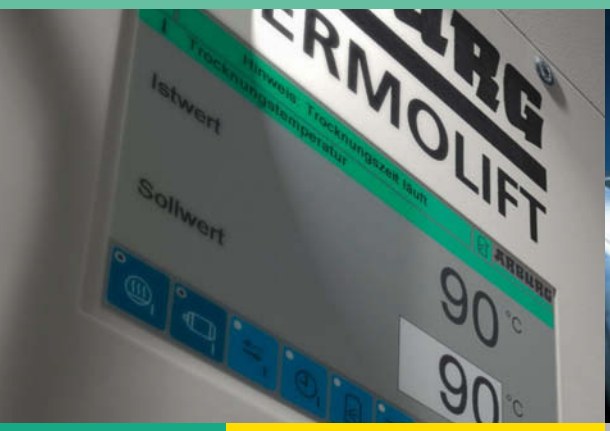
Focus



THERMOLIFT

Combined drying and conveying of plastic granulate

ARBURG

www.arburg.com

At a glance

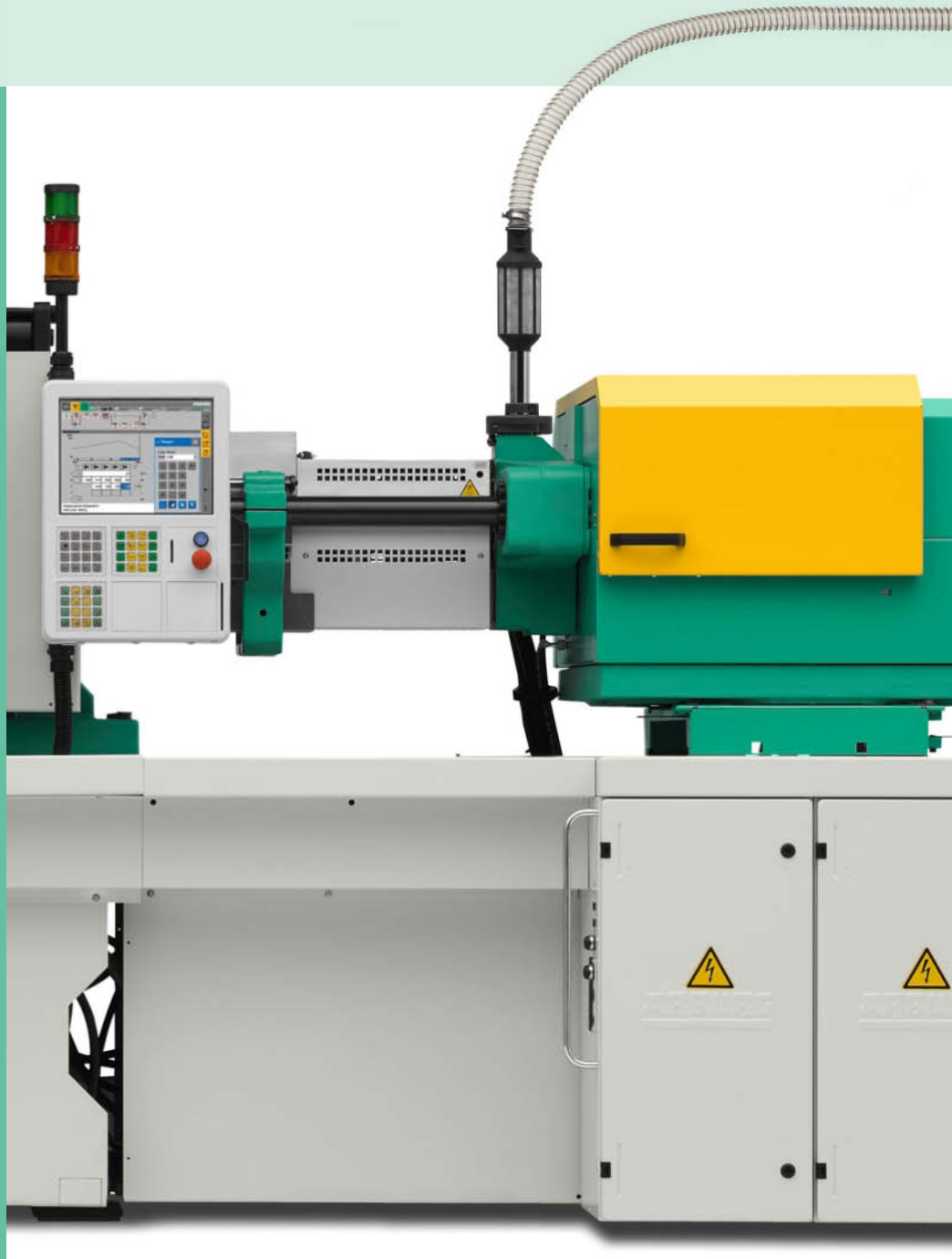
Energy efficient: Heat insulated material container of stainless steel.

