



Isokinetic rectangular sampling probe for a volume flow rate of 28.3 l/min (1cf/min) at 0.45 m/s air velocity and adapter piece with HEPA filter for cleaning purposes

### Why rectangular sampling probe design?

Circular sampling probes are still being produced and commonly used to fulfil isokinetic flow conditions. Increasingly though, users recognise the advantages of rectangular shaped sampling probes.

Topas sampling probes have a rectangular inlet which is gradually reduced to a circular tube connector.

The design of the probe is based on the EN ISO 14644, part 3 which defines a maximum width to height ratio of 1:6.

The manufacturing process ensures that all internal surfaces are polished to avoid material deposits and thereby falsifying test results.

### Advantages of the rectangular sampling probe design

- *Exact Scanning over the whole filter area*

The rectangular design enables the scanning of the filter corners too unlike circular probes which inevitably miss some areas.

- *Sampling probe designed to standard*

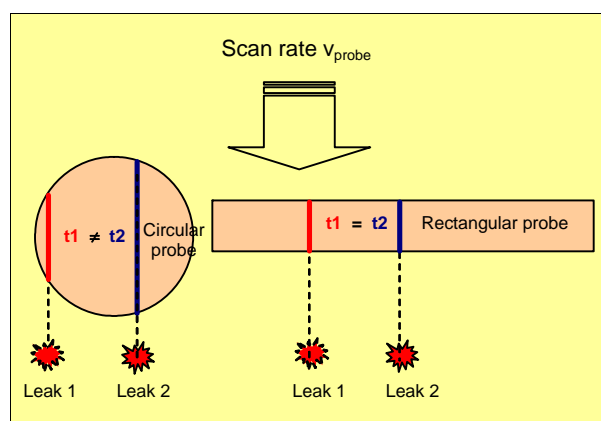
Rectangular sampling probes are compulsory according to EN ISO 14644-3.

- *Shorter filter testing times*

The scan rate of rectangular probes is lower compared to circular shaped probes due to the smaller height of the probe. The greater width on the other hand reduces the number of runs over the filter area, which enables a shorter filter testing time.

- *More accurate sampling*

The circular shape of conventional probes causes a systematic error due to the different scanning times as shown in the figure below. Rectangular shaped sampling probes overcome this problem and lead to an accurate measurement.



Schematic of filter scanning with circular and rectangular probe demonstrating the differences

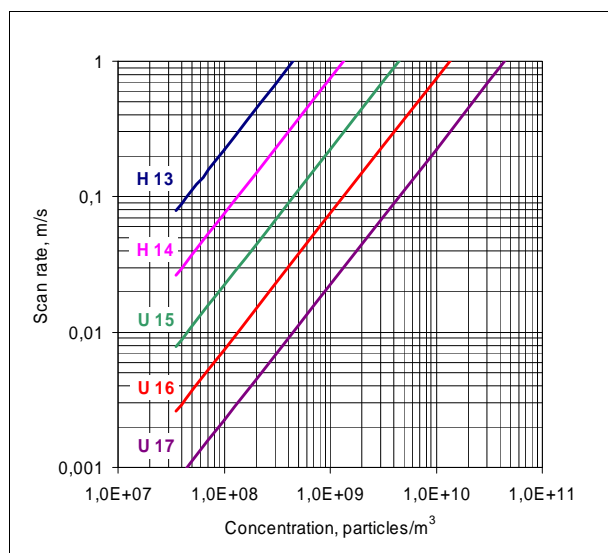
## Specifications

### Details

The Topas sampling probe body is made of high quality aluminium with a weight similar to that of conventional probes. The high-quality internal surfaces ensure that no material deposits occur. The stainless steel tube connection is designed for standard antistatic tubes with an internal diameter of 6-8 mm.

The standard probe is suited for particle counters with a volume flow rate of 28.3 l/min (1 cf/min). The inlet area of the probe is determined by the air velocity. To ensure isokinetic flow conditions at various air velocities it is necessary to change the sampling probes.

The sampling probe is designed for a defined air velocity. Our standard model rectangular sampling probe works at an air intake velocity of 0.45 m/s.



Scan rates for using the standard model rectangular sampling probe at an air velocity of 0.45 m/s

### Technical Data

Material in contact with media	Probe body: anodised aluminium; tube connection: stainless steel
Tube connection	Ø 8 mm
Design	According to EN ISO 14644-3:2005
Probe dimension	length: 130 mm (235 mm incl. tube connector), additional in refer to table below
Weight	Approx. 170 g

### Standard Model Sampling Probe

Mean air velocity	0.45 m/s
Inlet area	1047 mm <sup>2</sup>
Inlet dimensions	13.6 mm x 77 mm

Other models are available on customer request.

QMS certified to  
DIN EN ISO 9001.



12 100 11908 TMS

For more information please  
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[www.topas-gmbh.de](http://www.topas-gmbh.de)

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