

# Laser Machine Cutting Force for Materials

## Multi-Axis

Industry: Industrial Automation

### Summary

#### Customer Need / Challenge

A tool manufacturer wants to monitor the forces and torque on their high precision laser cutting machine as it cuts different materials such as aluminum, copper, stainless steel, wood, plastics, acrylics, and more.

#### Interface Solution

Interface suggests using the 6ADF Series 6-Axis Load Cell, and mounting it in between the laser machine cutting tool and the fixture as it cuts different materials. The 6-Axis Load Cell is connected to the BX8 8-Channel Data Acquisition and Amplifier, where the customer is able to collect data.

#### Results

The manufacturer was able to measure the forces and torques applied from their laser cutting machine on different materials using Interface's products.

### Materials

- 6ADF 6-Axis DIN Flange Load Cell with thru-hole
- BX8 8-Channel Data Acquisition and Amplifier with BlueDAQ software included
- Customer PC or Laptop

### How It Works

1. The 6ADF 6-Axis Load Cell was installed in the laser cutting machine.
2. The output of the 6-Axis sensor was connected to the BX8 8-Channel Data Acquisition and Amplifier which was connected via USB cable to the PC.
3. Software in the PC converted load cell outputs to actual force and torque values at the cutting surface.
4. The customer analyzed the different force and torque data as their laser cutting machine cut through different materials.

