



SGI - 300

Sample Cooler for OEMs

Sarvesh Analytics brings to you the most powerful PELTIER based SAMPLE GAS COOLER with Integrated Peristaltic Pump, Filter and Condensate Sensor .

SGI-300 is more than a Sample Cooler. It simplifies your sample condition design and assembly. SGI-300 has a very small form factor.

Salient Features

Plug n Play

Engineered for Online Processes and Analysers

Peltier Cooler with PTFE Heat Exchanger

Microprocessor based Electronics

Inbuilt Moisture / Condensate Protection Logic

Integrated Peristaltic Pump

Auto Start-up Sequence

Inbuilt Sample Pump Control Logic

Sample Filter with Condensate Sensor

Alarm / Fault Relay output

Auto Shutdown on Hardware Failure

Output to directly drive external Sample Pump

In-built Control Logic for Sample Pump

Sample Pump output is ON only when

- Sample temperature $< 12^{\circ}\text{C}$ &
- Sample is dry without Condensate

- Consumes Less Panel Space
- Reduces Tubing and Electricals
- Faster Integration time
- Reduces Cost

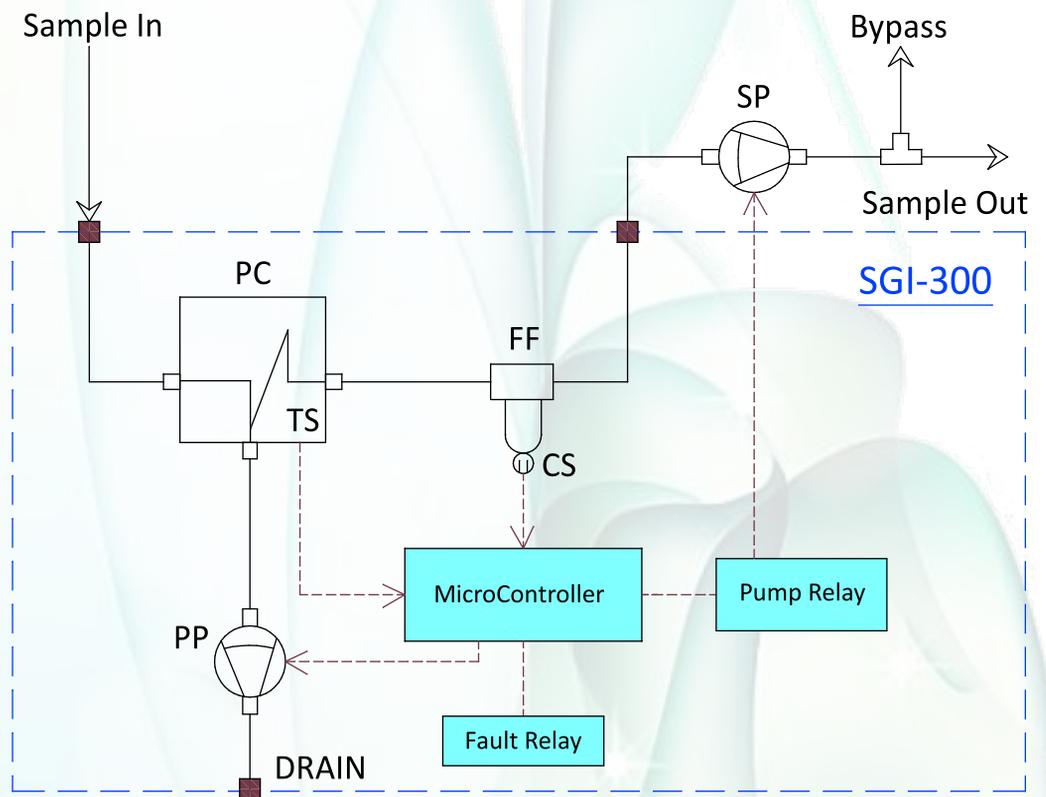


SGI-300 is a Sample Cooler based on Peltier Cooler which is a solid-state technology. It is highly efficient, robust and has a long life as compared to conventional compressor based cooler. Peltier Technology is environment friendly.

