

Pioneering for You

wilo

Wilo-Rexa MINI3-V05...



zh-CHS 安装及操作说明

en Installation and operating instructions



Rexa MINI3-...-AU
<https://qr.wilo.com/9405>

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1 安全

1.1 关于本说明

本说明是产品的一部分。遵守说明中的规定是正确操作和使用产品的关键：

- 在进行任何操作之前，请仔细阅读说明。
- 始终将本说明保存在容易拿到的地方。
- 请将本说明转交给产品的继任者。
- 遵守所有产品规范。
- 注意产品上的标识。

若不遵守说明可能会造成以下后果：

- 人身危险或财产损失。
- 丧失索赔权。

原版操作说明以英语撰写。本说明的所有其他语言版本均为其译本。

1.2 安全说明标识

在本安装及操作说明中，安全说明显示如下：

- 人身危险：安全说明的前面有相应的符号，并用灰色阴影标出。
- 财产损失：安全说明以信号词打头，不含图标。

信号词

- **危险！**
若不遵守说明，会导致重伤或死亡！
- **警告！**
若不遵守说明，可能导致（重）伤！
- **小心！**
若不遵守说明，可能导致或许无法挽回的财产损失。
- **注意！**
关于产品操作的有用信息

图标

本说明使用以下图标：



电击造成的生命危险



爆炸造成的生命危险



警告 - 健康受损的风险



警告 - 受伤的风险：佩戴防护手套



警告 - 受伤的风险：佩戴面罩



警告 - 受伤的风险：佩戴护目镜



有用信息

1.3 工作人员资格鉴定

- 年满16周岁
- 已阅读且理解安装及操作说明。

儿童和家务能力受限的人

本设备不适合身体、感官或精神能力较弱以及缺乏经验和相关知识的人员（包括儿童）使用，除非有人监督或指导他们使用设备，并负责他们的安全。

应照看好儿童，确保其不会玩弄设备。

1.4 有害健康的流体

死水（如泵井、渗水坑等）中可能滋生有害健康的病菌。有细菌感染的危险！

- 拆卸后，对产品进行彻底清洁和消毒！
- 告知所有人员泵送流体及其造成的危险！

1.5 运输和存放

- 穿戴防护装备！
- 始终使用把手搬运产品！
- 清洁水泵，必要时进行消毒！
 - 污染会滋生病菌。
 - 结垢会导致叶轮堵塞。

1.6 安装

- 穿戴防护装备！
- 请勿安装损坏或有缺陷的产品。
- 如果存在滋生病菌的风险，请注意以下几点：
 - 确保足够的空气流通。
 - 佩戴呼吸保护面罩。
例如：3M 6000系列半面罩，带6055 A2过滤器

1.7 电气连接

- 请勿使用已损坏的接线电缆连接产品！由有资质的电工或客户服务人员更换接线电缆。
- 电源连接需带有安装正确的保护接地导体。
- 安装一个30 mA的漏电断路器（RCD）。

- 电源连接处的保险丝：最大16 A。
- 不带插头的产品：由有资质的电工进行电气连接！

1.8 运行期间

- 严禁泵送纯粹形态下的易燃易爆流体（汽油、煤油等）！
- 如果人员可触碰到泵送流体（可触及的水池^{*}），请勿启动水泵。

*“可触及的水池”释义

人员无需借助工具（如梯子）即可直接进入的安装地点：

- 花园池塘
- 泳池
- 化粪池
- 喷泉等。

注意！适用于游泳池的规范也适用于可触及的水池。

1.9 拆卸

- 穿戴防护装备！
- 不带插头的产品：由有资质的电工将接线电缆与电源断开。
- 根据运行模式和持续时间的不同，外壳部件的温度会超过40 °C (104 °F)。
 - 始终使用把手接触产品。
 - 使产品冷却。
- 彻底清洁装置。
- 如果存在滋生病菌的风险，请注意以下几点：
 - 确保足够的空气流通。
 - 佩戴呼吸保护面罩。例如：3M 6000系列半面罩，带6055 A2过滤器
 - 对产品进行消毒。

1.10 清洁和消毒

- 穿戴防护装备！
防护装备可防止接触到有害健康的病菌和消毒剂。
- 如果使用消毒剂，请遵守生产商的说明！
 - 根据生产商的说明穿戴防护装备！如有疑问，请咨询您的专业经销商。
 - 告知所有人员有关消毒剂及其正确使用方法的信息！

1.11 商业使用

规定用途是家用。因此，本说明仅针对产品的家用。

产品也可用于商业使用。请遵守以下关于商业使用的规定：

- 本安装及操作说明不包含商业使用的必要信息。
- 工作人员接受过操作商业废水处理设施的培训。
- 运营者有责任保证产品符合要求。
- 请勿在以下应用中使用本产品：
 - 变频器操作
 - 软启动控制操作
 - 在易爆环境中操作

1.12 工作流体

密封室内有油。该油用于润滑电机上和水泵侧的密封件。

- 立即吸收泄漏物。
- 如果发生较严重的泄漏，请联系客户服务部。
- 如果密封件损坏，油会流入泵送流体和污水管道。
- 按类型收集废油（不得混合）。在经认证的收集点对油进行弃置。
- 如接触皮肤：用肥皂和水彻底清洗该皮肤部位。如果皮肤发炎，请就医。
- 如接触眼睛：取下隐形眼镜。用水彻底冲洗眼睛。如果眼睛发炎，请就医。
- 如吞咽：如果不慎吞咽，请就医。

2 产品说明及功能

2.1 说明

潜水泵适用于间歇运行模式下的固定式和便携式湿式安装。



Fig. 1: 概览

| | |
|---|------|
| 1 | 把手 |
| 2 | 电机外壳 |
| 3 | 浮子开关 |
| 4 | 水泵壳体 |
| 5 | 出口连接 |
| 6 | 接线电缆 |

Rexa MINI3-V ... -P

带有涡流叶轮的污水泵。出水口带有垂直的螺纹连接和预装配的软管接头。水泵壳体由灰口铸铁制成，叶轮由塑料制成。表面冷却的单相电机（内置运行电容器），带有自开关的电机过热保护。电机外壳由不锈钢制成。充油的密封室采用双重密封：电机侧装有转轴密封，水泵侧装有机械密封。（可拆分的）接线电缆带有Schuko插头（CEE 7/7型）。

Rexa MINI3-V ... -A

带有涡流叶轮的污水泵。出水口带有垂直的螺纹连接和预装配的软管接头。水泵壳体由灰口铸铁制成，叶轮由塑料制成。表面冷却的单相电机（内置运行电容器），带有自开关的电机过热保护。电机外壳由不锈钢制成。充油的密封室采用双重密封：电机侧装有转轴密封，水泵侧装有机械密封。（可拆分的）接线电缆带有浮子开关和Schuko插头（CEE 7/7型）。

