

JUNG PUMPEN MULTISTREAM

UC 25/4 C1 UC 35/2 B2 UC 35/4 C1

10/2 A1 15/2 A1 25/2 A2 35/2 A2 - 25/2 B1 - 35/2 B2
10/4 B1 15/4 B3 25/4 B4 35/4 B4 - 25/4 C1 - 35/4 C1

10/2 A1 EX 15/2 A1 EX 25/2 A2 EX 35/2 A2 EX 25/2 B1 EX 35/2 B2 EX
10/4 B1 EX 15/4 B3 EX 25/4 B4 EX 35/4 B4 EX 25/4 C1 EX 35/4 C1 EX

DE Original-Betriebsanleitung

EN Instruction Manual

FR Instructions de service

NL Gebruikshandleiding

IT Istruzioni per l'uso

PL Instrukcja eksploatacji

CZ Návod pro provoz

SK Návod na prevádzku

HU Üzemeltetési útmutató

RO Manual de utilizare



You have purchased a product made by JUNG PUMPEN and with it, therefore, also excellent quality and service. Secure this service by carrying out the installation works in accordance with the instructions, so that our product can perform its task to your complete satisfaction. Please remember that damage caused by incorrect installation or handling will adversely affect the guarantee.

Therefore please adhere to the instructions in this manual!

As with all electrical devices, this product can also fail to operate due to an interruption in the electricity supply or due to a technical defect. If this could result in damage, a mains-independent alarm system must be installed. Depending on the application, you may also wish to install an emergency power generator, or a second system as a back-up.

SAFETY INSTRUCTIONS

This instruction manual contains essential information that must be observed during installation, operation and servicing. It is therefore important that the installer and the responsible technician/operator read this instruction manual before the equipment is installed and put into operation. The manual must always be available at the location where the pump or the plant is installed.

Failure to observe the safety instructions can lead to the loss of all indemnity.

In this instruction manual, safety information is distinctly labelled with particular symbols. Disregarding this information can be dangerous.



General danger to people



Warning of electrical voltage

ATTENTION!

Danger to equipment and operation

Qualification and training of personnel

All personnel involved with the operation, servicing, inspection and installation of the equipment must be suitably qualified for this work and must have studied the instruction manual in depth to ensure that they are sufficiently conversant with its contents. The supervision, competence and areas of responsibility of the personnel must be precisely regulated by the operator. If the personnel do not have the necessary skills, they must be instructed and trained accordingly.

Safety-conscious working

The safety instructions in this instruction manual, the existing national regulations regarding accident prevention, and any internal working, operating and safety regulations must be adhered to.

Safety instructions for the operator/user

All legal regulations, local directives and safety regulations must be adhered to.

The possibility of danger due to electrical energy must be prevented.

Leakages of dangerous (e.g. explosive, toxic, hot) substances must be discharged such that no danger to people or the environment occurs. Legal regulations must be observed.

Safety instructions for installation, inspection and maintenance works

As a basic principle, works may only be carried out to the equipment when it is shut down. Pumps or plant that convey harmful substances must be decontaminated.

All safety and protection components must be re-fitted and/or made operational immediately after the works have been completed. Their effectiveness must be checked before restarting, taking into account the current regulations and stipulations.

Unauthorised modifications, manufacture of spare parts

The equipment may only be modified or altered in agreement with the manufacturer. The use of original spare parts and accessories approved by the manufacturer is important for safety reasons. The use of other parts can result in liability for consequential damage being rescinded.

Unauthorised operating methods

The operational safety of the supplied equipment is only guaranteed if the equipment is used for its intended purpose. The limiting values given in the "Technical Data" section may not be exceeded under any circumstances.

Instructions regarding accident prevention

Before commencing servicing or maintenance works, cordon off the working area and check that the lifting gear is in perfect condition.

Never work alone. Always wear a hard hat, safety glasses and safety shoes and, if necessary, a suitable safety belt.

Before carrying out welding works or using electrical devices, check to ensure there is no danger of explosion.

People working in wastewater systems must be vaccinated against the pathogens that may be found there. For the sake of your health, be sure to pay meticulous attention to cleanliness wherever you are working.

Make sure that there are no toxic gases in the working area.

Observe the health and safety at work regulations and make sure that a first-aid kit is to hand.

