SIMPLY PRECISE

Dynamic measurement of impeller blades

Our newly developed algorithm enables the contour of impeller blades to be measured dynamically in a radial direction, i.e. towards the housing.

MICROSCOPY + METROLOGY SERVICES

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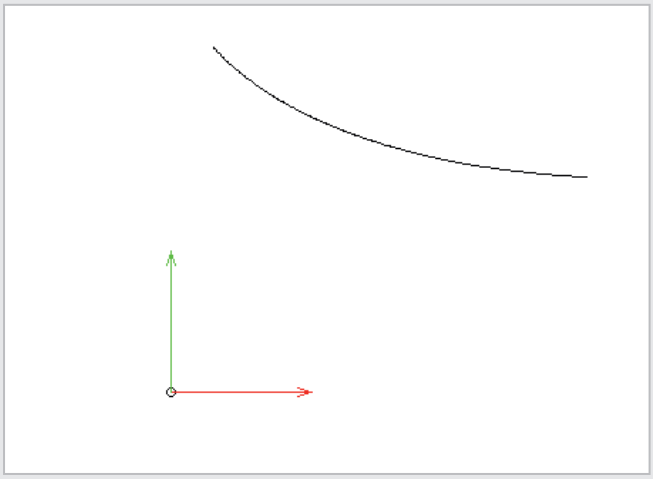
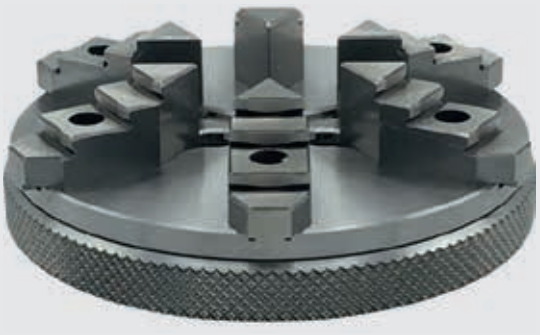
Measurement in the shaft measurement machine

Scan here to see how the measurement works.

The camera records the measurement points during the rotation and assigns them to the relevant blade. This is achieved by using a camera that captures approx. 60 images/sec. Measurement speeds, for example, of 3 sec./revolution at a diameter of 100 mm can be implemented easily.

The measurement is based on a contour description of the impeller blade in DXF or Iges format.