SGI-300 also includes Peristaltic Pump, Condensate Sensor and Control Logic for Sample Pump with Relay Output. In case of any fault, which is rare, it stops the Sample Pump and goes into Shutdown thus avoiding damages to downstream components.

SGI-300 is very compact and is more than a Sample Cooler -

- ✓ It is a **Peltier Cooler** with **PTFE Heat Exchanger** to Cool your Acidic Sample Gas and
- ✓ It has a **Peristaltic Pump** to remove the collected Condensate
- ✓ It has a **Condensate Sensor** to trip the Sample Pump Relay Output in case of condensate carryover
- ✓ It has a **Fine Filter** as a final stage filtration for your Analyser
- ✓ It has a **Relay Output** to connect your External **Sample Pump** to draw the Sample gas



Components of SGI-300

PC	Peltier Cooler
TS	Temperature Sensor
PP	Peristaltic Pump
FF	Fine Filter
CS	Condensate Filter

External Components
(Not in scope of Supply)

SP	Sample Pump
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SGI-300 simplifies your Sample Handling System as it includes a Sample Cooler, a Peristaltic Pump, a Condensate Sensor and a Fine Filter, all in one housing. This compact size consumes Less space in your panel, Less Tubes and Fittings. It is quick to install and commission. Overall it reduces your Integration Time and Bill of Material cost.

The unique PTFE Heat Exchanger is very efficient and it assures a extended life for acidic sample gases.



Control Logic

The micro-controller in **SGI-300** does most of the Logic required for your Sample Conditioning system. This simplifies the wiring and interconnection. The micro-controller -

- ✓ Controls the Sample Gas Output Temperature at 5° C
- ✓ Operates the Relay Output for your Sample Pump, when the Sample Temperature is below 12° C
- ✓ Operates the Peristaltic Pumps periodically to remove the Condensate
- ✓ Trips the Relay Output for your Sample Pump when Condensate is detected
- ✓ Operates Fault Alarm Relay when the Cooler Temperature is above 12° C and/or Condensate is detected

Display Indicators and Diagnostics

The **SGI-300** has four LEDs to display the status of Power, Cooler Temperature, Condensate and Relay Output for Sample Pump.

The micro-controller continuously monitors the health of the Hardware. In case of failure these LEDs are used to indicate the various area of failure.

Hardware Specifications

Cooler Specifications:	
Heat Exchanger:	1 x PTFE
Sample Inlet Temperature:	Max 160° C
Sample Dew Point:	65° C max
Sample Flow (max):	240 LPH (4LPM)
Sample Outlet Temperature:	5° C
Sample Dust Level:	< 3 micron
Peristaltic Pump:	1 No.
Fine Filter:	0.1µ Coalescing Element
Condensate Sensor:	Long life SS Sensor

Electrical Specifications

Display Indicators:	4 x LEDs, Status Indicator for Power, Cooler Temperature, Pump and Condensate
Outputs:	Relay-1: Sample Pump Connection Relay-2: Alarm
	All Relay outputs are SPST (Single Pole Single Throw) and rated @ 230V AC 1A
Power Supply:	230 VAC, 50 Hz, 150 VA

Material in contact with Sample: SS 316, PTFE, Viton, Silicon, Engineering Plastic.

Suitable for Sample containing SO2, NOx, CO less than 1000ppm.

