

Squeeze Analyser



RESISTANCE WELDING FORCE MONITOR

**Optimises & Calibrates Resistance
Welding Guns
Greater Productivity
Improved Weld Quality**

Features of the Squeeze Analyser

- Measures the squeeze force - the force when the electrode current commences.
- Measures the peak force - the maximum force in the welding cycle
- Display shows if the timing of the resistance welding cycle is correct.
- Enables resistance welding equipment to be correctly adjusted within minutes.
- Ensures high quality resistance welds.
- Meets BS 5750/ ISO 9000 quality assurance requirements.
- Fully calibrated and delivered with certification.
- Supplied with a protective carrying case and full user instructions.

An Overview

The **Squeeze Analyser** measures the electrode force at key points during a resistance welding cycle by giving a measure of the squeeze force **when the welding current is applied and also the peak force** in the welding cycle. Thus both the timing of the electrode current and the squeeze time can be correctly adjusted.

Correct setting of the squeeze time will result in greater productivity, improved weld quality and reduced electrode wear. **Squeeze Analyser** is recommended for routine quality checks and following servicing of resistance welding equipment. It allows both the timing of the weld and the forces to be adjusted to the optimum settings.

Optional Features

- SI or Imperial units of measurement
- Rechargeable cells

Applications

- Correct setting the squeeze time and squeeze force for resistance welding.
- Users of Squeeze Analyser include: BMW, Daewoo, Ford, Saab, Jaguar, Land Rover, Nissan & Volvo.

About the Squeeze Analyser

Squeeze Analyser enables the correct squeeze time and electrode force to be established not only when setting up resistance welding equipment for the first time, but also when doing regular maintenance or corrections after repairs. By setting the optimum weld cycle with the **Squeeze Analyser**, resistance welding equipment will be adjusted to the highest possible speed with consistent weld quality.

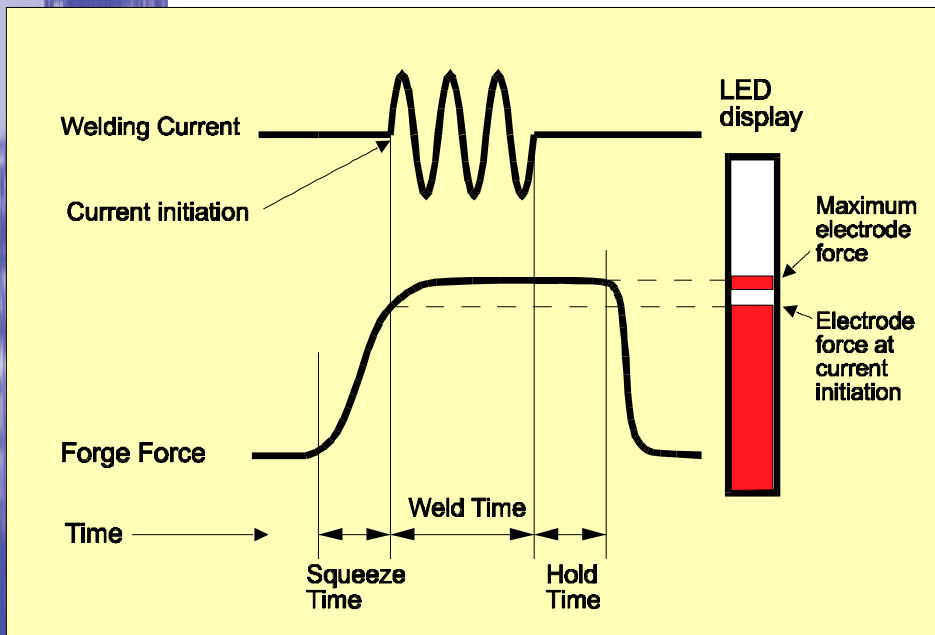
The basic resistance welding cycle involves **squeeze**, **weld**, and **hold** times as shown in the figure below. The squeeze time in a resistance weld is the time which elapses after the electrode force is activated and before the welding current commences. The weld time is the period when the current passes between the electrodes. And the hold time is where the force remains on the electrode whilst the spot weld cools.

The **Squeeze Analyser** displays both the force at the beginning of the weld and the peak force during the welding cycle. This is easily seen on the optical display on the **Squeeze Analyser** enabling the welding parameters to be established quickly and simply. By setting the squeeze force to be slightly lower than the peak force, it is possible to ensure that the welding sequence is adjusted to produce consistently good welds.

Specification

Measurement Ranges:

European	0.5 to 1.25kN 1 to 2.5kN 2 to 5.0kN 4 to 10kN
USA	100 - 250 lbf 200 - 500 lbf 400 - 1000 lbf 800 - 2000 lbf
Display:	Squeeze Force and Peak Force
Accuracy:	2% Full Scale
Electrode Gap:	European 6mm minimum 20mm maximum
	USA 0.25in minimum 0.75 in maximum
Power Supply:	4 rechargeable AA NICAD cells
Monitor Size:	160 x 100 x 50mm
Transducer Size:	200 x 50 x 50mm
Battery Charger:	120/240 Volt Input 7.5V limited
Weight in Case:	3.0 kg



One or more of the following spot welding conditions may be related to incorrectly set squeeze times:

- Severe surface splashing
- External cracking
- Burnt surface condition
- Electrode pick up
- Expulsion between faying surfaces
- Voids and Porosities
- Copper deposits in the contact area
- Excessive electrode wear

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