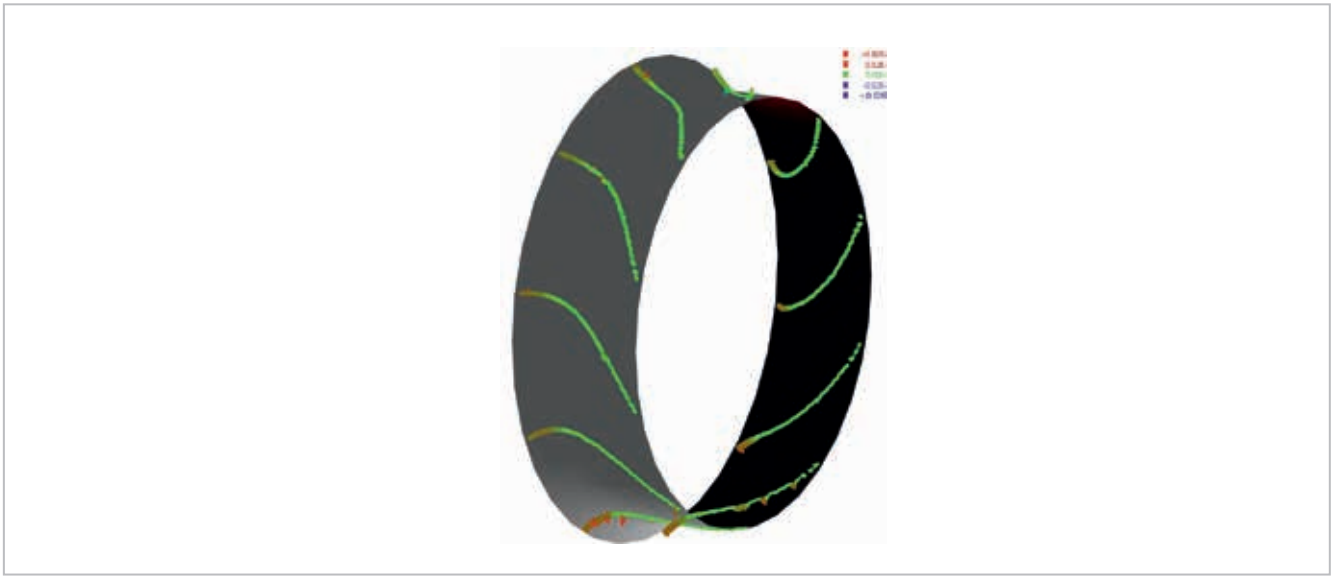




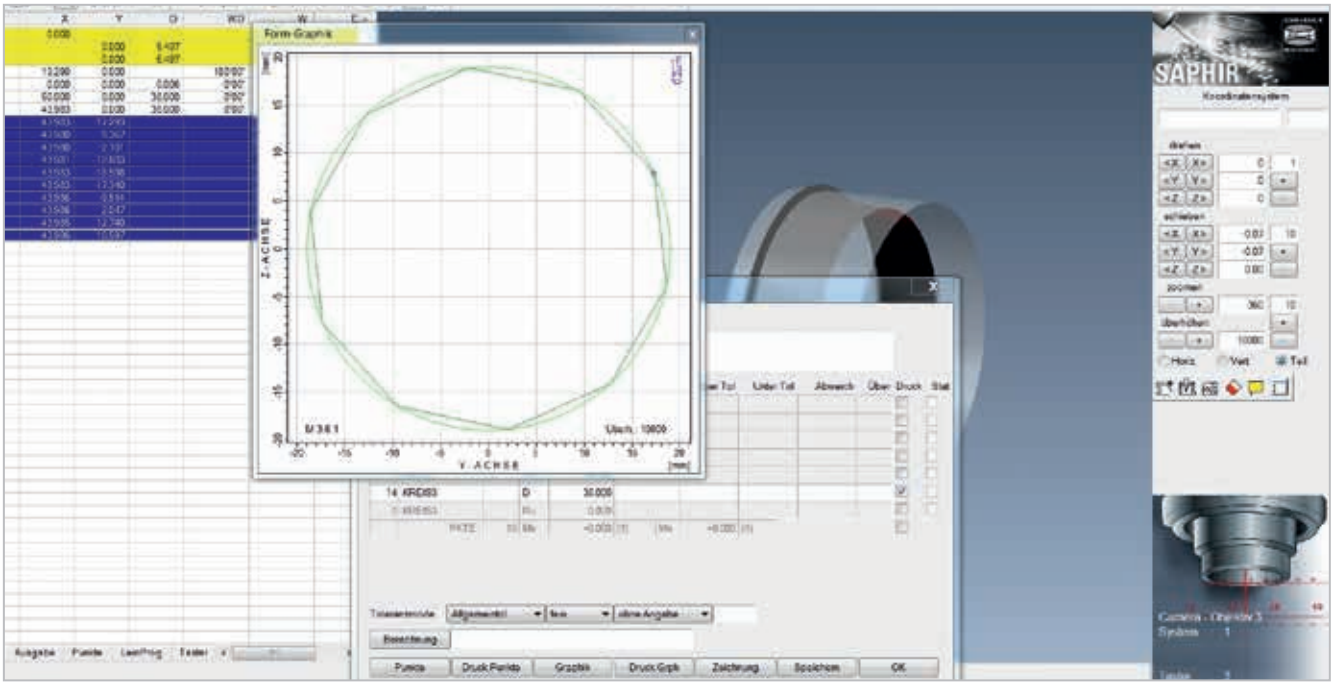
Thanks to our patented, dynamic wobble correction, impellers can also be clamped in a suspended position, e.g. in a jaw chuck.

The evaluation

The evaluation determines the minimum circumscribed contour, although, each individual blade can also be evaluated. The evaluation is in the form of a graph, whereby the target contour, upper and lower tolerance and the measurement points are depicted in an exaggerated way. The line shape is issued as a numerical value.

