



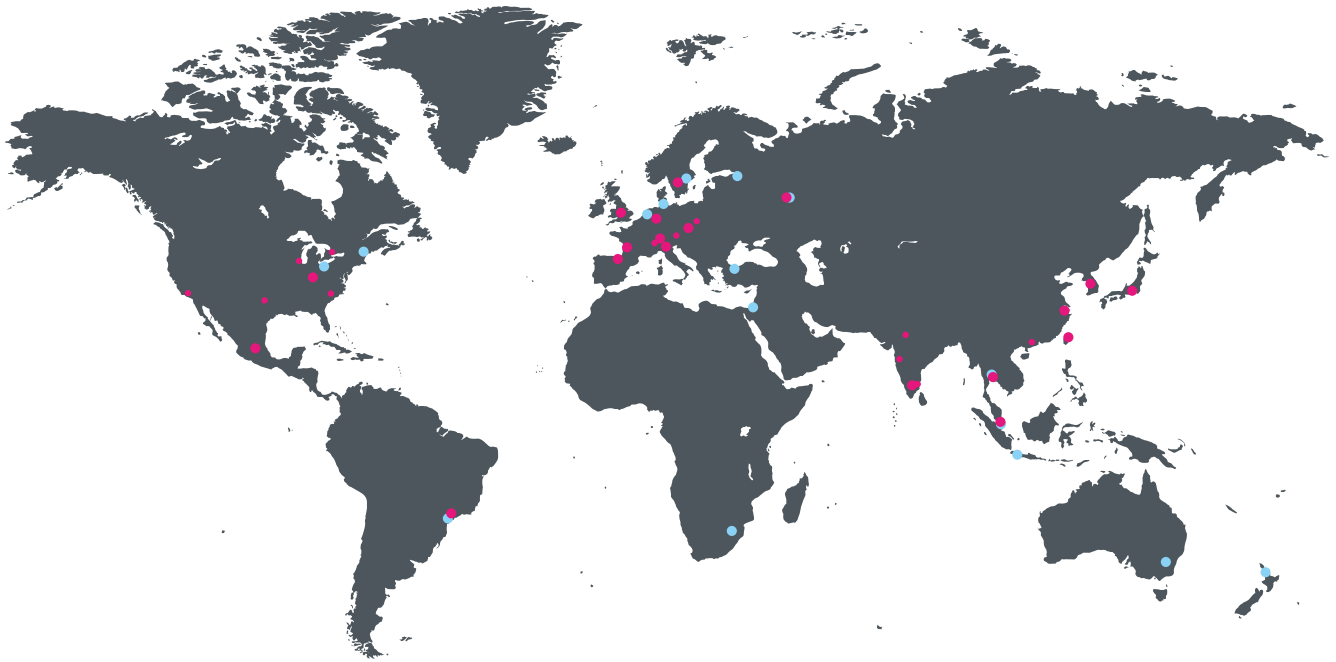
BUSINESS DIVISION MEASURING MACHINES

SOLUTIONS FOR DIMENSIONAL AND GEOMETRIC INSPECTION

BLUM
NOVOTEST

THE BLUM-NOVOTEST GROUP

Established in 1968, Blum-Novotest GmbH is one of the globally leading manufacturers of innovative as well as high-quality measuring and testing technology. Today approx. 600 employees are working in the three business divisions of the company: **Measuring Components** for the international machine tool industry, **Measuring Machines** for automotive industry, suppliers and machine tool industry and **NOVOTEST Testing Technology** for the automotive, hydraulic and aircraft industry.



● Blum-Novotest Subsidiary

● Blum-Novotest Sales & Service

● Blum-Novotest System Integrator



BUSINESS DIVISION MEASURING MACHINES

The field of activity of the measuring machine division is focused on solutions for 100 % **dimensional and geometric measuring**, especially of rotationally symmetrical parts. Static and dynamic measurements are carried out on the measuring machines using tactile, non-contact and combined methods.

In addition to the provision of automatic temperature compensation, additional tests can optionally be integrated, e.g. for cracks, natural frequency, etc.

Active **process optimization** is ensured by a closed-loop process with parameterizable transfer of correction values for automatic tool wear compensation. The measuring machines can be equipped with additional automation modules, e.g. separation of the workpieces, automatic feeding of setting standard in the process, marking and separation of NIO parts.

