

# Screwdrivers – Shut Off – Fastening Assurance System



The Desoutter FAS2000 – Fastening Assurance System provides the ability to verify that all the fasteners in an assembly have been correctly fastened without the level of investment usually associated with assembly control systems and additional inspection.

By comparing the timing of pneumatic signals from a shut off screwdriver with set parameters, the fastening cycle can be monitored and output signals generated for OK and NOK assembly confirmation.

The output signals can then be combined to indicate that all the fasteners on the component have been tightened correctly.

The FAS2000 has been designed with the operator and engineer in mind and is easy to use and set up with a typical procedure comprising:

- Select measurement program.
- Rundown a number of OK screws and record data from the display.
- Enter parameters into the program via facia keypad.
- Select the run mode and the FAS2000 is now ready to use.

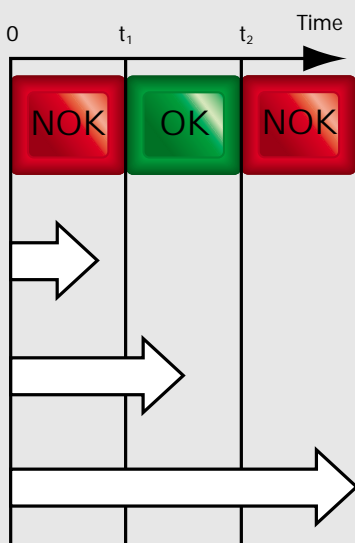
## Features

- Automatic measurement of fastener profile for rapid set up.
- 3 programs for different fastener profiles.
- Capacity for a maximum of 80 fasteners per program.
- OK and Not OK visual indicators for each fastener.
- Audible error warning for Not OK.
- 'Group Cycle Complete' visual indicator.
- Manual lockable reset switch.
- Password protection of parameters.
- 4 output sockets for interfacing with other equipment including inputs as well as output signals.
- EMC approved.

Coded error messages are shown on the LED display to quickly identify the problem with the assembly process. The messages include:

- Fastener already tightened.
- Clutch operated before minimum time.
- Clutch operated after maximum time.
- Trigger/Lever released at the same instant as the clutch operated.
- Trigger/Lever released before the clutch operated.
- Sensor failure.
- Too many fasteners tightened.

## OPERATING SEQUENCE



$t_1$  = Minimum time  
 $t_2$  = Maximum time

Clutch operated before minimum time, lever/trigger released before minimum time. Indicates crossed thread, screw too short, thread too short, too many washers.

Clutch operated within time limits – OK.

Clutch operated after maximum time. Screw too long, no thread in component, stripped thread, no washers on assembly.