

## 2. Installing a filter cartridge

(see front page picture)

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

### NOTE:

- Once the filter is positioned on the baseplate 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.
- After installing the filter cartridge to the baseplate, highly pure gas will automatically stream from the filter into the analytical system.
- Before connection of a new baseplate to the inlet gas line of the analytical system, it is recommended to flush the total system for 1/2 hour at min. 90 psi.
- Regularly check both the big and small Viton O-rings on the baseplate for hair cracks. The slightest leak may allow moisture, oxygen and hydrocarbons to enter the system and contaminate the gas.
- Indicator colour change with moisture absorbents devices acc. EC Directive December 1998.
- All SGT filter cartridges are packed under Argon, except for the special, He-specific GC-MS filter.

## 3. Replacement of a filter cartridge

A filter cartridge needs to be exchanged when the visual indicators start changing color.

**The original indicator color and the color after saturation are printed on the front of the filter.**

### Specific Capacities of Filter types

Filter-Type	Gas Quality at outlet	Max. Pressure	Max. Flow	Usable for:	Indicator Color change
GC-Moisture	> 6.0	11 bar	7 U/min.	Inert carrier gas *Air *H <sub>2</sub>	
GC-Oxygen	> 6.0	11 bar	7 U/min.	Inert carrier gas	
GC-Hydrocarbons	> 6.0	11 bar	7 U/min.	Inert carrier gas *Air *H <sub>2</sub>	n.a.
LC-Hydrocarbons	> 6.0	11 bar	20 U/min.	N <sub>2</sub> (LC/MS)	n.a.
GC-Combi (moist. + hydrocarbons)	> 6.0	11 bar	7 U/min.	Inert carrier gas *Air *H <sub>2</sub>	see under: Moisture
GC-Triple (moist. + oxygen + hydrocarbons)	> 6.0	11 bar	7 U/min.	Inert carrier gas	see under: Moisture & Oxygen

Filter-Type	H <sub>2</sub> O (gr.)	Capacity O <sub>2</sub> (ml.)	Hydro-Carbons (gr.)	Estimate life time
GC-Moisture	7.2	n.a.	n.a.	> 2 years
GC-Oxygen	n.a.	1000	n.a.	> 2 years
GC-Hydrocarbons	n.a.	n.a.	12 (as n-butane)	> 2 years
LC-Hydrocarbons	n.a.	n.a.	24 (as n-butane)	> 0,4 year
GC-Combi (moist. + hydrocarbons)	3.5	n.a.	6 (as n-butane)	> 1,5 years
GC-Triple (moist. + oxygen + hydrocarbons)	1.8	500	4 (as n-butane)	> 1 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.

## Ordering Information

### Hardware for Super Clean Gasfilters

- B 0010** GC-Baseplate for 1 Gas filter
- B 0020** GC-Baseplate for 2 Gas filters
- B 0021** LC-Baseplate for 2 Gas filters (N<sub>2</sub>-purification)
- B 0030** GC-Baseplate for 3 Gas filters
- B 0040** GC-Baseplate for 4 Gas filters

### Standard (Classic) Super Clean Gas Filter cartridges with ultra large capacity

- F 0101** Moisture GC-Filter, standard, ultra cap. : with indicator
- F 0102** Oxygen GC-Filter, standard, ultra cap. : with Indicator
- F 0103** Charcoal GC-Filter, standard, ultra cap. : without indicator
- F 0104** Charcoal GC-Filter, standard, ultra cap. : with indicator
- F 0730** GC-Filter bundle of 3 (Triple + 2x Charc./Moist. Comb)
- F 0740** GC-Filter bundle of 4 (standard + Oxy., Moist. + 2x Charc.)
- F 0720** LC-Filter bundle of 2 (Charc. 2x for LC-MS : N<sub>2</sub> purification)  
- high flow : without indicator
- F 0722** LC-Filter bundle of 2 (Charc. 2x for LC-MS : N<sub>2</sub> purification)  
- high flow : with indicator
- F 0721** HIGH-FLOW Special Moisture Filter : bundle of 2 cartridges

### New Super Clean Gas Filters Cartridges with Combination of Absorbents

- F 0301** GC-Filter, Triple (O<sub>2</sub>/Moist./Charc.) : carrier gas purifier for FID-ECD-NPD
- F 0302** GC-Filter, Triple : gas specific for He (O<sub>2</sub>/Moist./Charc.) in GC-MS usage.
- F0201** GC-Filter, Combi, high capacity, (Charc./Moist.) : fuel gas usage

### Super Clean Kits

- B 1040** GC-FID KIT for 4 standard cartridge filters, ultra capac. O<sub>2</sub>, Moist., 2x Charc.
- B 1030** GC-FID KIT for 3 filters/baseplate : Triple + 2x Combi cartridge (Charc./Moist.)
- B 1011** GC-MS KIT for He (gas specific) : 1 filter/baseplate, Triple cartridge (O<sub>2</sub>/Moist./Charc.)
- B 1010** GC-MS, ECD-, FID-, NPD-carrier gas KIT for 1 filter/baseplate, Triple cartridge (O<sub>2</sub>/Moist./Charc.)
- B 1020** GC-Burnegas KIT for FID, 2 pos. for AIR & H<sub>2</sub> (Combi : 2x Charc./Moist.)
- B 1021** LC-MS KIT for 2 filters/baseplate (2x Charc. : N<sub>2</sub> purification)  
- HIGH FLOW cap. : without indicator
- B 1022** HIGH-FLOW Special Moisture Filter KIT for 2 filters/baseplate

