UNA 13
UNA 15
UNA 15 Stainless Steel Design

Installation Instructions 810604-01
Steam Traps UNA 13, UNA 15
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Capacity Chart

Fig. 1

Orifice 4, DN 15 - 25, ½" - 1"
Orifice 13, DN 15 - 25, ½" - 1"
Orifice 21, DN 15 - 25, ½" - 1"

1
2
3
Fig. 2
Key

A Flow direction arrow
B Body
C Retainer
D Thermostatic capsule
E Name plate
F Hand vent valve
G Plug
H Gasket C 17 x 23
I Cover
J Float-lifting lever
K Handle
L Control unit SIMPLEX
M Control unit SIMPLEX R
N Control unit DUPLEX
O Body gasket 77 x 67 x 1 (graphite/CrNi)
P Socket-head cap screw
Important Notes

Use

Use steam traps UNA 13 and UNA 15 only for discharge of condensate and liquids in pipes within the admissible pressure/temperature ratings. Check the chemical resistance and suitability of the steam trap for the desired application.

Safety Note

The steam trap may only be installed by qualified staff. Qualified staff are those persons who – through adequate training in engineering, the use and application of equipment in accordance with regulations concerning steam systems, and first aid & accident prevention – have achieved a recognised level of competence appropriate to the installation and commissioning of this device.

Danger

The steam trap is under pressure when the system is operating. When loosening flanged connections, plugs or the control unit hot water, steam, corrosive fluids or toxic gases may escape. This presents the risk of severe scalds and acid burns to the whole body or severe cases of poisoning. Before carrying out installation and maintenance work it is therefore essential to isolate and depressurize the trap.

The trap becomes hot during operation. This presents the risk of severe burns to hands and arms. Before carrying out any installation or maintenance work make sure that the trap is cold.

Sharp edges on internals present a danger of cuts to hands. Always wear industrial gloves when replacing the control unit.
### Explanatory Notes

#### Scope of Supply

**UNA 13**
- 1 Steam trap type UNA 13
- 1 Installation manual

**UNA 15**
- 1 Steam trap type UNA 15
- 1 Installation manual

**UNA 15 Stainless Steel Design**
- 1 Steam trap type UNA 15 – stainless steel design
- 1 Installation manual

#### Description

UNA 13, UNA 15 are ball float traps with rolling ball closing mechanisms. The steam traps work independently of back pressure, thus ensuring universal application. UNA 13, UNA 15 feature a body with bolted cover and a control unit. The control unit is freely accessible after removing the cover and can be replaced without taking the body out of the pipe. Three different control units are available: Level-dependent **SIMPLEX** control for cold condensates, level-dependent **SIMPLEX R** control with inner vent pipe for continuous air-venting and temperature-dependent **DUPLEX** control with automatic deaeration for saturated steam systems.

- suitable for large condensate flowrates
- asbestos-free body gasket (graphite/CrNi)
- horizontal or vertical installation according to position of cover

#### Function

The ball valve of the control unit is operated by the float as a function of the condensate level in the trap. The cross-sectional area (CSA) of the orifice dictates the max. flowrate when the valve is completely open. The max. differential pressure of the control unit is a function of the CSA of the orifice and the density of the fluid to be discharged. There are three different closing units (orifices) available which can also be retrofitted. Float traps equipped with control units **DUPLEX** enable automatic temperature-dependent deaeration of saturated steam systems during start-up and in continuous operation.
### Technical Data

<table>
<thead>
<tr>
<th>Orifices (O)</th>
<th>UNA 13</th>
<th>UNA 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>O 4, ΔPMX 4 bar (60 psi)</td>
<td>suitable</td>
<td>suitable</td>
</tr>
<tr>
<td>O 13, ΔPMX 13 bar (185 psi)</td>
<td>suitable</td>
<td>suitable</td>
</tr>
<tr>
<td>O 21, ΔPMX 21 bar (305 psi)</td>
<td>suitable</td>
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</table>

### Pressure/Temperature Rating

#### UNA 13, grey cast iron, PN 16

<table>
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<tr>
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<th>Max. service pressure [barg]</th>
<th>PMA</th>
<th>Related temperature [°C]</th>
<th>TMA</th>
<th>Max. differential pressure (inlet pressure minus outlet pressure) ΔPMX</th>
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<tbody>
<tr>
<td></td>
<td>[psig]</td>
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<td></td>
<td>Orifice 4: 4 bar (58 psi) Orifice 13: 13 bar (185 psi)</td>
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<td>UNA 13</td>
<td>16</td>
<td>230</td>
<td>120</td>
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<td></td>
<td>13</td>
<td>185</td>
<td>300</td>
<td>572</td>
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#### UNA 15, carbon steel, PN 25

