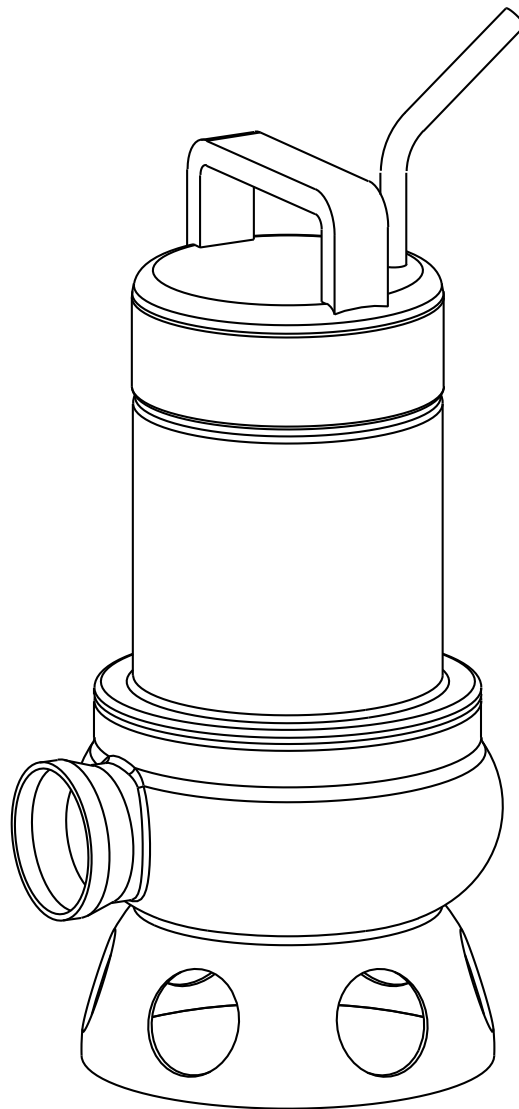


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**Light Drainage Pump Type ABS IP 900**

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**Installation and Operating Instructions**

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## Light Drainage Pump Type ABS IP

900

### Symbols used in this booklet:



**Safety instructions given in this operating manual, the non-observance of which could cause danger to life have been specifically high-lighted with the general danger symbol. (See DIN 4844-W9).**



**The presence of a dangerous voltage is identified with the safety symbol. (See DIN 4844-W8).**

**ATTENTION:** *Applies to safety instructions, the non-observance of which could damage the unit or affect its functioning.*

Symbols directly on the unit itself, e.g.

- Direction of rotation arrow
- Nameplate

must be carefully observed and must be maintained in a legible condition.

### Safety

(Extracted from VDMA-Standard sheet 24292)\*

This unit can be used by children aged 8 years and above, and persons with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, when they have been given supervision or instruction concerning the safe use of the device and understand the hazards involved. Children must not play with the appliance. Cleaning and user maintenance should not be performed by children without supervision.



**To avoid injury, when the pump is in operation, do not handle the impeller screen.**

These operating instructions contain basic information on erection, operating and maintenance and should be followed carefully. For this reason it is essential that these instructions are carefully read before erection or commissioning by both the installation crew as well as those responsible for operation or maintenance. The operating instructions should always be readily available at the location of the unit.

In addition to following the safety regulations of a general nature listed under these main headings, it is also essential that the special safety instructions given under other headings be observed.

The safety instruction listed in this operating manual, the existing National Regulations for safety, as well as any internal operating or safety regulations which apply in the user's own premises must be observed.

The general and specific health and safety guidelines are described in detail in the "Safety Instructions for Sulzer Products Type ABS" booklet. If anything is not clear or you have any questions as to safety make certain to contact the manufacturer Sulzer.

### Dangers which could arise due to non-observance of safety instructions

The non-observance of the safety instructions can lead to both danger to personnel and also to possible harm to the environment or the unit itself. Non-observance of the safety instructions can invalidate the rights of the user to any compensation or redress.

