180 SERIES

Introducing the Decade 180 Series

In an increasingly competitive global marketplace, efficiency and quality are key to business success. Improve your manufacturing process. Measure, analyse and optimise your production process.

The next generation **Decade 180 Series with MARS Production Recording Equipment** will ensure maximum performance from your Power Press machinery. Clear, simple to use touch screens allows easy input of parameters and provide valuable data to improve overall equipment efficiency.

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What are the benefits of choosing Decade?

Protection

Advanced Load Monitoring provides asset protection for presses and tooling. **Automatic Press Control** extends the life of presses and tooling, by setting limits for cushion, counterbalance and overload pressures. **Tool Library** stores the settings for each tool and die. **Tool Sensors** monitor performance, so costly damage is prevented. **Temperature Monitoring** protects against excessive temperature and variations.

Load

Temperatures
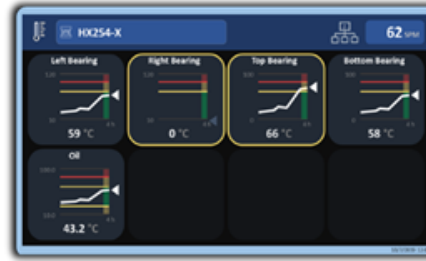
CAMs

Automation

Smart CAMS are programmable and controlled from the tool library.

**Automatic Slide Control** lowers change over time and reduces setting errors.

Tool Library Database automatically loads the correct saved settings for quick and reliable tool changes.

Production

Decade180 Series, **MARS Production Recording Software** provides **Energy Monitoring** and **Downtime Recording**. Easy to analyse traffic light system for each press, with the capacity to monitor multiple machines from one device. **Download Reports** to show operating speed, machine run and stop activity to understand the reasons for downtime and improve **O**verall **E**quipment **E**fficiency.

Load Monitoring
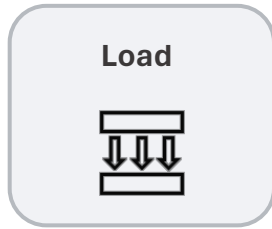
Load

The **180 Series Load Monitor** feature allows a more **accurate** method of **monitoring press** and **tool load**.

Trip levels are set **automatically** and adjusted for gradual changes in running load, this process eliminates unscheduled stopping and allows finer control over the press and tool conditions.

- 'Trend' based limit checking tolerates changing load values but maintains sensitivity
- Integrates with tool setup library (1000+) to save target load values and limits values
- Fault history file saves load faults with time/date stamp
- "Setter Mode" disables load checking for N strokes during tool/die setup
- Available in 1,2 and 4 load channel versions
- Monitor measures load through complete press stroke
- Uses DECADE piezo transducers or load cells
- Power curve monitor
- Choose from 7", 10" or 15" screens.
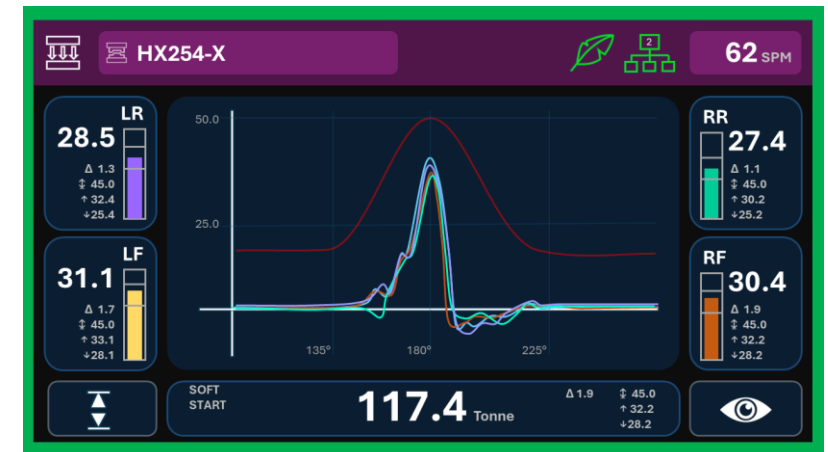
Tool Protection

Sensors

Press tooling represents a **significant financial investment** to ensure the manufacture of **high-quality components** due to demands on the tooling.

To protect this investment and to ensure no accidental or avoidable damage to the tooling the **180 Series** offers an **In-Tool Protection**, featuring up to 24 digital sensors which can monitored for correct operation, and in the event of a fault stop the press before irreparable damage is done.

- Mechanical feeder or material in correct position.

- Buckle detection for long feeds of thin material.

- Successful scrap or component ejection out of the tool area.

- Correct positioning of material in transfer system.

