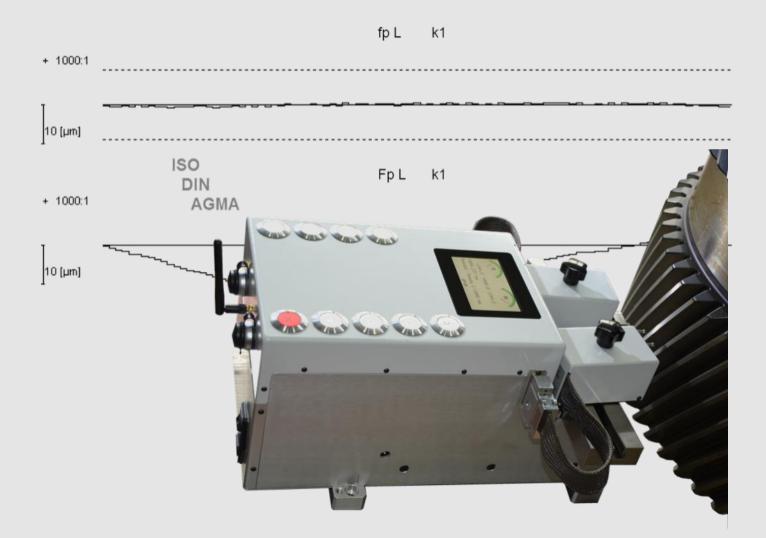
## Donner + Pfister AG



*Technology for Industry* CH-8855 Wangen-Nuolen Switzerland www.dpag.ch

## **Portable Inspection Solutions:**

# **ES4100 PITCH INSPECTION UNIT**



#### The measuring Instrument

The new portable pitch measuring instrument ES 4100 offers an extremely exact method of measurement based on the principle of chord measurement (comparator method). A high degree of operational convenience is possible due to the built-in processing of the measured data.





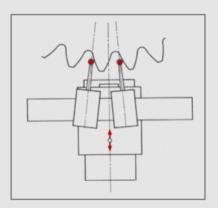
The quality level of the gear teeth is easily determined thanks to the evaluation software according to ISO, DIN or AGMA standards. The measured values are displayed on a small 4.3"TFT display. The evaluation is displayed via WiFi on a rugged 10.1" tablet with Windows 10 professional and can be stored as a PDF file or printed out.



Existing pitch measuring instruments MAAG ES401 can also be updated on request.

### Operation

The portable pitch measuring instrument can be used in many production locations. The only prerequisite for its use is a slowly rotating work-table or an appropriate arrangement between centres, where the work piece to be measured can be accommodated. The instrument is therefore employed directly on the machine tool or as a supplementary device on measuring centres.





The operator is guided through the setting up 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.

## The Result

ogo			PITCH	DEVI/	ATION	E\$4100	
		:26:47 AM	Number of tee Module m: Pressure and	Number of teeth z: Module m: Pressure angle alpha:		DIN 3962 µm [0.001 mm]	
			fp L	k1			
*********							
			Fp L	k1			
			to R	k1			
			Fp R	k1			
			Fr				
				11000000	,		
		e #: 99/V85		e #: 99/X85 Module m: Pressure and Foi L Fp L fp R fp R Fp R Fr	e #. 99/V85 Module m. Presure angle alpha: Helix angle beta: fp L k1 Fp L k1 fp R k1 Fp R k1	e #. 99/V85 Module m: 3.0000m Pressure angle alpha: 15.0000' Helix angle beta: 15.0000' 19 L k1 Fp L k1 Fp R k1 Fp R k1 Fr K1	

	Nominal	Actual		
		L	R	
fp max	1.5 [DIN1]	0.2 [DIN1]	0.3 [DIN1]	
fu max	2.0 [DIN1]	0.3 [DIN1]	0.2 [DIN1]	
Rp		0.4	0.5	
Fp	7.0 [DIN1]	2.1 [DIN1]	3.1 [DIN1]	
F	4.5 [DIN1]	3.3 [DIN1]		

A record with the requested and the actual quality printed out or as PDF file.

For a safe handling is a transportation box and hood provided



Transportation hood



#### **Transportation Box**

## Options



#### Runout probe

Specifications: Modul Measuring range Resolution Accuracy Measuring ball collet chuck Weight Accessories

1-40 mm ±500 μm 0.2 μm ±1 μm

8mm 1.6 kg Transportation box

#### Internal measuring arm

#### **Specifications:**

Maximum measuring path Modul Maximum measuring depth Span with probes Minimum diameter capacity Dimensions: Weight: Accessories: 35 mm 1-20mm 125 mm 40 mm 250 mm 230 x 230 x 170 mm 5 kg Transportation box Necessary screws and tools



V2.1 2018

#### **Technical Data**

	Metric	Inch	
Workpiece Diameter min/max	10mm/unlimited	0.394"/unlimited	
Standard Module / DP	1 - 40 Mod.	25.4 - 0.635 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	
Circumferential speed of workpiece, variable	1 - 10 mm/sec	0.039"- 0.394"/sec	
Left/right hand measurement changeover	motorized	motorized	
Radial Slide adjustment (range)	70 mm	2.756"	
Probe span (max)	250 mm	9.84"	
Magnification for diagrams selectable	100,250,500,1000,2000	100,250,500,1000,2000	
Net weight (approx)	35 kg	78 lbs	
Dimensions of ES4100 unit	550x350x250 mm	21.65"x13.78"x9.84"	
Measuring range	± 250 μm	± 0.00984"	
Accuracy	VDI 2613 Group I	VDI 2613 Group I	
Measuring range	±500 μm	± 0.0197"	
Accuracy	VDI 2613 Group I	VDI 2613 Group I	
Larger measuring ranges	on request	on request	
Power requirements	110/220 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, 2	2015 and DIN 3962	
Numerical printout of individual tooth values			
for each tooth is also possible in text and Excel f	ïle.		

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



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