In detail, non-observance can for example result in the following dangers:

- Failure of important functions of the unit/installation
- Danger to personnel by electrical, mechanical or chemical influences
- Danger to the environment by leakage of dangerous substances

**ATTENTION:** *Carry out work in a safety conscious manner.*

### Safety regulations for the owner/operator

All dangers due to electricity must be avoided (for details consult the regulations of your local Electricity Supply Company).

## Safety regulations for maintenance, inspection and installation work

The user of the unit should ensure that all maintenance, inspection or installation work is carried out by authorised and qualified skilled personnel. The user must also make certain that they have carefully studied the operating instructions. In principle all work on the unit should only be carried out while it is stationary. Pumps or units, used for pumping of fluids which could be injurious to health must be decontaminated. After completion of the work all safety and protective devices must be refitted and a check should be made that they are fully functional. Before starting up again, the points listed under the section “Commissioning” should be complied with.

## Unilateral modification and spare parts manufacturing

Modifications or changes to the unit/installation should only be carried out after consultations with the manufacturer. Original spare parts and accessories authorised by the manufacturer are essential for compliance with safety requirements. The use of other parts can invalidate any claims for warranty or compensation.

## Unproven usage

The operating safety of the unit is only guaranteed provided that the unit is used in accordance with the operating and safety instructions. The limit values given in the technical data sheet should under no circumstance be exceeded.

These installation and operation instructions do not supersede or exclude the following of generally valid regulation and standards.

\*VDMA=Verband Deutscher Maschinen- und Anlagebau e.V.  
(German Machinery Manufacturers Association).



**End of life units can be returned to Sulzer or recycled in accordance with local regulations.**

## Transport

During transport the unit should not be dropped or thrown.



**The unit should never be raised or lowered by the power cable.**

A handle is provided for transport. If necessary, it is possible to suspend the pump by attaching a rope or chain to the handle.

## Nameplate

We recommend that you record the data from the nameplate on the pump in the corresponding form below, and maintain it as a source of reference for the ordering of spare parts, repeat orders and general queries.

Always state the pump type, item number and serial number in all communications.

<b>SULZER</b>		CE	xx/xxxx	IP68		
Typ						
Nr	SN					
U	V	Ph	A	Hz	P1	kW
Qmax	m <sup>3</sup> /h		Hmax	m	1/min	
					▽	m
Sulzer Pump Solutions Ireland Ltd. Wexford, Ireland www.sulzer.com						
Made in Italy						

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## Legend

Typ	Pump type	
Nr.	Item number	
SN	Serial number	
# / #	Production date (week/year)	
U	Rated Voltage	V
Ph	Number of phases	
	Rated Current	A
Hz	Frequency	Hz
P1	Rated Input Power	kW
Qmax	Max. Flow	m <sup>3</sup> /h
Hmax	Max. Head	m
1/min	Speed	r/min
IP	Protection type	
▽	Max submersible depth	m

**ATTENTION:** *Maximum medium temperature for continuous operation with fully submerged unit = 40 °C, intermittent = 60 °C.*  
*Noise level 70 dB.*

## Performance

Maximum total head: 11 m

## Application

The submersible wastewater pumps of the IP 900 series are reliable quality products designed for the following applications:

- Pumping of aggressive medium.
- Pumping of clear water.
- Pumping of rain water.
- For blockage-free pumping of liquids which have a high proportion of solid or fibrous matter present.



**The pump must not be used in an explosive or flammable environment or for pumping flammable or explosive liquids.**

**ATTENTION:** *Before using aggressive fluids check that the materials used in the pump are resistant to the particular fluid being pumped.*

**NOTE:** *As with all electrical devices, this product may fail due to operating errors, absence of mains voltage, or even a technical defect. Such a failure may result in the medium or water escaping. If damage may occur due to such failures, measures are required to avoid damage arising. In this respect, taking account of the conditions in question, use of an emergency generator, provision of an additional and appropriately connected second unit, and particularly the use of an off-grid alarm system, are to be considered.*

**NOTE** *Leakage of lubricants could result in pollution of the medium being pumped.*

## Commissioning

Before commencing operations, the pump/pump station should be examined and a function check carried out. Particular attention should be paid to the following:

- Check that the power cable and plug are undamaged.
- Does the electrical connection comply with regulations?
- Is the motor overload correctly set?
- Is the rotation of the pump correct?
- Is the level control system operating correctly?
- Are the SWITCH ON / SWITCH OFF levels correctly set?



