

Products for heating oil installations

Deaerators, filters and components



Toc-Duo-3

Heating oil filter / heating oil deaerator combination



Trouble-free
oil supply

YOUR BENEFITS AT A GLANCE:

- + Quick and easy installation
- + Supports a **trouble-free oil supply** to the burner
- + No return pipe to the tank required
- + Suitable for **heating oil** with a **bio proportion of up to 20 %**
- + Installation is permitted below and above the oil level
- + Version with metal deaerator cap and metal filter cup
- + Suitable for **heating oil** with a **bio proportion of up to 100 %**
- + **High venting capacity**
- + Discharge of outgassing possible via hose (accessory)
- + **Suitable for flood-prone areas**
- + **Different filter inserts** are available

Trouble-free oil supply

TOC-DUO-3

The **Toc-Duo-3** heating oil filter/heating oil deaerator combination is used in oil firing systems (suction operation) that are operated as one pipe system with return flow feed.

A return pipe to the tank is not necessary. This does not only make the oil firing system *cheaper*, but also *safer*. The **Toc-Duo-3** supports a *trouble-free oil supply* to the burner through a *high venting capacity*.

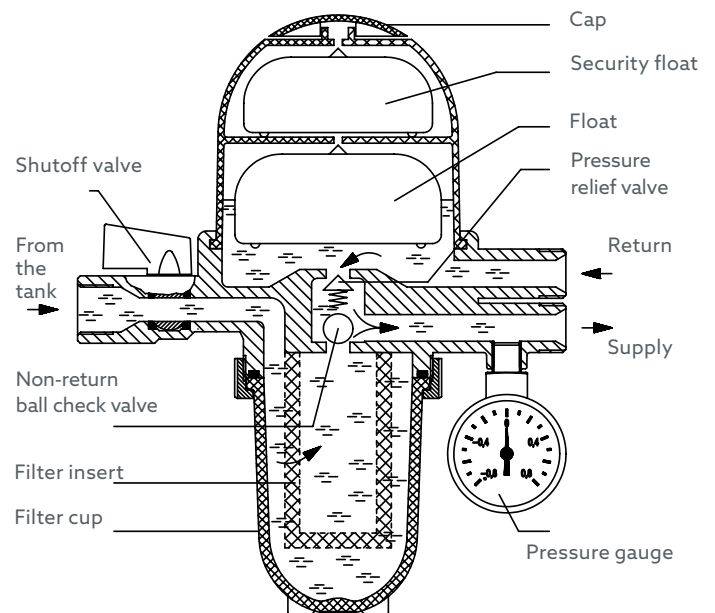
The combination is suitable for heating oil with "alternative additives" or a *bio proportion of up to 20 %*. The version with metal deaerator cap and metal filter cup is suitable for *heating oil EL A Bio according to DIN SPEC 51603-6 with up to 100 % FAME* as well as for various low-viscosity vegetable oils.

The **Toc-Duo-3** combines essential functions for a trouble-free operation of oil firing systems:

- Shutting off the supply pipe from the tank
- Cleaning of the oil through the heating oil filter
- Checking of the suction pressure and the filter contamination (optional) via the vacuum gauge
- Removing air and outgassing from the oil circuit via the heating oil deaerator

HOSE NOZZLE WITH 10 M HOSE

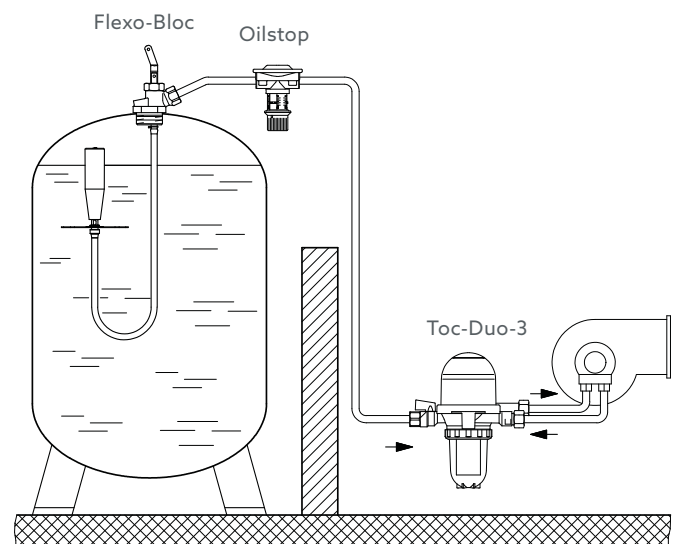
The **Toc-Duo-3** discharges outgassing into the environment. This can lead to unpleasant odours in poorly ventilated boiler rooms. In such cases, a hose can be attached via a hose nozzle and the outgassing can be discharged to the outside. Odour nuisance is thus avoided.



