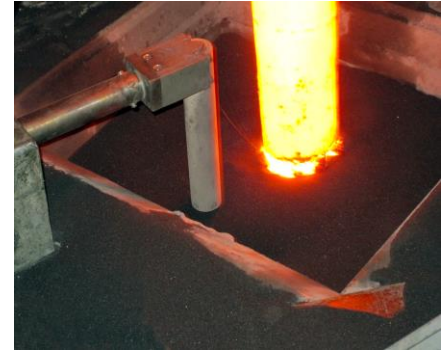


### Mould Level Sensor Manipulator

The Agellis Manipulator is designed to perfectly position the sensor in the mould and automatically extend and withdraw the sensor at start and end of casting.

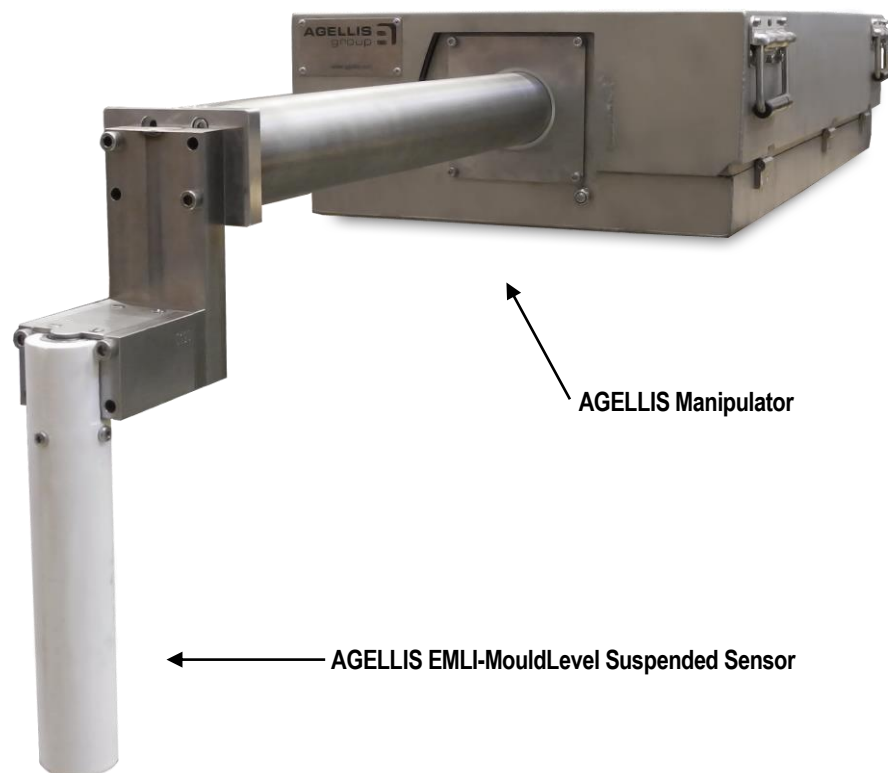


The Manipulator ensures perfect sensor positioning in the mould every time and a safe withdrawal is essential for a smooth caster operation. The Manipulator unit has a critical function as it is the link between the sensor unit and the mould level evaluation unit. The unit is driven by precise high performance electrical actuators, air cooled and specifically designed to work flawlessly with the Agellis EMLI-MouldLevel Suspended sensor.

The Manipulator unit is controlled by an industrial PLC. It is customised for your specific caster needs and has an adjustable position depending on current mould size format. It places the sensor in the correct position every time and position it out of the way when not in use.

The unit is segment cooled, with air cooling in the different section such as the arm, body, sensor and cover. It is mechanically designed to handle radiation heat.

The EMLI sensor is engineered for simple sensor exchanges with a quick connector, if replacement is needed.



Agellis follows a policy of continual improvement of design and we must therefore reserve the right to supply equipment differing in detail from that described herein.

## Key Features

- Perfect sensor position every time
- Automatically deploys the sensor at casting start signal
- Automatically withdraw the sensor at casting end signal
- Flexible positioning of sensor for different mould sizes
- Allows for safety withdrawal if sensor is overheated
- Engineered to withstand long casting periods (heat protected)
- Sensor is protected and out of the way when not in use
- Simple and low maintenance
- Allows sensor exchange in few minutes

## Technical Information

<b>Type:</b>	Electrically Powered Actuators
<b>Control:</b>	From local PLC (one per caster)
<b>Dimensions:</b>	1000-1900x400x150 mm
<b>Maximum stroke length:</b>	1500cm (adjusted to specifications)
<b>Movements:</b>	Horizontal linear and rotary 90 degrees
<b>Positioning time:</b>	Approximately 2 seconds
<b>Positioning precision:</b>	± 0,1 mm
<b>Air/Nitrogen cooling and temp requirement:</b>	600 lpm for sensor + 400 lpm for manipulator Must be kept under 25°C (air cooling device available as option)

## Function and description

### Function

The main function is to extend and place the sensor in the mould with high repeatability at the casting start and retract the sensor to storage position at casting end. Suspended sensors are used because of their superior measurement precision, ease of use, compatibility with nickel plating, EMB and EMS.

Depending on the mould size the sensor is placed at pre-defined optimal locations allowing for quick and automatic mould parameters to be set directly from the caster PLC.

The manipulator is powered by precise electric actuators ensuring many years of trouble free operation as no specific maintenance is necessary. The sensor and the manipulator are both cooled by air or nitrogen.

### Mounting

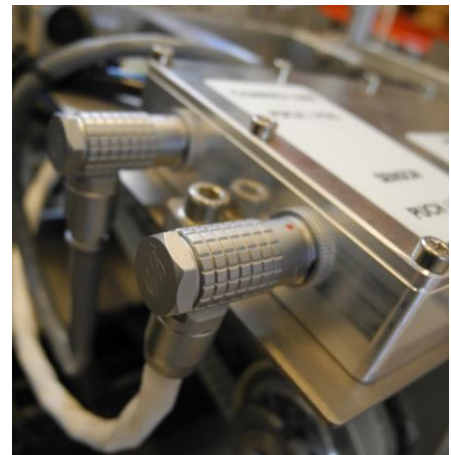
The manipulator is mounted directly on the mould canopy (cover) using a fixed guiding plate for precise placement and four screws to hold it in place. Alternatively, it can also be mounted on a precision rotary stand allowing quicker stow away when the mould cover is lifted. The mounting plates or rotary stands are both specifically designed to fit local demands (external supply).

### Dismounting

Removing the four screws holding the manipulator to the guiding plate or stand allows lifting each unit.

### Sensor exchange

The Agellis EMLI-MouldLevel Suspended sensor and the manipulator are specifically designed to match each other. The sensor is simply exchanged by removing four screws on the sensor head, pull out the sensor head, replace it by a spare and screw back the four screws. This operation takes only a few minutes.



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