Leybold

Purge Upgrade Kit

NOVADRY and VARODRY OEM

Operating instructions 300934449_002_C0

Part No.
111005A01

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Product warranty and limit of liability are dealt with in our standard terms and conditions of sale or negotiated contract under which this document is supplied.

You must use this product as described in this manual. Read the manual before you install, operate, or maintain the product.

Contents

1 Safety and compliance. 4

1.1 Definition of Warnings and Cautions. 4

1.2 Safety symbols. 5

2 Introduction. 6

3 Technical data. 9

4 Installation. 10

4.1 Installation on the pump. 10

5 Accessories. 11

6 Disposal. 12

Safety and compliance

1 Safety and compliance

1.1 Definition of Warnings and Cautions

NOTICE:

For safe operation from the start, read these instructions carefully before you install or commission the equipment and keep them safe for future use.



Read all the safety instructions in this section and the rest of this manual carefully and make sure that you obey these instructions. The equipment must only be operated and maintained by trained personnel in the proper condition and as described in this instruction manual.

Obey local and state requirements and regulations. If you have any questions about safety, operation or maintenance of the device, please contact our nearest subsidiary.

Important safety information is highlighted as warning and caution instructions. Obey these instructions.



WARNING:

If you do not obey a warning, there is a risk of injury or death. Different symbols are used according to the type of hazard.



CAUTION:

If you do not obey a caution, there is a risk of minor injury, damage to equipment, related equipment or process.



NOTICE:

Information about properties or instructions for an action which, if ignored, will cause damage to the pump or the system.

We reserve the right to change the design and the stated data. The illustrations are not binding.

Keep the instructions for future use.

1.2 Safety symbols

The safety symbols on the products shows the areas where care and attention is necessary.

The safety symbols that follow are used on the product or in the product documentation.

	Warning/Caution An appropriate safety instruction must be followed or caution to a potential hazard exists.
	Warning - Hot surfaces Identifies a potential hazard from a hot surface.
	Warning - Pressurised The equipment contains pressurised gases/liquids.

Introduction

2 Introduction

The purge upgrade kit has been designed for safe and efficient operation when used properly and in accordance with these operating instructions. It is the responsibility of the user to carefully read and strictly observe all safety precautions described in this manual.

The function of the purge upgrade kit is to supply pressurised gas to the bearings and shaft seals of the pump.

It consists of two components:

1. Seal purge exhaust side

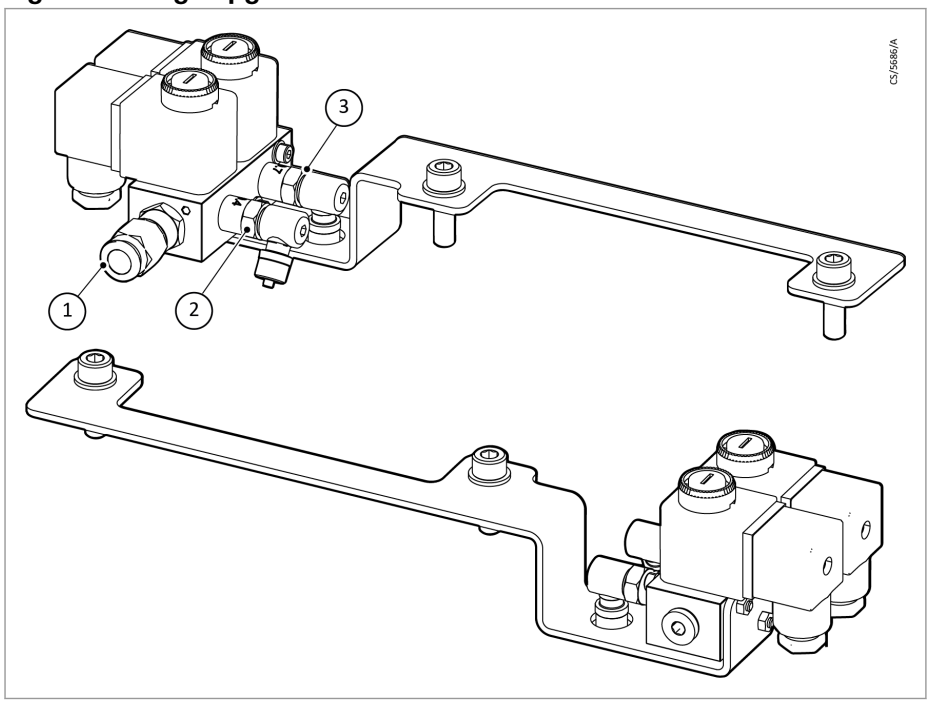
   The pump range has no hermetically sealed shaft feedthroughs at the exhaust side. Therefore small amounts of gases inside the pump will escape into the ambient air if no seal purge is used. To avoid this the shaft seals at the exhaust side can be loaded with purge gas. The purge gas will create a gas barrier that will prevent gas from inside the pump to escape. Note that a fraction of the purge gas will also escape to the ambient. Make sure that the pump is operated in a room with good ventilation if other gases than air are used as a purge gas.

