

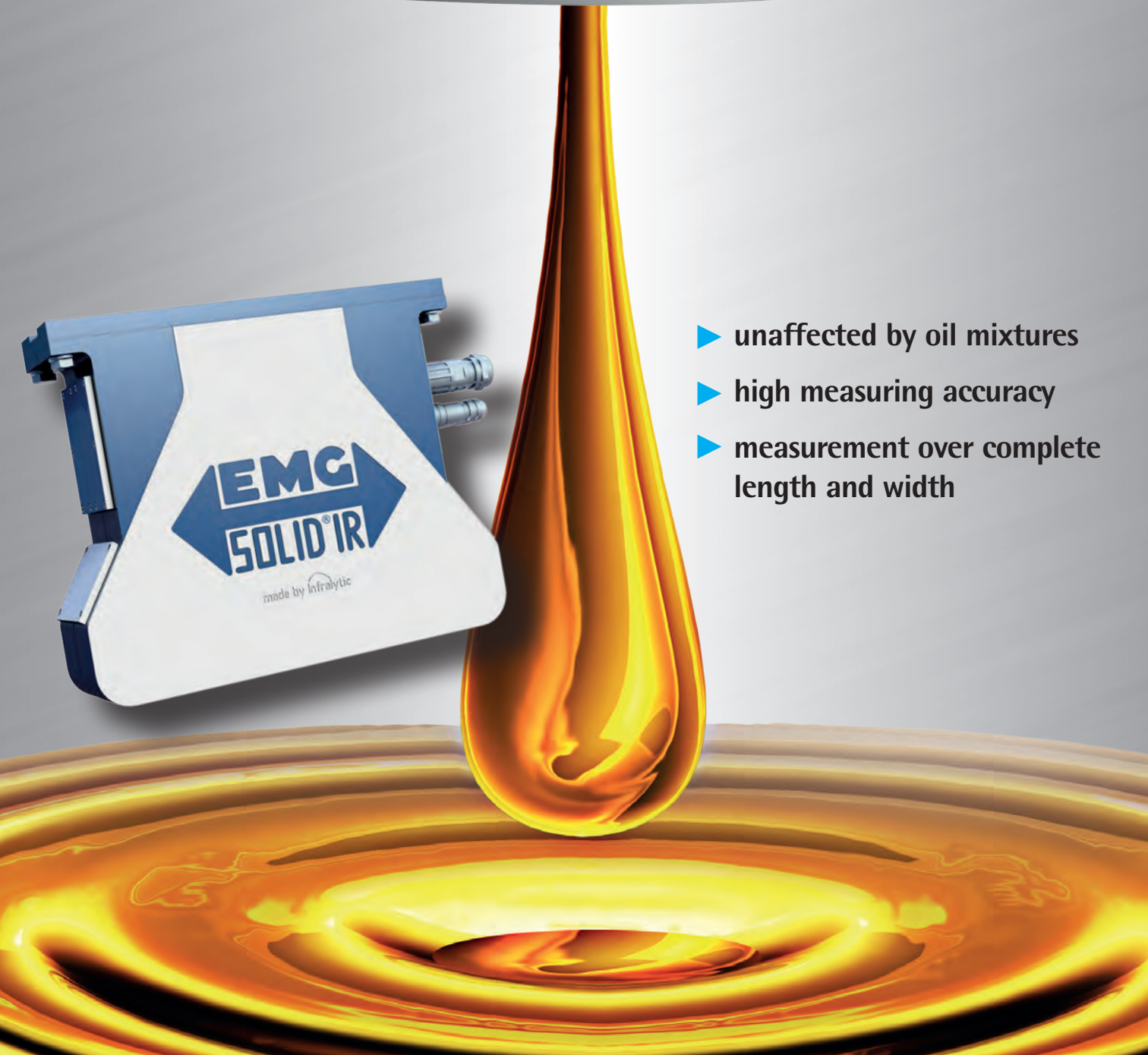
EMG SOLID[®] IR

InfraRed Spectroscopy

Optimise your oiling and forming process!



