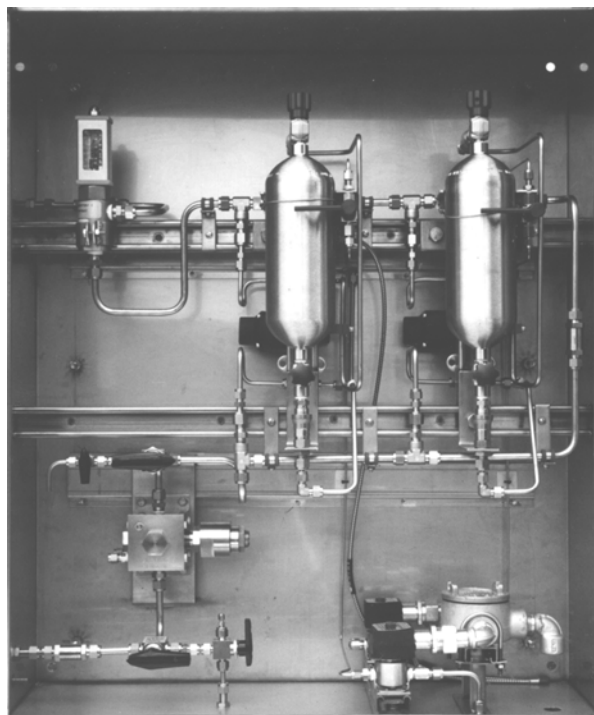


Remote Optical Sensing Assembly (ROSA)

Capture modeling or validation samples on demand with Guided Wave's Remote Optical Sensing Assembly -- This compact, closed loop, sample collection system is integrated with a **Multipurpose Flow Cell**. ROSA provides simultaneous collection of spectral data and liquid samples. Models operating on process analyzers need periodic samples (and laboratory analyses) to validate the analyzer. Models also need updating if the process changes due to feed stock changes or operating setpoint changes. These changes can occur at times when an attendant is not available to collect samples. **ROSA** provides a means of simultaneously collecting spectra and samples under computer control. Samples can also be captured at a preprogrammed time, manually, or when the analyzer senses an outlier condition. Simultaneous spectral and closed loop sample collection ensures that the sample sent to the laboratory is identical to the sample measured on-line. An optional laboratory sample unloading station provides closed sample transfer into the laboratory analyzer, and inert gas flush of the cylinder for the next sample.



ROSA – Remote Optical Sensing Assembly

ROSA consists of a **Multipurpose Flow Cell** mounted in series with a manifold and two, one-liter sample cylinders. Flow through the sample cylinders is controlled via a pair of pneumatically actuated ball valves. **ROSA** is a unique 3-dimensional modular design. The sample cylinders are mounted in the front of a vertical strut with the pneumatic actuator and ball valves in the rear. Each cylinder is coupled to the manifold via zero clearance fittings. This entire module is quickly removable for service. Each end of the sample cylinder is sealed with self-sealing quick disconnects plus manually operated, red handled valves. For safety, cylinder removal is blocked by a red, long handled valve. Closing the valve bleeds air off the actuator and ensures that the fluid lines are closed and in the safe position before the cylinder is removed.

Flow Cell Access

Three-way isolation valves are mounted around the **Multipurpose Flow Cell** to permit draining of the cell for service and cleaning. Ports are available for manual injection of a test or standard samples.