In some cases, the pump and the pumping medium may be hot and could cause burns.

For installations in areas subject to explosion hazards, special regulations apply!

This appliance can be used by children aged 8 years or over and by persons with limited physical, sensory or intellectual capabilities, or with limited experience and knowledge, provided that they are supervised or have been instructed in the safe use of the appliance and are aware of the dangers involved. Children must not be allowed to play with the appliance. Cleaning and user maintenance must not be carried out by children unless they are supervised.

AREAS OF APPLICATION

Submersible pumps in the MultiStream range are suitable for pumping wastewater in municipal and industrial pumping stations, and in rainwater retention tanks. The smallest models also perform well in disaster control applications.

MultiStream pumps are favoured for use with:

- wastewater containing fibres
- wastewater containing solids (without stones)
- mixed wastewater
- untreated water
- raw sludge
- surface water and rainwater

The submersible pumps are supplied without explosion protection or with explosion protection.

When using the pumps, the relevant national laws, regulations and stipulations must be adhered to, for example:

- Installation of low-voltage systems [e.g., VDE 0100 in Germany]
- Safety and working materials [e.g., BetrSichV and BGR 500 in Germany]
- Safety in wastewater systems [e.g., GUV-V C5, GUV-R 104 and GUV-R 126 in Germany]
- Electrical systems and operating resources [e.g., GUV-V A3 in Germany]
- Explosion protection
EN 60079-0:2012, EN 60079-1:2007, EN 60079-14:2007, EN 60079-14:2007 and EN 1127-1:2011

For non-standard utilisation conditions in areas subject to explosion hazards, please ask the local authority responsible.

In Germany, this would be, for example, the Trade Supervisory Centre (Gewerbeaufsicht), the Technical Inspection Agency (TÜV), the building authority (Bauamt) or professional organisation (Berufsgenossenschaft).

The installation and operation of this equipment is regulated by the ordinance concerning the protection of health and safety in the provision of work equipment and its use at work, concerning safety when operating installations subject to monitoring, and concerning the organisation of industrial health and safety at work, [Betriebssicherheitsverordnung], Article 1.

Where no explosion protection is stipulated for the pumping of foul wastewater at the installation location, pumps without explosion protection may also be used.

Modes of operation

with the pumped medium at a temperature of 40°C:

Motor submersed: continuous operation S1

Motor emerged: short duration operation S2;

see "Technical Data"

Motor emerged: intermittent operation S3;

see "Technical Data"

The submersible pump is frost-resistant down to -20°C when stored in dry conditions. When installed, however, it must not be allowed to freeze in the water.

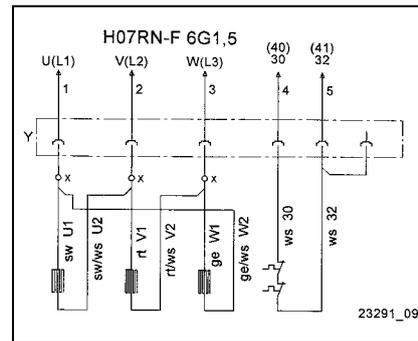
Transport



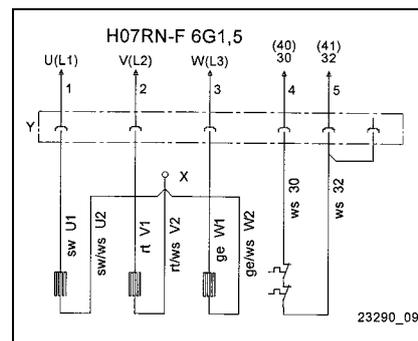
The pump must always be lifted by the shackle and never by the power supply cable! The pump should only be lowered by using a rope or chain.

ELECTRICAL CONNECTION

Δ-Circuitry, low voltage



Y-Circuitry, high voltage



Alterations to the circuitry are to be made using crimp connectors (X) between the conical plug connection (Y) and the built-in motor. The new crimp connection must be professionally made.

By using our controls, you can be sure that the requirements of the EU type-testing certificate are met.



Only qualified electricians may carry out electrical works to the pump or the controls.

The standards applicable in each case (e.g. EN), the country-specific regulations (e.g. VDE in Germany), and the regulations of the local supply network operator must be observed.

