



GC consumables

# Click-On Inline Gas Filters and Connectors

Product manual

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# Introduction

Thermo Scientific™ Click-On™ Inline Gas Filters are suited for the purification of non-corrosive gases with low contamination concentrations to a better as 6.0 grade (99,99990%) purity. Click-On inline gas filters are connected to an appropriate genuine Thermo Scientific™ Click-On™ Inline Gas Filter Connectors which is a one time connection.

## Physical specifications

- Max. inlet pressure: 160 psi (11 bar)
- Maximum flow: 25 L/min.
- Operating temperature: 0° C to 65° C
- Dimensions: 270 (L) x 32 mm (OD)
- Gas outlet purity: > 6.0 grade (purity level > 99.9999 %); rest impurities < 0.1 ppm at flow of 2 L/min

## Safety information

- The maximum concentration of oxygen allowed in the gas is 0.5%. (Valid only for each filter packed with O<sub>2</sub>-adsorbent and O<sub>2</sub>-indicator).
- Maximum gas-system pressure should never exceed 11 bar (160 psi or 1100 kPa).
- The total system design must be considered to ensure safe, trouble-free performance. Proper installation, operation, and maintenance are the responsibilities of the system designer and user.



### Caution

- Maximum gas- maximum system pressure must not exceed 11 Bar (160 psi)
- Install outlet connector first, than inlet connector
- Do not install a filter system in or near a hot area (i.e. the hot-air exhaust at the rear of the GC)
- Always install filters in the appropriate position with the label at the front
- Installation of the connector to the gas line should be done by experienced and/or certified personnel
- Please do not forget to perform a reliable leak test, especially when installing an indicating triple
- During installation of a new Click-On inline gas filter, torsion on the plastic outer protection tube should be avoided; watch out for cracks in the inside glass tube after installation. For use with glass Click-On traps only.
- The screws on the outside trap-housing on both sides should never be removed; in case these screws should be missing, the cartridge may not be installed, but should be returned to the supplier
- Click-On inline gas filter connectors are available as spare parts – do not repair damaged connectors but replace by new ones
- Only use original parts to avoid bad-performance and loss of warranty
- Never install an oxygen filter in a gas line for air. It will result in instant saturation.



# Introduction (continued)

## Technical specifications

Filter type	Gas quality at outlet	Max. pressure	Max. flow	Usable for (gas type)
<b>Moisture</b>	> 6.0	11 bar - 160 psi	25 L/min	Inert carrier, He, H <sub>2</sub> , N <sub>2</sub> , Argon, Air
<b>Oxygen</b>	> 6.0	11 bar - 160 psi	25 L/min	Inert carrier, He, H <sub>2</sub> , N <sub>2</sub> , Argon
<b>Hydrocarbons</b>	> 6.0	11 bar - 160 psi	25 L/min	Inert carrier, He, H <sub>2</sub> , N <sub>2</sub> , Argon, Air
<b>Combi</b> (Moisture + oxygen)	> 6.0	11 bar - 160 psi	25 L/min	Inert carrier, He, H <sub>2</sub> , N <sub>2</sub> , Argon
<b>Combi</b> (Moisture + hydrocarbons)	> 6.0	11 bar - 160 psi	25 L/min	Inert carrier, He, H <sub>2</sub> , N <sub>2</sub> , Argon, Air
<b>Triple</b> (Moisture + oxygen + hydrocarbons)	> 6.0	11 bar - 160 psi	25 L/min	Inert carrier, He, H <sub>2</sub> , N <sub>2</sub> , Argon
<b>Indicating Triple</b> (Moisture + oxygen + hydrocarbons)	> 6.0	11 bar - 160 psi	25 L/min	Inert carrier, He, H <sub>2</sub> , N <sub>2</sub> , Argon

Filter type	H <sub>2</sub> O (gr)	Capacity O <sub>2</sub> (mL)	Hydro-carbos (gr)
<b>Moisture</b>	21	-	-
<b>Oxygen</b>	-	450	-
<b>Hydrocarbons</b>	-	-	36 (as n-butane)
<b>Combi</b> (Moisture + oxygen)	10	225	-
<b>Combi</b> (Moisture + hydrocarbons)	10	-	18 (as n-butane)
<b>Triple</b> (Moisture + oxygen + hydrocarbons)	6	150	12 (as n-butane)
<b>Indicating Triple</b> (Moisture + oxygen + hydrocarbons)	0.1	10	0.07 (as n-butane)

Note: The data given in the table strongly depend on the level of gas filter prior to entering the filter. Replacement of the filter cartridge without indicator is recommended once a year.

