

**JCT**  
Analysentechnik

# JFID-FE

## Real Time Analyzer for TOC in Steam and Condensate



### APPLICATION

- Continuous real-time analysis of contamination with Hydrocarbons (TOC/THC) directly in process-steam and/or condensate, e.g. at:
  - Heat exchanger
  - Blow-down vessel
  - Flash drum
  - Condensate recovery
  - LEL monitoring in cooling tower
  - VOC in waste water





### BENEFITS

- No time consuming sample conditioning (e.g. cooling of the condensate to < 45 °C)
- Quick analyzing results
- Response time < 1 sec
- low maintenance
- no chemical reagent required
- self cleaning system

### FEATURES

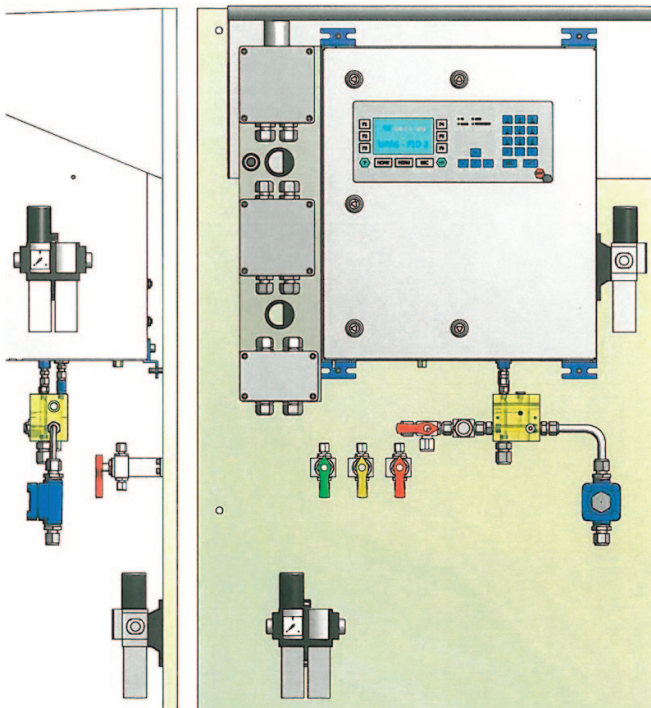
- Proven FID (Flame Ionization Detector)
- Provides monitoring results within seconds
- Reliable control of the whole steam process
- Safe detection of leakages
- Decision if it can be recycled or discharged
- Applicable in both, steam and condensate pipes
- Single or multi channel configuration
- For safe area or Ex area zone 1 or 2
- Fast response time
- Simple automatic calibration
- Complete diagnostics of all utilities
- Automatic start-up
- Heated corrosion proof detector
- Integrated catalyst for Zero and burner air (non Ex)

