

PHYSICAL SPECIFICATIONS:

- **Max. inlet pressure:** 160 psi (11 bar).
- **Maximum flow:** 25 L/min.
- **Operating temperature:** -40° 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.

Ordering Information Click-On Inline Super Clean® Purifier

Click-On Inline Super Clean® Traps and Connector Kits

- 22456 Carrier Gas Purification Kit, 1/8" Stainless Steel
- 22457 Carrier Gas Purification Kit, 1/8" Brass
- 22458 Carrier Gas Purification Kit, 1/4" Stainless Steel
- 22459 Carrier Gas Purification Kit, 1/4" Brass
- 22460 Fuel Gas Purification Kit, 1/8" Stainless Steel
- 22461 Fuel Gas Purification Kit, 1/8" Brass
- 22462 Fuel Gas Purification Kit, 1/4" Stainless Steel
- 22463 Fuel Gas Purification Kit, 1/4" Brass

Click-On Inline Super Clean® Replacement Traps

- 22464 Click-On Super Clean® Replacement Triple Trap
- 22465 Click-On Super Clean® Replacement Fuel Gas Trap

Click-On Inline Super Clean® Ultra-High Capacity Traps

- 22466 Ultra-High Capacity Hydrocarbon Trap
- 22467 Ultra-High Capacity Moisture Trap
- 22468 Ultra-High Capacity Oxygen Trap

Helium-Specific Click-On Inline Super Clean® Traps and Kits

- 22469 Helium-Specific Carrier Gas Cleaning Kit, 1/8" Stainless Steel
- 22470 Helium-Specific Carrier Gas Cleaning Kit, 1/8" Brass
- 22471 Helium-Specific Carrier Gas Cleaning Kit, 1/4" Stainless Steel
- 22472 Helium-Specific Carrier Gas Cleaning Kit, 1/4" Brass
- 22473 Helium-Specific Replacement Triple Trap

Click-On Inline Super Clean® Indicating Cartridge

- 22474 Click-On Inline Super Clean® Indicating Cartridge

Click-On Inline Super-Clean® Connectors

- 22475 1/8" Brass Click-On Inline Super Clean® Connectors (2-pk.)
- 22476 1/8" Stainless Steel Click-On Inline Super Clean® Connectors (2-pk.)
- 22477 1/4" Brass Click-On Inline Super Clean® Connectors (2-pk.)
- 22478 1/4" Stainless Steel Click-On Inline Super Clean® Connectors (2-pk.)

Click-On Inline Super Clean® Double Connector

- 22479 Click-On Inline Super Clean® Double Connector

Wall-Mounting Clamps for Click-On Inline Super Clean® Traps

- 22480 Wall-Mounting Clamps for Click-On Inline Super Clean® Traps

Replacement O-Rings for Click-On Inline Connectors

- 22481 Replacement O-Rings for Click-On Connectors

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RESTEK

Click-On Inline Super Clean® Purifier

Instructions for Use



Patent pending
1024083



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Click-On Inline Super Clean® purifiers are suited for the purification of noncorrosive gases with low contamination concentrations to a better as 6.0 grade (99.99990%) purity. Click-On Inline Super Clean® purifiers are connected to an appropriate genuine Click-On connector, which can only be connected to the gas line once.

CAUTION

- The maximum concentration of oxygen allowed in the gas before entering the indicating trap is 0.5%. (Valid only for each purifier packed with O₂-adsorbents and O₂-indicator.)
- Maximum gas-maximum system pressure must not exceed 11 bar (160 psi).
- Install outlet connector first; then install inlet connector.
- Do not install a purifier system near or in a hot area (i.e., the hot-air exhaust at the rear of the GC).
- Never recondition any trap, ever: for eventual recycling, please contact your local supplier.
- Always install traps 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.
- Do not forget to perform a reliable leak test, especially when installing an indicating trap.
- During installation of a new Click-On Inline Super Clean® indicating purifier, torsion on the plastic outer protection tube should be avoided at any time; watch out for cracks in the inside glass tube after installation (valid only for glass Click-On types of traps).
- The screws on the outside trap housing on both sides should never be removed; in case these screws should be missing, the cartridge should not be installed; it should be returned to the supplier.
- Click-On connectors are available as spare parts – do NOT repair damaged connectors; replace them with new ones.
- Only use original parts to avoid malperformance and loss of warranty.

NEVER INSTALL AN OXYGEN PURIFIER IN A GAS LINE FOR AIR: it will result in instant saturation!

1. Installation of a Click-On Connector

A Click-On connector is available for gas line tubing with OD of 1/4" and 1/8". These instructions are valid for each dimension of tubing; Restek advises the use of stainless steel or copper tubing for gas lines, preferably.

