**Technical data sheet for cold traps with Dewar flasks out of glass**

**Area of application**

For condensing water, solvents or gases in connection with a vacuum pump

- laboratory technology
- medicinal technology
- biotechnology
- vacuum technology

**Characteristics**

- reliable and easy handling
- no stand material for holding the cold trap necessary
- Dewar flasks according to DIN 12492
- glass material according to ISO 3585 (DURAN)
- protective casing of Dewar flask made of blue coated metal or aluminum
- for liquid cooling agents, e.g. LN2 (-196°C)
- for solid cooling agents CO2 (-77°C) with solvent (CO2-wire basket necessary)
- pressure-free coolant sphere inside the Dewar flask

**Description of complete cold trap with Dewar flask**

**Types and accessories**

- C = blue-coated protective casing out of metal
- CAL = structured aluminium casing
- plastic ring = polyethylene (PE), white, two-parted
- connections for cold trap = flange KF NW, Gl18 / olive, spherical joint S29 with and without o ring seal

**Temperature ranges for the Dewar flasks and the plastic ring**

- glass refill from -196°C to +150°C
- plastic ring to +100°C

**Pressure range in the cold trap**

- up to 1 bar excess pressure
- vacuum up to 5x10⁻⁵ mbar

**Description of the glass for the cold trap and the Dewar flask**

**Material**

- borosilicate glass 3.3 ISO 3585

**Chemical characteristics**

- hydrolytic resistance: according to ISO 719 (98°C)
- hydrolytic resistance: according to ISO 720 (121°C)
- acid resistance: according to ISO 1776
- alkaline resistance: according to ISO 695-A2

**Physical characteristics**

- linear expansion coefficient: 3,3 x 10⁻⁶ 1/K (in between 20-300°C)
- density: 2,23 g/cm³
- specific thermal capacity: 910 J/kg K
- transformation temperature: 525°C
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Vacuum connections for the cold trap

- glass threads with screw-on cap and PTFE-olive, e.g. GL18
- vacuum glass flanges, e.g. KF NW 16
- plane flanges, e.g. DN 25
- conical ground joints NS 29/32
- spherical ground joints S 29
- spherical ground joints Rotulex S 29 with O-ring seal

Safety advises and regulations

- always wear protective glasses and protective gloves
- national regulations for laboratories
- company-internal regulations
- safety regulations for handling with liquid gases
- Pressure calculation according to “AD Merkblätter”

Technical and order data for cold traps

<table>
<thead>
<tr>
<th>Cold traps complete</th>
<th>Condensate</th>
<th>Coolant</th>
<th>Dewar</th>
<th>Cold trap</th>
<th>Art. No.</th>
<th>Spare parts</th>
<th>Art. No.</th>
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<tbody>
<tr>
<td>Type KF 29-K</td>
<td>150 ml</td>
<td>1000 ml</td>
<td>12 C</td>
<td>S 29</td>
<td>1731</td>
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</table>

S 29 = Spherical joints S29
GL 18 = Glass screw threads with 10mm-PTFE olive
O 29 = Spherical joints S29 with O-ring seal

Cold traps complete = cold trap with Dewar and plastic ring / theoretcap. = theoretical capacity