# PEWeldBank

# User Manual Version 10


**www.PEWeldBank.com**

Info@PEWeldBank.com

PEWeldBank.com

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# Fusion Management System (FMS)

**www.PEWeldBank.com**

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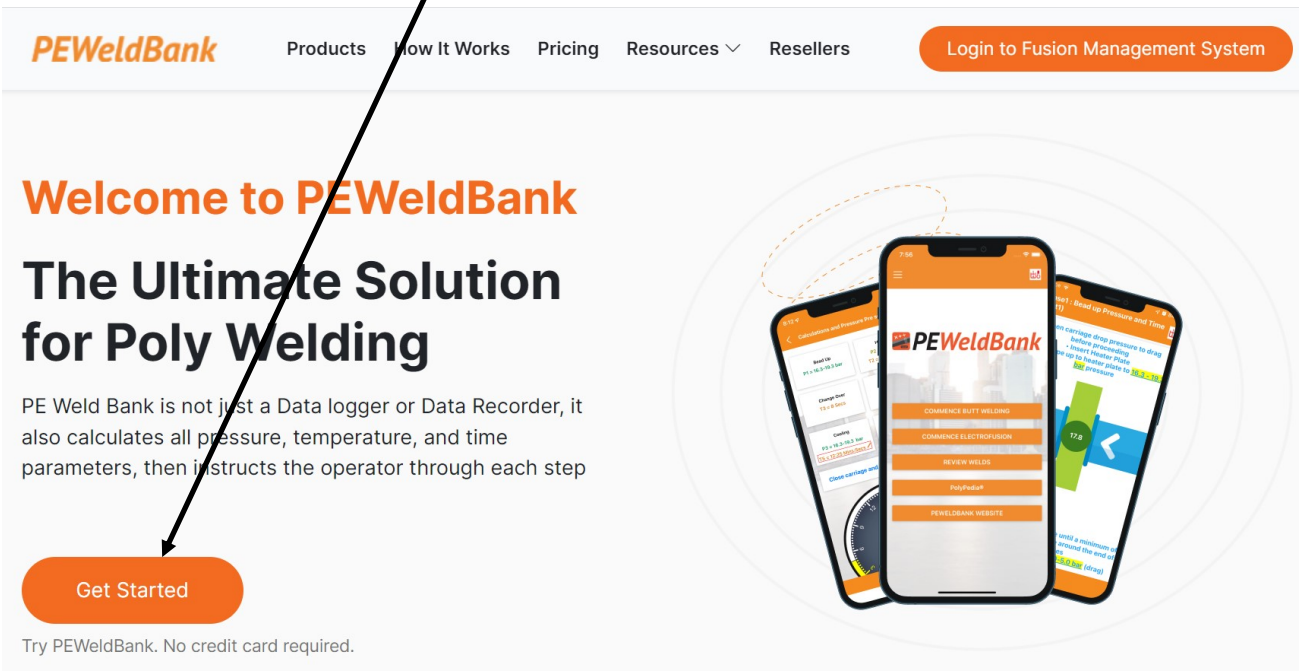
# How to Subscribe to *PEWeldBank* Fusion Management System (FMS) on your PC or Laptop

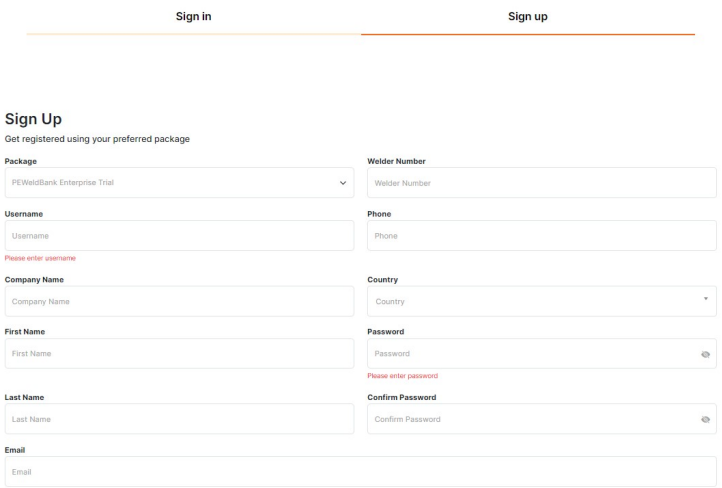
**You must subscribe to "PE Weld Bank Enterprise Multi User" if you want to use sensors**

1. Go to *PEWeldBank*.com on your PC or Laptop

2. Click on Get Started




3. Click "Sign up"



## Subscription Rates

*Go to PEWeldBank*.com for the current subscription features, details and prices.

There are 2 different Subscription levels

**"Standard"** - Free

This allows the user to calculate Butt Weld Time and Pressure parameters and steps them through the welding process with active timers and alarms, but does not store any weld information.

**"Enterprise"** - $15* per user per month

This includes standard features and includes the ability to store Butt and Electrofusion weld data and connect to Bluetooth Sensor sets for active data recording.

This level also allows for multiple user reports to be stored together within a company database.