The reduction of residual moisture in the plastic granulate and the prevention of moisture deposits on it are basic prerequisites for high moulded part quality. With the ARBURG THERMOLIFT, you can dry all common materials and convey them to the injection moulding machine in a combined process.
The compact device, which works alongside the machine, is capable of feeding two ALLROUNDER machines at the same time. This way, different plastics are ideally prepared for your moulded part production, ensuring constantly high-quality production.

1 Compact design

The THERMOLIFT was developed to guarantee the optimum drying of all common plastic granulates alongside the machine. To achieve this, you only need to connect the mobile device to the injection moulding machine. The compact design with a small footprint, a choice of several drying alternatives and easily integrated options make the THERMOLIFT extremely flexible. All options can be added easily. These include, for example:

- Automatic filling of the material container via a vacuum conveying device,
- Increasing the drying capacity by means of a dry air module, or
- Feeding two injection moulding machines.



2 Drying and conveying

A key feature of the THERMOLIFT is its ability to combine drying and conveying in a closed material circuit. Conveying with dry air ensures that the dried material cannot absorb any moisture, either during transport or in the buffer section in the feed regulator. This ensures that outside influences can no longer have an effect on the granulate, and ensures consistently high-quality production.

User-friendly: Sampling of material is easy.

Flexible: Optimum material preparation

1

Powerful: Dry air module with silica gel rotor ensures efficient pre-drying of ambient air.

2

Clean: Environmentally friendly air filter keeps dust out of the environment.

The ARBURG THERMOLIFT works on the principle of convection drying. In this process, heated air flows around the granulate and removes moisture from it. This method enables you to achieve extremely fast drying times. A choice of several drying alternatives enables you to flexibly adapt the process in order to always achieve optimum material preparation. Using dry air mode, you can also process hygroscopic plastics without any problems. Moreover, the device is easy to use and can be fully integrated in the production sequence of the SELOGICA machine control system. This is material preparation at its very best.

1 Several drying alternatives

Depending on your requirements, a choice of various drying alternatives is available:

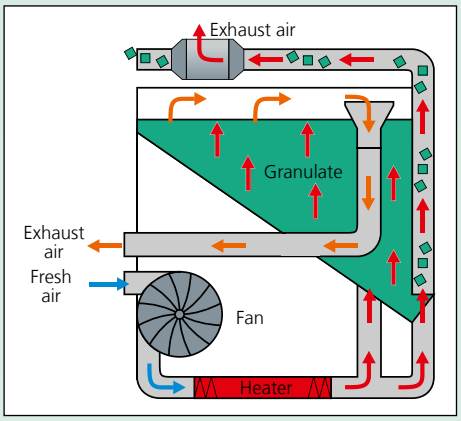
- Fresh air mode for rapid pre-drying of damp granulate. Here, ambient air is drawn in and heated to the programmed drying temperature by a heating element.
- Circulating air mode for granulate that is largely dry. Here, the air is reused after the drying process. The closed air circuit ensures extremely good energy-saving operation.
- Dry air mode (optional) for a high-quality, energy-saving drying process. Here, the ambient air that is drawn in is pre-dried by an air dryer. This increases the water absorption capacity of the air and so significantly improves the drying capacity of the THERMOLIFT. A dew point sensor is connected downstream of the air dryer for quality assurance purposes.

2 Practice-oriented technical details

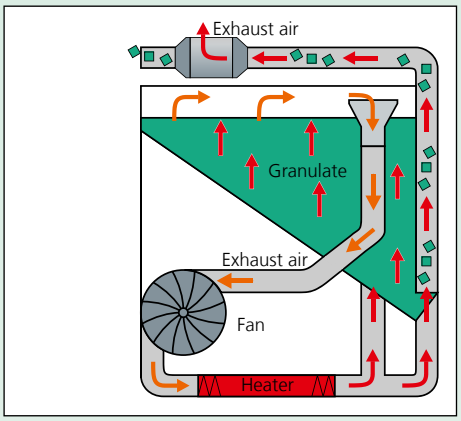
The automatic phase detection, monitored sliding bar for operating with fresh air or circulating air, the large sealing cover and the easy cleaning and sample removal guarantee efficient and safe operation. The stainless steel granulate feed hopper is corrosion-resistant and insulated as standard, to keep heat loss to a minimum and achieve uniform heating of the granulate.
An air filter ensures clean outgoing air and protects the drying fan of the THERMOLIFT against dust particles. This is particularly useful when processing recovered or re-ground material and for new material with a dust or glass-fibre content.

