SARVESH ANALYTICS Pvt. Ltd.

Analysis Simplified

SGI-320

Continuous Emission Monitoring System

SGI-320 is the most Advanced, Intelligent and Compact Hot Extractive Emission Monitoring System. It includes all the essential Sampling Components, Realtime Diagnostics with Auto Correction and Early Warnings, History & Modbus communications. It helps you to achieve quickest installation & commissioning at site with minimal site activities.

Salient Features

- Plug n Play Menu Driven
- Engineered for Online Processes and Analysers
- Auto Start-up Sequence
- Peltier Cooler with PTFE heat exchanger
- Controls output for Blowback, Sample SOVs & Heated Hose
- Auto Blowback on Flow Failure
- Peristaltic Pump with variable discharge rate
- Built in Sample Pump, Condensate Sensor, Flow detector, Autocal SOVs & Filter
- Pulsating Blowback for efficient Cleaning
- Alarm and Fault History
- Remote Calibration with Modbus RTU over RS 485
- Auto Shutdown on Hardware Failure

Maintenance Reminder for
- Peristaltic Pump tube
- Sample Filter
- Sample Probe Filter
- Sample Pump kit

- Small Footprint 5500 x 520 x 700 (H)
- Consumes Less Panel Space
- Quick Installation & Commissioning
- Reduces Direct and Indirect Cost

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SGI-320 is a ready to use complete Analyser system for your application. It helps to quickly put the system for use.

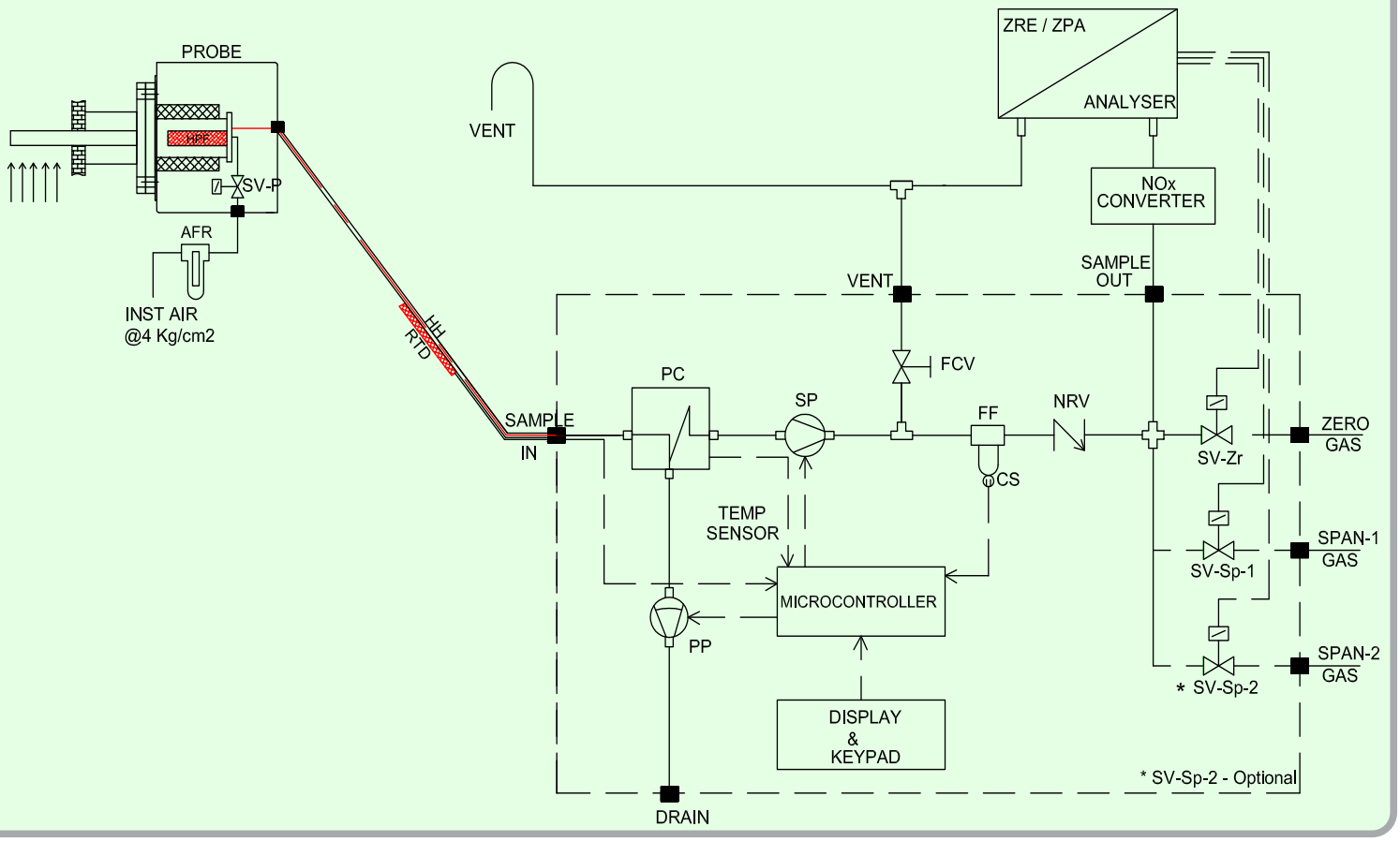
It is best suited for many analysers which requires an extractive sample handling system.

