



Tigerloop® Twin



FIG 1

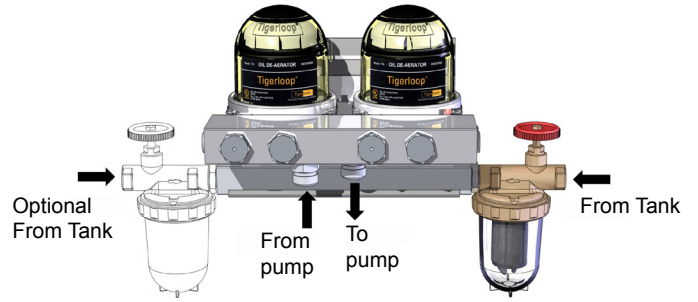


FIG 2

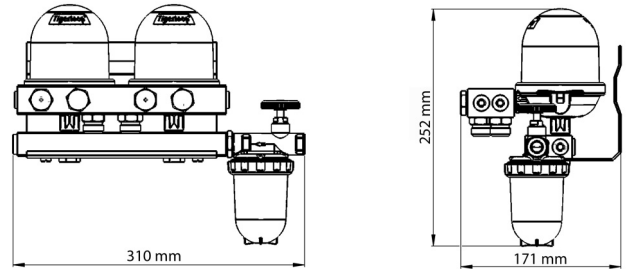


FIG 3

Technical Data	Tigerloop Twin
Maximum nozzle capacity	166 kg/h / 200 l/h
Maximum oil flow	332 kg/h / 400 l/h
Maximum de-aerating capacity	16 l/h
Maximum operating temperature	60°C
Max. / Min. operating pressure in feed line	+0,5 / -0,6 bar
Filtration	100 – 150 micron
Pump connections	1/2" male thread
Tank connection	3/8" female thread

FIG 4

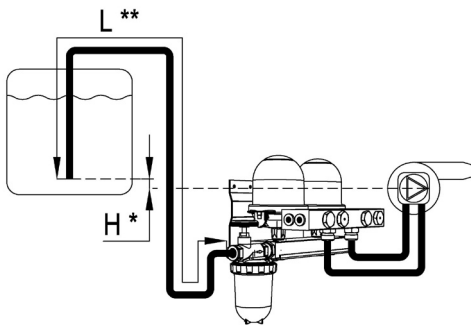


FIG 5

	*** **		*** **		*** **		*** **		*** **		*** **	
	∅ 8	∅ 10	∅ 8	∅ 10	∅ 8	∅ 10	∅ 10	∅ 12	∅ 10	∅ 12	∅ 10	∅ 12
*	**	**	**	**	**	**	**	**	**	**	**	**
+4.0	68	100	50	100	39	97	79	100	67	100	58	100
+3,5	64	100	47	100	37	91	74	100	63	100	54	100
+3.0	60	100	44	100	34	85	69	100	58	100	50	100
+2,5	55	100	41	100	32	79	64	100	54	100	47	97
+2.0	51	100	38	93	29	73	59	100	50	100	43	89
+1,5	47	100	35	85	27	67	54	100	45	94	39	81
+1.0	43	100	32	78	25	61	49	100	41	85	35	74
+0,5	39	96	28	70	22	55	44	92	37	76	31	66
Nozzle Cap.	80 kg/h		100 kg/h		120 kg/h		140 kg/h		160 kg/h		170 kg/h	
60 kg/h / 72.3 l/h	96.4 l/h		120.5 l/h		144.6 l/h		168.7 l/h		192.8 l/h		204.8 l/h	

