
Tigerloop®

The new Tigerloop®

The worlds leading automatic oil de-aerator

AFTER SEVERAL YEARS OF DEVELOPMENT, Tigerholm is proud to present the new third generation oil de-aerator, a unique invention known worldwide as the Tigerloop®. With over 30 years experience and Tigerloop® installed in more than 3.5 million heating oil systems around the world, Tigerholm has the experience and competence to further develop the world's best oil de-aerator. The new Tigerloop® contains an increased capacity for oil de-aeration. It meets present and increasingly tougher future demands for environmental safety, cost savings and reliability. To meet the increasing demand from environmental regulations, Tigerloop® improves oil-heating installations by providing clean, air-free oil to the burner, which reduces to a minimum the discharge of harmful particles. The new Tigerloop® also has an extra security chamber totally preventing the leakage of oil and thus raising safety to the highest level.

OIL IS THE WORLD'S MOST IMPORTANT source of raw energy. It answers for the largest production of energy and will be, for many years to come, very important for the production of heat. This puts a heavy responsibility on the modern oil heating industry to develop efficient and environmentally safer products. Recent development has lead to low-sulfur heating oil, highly efficient burners using blue-flame technology and condensing oil boilers. This new technology helps ensure optimal combustion making oil heating a reliable, cost effective and environmentally friendly alternative. These technological developments have created an even higher demand for clean, air-free oil to ensure reliability in oil heating. The material selection in every part of the new Tigerloop® meets the demands placed by new oil qualities with special additives for lasting reliability.

NEW LAWS AND REGULATIONS for environmentally safe oil heating installations are leading to the demise of the two-pipe system. Tigerloop® makes a one-pipe system possible for every type of oil heating installation. The one-pipe system is the most environmentally safe method for transporting oil from the oil tank to the oil burner. A number of European countries have identified the risks associated with two-pipe systems and even past laws forbidding its use.

Oil heating problems...

...with gas/air in oil

When oil is drawn up from the oil tank to the burner large amounts of gas bubbles can be released from the oil. These gas bubbles are released when there is a negative pressure (vacuum) in the suction line. This occurs in almost every installation, but above all when oil must be lifted to a higher level, drawn through long suction lines or when the suction line is too coarse for the needed oil flow. Air can also enter the suction line if all connections are not 100% tight or if the tank is run empty. The gas/air bubbles flow with the oil into the oil pump and are the leading cause of breakdowns, increased build up of soot, unnecessary wear and tear on the oil pump and higher oil consumption.

...with two-pipe systems

The two-pipe system was developed to try and get rid of the gas/air bubbles from the oil pump.
A return line pumps the separated gas/air bubbles together with the unburned oil from the oil pump back to the oil tank. This, however, does not reduce the amount of gas/air bubbles that flow to the nozzle for combustion, which leads to an air pocket forming between the oil pump and the nozzle. This air pocket causes dripping from the nozzle each time the oil burner is stopped resulting in increased soot build up and poor fuel efficiency. The high flow of oil in the two-pipe system (up to 20 times more than what is actually used for combustion) leads to increased dirt/sludge being released from the oil tank leading to clogged oil filters and nozzles. The pressurised return line in a two-pipe system is the number one cause of leak damages. Even the smallest leak in the return line can lead to terrible environmental damages and expensive clean up.

...with one-pipe system without Tigerloop®

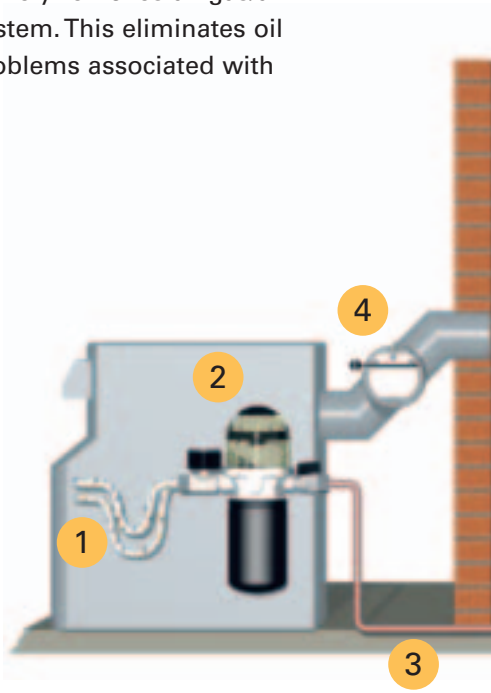
The one-pipe system without a Tigerloop® is not to be recommended. This is due to the increased risk of breakdowns as gas/air bubbles cannot be removed from the oil pump during operation. Such a system will only work as long as the oil is continuously 100% free of gas/air bubbles. Moreover, it is impossible to automatically de-aerate the system during start up or after running the tank empty since a tool is necessary.

