve</b> 2" (DN 50), PN 6	185	155	2"	9857	●	●	●	●
	<b>Elbow ball check valve</b> 1½" (DN 40), PN 6, EN 12050-4				22442	●	●	●	●
	<b>Duplex swing-type check valve</b> 1½" (DN 40), PN 4 for double pump station, EN 12050-4	200	280	1½"	9155	●	●	●	●
	<b>2</b> <b>Stop valve</b> 1½" (DN 40), PN 16	H	L	D	11837	●	●	●	●
	2" (DN 50), PN 16	125 max.60	140 max.67	1½"	11838	●	●	●	●
	<b>3</b> <b>Elastic connection</b> 1½" (DN 40), PN 4	H	D	20368	●	●	●	●	
	2" (DN 50), PN 4	120	50	17194	●	●	●	●	
	<b>4</b> <b>Hose band clamp</b> 1½"	H	D	3571	●	●	●	●	
	2"	150	63	3572	●	●	●	●	
	<b>5</b> <b>Cover plate*</b> c/w frame, seal and pipe conduct LW 420	H	D	1256	●	●	●	●	
	<b>Blind plate*</b> c/w frame and seal LW 420			322	●	●	●	●	
	<b>6</b> <b>Elbow 90°</b> 1½"	H	D	17894	●	●	●	●	
	<b>Elbow 90°</b> 2"			14230	●	●	●	●	
	<b>7</b> <b>Alarm system</b> with submersible ball contact switch with 3 m cable, separate, mainsdependent, with potential free contact			16723	●	●	●	●	
	<b>Alarm system</b> ditto. with 9,5 m cable			24434	●	●	●	●	
	<b>Alarm system for washing-machines AW 3</b> with submersible ball contact switch with 3 m cable, separate, mainsdependent			25090	●	●	●	●	
	<b>Alarm system for washing-machines AW 10</b> ditto, with 9,5 m cable			25091	●	●	●	●	
	<b>8</b> <b>Separate level controls for single unit</b>								
	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	●	●			
	<b>Duplex control unit</b>								
	BD 00 E (1-phase)			482	●				
	BD 00 EC (1-phase)			25709					
	BD 00 (3-phase)			299		●			
	BD 25 (3-phase)			302					
	BD 46 (3-phase)			14358					
Subm. switch pack B with 3 subm. ball contact switches with 9,5 m cable and fixing devices			16725	●		●			
Subm. switch pack BmG with 3 subm. ball contact switches with 9,5 m cable and counterweight			16726	●		●			
	<b>9</b> <b>Rechargeable battery</b> for off the line operation of the alarm system			7562	●	●	●	●	
	<b>10</b> <b>Seal leak control</b> DKG			252	●	●	●	●	
	<b>11</b> <b>Special float</b> for low switching points			17424		●		●	
	Switching points US 62 ON/OFF		US 102 ON/OFF						
	without GR 155/105 mm		185/135 mm						
with GR 180/130 mm		210/160 mm							
	<b>12</b> <b>Chain</b> with 2 rings DIN 766, 2,5 m, 320 kg			19189	●	●	●	●	
	<b>Chain</b> stainless steel with 5 rings, 1 shackle NG 10, DIN 766, 2,5 m, 200 kg			23986	●	●	●	●	
	<b>13</b> <b>Shackle</b> A 0,6			13402	●	●	●	●	
	<b>14</b> <b>Guide rail system</b> GR 40			25592	●	●	●	●	
	<b>Guide rail system</b> GR 50			25593	●	●	●	●	

\* only for single units



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## Technical data

### **Pump**

Vertical, single-stage, submersible, open centrifugal impeller with 10 mm free passage.

**US 62 and US 102:** volute casing with horizontal discharge branch 1½" female thread.

**US 151 and US 251:** spiral housing with horizontal discharge branch 2" female thread.

### **Bearings**

Common shaft for pump and motor, arranged in ball bearings, deep groove ball bearing with grease chamber, (US 151 and 251 angular inclined ball bearing).

### **Seal**

Silicon carbide mechanical seal, oil chamber and duplex rotary shaft 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 151 and US 251), winding thermostat protects the motor from overload, starting via plug, automatically via mounted circuit or submersible ball contact switches.

### **Materials**

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

**US 62-102:** terminal board lid, open centrifugal impeller, wear plate and foot strainer made of GRP, motor casing and shaft from stainless steel.

**US 151-251:** motor casing, circular casing and cable inlet made of GG grey cast iron, open centrifugal impeller and foot strainer made of GRP, rubbercoated wear plate shaft made of 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 cable and safety-plug (1-phase) or CEE-plug with phase inverter (3-phase) (phase inverter only for US 151 D/DS and 251 D/DS).