1. Shut off the incoming gas.
2. If no trap was previously in use, cut the gas line using an appropriate metal tubing cutter.
3. Disconnect the gas line from the analytical instrument.
4. Turn the carrier gas on and flush the gas line for 2 min with pure carrier gas; advised pressure: 90 psi.
5. Remove the blue closing plugs at both ends of the trap and connect the Click-On connectors tightly to both ends of the gas line.
6. For stainless steel tubing, always use stainless steel Click-On connectors; for copper tubing, always use brass Click-On connectors.
7. Flush the incoming gas line and connectors for 10 min with pure carrier gas by pushing back the needle valve on the Click-On connector. NOTE: SHARP EDGE!! Advised pressure: 90 psi.
8. Attach Click-On Trap to both Click-On connectors by punching the internal membranes in the traps and tightening the knurled ring clockwise.
9. Install outlet connector first; then install inlet connector.
10. Flush the trap/whole system for at least 15 min with pure carrier gas; advised pressure: 90 psi (except for He-specific traps; they are already conditioned and need no flush). Do NOT connect the gas line to the analytical instrument yet!
11. Once the purifier has been flushed, mount the outgoing carrier gas line to the analytical system and you are ready to go: normally, the user should not see any notable argon or nitrogen peaks in the chromatogram.
12. Check whole system for leaks after installation!

Brass Click-On Connectors



Stainless Steel Click-On Connectors

NOTE:

- Once the purifier is positioned to the Click-On connector, the PTFE seals inside the purifier will be punctured, and it is necessary to keep the trap in position by hand to prevent air entering the system.
- After installing the trap to the Click-On connector, highly pure gas will automatically stream from the purifier into the analytical system.
- Regularly check both the big and small Viton O-rings on the Click-On connector for hair cracks. The slightest leak may allow moisture, oxygen, and hydrocarbons to enter the system and contaminate the system. Also, check the glass indicating purifier cartridge for cracks with a leak detector.
- Indicator color change with moisture adsorbents devices according to EC Directive December 1998.
- All purifiers are packed under argon, except for the special, He-specific GC-MS filter.
- As long as there is no trap connected, the special Click-On connector will automatically block the gas stream.

NO GAS WILL PASS THROUGH THE GAS LINE!

2. Replacement of a Saturated Click-On Purifier

1. A purifier cartridge needs to be exchanged when the visual indicators (if applicable) start changing color. The original indicator color and the color after saturation are printed on the front of the purifier.
2. For metal traps without an indicator, it is strongly recommended you replace the trap once a year.
3. Before installation of a new replacement trap, make sure that the temperature of the replacement trap 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 the temperature is not identical, use at least one hour of stabilization time in the same room as the connectors.

Specific Capacities of Click-On Inline Super Clean® Purifier Types

Purifier Type	Gas Quality at Outlet	Max. Pressure	Max. Flow	Usable for:
Moisture	> 6.0	11 bar - 160 psi	25 L/min	Inert carrier gas: He *Air *H ₂
Oxygen	> 6.0	11 bar - 160 psi	25 L/min	Inert carrier gas
Hydrocarbons	> 6.0	11 bar - 160 psi	25 L/min	Inert carrier gas: He *Air *H ₂
Ind. Triple (moisture + oxygen + hydrocarbons)	> 6.0	11 bar - 160 psi	25 L/min	Inert carrier gas: He
Combi. (moisture + hydrocarbons)	> 6.0	11 bar - 160 psi	25 L/min	Inert carrier gas: He *Air *H ₂
Triple (moisture + oxygen + hydrocarbons)	> 6.0	11 bar - 160 psi	25 L/min	Inert carrier gas
Combi. (oxygen/ moisture)	> 6.0	11 bar - 160 psi	25 L/min	Inert carrier gas: He, H ₂
Ind. combi. (oxygen/moisture)	> 6.0	11 bar - 160 psi	25 L/min	Inert carrier gas: He, H ₂

Purifier Type	H ₂ O (gr)	Capacity O ₂ (ml)	Hydrocarbons (g)	Estimated Lifetime
Moisture	21	n/a	n/a	> 3 years
Oxygen	n/a	3,000	n/a	> 3 years
Hydrocarbons	n/a	n/a	36 (as n-butane)	> 3 years
Ind. Triple (moisture + oxygen + hydrocarbons)	3	400	5 (as n-butane)	> 1 year
Combi. (moisture + hydrocarbons)	10	n/a	18 (as n-butane)	> 2 years
Triple (moisture + oxygen + hydrocarbons)	6	1,000	12 (as n-butane)	> 2 year
Combi. (oxygen/ moisture)	10	1,500	n/a	> 2 year
Ind. combi. (oxygen/moisture)	3	500	n/a	> 2 year

NOTE: the data given in the table strongly depend on the level of gas purity prior to entering the purifier.

Replacement of a metal purifier cartridge without an indicator is recommended once a year.