Rexa MINI3-V ... -O

带有涡流叶轮的污水泵。出水口带有垂直的螺纹连接和预装配的软管接头。水泵壳体由灰口铸铁制成，叶轮由塑料制成。表面冷却的三相电机带有自开关的电机过热保护。电机外壳由不锈钢制成。充油的密封室采用双重密封：电机侧装有转轴密封，水泵侧装有机械密封。（可拆分的）接线电缆带有裸露电缆端部，用于固定连接到现场控制装置。注意！不带浮子开关和插头的水泵！

2.2 技术数据

| | |
|-------------|-----------------------------------|
| 生产商数据 | 参见型号铭牌 ¹⁾ |
| 电源连接 | 参见型号铭牌 |
| 额定功率 | 参见型号铭牌 |
| 最大扬程 | 参见型号铭牌 |
| 最大流量 | 参见型号铭牌 |
| 启动方法 | 参见型号铭牌 |
| 转速 | 参见型号铭牌 |
| 出口连接* | G 2 IG, 预装配的软管接头： 52 mm (2 in) |
| 运行模式, 浸入式 | S1 |
| 运行模式, 非浸入式 | S3 20% |
| 非浸入式：运行时间 | 2 min |
| 非浸入式：停止运行时间 | 8 min |

| | |
|-----------|-----------------------------|
| 流体温度 | 3 ... 40 °C (37 ... 104 °F) |
| 最大潜水深度 | 7 m (23 ft) |
| 防护等级 | IP68 |
| 绝缘等级 | F |
| 最高开关频率/小时 | 30/h |

代码

* IG=内螺纹, AG=外螺纹

¹⁾ 数据符合ISO 8601

2.3 型号代码

示例 : **Rexa MINI3-V05.09/M05-522/A-10M**

Rexa 污水潜水泵

MINI3 系列

V 涡流叶轮

05 出水口G 2 IG标称尺寸

09 最大扬程, 单位m

M 电源连接类型 :

- M = 单相交流电 (1~ AC)
- T = 三相交流电 (3~ AC)

05 数值/10 = 额定功率P₂, 单位kW

5 主频率 :

- 5 = 50 Hz
- 6 = 60 Hz

22 额定电压代码 :

- 22 = 220 V
- 38 = 380 V

A 电气设备 :

- O = 带裸露电缆端部
- P = 带插头
- A = 带插头和浮子开关

10M 接线电缆的长度

2.4 供货范围

- 水泵
- (预装配的) 软管喷嘴
- 安装及操作说明

2.5 功能**2.5.1 自开关的电机过热保护**

如果电机过热, 水泵会停机。电机冷却后, 水泵自动重启。

2.5.2 浮子开关

The Rexa MINI3-V ... -A配备有一个浮子开关。浮子开关控制水泵的开启和关闭 :

- 浮子在上 : 水泵开启
- 浮子在下 : 水泵关闭

3 应用/使用**3.1 规定用途**

用于在家庭 (家用) 空间内泵送 :

- 不含粪便的污水
 - 盘洗池
 - 淋浴水池/浴缸
 - 洗衣机
- 废水 (含少量沙子和沙砾)

- 雨水
- 排水

3.2 不允许的操作方式



危险

泵送易爆流体会导致爆炸！

严禁泵送纯粹形态下的高度易燃易爆流体（汽油、煤油等）。爆炸会造成生命危险！此水泵不适用于这些流体。

请勿使用水泵泵送：

- 原污水
- 含有粪便的污水
- 饮用水
- 含有硬物（如石头、木材、金属等）的流体
- 含有大量腐蚀性物质（如沙子、沙砾等）的流体

规定用途需要遵守本说明的规定。任何其他用途均不符合规定用途。

4 运输和存放

小心

浸泡过的包装可能会裂开！

产品可能会跌落到地面并损坏。请小心提起湿包装并立即进行更换！

- 穿戴防护装备！
- 使用把手搬运水泵。切勿使用接线电缆搬运或拖拽水泵！
- 清洁水泵，必要时进行消毒。
- 密封出口连接。
- 保护接线电缆，防止其弯折和损坏。
- 运输和存放时，使用原厂包装。
- 仅可包装干燥的水泵。带水或潮湿的水泵可能会使包装变软。
- 存放条件：
 - 最高温度：-15 ... +60 °C (5 ... 140 °F)，最大湿度：90%，非冷凝
 - 推荐温度：5 ... 25 °C (41 ... 77 °F)，相对湿度：40 ... 50%

5 安装及电气连接

5.1 安装方式

- 固定式湿式安装
- 便携式湿式安装

不得按以下方式安装：

- 干式地坑安装
- 卧式安装

5.2 安装

- 穿戴防护装备！
- 请勿安装损坏或有缺陷的水泵。
- 安装地点不会结霜。
- 正确敷设接线电缆。运行期间，不得出现无危险情况（绊倒、损坏等）。
- 浮子开关可以自由移动！

5.2.1 固定式湿式安装

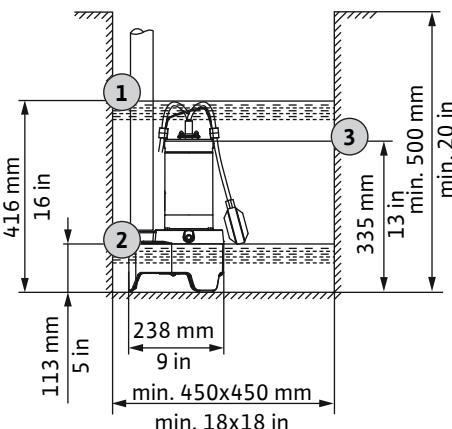


Fig. 2: 安装尺寸和切换点

- | | |
|---|---------------------------------------|
| 1 | 液位：开关打开 |
| 2 | 液位：开关关闭 |
| 3 | 连续运行 (S1) 的最低水位。低于此液位时，只可进行间歇运行 (S3)。 |

进行固定式湿式安装时，直接将水泵安装在压力管上。注意以下几点：

- 连接的压力管必须能够自行支撑。压力管不得由水泵支撑。
 - 运行期间，水泵可能会轻微振动。这种振动必须通过压力管传递至底座。
 - 确保出水口处的无张力连接，请勿将压力管拧得太深。
 - 压力管不得小于出水口。
 - 使用特氟龙胶带密封管道连接。
 - 按照当地法规安装所有规定的阀门（截止阀、止回阀）。
 - 敷设压力管时采取防霜冻措施。
 - 防止空气进入！水泵和管道系统中的空气可能会导致出现输送问题。使用排气系统移除气袋！
 - 为了避免发生从公共污水管道回流的情况，将压力管安装为“管路回线”。
- 管路回线的下端边缘必须位于当地规定的回流水位之上的最高点处！
- ✓ 使用地点已准备就绪。
 - ✓ 已正确安装压力管。
 - ✓ 准备好的管道，长度为从出水口到压力管。
 - ✓ 预装配的软管喷嘴已移除。从出水口拧下软管喷嘴。

1. 将准备好的管道拧入出水口。
2. 将水泵放置在使用地点。
小心！为避免水泵在软底座上出现下沉问题，必须在使用地点放置一个硬底座。
3. 将准备好的管道连接到压力管（如使用一个灵活的软管段）。
4. 将接线电缆安装在压力管处，并将其敷设到插座/电源上。
▶ 水泵安装完毕。

