Specific Capacities of High Flow Filter types

Filter-Type	Gas Quality at outlet	Max. Pressure	Max. Flow	Usable for:
Moisture	> 6.0	11 bar	20 l/min.	Inert carrier gas Air, H2
Hydrocarbons	> 6.0	11 bar	20 l/min.	N2 (LC/MS)

Filter-Type	Capacity H2O (gr.)	Capacity O2 (ml.)	Capacity Hydro-Carbons (gr.)	Estimate life time
Moisture	7.2	n.a.	n.a.	> 2 years
Hydrocarbons	n.a.	n.a.	24 (as n-butane)	> 0,4 year

NOTE: the data given in the table strongly depend on the level of gas purity prior to entering the filter.
Replacement of the filter cartridge is recommended at least once a year, regardless of the saturation level shown by the indicator (if any available).

Ordering Information

Hardware for High Flow Super Clean Gasfilters
B 0021 High Flow base plate for 2 filters
B 0060 Outlet 0.5 micron particle filter - Brass 1/4"
B 0065 Outlet 0.5 micron particle filter - replacement filter element (pack of 10)

Standard (Classic) High Flow Super Clean Gas Filter cartridges with ultra large capacity
F 0720 Filter bundle of 2 (Charc. 2x : N2 purification) - high flow : without indicator
F 0722 Filter bundle of 2 (Charc. 2x : N2 purification) - high flow : with indicator
F 0721 High-Flow Special Moisture Filter : bundle of 2 cartridges

High Flow Super Clean Kits
B 1021 High Flow KIT for 2 filters/base plate (2x Charc. : N2 purification) - High Flow cap. : without indicator
B 1022 High-Flow Special Moisture Filter KIT for 2 filters/base plate

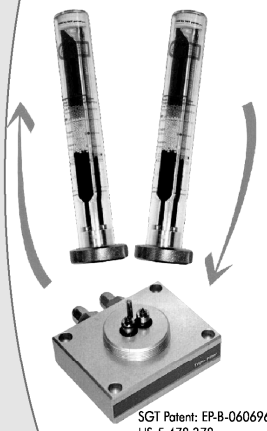
Parts
B 0050 Wallmounting-bracket set for Filter KIT
B 0110 Replacement O-ring set for base plate (10+10)
B 0120 Replacement rear-end fitting set for base plate (3x2 for in- and outlet) : brass- 1/4"
B 0122 Replacement rear-end fitting set for base plate (3x2 for in- and outlet) : stainless steel - 1/4"
B 0131 Replacement Flush caps for base plate : set of 2, incl. O-rings

Release date: 15 June 2006

SGT Middelburg BV - The Netherlands
www.sgt-nl.com
Subsidiaries - GERMANY, SINGAPORE

Super-Clean Gas Filter Kit®

Instructions for High Flow Filter Systems



SGT Patent: EP-B-0606960
US-5.478.378

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SGT Super-Clean Gas Filters are suitable for the purification of non-corrosive gases with low contamination concentrations to a better as 6.0 grade (99,9999%) purity.

SGT Super-Clean Gas Filter cartridges are connected to an appropriate genuine base plate which is installed into the gas line.