ATTENTION! Never lay the end of cables in water! Penetrating water may cause malfunctions.

Only slow-blow fuses or automatic fuses with C or D characteristics are to be used as pre-fuses for the pump. Necessary fuse protection for direct on-line start: 10 A.

The pump must be protected via an overload trip. Setting for direct on-line start = nominal current.

If the protective device has been triggered, the cause of the malfunction must be eliminated before switching on again.

Coil thermostats

ATTENTION! In addition to the overload trip or protective switch of the motor, the thermostats integrated in the motor winding must also be connected. The thermostats are suitable for 250 V / 1.2 A (cos phi = 0.6) and are labelled 30 and 32 for connection purposes.

Thermostat connection without explosion protection

The thermostats are to be connected in such a way that the motor is switched off via the control circuit when the response temperature is reached. The motor is switched on again automatically after the winding has cooled down.

Thermostat connection with explosion protection

The thermostats are to be connected in such a way that the motor is switched off via the control circuit when the response temperature is reached. It must not be possible for the motor to switch on again automatically after the winding has cooled down.



After an automatic cut-out via the temperature limiters, the cause of the malfunction must first be eliminated. Only then may the motor be switched on again manually.

The restart interlock must be "non-resetting on power failure", i.e. the lock must be in place to prevent restarting even after a power cut (in Europe: Directive 94/9/EC, Appendix II 1.5, EN 60079-17 Table1, B10).

Operation with frequency converter

Frequency converters may only be used for controlling the frequency of special models of three-phase pumps.

ATTENTION! For physical reasons, pumps may not be operated at a higher frequency than that shown on the type plate. If the frequency increases beyond the value on the type plate, the power input increases and the motor is then overloaded.

For special models of three-phase pumps that are designed for frequency converter operation, the motor type shown on the type plate is labelled with an additional "K" (e.g. D90-2/75 CK). These pumps also have a sticker on the end of the cable that indicates their suitability for use with a frequency converter.

These motors are fitted with PTC thermistors as winding protectors. Voltages of more than 2.5V may not be connected to the winding protection terminals 40 and 41! For explosion protected pumps, a type-tested tripping unit that complies with the EC type-testing requirements is also necessary.

Rotational direction

The rotational direction must be checked before installation! If the rotational direction is correct, the start-up jolt should be in the opposite direction to the rotational direction arrow on the motor housing. The wrong rotational direction is also indicated if the pump performs inadequately when installed, or if loud noises can be heard during operation. If the rotational direction is wrong, 2 phases of the supply cable must be swapped over.



The start-up jolt can be very forceful.

Potential equalisation

To comply with EN 60079-14 and EN 1127-1, an additional equipotential bonding must be installed for facilities with protective earth conductors in TN/TT networks in areas subject to explosion hazards. In Germany, for example, the design must be in accordance with VDE 0100, Part 540 (Association of German Electrical Engineers).

No additional potential equalisation is required on site for JUNG PUMPEN concrete or plastic chambers in explosion zones 1 and 2 (statement made by TÜV Nord (Technical Inspection Agency) in March 2008).

Exception: if conductive parts, such as cable protection sleeves made of corrugated pipe or a pressure pipe made of metal, are connected to the chamber from the outside. In this case, an electrically conductive connection must be made between the conductive parts and the housing of the pump(s). For corrosion protection reasons, the connection should be made using stainless steel.

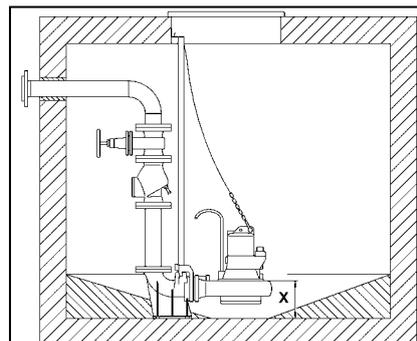
Explosion protected pumps have a special connection point at the cable entry point.

INSTALLATION

ATTENTION! Before the pump can be installed, the 4 plastic packaging feet must be unscrewed from the bottom of the pump housing and removed.

The pump must be installed as shown in the examples. For installations in accordance with DIN EN 12056-4, the pressure pipe must be laid in a loop above the local back pressure level and protected with a back pressure prevention valve.