DESIGN AND MODE OF OPERATION

The heating oil is sucked in via the suction pipe, the shutoff valve and the heating oil filter. The heating oil filter retains dirt particles. The oil flowing back from the pump with the air particles contained in it is led into the vent pot of the Toc-Duo 3. The air particles are separated and the deaerated heating oil is returned to the supply pipe.

Example: Pump ~50 l/h,
consumption at 20 kW ~2 l/h,
flow of returned oil = 50 - 2 = 48 l/h



System illustration

Toc-Uno

Heating oil deaerator



High venting
capacity

YOUR BENEFITS AT A GLANCE:

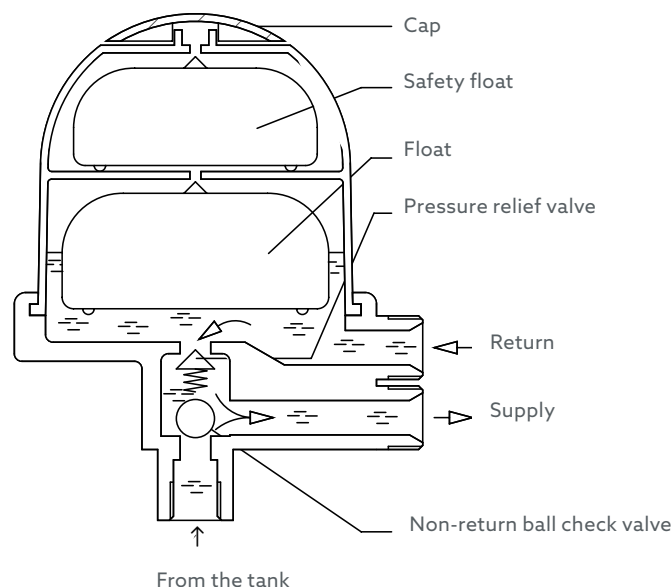
- + Quick and simple installation
- + Supports a *trouble-free oil supply* to the burner
- + No return pipe to the tank required
- + Suitable for *heating oil* with a *bio proportion of up to 20 %*
- + Version with metal deaerator cap suitable for *heating oil* with a *bio proportion of up to 100 %*
- + Installation is permitted below and above the oil level
- + High venting capacity
- + Suitable for flood-prone areas
- + Discharge of outgassing possible via hose (accessory)
- + Lateral outlets

High venting capacity

TOC-UNO

The **Toc-Uno** heating oil deaerator ensures the proper deaeration of the oil. It is used in oil firing systems (suction operation) that are operated as one pipe system with return flow feed - always in combination with a heating oil filter for one pipe systems. A return pipe to the tank is not necessary. This does not only make the oil firing system *cheaper*, but also *safer*.

The heating oil deaerator is suitable for heating oil with *"alternative additives"* or a *bio proportion of up to 20 %*. The version with metal deaerator cap is also suitable for *heating oil EL A Bio according to DIN SPEC 51603-6 with up to 100 % FAME* as well as for various *low-viscosity vegetable oils*.



