

LabTest SMB 200

series sheet metal testing machines

Electromechanical testing machines of the SMB series in bench or rack design, which are primarily designed for measuring and testing sheets and strips by alternating bending in order to assess their mechanical resistance to bending or cracking and deformation under repeated stress. SMB machines feature a fully automatic test sequence and shutdown of the bending test when the sample is broken or interrupted. These SMB test machines have been developed to ensure continuous control of sheet and tape production in test rooms and laboratories, research and development, using standardized and other established standards. LABORTECH machines are characterized by very high rigidity of the test frame, reliability and accuracy of measurements in manual and automatic mode.

Alternating bending of sheets and strips with
high rigidity and service life...

Key features

- Robust vertical table or stand design with pneumatic clamping.
- All components are easily accessible from the outside of the machine, so they can quickly change the tools for individual standardized and non-standardized tests.
- The SMB series testing machines are equipped with a special crack detection algorithm. This high-resolution algorithm allows individual adjustment of this criterion for individual materials and test types.
- SMB series testing machines are driven by a precision servo electric drive. The test itself can be controlled automatically or manually as necessary. A programmable PLC is used to control the machine functions.
- The testing machines are equipped with a digital LCD touch screen with integrated MBTest-S software to indicate the type of standard, bending angle, number of bends, etc.
- The SMB series test machine is equipped with various safety features such as emergency stop, warning light and sound signals, and barriers to protect operators and prevent accidents.
- By connecting to a PC via Ethernet 10/100 Mbit, in conjunction with the MBTest-BASIC software, it is possible to graphically monitor the testing process itself.
- Each SMB machine includes extensive technical documentation with VIDEO instructions and EC product declaration of conformity.

Industrial deployment

- engineering, metallurgical, aerospace and nuclear industries, research institutions, universities etc.



Safety features

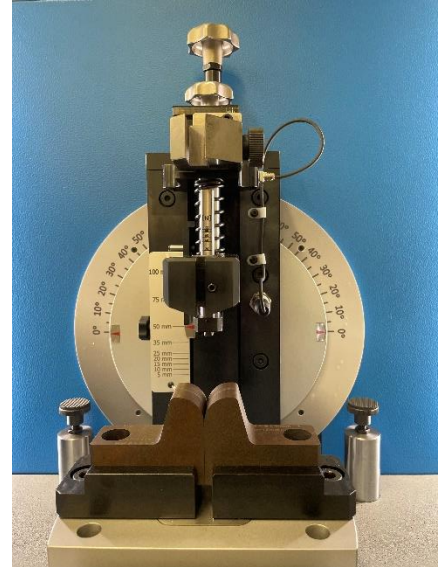
- The machine meets all safety parameters defined by the following standards:
EN ISO 12100:2015
 Safety of machinery — Risk assessment and reduction
EN ISO 14120:2015
 Safety of machinery — Guards
EN ISO 13850:2015
 Safety of machinery — Emergency stop function
EN IEC 61000-6-2:2019
 Electromagnetic compatibility (EMC)

Types of tests according to standards

- ČSN ISO 7799 – metallic materials; test of sheets and strips of thickness <3 mm by alternating bending
- GOST 13813-68 – bend test for sheets and strips with a thickness of <4 mm
- ČSN ISO 7801 – metallic materials; Wire test by alternating bending

Test fixtures

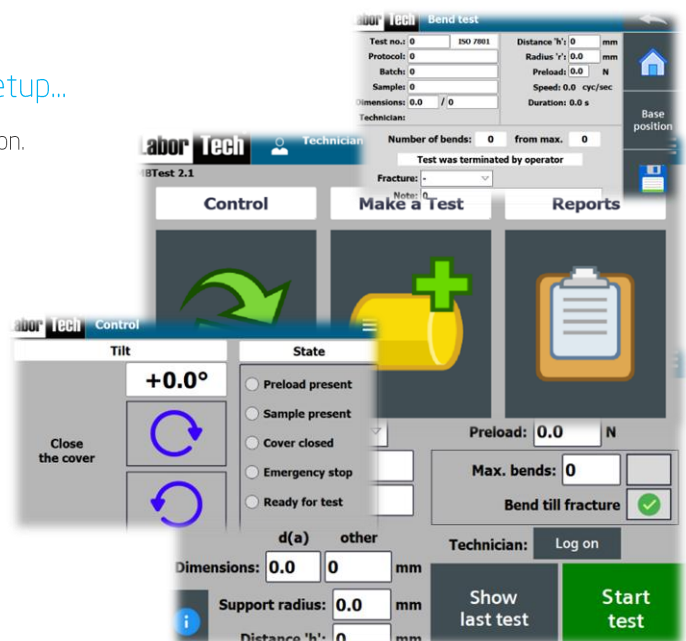
- When selecting a fixture for alternating bending sheet metal testing, it is important to consider the requirements for the material to be tested and the determinable test parameters.
- Each preparation is used in accordance with the relevant standard, which determines the procedure and criteria for conducting the test:
 - Replaceable cylindrical supports for sheet thickness:
 - $0,15 < s \leq 0,3$ mm, radius of cylindrical support $g = 1$ mm
 - $0,30 < s \leq 0,5$ mm, radius of cylindrical support $g = 2,5$ mm
 - $0,50 < s \leq 1,5$ mm, radius of cylindrical support $g = 4$ mm
 - $1,50 < s \leq 2,0$ mm, radius of cylindrical support $g = 6$ mm
 - Replaceable cylindrical inserts for bending arms for wire diameters:
 - $2,0 < d \leq 3,0$ mm, diameter of cylindrical support $r = 7,5 \pm 0,1$ mm
 - $3,0 < d \leq 4,0$ mm, diameter of cylindrical support $r = 10 \pm 0,1$ mm
 - $4,0 < d \leq 6,0$ mm, diameter of cylindrical support $r = 15 \pm 0,1$ mm
 - Etc.



Software MBTest-S

System software for bending test control and setup...

- Intelligent software designed for fast and easy machine operation.
- Simple switching between traffic, database settings and user.
- Device user choice - rights - user permission.
- Manual or automatic control of the machine.
- Choice of downforce, tightening or loosening, rotational speed.
- Manual mode measurement settings – cycles, angle, pressure...
- Digital display of all current values.
- Accurate information about machine status and error messages.
- Data with results and statistics.
- Extensive calibration and service program.
- Multilingual version (CZE, EN, POL, RU, ESP etc.).
- Perpetual license.
- Installation on any SIEMENS system.



Specification

Ratings	Units	SMB 200
Product code		1.12090122
Bending moment	Nm	± 50
Lever deflection angle from the starting	°	90°±3°
Prestressing force	N	20 to 100
Nominal wire diameter or thickness	mm	0,15 to 10
Adjustable axis of rotation and gripper (h)	mm	5 to 100
HA noise level	dB	< 58
Weight	kg	375
Air pressure used	bar	4 to 8
Environmental conditions		
Temperature of the working environment	°C	+10 ... +35
Storage temperature	°C	-25 ... +55
Humidity of the working environment	%	<90
Electrical connection		
Supply voltage/frequency	V/Hz	200 to 240/50-60
Number of phases		1
Wattage	kVA	1
Other parameters		
Color combination	RAL	1015, 5015
PC interface		Ethernet, USB ...