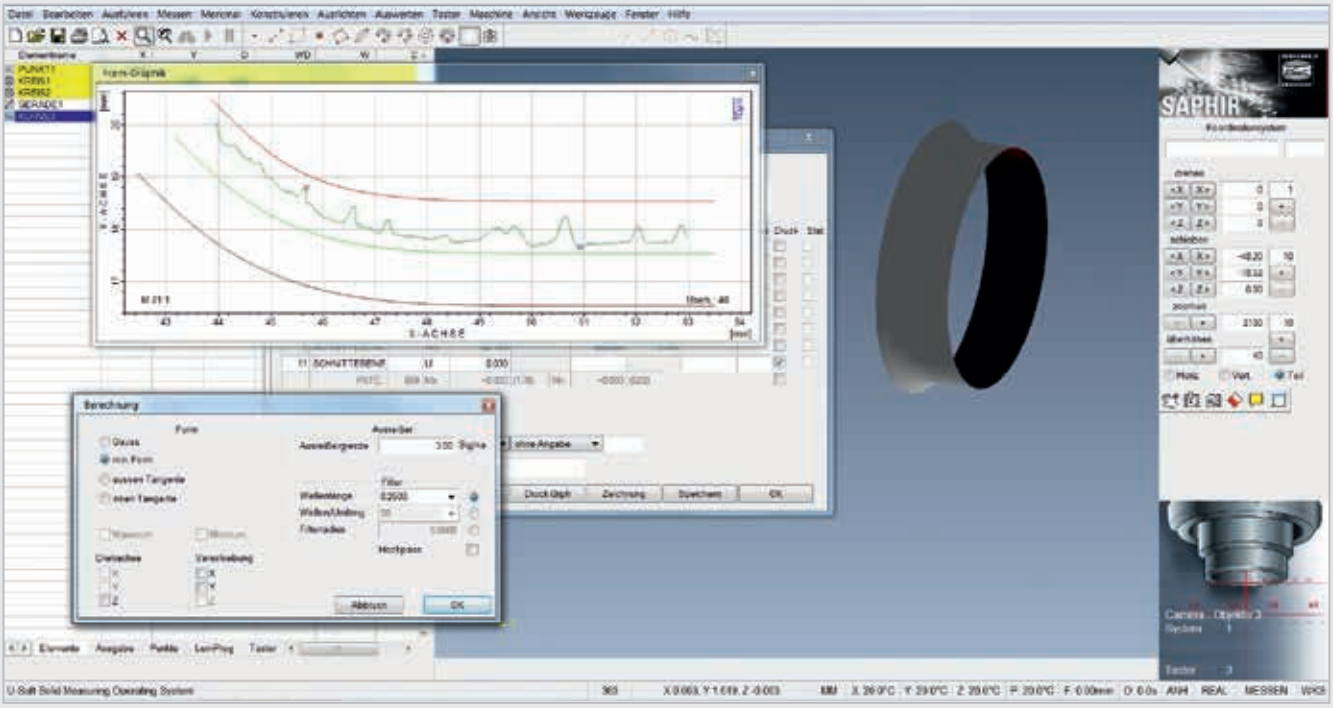


Graphic, three-dimensional evaluation of the impeller blades.