Functions

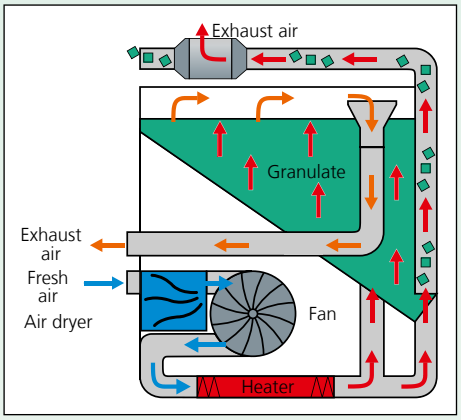
User-friendly: Operation of the THERMOLIFT is learned quickly and can also be integrated in the SELOGICA machine control system.



Fresh air mode



Recirculating air mode – Energy-saving



Dry air mode (optional) – Energy-saving

3 **Simple operation**

The THERMOLIFT controller features a touch screen. This enables entries to be made directly, quickly and clearly. Working is made more comfortable thanks to stored reference data for drying times and temperatures for various materials as well as a plain talk display. An automatic switch-on/off feature permits unmanned preparation for starting production without waiting times directly at the beginning of a shift. The drying fan functions in interval mode and is switched off after a time of your choosing.

The variations in pressure that then occur prevent possible blockages during conveying. An interface enables communication between the THERMOLIFT and the SELOGICA machine controller. This has the following advantages:

- The THERMOLIFT is operated directly via the SELOGICA
- The ambient temperature and automatic switch-on/off are programmed and monitored via the SELOGICA
- Entries are also stored in the data set

Thanks to a digital alarm output, users can also be alerted to any problems in the THERMOLIFT via a signal unit (warning light and / or horn). This can either be external or mounted on the device. Faults can therefore be detected and rectified at an early stage.

Efficient: Drying and conveying in one

To suit every requirement: From a swivelling lid through a feed hopper, to a suction feed unit with or without 100-litre container attachment – this is the range of additional equipment for filling the THERMOLIFT.

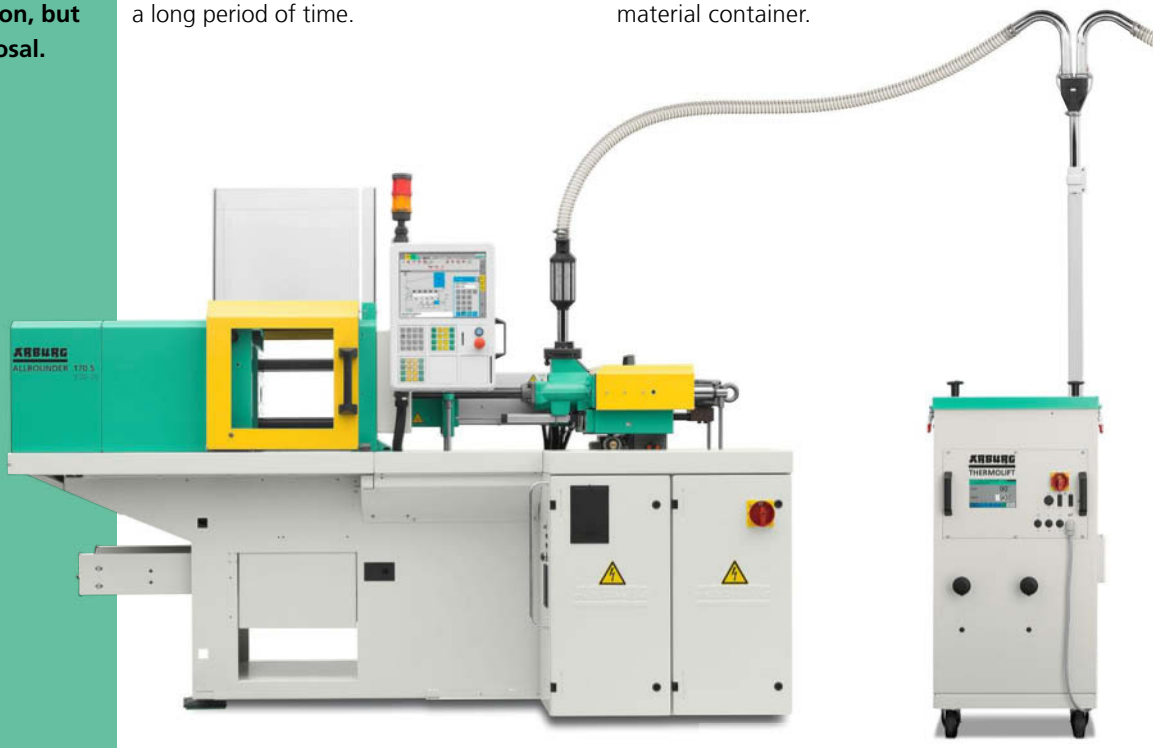
Various expansion options enable the ARBURG THERMOLIFT to be adapted to your particular production requirements. For example, you can achieve highly autonomous production by having the material container filled automatically by the suction feed unit. To suit the characteristics of the plastic granulate you are using, you can choose between pressure or vacuum conveying, for transporting the dried material reliably to the feed opening of the injection unit. In this way, you don't have just any production solution, but the very best one, at your disposal.