### Parts

- B 0050** Wallmounting-bracket set for GC-Filter KIT
- B 0110** Replacement O-ring set for baseplate (10+10) for GC-Filters
- B 0120** Replacement rear-end fitting set for GC-baseplate (3x2 for in- and outlet) : brass- 1/4"
- B 0121** Replacement rear-end fitting set for GC-baseplate (3x2 for in- and outlet) : brass- 1/8"
- B 0122** Replacement rear-end fitting set for GC-baseplate (3x2 for in- and outlet) : stainless steel - 1/4"
- B 0123** Replacement rear-end fitting set for GC-baseplate (3x2 for in- and outlet) : stainless steel - 1/8"
- B 0130** Replacement GC-Flush caps for baseplate : set of 2, incl. O-rings
- B 0131** Replacement LC-Flush caps for baseplate : set of 2, incl. O-rings

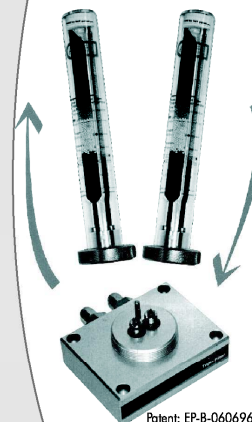
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# SGT

## Super-Clean Gas Filters Kit®

### Instruction for GC- and LC-use



Patent: EP-B-0606960  
US-5.478.378



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SGT Super-Clean 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.

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

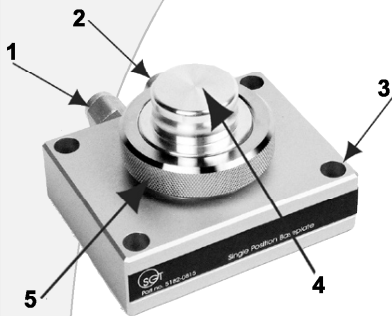
### CAUTION

- 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 (i.e., the hot-air exhaust at the rear of the GC).
- **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 baseplate.
- Installation of the baseplate should be done by certified personnel.
- Please do not forget to perform a reliable **leak test**, when installing either a baseplate 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 after 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 baseplate may never be exchanged by unauthorized personnel.
- **Only use original SGT baseplates** supplier warranty and German TUEV-insurance will be waived with use of non-original baseplate!
- The LC-MS filter system requires special filter cartridges, which allow high flows. Mounting a GC Filter cartridge to the LC-MS baseplate and other way around is **not possible**.

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

## 1. Installation of a baseplate

A baseplate can have 1, 2, 3, or 4 positions, depending upon the number of gas purification applications. These instructions are valid for each individual position/rear end fitting connection on the baseplate.



- shut off the incoming gas
- cut the gas line, using an appropriate metal tubing cutter.
- connect the gas inlet (1) and outlet (2) as indicated to the rear end fitting "in" of the baseplate (for LC-MS: at side of baseplate); keep the connection loose!
- turn the carrier gas on and **flush the gas line for 10 min.** with pure carrier gas, min. pressure: 8 psi
- connect the incoming gas line tight to the rear end fitting (do not over-tighten)
- make sure, that the flush cap (4) is well mounted on the baseplate; push cap down during mounting procedure
- attach baseplate, using mounting holes (3) or use an optional wall mounting bracket
- flush the baseplate for 10 min.** with pure carrier gas, advised pressure: 90 psi
- remove the flush cap from baseplate; mount a new cartridge on the baseplate
- flush the cartridge / whole system for 15 min.** with pure carrier gas, advised pressure: 90 psi
- now mount the outgoing carrier gas line to the rear end fitting "out" of the baseplate and your analytical system is "ready-to-go": normally the user should not see any notable Argon or Nitrogen peaks in your chromatogram

### NOTE:

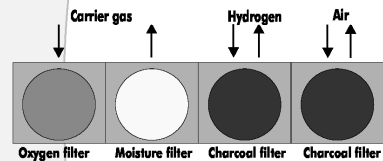
As long as there is no filter cartridge connected, the baseplate will automatically block the gas stream.

#### NO GAS WILL PASS THROUGH THE BASEPLATE!

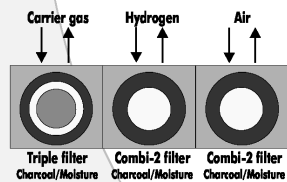
- A Super-Clean Gas Filter can now be installed.
- ALWAYS CHECK FOR POSSIBLE GAS LEAKS BEFORE OPERATION

## Four Standard Filter/ Baseplate Combinations

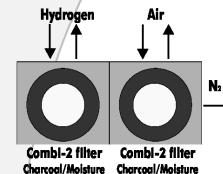
### 1. GC-FID Kit, 4 positions Ultra Purity + Ultra Capacity



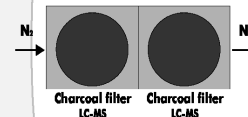
### 2. GC-FID Kit, 3 positions Ultra Purity + Ultra Capacity



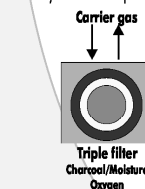
### 3a. Burner gas Kit GC-FID 2 positions Ultra Purity + Ultra Capacity



### 3b. LC-MS Super Kit High Flow (max. 20 L/min) 2 positions Ultra Purity



### 4. GC-MS Super Kit, 1 position Ultra Purity + Ultra Capacity



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