Creating the optima

Tigerloop® makes a one-pipe system possible for all types of oil heating installations helping to ensure environmental safety, cost effectiveness and reliability.

Effective de-aeration

In an oil heating system using a Tigerloop®, all oil passes through the automatic oil de-aerator, which effectively removes all gas/air bubbles from the system. This eliminates oil pump and nozzle problems associated with gas/air in the oil.



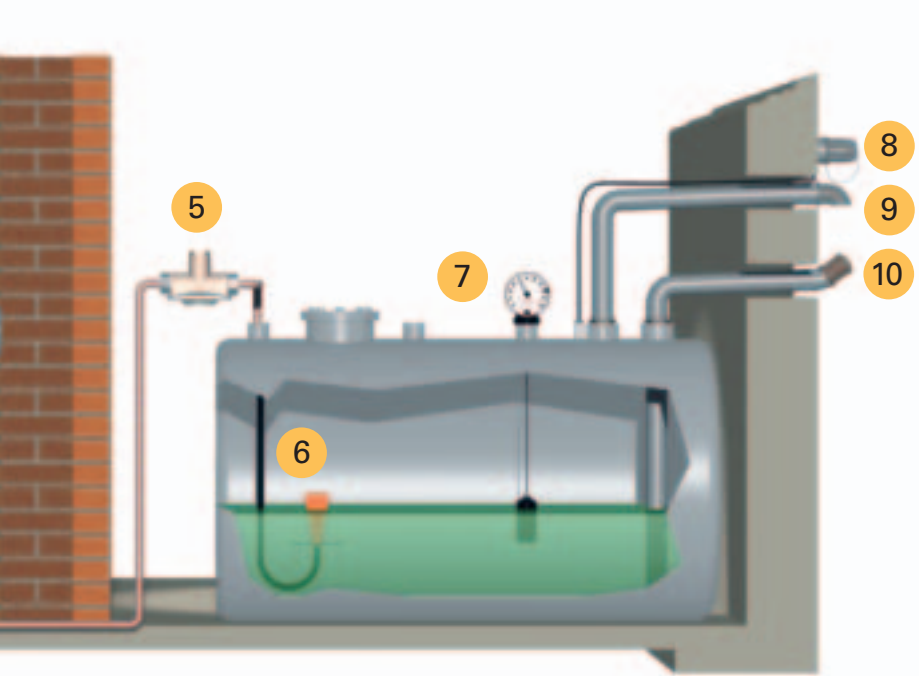
Own two-pipe circulation

An oil pump delivers the same amount of oil irrespective of what is actually needed for combustion. In the case of a normal domestic burner, only 5 % of the delivered oil is actually burned in combustion. The remaining 95% is transported by a two-pipe system back to the oil tank. With a Tigerloop® automatic oil de-aerator no oil needs to be transported back to the tank. The oil that is not burned in combustion is lead back to the Tigerloop® where it is de-aerated again and again automatically. For this reason only the amount of oil to be burned in combustion is sucked from the oil tank.

al solution

Preheated oil

A one-pipe system with Tigerloop® increases the oil pump capacity. Moreover, the oil is actually preheated to at least room temperature as friction in the oil pump generates heat. This eliminates problems with cold oil giving cleaner combustion and reduced oil consumption.

