



LowStir is a low cost friction stir welding system that provides full monitoring of key weld parameters, including tool temperature, and is designed to be retro-fitted to milling machines.

The original LowStir unit was developed jointly by a European consortium headed by TWI. The new Mk2 version offers a more compact design and now uses Bluetooth data transmission for even easier set up.



**LowStir Mk2**

### **Specification**

- Measurement of tool tip temperature
- Down force to 50 kN
- Lateral force to 25 kN
- Torque to 100 Nm
- Speed to 3000 rpm
- Software logging rate from 1 to 100 Hz
- Fitting of sensor head via ISO taper

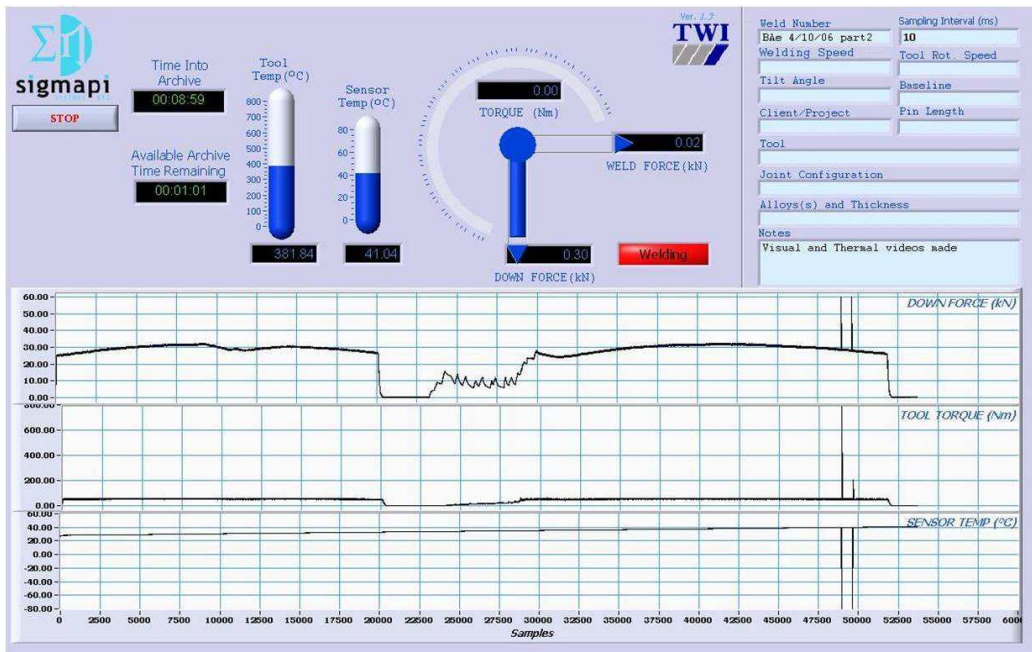
### **Why LowStir?**

LowStir is a much cheaper solution for small companies and individual projects than the traditional friction stir weld machines.

The LowStir system enables high quality welds and continual weld improvement by providing both display of forces, torque and temperatures during the weld process and storage of the data for later analysis. Stored data also allows retrospective investigations into individual weld quality and long-term trends.

LowStir friction stir welding is a green technology, offering a number of advantages over traditional welding methods including; much lower power consumption, no shielding gases or filler materials required, no arc, gas emissions or weld spatter.

## LowStir Display



### Example LowStir display

- Information gathered by the LowStir welding head is displayed on a PC
- This instrument panel shows both the current values of forces, torque and temperatures and trending of selected parameters
- Job parameters can be entered before beginning the weld for subsequent identification
- The main display also has buttons to start and stop data recording

### Companies already successfully using LowStir include:

TWI  
BAE Systems  
Aeronautical Research  
AUT University (New Zealand)  
Test Institute of the Czech Republic  
Instytut Spawalnictwa (Poland)  
CRIQ (Canada)

### For further information please contact:

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