## TECHNICAL DATA

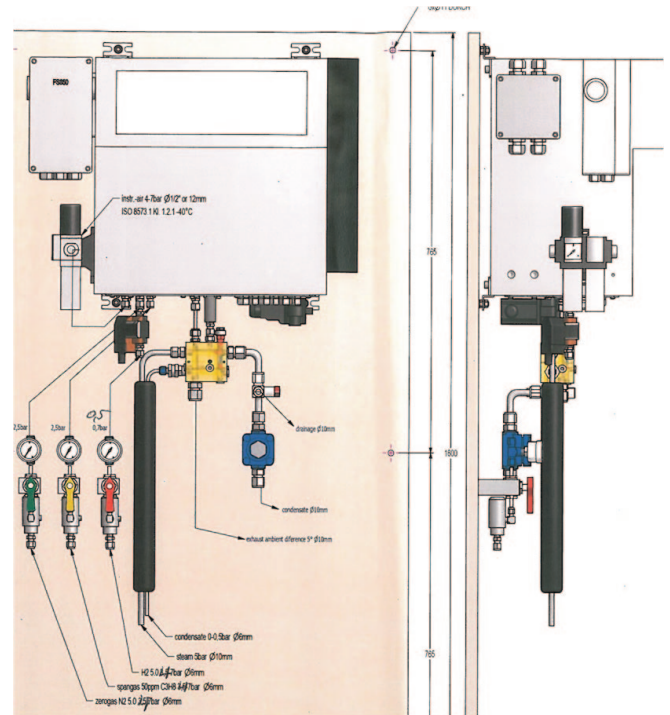
Model	JFID-FE Safe area	JFID-FE EEx p zone 1	JFID-FE Ex pz 2/3 G zone 2
Description			
Operation			
Vacuum system	Injectors		
Measurement range	0-3 mg org. C/m³ to 100000 mg org. C/m³, free selectable		
Detection limit	< 0.1 mg org. C/m³		
Linearity	< 4 % over measurement range		
Selectable units	ppm, mg/m³, Vol%, %LEL		
Signal output	0(4) mA to 20 mA; burden 600 Ω not galvanically isolated		
Ambient temperature	−5 °C to 40 °C		
Response time (T <sub>90</sub> )	< 0.5 s if measured value > 20 mg org. C/m³ < 5.0 s if measured value < 20 mg org. C/m³		
Sample gas (self-drawn)	approx. 25 l/h with 1013 hPa optionally approx. 2 l/h; 5 l/h; 60 l/h		
Sample gas pressure	800 to 1600 mbara	800 to 1100 mbara	
Air humidity	< 90 % rel. humidity, + 20 °C < 50 % rel. humidity, + 40 °C		
Geographical altitude	0 to 1500 m above NN		
Construction			
Dimensions over all (W x H x D)	500 x 505 x 410 mm	625 x 540 x 410 mm	570 x 590 x 410 mm
Weight	33,5 kg	41 kg	38 kg
Detector temperature	adjustable up to 200 °C		
Catalyst temperature	400 °C		
Utilities			
Instrument air	3.0 to 3.9 bar, < 2 Nm³/h quality to ISO8573-1 1.2.1	3.0 to 3.9 bar, < 2 Nm³/h for prepurge 3.5 Nm³/h for normal operation 0.8 Nm³/h quality to ISO8573-1 1.2.1	
Fuel gas	Hydrogen 0.7 to 1.0 bar, < 80 ml/min quality 5.0		
Combustion air	with internal catalyst or optional Synthetic air 1.0 to 1.5 bar < 30NI/h	Synthetic air 1.0 to 1.5 bar < 30NI/h	
Calibration gas	2.0 to 2.5 bar, < 130 NI/h during calibration concentration 60 % to 80 % of the measurement range in relation to C <sub>3</sub> H <sub>8</sub>		
Zero gas	with internal catalyst or optional Nitrogen 2.0 to 2.5 bar, < 130 NI/h quality 5.0	Synthetic air 2.0 to 2.5 Bar or Nitrogen 2.0 to 2.5 bar, < 130 NI/h quality 5.0	
Protection class	IP 54 optional IP65	IP65	
Type of protection		 II 2G Ex px II T2-T4  II 2G Ex px IIC T2-T4 Gb  II 2G Ex d IIV	 II 2/3G Ex pz IIC T2-T4 Gc
Approvals / Signs	CE	BVS 09 ATEX E 119 X, BVS 09 ATEX E 108 U CE	BVS 09 ATEX E 144 X (2014/34/EU) CE
Electrics			
Power supply	115 V ± 10 % or 230 V ± 10 %; 48 Hz to 62 Hz		
Power consumptionwith supplementary heating system	< 250 W < 1000 W		

