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# JUNG PUMPEN MULTICUT SEWAGE PUMPS

## APPLICATION

Centrifugal submersible sewage pumps fitted with the MultiCut cutting system are used as stationary appliances for backpressure protection of detached houses. They are suitable for pumping domestic wastewater with the usual additions (as specified in German standard DIN 1986, Part 3).

For pumping from ducts which are connected to the public sewer system, explosion-proof submersible pumps of have to be used. On account of the upstream cutting system, the pressurised line as from DN 32 - as from DN 80 minimum without cutting system - may be routed parallel to the terrain.

Operating conditions up to a temperature of the material to be transported of 40° Celsius Submerged motor: Continuous operation (S1) Emerged motor: Intermittent operation (S3) (e.g. 35% = 3.5 min. operation, 6.5 min. break)

### **MULTICUT CUTTING SYSTEM**

The unique MultiCut cutting system ensures a maximum of operational safety at outstanding delivery characteristics. Fitted with a cutter plate made of hardened stainless steel and a threebladed knife, it disintegrates coarse additions in the wastewater with more than 62,000 cutting processes per minute before they can get into the pump hydraulics. Solids which cannot be transported are rejected outside of the pump by the cutting rotor as the cutting system is located upstream from the pump hydraulics. Specifically arranged grooves on the cutter plate ensure additional safety as the cutting unit is permanently cleaned automatically during the delivery.



- Cutting rotor with stirring effect
- Plug-in cable connection
- External adjustable cutting mechanism
- · Controllable oil chamber
- SiC mechanical seal independent of sense of rotation



08/2 M, Ex

- Moisture-sealed cable inlet
- Installed motor protection
- Ex version: Impeller and replaceable wear plate made from fibre-glass reinforced plastic



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.

### SEWAGE PUMPS

Туре		Largest height x width	Cable length	Pressure connection	Weight approx.	Code No.
08/2 M	Pumps with	370 x 235 mm	10 m	DN 32	16.5 kg	JP09945
08/2 ME	control unit	370 x 235 mm	10 m	DN 32	16.2 kg	JP09312
08/2 MS	Pumps with	370 x 340 mm	10 m	DN 32	17.2 kg	JP09946
08/2 MES	aut. switch control	370 x 340 mm	10 m	DN 32	16.6 kg	JP09313
08/2 M, Ex	with ex-proof	350 x 290 mm	10 m	DN 32	28.0 kg	JP42768

### PERFORMANCE

Тур	H [m]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
08/2 ME+MES	Q [m3/h]	16.5	15.5	15	14	13	12	11	10	9	7.5	6.5	5	3.5	1.5		
08/2 M+MS+ 08/2	M, Ex	18.5	18	17.5	17	16.5	15.5	15	14	13	12	11	10	9	7.5	6	4.5

### ELECTRICAL DATA

Туре	Voltage Volt	Motor ra P1	ting kW P2	S3 %	Current Ampere	Motor protection	RPM min-1	Cable	Plug
08/2 M+MS	3/PE~400	1.65	1.24	10	2.8	in the motor	2674	H07RN-F-4G1	CEE-16 A
08/2 ME+MES	1/N/PE~230	1.37	0.98	10	6.0	in the motor	2705	H07RN-F-3G1	Safety-
08/2 M, Ex	3/PE~400	1.65	1.24	35	2.8	with control	2674	H07RN-F-6G1.5	without

