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AIR fair

EMISSION MONITORING SYSTEMS

دقیقا تمهیز

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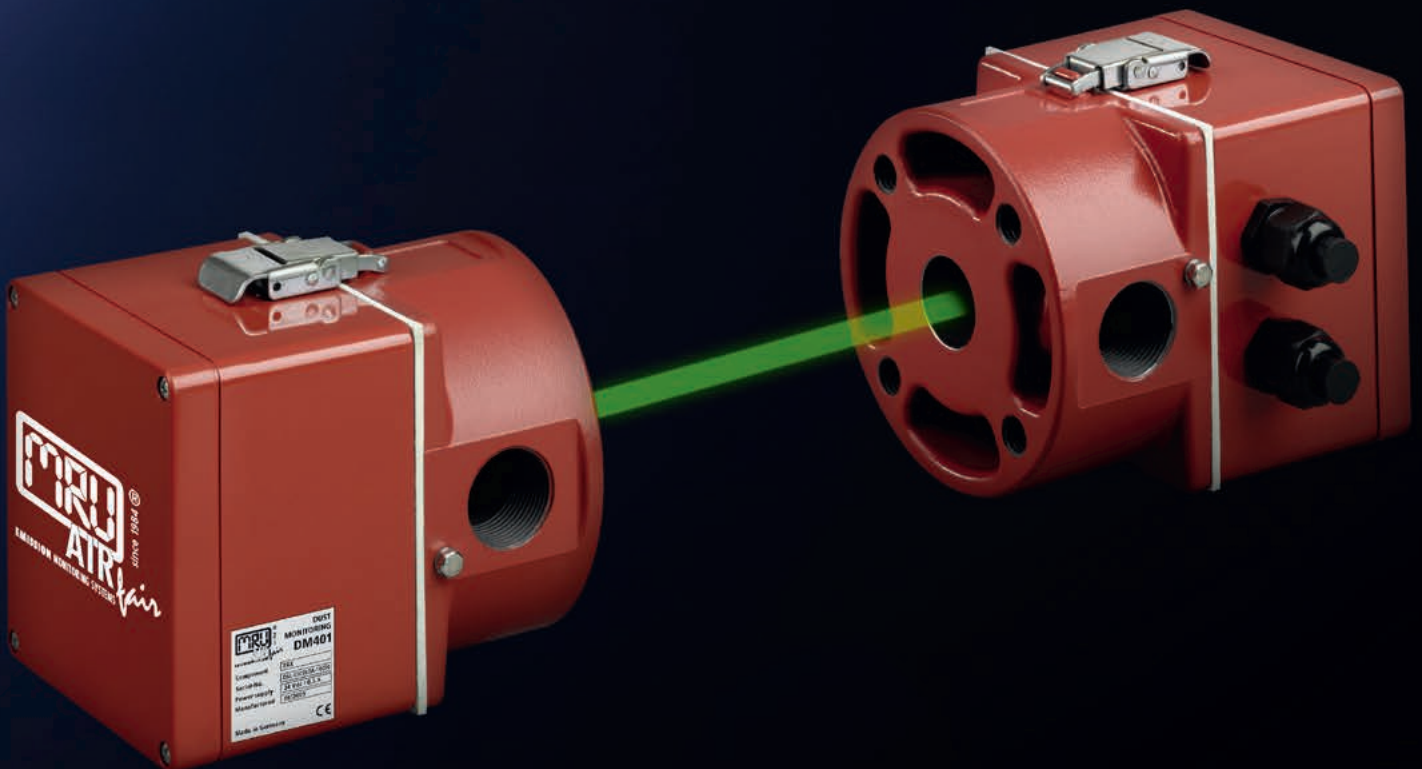
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MRU – Competence in gas analysis. Since 1984.

# DM 401

## DUST OPACITY MONITORING SYSTEM

**Double pass transmission method  
for continuous particulates and opacity  
monitoring**



# DM 401

## Dust Monitoring System Double pass transmission measurement

Measures 0 ... 100 % opacity or 10 ... 1.000 mg/m<sup>3</sup> dust (\*)

(\*) after on site calibration according to VDI 2066

Reflector



### Features

- In situ measurement directly in exhaust gas flow
- Measurement reading as particulate as mg/m<sup>3</sup>
- Modulated green LED source for long lifetime stability and immunity to ambient light
- Rugged 316 stainless steel construction
- In-situ zero and calibration check facility
- Choice of interface options enabling easy integration
- Free utility software for PC based set-up, control and data logging
- Optional Operator Interface with different mounting configurations

### Benefits

- Simpler installation than single pass opacity monitors
- Better accuracy over shorter path lengths than single pass opacity monitors
- Rugged design with no moving parts so low maintenance
- Latched head and lid design to enable ease of access for installation and maintenance

