

Variomix[®]

Mixer cooling – fast and efficient



Advantages:

- Eco-friendly product cooling with natural cold gases
- Increased productivity – more batches per day
- No cold water or crushed ice required
- Low consumption
- Hygienic
- Cost-efficient
- Low maintenance



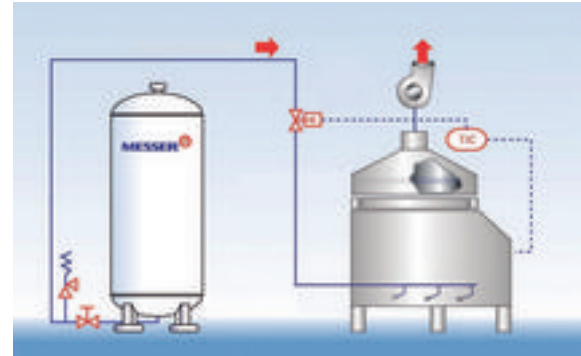
- Kneader cooling in the baking industry for a process without temperature increase
- Production of dry mixtures such as dry soups (in particular if fat is added)
- Encapsulation of powdery products, e.g. flour, with fat or lecithin for baking mixtures

N₂ and CO₂ – mixer cooling with gas as cooling agent: fast and precise

Many mixing processes require precise control of the product temperature. The Variomix® process is by far the quickest method to obtain the optimum temperature.

That will be done by adding proper doses of liquid nitrogen (LIN) or liquid carbon dioxide (LCO₂) as a coolant. It is particularly beneficial when the coolant is injected through the bottom of the mixer or trough, i.e. directly into the product phase. This is made by so-called Clapet nozzles – a Messer development.

The Clapet nozzles open self-medium controlled with applied gas pressure, and require no extra energy or heating. Their design prevent the penetration of product residues or cleaning water. Furthermore, the approved Variomix®



Further advantages:

- Extremely rapid cooling by direct injection of coolant into mixer
- Precise temperature control
- Optimum utilisation of coolant by direct product contact (large heat exchange surface)
- Lower coolant consumption compared with other processes
- Simple set-up of coolant supply to mixer
- Retrofitting possible

Please do not hesitate to contact us if you have any questions regarding the Variomix® process or would like to arrange a personal consultation with our application experts.

This and many other brochures can also be downloaded from the Internet in PDF format:
www.messergroup.com



process can be integrated into the machine control system.

Variomix® is particularly suitable for:

- Standardisation of meat in a mixer
- Minoring of meat products, e.g. in a mixer grinder
- Production of formed meat from poultry meat (here the formed meat has to be cooled to -2 °C to -3 °C during mixing)



Messer Group GmbH
 Gahlingspfad 31
 47803 Krefeld
 Tel. +49 2151 7811-0
 Fax +49 2151 7811-501
info@messergroup.com
www.messergroup.com