5.2.2 便携式湿式安装

进行便携式湿式安装时，可以将水泵安装在使用地点的任意位置上。注意以下几点：

- 防止水泵在使用时发生倾翻和移动（缓慢挪动）。
- 将压力软管牢牢地固定在软管喷嘴上。
- ✓ 使用地点已准备就绪
- ✓ 压力软管最小内径：53 mm (2")
- ✓ 软管夹内径：55 ... 70 mm (2.2 ... 2.8 in)

- ✓ 检查预装配的软管喷嘴。软管喷嘴已拧入出水口并已拧到底。
1. 将软管夹套到压力软管上。
 2. 将压力软管套到软管喷嘴上。
 3. 使用软管夹，将压力软管安装在软管连接处。
 4. 将水泵放置在使用地点。
小心！为避免水泵在软底座上出现下沉问题，必须在使用地点放置一个硬底座。
 5. 敷设压力软管。将压力软管固定在合适的位置上（如排水口）。小心！如果水泵放置在装满水的集水坑中，浸入时将其稍微倾斜。该动作会使空气从水泵中逸出！
 6. 将接线电缆敷设到插座/电源上。
▶ 水泵安装完毕。

6 电气连接

- 电源连接需带有安装正确的保护接地导体。
- 安装一个30 mA的漏电断路器（RCD）。
- 电源连接保险丝：最大16 A。
- 检查型号铭牌上的电压（U）和频率（f）数据。它们的值必须与电源连接上的数据保持一致。

出现以下情况时请勿连接水泵：

- 接线电缆损坏。
由有资质的电工或客户服务人员更换接线电缆。
- 使用了独立逆变器。
独立逆变器用于自主电源，如太阳能供电。逆变器可产生过电压。过电压可能会毁坏水泵。
- 使用了多头插座或接线板。
- 使用了节能插头。
插头会减少供应给水泵的能源。水泵可能会剧烈升温。

6.1 连接：带插头的水泵

配备带有接地触点的插座（E或F型）。将插头插入插座以连接水泵。



注意

水泵启动或已运行就绪！

如果插头已插入插座，水泵会立即启动或处于运行就绪状态：

- 不带浮子开关的水泵：水泵会立即启动！
- 带浮子开关的水泵：水泵已运行就绪。水泵会根据液位启动！

▶ 建议使用单独的主开关接通和断开插座！

6.2 连接：不带插头的水泵



危险

触电会导致生命危险！

进行电气作业时的操作不当可能导致触电造成的生命危险！

- 由有资质的电工进行电气作业。
- 遵守当地法规。

小心

渗水会造成无法修复的损坏！

如果接线电缆不带插头或电缆末端裸露，则有因进水而损坏的风险。进水会毁坏接线电缆和水泵。切勿将电缆末端浸入流体。存放期间将电缆牢牢密封住。

将水泵永久连接到开关设备上。注意以下几点：

- 将装置正确接地！
- 配备一个电机保护开关！
最低要求是配备一个热继电器或电机保护开关，带有符合当地规定的温度补偿、差值触发和重启锁定功能。
- 安装电源断开装置！
最低要求：带有全极断开功能的主开关。

带单相交流电机的水泵

要将水泵连接至开关设备，请断开插头。按以下步骤将水泵连接至开关设备：

| 芯线颜色 | 开关设备内的端子 |
|--------------|-------------|
| 棕色 (bn) | 火线 (相线) |
| 蓝色 (bl) | 零线 (中性线) |
| 绿/黄色 (gn-ye) | 地线 (保护接地导体) |

安装现场的芯线颜色可有所不同：

- 火线可为黄色 (ye)、绿色 (ge) 或红色 (rd)。
- 零线可为黑色 (bk) 或蓝色 (bl)。

带三相交流电机的水泵

水泵必须连接到顺时针旋转的旋转磁场。在连接前用旋转磁场测试装置检查旋转磁场。如有逆时针旋转的旋转磁场，请纠正电源连接。小心！水泵不得在逆时针旋转的旋转磁场中运行！

按以下步骤将水泵连接至开关设备：

| 芯线颜色 | 开关设备内的端子 |
|--------------|-------------|
| 棕色 (bn) | 火线L1 (U) |
| 黑色 (bk) | 火线L2 (V) |
| 蓝色 (bl) | 火线L3 (W) |
| 绿/黄色 (gn-ye) | 地线 (保护接地导体) |

安装现场的芯线颜色可有所不同：

- 火线L1可为黄色 (ye)。
- 火线L2可为绿色 (gn)。
- 火线L3可为红色 (rd)。

设置电机保护

将电机保护开关设置到额定电流（参见型号铭牌）。

7 试运行



危险

在可触及的水池内触电可导致生命危险！

请勿在有人员接触流体的情况下运行水泵。如果发生故障，触电可导致生命危险！只有在无人员接触流体的情况下，才可启动水泵。



注意

检查入口流量！

最大流入量必须小于水泵的最大输出量。如果流入量更高，则水泵无法完全泵送出流体。集水坑可能发生溢流！

7.1 启动水泵之前

启动水泵前，请检查以下几项：

- 电气连接是否符合规定？
- 接线电缆的敷设是否安全？
- 浮子开关是否可以自由移动？
- 是否遵守了泵送流体的温度规定？
- 是否遵守了潜水深度的规定？
- 压力管和泵井中有无沉积物？
- 压力管中的所有截止阀是否已打开？

7.2 启动和关闭

根据型号启动和关闭水泵：

- 带插头、不带浮子开关的水泵
插头插入插座后，水泵会立即启动。如要关闭水泵，请拔下插头。
- 带插头和浮子开关的水泵
达到开关液位时，水泵自动开启和关闭：
 - 浮子在上：水泵开启。
 - 浮子在下：水泵关闭。
- 不带插头的水泵
操作面板控制水泵的开启和关闭。更多细节请参阅操作面板的安装及操作说明。

7.3 试运转

如果水泵以固定式安装（如化粪池、溢流轴），请进行试运转。通过试运转检查基本情况（流入量，切换点）。试运转必须包括三个泵送循环。

1. 使集水坑溢流：打开入口。
注意！试运转需要的流入量可使用其他水源模拟。
2. 达到开启液位：水泵启动。
3. 达到关闭液位：水泵停止。
4. 再重复两个泵送循环。
▶ 如果三个泵送循环均畅通无阻，即可完成试运转。

