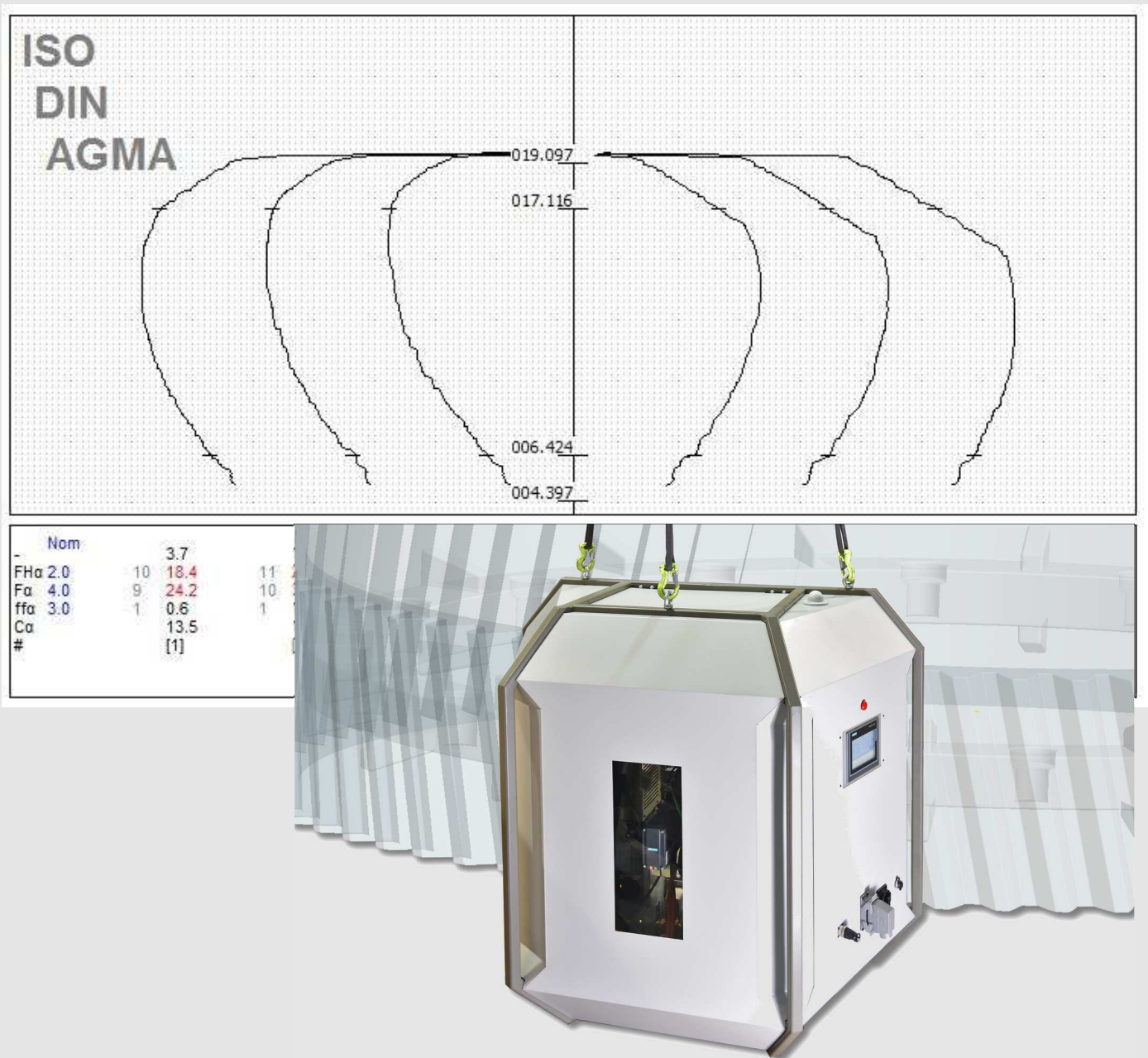


Portable Inspection Solutions:

ES4400 PROFILE AND LEAD INSPECTION UNIT



The measuring Instrument

The new portable profile and lead inspection unit ES4400 offers an exact method of portable measurement thanks to the robust and precise build.

A high degree of operational convenience is possible due to the built-in processing of the measured data.



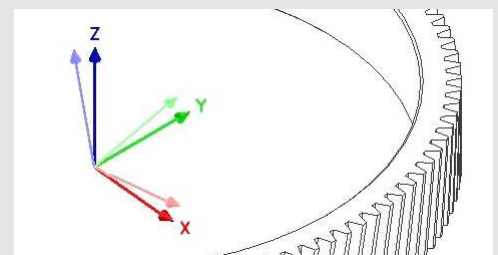
The quality level of the gear teeth is easily determined by the evaluation software according to ISO, DIN or AGMA standards. The evaluation is displayed via Wi-Fi on a rugged 10.1" tablet with Windows 10 professional and can be stored as a PDF file or printed out.

Operation

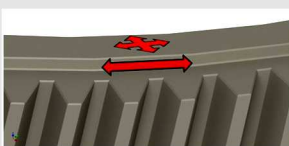
The portable profile and lead measuring instrument is used according to the existing condition on the gear. It is clamped on the workpiece.

By using defined datum points, the instrument is precisely adjusted to the gear axis and centre.

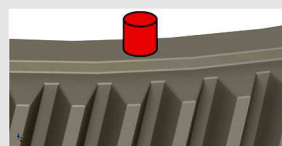
The measurement can be done on the gearing machine or on the workshop floor.