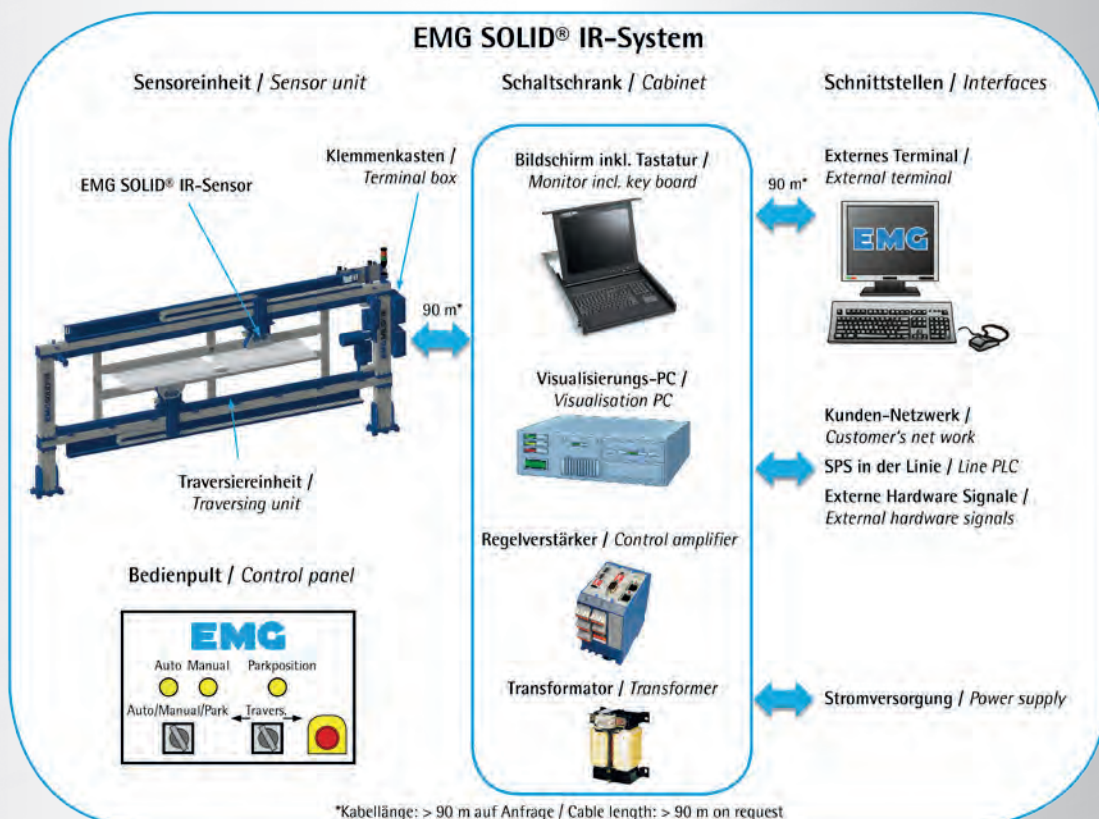
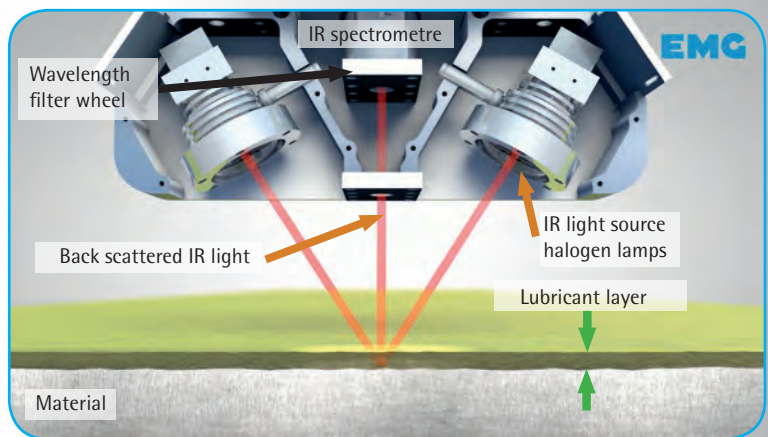
- ▶ unaffected by oil mixtures
- ▶ high measuring accuracy
- ▶ measurement over complete length and width



Oil layer measurement

Measuring principle

- The infrared light emitted by EMG SOLID® IR passes through the oil layer, is scattered back from the strip surface and passes through the oil layer again.
- In doing so the intensity of specific wave-lengths of the oil layer is attenuated.
- According to the Lambert-Beer law, the layer thickness is then calculated from the logarithm of the absorption.



InfraRed Spectroscopy

Customer's benefits

- unaffected by oil mixtures
- easy calibration of new oil types and clear oil type classification due to group calibrations
- high repetition accuracy (min. 0.0015 g/m²)
- absolute and relative measurements possible
- no falsification through unevenly applied passivation coatings
- special EMG solution for keeping the lens clean
- automatic system check via integrated reference measurement
- high measuring accuracy
- worldwide proven technology



Further details can be found in our EMG SOLID[®] movie.

Please follow the QR code or visit our website:
www.emg-automation.com.



Technical data

Measuring method	infrared spectroscopic
Measured variable	area weight of lubricant layer in g/m ²
Measuring range	0.1 – 6 g/m ² (measurement from 0.05 g/m ² possible with special calibration)
Measuring accuracy	measuring range 0.1 – 0.5 g/m ² : +/- 0.025 g/m ² measuring range 0.5 – 2 gm ² : +/- 0.2 g/m ² measuring range > 2 g/m ² : +/- 10 % from measured value
Repetition accuracy	min. 0.0015 g/m ²
Materials	all metal and non-metal surfaces with low glossy level, e.g.: <ul style="list-style-type: none"> • steel/cold strip, hot-dip galvanised, electrolytically galvanised, phosphated, aluminised, ZnMg surfaces, galvanized • aluminium – uncoated, pre-treated
Lubricants	mineral oil, mineral oil thixotropic, hotmelts, waxes
Operating distance (measuring position)	120 mm (traversing)
Strip height deviations	+/- 10 mm
Ambient temperature	+5 °C up to +50 °C (extended temperature range with cooling possible)
Measuring frequency	60 Hz
Traversing speed	0 – 1 m/sec

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