注意！如果水泵无法保证每周启动一次，则需每月重复一次试运转。

7.4 运行期间

小心

禁止干转运行！

请勿在无流体（干转运行）的情况下运行水泵。
如果达到残余水位，请关闭水泵。干转运行可能会毁坏密封件并导致水泵受到无法修复的损坏。

请检查以下几点：

- 流入量是否符合水泵的输出量。
- 浮子开关是否正常工作。
- 接线电缆完好无损。
- 水泵无沉积物和结垢。

8 拆卸



危险

有害健康的流体可导致感染风险！

死水中可滋生有害病菌。如果存在滋生病菌的风险，请注意以下几点：

- 确保足够的空气流通。
- 佩戴呼吸保护面罩，例如：3M 6000系列半面罩，带6055 A2过滤器。
- 对产品进行消毒。



- 穿戴防护装备！

- 根据运行模式和时间的不同，外壳部件的温度会超过40 °C (104 °F)。
 - 始终使用把手接触产品。
 - 使产品冷却。
- 彻底清洁装置。

8.1 固定式湿式安装

1. 关闭入口和压力管中的截止阀。

2. 关闭水泵。

带插头的水泵：拔下插头。

水泵固定连接（不带插头）：将水泵与电源断开。危险！由有资质的电工进行电气作业！

3. 断开压力管上的接线电缆。

4. 从压力管上松开带管道的水泵。

5. 使用把手将水泵从使用地点提出。

6. 从出水口拧下管道。

7. 卷起接线电缆并将其与水泵一起存放。

8. 彻底清洁水泵和管道。

▶ 水泵已拆除。

如果水泵保持安装状态，请注意以下几点：

- 防止水泵出现霜冻和结冰：
 - 将水泵完整浸入泵送流体中。
 - 最低环境温度：+3 °C (+37 °F)
 - 最低流体温度：+3 °C (+37 °F)
- 如果长期不使用水泵，请每2个月启动水泵并进行一次泵送过程。该试运转可防止水泵结垢和堵塞。必须在合适的运行条件下进行泵送过程！

如不能保证满足上述要求，请将水泵拆除！

8.2 便携式湿式安装

1. 关闭水泵：拔下插头。

2. 使用把手将水泵从使用地点提出。

3. 松开软管夹并从压力软管上拔下软管喷嘴。

4. 卷起接线电缆并将其与水泵一起存放。

5. 彻底清洁水泵和压力软管。

9 清洁水泵

- ✓ 水泵已拆除。

- ✓ 有消毒剂可供使用。

1. 确保插头或裸露的电缆末端以防水的方式包装和存放！

2. 在流动的清水下冲洗水泵和电缆。
注意！使用消毒剂时，请严格遵守生产商的规范和使用说明！
3. 清洁叶轮和水泵内部时，通过出水口向水泵内部喷水。
4. 在流动的清水下冲洗管道或压力软管等附件。
5. 将地面上的污垢残渣冲入排污管道。
6. 使水泵干燥。
7. 仅可使用湿布清洁插头或裸露的电缆末端！
▶ 水泵已清洁。将水泵包装好并进行存放。

10 维护

- 穿戴防护装备！
- 仅可进行本安装及操作说明中规定的维护作业。
- 在清洁、干燥、光线充足的地方进行维护作业。
- 仅可使用生产商提供的原装部件。若使用非原装部件，生产商将不承担任何责任。
- 应立即收集任何泄漏的流体和工作流体。
- 在经认证的收集点弃置工作流体。

10.1 工作流体

- 容量：220 ml (7.4 US.fl.oz)
- 换油间隔：720个运行小时后或每年1次
- 油类型 (ISO VG 32级)：
 - ELFOLNA DS 22
 - Shell Turbo T 32

10.2 换油

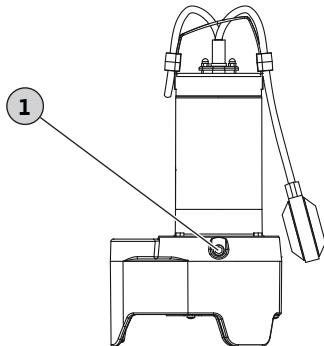


Fig. 3: 密封室换油

1 密封室螺旋塞

- ✓ 佩戴防护手套！
 - ✓ 水泵已拆卸、清洁完毕，必要时进行消毒。
 - ✓ 有耐油的可密封集油罐。
1. 将水泵水平放置在结实的表面上。螺旋塞朝上。警告！存在手被碾压的风险。确保水泵不会倾翻或滑移！
 2. 缓慢旋下螺旋塞。
 3. 将集油罐放在水泵下方。
 4. 排放油：转动水泵，直到开口朝下为止。
 5. 检查油：如果油内有金属碎屑，请通知客户服务部！
 6. 转动水泵，直到开口重新朝上为止。
 7. 注油：通过开口注油。
⇒ 遵守关于油类型和油量的规定！
 8. 清洁螺旋塞，更换新的密封环并重新拧紧。

10.3 大修

在运行1500个小时之后，由客户服务部对水泵进行大修。对所有部件进行磨损检查，更换损坏的部件。

11 故障、原因和排除方法

水泵不启动或者短时间运行后关闭。

1. 电源供应中断
⇒ 检查水泵的电气连接。
⇒ 由有资质的电工检查保险丝/漏电断路器。
2. 电机过热保护跳闸
⇒ 冷却水泵。水泵将自动重启。
⇒ 水泵在开/关状态间切换过于频繁检查浮子开关的电缆长度。
⇒ 泵送流体温度过高。检查温度。如有必要，使用其他水泵。
3. 吸水口/滤网/叶轮瘀塞/堵塞
⇒ 关闭水泵，将其拆卸并清洁。
4. 浮子开关无法正常工作
⇒ 浮子开关必须能够自由移动。

水泵可启动，但不输送流体

1. 压力管/出水口堵塞
⇒ 冲洗压力管至通畅。
⇒ 冲洗压力软管至通畅。
⇒ 去除压力软管中的任何扭结。
2. 止回阀受污
⇒ 关闭水泵，将其拆卸并清洁出水口。
⇒ 更换出现问题的止回阀。
3. 水位过低
⇒ 检查入口。
⇒ 水泵的泵送水位太低。检查浮子开关的电缆长度。
4. 吸水口/滤网瘀塞/堵塞
⇒ 关闭水泵，将其拆卸并清洁。
5. 水泵/压力管中进入空气
⇒ 将水泵稍微倾斜，可排出空气。
⇒ 在压力管中安装排气设备。

水泵运转，但输出量降低。

1. 压力管/出水口堵塞
⇒ 冲洗压力管至通畅。
⇒ 冲洗压力软管至通畅。
⇒ 去除压力软管中的任何扭结。
2. 吸水口/滤网瘀塞/堵塞
⇒ 关闭水泵，将其拆卸并清洁。
3. 水泵/压力管中进入空气
⇒ 将水泵稍微倾斜，可排出空气。
⇒ 在压力管中安装排气设备。
4. 有磨损迹象
⇒ 请联系客户服务部。

客户服务

如果以上各项措施未能排除故障,请联系客户服务部。如果向客户服务部寻求支持,可能会产生费用!更多信息请联系客户服务部。

12 废弃处置

12.1 有关回收废旧电气和电子产品的信息

正确废弃处置和恰当回收本产品,能避免破坏环境或危害人身健康。



注意

禁止与生活垃圾一起处置!

此符号表示不要在生活垃圾中处置电气和电子产品。该符号出现在产品上、包装上或随附文件上。

为确保产品的妥善搬运、回收和废弃处置,请注意以下几点:

- 只能在指定的经认证的回收点移交产品。
- 请遵守当地适用法规!