Example installation with guide rail system for pumping stations at a permanent location.

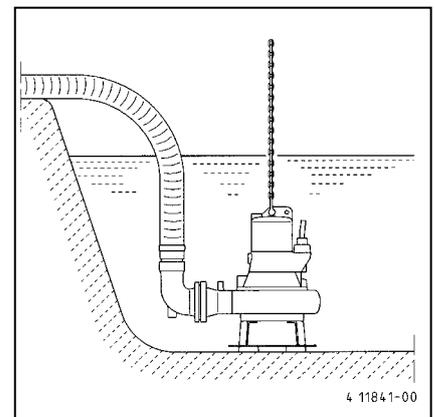


Assembly: Fix the coupling base firmly to the floor of the collection chamber using plugs and then mount the guide rails. Next, install the pressure pipe including the necessary fittings, such as the non-return valve and shut-off valves.

Finally, fit the pump with the screwed-on coupling catch on to the guide rails and lower it into place using a chain fixed to the shackle.

A fixing facility for lifting gear should be provided above the chamber opening at a sufficient height.

Example of installation with pump base or retrofitting or mobile operation.



Assembly: The submersible pump is fitted with a 90° connection and then lowered into the chamber or collecting pit using a chain. For short-term use, the pump can also be put into operation using a suitable plug.

Level monitoring can be carried out using various systems. Their specific characteristics and requirements can be found in the relevant operating manuals.



In accordance with the explosion protection laws and regulations, JUNG Ex-pumps should never be allowed to run dry or to operate in "snore" mode.

The pump must switch off when the water level sinks to the upper edge of the pump housing (x in the illustration), at the very latest. This shut-down must be implemented via a separate switching circuit. Dry running for servicing or inspection purposes may only take place outside the potentially explosive area.

A correspondingly larger diameter pipe should be used for longer pressure pipelines to avoid pipe friction losses.

Rising pressure pipes must be protected from frost! A chamber cover must be selected that is suitable for the intended use and has the required load-bearing capacity.

If necessary, the pump housing can be ventilated by unscrewing the "Luft" sealing screw. A flushing pipe, available as an accessory, can be installed to minimise deposits and the formation of floating layers in the chamber.

If the pump is malfunctioning, part of the contents of the oil reservoir could escape into the pumping medium.

Not Ex-pumps. If a hose is used as a pressure line, care must be taken to ensure that for every pumping operation the hose is completely empty before the pump is submersed. Any residual liquid would obstruct the ventilation of the pump housing and therefore also hinder the pumping operation.

This situation can also occur if the pump runs dry, pumps down to a lower level than that shown in the installation drawing, or runs in "snore" mode during the daily test run.

In these cases, the pump housing must be ventilated by unscrewing the "Luft" sealing screw.

SERVICING

We recommend that you service the equipment in accordance with EN 12056-4 and EN 60074-19.

To ensure continued reliability of service, we recommend that you take out a service contract.



Before carrying out any works: disconnect the pump and the controls from the mains and take steps to ensure that it cannot be energized again.



Check the cable for mechanical or chemical damage. A damaged or kinked cable must be replaced.



When using a chain to lift the pump, please observe the relevant national regulations regarding accident prevention. Lifting gear must be checked regularly by an expert in accordance with the legal regulations.



Motors in the Ex-range conform to the "flameproof enclosures" ignition protection cat-

egory. Maintenance works that affect the explosion protection may only be carried out by authorised specialists or by the manufacturer. When carrying out repairs, all areas next to flameproof gaps must be checked for damages and, if necessary, replaced by genuine parts.

Oil check

The drain plug is labelled "Öl". In order to check the mechanical seal, the oil, including any residue, must be drained from the oil reservoir and collected in a clean measuring container.

- If the oil is contaminated with water (milky), an oil change must be carried out. Check again after a further 300 operating hours, but at the very latest after 6 months!
- However, if the oil is contaminated with both water and pollutants, then not only the oil must be replaced, but the mechanical seal as well.

For monitoring the oil reservoir, it is also possible to retrofit the electrode of our "DKG" or "DKG-Ex" seal leak control device in place of the "DKG" sealing screw.

Changing the oil

To ensure operational liability, the first oil change should be carried out after 300 operating hours, with further oil changes carried out after every 1000 operating hours.

