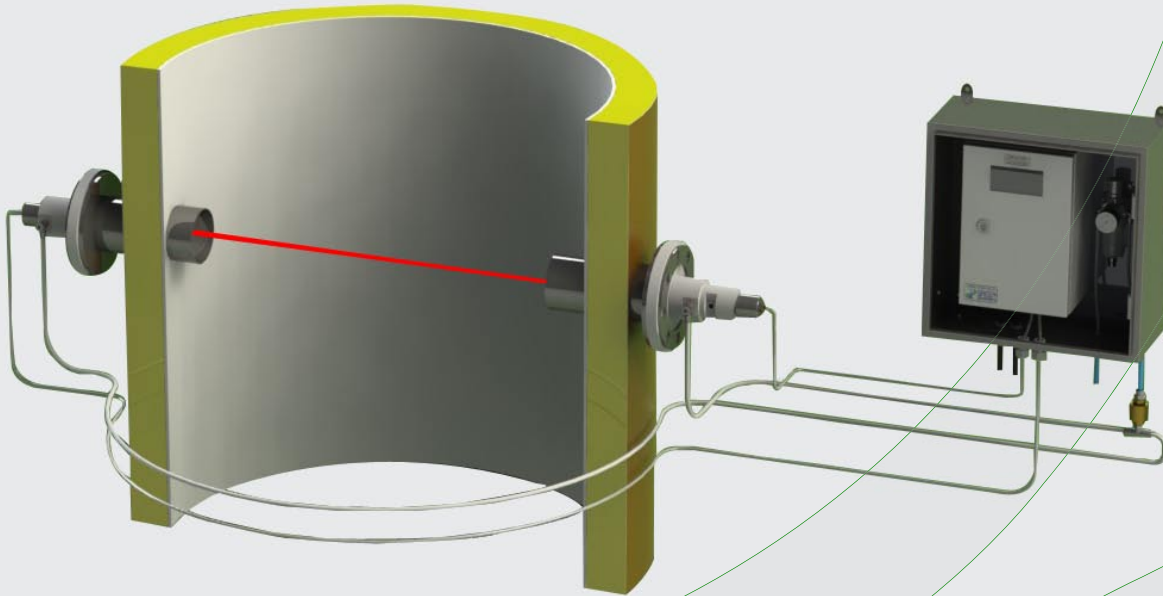


G1100 Opacity Monitor

Monitor Acid Mist in Chemical Processes

Isolated and Heated Cabinet



Perfecting Sensible Technology

The G1100 Opacity Monitor is a line-of-sight opacity monitor that measures the clarity of the air in funnels.

Especially designed for Chemical Processes

The G1100 is especially designed to monitor acid mist in chemical processes. It is equipped with two special PTFE-heads that are made to resist acid mist.

The system is installed with two PTFE-heads directly opposite each other. The PTFE-heads are connected to the monitoring unit by two fiber optic cables.

Our G1100 Opacity Monitors have been installed in many acid plants around the world.

Weather Resistant Cabinet

The monitoring unit is placed in a special isolated and heated cabinet that provides extra protection. This means that the system can withstand ambient temperatures from -45°C to $+55^{\circ}\text{C}$.

Alarm Functions

The system provides a prompt response to acid mist. It has two freely configurable alarm relays that are preset to respectively 20 and 30% opacity.

Simple Design — Low Maintenance

During operation the purge air supply is used to keep the lenses clean. However, the optic heads and the lenses do need to be cleaned occasionally and the simple design makes it easy carry out this task.



PTFE-head



Specifications - G1100 PTFE Opacity Monitor

Protection Cabinet with Monitoring Unit	
Power supply	Standard 210-250 V AC - 50/60 Hz Optional: 105-130 V AC - 50/60 Hz or 20-30 V DC
Consumption	120 VA max. with heating element in use
Ambient temperature	-45°C to +55°C
Output signal (linearized)	4...20 mA (4 mA ≈ 0% — Opacity 20 mA ≈ 100%) max. 800 Ω 0...10 V DC (0 V ≈ 100% — 10 V ≈ 0% Opacity) max. 10 mA
Dimensions / weight	H×W×D: 380 × 380 × 210 mm / 15.5 kg
Enclosure	IP 66 stainless steel box
Purge air connection	Ø 10 hose connection
Digital Display (either as part of the monitoring unit or as optional remote digital display)	
Display	0-100% opacity level (programmable)
Alarm delay	Default 10 s (programmable 0-99 s)
Relay voltage	Max. 250 V AC, max. 2A
Relay function	2 relays, volt free, freely configurable — default NC
Default alarm levels	Relay 1 at 20% opacity and Relay 2 at 30%
Power supply	22... 250 V AC - 50/60 Hz or 20... 300 VDC - 4 VA
Dimensions (only relevant if remote)	H×W×D: 48 × 96 × 120 mm Panel cut: 44.5 × 91.5 mm
Fiber Optic Cables	
Optic fibers	Glass fiber core in stainless-steel sheathings with brass end tip
Operating temperature	Max. 240°C at the glass fiber tip behind the lenses
Length of fibers	Standard 4.5 m - optional 6.0 m, 7.5 m, or others
Optic PTFE Heads with Purge Air System	
Mounting flange	Uniflange for DN 80 and 3" Flange sockets on duct are to be aligned opposite of each other
Scanning distance	1 m to 3 m
PTFE heads	L×Ø: 160 × 80 mm - with purge air connector
Purge air supply	10 NLPM - i.e. 5 NLPM for each head
Optional Equipment	
Audit pens	
Alarm annunciator for panel mounting	
Visualization & data logging	
Data-system integration via various busses	
Specifications subject to changes without notice	