

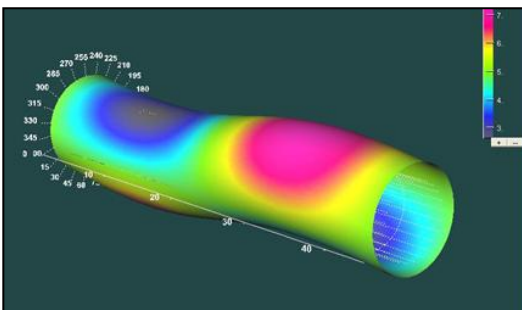
BEMIS-SC™ Small Caliber (5.56mm – .45 Cal) Bore Erosion Measurement and Inspection System



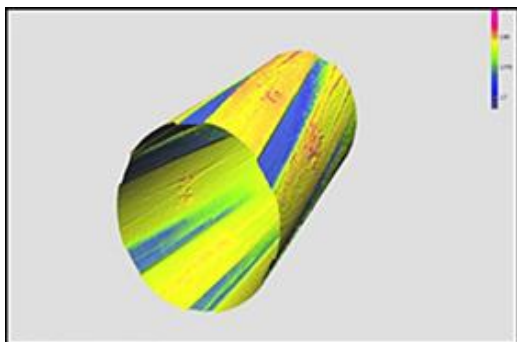
Designed to Inspect Small Caliber Gun Barrels



7.62mm BEMIS-SC™ Laser Sensor



3D Image of Bore Deflection

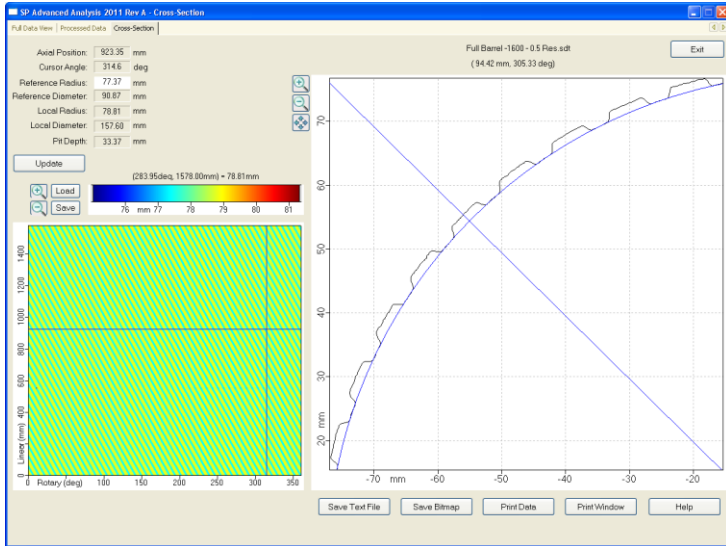


3D Image of Gun Barrel Rifling and Erosion

BEMIS-SC™ Features

- **High Resolution** laser-based inspection system for assessment of gun barrel condition
- **Automated** inspection process removes operator subjectivity
- **3D Precision** bore erosion profiling and laser-based dimensional measurements
- **High Resolution LaserVideo™** provides camera-like image of entire gun tube surface
- **Quantitative data** for unparalleled gun tube surface and erosion analysis
- **Advanced analysis and reporting** software provides data in hard-copy summary or exportable to text file
- **Transportable Inspection Data** can be stored, transmitted and reviewed at remote locations
- **Automatic report generator** software provides tabular summary of test results
- **Operator-Configurable** motion and scan control
- **Quick setup** with automatic calibration routine
- **Sensor modules** easily exchanged
- **Optional Bore Straightness and Deflection Module**
- **On-Site training** available

LTC...Making HeroesSM



Typical Display allows operators in-depth analysis of test results

BEMIS-SC™ includes:

- LP-4210™ Data Acquisition and Control Unit
- LaserViewer™ Software
- External Motor Control unit
- Rigid Sensor Delivery Station
- Laser Sensor Scanning Assembly
- Guide Tube Adapter and Calibration Set
- Hard-sided Shipping Cases
- Instruction Manuals



BEMIS-SC™ Inspection Station

LABORATORY SERVICES BRANCH TEST REPORT

DATE OF MEASUREMENT: 10/1/2003 12:59:08 PM
 OPERATOR: John Doe
 BARREL TYPE: M2 SO Caliber
 SERIAL NUMBER: M2C-123
 NUMBER OF ROUNDS: 100
 MEASUREMENT TEMP: 82 deg F
 TEST PROGRAM:
 TEST DIRECTOR:

SCAN DATA FILENAME: D:
 SCAN DATA ANGULAR RESOLUTION: 0.5 deg
 APPROXIMATE CIRCUMFERENTIAL SAMPLE SPACING: 0.002 in
 SCAN DATA AXIAL RESOLUTION: 0.02 in
 REPORT AXIAL RESOLUTION: 0.5 in
 NUMBER OF LAND SAMPLES PER CALCULATION: 15
 NUMBER OF GROOVE SAMPLES PER CALCULATION: 31
 REPORT GENERATED ON: 1/30/2004
 NOTE: Land 1 is the first land above 0 degrees at the muzzle end.

