

Important information for the use of AVS pneumatic components



GENERAL

Respecting the limit values for:

- Pressure
- Mass
- Actuating force
- Speed
- Voltage
- Temperature

The pneumatic have to be used with properly prepared compressed air. The type of preparation depends on the environmental characteristics and the sector of industry in which they will be used.

Except for different information shown on the technical data sheet for the single products, in general the air characteristics should be:

Fluid temperature:	-10...+60 °C
Environmental temperature:	-20...+80 °C
Air filtering:	according to DIN ISO 8573-1: not superior to the class 5/5/4 (see table)
Lubrication:	not necessary, if used then use ISOVG32 oil and do not interrupt once applied
Oil contents:	from 1 to 5 drops every 100 litres of air

AIR TREATMENT

Filtering

The temperature affects the capacity of air to maintain water particles (relative humidity).

Warm air contains a larger quantity of water than the same volume filled with cold air.

An excess of humidity causes the formation of condensate. Cooling of the air modifies the structure of the water it contains, by turning it from a gaseous to a liquid state. Specific apparatus can be used to cool (refrigerator) and heat (drier) the air and are, as a rule, assembled on the outlet of the compressor.

The filtering elements mounted inside the filters for compressed air, are only partly able to separate the condensate from the air, in fact, their main function is to eliminate any solid particles.

During the production of compressed air, compressors can introduce oil into the distribution network.

The characteristics of this oil are not compatible with the seals of pneumatic components and with the market trend towards miniaturized products imposes the requirement to use coalescing filters. It is advisable to provide for automatic drains on the filters.

Lubrication

This is not necessary as the components are already greased with special products. Only use oils with a viscosity of 32 cSt at 40°C. The oil quantity has to be a maximum of 1 drop per minute, this regulation has to be made with the machine in normal operation. The lubrication, once applied, must never be interrupted. If not, the seals of the components could degenerate, compromising their function.

For a correct use of our products, refer to the values shown in the table of the Air Quality classes, according to the Standard DIN ISO 8573-1

Class	Solid bodies Max dimension of the particles	Air contents dew-point	Oil quantity Max concentration
1	0.1 µ	-70 °C	0.01 mg/m ³
2	1 µ	-40 °C	0.1 mg/m ³
3	5 µ	-20 °C	1 mg/m ³
4	15 µ	+3 °C	5 mg/m ³
5	40 µ	+7 °C	25 mg/m ³