# Installation

## Click-On inline gas filter connector

Reusable Click-On inline gas filter connectors are available for 1/8" and 1/4" outer tubing sizes and both sizes are available in stainless steel (SS) or brass.



### Important information before you start:

- Always use stainless steel Click-On connectors for SS tubing; use brass Click-On connectors for copper tubing
- Installation of the connector should always be done by trained personnel
- After installation, remember to perform a reliable leak test using an electronic leak detector
- Only use genuine Click-On connector parts

1. Switch off the incoming gas.
2. Disconnect the gas line (see Figure 1) from the analytical instrument.
3. Cut the gas line using an appropriate metal tubing cutter.

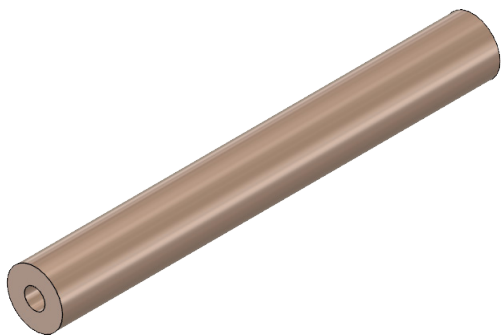


Figure 1: Gas line

4. Plumb the Click-On connectors into each end of the gas line (see Figure 2).

When there is no trap connected, the Click-On connector will automatically block the gas stream.

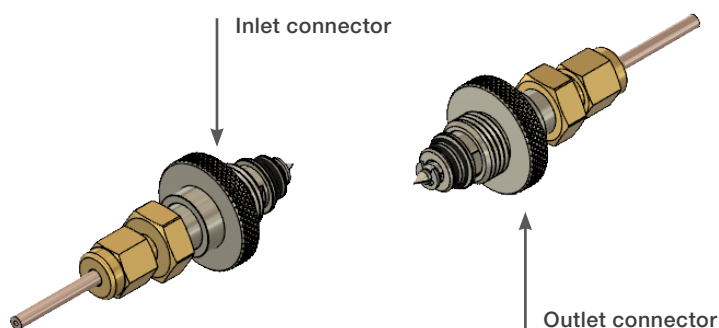


Figure 2: Inlet and outlet connectors

5. Turn the carrier gas on and flush the inlet connector (see Figure 3) with pure carrier gas.

Flush the inlet connector by pushing down the needle valve for approximately 60 seconds.

**Please note:** Sharp edges. Advised pressure for flushing is 90 psi.

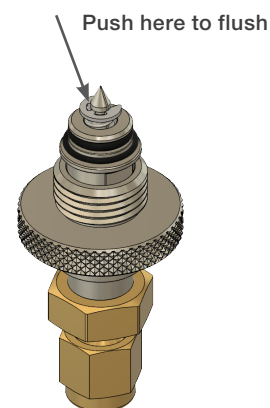


Figure 3. Inlet connector

# Installation (continued)

## Click-On inline gas filter



### Important information before you start:

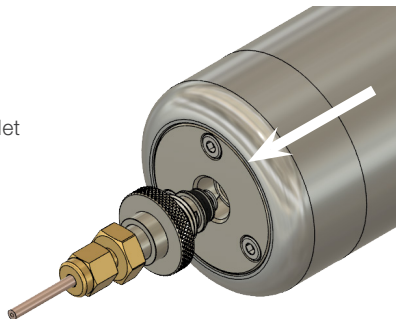
- Never install Click-On inline oxygen filter in a gas line for air. It will result in instant saturation.
- Installation of a filter should be done only under low pressure (max. 1 bar)
- Make sure that the temperature of the replacement filter is more or less identical to the temperature of the (already installed) Click-On connectors on your gas line to avoid any leakage in connections. If temperature is not identical, use at least one hour stabilization time in the same room as the connectors.