**The pump must not be run if it has been partially dismantled.**



**In all installations, the power supply to the IP 900 pump must be via a residual current device (e.g. RCD, ELCB, RCBO etc.) with a rated residual operating current not exceeding 30 mA. For installations not having a fixed residual current device the pump must be plugged into the power supply through a portable version of the device.**



**In the case of Class I (EN 60335) submersible pumps such as the IP series, all accessible metal parts are connected to the earth lead. Before operation a qualified person should check that the earth lead is correctly connected.**



**IP pumps must not be operated in places where a person could be immersed or in contact with the pumped medium, either intentionally or accidentally, e.g. swimming pool, garden pond, fountain, flooded area.**



**Pumps for use in swimming pools where people are present must only use Class III (EN 60335) pumps with a voltage not greater than 12 V.**

**NOTE** *Suitable earth leakage protection devices are available from electrical suppliers. Please consult your electrician.*

The regulations in Austria prescribe that a pump used in swimming pools or garden ponds with a fixed connection lead, may only be supplied with power by means of a separating transformer, the rated voltage of the secondary output of which does not exceed 220 V.

**If you have any doubts consult an electrician.**

### Electrical connections



**Before operating the pump, have an expert check that one of the electrical safety devices is present. Earthing, neutral connection, earth leakage circuit breakers, etc. must conform to the regulations of your local Electricity Supply Body, and must be in perfect working order.**

**ATTENTION:** *Cross-section and voltage drop of the main supply must comply with VDE regulations.*

The mains voltage should be the same as the voltage given on the name-plate of the pump. In the case of pumps fitted with a plug, a socket with earth connections should be provided above possible flood level. In the case of pumps supplied without a plug, the connection of the supply and pump cable to the terminals of the control panel should be carried out by a qualified person in accordance with the lead identifications given and complying with all relevant regulations.

The unit should be protected by a correctly dimensioned slow blow fuse (suitable for the rated power of the pump). We recommend the use of an overload relay.

### Maintenance



**Before commencing any maintenance work, ensure that all leads to the mains are disconnected and that the pump cannot be inadvertently switched on.**



**To avoid danger if the power cable is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person.**

**ATTENTION:** *The maintenance hints given here are not suitable for DIY repair work, as special technical knowledge is required.*

The Sulzer guarantee is only valid if all repair work has been carried out by a Sulzer authorised workshop and where original Sulzer spare parts have been used.

### General maintenance instructions

Sulzer pumps are reliable products of proven quality, each being subjected to careful final inspection. Lubricated-for-life ball-bearings together with monitoring devices ensure optimum reliability of the pump. It is essential that the pump is installed and operated in accordance with the operating instructions.

Should, however, a fault occur, do not attempt to improvise but call on your Sulzer Service Centre. This applies particularly in the case where the unit is continually switched off by the current overload in the control panel, or by the thermal sensors of the thermo-control system.

For a long running life, we recommend regular checks and cleaning. The Sulzer Service Organisation would be glad to advise you on any special applications and to solve your pumping problems.

### Regulations in DIN EN 12056-4 for the use of lifting stations for the pumping of effluent containing faecal matter.

Automatically operated lifting units are prescribed if:

- The water level in the odour-lock lies below the sewer backwash level.
- Rainwater gullies from areas below the sewer backwash level are present.

The sewer backwash level is the maximum possible water level in the public sewer network, and information on this can be obtained from your Local Authority. If the backwash level has not been fixed by the Local Authority, then the surface level of the roadway at the connection point is taken to be the level.

If the effluent does not give rise to foul odours, then a water-tight connection tank fitted with a lid is acceptable.

**ATTENTION:** *The regulations of DIN 1986/100, EN 12050 and 12056, as well as your own local by-laws should be observed.*

### Cleaning

If the pump is taken out of service in order to prevent deposition of soil or other materials, the pump should be cleaned by pumping clear water.

Clean the float switch of any deposits and check its functioning.