COMMENTS:

Diameter calculations muzzle	Scan		Lands		Grooves		Lands		Grooves		Lands		Grooves		Average		Average	
	76	78	78	79	79	80	80	81	81	81	81	81	81	81	81	81	81	81
0.5	-39.22	0.4950	0.5080	0.4955	0.5090	0.4955	0.5090	0.4955	0.5090	0.4945	0.5080	0.4945	0.5080	0.4952	0.5084			
1	-38.72	0.4950	0.5080	0.4955	0.5085	0.5085	0.4955	0.5090	0.4955	0.5080	0.4945	0.5080	0.4945	0.5080	0.4952	0.5084		
1.5	-38.22	0.4955	0.5085	0.4960	0.5090	0.4950	0.5090	0.4950	0.5090	0.4950	0.5080	0.4950	0.5080	0.4954	0.5086			
2	-37.72	0.4955	0.5090	0.4955	0.5090	0.4950	0.5085	0.4955	0.5080	0.4955	0.5080	0.4955	0.5080	0.4954	0.5086			
2.5	-37.22	0.4960	0.5085	0.4955	0.5085	0.5085	0.4950	0.5080	0.4955	0.5080	0.4955	0.5080	0.4955	0.5080	0.4956	0.5083		
3	-36.72	0.4965	0.5090	0.4960	0.5085	0.5085	0.4955	0.5080	0.4955	0.5080	0.4955	0.5075	0.4955	0.5083	0.5084			
3.5	-36.22	0.4965	0.5090	0.4960	0.5085	0.5085	0.4955	0.5080	0.4955	0.5080	0.4955	0.5080	0.4955	0.5080	0.4962	0.5084		
4	-35.72	0.4965	0.5090	0.4960	0.5085	0.5085	0.4960	0.5080	0.4955	0.5080	0.4955	0.5080	0.4955	0.5080	0.4964	0.5083		
4.5	-35.22	0.4965	0.5085	0.4960	0.5085	0.5085	0.4965	0.5080	0.4965	0.5080	0.4965	0.5085	0.4965	0.5083	0.5083			
5	-34.72	0.4965	0.5085	0.4960	0.5080	0.5080	0.4965	0.5080	0.4970	0.5085	0.4965	0.5080	0.4970	0.5085	0.4964	0.5084		
5.5	-34.22	0.4965	0.5090	0.4960	0.5080	0.5080	0.4970	0.5080	0.4970	0.5085	0.4965	0.5080	0.4970	0.5085	0.4966	0.5084		
6	-33.72	0.4965	0.5085	0.4965	0.5080	0.5080	0.4970	0.5080	0.4965	0.5080	0.4965	0.5080	0.4970	0.5080	0.4974	0.5096		
6.5	-33.22	0.4965	0.5085	0.4965	0.5080	0.5080	0.4970	0.5080	0.4965	0.5080	0.4965	0.5080	0.4970	0.5080	0.4967	0.5086		
7	-32.72	0.4965	0.5090	0.4970	0.5085	0.5085	0.4970	0.5080	0.4965	0.5080	0.4965	0.5080	0.4970	0.5080	0.4977	0.5103		
7.5	-32.22	0.4965	0.5090	0.4975	0.5085	0.5085	0.4970	0.5085	0.4970	0.5085	0.4965	0.5080	0.4970	0.5085	0.4988	0.5090		
8	-31.72	0.4970	0.5085	0.4975	0.5085	0.5085	0.4970	0.5085	0.4965	0.5080	0.4965	0.5080	0.4970	0.5085	0.4970	0.5092		
8.5	-31.22	0.4970	0.5090	0.4980	0.5085	0.5085	0.4965	0.5085	0.4965	0.5080	0.4965	0.5080	0.4970	0.5085	0.4970	0.5095		
9	-30.72	0.4975	0.5085	0.4980	0.5100	0.4970	0.5085	0.4965	0.5080	0.4970	0.5085	0.4970	0.5080	0.4974	0.5096			
9.5	-30.22	0.4980	0.5085	0.4975	0.5105	0.4970	0.5085	0.4970	0.5085	0.4970	0.5085	0.4970	0.5080	0.4974	0.5096			
10	-29.72	0.4985	0.5100	0.4980	0.5105	0.4975	0.5100	0.4970	0.5085	0.4970	0.5085	0.4970	0.5080	0.4977	0.5100			
10.5	-29.22	0.4980	0.5105	0.4980	0.5105	0.4970	0.5100	0.4975	0.5100	0.4975	0.5100	0.4975	0.5100	0.4978	0.5102			
11	-28.72	0.4985	0.5105	0.4975	0.5110	0.4975	0.5100	0.4980	0.5100	0.4980	0.5100	0.4980	0.5100	0.4977	0.5103			
11.5	-28.22	0.4985	0.5110	0.4980	0.5110	0.4975	0.5100	0.4980	0.5105	0.4980	0.5105	0.4980	0.5105	0.4980	0.5106			
12	-27.72	0.4985	0.5110	0.4975	0.5105	0.4980	0.5105	0.4980	0.5105	0.4985	0.5110	0.4985	0.5110	0.4981	0.5108			