## APPLICATIONS

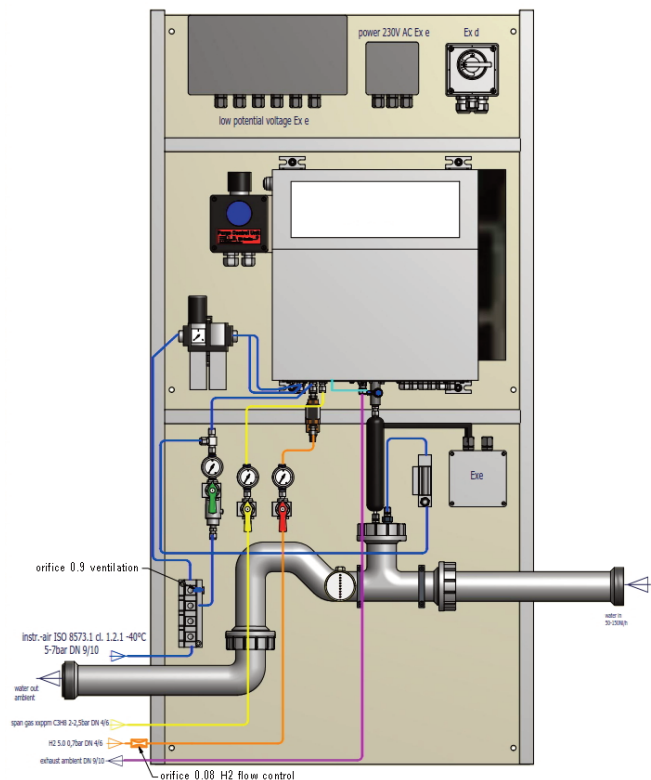
### Steam Monitoring



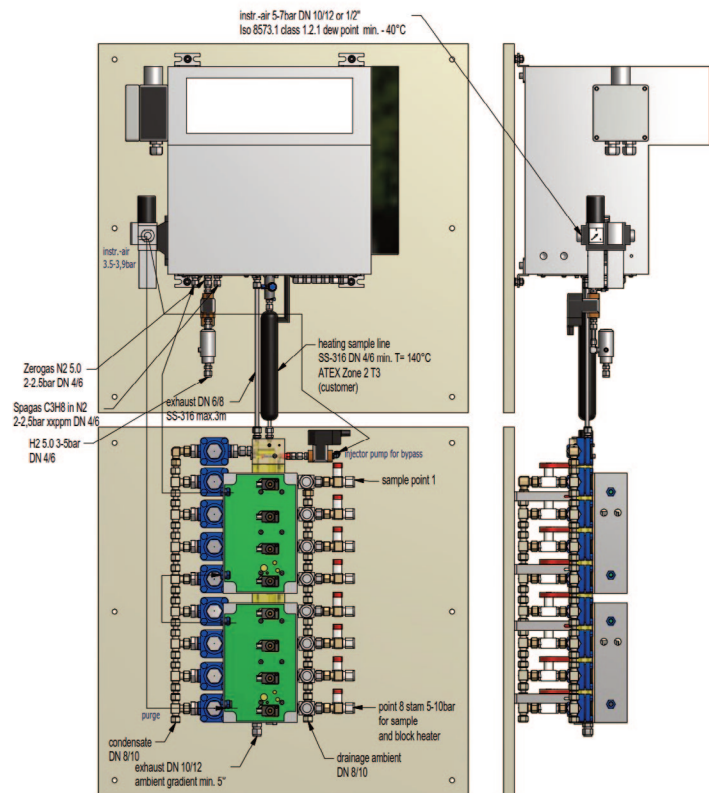
### Condensate Monitoring



### Waste Water Leak Detection



### Multi Channel Monitoring



## ORDER CODE

Part number	Description
207.020008	JFID-FE-Steam IP54
207.021008	JFID-FE-Steam IP65
207.021208	JFID-FE-Steam Ex pz 2/3 G zone 2, IP65
207.020009	JFID-FE-Condensate IP54
207.021009	JFID-FE-Condensate IP65
207.021209	JFID-FE-Condensate Ex pz 2/3 G zone 2, IP65

### Standard included for systems for zone 1 or 2

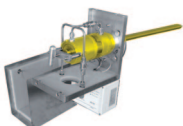
407.950033	Status- and alarmboard with 4 x 0/4 to 20 mA output, galvanically isolated
407.020048	Conversion kit for external zero air

### Options

407.950033	Status- and alarmboard with 4 x 0/4 to 20 mA output, galvanically isolated
407.970083	Multi sampling MSU-block HT-4 steam for model "FE" (safe area)
407.970084	Multi sampling MSU-block HT-8 steam for model "FE" (safe area)
207.930000	Inlinestripper (safe area)
207.930200	Inlinestripper Ex
407.030103	Flame trap ATEX
207.999910	Mounting plate
116.130197	Hook up drawing and documentation
207.999920	ATEX documentation for add-ons
907.050000	Vortex cooler safe area
615.012001	Vortex cooler ATEX
407.040190	Air pressure regulator with fine filter assembly
DAS 2	Instrument air purifier
DM003 P	Instrument air purifier for Ex area

- TOC in steam
- TOC in condensate
- Condensate recovery
- TOC in heat exchanger
- LEL monitoring in cooling tower
- Leak monitoring in spill water
- Leak monitoring in cooling water

Gas Sampling **Probes**



Heated Sample **Lines**



Sample Gas **Coolers**



Gas Conditioning **Systems**



NOx **Converter**



and solutions for