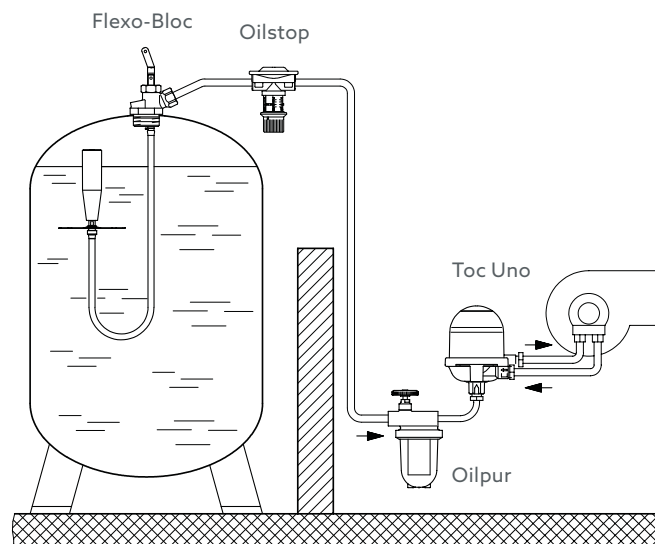
DESIGN AND MODE OF OPERATION

The heating oil is sucked in via the suction pipe, the heating oil filter with shutoff valve mounted in front of the deaerator and the deaerator body. The heating oil flowing back from the pump and the air particles contained in it is led into the vent pot of the **Toc-Uno**. The air particles are separated and the deaerated heating oil is returned to the supply pipe.

Example: Pump ~50 l/h,
consumption at 20 kW ~2 l/h,
flow of returned oil = 50 - 2 = 48 l/h

HOSE NOZZLE WITH 10 M HOSE

The **Toc-Uno** discharge outgassing into the environment. This can lead to unpleasant odours in poorly ventilated boiler rooms. In such cases, a hose can be attached via a hose nozzle and the outgassing can be discharged to the outside. Odour nuisance is thus avoided.



System illustration

Oilpur

Heating oil filters



Heating oil **filters Oilpur** are used in oil firing systems that are operated as one pipe system with or without return flow feed or as two pipe systems. Filters with *plastic filter cups* are generally only approved *for suction operation*. *Metal filter cups and the filter cartridge* are also approved for *pressurised systems* and are available optionally or as accessories.

All **Oilpur** heating oil filters are suitable for *heating oils with alternative additives or a bio proportion of up to 20 % according to DIN SPEC 51603-6*. The versions with metal filter cup are suitable for heating oil with a *bio, FAME and low-viscosity vegetable oil proportion up to 100 %*.

OILPUR E A R HEATING OIL FILTERS

Oilpur heating oil filters for one pipe systems with return flow feed, DN 10 and DN 15 with shutoff. With vent valve for commissioning.

OILPUR E A HEATING OIL FILTERS

Oilpur heating oil filters for one pipe systems, DN 10 and DN 15 with shutoff.

Illustration with **Magnum** filter insert

OILPUR Z A HEATING OIL FILTERS

Oilpur heating oil filters for two pipe systems, DN 10 and DN 15 with shutoff.

OILPUR E HEATING OIL FILTERS

Oilpur heating oil filters for one pipe systems, DN 8, DN 10 and DN 15 without shutoff.

Not illustrated

Filter inserts

Oventrop offers filter inserts for Oilpur heating oil filters and Toc-Duo-3 (heating oil filter/heating oil deaerator combination) of different materials and in different mesh sizes (see below table).
 The filter inserts have a bayonet catch and are interchangeable (except for filter cartridge PN 10). Most filter inserts *cannot* be cleaned; they must be replaced before each heating period.

