

Central compressed air treatment

Production of the compressed air purity required by the majority of the compressed air applications or the largest compressed air consumers.

Refrigeration dryer

Refrigeration dryers achieve pressure dew-points down to +3°C and thus create a “basic drying level” which is suitable for frost-free indoor installations and compressed air applications with low requirements in terms of the degree of dryness of the compressed air.

In the case of outdoor installations which are at risk of frost and summer/winter operation of the compressed air station, refrigeration dryers dry the compressed air at outdoor temperatures above approximately 5-10°C. At lower outdoor temperatures, the refrigeration dryer works as a pre-dryer for the connected adsorption dryer or is completely replaced by the adsorption dryer.

Adsorption dryer

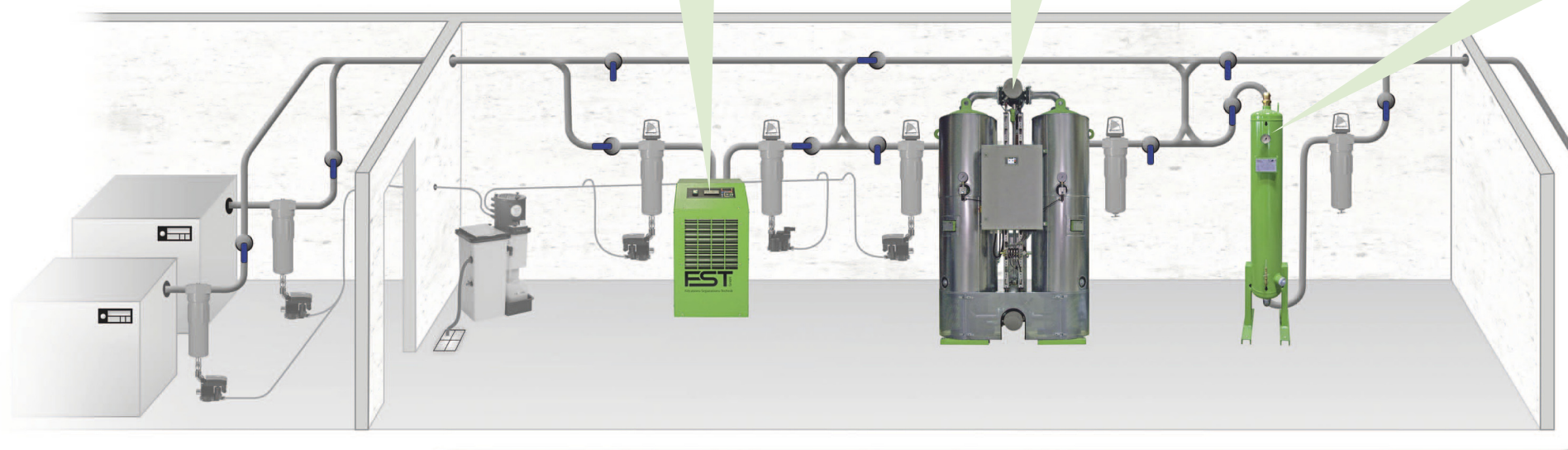
Adsorption dryers create pressure dew-points down to -70°C and are used for outdoor installations at risk of frost with temperatures below 5°C or for compressed air applications with a general requirement for highly dried compressed air.

In the case of outdoor installations which are at risk of frost and summer/winter operation of the compressed air station, adsorption dryers dry the compressed air at outdoor temperatures below 5-10°C, either completely or in combination with an upstream refrigeration dryer.

Activated carbon oil vapour adsorber

Activated carbon oil vapour adsorbers reduce the oil vapour content of the compressed air to minimum residual levels. Oil vapour is the second largest vapour phase in compressed air and, like moisture, is highly likely to condense – in the case of oil vapour it condenses to form liquid oil.

High-grade removal of oil vapour using an activated carbon oil vapour adsorber reliably prevents condensation processes during cooling of compressed air and thus the formation of liquid oil in the compressed air. In addition, activated carbon oil vapour adsorbers remove a variety of other hydrocarbons, odours and flavours.

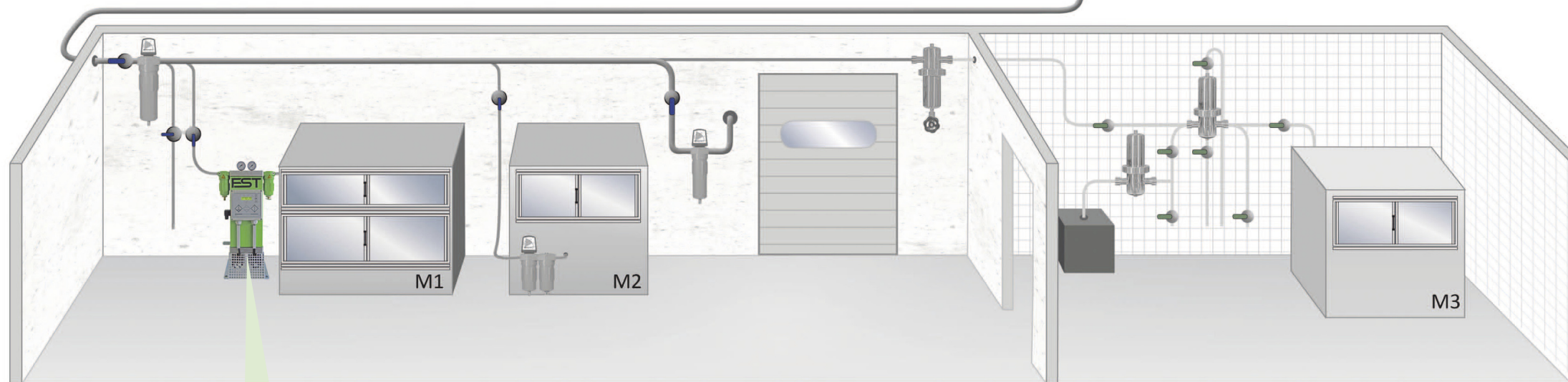


The following rule applies to central compressed air treatment:

As much as necessary, as little as possible

Compressed air treatment requires energy in the form of differential pressure and intrinsic energy. The higher the compressed air purity produced, the more energy is required. Therefore, central compressed air treatment should achieve only the compressed air purity required by the majority of the compressed air applications or the largest compressed air consumers.

If individual compressed air applications require greater compressed air quality, a smaller, separate air treatment package can be installed with a separate distribution system thereby reducing the energy cost, the capital cost and cost of ownership.



Decentralised compressed air treatment

Protection of compressed air applications against contamination from the compressed air system and final production of the compressed air purity required by the individual compressed air application.

Point of use dryer

Point of use dryers are installed directly upstream of the compressed air application. They prepare the compressed air according to the pressure dew-point and quantity required for the compressed air application.

Decentralised point of use dryers are used when compressed air applications with a percentually lower compressed air demand, require higher pressure dew-points than the “basic drying level”.