有关妥善废弃处置的信息,请咨询当地市政厅、最近的废弃处置场或您的零售商。如需更多关于回收的信息,请访问
www.wilo-recycling.com。

12.2 油



警告

错误地废弃处置油类产品可破坏环境并危害健康!

油可对健康和环境造成危害!不得将油与生活垃圾仪器处理,或排放到污水处理系统中!将油收集到耐油的可密封集油罐中并交由经认证的回收点进行弃置。

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1 Safety

1.1 About these instructions

These instructions form part of the product. Compliance with the instructions is essential for correct handling and use:

- Before all activities, read the instructions carefully.
- Always keep the instructions in an accessible place.
- Pass the instructions on to a subsequent owner.
- Observe all product specifications.
- Observe the markings on the product.

Failure to follow the instructions results in:

- Danger to persons or damage to property.
- Loss of claims for damages.

The language of the original operating instructions is English. All other languages of these instructions are translations of the original operating instructions.

1.2 Identification of safety instructions

In these installation and operating instructions, safety instructions are displayed as follows:

- Danger to persons: Safety instructions are preceded by a corresponding symbol and are shaded in grey.
- Damage to property: Safety instructions start with a signal word and are displayed without a symbol.

Signal words

• DANGER!

Failure to follow the instructions will result in serious injuries or death!

• WARNING!

Failure to follow the instructions can lead to (serious) injury!

• CAUTION!

Failure to follow the instructions can lead to potentially irreparable property damage.

• NOTICE!

Useful information on handling the product

Symbols

These instructions use the following symbols:



Danger to life due to electric shock



Danger to life due to explosion



Warning – risk of health damage



Warning – risk of injury: wear protective gloves



Warning – risk of injury: wear face mask



Warning – risk of injury: wear safety goggles



Useful information

1.3 Personnel qualifications

- Persons aged 16 and over
- Have read and understood the installation and operating instructions.

Children and persons with limited abilities in the household

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

1.4 Fluids hazardous to health

In stagnant water (for example: pump sump, soakaway, and so on) germs which are hazardous to health can form. There is a danger of bacterial infections!

- Clean and disinfect the product thoroughly after removal!
- Inform all persons about the pumped fluid and the danger it poses!

1.5 Transport and storage

- Wear protective equipment!
- Always carry the product by the handle!
- Clean product and disinfect if necessary!
 - Dirt fosters the formation of germs.
 - Incrustations lead to the impeller becoming blocked.

1.6 Installation

- Wear protective equipment!
- Do not install damaged or defective products.
- If there is a risk of germ formation, observe the following points:
 - Ensure sufficient air exchange.
 - Wear a breathing protection mask.
For example: Half mask 3M series 6000 with filter 6055 A2

1.7 Electrical connection

- Do not connect products with a damaged connection cable! Replace the connection cable by a qualified electrician or the customer service.
- Mains connection with correctly installed protective earth conductor.
- Install a residual-current device (RCD) with 30 mA.
- Fuse protection at mains connection: max. 16 A.
- **Product without plug:** Carry out the electrical connection by a qualified electrician!

1.8 During operation

- The pumping of highly inflammable and explosive fluids (petrol, paraffin, and so on) in their pure form is strictly prohibited!
- If persons come into contact with the pumped fluid (accessible basins*), do not switch on the product.

*Definition of “accessible basins”

Installation sites that can be walked on and directly accessed without tools (for example, ladders):

- Garden ponds
- Paddling pools
- Cesspools
- Fountains, and so on.

NOTICE! The specifications applicable to Swimming pools also apply to accessible basins.

1.9 Removal

- Wear protective equipment!
- **Product without plug:** Disconnect the connection cable from the mains by a qualified electrician.
- Depending on the operating mode and duration, the housing parts become hotter than 40 °C (104 °F).
 - Only touch the product at the carrying handle.
 - Cool down the product.
- Clean the device thoroughly.
- If there is a risk of germ formation, observe the following points:
 - Ensure sufficient air exchange.
 - Wear a breathing protection mask. For example: Half mask 3M series 6000 with filter 6055 A2
 - Disinfect product.

1.10 Clean and disinfect

- Wear protective equipment!
The protective equipment prevents contact with germs that are hazardous to health and the disinfectant.
- If a disinfectant is used, follow the manufacturer instructions!
 - Wear protective equipment according to the manufacturer instructions! If in doubt, ask your specialist dealer.
 - Inform all persons about the disinfectant and how to use it correctly!

1.11 Commercial use

The intended use is for domestic use. The instructions therefore refer only to the domestic use of the product.

The product can also use in commercial applications. Observe the following about commercial use:

- These installation and operating instructions do not contain the necessary information for commercial use.

- The staff is trained in the operation of commercial Wastewater facilities.
- The operator is responsible that the product meets the requirements.
- Do not** use the product in the following applications:
 - Frequency converter operation
 - Operation on soft start control
 - Operation within explosive atmospheres

1.12 Operating fluid

The oil is in the sealing chamber. The oil lubricates the seal on the motor and pump side.

- Absorb leakage immediately.
- If larger leakage occurs, contact customer service.
- If the seal is defective, the oil reaches the pumped fluid and the sewer.
- Collect waste oil by type (unmixed). Dispose the oil at a certified collection point.
- Skin contact:** Rinse skin areas thoroughly with soap and water. If skin irritation occurs, consult a doctor.
- Contact with eyes:** Remove the contact lenses. Rinse eye thoroughly with water. If eye irritation occurs, consult a doctor.
- Ingestion:** If swallowed, consult a doctor.

2 Product description and function

2.1 Description

Submersible pump for stationary and portable wet well installation in intermittent operation.



Fig. 1: Overview

| | |
|---|----------------------|
| 1 | Handle |
| 2 | Motor housing |
| 3 | Float switch |
| 4 | Pump housing |
| 5 | Discharge connection |
| 6 | Connection cable |

Rexa MINI3-V ... -P

Sewage pump with vortex impeller. Discharge port with vertical threaded connection and pre-assembled hose nipple. Pump housing made of grey cast iron, impeller made of plastic. Surface-cooled single-phase motor (operating capacitor integrated) with self-switching thermal motor monitoring. Motor housing made of stainless steel. Oil-filled sealing chamber with double sealing: rotary shaft seal on motor side, mechanical seal on pump side. Connection cable (detachable) with shockproof plug (type CEE 7/7).

Rexa MINI3-V ... -A

Sewage pump with vortex impeller. Discharge port with vertical threaded connection and pre-assembled hose nipple. Pump housing made of grey cast iron, impeller made of plastic. Surface-cooled single-phase motor (operating capacitor integrated) with self-switching thermal motor monitoring. Motor housing made of stainless steel. Oil-filled sealing chamber with double sealing: rotary shaft seal on motor side, mechanical seal on pump side. Connection cable (detachable) with float switch and shockproof plug (type CEE 7/7).

