

### Filters and connection

This section contains everything you need to connect the vacuum generators to the suction pads with hoses. It also offers a wide range of dust filters for protection of your vacuum system.

You should select the components carefully in order to ensure correct operation of your vacuum system.

The following checklists provide valuable tips and notes about the things you should remember when selecting filters and connecting elements in order to ensure trouble-free operation of your vacuum system.



### Planning checklist for hoses

Criterion/material	PVC (soft)	PU
Resistance to oil	medium	excellent
Resistance to fuels and natural gas	medium	very good
Resistance to weathering	medium	excellent
Behaviour at low temperatures	Freezes at -20 °C	Similar to a hard plastic at -35 to -40 °C, but no embrittlement
Behaviour at high temperatures	Withstands 70 °C for long periods	Continuous operating temperature up to +80 °C, for short periods up to +100 °C
Dynamic stress resistance	Tensile strength up to 19 N/mm <sup>2</sup> , ductile yield about 350%, suitable for static installation	Tensile strength up to 55 N/mm <sup>2</sup> , ductile yield up to 600%, very high elasticity, excellent creepage resistance, thus suitable for trailing cable installations
Resistance to abrasion	good	excellent

# Filters and connections



## Selection and configuration

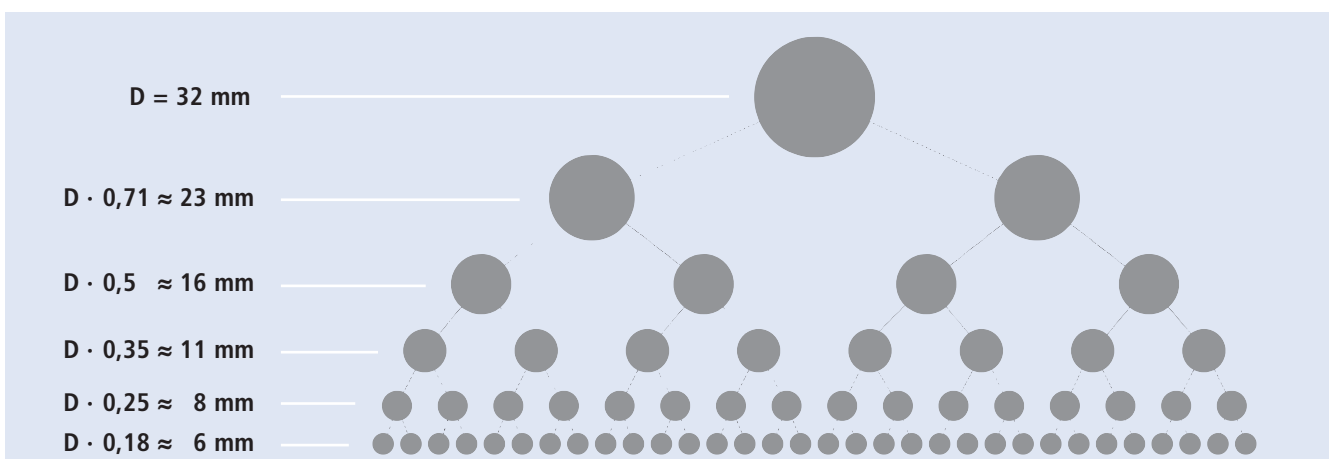
### Planning checklist for filter selection

What is the minimum required nominal flow rate?	See the notes in the technical data.
Are there any size restrictions?	See the notes in the design data.
Is maintenance assured?	Planning and design should permit easy maintenance.

### Planning checklist for connecting elements

Which diameter is needed?	See the design diagram below.
How long are the hoses?	The hose recommendations are based on a hose length of 2 m. For longer hoses, larger diameters must be used.
Which hose material is needed?	See the material notes. In trailing cable installations, we recommend the use of polyurethane hoses.
What are the best hose connections for the application?	For dynamic applications, you should always use unions which are secured with union nuts or hose clamps.

### Flow resistance in hoses



#### Aid for the dimensioning of distribution hoses:

Example: A hose with an internal diameter  $D = 32$  mm has the same internal flow rate as 32 hoses with an internal diameter of 6 mm or four hoses with an internal diameter of 16 mm.