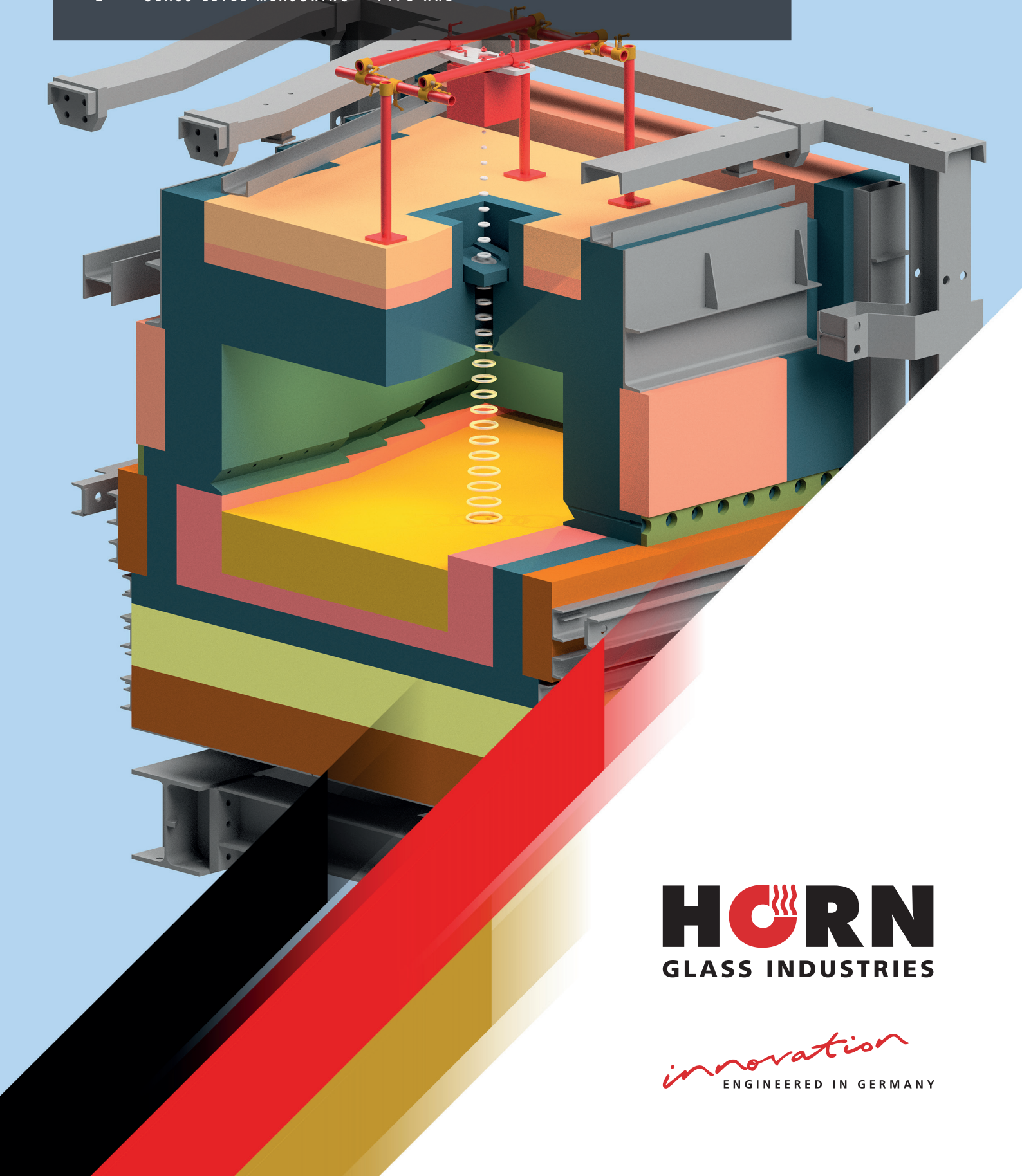
RADAR BEAM

GLASS LEVEL MEASURING – TYPE HRD



HORN
GLASS INDUSTRIES

innovation
ENGINEERED IN GERMANY

CONTACTLESS GLASS LEVEL MEASUREMENT BASED ON RADAR TECHNOLOGY

GLASS LEVEL MEASUREMENT

A constant glass level in the melting end is a very important control component in the glass melting process. Glass level variations influence the steady operation of the furnace and have a significant influence on the gob weight.

The high measuring accuracy of the HORN HRD-BEAM allows the precise control of the glass level together with all common charging machines. The measuring device can either be installed as a stand-alone version or can be integrated into a HORN control cabinet and comes together with a touchscreen evaluation computer.

The HORN HRD-BEAM reduces all maintenance work to a minimum because no mechanical moving parts are built in.

HORN HRD-BEAM SENSOR HEAD

MEASURING PROCEDURE

The water-cooled radar sensor is acting like a transmitter / receiver module in one unit. Radar waves will be sent to the glass surface and are reflected by it. The glass level will be calculated according to the time between the emission and the reflection of the waves.

TECHNICAL DATA HRD-BEAM

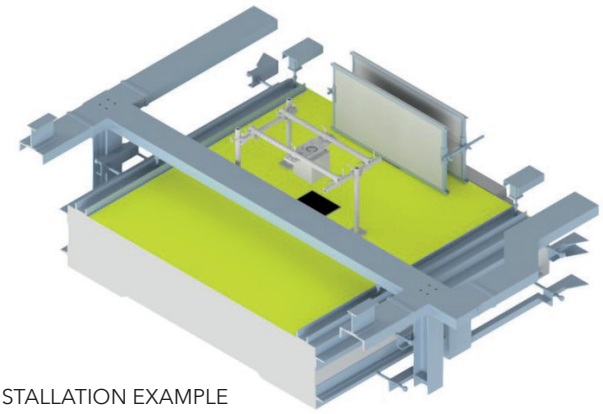
- Measurement accuracy: distance between glass surface and sensor at 2 m with an accuracy of +- 0.1 mm or better. Greater distances are also possible but need to be checked in detail.
- Ambient temperature max.: 250°C
- Cooling water requirement: 4-5 l per minute

FEATURES

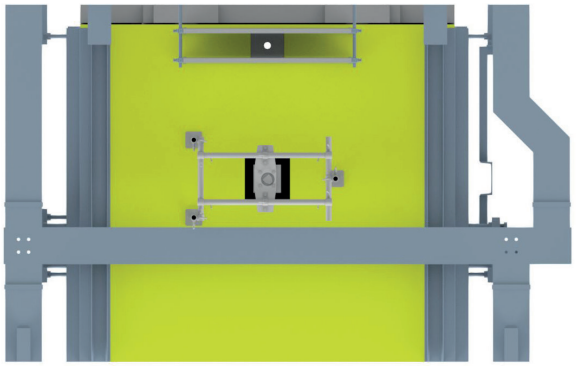
- **Simple opening for measurement in the distributor / working end crown**
- **Easy installation of the system; no welding necessary**
- **Network connection; remote access easily possible**
- **Measurement independent of glass colour**
- **Minimum maintenance effort**
- **No special housings / safety fences etc. necessary**
- **No influence by cooling air**
- **No spill air necessary**

INSTALLATION

The measurement device will be installed on top of the distributor or forehearth (for a container glass furnace) or on top of the working end (for a float glass furnace). HORN suggests an open hole with a diameter of 80 mm (covered with a ceramic protection plate) where the RADAR sensor can measure through. Other holes are also possible but this needs to be checked in detail by HORN.



INSTALLATION EXAMPLE



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