### Applications

- Industrial combustion processes such as boilers and furnaces
- Air filtration processes such as filter bag houses, electrostatic precipitators or cyclones
- Industrial process control applications
- Other non-compliant processes

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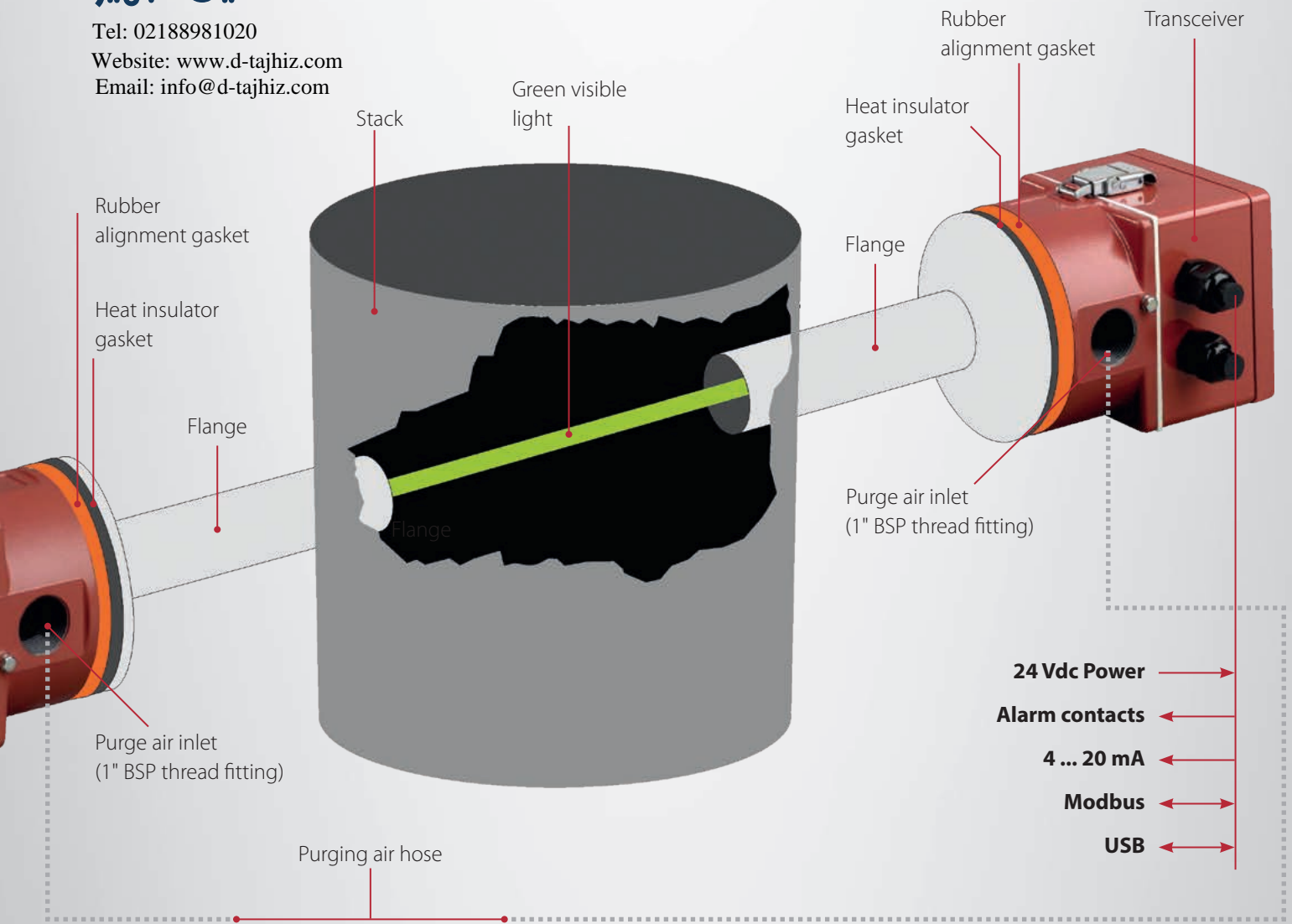
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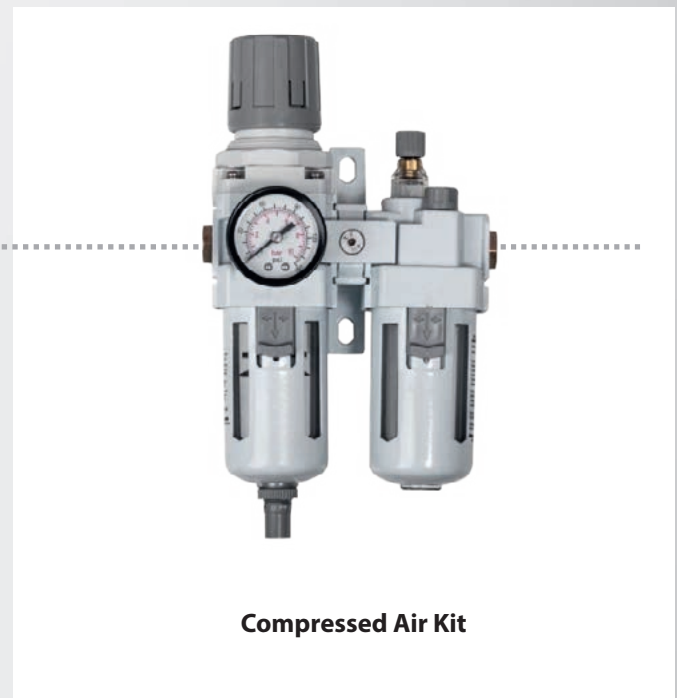
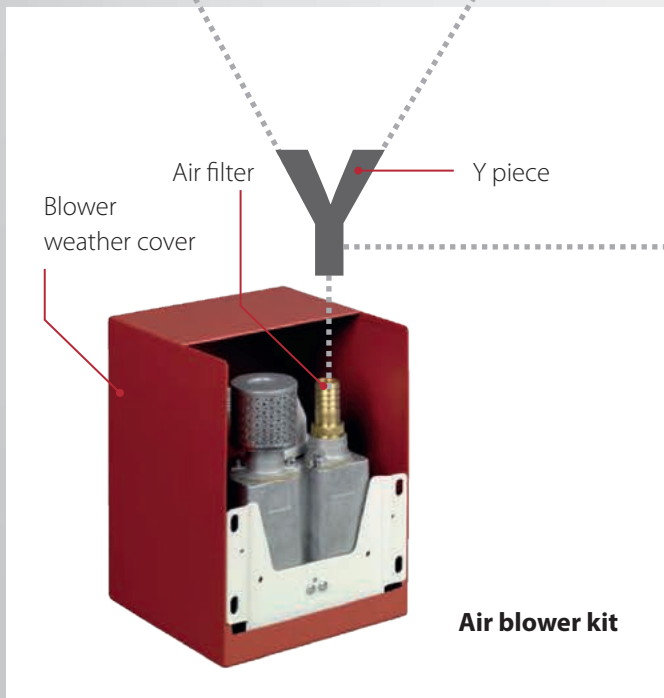
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Purging air hose



