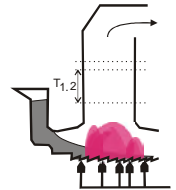


## Productinfo: Pyrometer

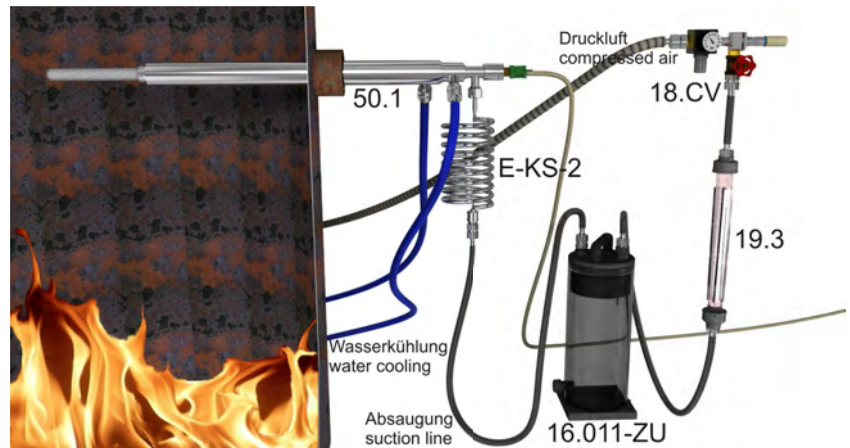
### Suction pyrometer

For the determination of the temperature in the fire chamber (like demanded for the singularly test at chamber installations according to the emission act) is only interesting the convective part of the heat and not the radiation-heat. Suction pyrometer can use for such determination.



### Composition of a sampling line:

The thermocouple is in the front area of the suction pyrometer and shielded by ceramic-body's to protect the thermocouple against the IR-radiation from the fire-combustion chamber. The hot exhaust gas will be sucked over the thermocouple. The suction pyrometer can be cooled by cooling water circuit. The sucked gas with the pyrometer can use for the measurement of the oxygen rate by an analyser.

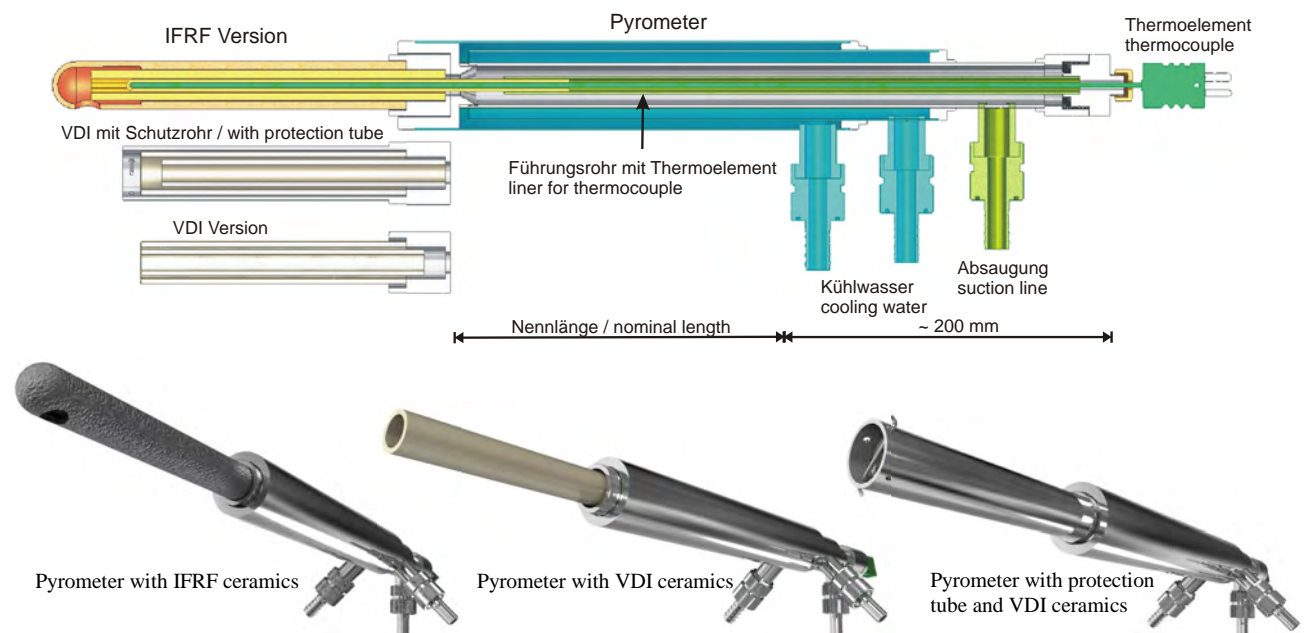


### 1. Cooled suction pyrometer with outer Ø 50 mm

It is developed for the measurement in high temperature area up to 1600 °C. Titanium and Stainless Steel can use. The cooling water goes at first through the inner tube and return at the outer tube. The thermocouple Ø 3-4 mm has his separate liner, can easy remove and cleaned and is gas tight sealed. The water ports have fast connector for 19 mm hose and one closing valve. The gas port has G 3/4 thread with fast connector for 13 mm hose. The ceramic shields are mounted in one bayonet socket and can change very fast.

