Blue Air
SYSTEMS

Drying Hygroscopic Resin with Compressed Air

Most plastic resins absorb humidity from ambient air. Humidity absorbed by resin (hygroscopic material) or found on the surface of pellets (non-hygroscopic material) cause troubles during the production e.g. processing failure, surface defects or loss of mechanical properties.

The Modular Resin Dryer RDL uses pre dried compressed air either from the customers´air system, from an integrated compressor system or from the exhaust air of the blowing process of an injection stretch blowmoulding machine for drying. Available material capacity range from 24 to 200 kg/h.


Examples for insufficiently dried resin (pictures: Bayer AG)

The perfect drying solution for large material flow

Advantages:

- Guaranteed drying performance, due to constant, low dew point (throughout the year, in every weather, in every climate
- No maintenance required
- Applicable for all resins, including PET
- No minimum drying temperature
- No chilled water connection
- No moving parts
- Plug-and-Play

How is the dew point lowered in the process air?

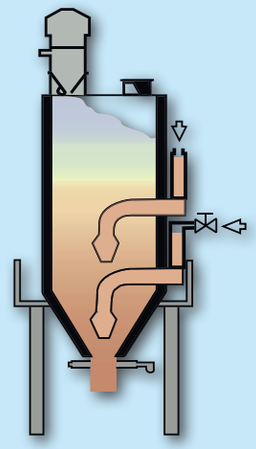
When pre-dried compressed air is expanded to atmospheric pressure, the dew point sinks to a low level. The dry air is then heated to the desired drying temperature.

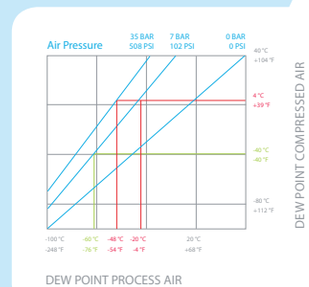
Resin drying FREE OF CHARGE

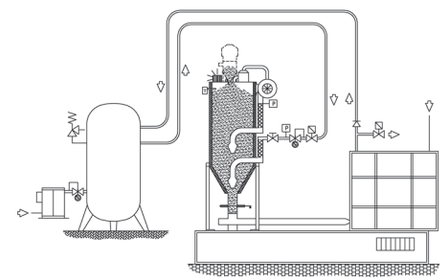
The compressed air used to inflate bottles in an injection stretch blow moulding machine (ISBM) is of high quality and very low and constant dew point (-68°C). This air is then exhausted into the atmosphere without further use. The RDL-R resin dryer uses the exhaust air for material drying. Collecting the dry exhaust air this system assures continuous air flow and cost savings up to 80% compared to conventional desiccant drying systems.

Heat and energy Recovery

The RDL-C system receives its compressed air from a built-in compressor. This system offers the advantage of recovering up to 70 % of the energy needed to produce the compressed air. It is reclaimed in the form of heat and used to pre-heat the material. Additional there is the possibility of integrating a larger compressor to cover the compressed air requirements of one or more production machines as well.







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