

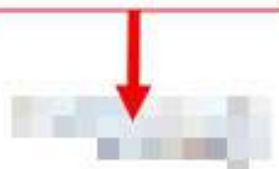
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Product  
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# Structured table of contents according to product life cycle

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## 2. Introduction

### 2.1. Scope and definitions

This manual contains information of installation, operation and maintenance instructions for the standard/safe area Liquid Ring Vacuum Pumps (abbreviated to 'liquid ring pump(s)' or 'pump(s)' in the remainder of this manual).

You must use your pump as specified in this manual. Read this manual before you install and operate your pump.

The units used throughout this manual conform to the SI international system of units of measurement.

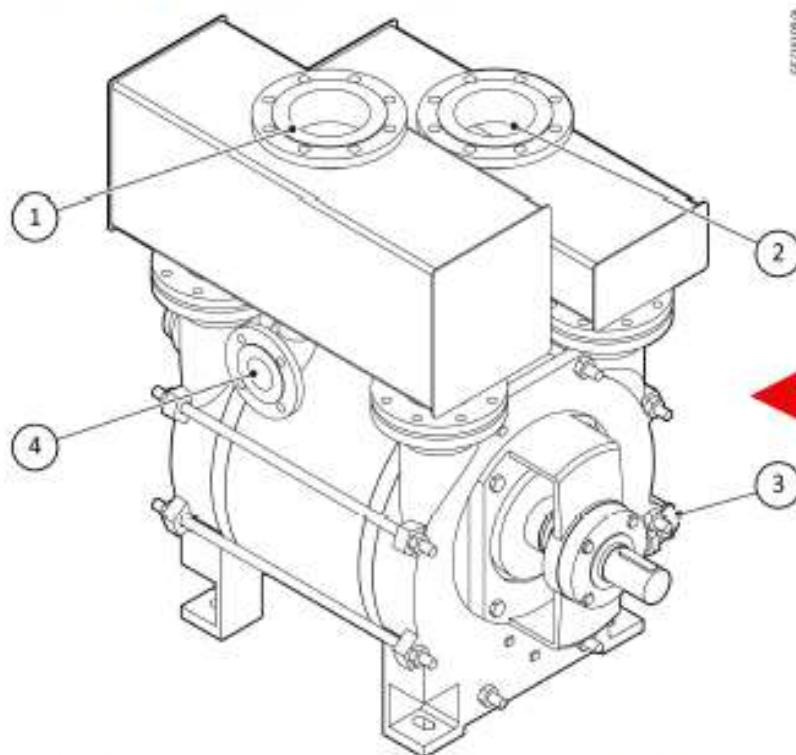
The pump identification and rating plate (refer to the system manual) have specific details about the pump which includes the pump type, part number and serial number.

### 2.2. The liquid ring pump

The standard liquid ring pumps are suitable for pumping a wide range of non-flammable gases and vapours, subject to the restrictions specified in *Abnormal operation* on page 10.

Standard pumps have packed gland or mechanical seals. Each gland/seal has its own seals flush supply, provided internally from the sealing liquid ring.

**Figure 1** Liquid ring pump - 2BE1



- 1. Inlet
- 3. Sealing liquid inlet

- 2. Outlet
- 4. Drain

Illustration

## Procedural writing

### 8. Storage

#### 8.1. Preparation



##### **WARNING: USE PERSONAL PROTECTIVE EQUIPMENT**

If the pump has been used with a water-based sealing liquid, harmful bacteria may have propagated in the pump. Make sure that you wear the appropriate Personal Protective Equipment (PPE) when you prepare the pump for storage.

Use the following procedure to remove the pump from your system for storage:

1. Shut down the pump as described in [Shut down](#) on page 37.
2. Where necessary, disconnect the drive and transmission system from the pump drive shaft: refer to the manufacturer's instructions supplied with your transmission system.
3. Purge your vacuum system and the pump with dry nitrogen and disconnect the pump from your vacuum and discharge system.
4. Place and secure protective covers over the pump process inlet, outlet and sealing liquid connections.
5. Use suitable lifting equipment to move the pump to its storage area: refer to [Locate the pump](#).
6. Store the pump. Refer to [Short term storage](#) on page 45 or [Long term storage](#) on page 45.

#### 8.2. Short term storage

If the pump is to be stored for less than two months:

- Store the pump indoors, in cool, dry conditions, at an ambient temperature of more than 5 °C (40 °F).
- Every 10 days or less, turn the pump drive shaft through three or four revolutions, to turn the pump and prevent seizure.

When required for use, prepare and install the pump as described in [Installation](#).

#### 8.3. Long term storage



##### **WARNING: USE PERSONAL PROTECTIVE EQUIPMENT**

Make sure that you wear the appropriate Personal Protective Equipment (PPE) when you drain the pump, if the contaminated sealing liquid is classified as hazardous, or if the pump is used with a water-based sealing liquid (in which case, harmful bacteria may have propagated inside the pump)

##### **Note:**

*If the pump is to be stored for more than 6 months, consult with us or the supplier.*

If the pump is to be stored for two months or more: