



## Isokinetic Probes

### PM10 and PM2.5 Stack Cyclones

#### Main characteristics:

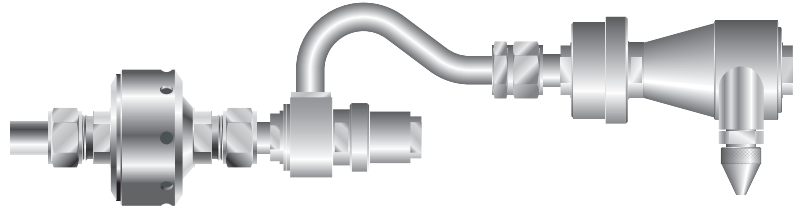
- Gaskets in Viton®
- Completely built in Inox Aisi 316
- Maximum temperature: 250 °C
- Maximum exposition temperature: 300°C per 1h

To meet the increasing interest for the fine particulate sampling in stack emission with aerodynamic diameter less than 10 microns, TCR Tecora has added the PM 10 and 2.5 cyclones to its wide range of accessories.

Both cyclones are designed to meet the specifications reported by USEPA in the Method 201A and they have been realized under ISO 9001 standard.

The method 201A specifies the sampling at constant flowrate at actual emission conditions using an in-stack filterholder.

The PM10/2.5 cyclones can be installed on the TCR Tecora Heated Probe equipped with either AISI 316 or Titan suction tube.



#### I° stadium PM10 Cyclone and Nozzle Kit

The PM10 cyclone, inserted instead of curve-nozzle, makes it possible to use the Isokinetic Kit for determining the already existing total particulate matter.

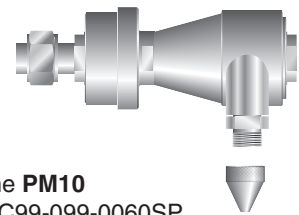
It's possible to use the same nozzles of the Isokinetic Kit with the interchangeable nozzles.

The length of those are different from the ones' suggested by EPA, and so it allows the probe to enter the 4" stack ports.

The PM10 cyclone kit is supplied with a practical metal carrying case, a set of interchangeable spare gaskets, the user's instruction manual and an Excel® calculation chart.



Nozzle kit (4-5-6-7-8-9-10-11-14-18)  
P/N AC99-099-0012KP



Cyclone PM10  
P/N AC99-099-0060SP

#### II° stadium Cyclone PM2.5

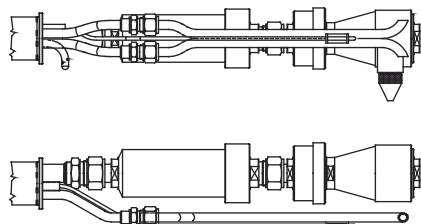
To be used, the cyclone PM2.5 needs the I° fractioning stadium operated by the cyclone PM10.

The PM2.5 cyclone kit is supplied with a set of interchangeable spare gaskets.

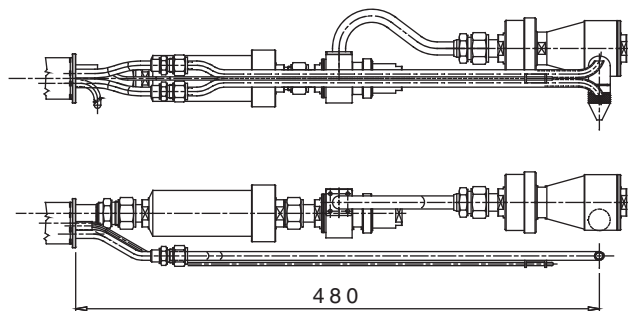


Cyclone PM2.5 P/N AC99-099-0062SP

#### PM10 on isokinetic probe



#### PM10 and PM2.5 on isokinetic probe with XL type Pitot Terminal



XL type Pitot Terminal:  
P/N AC99-099-0064SP



## Stack Impactors

### Multistage Impactor for PM10 and PM2.5 mod. MSSI

#### Main characteristics:

- Emission multistage cascade impactor
- According to VDI 2066 Part. 10 and EN 13284-1
- 3 particulate cut size on the same sample:
  - PM 10 > 10 micron
  - PM 2,5 from 2,5 to 10 micron
  - Total below 2,5 micron
- Material in contact with the sample: Titanium (it is also available the stainless steel AISI 316 version)



