DILUTING is often one of the most crucial parts of the aerosol sampling and measurement systems. For most aerosol measurement setups, the target of the aerosol dilution system is to dilute and cool the sample suitable for the used analysers and to preserve the sample as unbiased as possible.

THE VENACONTRA DILUTING SAMPLING SYSTEMS are designed to achieve these goals. They provide stable and adjustable flow rates and a well-conditioned dilution and mixing process, which is essential in having desired sampling conditions with minimal sampling artefacts.

Venacontra Porous Tube Diluter (VC-PTD) is designed to be used in an aerosol sampling with wide range of dilution ratios and minimal losses. The VC-PTD offers excellent diluting properties when gentle and reliable sampling is needed. The Venacontra Porous Tube Diluters are commonly used in aerosol research such as combustion studies, vehicle emission studies and a nanoparticle synthesis. This diluter type allows a wide range of dilution ratios, from 2 to 140. In the porous tube diluter, the sample is drawn through a porous tube, while dilution gas is introduced through the pores of the porous tube wall. The dilution gas acts as a sheath gas, which allows aerosol dilution without wall losses.

Minimal wall losses of particles and vapours

DILUTING

Reliable sampling

Venacontra is a Finnish company in the field of aerosol technology. We provide diluting aerosol sampling systems for various aerosol environments. We have decades of expertise in combustion processes, nanomaterial synthesis and aerosol sampling systems. We provide customised solutions and expertise for designing your sampling set-ups.

See more and contact us on our website www.venacontra.com
### Venacontra Porous Tube Diluter (VC-PTD) Technical Description

<table>
<thead>
<tr>
<th>Material</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>- Body</td>
<td>Stainless steel 316L (1.4404)</td>
</tr>
<tr>
<td>- Inlet seal</td>
<td>Copper</td>
</tr>
<tr>
<td>- Outlet</td>
<td>Viton</td>
</tr>
</tbody>
</table>

**Inlet**

- Sample Thread connection
- Dilution gas 12 mm

**Outlet**

- KF 25

**Maximum temperature**

- 180°C

**Flows**

- Sample flow (inlet) 1-20 lpm
- Dilution gas flow 5-120 lpm
- Diluted sample flow (outlet) 6-140 lpm

**Dilution ratios**

- 4:140

**Dimensions**

- length 250 mm
- outer diameter 45 mm
- max. width 95 mm
- Weight 1.3 kg