Rexa MINI3-V ... -O

Sewage pump with vortex impeller. Discharge port with vertical threaded connection and pre-assembled hose nipple. Pump housing made of grey cast iron, impeller made of plastic. Surface-cooled three-phase motor with self-switching thermal motor monitoring. Motor housing made of stainless steel. Oil-filled sealing chamber with double sealing: rotary shaft seal on motor side, mechanical seal on pump side. Connection cable (detachable) with bare cable end, for fixed connection to on-site controls. **NOTICE! Pump without float switch and plug!**

2.2 Technical data

| | |
|--------------------|--------------------------------|
| Manufacturer date | See rating plate ¹⁾ |
| Mains connection | See rating plate |
| Rated power | See rating plate |
| Max. delivery head | See rating plate |
| Max. volume flow | See rating plate |
| Starting method | See rating plate |
| Speed | See rating plate |

| | |
|------------------------------|---|
| Discharge connection* | G 2 IG, pre-assembled hose nipple: 52 mm (2 in) |
| Operating mode, immersed | S1 |
| Operating mode, non-immersed | S3 20% |
| Non-immersed: operating time | 2 min |
| Non-immersed: shutdown time | 8 min |
| Fluid temperature | 3 ... +40 °C (37 ... 104 °F) |
| Max. immersion depth | 7 m (23 ft) |
| Protection class | IP68 |
| Insulation class | F |
| Max. switching frequency /h | 30/h |

Key

* IG = female thread, AG = male thread

¹⁾ Date format according to ISO 8601

2.3 Type key

Example: Rexa MINI3-V05.09/M05-522/A-10M

Rexa Submersible sewage pump

MINI3 Series

V Vortex impeller

05 Nominal size of discharge port G 2 IG

09 Max. delivery head in m

M Mains connection version:

- M = single-phase alternating current (1~ AC)
- T = three-phase alternating current (3~ AC)

05 Value/10 = rated power P₂ in kW

5 Mains frequency:

- 5 = 50 Hz
- 6 = 60 Hz

22 Code for rated voltage:

- 22 = 220 V
- 38 = 380 V

A Electrical equipment:

- O = with bare cable end
- P = with plug
- A = with plug and float switch

10M Length of connection cable

2.4 Scope of delivery

- Pump
- Hose nozzle (pre-assembled)
- Installation and operating instructions

2.5 Functions

2.5.1 Self-switching thermal motor monitoring

If the motor becomes too hot, the pump is deactivated. After the motor has cooled down, the pump is automatically switched on again.

2.5.2 Float switch

The Rexa MINI3-V ... -A is equipped with a float switch. The float switch takes the pump on and off:

- Float up: Pump on
- Float down: Pump off

3 Application/use

3.1 Intended use

For the pumping in household (domestic) areas of:

- Sewage **without** faeces
 - Wash basins
 - Shower basins/bathtubs
 - Washing machines
- Wastewater (with small amounts of sand and gravel)
 - Rainwater
 - Drainage water

3.2 Improper use



DANGER

Explosion due to pumping of explosive fluids!

Pumping of highly flammable and explosive fluids (gasoline, kerosene, ...) in pure form is strictly prohibited. There is a danger to life due to explosion! The pump is not designed for these fluids.

Do not use the pump for pumping of:

- Untreated sewage
- Sewage with faeces
- Drinking water
- Fluids containing hard components (such as stones, wood, metal, ...)
- Fluids containing high quantities of abrasive contents (such as sand, gravel, ...)

Intended use requires compliance with this manual. Any other use is non-compliant with the intended use.

4 Transport and storage

CAUTION

Soaked packaging may tear!

The product may fall on the ground and damage. Lift wet packaging carefully and replace it immediately!

- Wear protective equipment!
- Carry the pump by the handle. Never carry or pull the pump on the connection cable!
- Clean the pump and disinfect if necessary.
- Seal the discharge connection.
- Protect the connection cable against kinking and damage.
- Use original packaging for transport and storage.
- Pack only the dry pump. A wet or humid pump may soften the packaging.
- Storage conditions:
 - Maximum: -15 ... +60 °C (5 ... 140 °F), max. humidity: 90 %, non-condensing
 - Recommended: 5 ... 25 °C (41 ... 77 °F), relative humidity: 40 ... 50 %

5 Installation and electrical connection

5.1 Installation types

- Stationary wet well installation

- Portable wet well installation

The following installation types are **not** permitted:

- Dry well installation
- Horizontal installation

5.2 Installation

- Wear protective equipment!
- Do not install a damaged or defective pump.
- Frost-free location.
- Lay the connection cable properly. No danger situations during operation (stumbling, damage, and so on).
- Float switch capable to move freely!

5.2.1 Stationary wet well installation

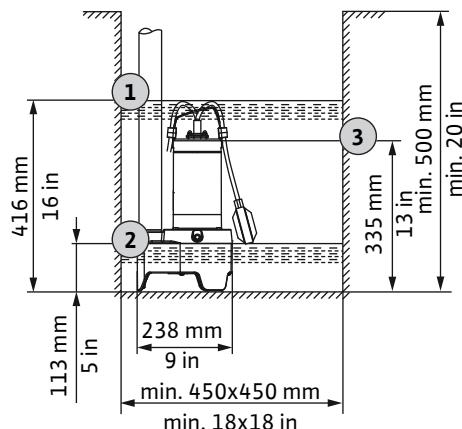


Fig. 2: Installation dimensions and switching points

| | |
|---|---|
| 1 | Level: switch on |
| 2 | Level: switch off |
| 3 | Minimum water level for continuous operation (S1). Below this level only intermittent operation (S3). |

For stationary wet well installation, install the pump directly at the pressure pipe. Observe the following points:

- The connected pressure pipe is self-supporting. Do not support the pressure pipe at the pump.
- During operation, the pump may vibrate slightly. These vibrations must transfer via the pressure pipe to the foundation.
- Ensure a stress-free connection at the discharge port – do not screw the pipe in too deep.
- The pressure pipe must not be smaller than the discharge port.
- Seal pipe connections with Teflon tape.
- Install all specified valves in accordance with local requirements (gate valve, non-return valve).
- Lay the pressure pipe frost-proof.
- Avoid air intake! Air in the pump and in the pipe system can lead to delivery problems. Remove air pockets using ventilation systems!
- Install the pressure pipe as a “pipe loop” to avoid backflow from the public sewer.

At its highest point, the bottom edge of the pipe loop must be above the locally determined backflow level!

- Place of use is prepared.
- Pressure pipe properly installed.
- Prepared pipe, with the length from discharge port to pressure pipe.
- Pre-assembled hose nozzle removed. Unscrew the hose nozzle from the discharge port.

- Screw the prepared pipe into the discharge port.
- Place the pump at the place of use.
CAUTION! To prevent the pump from sinking on soft substrate, use a hard underlay at the place of use.
- Connect the prepared pipe to the pressure pipe (for example, using a flexible hose section).
- Mount the connection cable at the pressure pipe and lay it to the socket/power supply.
▶ Pump is installed.