fig.1 Assembled Impactor with nozzle and cone for sampling in vertical position

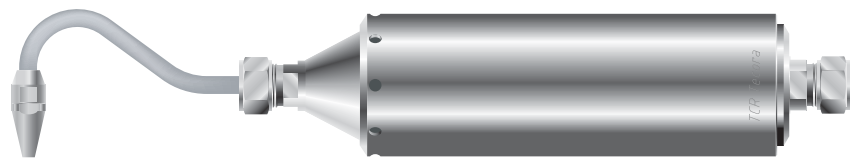
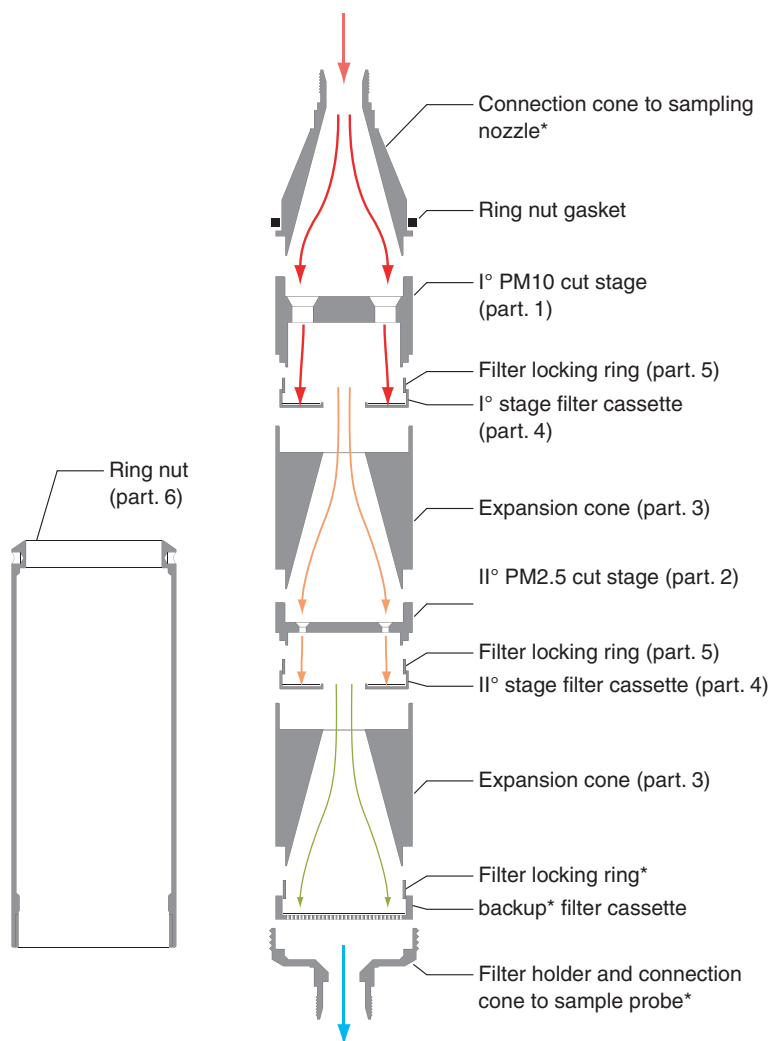


fig.2 Assembled Impactor with nozzle for sampling in horizontal position



\* Parts not included in MSSI impactor

To meet the increasing requirements toward the fine particulate determination and progressive reduction of emission dust concentration, TCR Tecora added to the already stated cyclone series realised according to USEPA design, the new multistage cascade impactor mod. MSSI.