### ACCESSORIES

								Code No.					Ex
									М	ME	MS	MES	М
	•	Chain certified stainless steel (EN 818 mod)											
	U		I, (EN 010	mou.)	Luau	-bearing	y cap.	10/5004					
0		2,5 m, 5 rings			160 k	g		JP45901	•	•	•	•	•
0		5,0 m, 8 rings			JP45902	•	•	•	•	•			
0		7.5 m, 8 rings			160 k	g		JP47365	•	•	•	•	•
		Webbing with chackle for attaching the chain to the nump						JP45904	•	•	•	•	•
		<b>Webbing with shackle</b> for attaching the chain to the pump						JP45168	•	•	•	•	
	0	Pump nanging											•
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2	Guide Fail system GR 35	1/2 Fema	ale înreat (	see mou	inting ar	rang.J	JP14094					•
l fay		Guide rail system GR 35	1½" Fema	ale threat (	JP29953	•	•	•	•				
		for pumps without Ex-proof											
	_				H	W	D						
D	3	Swing-type check valve	11⁄2" (DN 4	40), PN 4	150	120	11/2"	JP00317	•	•	•	•	•
		DIN EN 12050-4	2" (DN !	50), PN 4	150	120	2"	JP00326	•	٠	•	•	•
		Ball check valve					- 4						
В		DIN EN 12050-4 (without illustr)	2" (DN !	50J, PN 6	185	155	2"	JP44782	•	•	•	•	•
		ELDOW DALL Check valve	11/ " (D)										
		DIN EN 12050-4 (without illustr)	11/2 [UN /	4UJ, PN 6	000	000	11/ "	JP44783	•	•	•	•	•
		Duplex swing-type check valve	1 1/2 (UN /	4UJ, PN 6	200	28U	1/2	JE03122	•	•			•
		tor duplex pump stations, DIN E	N 12050-4	Iwithout il	lustr.)								
A.	_		11/ " (=		H	W	<u>D</u>	ID ( / DC /					
	4	Stop valve	1½ (DN	4UJ, PN 16	125	max.6	U 1½	JP44786	•	•	•	•	•
B			2" (DN !	50), PN 16	140	max.6'	7 2"	JP44787	•	•	•	•	•
_D_					Н	D							
	Elastic connection	11/2" (DN 4	40), PN 4	120	50		JP44777	•	•	•	•	•	
H	9	Etastic connection	2" (חאם)	50) PN /	150	63		IP//775	•	•	•	•	•
			Z (DN)	30), 1 11 4	150	05		JF 44773	-				
	6	Hose band clamp	1 1/2					JP44763	•	•	•	•	•
	-		2	00/0 140			0	JP44764	•	•	•	•	•
	Ø	Bases (contained in the scope o	f supply of	108/2 MS +	MES WI	thout Ex	-proofJ	JP44759	•	•			•
		Retaining plate in connection v	vith static	air level c	<u>control</u>			JP23100	•	•	•	•	•
	8	Reducing socket	1½ -2 fc	or Guide rai	JP44776	•	•			•			
			11/4 - 11/2	for Pipe co	JP44769	•	•	•	•	•			
	0		1 1/4 - Z TC	or Pipe con	nection			JP44772	•	•	•	•	•
l 🛶 🗸 🗌	9	Pipe connection	1¼" (insid	de thread) f	for trans	p. applio	cation	JP16870	•	•	•	•	•
「簀、目		Coupling connection		JP14076	•	•	•	•	•				
		Hose connection	Ø 42, for t	transportat	ole appli	cation		JP14077	•	•	•	•	•
	10	Flushing tube - type I M stainle	ess steel w	vith connec	tion flan	g⁺		JP40333	•	٠	•	•	
		Flushing tube - stainless steel	type 0					JP45408					•
A	11	Alarm unit AG3 separate main	s-dependence	ant ?m				IP4/.901					
$\int O$		Alarm unit AG10 concrete mai	ne-dopon	dant 0 5 m				ID//002				-	
		Flectrical connection	ns-uepelli	uani, 7,J III				JF 44072					
		Single units						1000280					
		Single units	+ pressure switches					JP17101		•			
			AD 8 FxM	F DRP				JP43162					
			AD 25 FxM	M. DRP				JP43159	•				•
			AD 25 MP	9 SM*				JP27118	•				•
		Duplex units	BD 00 E	-				JP45735		•			
			+ pressur	e switches				JP17101		٠			
			BD 25 Exl	M, DRP				JP43165	•				•
			BD 25 MP	SM*				JP27152	•				•
			Special co	ontrol unit	on reque	est							
		* Control panels for pumps in explosio	on hazardous	s locations re	equire a dr	y run pro	tection	JP41463					
		Accessories for AD/BD: Retaining	ng plate (so	cope of sup	ply of GI	R 35)		JP23100	•	•			•
e		Rechargeable battery for mains	s-independ	dent alarm									
		(for MP SM controls, order artic	le No. JP4	4851)				JF44850	•	•	•	•	•
	12	Seal leak detector DKG						JP44900	•	•	•	•	
-0\ <b>"</b>								51 44/00					6
\`		Seal leak detector DKG-Ex (pur	nps with E	x-proof				JP00249					

# JUNG PUMPEN MULTICUT

SEWAGE PUMPS

#### Mounting arrangement without ex-proof

- Dimensions of chamber
- Single pump system min. 40 x 40 cm
- Suplex pump system min. 60 x 60 cm with swing-type check valve, duplex check valve or ball-type check valve (without ill.)
- Suplex pump system min. 80 x 60 cm with elbow ball check valve (without illustration)

When a cover plate is used, the elastic connection has to be attached outside of the chamber and a ventilation system has to be provided.



