

# Installation and Operating Manual

## Fluid Neutralization Equipment with back-flush device

### Type RNA Komfort –100KW

Art .No 90 830 40

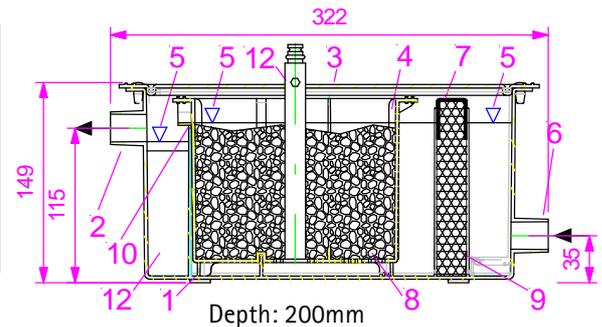


Depending on sulphur content of the heating oil used, the resulting condensate may show a high acid content and thus may cause corrosion. Be sure to wear appropriate safety gloves and eye gear / face masks when working on the equipment.

#### Function

The condensate travels from boiler and flue gas pipe via the condensate inlet (6) into the first chamber of the RNA-Komfort for pre-cleaning. This chamber is equipped with an absorber (9) to retain most of the hydrocarbons and organic matter. After pre-cleaning, the condensate proceeds into the second chamber filled with neutralization granulate (8). The retention period in this chamber increases the ph-value of the condensate by its reacting with the neutralization granulate (i.e. it is being neutralized). The neutralized condensate then passes into the sedimentation chamber (12) where solid neutralization products will deposit. The neutralized condensate is drained via the condensate drain (2) into the drain/sewer.

|                           |                                       |
|---------------------------|---------------------------------------|
| 1= plastic container      | 8= neutralization granulate           |
| 2= condensate outlet, Ø25 | 9= absorber                           |
| 3= container lid          | 10= gasket                            |
| 4= filter basket          | 11= rinsing device with hose coupling |
| 5= fluid level            | 12= sedimentation chamber             |
| 6= condensate inlet, Ø25  |                                       |
| 7= absorber fixture       |                                       |



#### Start-up

Before start-up, please ensure that:

- The rinsing pipe (11) has been fastened to the bottom of the filter basket (4) by means of the threaded fitting.
- The neutralization granulate (8) from the bag has been filled into the filter basket (4) and the absorber (9) has been placed correctly into the container with absorber fixture (7) so that no condensate may bypass;
- the RNA-Komfort has been placed horizontally in its appropriate location – if possible, near the boiler – and secured against toppling (please observe inlet and outlet height as well as the required slope!);
- inlet and drain hose have been installed at an even slope, if possible, without any sacking (danger of clogging!);
- inlet and drain hose have been pushed flush onto the nozzles (2 & 6);
- the RNA is filled with water.

#### Maintenance

At intervals of two weeks or if required (upon metering the ph-value), flush the RNA-Komfort with tap water using a 13 mm (1/2") hose (e.g. garden hose). Rinsing should be done at a 2-4 bar line pressure, rinsing time approx. 5 minutes.

**Caution: Danger of overflowing!** When using a condensate pump ensure that it has a minimum feed rate of 4 l/min to ensure safe transport of the water return!

As a result of the neutralization process, mud will be deposited on the neutralization granulate decreasing the neutralization performance. The rinsing process will sufficiently flush out such deposits and the neutralization performance is retained.

The neutralization condensate wears off after a period of time and has to be refilled accordingly (accessories).

**Annually:** Exchange absorber and granulate and clean all parts of the equipment! Please use the maintenance package (accessories). Remove filter basket (4) and empty, remove absorber fixture (7) together with the absorber (9), remove absorber (9) from its fixture (7) and dispose of it. Cleanse container (1) and filter basket (4) with water. Insert new absorber into fixture (7) and insert absorber fixture into the pre-cut slot inside the container (1). Replace gasket (10) at the overflow nozzle of the filter basket (4). Reinsert filter basket (4) with its slot into the protruding rib of the container (8). Fill in neutralization granulate from the maintenance package into the filter basket (4). Check connection hoses for clogging – if required, remove deposits. Fill RNA with water. Check connection hoses for tightness/leakages.

#### Disposal

The neutralization granulate may be disposed of easily (e.g. building rubble).

The absorber should be disposed of separately (municipal specialty waste).

#### Instructions

- The RNA must be filled with fluid up to its maximum level at all times (siphon effect), as otherwise flue gas may seep into the installation site – danger of poisoning!
- As a result from lack of or improper maintenance the neutralization performance will decrease and may cause the equipment to overflow (clogging of the absorber, neutralization granulate, inlet and drain hoses).
- Please observe DWA work sheets A 251 and A 115 (applicable only for Germany)!
- Metal ions inside the condensate may affect the neutralization performance of the RNA-Komfort.