

# drukosep

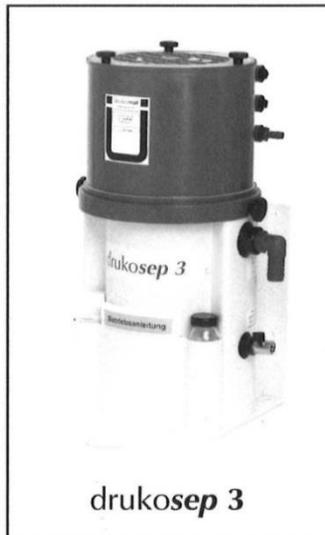
oil-water-separator for compressed air condensate

with 3-stage-combifilter

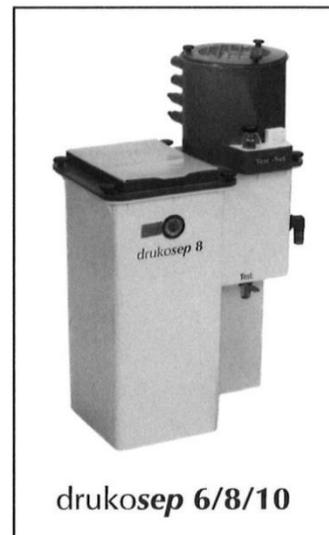
## Maintenance Book



drukosep 1/2



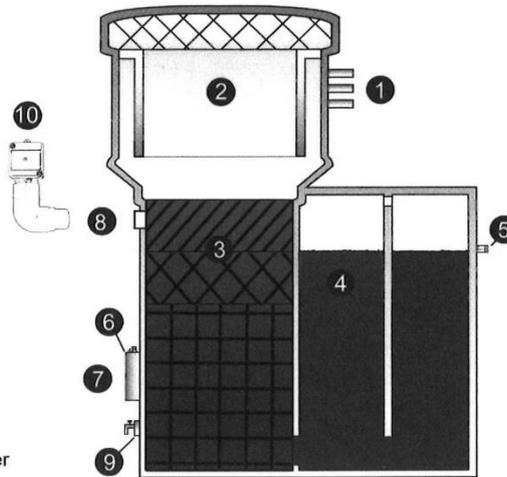
drukosep 3



drukosep 6/8/10

Day of installation: \_\_\_\_\_

Floating diagram  
*drukosep*



- 1 condensate inlet
- 2 expansion chamber with filter
- 3 3-stage-combifilter
- 4 safety chamber
- 5 water discharge
- 6 testset
- 7 document pocket
- 8 optical filter-control  
standard at drukosep 6 - 10  
option at drukosep 1-2-3
- 9 sample-valve

**Accessoires:**

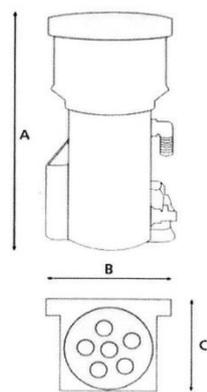
- 10 level switched - battery charged  
- local alarm and distant contact  
- retrofitable at any time
- 11 heater on request  
(only for drukosep 6 -10)



Level-control  
Typ: NS-10

**TECHNICAL DATA**

| type            | compressor-capacity* | dimensions (mm) |         |         | weight / kg | connections      |                 | filtering       |           |
|-----------------|----------------------|-----------------|---------|---------|-------------|------------------|-----------------|-----------------|-----------|
|                 |                      | height A        | width B | depth C |             | condensate inlet | water discharge | airside         | waterside |
| <i>drukosep</i> | m <sup>3</sup> /min  |                 |         |         |             |                  |                 |                 |           |
| 1               | 1,8                  | 445             | 251     | 240     | 5           | 3x 1/2"          | 1"              | sep1W/L         |           |
| 2               | 2,5                  | 545             | 251     | 240     | 7           | 3x 1/2"          | 1"              | sep2W/L         |           |
| 3               | 3,5                  | 613             | 373     | 284     | 10          | 3x 1/2"          | 1"              | 1x 1088L sep3W  |           |
| 6               | 6                    | 908             | 330     | 330     | 17          | 4x 1/2"          | 1"              | 1x 1088L sep6W  |           |
| 8               | 10                   | 962             | 595     | 375     | 22          | 4x 1/2"          | 1"              | 1x 1088L sep8W  |           |
| 10              | 12                   | 965             | 621     | 513     | 25          | 4x 1/2"          | 1"              | 1x 1088L sep10W |           |



\* Capacity for screw-compressors with non emulsifying oils in use. For other compressor -types or other types of compressor oils, you have to reduce the max. capacity.