FIG 6

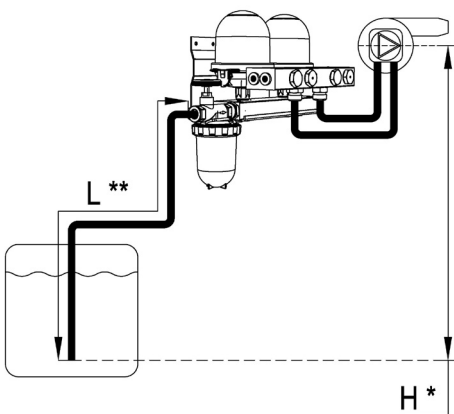


FIG 7

	*** ** *			*** **			*** **			*** **			*** **					
	∅ 8	∅ 10	∅ 12	∅ 10	∅ 12	∅ 10	∅ 12	∅ 12	∅ 15	∅ 12	∅ 15	∅ 12	∅ 15	∅ 12	∅ 15			
*	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**			
- 0.0	35	86	100	63	100	48	100	81	100	67	100	58	100	54	100			
- 0.5	31	76	100	55	100	42	89	71	100	59	100	50	100	47	100			
- 1.0	27	66	100	47	99	36	76	60	100	50	100	42	100	40	98			
- 1,5	22	56	100	40	83	30	63	50	100	41	100	34	85	32	80			
- 2.0	18	46	95	32	68	24	51	40	97	32	78	27	66	25	62			
- 2,5	14	35	74	25	52	18	38	29	72	23	56	19	46	18	44			
- 3.0	10	25	53	17	36	12	26	19	46	14	34	11	27	10	26			
- 3,5	6	15	32	10	21	6	13	8	21	5	13	3	8	3	8			
- 4.0	2	5	11	2	5	-	1	-	-	-	-	-	-	-	-			
Nozzle cap.	80 kg/h			100 kg/h			120 kg/h			140 kg/h			160 kg/h			170 kg/h		
60 kg/h / 72.3 l/h	96.4 l/h			120.5 l/h			144.6 l/h			168.7 l/h			192.8 l/h			204.8 l/h		

Tigerloop® Twin

Automatic oil de-aerator

The Tigerloop® Twin is a product designed to meet increasing demands on energy savings, environmental and operational safety. Tigerloop® Twin is specially designed to distribute and de-aerate oil evenly between the two Tigerloop® units for best possible results. Environmental regulations and changes in oil qualities continue to place high demands not only on material selection, but also on clean and air-free oil for optimal combustion with minimal discharge of harmful particles. Tigerloop® Twin makes it possible to use a one-pipe system in all types of heating installations, thus ensuring the most environmentally safe method for transporting oil from the oil tank to the burner.

Tigerloop® Twin combines the advantages of a two-pipe system for the oil pump with the advantages of a one-pipe system for the oil tank. By using a one-pipe system and Tigerloop® Twin, only the amount of oil used by the oil burner is sucked from the oil tank. As the oil flow decreases, so does the amount of dirt particles transported from the tank. This results in a cleaner combustion.

The pressurised return line to the oil tank is removed eliminating the risk for return line leakage and environmental damages. A large amount of air bubbles are released when oil is sucked from the oil tank to the oil burner. These bubbles cause breakdowns, increased soot and excessive wear on the oil pump. By functioning as a daily supply tank with automatic de-aeration, Tigerloop® Twin eliminates all such problems.

FIG 1:

Tigerloop® Twin consists of two units of standard Tigerloop® conveniently connected in parallel and combined with a separate oil filter. The oil filter can be installed on either side of the unit. Install the two washers, nipple and filter. Seal both ends of the nipple with Loctite gas, oil and HVAC sealant to the correct position. Be sure the filter is positioned correctly according to the oil flow arrow. Install the blind plug on the opposite tank connection end.

FIG 2:

Tigerloop® Twin dimensions

FIG 3:

Tigerloop® Twin technical data

Tigerloop® Twin is only to be used with diesel, light fuel oil and kerosene.

Installation

Install the bracket, included, in a horizontal position using the 4 sheet metal screws at a suitable place near the oil burner. However, the Tigerloop® Twin should not be exposed to temperatures in excess of

60°C. It should not, therefore, be installed on a non-insulated furnace or above a cover of a firebox or flue pipe. The Tigerloop® Twin is placed in the bracket and secured at the bottom with the two M6 screws. Use oil resistant lines for connection to the oil pump. Oil hoses are to be connected between the oil pump and the feed and return on the Tigerloop® Twin as indicated by text.