If the number of operating hours is very low, an oil change should still be carried out at least once a year.

If wastewater with strongly abrasive constituents is being pumped, the oil changes should be carried out at correspondingly shorter intervals.

Use HLP hydraulic mineral oil, viscosity class 22 to 46, e.g. Mobil DTE 22, DTE 24, DTE 25, to replace the oil in the oil reservoir.

The quantity of oil required is 1000 cm³, except for A1 and B1 pumps, which must be filled with 800 cm³.

The oil reservoir may only be filled with the specified quantity of oil. Overfilling will result in the pump being rendered inoperable.

Cleaning

To clean the impeller and the spiral housing, simply remove the 4 hexagonal screws and lift the motor unit off the spiral housing



Worn impellers can have sharp edges.

ATTENTION! If the wrong screws are unscrewed, the oil will run out of the oil reservoir.

Tightening torque M_A for A2 screw materials

for M 6 $M_A = 8 \text{ Nm}$

for M 8 $M_A = 20 \text{ Nm}$

for M 10 $M_A = 40 \text{ Nm}$

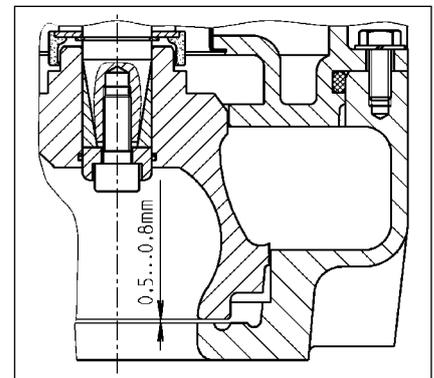
for M 12 $M_A = 70 \text{ Nm}$

for M 16 $M_A = 160 \text{ Nm}$

Checking the pump unit

The housing screws for the pump, and the connecting and fixing screws of the installation must be checked to ensure they are fixed securely. They should be tightened if necessary.

If the pump performance decreases, or if increasingly loud noises can be heard during operation, the gap dimension between the impeller face and the wear plate must be checked for wear by an expert and replaced if necessary. Nominal dimension: 0.5 - 0.8 mm.



Adjust the impeller gap

1. Block the impeller.
2. Loosen the central impeller screw located in the impeller hub.
3. Loosen the impeller by knocking it gently with a hammer.
4. Tighten the impeller screw until it is "hand tight".
5. Adjust the impeller gap by pulling the impeller down to the nominal dimension 0.5 - 0.8 mm.
6. Block the impeller again and tighten the impeller screw to 65 Nm.

The maximum adjustment possible is 3 mm

Replace the wear plate

1. Loosen the four cylinder head screws on the wear plate on the lower pump case.
2. Take out the old wear plate with the seal.
3. Clean the wear plate seat and insert the new wear plate with a new seal.
4. Tighten the four cylinder head screws again.
5. After this, readjust the impeller gap again.

Replacing the impeller



Worn impellers can have sharp edges.

1. Remove the 4 hexagonal screws and lift the motor unit off the spiral housing.
2. Block the impeller.
3. Loosen the central impeller screw located in the impeller hub.
4. Loosen the impeller by knocking it gently with a hammer and then slide it off the shaft.
5. Clean all the parts of the impeller mounting.
6. Grease the shaft cover on the inside.
ATTENTION! Do not use grease containing graphite, such as "Molykote".
7. Fix all the parts of the impeller mounting in place and tighten the impeller screw until it is "hand tight".
8. Slide the new impeller over the pre-assembled impeller mounting onto the shaft.
9. Mount the motor unit on the spiral housing; the cable entry point is opposite the discharge branch.
10. Set the gap dimension to 0.5 - 0.8 mm and then tighten the impeller screw to 65 Nm.