It is compact and user friendly.

SGI-320 is an Online system which can measure multiple gases from your process simultaneously. It has the most Simplified Gas Sampling System which is backed by a substantial track record.

The system is designed to condition the sample for the gas analysers.

The measurement technique can be based on NDIR / Paramagnetic / Electrochemical technology which ensures Excellent long term stability and highly accurate measurement .



SGI-320 is a Plug and Play Online Analyser system. It comes along with a Sample Probe with Auto-blowback, Heated Sample Line, Sample Conditioning System and optional NOx convertor & Remote Auto-calibration.

During Auto-Blowback and Auto-Calibration the sample pump is off.

It can detect a Choked Probe filter and do a Auto-blowback to remove choking. When it detects condensate carryover it removes the water before restarting the Sample.

It actively tracks the health of the overall system. It can also detect failure of components and shutdown the system safely thereby avoiding further damage.

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Sample Probe Blowback

SGI-320 controls the cyclic Blowback of the Filter in Sample Probe. The interval and duration of blowback is user programmable. In case the filter gets choked mid cycle and Sample Flow fails, **SGI-320** will initiates an Automatic Blowback. It has a separate output to control the Sample Solenoid valve.

Heated Sample Line

The **SGI-320** control the Heated Hose. The Sample Heated Hose temperature is user programmable. It is controlled based on RTD (Pt100) input from the Heated hose.

Sample Cooler

SGI-320 has a sample conditioner which is based on Peltier Cooler - a solid state technology. It is more efficient, robust and has a long life as compared to conventional system. It has inbuilt condensate Sensor and Flow Sensor to detect fault and trip the sample pump thereby avoiding conditions which can give rise to faults. **SGI-320** also continuously monitors system health and hardware. In case of any fault which is rare it goes into Shutdown thus avoiding running the system with fault and causing complications & damages.

Sample Pump and Autodrains

SGI-320 uses a sample pump to draw sample from the process. This Pump is off during Blowback and Calibration. It is also off during condensate detection and hardware fault.
The Autodrains in **SGI-320** run periodically. The discharge rate of these autodrains are user settable.

History & Maintenance Records

SGI-320 keeps a record of Faults and usage of consumables or spares such as Filters, Autodrains and Sample Pump in real time. And at the end of life, gives a message to Check and Replace the . This feature is very helpful and act as an early warning system.