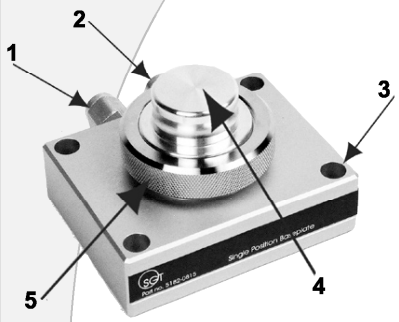
CAUTION

- The maximum concentration of Oxygen allowed in the gas is 0,5%.
- Maximum Gas-System pressure must **not exceed 11 Bar** (160 psi).
- Do **not install** a filter kit near or in a hot area >50°C.
- **Never re-condition** any cartridge: for evt. recycling, please contact you local supplier.
- Always install filters in the appropriate position as indicated on the front of the base plate.
- Installation of the base plate should be done by certified personnel.
- Please do not forget to perform a reliable **leak test**, when installing either a base plate or cartridge or both.
- During installation of a new cartridge, torsion on the plastic outer protection tube should be avoided at any time; **put your hand on** top of this housing during installation and keep the cartridge 90° upright. Watch out for cracks in the inside glass tube afte installation.
- The white small plastic mounting plugs on the outside housing (a bit above the bottom) should **never be removed**; in case these plugs should be missing, the cartridge may not be installed, but should be returned to the supplier.
- **Rear end connectors** at the base plate may never be exchanged by unauthorized personnel.
- **Only use original SGT base plates** supplier warranty and German TUEV-insurance will be waived with use of non-original base plate!
- The High Flow filter system requires special filter cartridges, which allow up to 20 L/min. Mounting an other Filter cartridge to the High Flow base plate and other way around is **not** possible.
- For High Flow and Resonator Lasing Gas applications: we STRONGLY RECOMMEND to use a special SGT **particle filter** (0.5 micron) at the outlet of the base plate.

NEVER INSTALL AN OXYGEN FILTER IN A BASE PLATE POSITION SUITED FOR AIR
It will result in instant saturation!

1. Installation of a base plate

A High Flow base plate has 2 parallel positions. These instructions are valid for each individual position and fitting connection on the base plate.



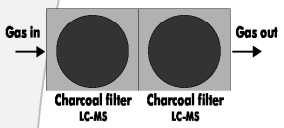
a) shut off the incoming gas
b) cut the gas line, using an appropriate metal tubing cutter.
c) connect the gas inlet **(1)** and outlet **(2)** as indicated to the fitting-"in" of the base plate (for High Flow: at side of base plate); keep the connection loose!
d) turn the carrier gas on and **flush the gas line for 10 min.** with pure carrier gas, min. pressure: 8 psi
e) connect the incoming gas line tight to the fitting (do not over-tighten)
f) make sure, that the flush cap **(4)** is well mounted on the base plate; push cap down during mounting procedure
g) attach base plate, using mounting holes **(3)** or use an optional wall mounting bracket
h) **flush the base plate for 10 min.** with pure gas, witch is used afterwards as well, advised presure: 90 psi
i) remove the flush cap from base plate; mount a new cartridge on the base plate
j) **flush the cartridge / whole system for 15 min.** with pure gas, advised presure: 90 psi
k) now mount the outgoing gas line to the fitting-"out" of the base plate and your instrument is "ready-to-go".

NOTE:

As long as there is no filter cartridge connected, the base plate will automatically block the gas stream.
NO GAS WILL PASS THROUGH THE BASE PLATE!

- A Super-Clean Gas Filter can now be installed.
- ALWAYS CHECK FOR POSSIBLE GAS LEAKS BEFORE OPERATION

High Flow Filter Kit
High Flow (max. 20 L/min)
2 positions Ultra Purity



Or other absorbents for various applications.

2. Installing a filter cartridge

(see front page picture)

- Remove the round, knurled ring **(5)** from the base plate and place it around the filter cartridge.
- Place the filter cartridge, including the round, knurled ring on the base plate making sure all three holes align with the two valves and positioning pin.
- While pushing the filter own on the base plate, hand tighten the knurled ring until the filter is firmly connected to the base plate.

NOTE:

1) Once the filter is positioned on the base plate the aluminium and teflon seals inside the filter foot will be punctured and it is necessary to keep the filter in position by hand to prevent air entering the system.
2) After installing the filter cartridge to the base plate, highly pure gas will automatically stream from the filter into the instrument.
3) Before connection of a new base plate to the inlet gas line of the instrument, it is recommended to flush the total system for 1/2 hour at min. 90 psi.
4) Regularly check both the big and small Viton O-rings on the base plate for hair cracks. The slightest leak may allow moisture, oxygen and hydrocarbons to enter the system and contaminate the gas.
5) Indicator colour change with moisture absorbents devices acc. EC Directive December 1998.
6) All SGT filter cartridges are packed under Argon, except for the special, He-specific filter.

3. Replacement of a filter cartridge

A filter cartridge needs to be exchanged when the visual indicators **start** changing color; if no indicator is available, than replacement is needed once a year.
The original indicator color and the color after saturation are printed on the front of the filter.