What to do in the event of any problems

Pump does not work

- Check mains current (do not use a pin gauge)
- Fuse faulty = may be too weak (please refer to Electrical Connection)
- Mains supply cable damaged = repair to be carried out by manufacturer only

Pump runs but does not pump

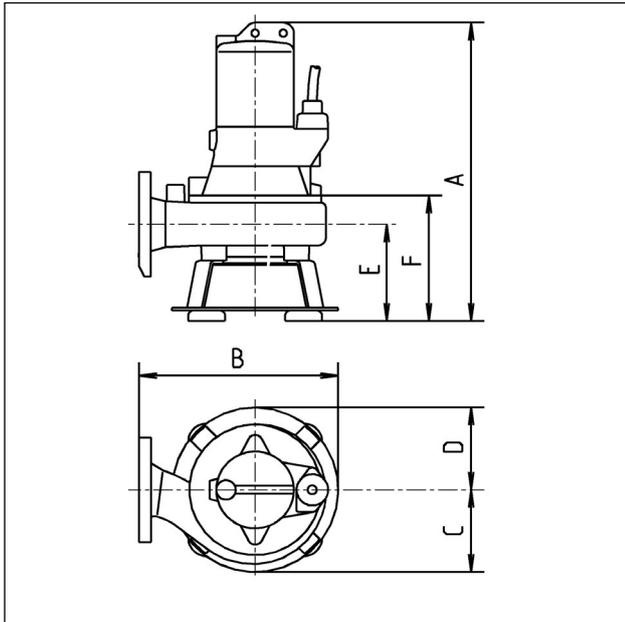
- Empty pressure pipe or hose to allow the non-return valve to open and let the air escape from the pump housing.
- Ventilate the pump housing by unscrewing the "Luft" (air) sealing screw.

The impeller is blocked

- Solids and fibrous matter have become lodged in the pump housing (please refer to Maintenance)

Decreased pumping performance

- The impeller is blocked (please refer to maintenance)
- Rotor gap too large = adjust
- The impeller is worn out = replace it
- Wrong direction of rotation = change 2 phases of the power supply



	A	B	C	D	E	F
10/2 A1	475	325	110	105	135	175
15/2 A1	475	325	110	105	135	175
25/2 A2	475	345	135	135	135	185
35/2 A2	510	345	135	135	135	185
25/2 B1	530	340	135	135	185	240
35/2 B2	570	380	145	135	185	240
10/4 B1	530	340	135	135	185	240
15/4 B3	535	380	160	160	185	240
25/4 B4	535	440	190	160	185	240
35/4 B4	570	440	190	160	185	240
25/4 C1	600	450	195	195	235	305
35/4 C1	635	450	195	195	235	305

Technische Daten | Technical data | Caractéristiques techniques | Dati tecnici | Technische gegevens | Dane techniczne | Technické údaje | Technické údaje | Műszaki adatok | Date tehnice

		10/2 A1	15/2 A1	25/2 A2	35/2 A2
	[kg]	41	42	48	52
	PN 6 / 10	DN 65	DN 65	DN 65	DN 65
	[mm]	40	40	40	40
	S2	40 min.	32 min.	26 min.	27 min.
	S3*	60 %	50 %	40 %	40 %
Motor		D 90-2/ 75	D 90-2/ 75	D 90-2/ 75	D 90-2/ 110
- EX		08 ATEX 1113 X			
	II 2 G	Ex d IIB T4			
P1	[kW]	1,3	1,8	2,6	3,7
P2	[kW]	1,1	1,5	2,1	3,2
U	[V]	3/PE ~230 / 400			
f	[Hz]	50	50	50	50
I	[A]	4,6 / 2,7	5,6 / 3,2	7,6 / 4,4	11,2 / 6,5
cos phi		0,72	0,81	0,86	0,83
n	[min ⁻¹]	2900	2860	2800	2890

		25/2 B1	35/2 B2	10/4 B1	15/4 B3
	[kg]	45	55	45	50
	PN 6 /10 [mm]	DN 80 70	DN 80 70	DN 80 70	DN 80 70
	S2	26 min.	27 min.	45 min.	35 min.
	S3*	40 %	40 %	50 %	40 %
Motor		D 90-2/75	D 90-2/110	D 90-4/ 75	D 90-4/75
- EX		08 ATEX 1113 X	08 ATEX 1113 X	08 ATEX 1113 X	08 ATEX 1113 X
II 2 G		Ex d IIB T4	Ex d IIB T4	Ex d IIB T4	Ex d IIB T4
P1	[kW]	2,6	3,7	1,0	1,8
P2	[kW]	2,2	3,2	0,8	1,5
U	[V]	3/PE ~230 / 400	3/PE ~230 / 400	3/PE ~230 /400	3/PE ~230 / 400
f	[Hz]	50	50	50	50
I	[A]	7,6 / 4,4	11,2 / 6,5	4,0 / 2,3	5,8 / 3,3
cos phi		0,86	0,83	0,60	0,78
n	[min ⁻¹]	2800	2890	1440	1385