Since today's oils place a high demand on materials, we recommend changing the Tigerloop® Twin after 10 years.

Installing the oil line

Check that the oil line is tight by pressure test. The Tigerloop® Twin must not be connected while pressure testing. The oil line and connections must be completely tight. A leak in the suction line can lead to air being sucked in, which gives an unstable combustion. When starting an empty pipe system the Tigerloop® Twin will help to automatically de-aerate the system. Press the reset button on the burner if necessary. The oil pump should not be run without oil for more than 5 minutes. Install only one oil burner per Tigerloop® Twin.

BE CAREFUL TO FOLLOW LOCAL CODES AND REQUIREMENTS DURING INSTALLATION!

THE 2-PIPE SCREW ON THE OIL PUMP MUST ALWAYS BE FITTED.

Calculating the dimension of suction pipe

The theoretic values in the tables on page one suppose a pipe system consisting of a copper pipe, four elbows, a non-return valve, a shut-off valve and one Tigerloop® Twin. The tables indicate the total suction length in metres at different heights and nozzle capacities. In the a one-pipe system, the flow of the suction pipe is identical to the nozzle capacity.

FIG 4:

Tank above the burner

FIG 5:

This table for tank above the burner is valid for standard fuel oil with a viscosity of 6,0 mm²/s (cSt) (DIN 51603-1).

* Height in metres

** Max. pipe length in metres

*** Inner pipe diameter in mm

FIG 6:

Tank below the burner

FIG 7:

This table for tank below the burner is valid for standard fuel oil with a viscosity of 6,0 mm²/s (cSt) (DIN 51603-1).

* Height in metres

** Max. pipe length in metres

*** Inner pipe diameter in mm

Remember that suction height must not exceed 4 metres as this may lead to noise and unnecessary wear and tear on the

pump.

Oil filter

The nickel mesh filter insert in the Tigerloop® Twin gives high mechanical stability, providing good quality of filtering coarse impurities.

Trouble shooting

Excessive foaming in the oil de-aerators Possible causes:

1. Leak in suction line. Check that all connections and lines are tight.
2. The feed line can be empty. Start the burner by pushing the reset button and let it run. If the burner trips out, wait and reset. Repeat a couple of times. The burner should not run without oil for more than 5 minutes.
3. The tank is almost empty.
4. Incorrectly dimensioned suction line. See the table for calculating suction lines.
5. Burner capacity is too large.

Noise from the oil pump

Possible causes:

1. Leak in suction line. Check that all connections and lines are tight.
2. Suction height is too high. See the table for calculating suction lines.
3. The oil filter is clogged. Change the filter.

Oil is not sucked up from the tank

Possible causes:

1. Large leak in suction line. Check that all connections and lines are tight.
2. Suction height is too high. See the table for calculating suction lines.
3. The two-pipe screw on the oil pump has not been installed. Install two-pipe screw.

Oil level in the Oil De-Aerator

The level of oil in the lower chamber of the oil de-aerator may vary depending on the installation conditions. For example, with an air-tight suction line and air-free oil where the oil tank is placed higher than the burner, the air pocket in the lower chamber of the de-aerator may slowly disappear until the lower chamber is completely filled with oil. **IMPORTANT!** This is not a problem. The oil de-aerator is functioning correctly. As conditions change and air enters the system, an air pocket will again form in the lower chamber of the de-aerator. On the other hand, if the upper chamber of one of the Tigerloop® Twin contains oil, it is damaged and should be replaced.

Cleaning

When cleaning the Tigerloop® Twin only mild soap and water are to be used. No alcohol based cleaning agents are to be used.

SPX

Manufactured by
SPX Flow Technology Stockholm AB, SWEDEN
www.tigerholm.com