Both the transceiver and reflector are supplied with an air purging (blower unit) or compressed air kit. This will prevent dust particle deposition on the optical lenses by continuous purge with clean ambient air and extend substantially the maintenance free operation.

# DM 401

## Technical data

Parameter	Units	Min	Max	Comment
<b>Measurement performance</b>				
<b>Path. length (flange to flange)</b>	m	0,5	10	flange-to-flange distance
<b>Measuring range</b>	particulate mg/m <sup>3</sup>	10,0	1000	after on site calibration
	opacity %	0,0	100,0	user selectable
<b>Accuracy</b>	%	-2	+2	
<b>Resolution</b>	mg/m <sup>3</sup>		0,1	display resolution
<b>Damping</b>	s	1	60	selectable
<b>Drift with temperature</b>	%	-2	+2	for any 20 °C change
<b>Operating wave length</b>	nm	510	540	green LED
<b>Power and air requirements</b>				
<b>Voltage</b>	Vdc		+24	optional 90 ... 240 Vac PSU available
<b>Air supply volume</b>	l /min	50	200	to each air purge inlet
<b>Air supply fitting</b>				1" BSP threaded aperture
<b>Interface options</b>				
<b>RS 485</b>				ModBus RTU
<b>Analog outputs</b>	mA	4,0	20,0	isolated and scalable
<b>Relay contact</b>	3 A @ 30 Vdc			level alarm and service alarm
<b>Physical</b>				
<b>Protection class</b>		IP 65		for outdoor use
<b>Operating temperature</b>	°C	-20	+55	air temperature around the equipment
<b>Gas temperature</b>	°C	+100	+600	heat insulated gaskets included
<b>Dimensions</b>				
<b>Transceiver</b>				153 x 122 x 120 mm
<b>Reflector</b>				153 x 122 x 120 mm
<b>Purging air blower unit</b>				310 x 220 x 230 mm
<b>Enclosure</b>				stainless steel, powder coated
<b>Weight</b>				transceiver: 2,5 kg, reflector: 2,5 kg purging air blower unit: 11 kg

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