		25/4 B4	35/4 B4	25/4 C1	35/4 C1
	[kg]	59	62	63	67
	PN 6 /10 [mm]	DN 80 70	DN 80 70	DN 100 100	DN 100 100
	S2	15 min.	16 min.	20 min.	16 min.
	S3*	25 %	25 %	30 %	25 %
Motor		D 90-4/75	D 90-4/110	D 90-4/75	D 90-4/110
- EX		08 ATEX 1113 X	08 ATEX 1113 X	08 ATEX 1113 X	08 ATEX 1113 X
II 2 G		Ex d IIB T4	Ex d IIB T4	Ex d IIB T4	Ex d IIB T4
P1	[kW]	2,7	3,5	2,4	3,5
P2	[kW]	2,1	2,65	1,9	2,65
U	[V]	3/PE ~230 / 400	3/PE ~230 / 400	3/PE ~230 /400	3/PE ~230 /400
f	[Hz]	50	50	50	50
I	[A]	7,9 / 4,6	12,0 / 6,9	7,3 / 4,2	12,0 / 6,9
cos phi		0,85	0,74	0,83	0,74
n	[min ⁻¹]	1375	1425	1395	1420

* Beispiel: 40% = 4 min Betrieb + 6 min Pause (Spieldauer 10 min)

* Example for 40%: 4 min. operation and 6 min. rest (Cycle duration 10 min.)

* Exemple: 40% = 4 min de service et 6 min de pause (Durée du jeu 10 min)

* Esempio: 40%: 4 min. di funzionamento + 6 min. di pausa (durata del ciclo 10 min.)

* Przykładowo 40%: 4 min pracy i 6 min przerwy (Czas cyklu 10 min)

* Příklad 40%: 4 min. provoz a 6 min. přestávka (trvání pracovního cyklu 10 min.)

* Příklad 40%: 4 min prevádzka a 6 min prestávka (doba trvania cyklu 10 min)

* 4 perc üzem és 6 perc szünet (ciklusidő 10 perc)

* Exemplu 40%: 4 min funcționare și 6 min pauză (timp aproximativ 10 min)

**Leistungen • Performance • Puissances • Capaciteit • Prestazioni •
Wydajności i moce • Výkony • Výkony • Teljesítmény • Capacități**

H [m]	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	22
10/2 A1	38	35	32	29	26	22	19	16	12	9	3					
15/2 A1	50	49	46	43	40	37	35	32	28	25	18	11	5			
25/2 A2	62	60	58	56	54	51	48	45	42	39	33	27	20	13		
35/2 A2	70	68	67	66	64	63	61	58	56	53	48	43	37	30	24	13
25/2 B1	91	86	80	74	68	61	55	49	42	36	20	8				
35/2 B2	126	121	117	111	103	96	89	81	72	65	49	31	16			
10/4 B1	59	52	40	28	14	3										
15/4 B3	98	90	80	70	58	46	35	20	12	6						
25/4 B4	120	114	106	97	87	77	65	53	43	31	9					
35/4 B4	132	125	119	112	104	95	85	74	64	53	30					
25/4 C1	154	139	122	103	87	71	51	32	16							
35/4 C1	170	160	146	133	119	101	89	71	54	36	3					
UC 25/4 C1				104	87	71	51	32	16							
UC 35/2 B2					102	95	88	80	72	65	17					
UC 35/4 C1						103	89	72	54	36	3					

Q [m³/h]

