



Wherever glass is made.

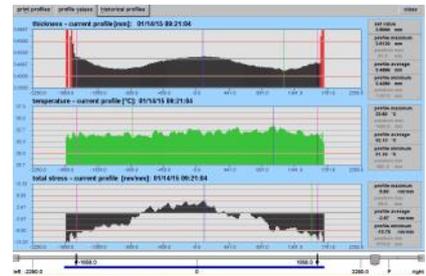


## TMF thickness/stress measurement at the cold end

The TMF system allows **exact, pinpoint on-line checking** of the thickness of float glass. The integration of the stress sensor enables the system to identify the distribution of stress in the lateral profile. TMF is designed and manufactured in line with special customer requirements and is delivered as a complete, ready-to-use system. Installation, commissioning and training are performed exclusively by our experienced engineers.

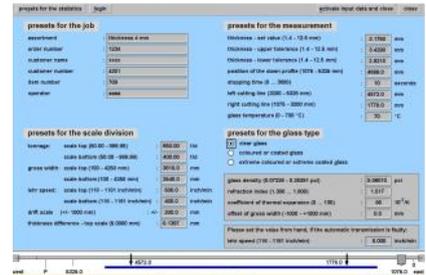
### Analysis:

- Thickness, stress and temperature in lateral profile
- Thickness of the glass ribbon in longitudinal direction
- Statistical analysis and trend plotting
- color-coded display
- Width of the glass ribbon and its position on the rollers



### Benefits:

- Operational **turn-key system**
- Patented, long-life sensor head and high-quality construction
- Connection to your plant information network
- Network solution with various operator workstations
- Optional service and/or maintenance agreement
- Remote diagnosis



VMA Gesellschaft für visuelle Messtechnik und Automatisierung mbH

OT Wümbach, Gräfinauer Straße 2, 98704 Wolfsberg, Germany  
Telefon: +49 36 785 58 70, Telefax: +49 36 785 51225  
info@vma-online.de, www.vma-online.de





Wherever glass is made.  
M p e t e r e l g e s e l l e m b H



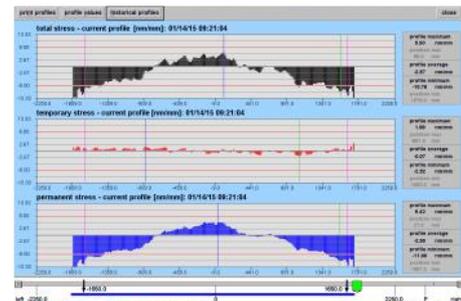
## Specification

### TMF

Measuring range:	1.5 - 25 mm*
Measurement accuracy:	0.003 mm
Resolution:	0.001 mm
Transmission:	> 8%, (measurement through a coating layer is possible)
Presentation:	250 measurement values in transverse profile

### Stress

Measurement accuracy:	Phase difference 1 nm (0.094 MPa in 4 mm glass)
Measurement accuracy temperature:	2 K
Transmission:	> 25%



### System

Installation:	Above and below the rollers
Cooling:	Water-cooled sensor head (chiller) compressed air for cooling stress lamp
Cleaning:	Compressed air for cleaning the safety screen
Calibration of thickness measuring equipment:	Once ex works, no recalibration needed
Working distance control:	Automatic (optimum working distance)
Control:	Simple, user-friendly from operator workstation
Diagnosis:	All incidents and messages recorded in daily logbook

\* Specify before placing order

VMA Gesellschaft für visuelle Messtechnik und Automatisierung mbH

OT Wümbach, Gräfinauer Straße 2, 98704 Wolfsberg, Germany  
Telefon: +49 36 785 58 70, Telefax: +49 36 785 51225  
info@vma-online.de, www.vma-online.de