The measuring machines division is characterized by well-founded competence and decades of integration experience of quality control in series production, e.g. for the following workpiece types:



– Brake discs and drums

– Shafts, camshafts, rotor shafts etc.

– Rotors

– Wheel hubs (cars, trucks)

– Flywheels

– Gears

– Differential gear housings

– Tool inserts

– Motor spindles

– Torque converter components

– Coupling flanges

– etc.

OUR PRODUCTS

The portfolio of solutions ranges from the integrable measuring devices and fully automatic post-process machines for 100% in-line control to the autonomous, flexible stand-alone cells with integrated workpiece handling. Tailored to your requirements, the quality- and cost-conscious specialists of Blum-Novotest GmbH manufacture your individual, precise and reliable measuring and testing solution. We deliver the technology you need - with high flexibility, ease of operation and service.



MULTIPOINT GAUGING MACHINES



FLEXIBLE 2D MEASURING MACHINES



MEASURING AND AUTOMATION CELLS



SPECIAL MEASURING SYSTEMS



TEST STANDS FOR MOTOR SPINDLES



CRACK DETECTION TESTING MACHINES



SIEMENS SIMATIC HMI

M4P | Measuring- and evaluation software

Current Project: 6R0.615.301.C (Dym)

Measurement to measurement | 2098 | 20/20

Name	LT	LIT	Nominal Value	UIT	UT	Actual Dimension	Deviation	State
1 thickness braking track	-0.1	-0.03	21.9	0.03	0.1	21.917 mm	17.0 µm	OK
2 height	-0.1	-0.03	30.36	0.03	0.1	30.379 mm	18.7 µm	OK
3 diameter	-0.1	-0.07	65.023	0.07	0.1	65.040 mm	16.6 µm	OK
4 pitch hub contact surface	-0.125	-0.08		0.015	0.08	-0.005 mm	-20.0 µm	OK
8 flatness hub contact surface				0	0.025	0.004 mm	-4.4 µm	OK
21 parallelism RR.F1 to NAF				0	0.04	0.008 mm	7.5 µm	OK
23 DTV inside				0	0.006	0.000 mm	0.4 µm	OK
45 slope FAF	-0.05	-0.04		0	0.04	-0.017 mm	-17.5 µm	OK
46 axial run FAF inside				0	0.025	0.000 mm	0.5 µm	OK

Value Viewer: 3D model of a circular part with dimensions.

Feature detail view M 8: "flatness hub contact surface"

Feature detail view M 4: "pitch hub contact surface"

Value Viewer: 3D model of a circular part with dimensions.

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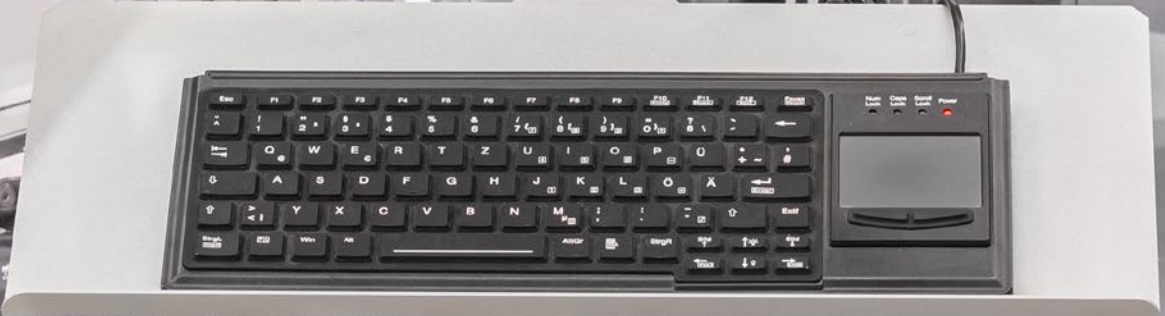
Value Viewer: 3D model of a circular part with dimensions.

Feature detail view M 8: "flatness hub contact surface"

Feature detail view M 4: "pitch hub contact surface"

Start Stop

Emergency Stop



MEASURING AND EVALUATION SOFTWARE

M4P

Precision | Production | Process | Productivity

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