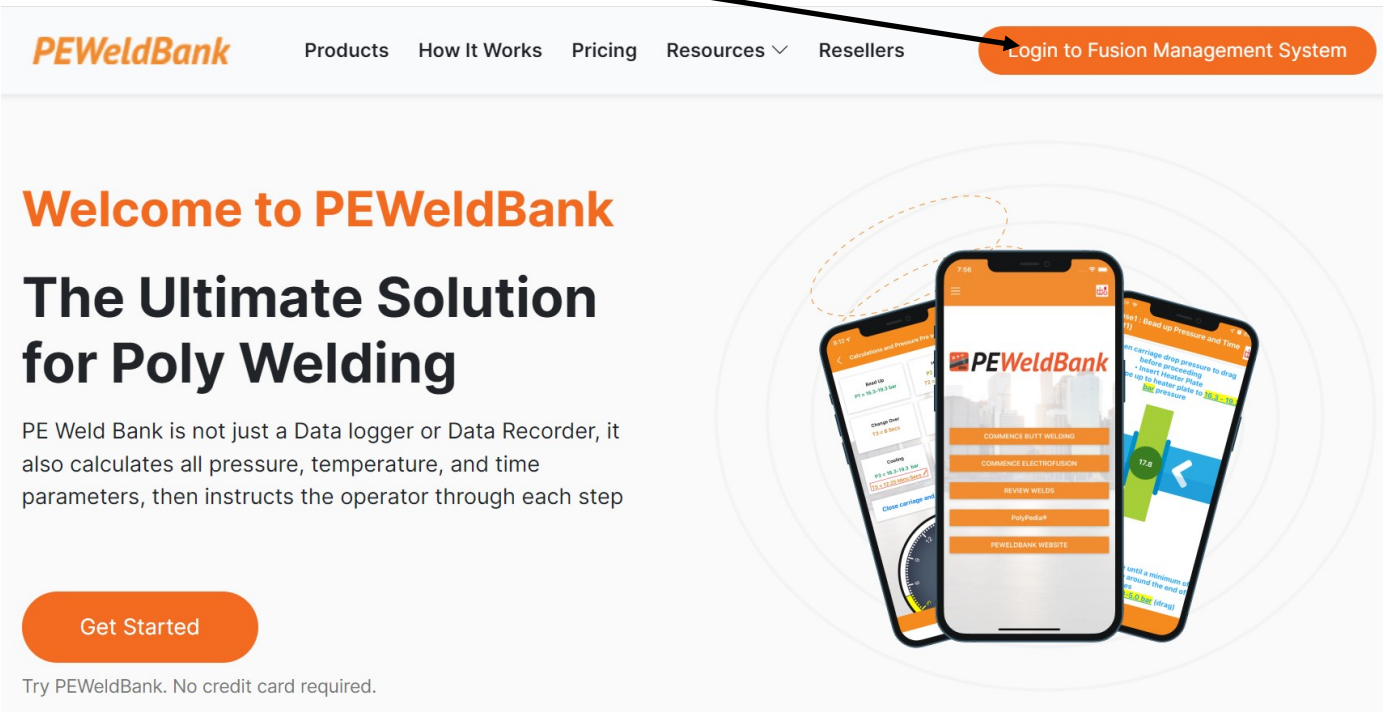
*Australian Dollars

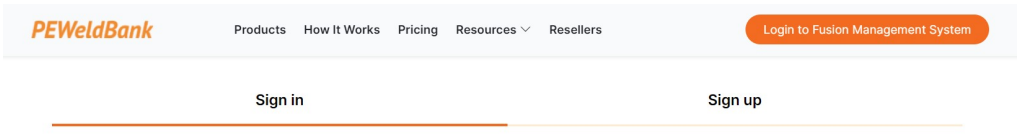
# How to log in to the Fusion Management System (FMS)

**You must subscribe to "Enterprise Subscription" if you want to use sensors**

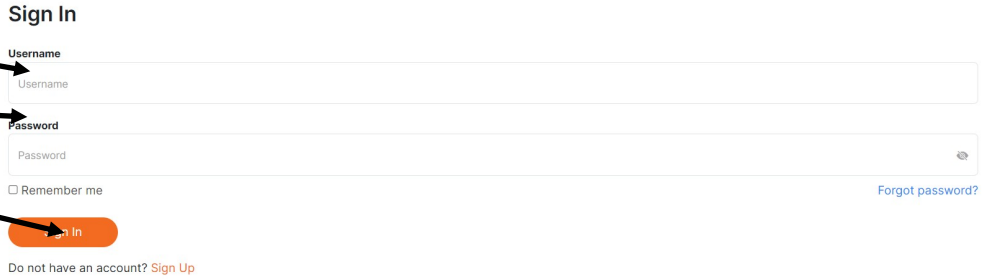
1. Go to *PEWeldBank*.com on your PC or Laptop