2. Seal purge inlet side

   Inlet seal purge can be used if there is a risk that harmful amounts of dust or condensable vapours are present at the inlet of the pump. Such substances could migrate to the inlet side bearings of the pump and reduce the service interval significantly. The inlet side purge is typically only used whenever the inlet pressure increases and is active until a pressure equalisation is reached.

The purge upgrade kit is delivered with a pre-assembled section along with loose parts required for installation on the pump.

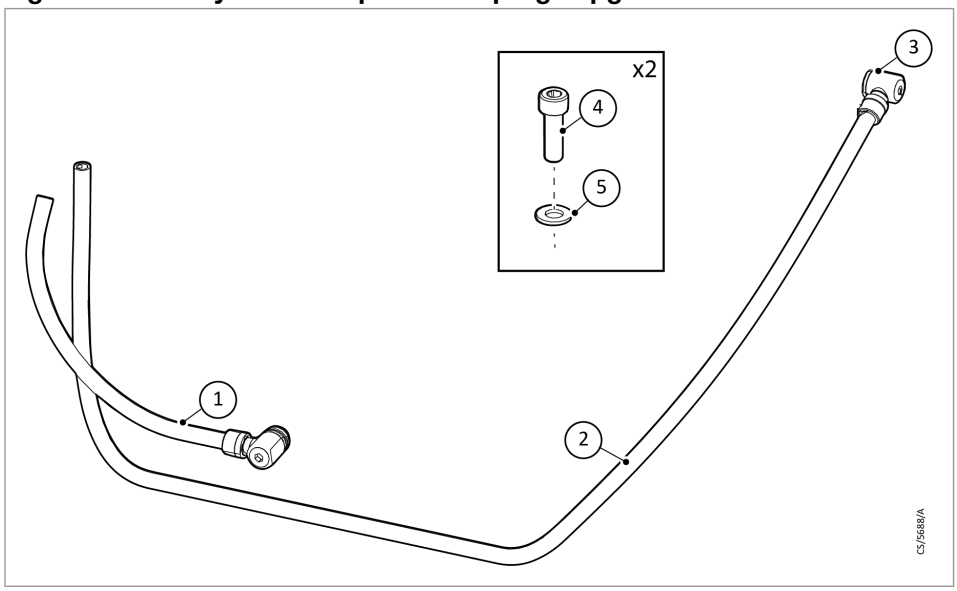
Figure 1. Purge upgrade kit



1. Purge gas inlet d = 10 mm
2. Connection inlet side purge (0.4 mm)
3. Connection exhaust side purge (0.7 mm)

Introduction

Figure 2. Loosely enclosed parts with purge upgrade kit



Part No.	Component	Specification
1	Polyamide pipe	6 mm diameter, 200 mm long
2	Polyamide pipe	6 mm diameter, 800 mm long
3	Pushover elbow connector	G1/4"
4	Cylinder screw	ISO 4762-M8x25-8.8
5	Washer	ISO 7089-8
6	Retrofit - Adapter* (not shown)	G1/2" to G1/4"

* Applicable for old pumps.