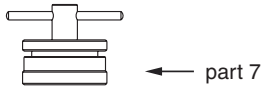
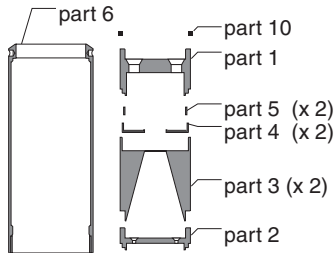
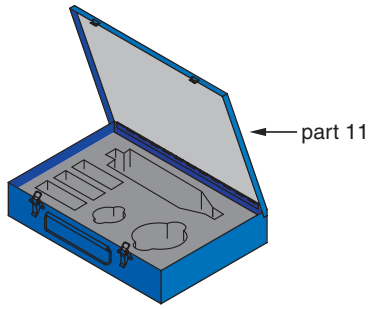
The MSSI impactor is realised according to the drawing indicated in the VDI 2066 Part. 10 method and in the Norm EN 13284-1 to reduce the dust deposit on walls.

Using filter cassette avoids the on field filter manipulation.

The impactor can be supplied with two different inlet cones to allow the vertical and horizontal positioning in respect the stream direction in the duct (fig. 1 and 2).

The impactor is designed for a high sampling flowrate, about 3m<sup>3</sup>/h, depending on emission characteristics to reduce sampling time.

It comes complete with the software to calculate the sampling flowrate, nozzle and others factors to optimise the quality measure.



## Kit MSSI PM10-2.5 Multistage Stack Impactor

The MSSI PM10-2.5 impactor is provided with a metal carrying case with compartment, containing the following items:

Part num	Description
1	1 I° PM10 cut stage
2	1 II° PM 2.5 cut stage
3	2 Expansion cone
4	2 I° and II° stage filter cassette
5	2 I° and II° stage filter locking ring
6	1 Ring nut
7	1 Cutter device for filter diam. 47mm
8	1 Assembling base impactor
9	6 Petri dish for filter diam. 47mm
10	1 Spare gaskets set
11	1 Carrying case

### MSSI Kit in Titanium

**AC99-107-0000KP**

### MSSI Kit in AISI 316 steel

**AC99-107-0010KP**

### Spare parts

Part	Description	Cod. Titanium	Cod. Inox
4/5	I° - II° stage filterhold. case	AC99-107-9900SP	AC99-107-9901SP
	Back-up filterholder case	AC99-105-0002SP	AC99-106-0002SP
9	100 Petri dish for filter	BA99-001-0047CR	
10	Spare Gasket set	AC99-107-9911KP	

### Sampling kit

In order to allow the widest interchangeability with other TCR Tecora accessories, avoiding expensive duplicate, the MSSI impactor can be used with filter holder diam 47mm, curves and nozzles used for total particulate isokinetic sampling.

It is supplied with a filter cutter device

to make a hole in the 1° and 2° stage in order to use flat filter diam 47mm made of quartz fiber or other support usually on the market.

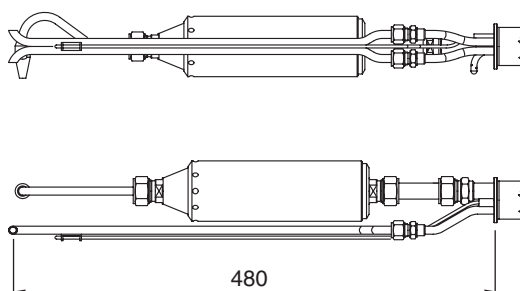
It is also supplied with a base to support the impactor during its assembling.

The unified connections allow the use of the MSSI impactor with the one

block probes and heated probes manufactured by TCR Tecora.

*For further information regarding compatible kit please see Product Data Emission Line 1.104.01*

### PM10-2.5 MSSI impactor assembling size on isokinetic probe with XL Pitot terminal



Impactor and gooseneck curve size for horizontal positioning allow the use of the Pitot tube XL used with cyclones PM 10-PM 2,5.

Pitot XL terminal:  
P/N. AC99-099-0064SP