2. Click on "Login to Fusion Management System"



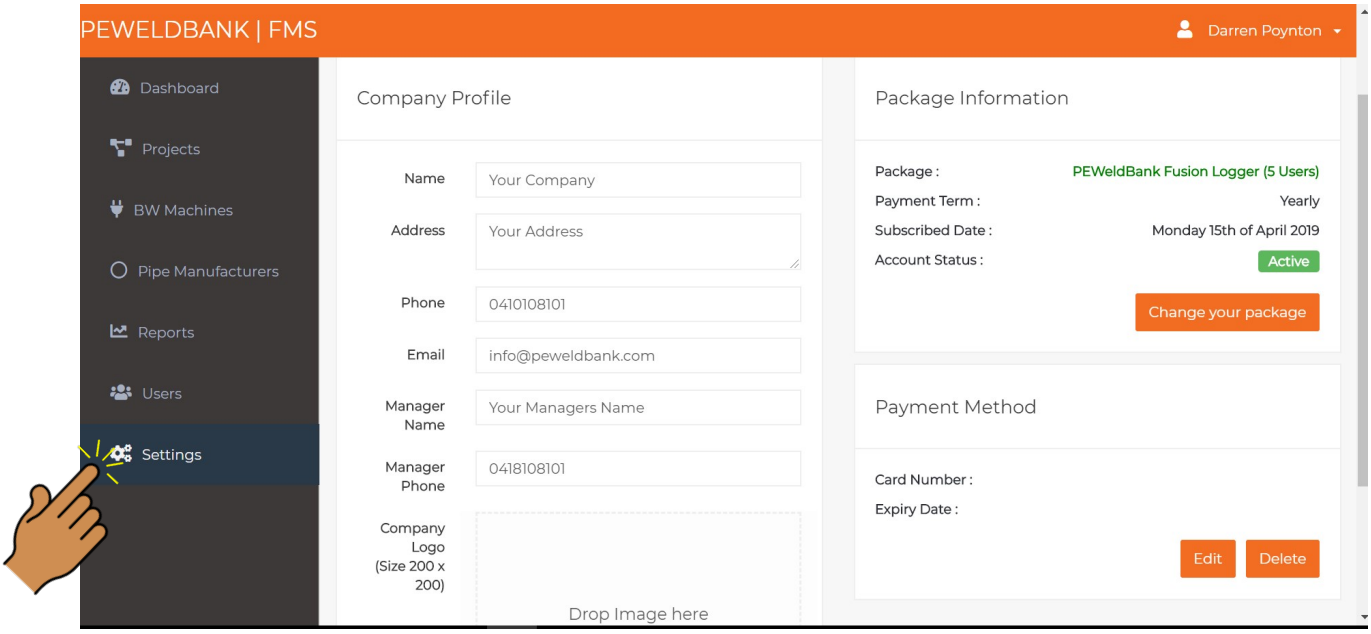

3. Login:
   - User ID
   - Password
   - Login



# How to set up Company Details

Step 1, Click on Settings

Enter your Company Details.  You can also insert a company logo here, this will be displayed on your reports



Note there are 3 levels of users access;

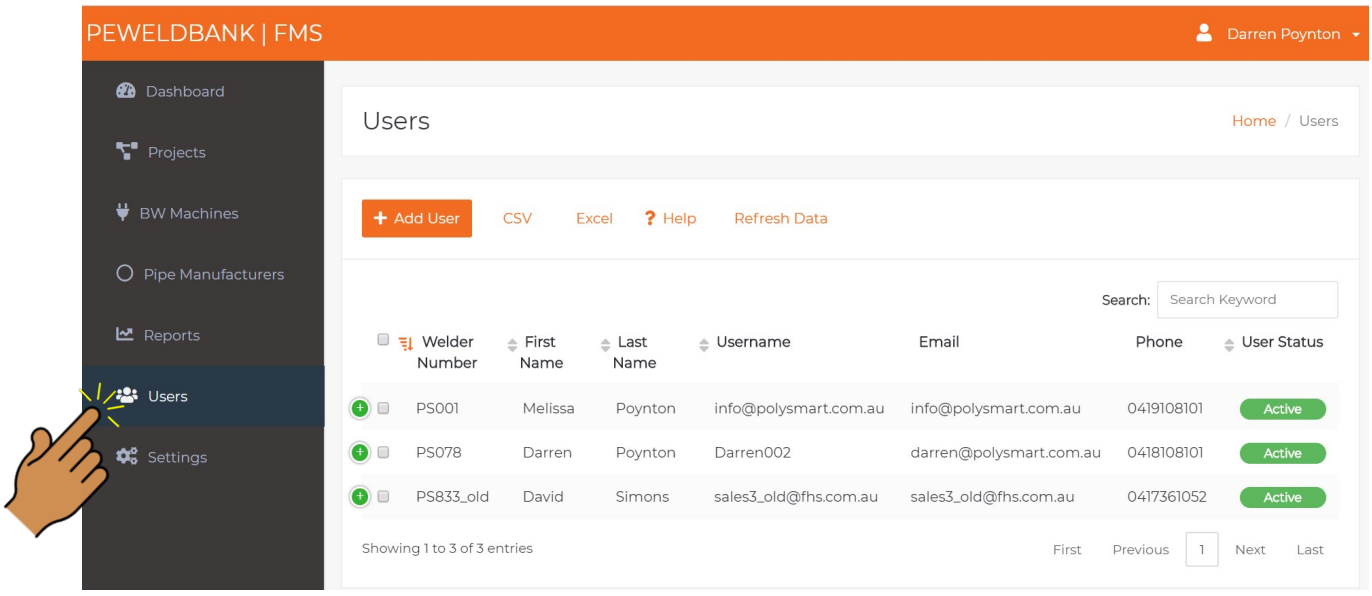
- **Super admin** - This is the person that initially set the system up, they control company details, quantity of users, credit card etc. this user has access to all levels. To change Super admin user they must send an email to info@peweldbank.com and nominate the new Superadmin user from the user list, PEWeldBank will change this ASAP
- **Admin** - Controls adding / deleting, Projects, Users, Butt and Electrofusion machinery, pairing of sensors, pipe manufacturers
- **Welder** - Select projects, machines, pipe and welding standard, use of app to conduct welding