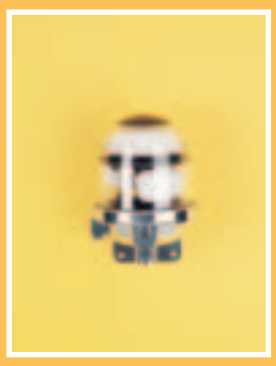


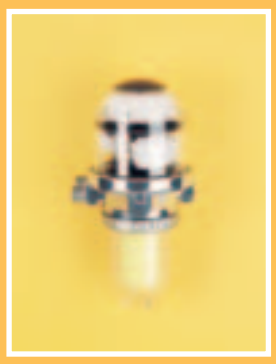
1. Flexible oil hoses
2. Tigerloop® Plus
3. Correctly dimensioned one-pipe system
4. Tigex draught regulator
5. Tigerstop anti-siphon diaphragm valve
6. Tigerflex floating suction system
7. Tank level indicator
8. Limit indicator
9. Air vent pipe
10. Tank filler pipe

Minimum of dirt/sludge

The oil flow in a one-pipe system is minimal due to the fact that only the amount of oil burned needs to be drawn up from the tank. For this reason very little dirt/sludge is transported from the oil tank. This reduces the risk for clogged oil filters and burner nozzles. Filtration is more effective, soot build up is reduced and filter life is extended.

When converting from a two-pipe system to a one-pipe system it is important to consider the dimension of the suction pipe (feed line). The suction pipe in a two-pipe system is often too coarse as the oil flow in a two-pipe system is up to 20 times higher than a one-pipe system.
Too coarse of pipe in a one-pipe system will lead to gas bubbles as siphon effect is lost in any descending sections of the suction line. For calculating the correct dimension suction line and other details for the optimal installation, please refer to your local distributor. Information is also provided on our website at www.tigerholm.com.





The new Tigerloop® makes each installation even more safe and efficient

The new Tigerloop® comes not only with a new fresh appearance, but also an improved technical design. The reliable new design offers increased capacities while remaining the cost effective and environmentally safe choice.

Oil de-aeration has been made even more effective thanks to a unique design solution in the new Tigerloop®. A patented float system has lead to an increase in de-aeration capacity from 6 to 8 l/h, which means air entering the system is more effectively removed.

The superior de-aeration of the Tigerloop® ensures that oil passing through the oil pump to the burner nozzle is completely air-free. This allows highly efficient combustion without dripping problems leading to soot build up. A Tigerloop® installation will achieve better fuel efficiency through lower oil consumption.

The high de-aeration capacity together with a new patented anti-foam system ensures that oil will never leak from the Tigerloop® even when, for example, running the oil tank to empty.

AS AN EXTRA SAFETY PRECAUTION an additional security chamber has been designed in the new Tigerloop® with a safety float. If something should fail in the Tigerloop®, oil will flow into the upper chamber causing the safety float to seal tight. This raises the level of safety to an even higher standard ensuring that oil can never leak from the Tigerloop®.

The new Tigerloop® Original

The world's leading automatic oil de-aerator

The new and improved original, third generation automatic oil de-aerator. The innovation presented by Tigerholm in 1971 has for over 30 years made oil heating installations more efficient, safe and environmentally friendly. To be combined with a separate oil filter.

Model	Pump connections	Tank connection
TON110I	1/4" female thread	1/4" female thread
TON110A	3/8" male thread	1/4" female thread

The new Tigerloop® Combi

With combined oil filter

The new Tigerloop® Combi offers several advantages thanks to the integrated oil filter. It allows the possibility of choosing different oil filter inserts depending on the need. The installation is done with fewer connections simplifying work and reducing the risk for leakage.

Model	Pump connections	Tank connection
TCN110I	1/4" female thread	1/4" female thread
TCN110A	3/8" male thread	1/4" female thread

The new Tigerloop® Plus

With combined Spin-on paper filter, shut off valve and vacuum gauge.

The new Tigerloop® Plus has been developed to meet the highest demands for cleaner air-free oil. The smart, all-in-one design includes a vacuum gauge for full control and simple troubleshooting, a shut off valve for easy service and a Spin-on paper filter for the toughest filtration needs. This unit has an extremely large filtration area of 1850 cm^2 with a filtration grade of 20 microns.

Model	Pump connections	Tank connection
TPN110I	1/4" female thread	1/4" female thread
TPN110A	3/8" male thread	1/4" female thread

Technical data – New Tigerloop®

Max nozzle capacity	110 l/h
Max return oil pumped into the Tigerloop®	120 l/h
Max oil flow	230 l/h
Max de-aerating capacity	8 l/h
Max operating temperature	60°C
Max. / Min. operating pressure in feed line	+0,5 / -0,6 bar

Tigerholm

www.tigerholm.com