5.2.2 Portable wet well installation

At portable wet well installation, the pump can be installed at any point at the place of use. Observe the following points:

- Secure the pump against falling over and moving (creeping) during use.
- Fasten securely the pressure hose at the hose nozzle.
- ✓ Place of use is prepared
- ✓ Min. inside diameter of pressure hose: 53 mm (2")
- ✓ Inside diameter of hose clip: 55 ... 70 mm (2.2 ... 2.8 in)
- ✓ Check the pre-assembled hose nozzle. The hose nozzle is screwed into the pressure port as far as it goes.
- Slide the hose clip over the pressure hose.
- Slide the pressure hose onto the hose nozzle.
- Mount the pressure hose at the hose connection using the hose clip.
- Position the pump at the place of use.
CAUTION! To prevent the pump from sinking on soft substrate, use a hard underlay at the place of use.
- Lay the pressure hose. Fasten the pressure hose at an appropriate place (for example, drainage). **CAUTION! If the pump places in a filled pit, hold the pump at a slight angle during immersing. This action allows the air to escape from the pump!**
- Lay the connection cable to the socket/power supply.
▶ Pump is installed.

6 Electrical connection

- Mains connection with correctly installed protective earth conductor.
- Install a residual-current device (RCD) with 30 mA.
- Mains connection fuse protection: max. 16 A.
- Check voltage (U) and frequency (f) data on the rating plate. The values must correspond to the data of the mains connection.

Do **not** connect the pump if:

- The connection cable is damaged. Replace the connection cable by a qualified electrician or the customer service.
- A stand-alone inverter is in use. A stand-alone inverter is used in autonomous power supplies, for example, solar power supply. An inverter can generate overvoltages. Overvoltages may destroy the pump.
- A multiple plug socket or power strip is in use.
- An energy-saving plug is in use. The plug reduces the energy supply to the pump. The pump may heat up too much.

6.1 Connection: Pump with plug

Provide a socket (type E or type F) with earthing contact. To connect the pump, insert the plug into the socket.



NOTICE

Pump starts or is ready for operation!

If the plug is connected to the socket, the pump starts immediately or is ready for operation:

- Pump **without float switch**: pump starts on immediately!
- Pump **with float switch**: pump is ready for operation. The pump starts depending on the fill level!
 - ▶ We recommend switching on and off the socket using a separate main switch!

6.2 Connection: Pump without plug



DANGER

Danger to life due to electrical shock!

Improper conduct when carrying out electrical work can lead to danger to life due to electric shock!

- Carry out electrical work by a qualified electrician.
- Observe local regulations.

CAUTION

Irreparable damage as a result of water penetration!

If the connection cable is without plug or with bare cable ends, there is a risk of damage due to water ingress. Water ingress destroys both, the connection cable and the pump. Never immerse the cable end in fluid. Firmly seal the cable end during storage.

Connect the pump permanently to a switchgear. Observe the following points:

- Earth the device properly!
 - Provide a motor protection switch!
- The minimum requirement is a thermal relay or motor protection switch with temperature compensation, differential trip, and reactivation lock according to local regulations.
- Install a mains disconnection device!
- Minimum requirement: Main switch with all-pole disconnection.

Pump with single-phase AC motor

To connect the pump to the switchgear, cut off the plug. Connect the pump to a switchgear as follows:

| Wire colour | Terminal in switchgear |
|----------------------|---|
| Brown (bn) | Live wire (phase conductor) |
| Blue (bl) | Neutral wire (neutral conductor) |
| Green/yellow (gn-ye) | Earth wire (protective earth conductor) |

The wire colours on installation site can be different:

- Live wire can be Yellow (ye), Green (ge), or Red (rd).
- Neutral wire can be Black (bk) or Blue (bl).

Pump with three-phase AC motor

The pump must connect to a clockwise-rotating field. Check the rotating field with a rotating-field-testing device before connection. If a counter-clockwise rotating field is available, correct mains connection. **CAUTION! An operation with a counter-clockwise rotating field is not allowed!**

Connect the pump to a switchgear as follows:

| Wire colour | Terminal in switchgear |
|----------------------|------------------------------------|
| Brown (bn) | phase L1 (U) |
| Black (bk) | phase L2 (V) |
| Blue (bl) | phase L3 (W) |
| Green/yellow (gn-ye) | Earth (protective earth conductor) |

The wire colours on installation site can be different:

- Phase L1 can be Yellow (ye).
- Phase L2 can be Green (gn).
- Phase L3 can be Red (rd)

Setup motor protection

Set the motor protection switch to the rated current (see rating plate).

7 Commissioning



DANGER

Danger to live due to electrical shock in accessible basins!

Do not operate the pump if there are persons in contact with the fluid. If a fault occurs, be danger to live due to electric shock! Only start the pump when there are no persons in contact with the fluid.



NOTICE

Check inlet quantity!

The maximum inflow must be smaller than the maximum delivery rate of the pump. If the inflow rate is higher, the pump cannot pump out the fluid complete. The pit can overflow!

7.1 Before switch on the pump

Check the following before starting the pump:

- Is the electrical connection carry out in accordance with regulations?
- Is the connection cable lay safely?
- Can the float switch move freely?
- Temperature of the pumped fluid observed?
- Immersion depth observed?
- Are the pressure pipe and pump sump free of deposits?
- All gate valves in the pressure pipe open?

7.2 Switching on and off

The pump switch on and off depending on the version:

- Pump **with** plug, **without** float switch
The pump switch on immediately after inserting the plug into the socket. To switch off the pump, pull the plug.
- Pump **with** plug **and** float switch
The pump switch on and off automatically on reaching the switching level:
 - Float up: Pump on.
 - Float down: Pump off.
- Pump **without** plug
The control panel switch the pump on and off. Read the installation and operating instructions for the control panel for further details.

7.3 Test run

If the pump is installed stationary (for example, cesspool, overflow shaft), carry out a test run. Check the basic conditions (inflow quantity, switching points) with the test run. The test run must include three pump cycles.

- Flood the pit: Open inlet.
NOTICE! The required inflow quantity for the test run can be simulating using another water source.
- Switch on level is reached: pump starts.
- Switch off level reached: pump stops.
- Repeat two more pumping cycles.
► After three complete pump cycles without problems, the test run is finished.

NOTICE! If the pump does not switch on once a week, repeat the test run every month.

7.4 During operation

CAUTION

Dry run is not allowed!

Do not run the pump without fluid (dry run). If the residual water level is reached, switch off the pump. Dry running may destroy the seal and cause the pump to be irreparably damaged.

Check the following points:

- Inflow quantity corresponds to the pump delivery rate.
- Float switch operates correctly.
- Connection cable is not damaged.
- Pump is free from deposits and incrustations.

8 Removal



DANGER

Risk of infection due to hazardous fluids to health!

Hazardous germs can form in standing waters. If there is a risk of germ formation, observe the following points:

- Ensure sufficient air exchange.
- Wear a breathing protection mask, for example, Half mask 3M series 6000 with filter 6055 A2.
- Disinfect product.

- Wear protective equipment!
- Depending on the operating mode and operation time, the housing parts become hotter than 40 °C (104 °F).
 - Only touch the product by the carrying handle.
 - Cool down the product.
- Clean the device thoroughly.