### Weight and bending:

Length	Weight Ti (kg) empty / water	Weight SS (kg) empty / water	bending Ti (mm)	bending SS (mm)
2000	4 / 9	6 / 11	8	100
3000	7 / 12	10 / 15	50	180
4000	8 / 15	-	75	-
5000	10 / 17	-	100	-
6000	12 / 20	-	200	-



## Productinfo: Pyrometer 2/3

### 2. Ceramic shields

For the protection against the heat radiation can mounting with cement according VDI two ceramic shields or according to IFRF three ceramic shields in the bayonet socket and placed in the cooled front section of the pyrometer.

The exchange of broken ceramic is now very easy.

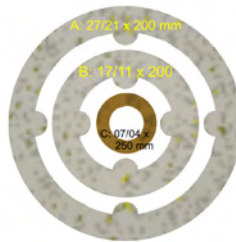


Bayonet socket  
Art.-No.: 50.018

### IFRF ceramics

The outer ceramic from the IFRF version is closed at the front, the sampling take place through a hole vertically to the gas flow. The inner ceramic surrounds completely the thermocouple. This caused thereby a slower temperature adjustment.

Operating range: up to 1600 °C  
in area with high IR radiation

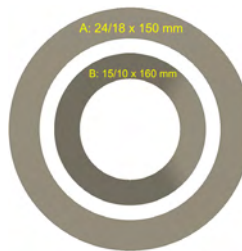


IFRF-Ceramic (3-part)  
Art.-No.: 50.091

### VDI Ceramics

In the VDI version are used only two ceramics and both are open at the front. As a result, the ceramics are significantly more favorable, but there is a risk that the IR radiation acts from the front on the thermocouple.

Operating range: up to 1600 °C

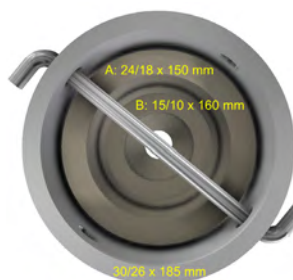


VDI-Ceramic (2-part)  
Art.-No.: 50.09

### VDI Ceramics with protection tube

For rough situations, we can offer a bayonet socket with protection tube from heat resistance steal (up to 1200 °C) in which the two VDI ceramics can be placed.

Operating range: up to 1200 °C

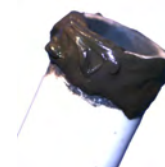


Bayonet with protection tube. Art.-No.: 50.19

### 3. Ceramic cement for ceramic tubes

To fix the ceramics in the bayonet socket, volume: 250 ml, ready to use mixture. Can be use up to 1600 °C.

Art.-No.: 50.09-C.



cement on ceramic

# PAUL GOTHE BOCHUM

PAUL GOTHE GmbH  
 Manufacturer of Emissions Control Technology



## Productinfo: Pyrometer 3/3

### 4. Cooling Coil:

In case of short suction pyrometer the temperature of the sucked gases can be higher as 80 °C and melt the connected hose. The cooling coil protects at high suction rate the hoses. Art.-Nr.: E-KS-2



E-KS-2

### 5. Condensate trap

The condensate from the cooled gas can be kept back with the trap to protect the suction parts. One PU-foam inside prevents that water squirts can reach the exit. Art.-No. 16.011-ZU.



16.011-ZU

### 6. Rotameter for the indication of the flow rate

For the determination and monitoring of the suction volume rate we recommend our rotameter with range 0,6-6,0 m³/h. The flow meter has at the inlet and outlet quick release hose coupling, that it can be installed at any point in the suction line.



19.3

Art.-No.: 19.3

### 7. Ejector for the suction with pressed air

For the correct measurement of the gas temperature must be the gas speed at the thermocouple more as 80 m/s. Ejectors are for this suction rates particularly well suited. The delivery volume depends on the pressure of the compressed air and the vacuum at the suction side. The delivery includes one pressure-reducing valve with compressed-air link and pressure indication, one sleeve valve at the suction side for adjusting the suction volume and one sound absorber.



Ejektor

Performance table: **P** = compr. air [bar], **S** = suction volume [m³/h], **L** = Air-consumption [l/min]

P	V	L	Art.-No.:
5	2,1	50	18.CV10
4	2,0	40	
3	1,5	30	
2	1,0	25	

P	V	L	Art.-No.:
5	9,0	180	18.CV20
4	8,5	150	
3	7,5	120	
2	5,5	90	

P	V	L	Art.-No.:
5	23	350	18.CV30
4	19	340	
3	16	300	
2	11	250	

### 8. Matching hoses

Hose for the water cooling (pressure resistance) 19 mm I. W.,  
 unit: meter (0,38 kg/m):  
 Art.-No.: 31.01.



Suction hose (pressure resistance) 13 mm I. W.,  
 unit: meter (0,35 kg/m):  
 Art.-No.: 31.02