### 1. Install the inlet side of the filter.

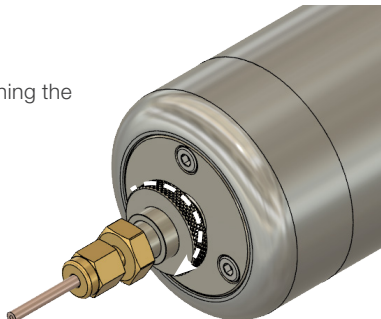
Remove the blue closing plug from the inlet of the filter by turning the plug counterclockwise



Position the filter into the inlet connector

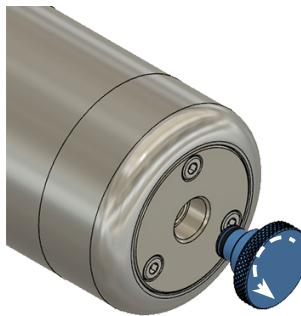


Tighten the connector by turning the knurled ring clockwise

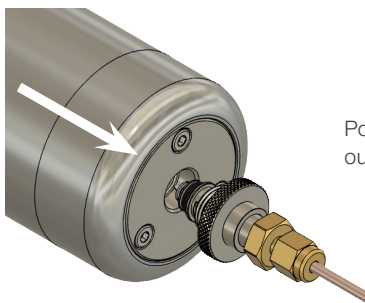


### 2. Install the outlet side of the filter.

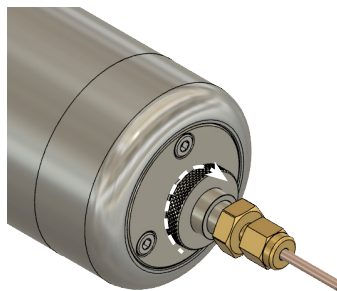
Remove the blue closing plug from the outlet of the filter by turning the plug counterclockwise



Position the big filter into the outlet connector



Tighten the connector by turning the knurled ring clockwise



For new installation: Flush the filter/whole system for 15 min. with pure carrier gas, advised pressure: 90 psi. Then and then mount the outgoing carrier gas line back to the analytical system.

After installation, remember to perform a reliable leak test using an electronic leak detector.

# System requirements

## Maintenance

### 1. Replacement of a Click-On inline gas filter

We recommend to replace Click-On inline gas filters annually to prevent breakthroughs of contaminants. Follow the steps under 'Installation of a Click-On inline gas filter'.

### 2. Click-On connectors

Regularly check both the big and small O-rings of the Click-On connectors for hair cracks. The slightest leak may allow moisture, oxygen, and hydrocarbons to enter the system and contaminate the gas.

## Disposal



Saturated filter cartridges should not be placed in household waste bins. Please check local regulations for information about the disposal of chemical waste in your area. Never re-condition any filter cartridge. For recycling, please contact your local supplier.



**RoHS**  
compliant



# Ordering information

Type	Description	Cat. no.
<b>Filters</b>		
Click-On inline gas filter	Moisture filter	<a href="#">60180-801</a>
	Oxygen filter	<a href="#">60180-802</a>
	Hydrocarbon filter	<a href="#">60180-803</a>
Click-On inline gas combi filter	Moisture, oxygen	<a href="#">60180-804</a>
	Moisture, hydrocarbons	<a href="#">60180-843</a>
Click-On inline gas triple filter	Moisture, oxygen, hydrocarbons	<a href="#">60180-805</a>
	Moisture, oxygen, hydrocarbons, He specific	<a href="#">60180-806</a>
Click-On inline gas indicating filter	Moisture, oxygen, hydrocarbons, He specific	<a href="#">60180-808</a>
<b>Connectors</b>		
Click-On inline gas filter connector	1/8" brass re-useable end fittings	<a href="#">60180-809</a>
	1/8" steel re-useable end fittings	<a href="#">60180-810</a>
	1/4" brass re-useable end fittings	<a href="#">60180-811</a>
	1/4" steel re-useable end fittings	<a href="#">60180-812</a>
Click-On inline gas filter	Wall mounting clamp	<a href="#">60180-834</a>
<b>Devices</b>		
Electronic leak detector	Thermo Scientific™ GLD Pro Gas Leak Detector	<a href="#">66002-004</a>
Electronic flowmeter	Thermo Scientific™ GFM Pro Gas Flowmeter	<a href="#">66002-010</a>

Learn more at [thermofisher.com/gcgasfilters](https://thermofisher.com/gcgasfilters)

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