**Place of installation:** clean and freeze-proof on **flatter, horizontal face** - don't face in direct sunlight

**Inout of condensate:** The condensate can be fed with or without pressure.

| <b><u>Connections:</u></b> | <b>drukosep 1-3</b> | <b>drukosep 6-10</b> |
|----------------------------|---------------------|----------------------|
| condensate inlet:          | 3x 1/2"             | 4x 1/2"              |
| water discharge:           | 1x 1"               | 1x 1"                |

**Start-up:**

**drukosep 1+2** Remove lid and filter. Fill the device with water until water runs out of water outlet (5). Press down the filter ! The waterinlet into the filterroom has to be free ! Mount the lid and filter, the device is now ready for operation !

**drukosep 3-10** Unscrew the dome. Fill the device with water until water runs out of water outlet (6). Press down the filter ! The waterinlet into the filterroom has to be free ! Screw the dome back on, device is now ready for operation !

**Condensate flow rate:** Depending of the type of compressor and the type of the oil used in the compressor (see page 6). For further informations see „technical information“ (page 5). The condensate must be fed continuously. Any sparadic input of large quantities (eg. when emptying the tank by hand) should be avoided.

The **drukosep** has got no extra oil discharge (oil-container). The separated oil will be collected in the filter and will be discharged with changign the filter.

**Discharging clean water:** The condensate flows out through tube, stay with the size (R1"), don't reduce outlet connection. The water drain hose (R1" - 25mm) must be connected with down slope to sewage system.

**Controls:** A regular control of the running condensate and the early change of the filter is assumption for a flawless function.  
- see maintenance book -

**Filtering:** **Only use original spare filters !**  
Only original spare-filters guarantee a flawless function and indicated capacity.

**Change of filters:**

Unscrew the dome (drukosep 3-10), and/or remove lid and filter (drukosep 1,2). Remove carefully the combined filter from the filter-chamber. Clean up the filter chamber and the inflow, insert the new filter. Fill up the separator with clean water until water runs out of the water discharge! Press down the filter and close the device. Now the separator is ready for operation.

The activated charcoal filter inside the expansion chamber (drukosep 3-10) can be changed after removing the lid from the dome.

**Note:**

We recommend to put the new charcoal-filter several hours in clean water before it is placed in the filterroom of the separator. By watering the charcoal filter, the air removed out of the capilars of the charcoal and therefor the filter is immediately active !

**Spare filter:**

|                  | drukosep 1         | drukosep 2 | drukosep 3 | drukosep 6 | drukosep 8 | drukosep 10 |
|------------------|--------------------|------------|------------|------------|------------|-------------|
| combined-filter  | sep1W/L            | sep2W/L    | sep3W      | sep6W      | sep8W      | sep10W      |
| exhaust air-side | containing the set |            | 1088L      | 1088L      | 1088L      | 1088L       |

**Checking of discharging water:**

(see also Test and Service Log)

A test sample can be taken from the test valve (8). The water must be clean and clear. If the water is turbid the filters have to be exchanged.

**Note:**

After the initial operation we recommend the following maintenance intervals:

weekly:

Take a sample out of the test-valve

- optical check (see also Test and Service Log)
- check with oil-tets-paper (see also Test and Service Log)

semiannual:

- replace filters if neccessary

annual:

- replace filters (min. once a year, if neccessary more often!)
- analysis of the discharging water by a laboratory

You can have the discharging water analysed as its remaining content. Such analysis are carried out by the Municipal Services or any licenced labatory. For such an analysis the laboratories need a test sample in a 1 ltr glass bottle. We can also do this analysis for you for a modert charge. We then need the following informations:

- 1 ltr. sample in a glass bottle
- type of the compressors used
- compressor size and work load, type of used separator

The results of the analysis should be noted in your „Test and Service Log“. You should also note when the filters were exchanged and when the maintenance work was carried out.

