



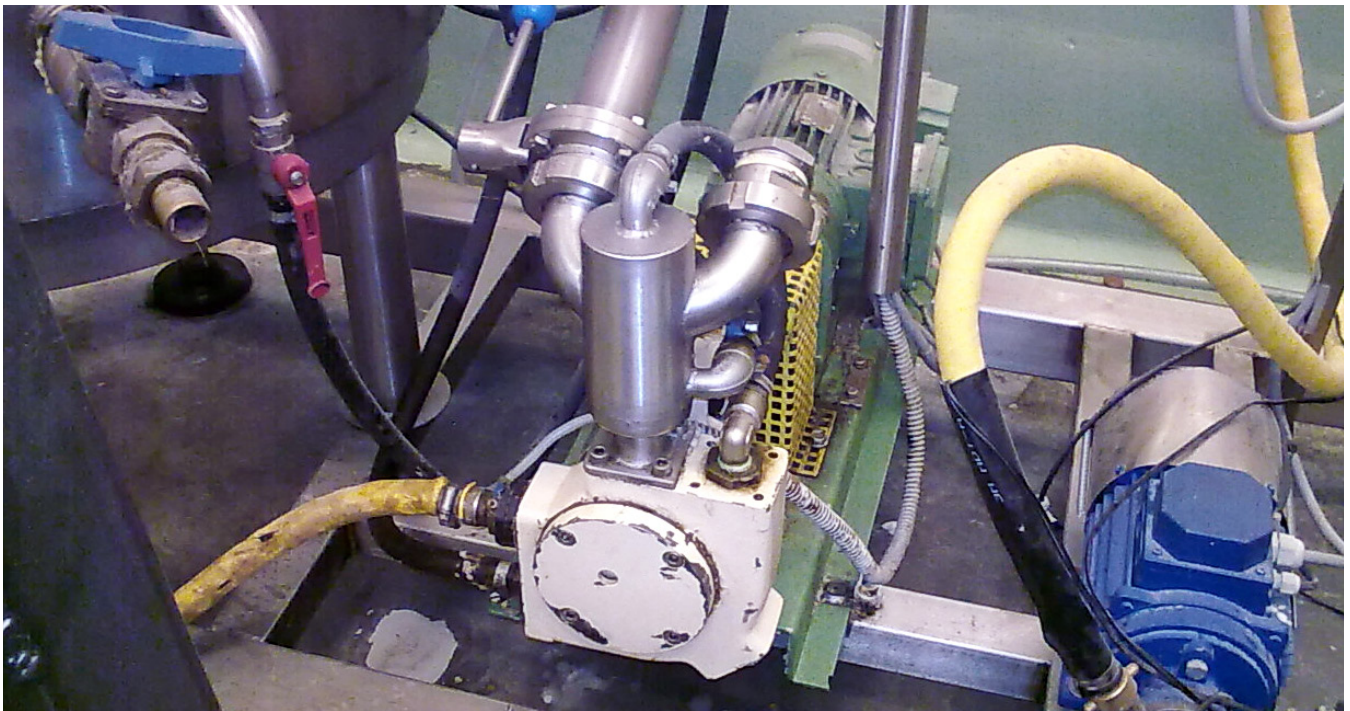
Chocolate Transfer

Delicious chocolate is widely used in the production of confectionary and desserts, however it is a particularly tricky substance to handle cost-effectively. This application report looks at these problems and how the Verdergear pump has been used successfully all around Europe.



Process Points

- Temperature-sensitive
- Shear-sensitive
- Product hygiene
- High viscosity



Above: A Verdergear pump transferring chocolate

Process points

A stable temperature is essential for handling chocolate. Too high a temperature and the media can be subject to change such as caramelisation, whereas too low a temperature can cause the media to thicken and increase internal friction and decrease the flow rate in proportion to energy consumption with the congealed build-up causing blockages and potential downtime in production.

Chocolate is a shear-sensitive, abrasive media which can be affected by an aggressive pumping action as well as the abrasive media causing wear and degradation on hoses, tubing and contact materials.

A critical factor for any pump in a food production line is the hygiene and non-contamination of the product. The media must be reliably sealed from the environment with

the integrity of the contact materials not compromising the purity of the chocolate.

The final factor to consider is the viscous nature of chocolate - The pump working principle must be able to efficiently move viscous chocolate using a low power consumption.

Pumping Solution

A pump is needed that can handle fluids at various viscosities and temperatures, which can pump a high capacity of fluid with a very efficient consumption of energy.

The pump must also be extremely robust and reliable with high resistance to leaks.

The Verdergear range of internal rotary gear pumps can provide an extremely suitable pumping solution

for the transfer of chocolate up to 350m³/h.

The working principle of the Verdergear range is ideal for liquids that are viscous or extremely viscous (up to 25,000 cPs) depending on the operating speed of the pump unit.

Models in the Verdergear range can handle temperatures of up to 300°C. Thanks to the working principle of the Verdergear range, it is possible to handle Chocolate and similar media with a low consumption of energy, comparative to other pumps.

With just two moving parts in the pumping action, there is no risk of shear damage to the chocolate. The working gears generate a non-pulsating, constant flow so there is no vibration on fittings valves or coupling.

A heating jacket accessory is also available with all Verdergear pumps which maintains the heat of the Bitumen and working gears.

For peace of mind, all Verdergear pumps are simple to strip-down and reassemble. The pump casing may be rotated and is available with 90° or 180° (in-line) ports.

The Verdergear range can pump bitumen, tar, oil, fuels and many other viscous substances.