- Presence of pilot holes in material strip / push back pilot.

- Detection of scrap carried along material strip.
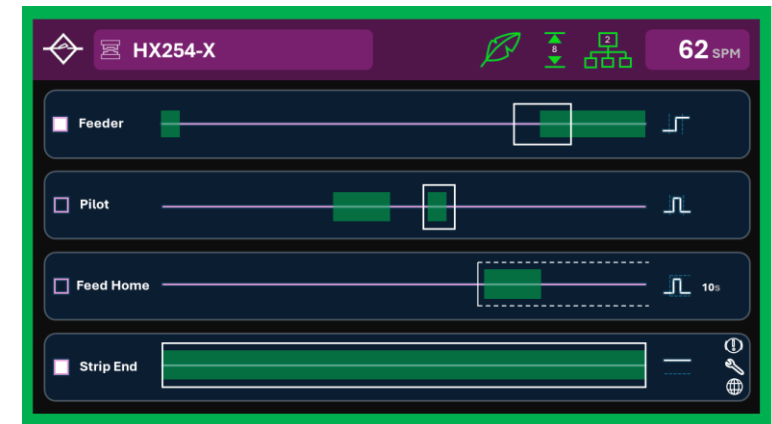
Counters

The **Production Recording Module** of the **180 Series** provides a means to measure your **productive** and **non-productive** times over shift or job runs.

The **180** will record time and part counts while the press is in **production**, when the press stops the operator is prompted for a **downtime** reason which is then used to log the stop time.

Over a shift or job run a pattern of run/stop times is built up which is displayed on the 180 screen.

This data can be exported to a PC for **analysis** to understand the reasons for **downtime** and how **to increase productivity** by the reduction in wasted time.
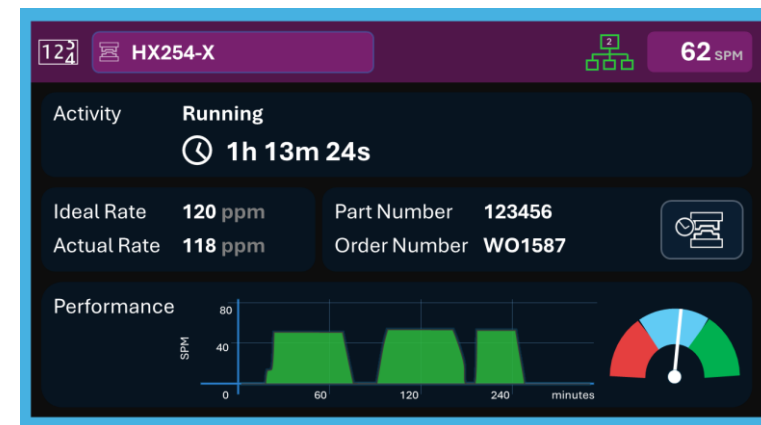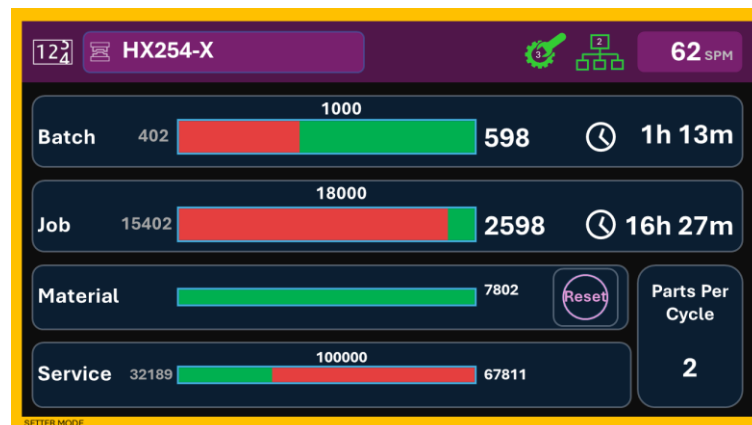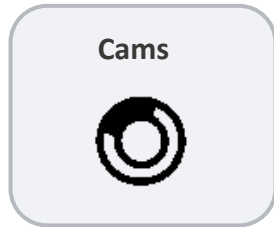
CAMS

Cams

Power presses use rotary **CAM** signals to control equipment like feeders, scrap cutters, part ejection and strip lubrication. Conventional cam-boxes use mechanical switches operated by CAM lobes which means if you need to adjust the on/off angles you have to physically move the CAM lobes.

The 180 Series provides up to **24 fully independent CAM channels** for controlling ancillary equipment.