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<th>PMA</th>
<th>Related temperature [°C]</th>
<th>TMA</th>
<th>Max. differential pressure (inlet pressure minus outlet pressure) ΔPMX</th>
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<td>UNA 15</td>
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<td>363</td>
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<td>13</td>
<td>185</td>
<td>400</td>
<td>752</td>
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#### UNA 15, stainless steel, PN 25

<table>
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<th>Related temperature [°C]</th>
<th>TMA</th>
<th>Max. differential pressure (inlet pressure minus outlet pressure) ΔPMX</th>
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<tr>
<td>UNA 15</td>
<td>20</td>
<td>290</td>
<td>100</td>
<td>212</td>
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<td></td>
<td>16</td>
<td>232</td>
<td>200</td>
<td>392</td>
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<td>14</td>
<td>203</td>
<td>300</td>
<td>572</td>
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### Materials

<table>
<thead>
<tr>
<th>Materials</th>
<th>DIN reference</th>
<th>ASTM equivalent*</th>
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<tbody>
<tr>
<td>Body UNA 13</td>
<td>EN-GJL-250 (EN-JL-1040)</td>
<td>Grey cast iron GG 25 (0.6025)</td>
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<tr>
<td>Cover UNA 13</td>
<td>EN-GJL-250 (EN-JL-1040)</td>
<td>Grey cast iron GG 25 (0.6025)</td>
</tr>
<tr>
<td>Body UNA 15</td>
<td></td>
<td>Forged steel C 22.8 (0.0460)</td>
</tr>
<tr>
<td>Cover UNA 15</td>
<td>GP 240 GH</td>
<td>Cast steel GS-C 25 (0.0619)</td>
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<tr>
<td>Body UNA 15 stainless steel design</td>
<td></td>
<td>Austenitic S.S. X6CrNiMoTi17122 (1.4571)</td>
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<tr>
<td>Cover UNA 15 stainless steel design</td>
<td></td>
<td>Stainless steel G-X6CrNi189 (1.4308)</td>
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<tr>
<td>Ball float</td>
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<td>Stainless steel X 6 CrNiMoTi 17122 (1.4571)</td>
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<tr>
<td>Seat</td>
<td></td>
<td>Stainless steel X 8 CrNiS 189 (1.4305)</td>
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<tr>
<td>Valve ball</td>
<td></td>
<td>Stainless steel X 5 CrNi 1810 (1.4301)</td>
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<td>Body gasket</td>
<td></td>
<td>Graphite/CrNi</td>
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<tr>
<td>Other internals</td>
<td></td>
<td>Stainless steel</td>
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* Physical and chemical properties comply with DIN grade. ASTM nearest equivalent grade is stated for guidance only.

### Corrosion Resistance

When used for its intended purpose the safe functioning of the steam trap will not be impaired by corrosion.

### Sizing

The trap body must not be subjected to sharp increases in pressure. Welds and flanges of the trap are designed to withstand dynamic loading (bending and alternating stress). The dimensional allowances for corrosion reflect the latest state of technology.
Installation

UNA 13, UNA 15

The steam trap can – depending on its body design – be installed in horizontal or vertical pipes with downward flow.

Flanged Design

1. Take care of correct position of installation. The name plate must always be on top.
2. Take care of flow direction. The flow arrow is on the trap body. If necessary, change direction of flow.
3. Consider space required for opening trap. When the trap is installed a minimum space of 130 mm is required for removing cover.
4. Remove plastic plugs. They are only used as transit protection.
5. Clean seating surfaces of both flanges.
6. Install steam trap.

Screwed-Socket Design

1. Take care of correct position of installation. The name plate must always be on top.
2. Take care of flow direction. The flow arrow is on the trap body. If necessary, change direction of flow.
3. Consider space required for opening trap. When the trap is installed a minimum space of 130 mm is required for removing cover.
4. Remove plastic plugs. They are only used as transit protection.
5. Clean threads of screwed sockets.
6. Install steam trap.

Socket-Weld Design

1. Take care of correct position of installation. The name plate must always be on top.
2. Take care of flow direction. The flow arrow is on the trap body. If necessary, change direction of flow.
3. Consider space required for opening trap. When the trap is installed a minimum space of 130 mm is required for removing cover.
4. Remove plastic plugs. They are only used as transit protection.
5. Clean socket-weld ends.
6. Arc-weld trap only manually (welding process 111 and 141 in accordance with DIN EN 24063).
Installation  – continued –

Butt-Weld Design

1. Take care of correct position of installation. The name plate ☞ must always be on top.
2. Take care of flow direction. The flow arrow ☞ is on the trap body. If necessary, change direction of flow.
3. Consider space required for opening trap. When the trap is installed a minimum space of 130 mm is required for removing cover ☞.
4. Remove plastic plugs. They are only used as transit protection.
5. Clean butt-weld ends.
6. Arc-weld trap only manually (welding process 111 and 141 in accordance with DIN EN 24063) or use gas-welding process (welding process 3 in accordance with DIN EN 24063).

