

Smart Bending Angle Calculator

Optical angle measurement system for press brakes

SBAC-1135

The SBAC-1135 is a high-speed, contactless, accurate and stand-alone angle measurement system for press brakes



Real-time Measurement:
100 measurements/sec.

High Accuracy:
0.2°

Wide Measurement Range:
From 180° to 30°

Real-time Measurement

The SBAC-1135 measures and communicates the bending angle of the sheet metal to the numerical control (CNC) of the press brake. This is done in real-time during the bending process.

The communicated measurement rate reaches up to 100 samples per second with a measurement accuracy of 0.2°. This allows the CNC to calculate precise corrections (i.e: Springback correction) in order to increase the productivity and performance of the press brake.

Easy to Use

The SBAC-1135 operates as a stand-alone unit without any external elements. Installation is fast and easy and requires only a simple calibration by setting three reference angles.

Wide Measurement Range

The SBAC-1135 offers a wide measurement range even on highly reflective surfaces like stainless-steel and aluminium sheets. This has been made possible by using special image processing algorithms combined with a sensor capable of capturing very strong light intensities. These two features allow a very reliable and robust measurement procedure.

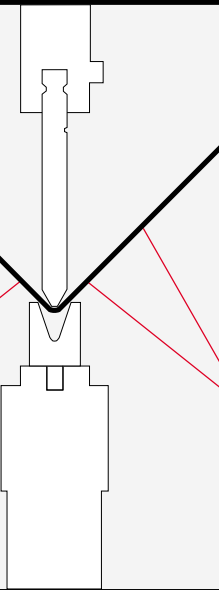
Flexible and Robust

Thanks to its compact and robust design, the SBAC is easily installed on the press brake. Placed below the sheet metal, the SBAC-1135 system measures the angle on both sides of the die.

Standard SBAC-1135 System Configuration

The SBAC-1135 slave module waits for a measurement command from the SBAC-1135 master module. It measures the half bent angle on the left side of the metal sheet and communicates the angle to the SBAC-1135 master module.

SBAC module configured as slave



The SBAC-1135 master module measures the half bent angle on the right side. The other half angle is received from the SBAC-1135 slave module. The total bending angle is calculated and communicated to the CNC controller 100 times/sec.

SBAC module configured as master



The SBAC modules come in a compact and robust casing with IP40 protection, adapted to harsh industrial environments.



POWER SUPPLY

12V DC, 10VA needed.
Built-in galvanic separation.
Cable with snap-and-lock connector.
Cable length: 80 cm.

RS-232 PORT

Communication between SBAC-1135 and CNC control.
Connector type MicroD-Sub.
Cable length: 5 m or 10 m.

RS-485 PORT

Communication between SBAC-1135 master and SBAC-1135 slave.
Connector type MicroD-Sub.
Cable length: 10 m.

SVGA PORT

Connexion of a standard VGA monitor used for the first installation.
800x600 displayed resolution.
60Hz image refresh rate.

DIGITAL INPUTS/OUTPUTS

Connection for the remote control used for the set-up of the system.
4 free configurable digital inputs.
4 free configurable digital outputs.

SUPPORTED CNC CONTROLLERS

Cybelelec DNC 800, 900, 1200.
ESA/GV Kvara series.
Delem (pending Q3/01).

SYSTEM PERFORMANCE

100 measurements per second.
0.2° angle measurement accuracy.
Angle measurement range from 180° to 30°.

CASING

Robust aluminium casing.
IP40 protected.
W x H x L: 160mm x 64mm x 116mm.
Weight: 1.3kg.

LASER SOURCE

5mW laser diode.
670nm visible light laser.
Class IIIa.