3 Technical data

Table 1 Technical data

Purge upgrade kit	
Purge gas supply pressure	2 - 4 bar (g)
Gas consumption exhaust purge	12 - 20 slm
Gas consumption inlet purge	6 - 10 slm
Permissible ambient temperature	0 to +40 °C
Valve	
Pressure range	0 - 3.5 bar
Voltage	24 V d.c.
Power	18 W
Insulation class	H 180 °C
IP rating	IP65
Connection	DIN 43650A

4 Installation

4.1 Installation on the pump

WARNING: PRESSURISED GAS

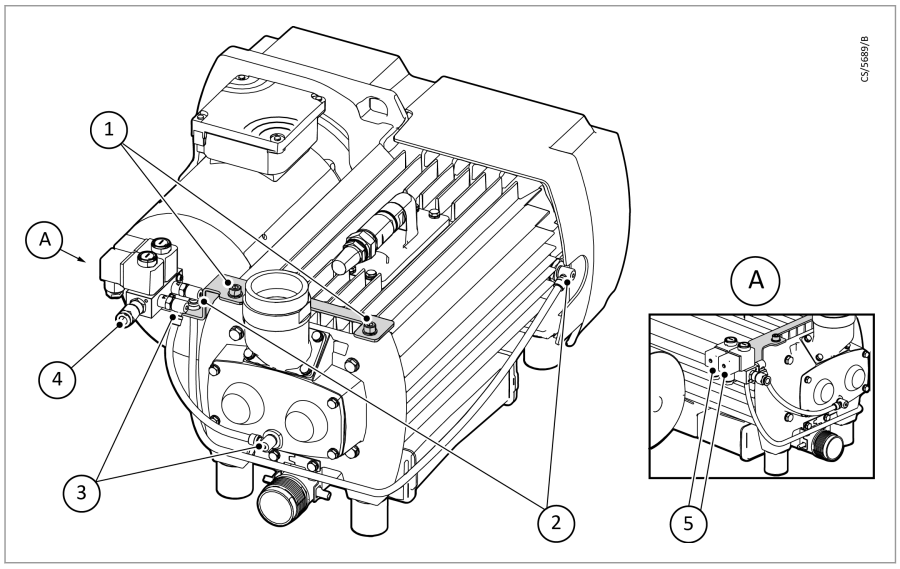


Risk of explosion and damage to the equipment. When the pump is switched off, the continuous supply of pressurised gas to the purge upgrade kit can cause the pressure to rise inside the pump. The pressure rise will be up to the regulated pressure of the purge supply gas if the pump inlet and exhaust are closed.

WARNING: HOT SURFACE



Risk of burns. During operation the pump is hot and some surfaces can reach a temperature higher than 70 °C. If you install the purge upgrade kit under such conditions then there exists the risk of suffering burns. Before you install the purge upgrade kit, let the vacuum pump cool down.



Before you install the purge upgrade kit mount the G1/4" pushover elbow connectors on the pump.

To install the purge upgrade kit on the pump, do the steps that follow:

1. Install the bracket with pre-assembled purge upgrade kit on the pump using M8 screws.
2. Connect the port on the exhaust side of the pump with the connector (labelled 0.7mm) on the valve block using the long (800 mm) hose.
3. Connect the port on the inlet side of the pump with the connector (labelled 0.4mm) on the valve block using the short (200 mm) hose.
4. Connect the pressurised air supply to the main connector using a 10 mm hose. Use a pressure regulator to make sure that the gas supply is within the limits. Refer to *Technical data* on page 9.
5. Connect the valves to 24 V d.c supply voltage.

5 Accessories

The purge upgrade kit (part no. 111005A01) can be pre-installed on the vacuum pumping system or can be ordered as an accessory for the vacuum pump.

If the purge upgrade kit is ordered as an accessory, refer *Installation* on page 10 to install the purge upgrade kit on the pump.

Disposal

6 Disposal

Dispose of the purge upgrade kit in accordance with all local and national safety and environmental requirements.

Disposal

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