For more information regarding User Hierarchy, see Appendix 4

## Set up Users (welder / admin)

Step 2, Click on Users

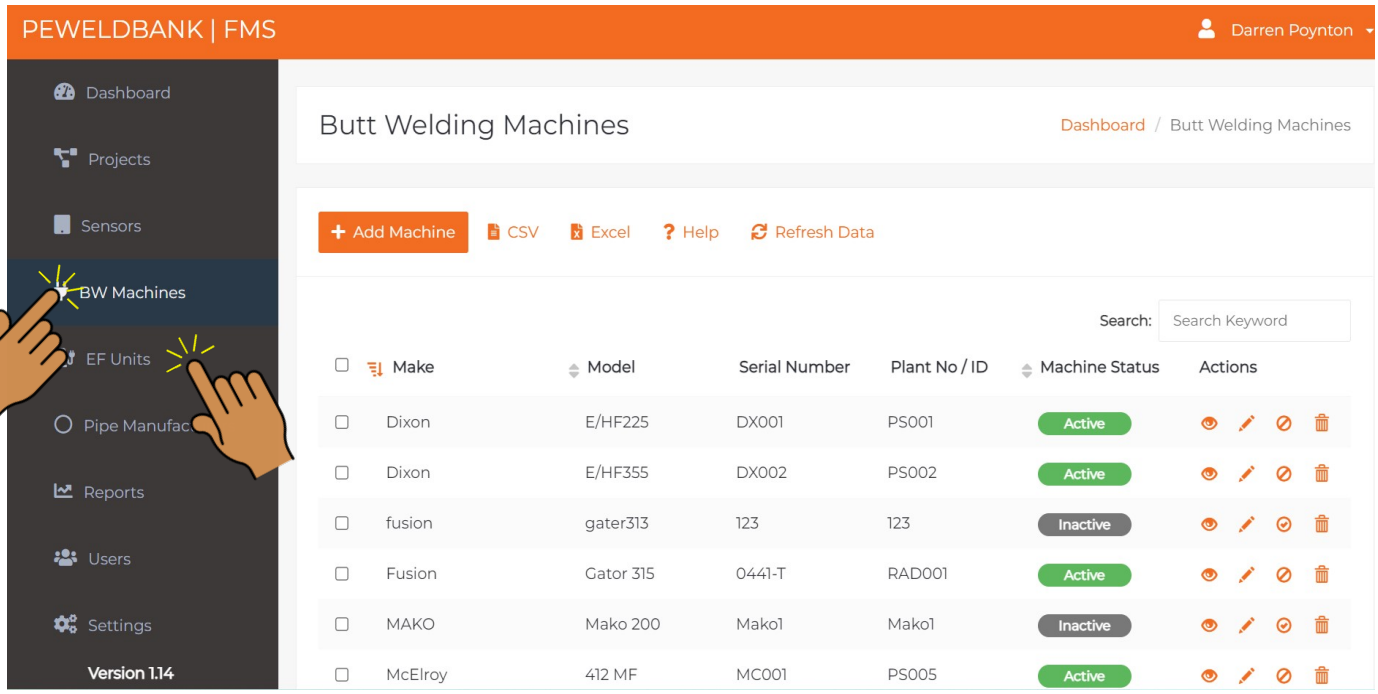
Set Up User Details.  You can allocate a User “Welder” or “Admin” rights