- Angles are set digitally on the **180 Series**.
- Advanced configurations:
  - ON/OFF.
  - On/Time duration.
  - Single, double, Cyclic for every X strokes.
- CAMs are ideal for Air Blow-offs or Strip Lubrication
- All CAMs are saved in the Tool Library.
- CAM channels can be named for easy identification.
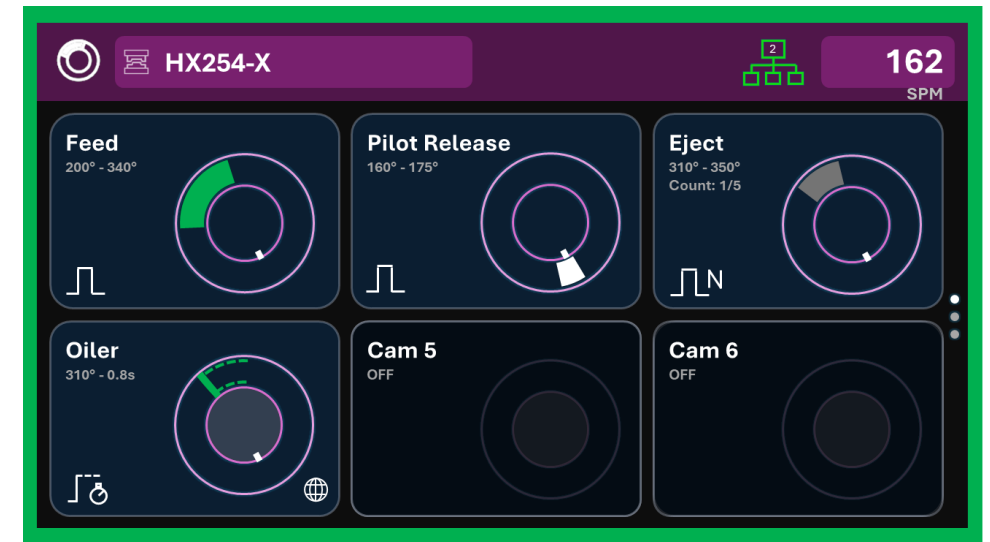
Slide Monitoring and Control
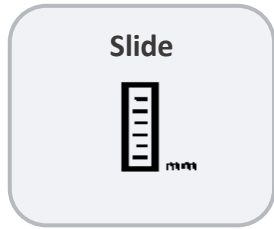
Slide

When setting up a **tool** or **die set** the **press slide** requires **accurate adjustment** which can be **automated** with the use the **180 Series**. Whether this process is motorized or done manually, the need for an **accurate reference point** is an obvious benefit for qu**ality assurance**.

Being able to move the slide to a known **reference point** for a tool or die set can **drastically reduce setup times** and give setters **valuable information**.

The **180 Series** monitors three target positions for **tool operations** and **removal**. **Tool clamp**, **unclamp** and **run settings**, all the **target positions** are saved in the **tool library** for future reference **reducing tool change over**.

The **180 Series** when interfaced to the press can **automatically adjust** the slide to **pre-set target positions**, **reducing set up time** and **reducing human error**. The slide position or shut height is displayed in mm to **0.01 mm resolution**.
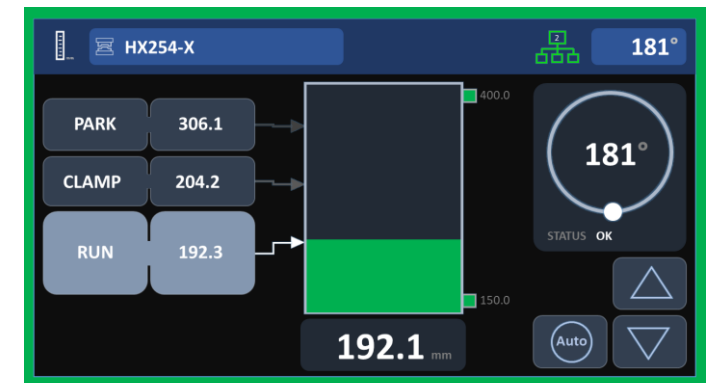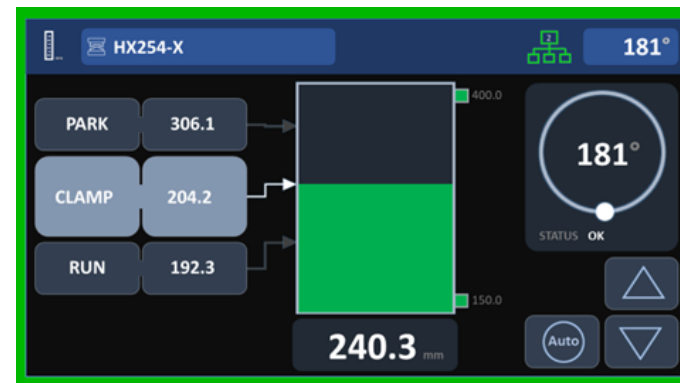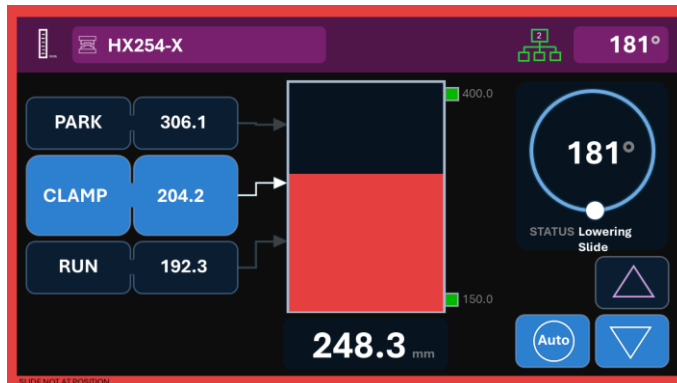
Temperature