1 Choice of manual or automatic filling

The basic version of the THERMOLIFT is filled manually. A swivelling lid and feed hopper for supplying material during ongoing operation are available as additional equipment.

As an option, the THERMOLIFT can be filled automatically by a suction feed unit. In this way, the filling level and so the throughput or drying time can be kept at optimum levels. The result is uniformly excellent drying over a long period of time.

The suction feed unit can suck up granulate from various supply sources, such as Octabins, for example. The filling capacity can be increased by 100 litres by adding an alternative container attachment. In addition, a stainless steel manifold is available for conveying a maximum of two materials. The mixture ratio can be adjusted in percent. The THERMOLIFT control unit is responsible for actuating the suction feed unit, programming the necessary parameters and monitoring the level sensor in the material container.



2

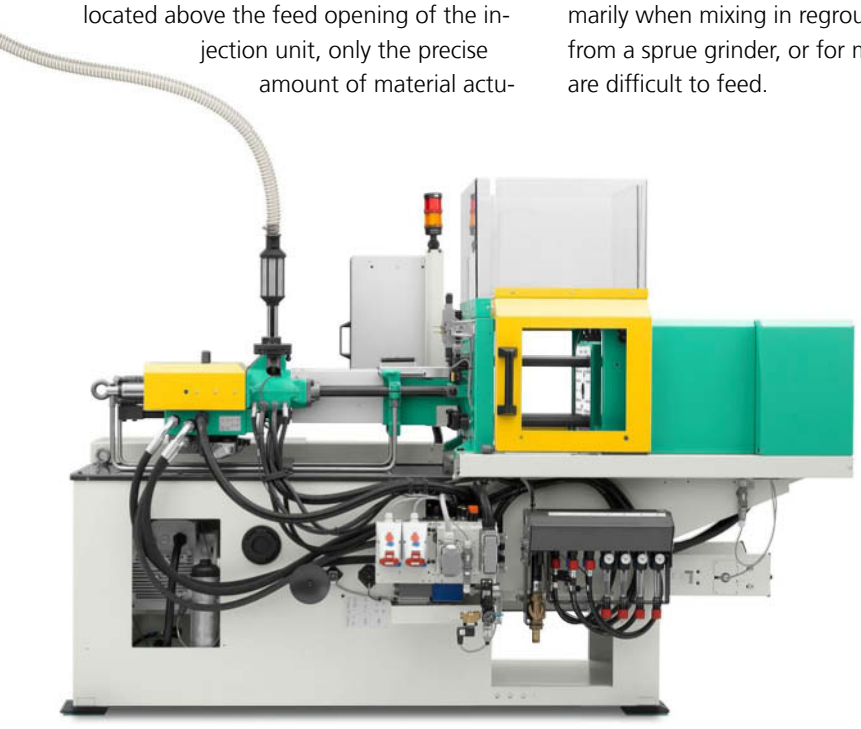
Perfectly adapted: Feed regulator with granulate feed hopper for automatic conveying.

3

Well thought-out to the last detail: Mounts for feed regulator and filter.

2 Reliable material supply

In its standard configuration, the THERMOLIFT uses the principle of pressure conveying. With this method, the dried granulate is conveyed out of the granulate feed hopper by air pressure from the drying fan. Because the material continuously has a defined quantity of dry air flowing through it during transport, it can absorb practically no more humidity between the THERMOLIFT and the injection moulding machine. With the aid of a feed regulator located above the feed opening of the injection unit, only the precise amount of material actually required in the machine at any given moment is fed in. Thanks to the automatic holding feature, no adjustment of feed rate is necessary. Moreover, when a surplus of material is required above the injection unit, to avoid dosage errors, for example, the feed regulator can be equipped with a granulate feed hopper. As another option, the dried granulate can also be conveyed out of the THERMOLIFT to the injection moulding machine via the suction feed unit provided by the customer. Suction feeding is used primarily when mixing in reground material from a sprue grinder, or for materials that are difficult to feed.



3 Versatile feed options

With the THERMOLIFT, you can also feed two injection moulding machines. For this, a conveyor distributor is needed and two feed regulators are fitted to this. Further items of alternative equipment are:

- Filter for feed regulator, with dust collector for the fine filtering of exhaust air
- Mounts for fixing feed regulators to the rear of the THERMOLIFT

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