8.1 Stationary wet well installation

- Close the gate valve in the inlet and pressure pipe.
- Switch off pump.
Pump **with** a plug: Pull the plug.
Pump firmly connected(**without** plug): Disconnect the pump from the mains. **DANGER! Carry out electrical work by a qualified electrician!**
- Disconnect the connection cable from the pressure pipe.
- Release the pump with the pipe from the pressure pipe.
- Lift the pump by the handle out of the place of use.
- Unscrew the pipe from the discharge port.
- Coil up the connection cable and store it with the pump.
- Clean pump and pipe thoroughly.
 - Pump removed.

If the pump remains installed, observe the following points:

- Protect pump from frost and ice:
 - Immerse the pump completely in the pumped fluid.
 - Min. ambient temperature: +3 °C (+37 °F)
 - Min. fluid temperature: +3 °C (+37 °F)
- If the pump is not used for a prolonged period, switch on pump and carry out one pumping process every 2 months. This test run prevents for incrustations and clogging. Only carry out the pumping process under suitable operating conditions!

If the former points are not guaranteed, remove the pump!

8.2 Portable wet well installation

- Switching off the pump: Pull the plug.
- Lift the pump by the handle out of the place of use.
- Release the hose clip and pull the pressure hose off the hose nozzle.
- Coil up the connection cable and store it with the pump.
- Clean pump and pressure hose thoroughly.

9 Cleaning pump

- ✓ Pump removed.
- ✓ Disinfectant is available.

- Ensure that the plug or bare cable end is packed and stored in a watertight manner!
- Rinse the pump and cable with clean, running water.
NOTICE! When using disinfectants, strictly observe the manufacturer specifications and instructions for use!
- To clean the impeller and the pump interior, guide the water jet inside through the discharge port.
- Rinse attachments such as the pipe and pressure hose with clean, running water.
- Flush any dirt residue on the floor into the sewage drain.
- Dry out the pump.

7. Only clean the plug or bare cable end with a damp cloth!

► Pump cleaned. Pack and store the pump.

10 Maintenance

- Wear protective equipment!
- Only carry out the maintenance work specified in these installation and operating instructions.
- Carry out maintenance work in a clean, dry, and well-lit location.
- Use only original parts from the manufacturer. The use of any non-original parts releases the manufacturer from any liability.
- Collect any leakage of fluid and operating fluid immediately.
- Dispose of the operating fluid at certified collection points.

10.1 Operating fluid

- Capacity: 220 ml (7.4 US.fl.oz)
- Interval for oil change: After 720 operating hours or 1x per year
- Oil types (ISO VG class 32):
 - ELFOLNA DS 22
 - Shell Turbo T 32

10.2 Oil change

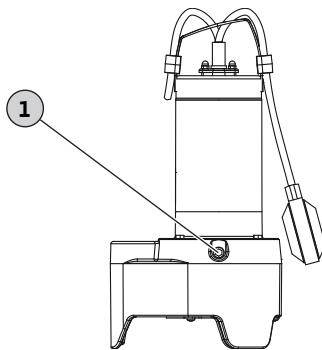


Fig. 3: Sealing chamber oil change

1 Screw plug sealing chamber

- ✓ Wear protective gloves!
- ✓ Pump is removed, cleaned and if necessary disinfected.
- ✓ Oil-resistant sealable collector tank is accessible.
- 1. Position the pump horizontally on a firm surface. The screw plug is on top. **WARNING! Risk of hands being crushed. Make sure that the pump cannot fall over or slip!**
- 2. Unscrew the screw plug slowly.
- 3. Place a collector tank underneath the pump.
- 4. Draining the oil: rotate the pump until the opening points downwards.
- 5. Checking the oil: notify customer service if the oil contains metal swarf!
- 6. Rotate the pump until the opening points upwards again.
- 7. Filling the oil: fill in the oil through the opening.
⇒ Comply with requirements concerning oil type and quantity!
- 8. Clean the screw plug, replace the seal ring with a new one, and fully screw it in.

10.3 General overhaul

General overhaul of the pump after 1,500 operating hours by customer service. All components are checked for wear and damaged components are replaced.

11 Faults, causes and remedies

Pump not starting or switches off after a short time.

1. Interrupted power supply
 - ⇒ Check the electrical connection of the pump.
 - ⇒ Check fuses/residual-current devices by a qualified electrician.
2. Thermal motor monitoring tripped.
 - ⇒ Cool down the pump. The pump starts automatically.
 - ⇒ Pump switches On/Off too frequently. Check the cable length of the float switch.
 - ⇒ Excessive fluid temperature. Check the temperature. If necessary, use a different pump.
3. Suction port,strainer/impeller silted/clogged.
 - ⇒ Shut down the pump, remove it and clean it.
4. Float switch not operational.
 - ⇒ The float switch must be able to move freely.

Pump starts up, but does not supply fluid.

1. Pressure pipe/discharge port clogged.
 - ⇒ Flush out the pressure pipe.
 - ⇒ Flush out the pressure hose.
 - ⇒ Remove any kinks in the pressure hose.
2. Swing check valve contaminated.
 - ⇒ Shut down the pump, remove it and clean the discharge port.
 - ⇒ Replace faulty swing check valve.
3. Water level too low.
 - ⇒ Check inlet.
 - ⇒ Pump is pumping at a too low level. Check the cable length of the float switch.
4. Suction port,strainer silted/clogged.
 - ⇒ Shut down the pump, remove it and clean it.
5. Air in the pump/pressure pipe.
 - ⇒ To escape the air, position the pump at a slight angle.
 - ⇒ Install a bleed unit in the pressure pipe.

Delivery rate drops while the pump is running.

1. Pressure pipe/discharge port clogged
 - ⇒ Flush out the pressure pipe.
 - ⇒ Flush out the pressure hose.
 - ⇒ Remove any kinks in the pressure hose.
2. Suction port,strainer silted/clogged
 - ⇒ Shut down the pump, remove it and clean it.
3. Air in the pump/pressure pipe
 - ⇒ To escape the air, position the pump at a slight angle.
 - ⇒ Install a bleed unit in the pressure pipe.
4. Signs of wear
 - ⇒ Contact customer service.

Customer service

If the points listed here do not rectify the fault, contact customer service. Costs may be incurred when using customer service support! Contact customer services for more information.

12 Disposal

12.1 Information on the collection of used electrical and electronic products

Proper disposal and appropriate recycling of this product avoid environmental damage and dangers to your personal health.



NOTICE

Do not dispose in domestic waste!

This symbol means do not dispose the electrical and electronic product in domestic waste. The symbol is included on the product, the packaging, or the accompanying documentation.

Note the following points for proper handling, recycling, and disposal of the product:

- Only hand over the product at designated, certified collection points.
- Observe the locally applicable regulations!

Consult your local municipality, the nearest waste disposal site, or your retailer for information of proper disposal. See www.wilo-recycling.com for more information about recycling.

12.2 Oil



WARNING

Risk of environmental and health damage due to incorrect disposal of oils!

Oil is harmful to health and the environment! Do not dispose oil with domestic waste or in the sewage system! Collect the oil in a sealable, oil-resistant container and dispose it at a certified collection point.



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