Temperature Monitoring

The **180 Series** can monitor up to **8 channels of temperature** on a metal stamping press and integrates with the **tool setup library** to save target temperatures. Designed for your **specific requirements** the operator can define the upper and lower temperature limits for maximum efficiency and asset protection.

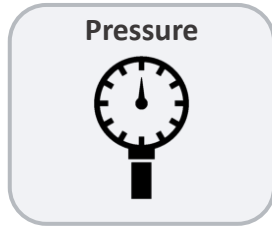Temperature output readings are shown in °C.

Servo Roll Feed

Setup

Servo Roll Feed Interface

The **180 Series** supports **roll feed** setup information in the **Tool Library**. When a roll feed tool is **recalled** from the **tool library** a **communications port** can be set for **pitch, rate** and **acceleration/deceleration**. Saving on set up and downtime.

Pressure

The **180 Series Pressure Control** feature ensures correct **counterbalance** and **cushion** pressures are **set accurately**. This is vital for press and **die** operation to run **efficiently**.

The pressure control features allows the **air pressures** held in the **Bed Cushions** or **Counterbalance Cylinders** to be **monitored** using **pressure transducers**. The screen shows a **graphical display** of real time **pressure values**, visible as 'tanks' in **calibrated** pressure units.

Pressure Target Values can be set for **cushion** and **counterbalance** which then visibly indicates to the operator if the pressure is above or below the **correct value** for the Die. The 'tank' turns **RED** when the pressure in not correct and it turns **GREEN** when set correctly.

Monitor Counterbalance and 1 or 2 **Bed Cushion** pressures. **Integrates** with **Tool Setup Library** to save target pressure values for each **Die set.**

- Shows pressure values in **real time** in either PSI or Bar.
- **Automate pressure regulation** when fitted with a fill/dump valve-block assembly or proportional valve .
- **Stop** the press if any of the pressures are **not set correctly**.
- **Manual** and **automatic** pressure regulation modes.

Energy Monitoring
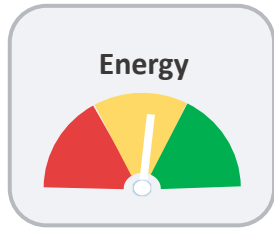
Energy

Energy monitoring is the process of measuring and recording the energy consumption.

Energy monitoring makes it easier for a company to save energy, reduce costs and reduce the CO2 footprint. It provides real-time updates to the current energy consumption, which could help improve OEE and detect malfunctions of the equipment. By monitoring the energy usage, the company can track if it this meets the requirements for the ISO 50001 certification.

The information can help with ESG (**E**nvironmental, **S**ocial, & **G**overnance) in helping to quantify positive environmental impact regarding the environment and drive to Net Zero with reduction in CO2 by planning heavier manufacture at times of higher availability of renewable energy.

The Decade 180 Series can measure data from up to 16 devices; current, voltage, and frequency against time and date. This data can be viewed live and is stored to be to allow historic review. In addition, this data can be used by MARS (MES) to allow smart scheduling optimise production and balance plant energy loading with the role out of smart tariffs.

MARS can store the history of energy cost for different types of commodities (electricity, gas, water), which allows for the conversion from energy to cost.

SOLVING TOMORROW'S PROBLEMS TODAY
TO ENGINEER A **BETTER FUTURE**

Thank You

**For any enquiries, please call us on +44 (0)121 359 3978
or email sales@decade.co.uk**