12.5	-27.22	0.4985	0.5110	0.4980	0.5105	0.4980	0.5105	0.4980	0.5105	0.4985	0.5110	0.4985	0.5110	0.4982	0.5108			
13	-26.72	0.4985	0.5110	0.4985	0.5105	0.4985	0.5105	0.4985	0.5105	0.4985	0.5110	0.4985	0.5110	0.4985	0.5108			
13.5	-26.22	0.4985	0.5110	0.4985	0.5105	0.4985	0.5110	0.4985	0.5110	0.4985	0.5110	0.4985	0.5110	0.4987	0.5110			
14	-25.72	0.4980	0.5110	0.4980	0.5110	0.4980	0.5120	0.4980	0.5110	0.4985	0.5110	0.4985	0.5110	0.4986	0.5112			
14.5	-25.22	0.4980	0.5105	0.4985	0.5105	0.4980	0.5125	0.4985	0.5110	0.4985	0.5110	0.4985	0.5110	0.4985	0.5112			
15	-24.72	0.4985	0.5110	0.4980	0.5110	0.4980	0.5125	0.4985	0.5110	0.4985	0.5110	0.4985	0.5110	0.4985	0.5114			
15.5	-24.22	0.4990	0.5115	0.4995	0.5125	0.4995	0.5125	0.4995	0.5125	0.4990	0.5110	0.4990	0.5110	0.4991	0.5118			
16	-23.72	0.4990	0.5115	0.4995	0.5125	0.4995	0.5125	0.4995	0.5125	0.4985	0.5110	0.4985	0.5110	0.4992	0.5120			
16.5	-23.22	0.4995	0.5120	0.4995	0.5130	0.4995	0.5125	0.4995	0.5125	0.4990	0.5115	0.4985	0.5112	0.4995	0.5122			
17	-22.72	0.4995	0.5125	0.5000	0.5125	0.4995	0.5120	0.4990	0.5120	0.4990	0.5115	0.4995	0.5122	0.4995	0.5122			
17.5	-22.22	0.5000	0.5130	0.5000	0.5130	0.4990	0.5125	0.4990	0.5125	0.4990	0.5120	0.4985	0.5125	0.4996	0.5126			
18	-21.72	0.5005	0.5130	0.5000	0.5130	0.4995	0.5120	0.4995	0.5120	0.5005	0.5130	0.4990	0.5128	0.4999	0.5128			
18.5	-21.22	0.5008	0.5135	0.4995	0.5130	0.4995	0.5120	0.5000	0.5120	0.5000	0.5120	0.4998	0.5127	0.4998	0.5127			
19	-20.72	0.5008	0.5130	0.4995	0.5130	0.4995	0.5120	0.5000	0.5125	0.5000	0.5125	0.4999	0.5128	0.4999	0.5128			
19.5	-20.22	0.5000	0.5135	0.4995	0.5125	0.4995	0.5125	0.5005	0.5130	0.5005	0.5130	0.4999	0.5128	0.4999	0.5128			
20	-19.72	0.5000	0.5135	0.4995	0.5120	0.4995	0.5120	0.5005	0.5130	0.5005	0.5130	0.4998	0.5126	0.4998	0.5126			
20.5	-19.22	0.5000	0.5130	0.4995	0.5120	0.5005	0.5125	0.5005	0.5125	0.5005	0.5130	0.5001	0.5127	0.4998	0.5126			
21	-18.72	0.4995	0.5130	0.4995	0.5120	0.5005	0.5125	0.5005	0.5130	0.5005	0.5130	0.5000	0.5126	0.4998	0.5126			
21.5	-18.22	0.4995	0.5125	0.4995	0.5120	0.5005	0.5125	0.5005	0.5125	0.5005	0.5130	0.5000	0.5125	0.4998	0.5126			
22	-17.72	0.4990	0.5120	0.5000	0.5120	0.5005	0.5125	0.5000	0.5130	0.5000	0.5130	0.4998	0.5125	0.4998	0.5125			

Test results can be generated in tabular format

Basic Specifications:

- Axial scan resolution: Up to 0.1 mm (0.004 inch) per increment
- Rotary scan resolution: Up to 0.1 mm (0.004 inch) per increment
- Sensor resolution: 5 microns (.00025 inch)
- Sensor Linearity: 12 microns (.0005 inch)
- Laser Power: < 4 mW
- Laser Spot Size (max): 0.05 mm (0.002 inch)
- Laser Power Classification: Class II
- Power: 110/240 VAC – 50/60 Hz
- Test Results Displayed: Contour view and cross sectional
- Surface contour display with 256 color, grey-scale, thermal and solid color options

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