Hardware Specifications

Gas Analyser

Standard Measurements:

Nitric Oxide-	0 - 200 / 1000 ppm
Sulphur Di-oxide -	0 - 200 / 1000 ppm
Carbon Di-oxide -	0 - 20%
Carbon Monoxide -	0 - 200 / 1000 ppm
Oxygen -	0 - 25%

Units of Measurement : ppm or mg/m^3

Repeatability: ± 0.5% of Full Scale

Linearity: ± 1% of Full Scale

Outputs:
- Calibration Relays
- Fault Relay
- Auto - Cal in Progress Relay
- 4- 20 mA for each Measurement
- Modbus

Nox Convertor

Smart Conditioner - i-Cons

Sample Probe - 230V AC for Filter heater
230V AC for Blowback Solenoid Valve

Heated Sample Line - 1x RTD (Pt100) for temperature
230V AC for heater

Calibration in Progress - 1 x DI (12V DC)

Alarm output - 1 x Potential free contact

Sample Condition

Suitable for Sample where SO_2, NO, CO < 1000ppm. Not suitable for samples containing, HCL, HF, H2S and other highly Corrosive, Toxic and Flammable Samples.

Sample Temperature:	120 - 500 ^0C
Sample Inlet Dew Point:	< 60 ^0C
Dust Level:	< 10 gm/Nm^3
Sample Gas Velocity:	between 5 - 20 m/sec
Sample Line Distance:	Max 50 m*

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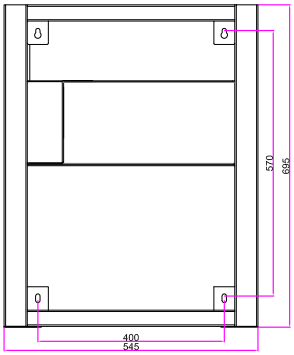
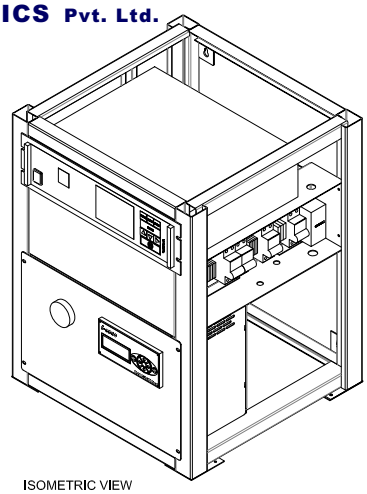
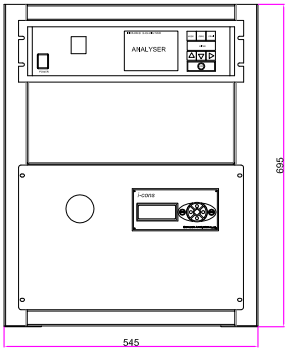
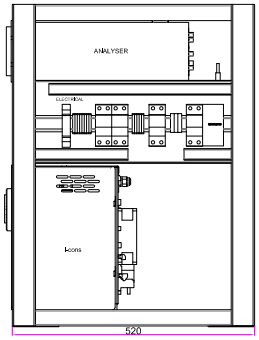


RACK MOUNTING


ISOMETRIC VIEW



FRONT VIEW



RHS VIEW

Other Specifications

Sample Connection	Inlet- 1/4" OD PTFE Outlet- 1/4" OD PTFE Bypass- 1/4" OD PTFE
Drain -	Flexible tube connection
Calibration Connections	1/4" OD PTFE
Enclosure	Wall Mounted / Table Top Rack
Dimension	695 (H) x 545 (W) x 520 (D) mm
Protection	Suitable for Safe Area,
Weight	Approx. 40 Kgs
Power Supply (excluding Heat Tracer)	230 VAC, 50 Hz, 1000 VA

Environmental Conditions

Ambient Temperature:	+10°C to + 40°C
Storage Temperature:	+0°C to + 50°C
Area Classification:	Safe Area

Order Code: SGI-3 2 0 - 2 _ _ _ _ _ _ _ _

Measurement Components

Single Component NO	1
Single Component SO2	2
Dual Component NO + SO2	3

Measurement Range

0 - 200 / 1000 ppm	L
0 - 500 / 2500 ppm	M
0 - 1000 / 5000 ppm	N

Nox Convertor

None	X
Included	Y

Sample Probe Length

500 mm	0	5
1000 mm	1	0
1500 mm	1	5

Future Use

X	None
-	–

Calibration Cylinders

x	None
2	Zero + Span
3	Zero + Span 1 + Span 2

Catchpot with autodrain

X	None
Y	Yes

Heated Hose

_ _	Specify total Length in mtr

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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