## Mounting arrangement with ex-proof

- Dimensions of chamber
- Single pump system min. 40 x 40 cm
- Duplex pump system min. 60 x 60 cm with swing-type check valve, duplex check valve or ball-type check valve (without illustration)
- Duplex pump system min. 80 x 60 cm with elbow ball check valve (without illustration)

When a cover plate is used, the elastic connection has to be attached outside of the chamber and a ventilation system has to be provided.



#### Mounting arrangement with guide rail system without ex-proof

- Dimensions of chamber
- Single pump system min. 40 x 65 cm with elbow ball check valve, ball-type check valve or swing-type check valve
- Duplex pump system min. 85 x 65 cm with elbow ball check valve, ball-type check valve or swing-type check valve (without ill.)
- Single pump system min. 40 x 60 cm with swing-type check valve
- Duplex pump system min. 60 x 60 cm with duplex check valve (without illustr.)



#### Mounting arrangement with guide rail system with ex-proof

#### Dimensions of chamber

- Single pump system min. 40 x 65 cm with elbow ball check valve, ball-type check valve or swing-type check valve
- Duplex pump system min. 85 x 65 cm with elbow ball check valve, ball-type check valve or swing-type check valve (without ill.)
- Single pump system min.  $40 \times 60$  cm with swing-type check valve
- Duplex pump system min. 60 x 60 cm with double check valve (without illustr.)



(11)



EN 12056 requires the pressure pipe to be connected elastically and to be passed over the locally defined backpressure level in a loop. Moreover, the installation of a nonreturn valve is prescribed, which has been tested in keeping with German / European standard DIN EN 12050-4. In addition, we recommend an alarm system for monitoring. 25981-08



43067-00





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#### **TECHNICAL DATA**

#### Pump

Vertical, single-stage, submersible, spiral casing with horizontal discharge flange, open impeller MultiCut cutting system - adjustable.

#### Bearing

Common shaft for pump and motor, grease-packed ball bearing.

#### Seal

Silicon-carbide mechanical seal independent of the sense of rotation, oil chamber and duplex radial shaft seal towards the motor compartment, safe to run dry.

#### Motor

Submersible, type of protection IP 68, protected by winding thermostats. Ex-proof types tested by the German PTB

Federal Agency for Ex designation (Ex) II 2 G Ex d IIB T4, automatic activation through control unit only.

#### Flushing tube

The type I M flush pipe is fitted between the pressure drainage of the pump and the pressure pipe. It vents the pump and at the same time cleans the chamber with a jet of water. This bypass causes a loss of performance of abt. 10 %.

#### Materials

Motor housing made of stainless steel, wear plate made of spheroidal ductile cast iron, UAK terminal board hood made of glass-fibre reinforced plastic, pump base (type MS + MES) made of stainless steel. Shaft made of stainless steel, cutting device made of hardened stainless steel (57 HRC), special flexible rubber cable.

**Explosion-proof pumps:** Motor housing made of grey cast iron, impeller made of glass-fibre reinforced plastic (corrosion-resistant).

#### Installation

Install the pump vertically (hose connection up to size C possible); in case of stationary installation provide detachable connection in front of the swing-type check valve and/or incorporate a guide rail system.

#### Scope of supply

As a prewired pump in keeping with German / European standard DIN EN 12050 with 10 m cable and CEE plug 16 A (type M + MS) and/or safety plug (type ME + MES).

The pump bases are part of the scope of supply for pumps with automatic switch control.

As **explosion-proof pump** in keeping with German / European standard DIN EN 12050 with 10 m cable without plug. Complete motor protection only in combination with appropriate controls (see accessories).

