

# ECcast LB 6780

Eddy Current based  
Mould Level Measurement



## The EC Way of Mould Level Measurement

The eddy current based measuring system from BERTHOLD TECHNOLOGIES, developed in cooperation with ERGOLINES is used for real-time monitoring of mould level in the continuous casting process. The eddy current technology has proven to be a reliable and precise measuring method - especially in slab casting applications. Mould level measurement with ECcast is not affected by the use of casting powder. It can be used as stand-alone system or in combination with radiometric measurement technology to provide you with additional information

### The Advantages

**Accurate and reliable:** The measuring signal is remarkably smooth and not affected by the use of casting powder. The temperature compensation ensures reliable results over the whole operation time.

**No nuclear sources required:** ECcast measures online and non-contacting, based on electromagnetic fields. Nuclear sources are not required.

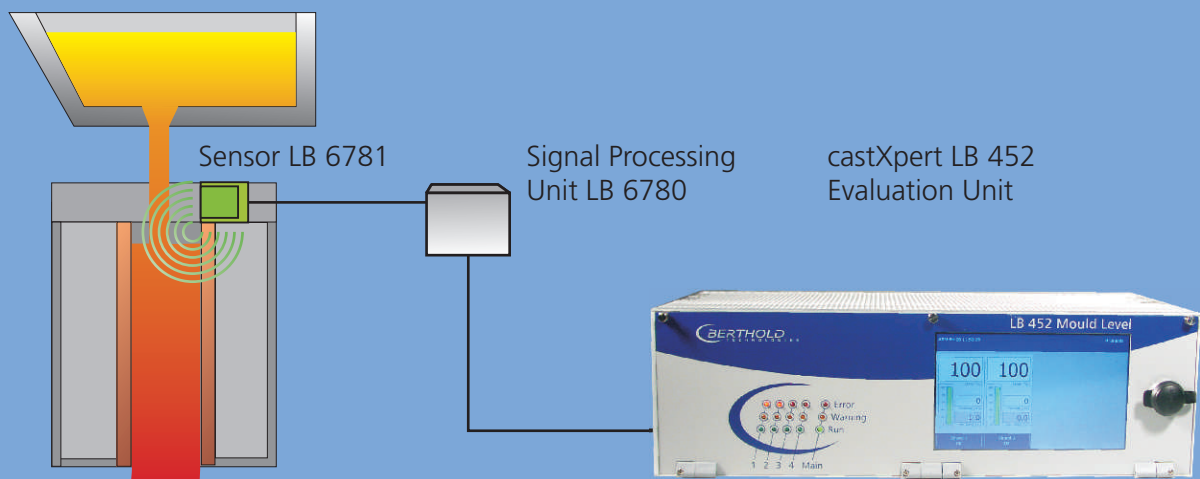
**castXpert LB 452:** Benefit from combining eddy current with radiometric measurement technology in one evaluation unit, thus allowing an extended measuring range for cast start as well as powder thickness control.

**Electromagnetic compatibility:** The measurement performance is unaffected by electromagnetic brakes and stirrers.

**Easy handling and installation:** The sensor is mounted at the edge of the mould and connected to the existing water cooling cycle. The easy to use interface of the LB 452 provides simple calibration and operation procedures.

**Long-life design:** Especially made for continuous casting applications, the robust sensor can stand high temperatures and steel splashes.

**Information Plus<sup>+</sup>:** Status as well as temperature of the sensor is monitored in the evaluation unit.





## Measuring principle

The coil within the ECcast sensor generates an electromagnetic field, penetrating deep into the mould. As a result eddy currents are induced in the top layer of the steel. These eddy currents in turn generate a counteracting electromagnetic field at the sensor - its strength is directly proportional to the distance between the steel surface and the coil. Thus the liquid steel level can be determined very accurately, independent from mould powder or slag.

## Always at your service

BERTHOLD TECHNOLOGIES has provided individual measuring solutions for the steel industry for several decades. Benefit from our many years of experience in mould level measurements and the technological expertise of our cooperation partner ERGOLINES. From the concept stage of a project through the commissioning and installation phase our worldwide network of subsidiaries and partners will provide technical expertise and the support you need to successfully complete your project. As a matter of course our individual assistance in project planning is free and without obligation. All we need are your application details to get started.

### Measuring Arrangement

**The ECcast sensor is installed at the upper edge of the mould. The Signal Processing Unit, mounted at a distance from the casting process, converts the response signal, which is finally evaluated and displayed in the castXpert LB 452 evaluation unit.**

# Technical Data ECast LB 6780

## Operating data

Mains Supply	115/230V selectable, 50-60Hz, 70 VA (via LB452 evaluation unit)
Signal I/O	see technical data LB452 evaluation unit

## LB6781 Sensor

Dimensions	sensor: 63 x 150 x 540 mm cover: 83.5 x 100.5 x 590 mm
Weight	approx. 11 kg
Storage temperature	0...60 °C (32...140 °F)
Operating temperature	max. 180 °C (356 °F)
Water cooling	20...25 l/min 10...40 °C (50...104 °F) water temperature Max. pressure 5 bar
Connecting cable	to LB6780 Signal Processing Unit Length max. 10m Temperature rating max. 180 °C (356 °F)

## LB6780 Signal Processing Unit

Dimensions	270 x 270 x 150 mm
Housing	cast aluminium, powder coated
Protection	IP65
Weight	approx. 12 kg
Storage temperature	-20 ...60 °C (-4...140 °F)
Operating temperature	0 ... 60°C (32...140 °F)
Connecting cable	to LB 452 evaluation unit Length max. 500 m with 12 x 1.5 mm <sup>2</sup>

## Measurement Performance

Mould size	min 100 x 600 mm
Measuring range	10...200 mm from top edge of copper mould
Nominal range	20...160 mm from edge of copper
Accuracy	± 0.2 mm within nominal range
Response time	50 ms or higher, adjustable

Right to implement technical improvements and/or design changes without prior notice reserved.



your local distributor



in cooperation with



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