**Disposal:**

The saturated filters have to be disposed of according to the regulations. Please get in contact with a disposal company in your area.

**Enclosures:**

Test and Service Log

## Capacity of drukosep 1, 2, 3, 6, 8, 10 in m<sup>3</sup>/min of installed compressor-capacity

| type of compressor  | screw-compressor |     |     |   |    |    | rotation-compressor<br>(oil-flooded) |     |     |   |    |    | piston compressor<br>(1 and 2 stage) |     |     |   |   |    |
|---------------------|------------------|-----|-----|---|----|----|--------------------------------------|-----|-----|---|----|----|--------------------------------------|-----|-----|---|---|----|
|                     | 1                | 2   | 3   | 6 | 8  | 10 | 1                                    | 2   | 3   | 6 | 8  | 10 | 1                                    | 2   | 3   | 6 | 8 | 10 |
| drukosep            | 1,8              | 2,5 | 3,5 | 6 | 10 | 12 | 1,8                                  | 2,5 | 3,5 | 6 | 10 | 12 | 0,8                                  | 1,2 | 1,8 | 3 | 5 | 6  |
| non emulsified oils |                  |     |     |   |    |    |                                      |     |     |   |    |    |                                      |     |     |   |   |    |

**Note:**

- 1) The capacity above are maximum figures !
- 2) Reduce the capacity when installation-place is difficult (warm and or dusty ambient conditions)
- 3) Divide capacity by 2 for condensate delivered through timed solenoid drains !
- 4) A heating improov the function of the drukosep and allows installation in freezing ambient !
- 5) 1 m<sup>3</sup>/min = 35,3 cfm

**Technical information on the oil-water separator:** drukosep

From time to time problems occur which require a more detailed knowledge of the device. Here is some information and rules which will help you.

**Operating instruction:**

Please read the instruction carefully, especially the paragraph „condensate flow rate“, and be sure to comply with it. The condensate should be fed automatically, if possible; input under pressure is possible by means of the expansion nozzle the device is equipped with.

**Influence of the compressor oil on the efficiency:**

In the past compressor oils were only chosen to suit the compressor. The problem of the condensate disposal was hardly considered or completely neglected. This is one reason why many companies still use compressor oils which emulsify strongly with water and some of which form stable emulsion.

**Consequence:**

The condensate is turbid and remains so even after fairly long settling time. Under certain conditions it even builds up a solid foam, which swims on the water surface and prevents the function of the separator (outlet and coal choke up).

Such condensate can't be separated by the drukosep system.  
The same applies to other separators which operate on the same principle.

When the filters are unused, they are able to absorb some of the oil from the emulsion. We can't guarantee for every type of emulsion, that the containing oil content of under 10 mg/ltr. can be kept. It is possible, that the filters are saturated within a few days or hours. If the filters are satisfied, the condensate level rises and the condensate flows out through the oil outlet. It is helpful and recommendable to install the optimal available level-control, to recognize very early, when the filters are satisfied.

**Important:**

In order to prevent the condensate from emulsifying a **non-emulsifying compressor oil** has to be used. These oils are being offered by almost every oil producer. Please contact your compressor and oil producer for more information on the type of oil to be used.

Non-emulsifying compressor oils can be separated from water by the drukosep system with the known high efficiency. Moreover, the service life of the filters is prolonged.

**When are the filters saturated?**

The service life of the filters depend on many factors such as type of compressor, type of oil, amount of condensate, temperature of condensate etc. It can't be determined an advance for individual applications. We recommend to visually control the discharging condensate regularly and to exchange the filters if necessary.

**Final conclusion::**

Adequate conditions (type of oil, amount of condensate, maintenance) are a must for a proper functioning of the device. It is thus important to inform the operator about the way the devices works, eg the importance of the choice of the right time of oil, etc.

**There is no technical disadvantage for the compressor, if right non-emulsifying oils are being used.**

Applies to the following articles:

**Oil-water-separator »drukosep«**

Article No.

Type No.

101615 to 101617

SEP 1 to SEP 3