Filter insert	Description	Version	µm	Item no.	
opticlean Fine filter insert	Paper filter insert for very fine filtration. The mesh size of 2 µm provides optimum safety.	long MX 11	2	2126484	
opticlean Fine filter insert	Paper filter insert for fine filtration with a very large surface. Recommended in one pipe systems that are operated with bio heating oils.	short MC-7 long MC-18	5 - 20 5 - 20	2126454 2126474	
Filter cartridge	Fine filter consisting of a metal cup with internal filter insert. (To be used with an adapter.)	PN 10	25	2126400	
Sintered plastic	The sintered plastic insert consists of a large number of tiny plastic beads. The surface is increased by the inwardly shaped design.	Siku Siku Siku f. Magnum Siku f. Magnum	50 - 75 25 - 40 50 - 75 25 - 40	2126300 2126354 2126355 2126371	
Sintered bronze	The sintered bronze insert (Sika) consists of a large number of tiny bronze beads. It is very dimensionally stable and offers fine filtration.	Sika 0	50 - 100	2126051	
Niro	Robust filter for good filtration of larger dirt particles. The typical permanent filter is particularly suitable for systems with higher outputs.	Stainless steel	100 - 150	2126100	

Tank equipment for oil heating technology

Fittings for safe filling and venting as well as for level detection.

Tank caps ensure a secure closure and connection of the filling hose to the filling pipe of the tank. Tank caps with bayonet according to EN 14420 part 6 (or part 8 for France) are recommended for a direct connection of the filling hose of the tank vehicle. Tank caps with screw connection provide a secure hold for adapter pieces.

The metal vent caps are particularly durable.

Fuel gauge locks as well as mechanical and pneumatic level indicators are available for determining the fill level.

Product	Description	
Tank cap (brass) with bayonet connection acc. to DIN EN 14420-6	For the direction connection without adapter to the hose coupling of the tank vehicle. (Mandatory for new installations see TRwS 791)	
Screwed tank cap (brass)	For the firm connection of the filling hose during filling of the tank.	
Vent cap (brass)	To protect the heating oil from penetrating rain water and dirt.	
Fuel gauge lock	Universal version with G 1 internal thread, with quick-acting lock, lockable.	
Level indicator Mechanical	For checking the fill level: Infinitely adjustable, for tank heights between 0 and 200 cm, odour-proof.	
Pneumatic	Infinitely adjustable, for tank heights between 0 and 300 cm, max. measuring line length 50 m, connection pipe diameter 6 mm, scale graduated in %.	

You can find further tank equipment in the Oventrop catalogue (product range 5) and at www.ventrop.com



Product	Description	
Tank filling limiter with tank level indicator	Sensor for tanks with current interface as part of an overfill system of type B and design B1 according to EN 13616. All tank filling limiters are ÜV tested and are marked with CE signs.	
Flexobloc Tank extraction system	The tank extraction devices combine suction opening with spacer foot, suction hose, tank and pipe connections, backflow preventer and quick shutoff in one device. Also available with level indicator pipe (for pneumatic tank level indicators), floating suction or tank filling limiter.	

Pipeline valves and components for oil heating technology

Product	Description	
Oilstop anti-siphon valves	Safety device in oil pipes according to DIN 4755, to prevent the contents of the tank from leaking.	
Oilstop V diaphragm anti-siphon valve	With infinitely adjustable protection heights from 1 to 4 m.	
Oilstop MV solenoid valve	Protection height up to 3 m, "normally closed".	
Olex pressure compensation device	Used in oil pipes in which there may be a heat-induced oil volume increase and thus a pressure increase in the pipe.	
Insulating fitting	For protection against harmful effects of galvanic currents.	

You can find further tank equipment in the Oventrop catalogue (product range 5) and at www.ventrop.com



Product	Description	
Vcuum pressure gauge	For checking the filter contamination during burner operation. Installation is also possible subsequently without great effort.	
Double change-over valve	For the connection of 2 storage tanks in two pipe operation to one point of consumption. By flipping the lever, the supply and return pipe of one tank are shut off and the supply and return pipe of the other tank are released. Suitable for fuels and combustibles with alternative additives or a bio proportion of up to 20 %, e.g. heating oils according to DIN SPEC 51603-6.	



Room climate



Hydronics



Stations,
Storage
cylinders



Potable water



Oil, Solar



Smart Home,
Smart Building

Oventrop is the partner for efficient heating, cooling and clean potable water. The modular systems and services offer pioneering solutions which all HVAC experts use to work with – easily and flexibly – from planning to installation, from industry to trade. As a family business, Oventrop accompanies its partners over many years – competently and personally.