# How to set up Butt Welding and Electrofusion Machines

Step 3, Click on  BW Machines or EF Units

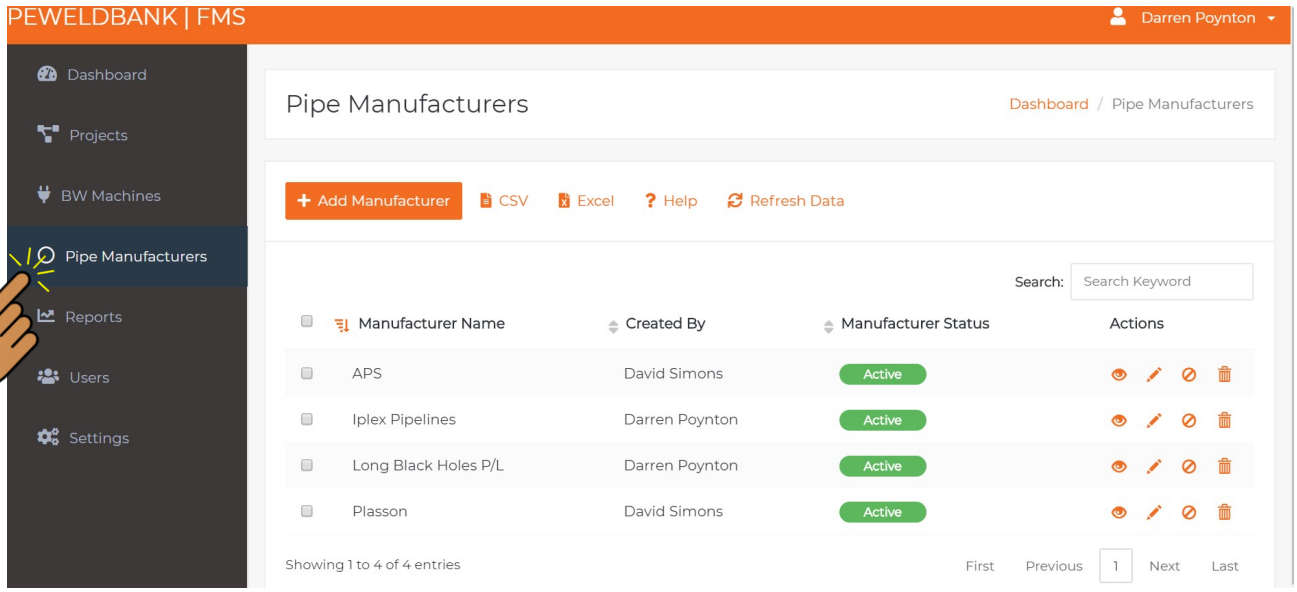
Set Up your Butt Welding Machines or Electrofusion Control Units