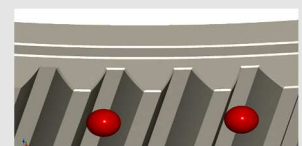
Determination of Centre and Inclination - Instrument to Gear



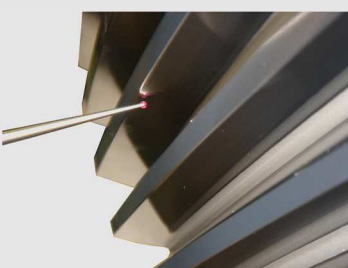
Plane surface
Radius



Inclinometer
"Zeromatic" © Wyler AG



Ball rests



The operator is guided through the setup and the measurement. The tuition time is minimal, and the measurements are performed automatically.

The measurements are stored automatically and can be recalled via the part numbers identifications.

ES Control

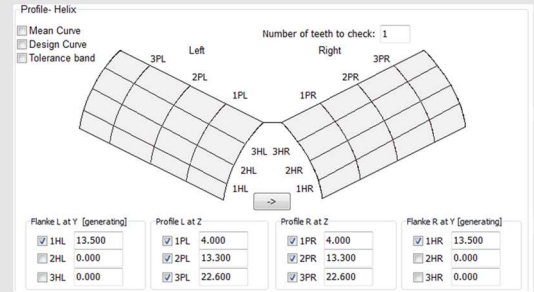
Operating Tablet for both ES4400 and ES4100 Units



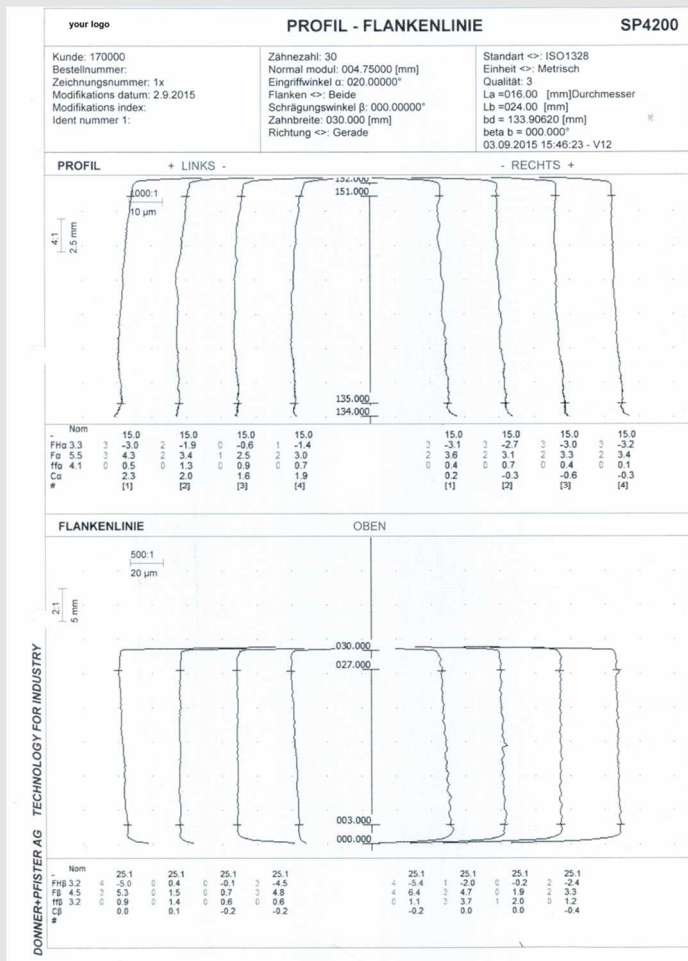
-Test results and their analysis:

- Profile $F_{\alpha}, f_{f\alpha}, f_{H\alpha}, f_{Ham}$
- Helix $F_{\beta}, f_{f\beta}, f_{H\beta}, f_{H\beta m}$
- Crown C_{α}, C_{β}
- Pitch (ES4100) $F_p, F_{pk}, f_{pt}, f_u,$
- Runout (ES4100) F_r

- Preparation of the data for statistical evaluation
- USB Memory-stick for storing documents in PDF format
- Documents printable



Simple definition of the measuring tasks



Measuring functions for involute spur and helical gears:

Profile and Helix

Test results and their analyses according to DIN, ISO, AGMA

- Profile $F_{\alpha}, f_{f\alpha}, f_{H\alpha}, f_{Ham}$
- Helix (tooth alignment) $F_{\beta}, f_{f\beta}, f_{H\beta}, f_{H\beta m}$
- Crown C_{α}, C_{β}

Charting example with the requested and the actual quality printed out or as PDF file.

For safe handling, a transportation box is provided.

Technical Data

	Metric	Inch
Workpiece Diameter min/max	600mm/unlimited	23.622"/unlimited
Standard Module / DP	3 - 80 Mod.	8.4666 - 0.3175 DP
Larger Modules / DP	on request	on request
Standard Number of teeth	up to 999	up to 999
Higher Number of teeth	on request	on request
Helix angle	+/- 35°	+/- 35°
Gear width according to customer requirements	Standard 1300mm	Standard 51.18"
Left/right hand measurement changeover	automatic	automatic
Magnification for diagrams selectable	100, 250, 500, 1000, 2000	100,250,500,1000, 2000
Approx. net weight (depending on gear width)	255 kg	562,18 lbs
Dimensions	2100 x 1010 x 800 mm	82.67" x 39.76" x 31.49"
Measuring range	± 500 µm	± 0.00984"
Accuracy	VDI 2613 Group I	VDI 2613 Group I
Power requirements	400 Volts 50/60 Hz. ±10%	400 Volts 50/60 Hz. ±10%
Machine Colour	Light grey	Light grey
The evaluation comprises of the following parameters and evaluated per	ISO 1328, AGMA 2000, 2015 and DIN 3962	

Further information and our overseas representatives can be found on our website
www.dpag.ch



Donner + Pfister AG

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