 0197	
JUNG PUMPEN GmbH - Industriestr. 4-6 - 33803 Steinhagen, Germany 13 407.12.1405 411.12.1405	
EN 12050-1:2001 Fäkalienhebeanlage	
10/2 A1 (JP09615/4) 10/4 B1 (JP09620/4) 15/2 A1 (JP09616/4) 15/4 B3 (JP09622/4) 25/2 A2 (JP09617/4) 25/2 B1 (JP09618/4) 25/4 B4 (JP09623/4) 25/4 C1 (JP09624/4) 35/2 A2 (JP09651/4) 35/2 B2 (JP09652/4) 35/4 B4 (JP09647/4) 35/4 C1 (JP09648/4)	10/2 A1, EX (JP09628/4) 10/4 B1, EX (JP09633/4) 15/2 A1, EX (JP09629/4) 15/4 B3, EX (JP09635/4) 25/2 A2, EX (JP09630/4) 25/2 B1, EX (JP09631/4) 25/4 B4, EX (JP09636/4) 25/4 C1, EX (JP09637/4) 35/2 A2, EX (JP09653/4) 35/2 B2, EX (JP09654/4) 35/4 B4, EX (JP09649/4) 35/4 C1, EX (JP09650/4)
Sammeln und automatisches Heben von fäkalienfreiem und fäkalienhaltigem Abwasser über die Rückstauenebene	

BRANDVERHALTEN	NPD
WASSERDICHTHEIT, LUFTDICHTHEIT	
- Wasserdichtheit	Bestanden
- Geruchsdichtheit	Bestanden
WIRKSAMKEIT (HEBEWIRKUNG)	
- Förderung von Feststoffen	Bestanden
- Rohranschlüsse	Bestanden
- Mindestmaße von Lüftungsleitungen	Bestanden
- Mindestfließgeschwindigkeit	Bestanden
- Freier Minstdurchgang der Anlage	Bestanden
- Mindestnutz volumen	Bestanden
MECHANISCHE FESTIGKEIT	
- Tragfähigkeit und strukturelle Stabilität des Sammelbehälters für die Verwendung außerhalb von Gebäuden	NPD
- Strukturelle Stabilität des Sammelbehälters für die Verwendung innerhalb von Gebäuden	Bestanden
GERÄUSCHPEGEL	≤ 70 dB(A)
DAUERHAFTIGKEIT	
- der Wasserdichtheit und Luftdichtheit	Bestanden
- der Hebewirkung	Bestanden
- der mechanischen Festigkeit	Bestanden
GEFÄHRLICHE SUBSTANZEN	NPD

 0197	
JUNG PUMPEN GmbH - Industriestr. 4-6 - 33803 Steinhagen, Germany 13 407.12.1405 411.12.1405	
EN 12050-1:2001 Lifting plant for wastewater containing faecal matter	
10/2 A1 (JP09615/4) 10/4 B1 (JP09620/4) 15/2 A1 (JP09616/4) 15/4 B3 (JP09622/4) 25/2 A2 (JP09617/4) 25/2 B1 (JP09618/4) 25/4 B4 (JP09623/4) 25/4 C1 (JP09624/4) 35/2 A2 (JP09651/4) 35/2 B2 (JP09652/4) 35/4 B4 (JP09647/4) 35/4 C1 (JP09648/4)	10/2 A1, EX (JP09628/4) 10/4 B1, EX (JP09633/4) 15/2 A1, EX (JP09629/4) 15/4 B3, EX (JP09635/4) 25/2 A2, EX (JP09630/4) 25/2 B1, EX (JP09631/4) 25/4 B4, EX (JP09636/4) 25/4 C1, EX (JP09637/4) 35/2 A2, EX (JP09653/4) 35/2 B2, EX (JP09654/4) 35/4 B4, EX (JP09649/4) 35/4 C1, EX (JP09650/4)
Collection and automatic lifting of wastewater without sewage and wastewater containing faecal matters above the backflow level	

REACTION TO FIRE	NPD
WATERTIGHTNESS, AIRTIGHTNESS	
- Water tightness	Pass
- Odour tightness	Pass
EFFECTIVENESS (LIFTING EFFECTIVENESS)	
- Pumping of solids	Pass
- Pipe connections	Pass
- Minimum dimensions of ventilating pipes system	Pass
- Minimum flow velocity	Pass
- Minimum free passage of the plant	Pass
- Minimum useful volume	Pass
MECHANICAL RESISTANCE	
- Load bearing capacity and structural stability of collection tank for use outside buildings	NPD
- Structural stability of collection tank for use inside buildings	Pass
NOISE LEVEL	≤ 70 dB(A)
DURABILITY	
- of structural stability	Pass
- of lifting effectiveness	Pass
- of mechanical resistance	Pass
DANGEROUS SUBSTANCES	NPD