



DRAINAGE

THE SYSTEM TO REMOVE FREQUENTLY ARISING ZIRCON CORDS

INNOVATION ENGINEERED IN GERMANY

HORN
GLASS INDUSTRIES

VARI-DRAIN[©] - Patent DE 102005042864

If you experience problems with zircon cords or cannot get rid of cat scratches, HORN has a drain system which addresses these problems.

The equipment enables the draining of small glass quantities from the forehearth in order to minimize contaminations such as zircon cords – known as cat scratches – stones or several other enclosures.

The system basically consists of a special shaped channelblock with a deepened part and centered drilling and a metal orifice plate of high temperature resistance, which is braced underneath your forehearth. An electrical heating element is positioned below the orifice and leads – when heated – to glassflow.

The rough quantity of glassflow is defined by the size of the drilling in the orifice plate and will be adapted to your particular technical requirements. The drainable glass quantity ranges between 0,5 – 5,0 tpd. The precise and constant amount of glassflow during operation is controlled via temperature at the draining point by a PID-control loop.

After heating up the system it takes about 2 hours until the first glass drops start to fall. The duration of the startup procedure keenly depends on the glass colour and - chemistry.

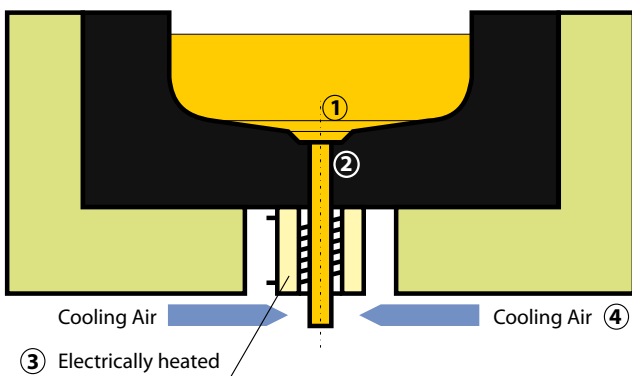
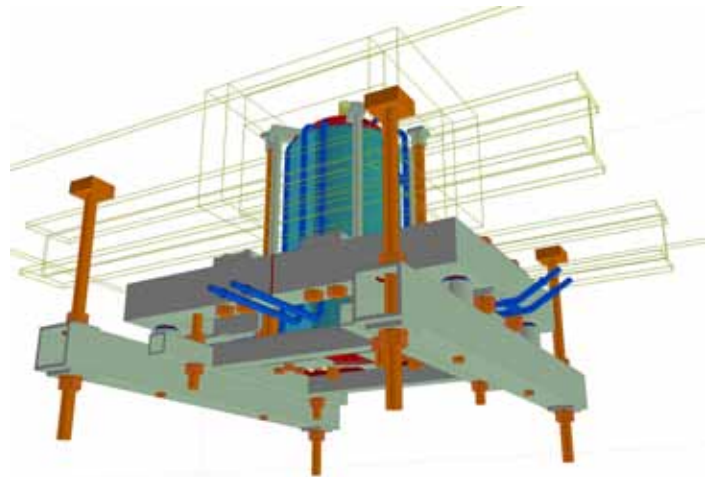
Additional cooling air distribution completes the system for easy stopping of the glass flow in unfortunate cases.

Depending on the location of the draining point it can occur that the cords do not disappear completely. Also after an installation without the special channel block

the results can be inferior to a complete installation. In such cases a stirrer bank should be considered.

The VARI-DRAIN[©] works without counterelectrode in the glassmelt and is applicable for container-, tableware-, cosmetic-, lighting glass in the common colours. For glass with higher contents of boron the system comes with a counter electrode.

With the Vari-Drain system from HORN it is possible to greatly improve the glass quality and therefore the profit of a production plant.



Advantages:

- no counter electrode in the glass bath required
- free eligible quantity