

## Cutting Force

Industry: Manufacturing

### Summary

#### Customer Need / Challenge

- A tool manufacturer wanted to monitor the forces on a cutting tool as it cut material, in an effort to understand the wear characteristics under different conditions.

#### Interface Solution

- A Model 6A68 6-Axis Load Cell was mounted between the cutting tool and the fixture, and connected to a Model BX8 to collect the needed data.

#### Results

- After analyzing the data, the tool manufacturer was able to improve the wear-resistance of their cutting tools, resulting in longer lasting tools.

### Materials

#### Interface Products

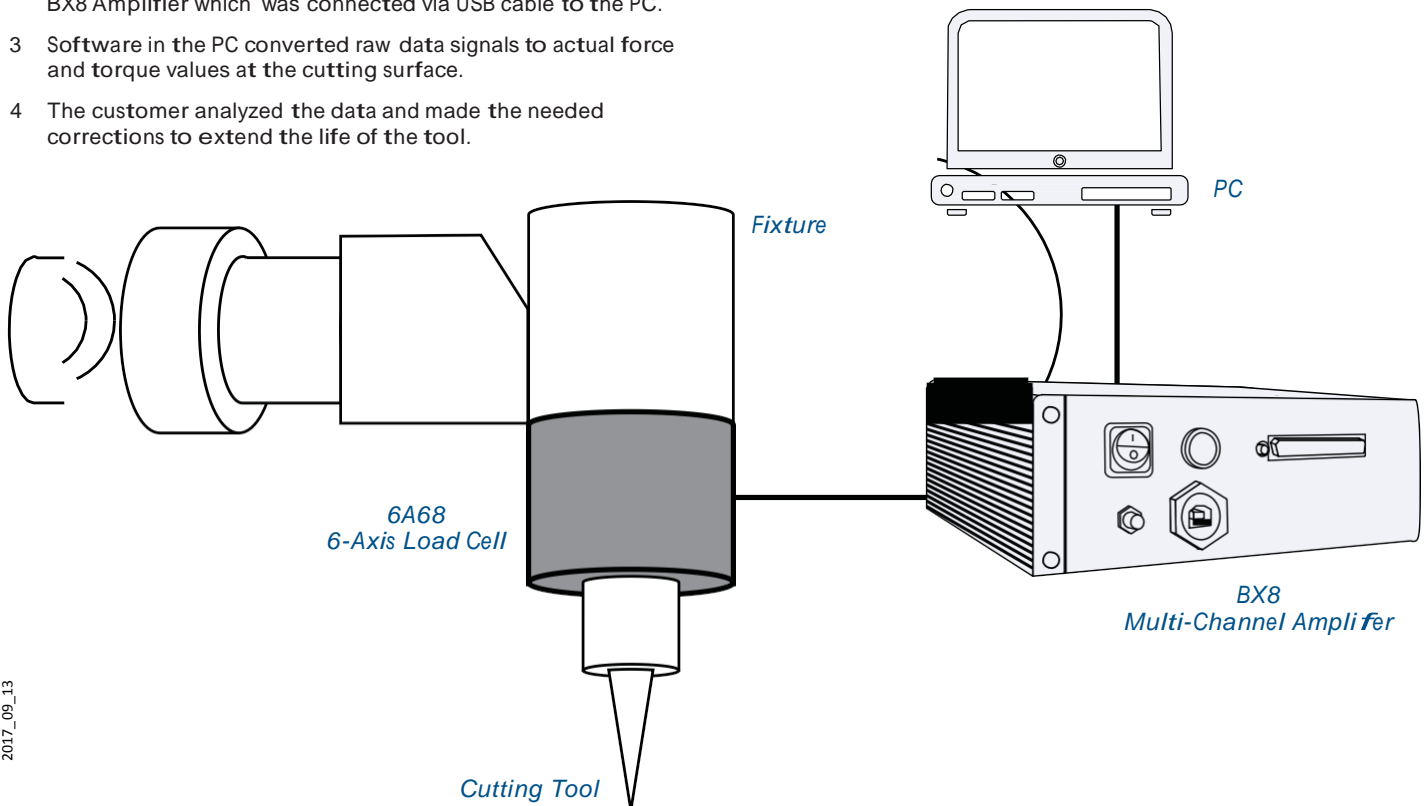
- Model 6A68A - 5K N / 50 Nm
- Model BX8 Multi-Channel Amplifier
- GSV-MULTI Software

#### Additional Materials

- Modified tool fixture to mate with the Model 6A68 6-Axis load cell
- PC for data logging and analysis

### How It Works

- The customer made a special fixture that allowed for the mounting of the Model 6A68 between the cutting tool and the arm of the machine.
- The output of the 6-Axis sensor was connected to the Model BX8 Amplifier which was connected via USB cable to the PC.
- Software in the PC converted raw data signals to actual force and torque values at the cutting surface.
- The customer analyzed the data and made the needed corrections to extend the life of the tool.



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