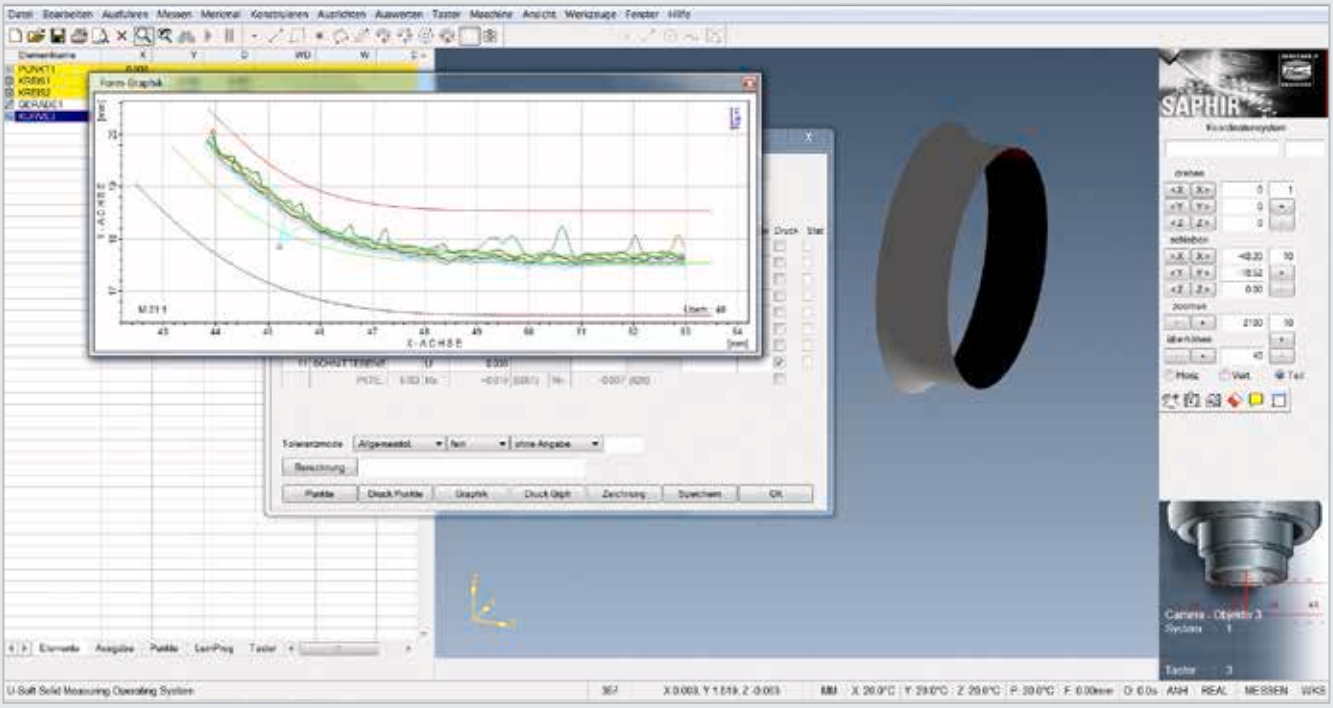


The SAPHIR measurement and analysis software also enables you to use intersections to create and evaluate gauge dimensions on the blade contour.

The evaluation – 3D view



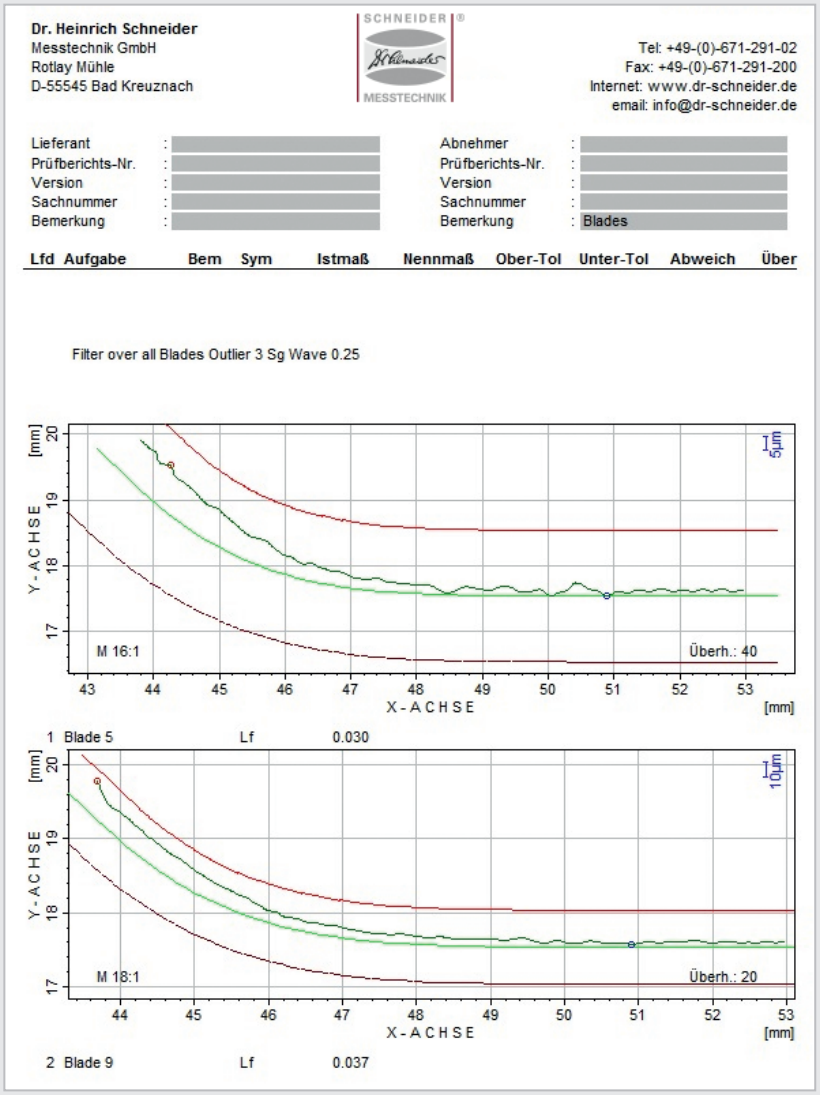
Graphic evaluation: Overview of **the minimum circumscribed contour** of the impeller.