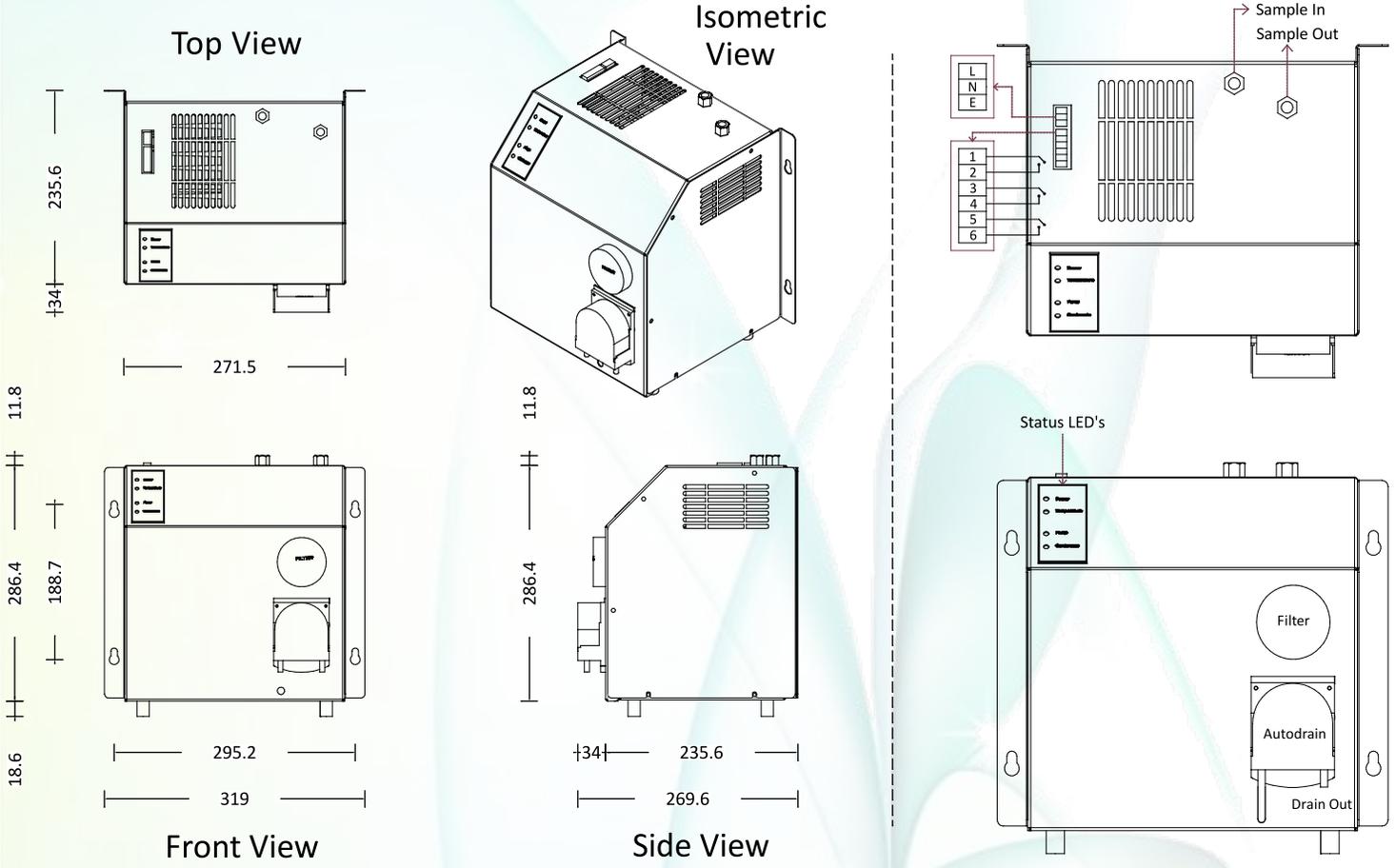
Not suitable for samples containing HCL, HF, H2S and other highly Corrosive, Toxic and Flammable Samples.

Other Specifications

Sample Connection	
Inlet -	1/4" OD PTFE
Outlet -	1/4" OD PTFE
Drain Connections	Flexible Tube connection
Enclosure	Wall Mounted
Dimension	330 (H) x 300 (W) x 267 (D) mm
Protection	Suitable for Safe Area, IP 20
Weight	Approx. 11 Kgs

Environmental Conditions

Ambient Temperature:	+10°C to + 40°C
Storage Temperature:	+0°C to + 50°C
Relative Humidity:	< 90% RH non-condensing
Area Classification:	Safe Area



Notes: - The final responsibility to check whether this product meets the requirement of the Process and / or Analyser remains solely with the customer.
 - M/s SARVESH ANALYTICS PVT. LTD. has a policy of continuous improvement of product & services and hence reserves the right to change the specifications and features without prior notice.

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