# Set up Pipe & Fittings Manufacturers

Step 4,  Click on  Pipe Manufactures

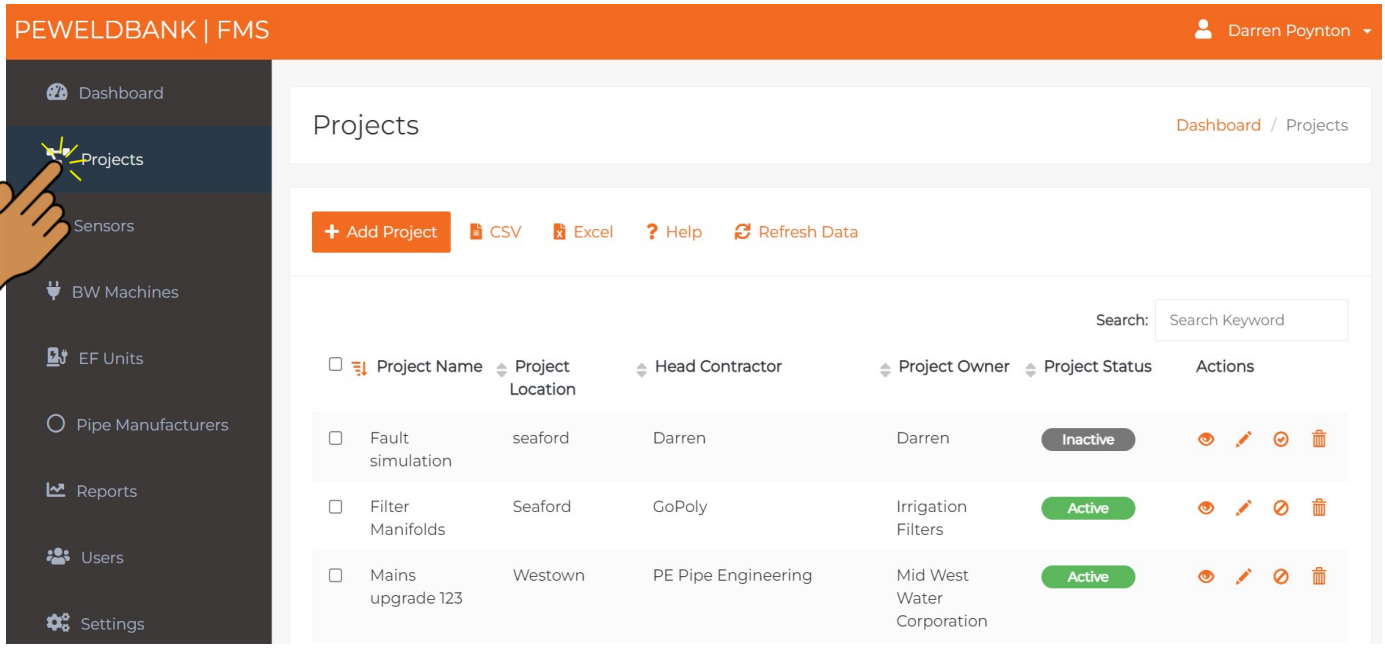
Set Up your Pipe and Fittings Library



# Set up Projects / Jobs

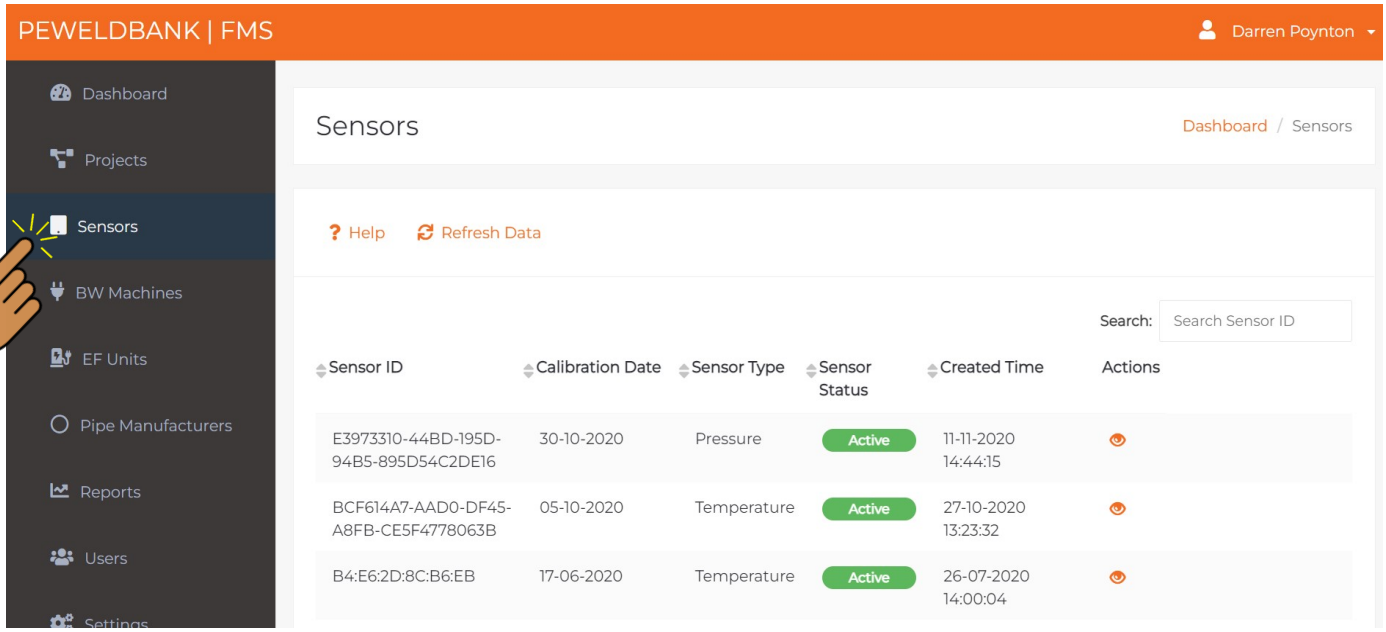
Step 5, Click on Projects

Set Up Project Details




# Review active sensors

Step 6, Click on Sensors