Automated Sample Collection

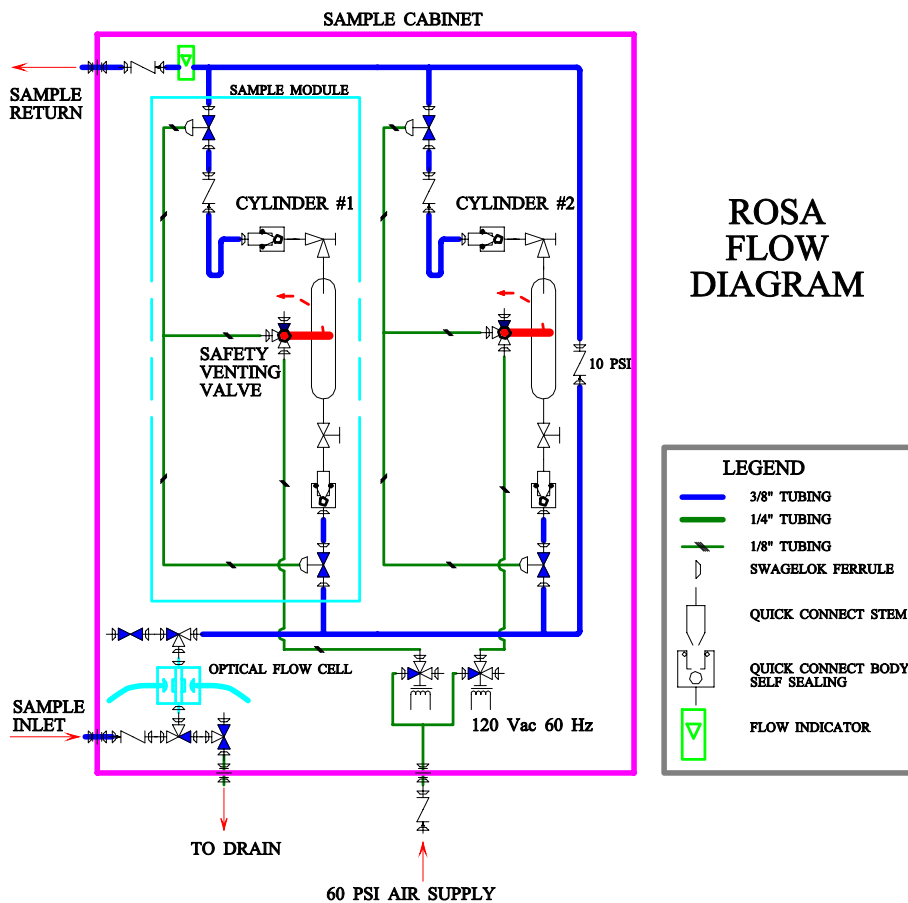
The computer controls sample collection, hence collection can be triggered by the analyzer's outlier detection algorithm, by manual request, or by a scheduled request. For a model to accurately predict the properties of a stream, the model must be built with representative but statistically different samples. Models become more robust when unusual but legitimate samples are added to the database. These interesting samples frequently occur during process upsets that are hard to predict and occur over short periods of time when technicians are not available to collect samples. Spectral data and sample are captured simultaneously thus ensuring that the sample sent to the laboratory is the same as the one measured. The closed sample cylinders ensure sample integrity and no light ends loss or oxidation, resulting in accurate continuous validation of the analyzer and accurate updates of the analyzer's chemometric model.

Accessories

ROSA may be ordered with extra sample cylinders and with a laboratory unloading station.

Specifications

Wetted Materials	316 Stainless Steel, Teflon™, Viton (unless specified otherwise)
Fittings/Valves	Swaglok (except quick disconnects), Whitey/Nupro
Manifold	3/8" OD, 0.035" Wall SS316 tubing
Sample Lines	1/4" OD, 0.035" Wall SS316 tubing
Air Lines	1/8" OD, 0.035" Wall SS316 tubing after actuator
Cylinders	1000cc including DOT Vapor Space (20%), NRS Type Shutoff Valves
Number of Cylinders	Maximum 2
Solenoids	120 Vac 60 Hz Class I Div. 1 Grp. C, D (CENELEC & 220 Vac available), Spring Return
Instrument Air	60 psig [414 KPag]
Cabinet	NEMA 12X, 36" x 30" x 12" [91.5 cm x 76.2 cm x 30.5 cm]
Maximum Temperature	200 °C (o-ring material dependent)
Maximum Pressure	500 psi [3450 KPa]
Pressure Drop	15 psig [103.5 KPag] @ 0.75 GPM [3 L] of 0.70 Specific Gravity Fluid
Flow Meter	Brooks 3602 Armored, 0 – 180 GPH [0 – 680 L/hr]



Please contact Guided Wave Sales at gwinfo@guided-wave.com for exact engineer specifications, part numbers, installation details, or pricing on this product. For information on other Guided Wave products, please visit our web site at <http://www.guided-wave.com>.

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