

Dry Compressed Air in Marking Machines

Maintenance units with air dryer

Moisture in the form of water in compressed air often causes extremely unpleasant faults in pneumatic control systems and in bead-dispensing equipment. The greater the concentration of moisture in the air, the more likely vapour will condense to form water in the compressed air whenever it cools down or the pressure drops. The consequences can be, for example, malfunctions in pneumatic valves (delayed switching) or a deteriorated flow behaviour of the beads.

So-called water separators only remove a portion of the moisture, i.e. only that portion that constitutes vapour already condensed to water when it enters the water separator. **This means that the air passing through is by no means dry.** The moisture, i.e. the vapour still in the air, passes through the water separator and does not condense into water until it cools down at a later point. Even when it cools down further by 1° C, it produces water again.



It is possible to achieve a considerably closer-to-perfect solution by using an additional air-drying apparatus. This entails extracting the majority of the moisture present in the form of vapour, so that the annoying water cannot be produced until it has cooled down considerably further.

For optimum moisture removal, HOFMANN offers maintenance units consisting of a water separator, a dirt filter and a compressed air membrane dryer.

The membrane dryer offers reliable compressed air drying with low air consumption, does not require any electrical energy and does not contain any drying agents that are harmful to the environment.

For cost reasons, these units should only be used where air is used for control purposes or for pressurising the bead containers.

HOFMANN offers membrane dryers with nominal capacities of 25, 250 and 500 l/min.



For compressed air membrane dryers, please note that:

- the devices for the drying process divert so-called purge air to a proportion of 10 to 20 % of the dryer nominal capacity and discharge it into the open air. This air is lost for other purposes.
- the maximum air inlet temperature must not exceed 60° C and must not fall below 2° C. Frost below 0° C can damage the filter and membrane elements.

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