# FMS
# Reporting System

www.PEWeldBank.com

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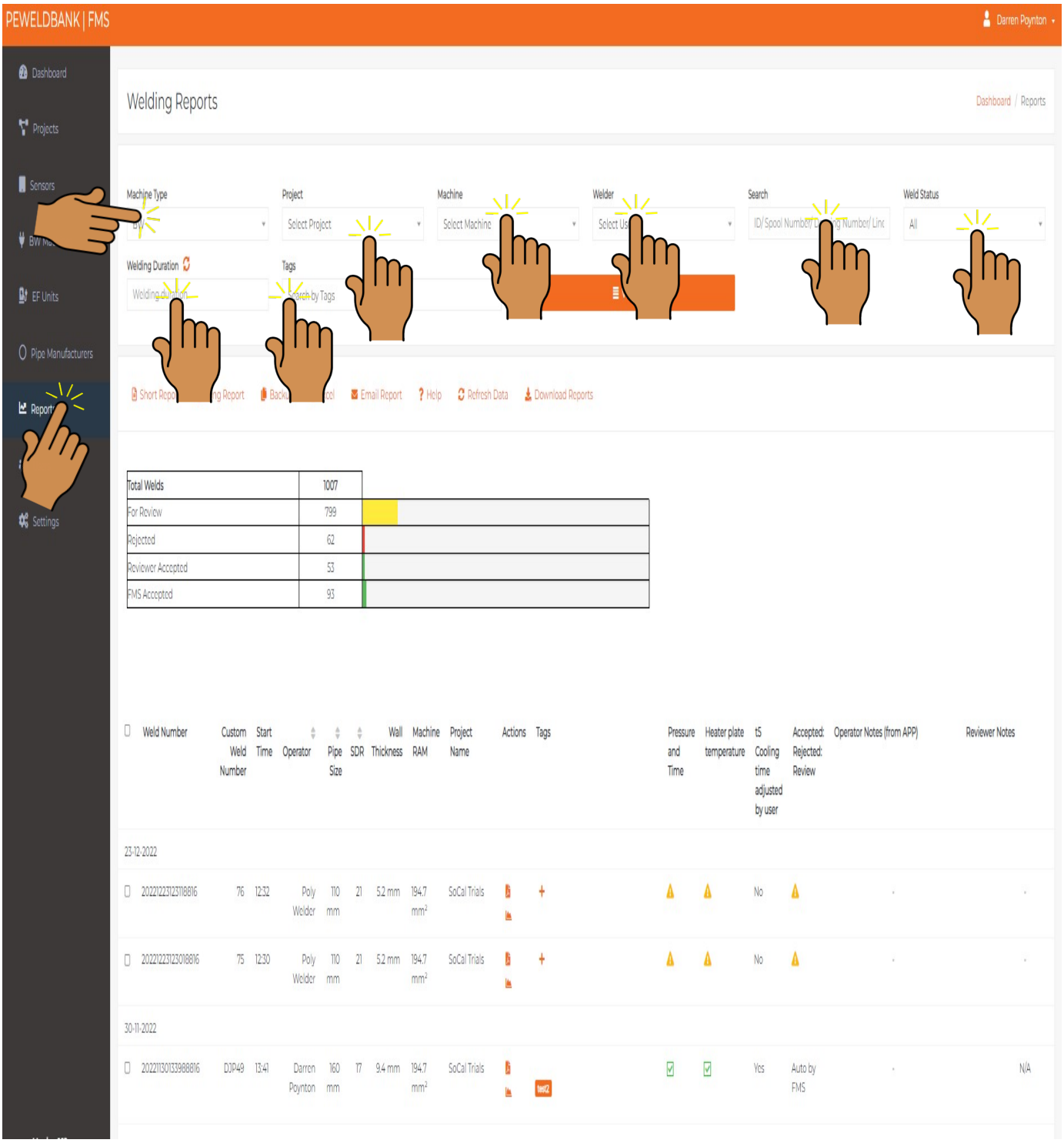
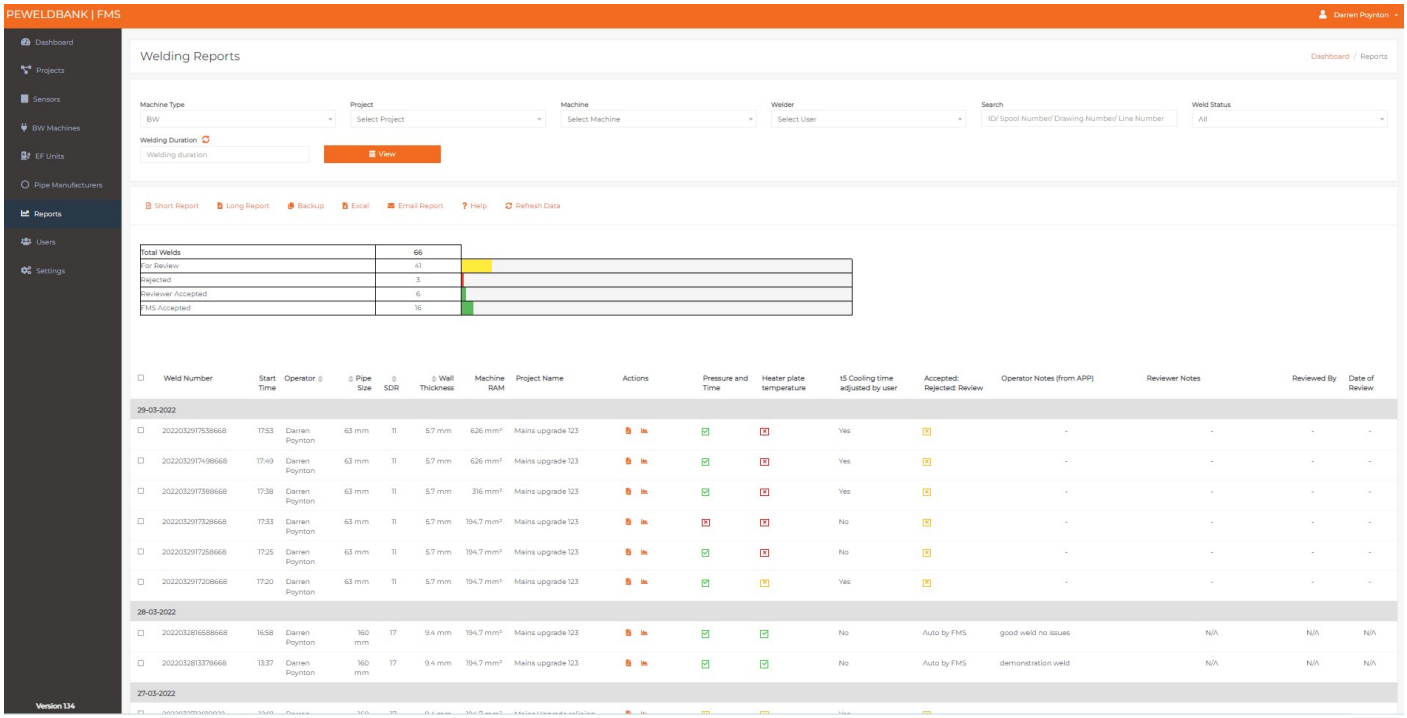
## Reports

There are multiple reports and sort functions available, you can use one or multiple search features at the same time.