Attention

- Only qualified welders certified e.g. according to DIN EN 287 may weld the steam trap into pressurized lines.

Heat Treatment of Welds

A subsequent heat treatment of the welds is not required.

Change Flow Direction

1. Remove cover ☞ from body ☞, Fig. 2.
2. Lever control unit ☞ off its support using a screwdriver, Fig. 3.
3. Turn body so that arrow ☞ points in the desired flow direction.
4. Position control unit on support and fix it by two sharp blows, Fig. 4.
5. Clean seating surfaces of body and cover.
6. Insert new gasket and reassemble body and cover. Tighten body screws in diagonally opposite pairs with a torque of 35 Nm. After commissioning retighten body screws.

Tools

- Allen key size 8 to DIN 911L
- Screwdriver 5.5/125 mm to DIN 5265
- Punch 120/10 mm to DIN 7250
- Hammer 500 g to DIN 1041
Installation  – continued –

Hand Vent Valve

1. Remove plug 🅃.
2. Insert gasket 🅄, fit hand vent valve 🅅 in place and tighten with a torque of 75 Nm.
3. Close hand vent valve.

Tools

- Spanner A. F. 17 mm to DIN 3113 form B
- Torque spanner 20 – 120 Nm to DIN ISO 6789

Float-Lifting Lever (Accessory)

1. Remove plug 🅃.
2. Insert gasket 🅄 and fit float-lifting lever 🅅 in place. Install handle for float-lifting lever and keep it in the horizontal position. Tighten with a torque of 75 Nm.

Tools

- Spanner A. F. 17 mm to DIN 3113 form B
- Torque spanner 20 – 120 Nm to DIN ISO 6789

Commissioning

Make sure that all flanged connections, the hand vent valve and the float-lifting lever are firmly fixed to the trap, maintaining a tight, leakproof joint.
**Maintenance**

GESTRA steam traps UNA 13, UNA 15 do not require any special maintenance. However, if used in new installations which have not been rinsed it may be necessary to check and clean the trap.

**Clean Steam Trap**

1. Remove cover from body, **Fig. 2**.
2. Lever control unit off its support using a screwdriver, **Fig. 3**.
3. Remove old body gasket.
4. Clean body and internals.
5. Clean seating surfaces of body and cover. Insert new gasket.
6. Position control unit on support and fix it by two sharp blows, **Fig. 4**.
7. Insert new gasket and reassemble body and cover. Tighten body screws in diagonally opposite pairs with a torque of **35 Nm**. After commissioning retighten body screws.

**Tools**

- Allen key size 8 to DIN 911L
- Screwdriver 5.5/125 mm to DIN 5265
- Punch 120/10 mm to DIN 7250
- Hammer 500 g to DIN 1041

**Torques**

<table>
<thead>
<tr>
<th>Item</th>
<th>Trap type</th>
<th>Torque [Nm]</th>
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<tr>
<td>P</td>
<td>UNA 13, UNA 15, UNA 15 stainless steel</td>
<td>75</td>
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<tr>
<td>P</td>
<td>UNA 13, UNA 15</td>
<td>15</td>
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<tr>
<td>P</td>
<td>UNA 15 stainless steel</td>
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</table>

All torques indicated in the table are based on 20 °C room temperature.
## Spare Parts List

### Spare Parts

<table>
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<tr>
<th>Item</th>
<th>Designation</th>
<th>Ref. no.</th>
<th>Ref. no.</th>
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<tr>
<td>H</td>
<td>Gasket* A17 x 23</td>
<td>560486</td>
<td>560486</td>
</tr>
<tr>
<td>O</td>
<td>Body gasket* (graphite/CrNi)</td>
<td>560493</td>
<td>560493</td>
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<tr>
<td>D</td>
<td>Thermostatic capsule 5N2</td>
<td>560494</td>
<td>560494</td>
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<tr>
<td>N O</td>
<td>Control unit Duplex, complete</td>
<td>Orifice 4</td>
<td>560410</td>
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<td></td>
<td></td>
<td>Orifice 13</td>
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<td>Orifice 21</td>
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<td></td>
<td>Orifice 21</td>
<td>560414</td>
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* Minimum purchasing quantity 20 pcs.
** Minimum purchasing quantity 10 pcs. Contact your local dealer for smaller quantities.
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