Graphic evaluation: Overview of **all** blade contours.

Report

Measurement results can be displayed in detailed tabular and graphical form.



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Lieferant	:	Abnehmer	:
Prüfberichts-Nr.	:	Prüfberichts-Nr.	:
Version	:	Version	:
Sachnummer	:	Sachnummer	:
Bemerkung	:	Bemerkung	: Blades

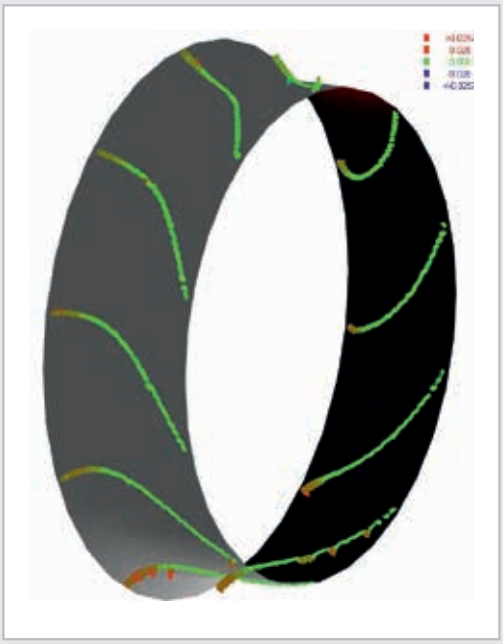
Lfd	Aufgabe	Bem	Sym	Istmaß	Nennmaß	Ober-Tol	Unter-Tol	Abweich	Über

Filter over all Blades Outlier 3 Sg Wave 0.25

1 Blade 5 Lf 0.030

2 Blade 9 Lf 0.037

Graphic 2D display of individual blades including the tolerance ranges.



Graphic 3D evaluation with tolerance colours.

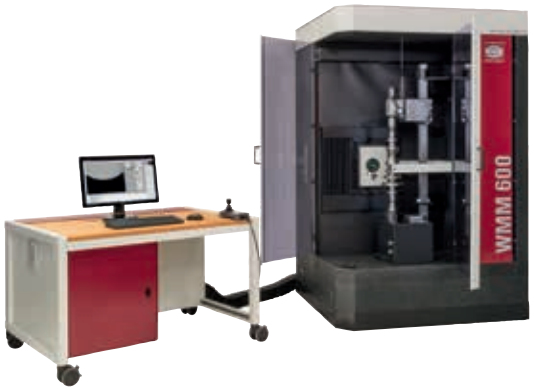
How do we achieve this?

SAPHIR

SAPHIR measurement and analysis software

Efficient, economic workflows start with the choice of equipment. **SAPHIR** is a tailor-made software system that covers all of your requirements. For further information, please request our free **"SAPHIR"** brochure.

WMM 450



WMM 600-1200

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