# Reports

There are multiple reports and sort functions available

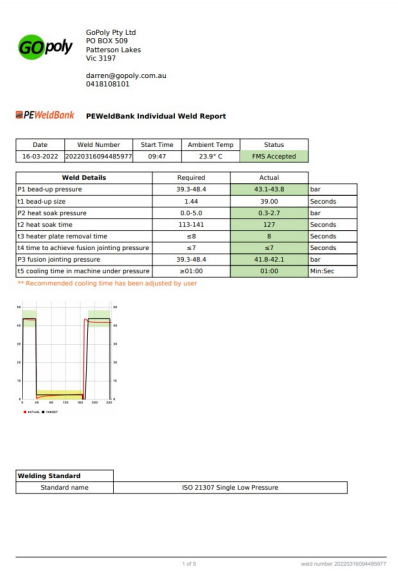



On the welding reports page the user can see a list of all welds and create a customised report by one or multiple search headings, then you can select a 4-5 page full report or “Short” or “Long” Reports or export all reports to your own back ups or excel, from this area you can send selected reports directly to you client.

| Search Heading | Search Description |
|---|---|
| Machine Type | Butt Welder or Electrofusion |
| Project | Project Name |
| Machine | Make and Model of machine |
| Welder | The user or person doing the welding |
| Search | ID/ Spool Number / Drawing Number / Line Number |
| Weld Status | Status of weld i.e. Accepted, Rejected or waiting for Review |
| Welding Duration | Select time frame |
| Tags | Select tagged reports |

# Reports – Full 4-5 page report

There are multiple reports and sort functions available within the FMS, below is an example of the full 4-5 page report.



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0418108101

**PEWeldBank Individual Weld Report**

| Date | Weld Number | Start Time | Ambient Temp | Status |
|---|---|---|---|---|
| 16-03-2022 | 20220316094485977 | 09:47 | 23.9° C | FMS Accepted |

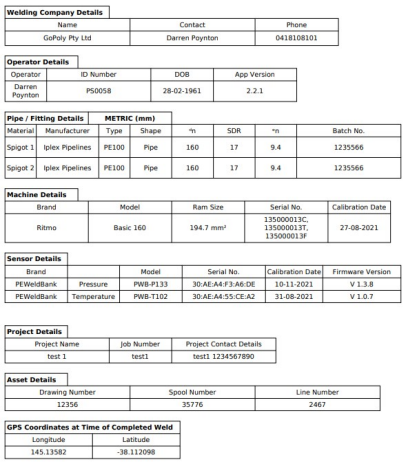
| Weld Details | Required | Actual | |
|---|---|---|---|
| P1 bead-up pressure | 39.3-48.4 | 43.1-43.8 | bar |
| t1 bead-up size | 1.44 | 39.00 | Seconds |
| P2 heat soak pressure | 0.0-5.0 | 0.3-2.7 | bar |
| t2 heat soak time | 113-141 | 127 | Seconds |
| t3 heater plate removal time | ≤8 | 8 | Seconds |
| t4 time to achieve fusion jointing pressure | ≤7 | ≤7 | Seconds |
| P3 fusion jointing pressure | 39.3-48.4 | 41.8-42.1 | bar |
| t5 cooling time in machine under pressure | ≥01:00 | 01:00 | Min:Sec |

** Recommended cooling time has been adjusted by user



| Welding Standard | |
|---|---|
| Standard name | ISO 21307 Single Low Pressure |

1 of 5 weld number 20220316094485977



**Welding Company Details**

| Name | Contact | Phone |
|---|---|---|
| GoPoly Pty Ltd | Darren Poynton | 0418108101 |

**Operator Details**

| Operator | ID Number | DOB | App Version |
|---|---|---|---|
| Darren Poynton | P50058 | 28-02-1961 | 2.2.1 |

**Pipe / Fitting Details** — **METRIC (mm)**

| Material | Manufacturer | Type | Shape | °n | SDR | °n | Batch No. |
|---|---|---|---|---|---|---|---|
| Spigot 1 | Iplex Pipelines | PE100 | Pipe | 160 | 17 | 9.4 | 1235566 |
| Spigot 2 | Iplex Pipelines | PE100 | Pipe | 160 | 17 | 9.4 | 1235566 |

**Machine Details**

| Brand | Model | Ram Size | Serial No. | Calibration Date |
|---|---|---|---|---|
| Ritmo | Basic 160 | 194.7 mm² | 135000013C, 135000013T, 135000013F | 27-08-2021 |

**Sensor Details**

| Brand | | Model | Serial No. | Calibration Date | Firmware Version |
|---|---|---|---|---|---|
| PEWeldBank | Pressure | PWB-P133 | 30:AE:A4:F3:A6:DE | 10-11-2021 | V 1.3.8 |
| PEWeldBank | Temperature | PWB-T102 | 30:AE:A4:55:CE:A2 | 31-08-2021 | V 1.0.7 |

**Project Details**

| Project Name | Job Number | Project Contact Details |
|---|---|---|
| test 1 | test1 | test1 1234567890 |

**Asset Details**

| Drawing Number | Spool Number | Line Number |
|---|---|---|
| 12356 | 35776 | 2467 |

**GPS Coordinates at Time of Completed Weld**

| Longitude | Latitude |
|---|---|
| 145.13582 | -38.112098 |

2 of 5 weld number 20220316094485977

| Heater Plate Target (° C) | | 215-235 | |
|---|---|---|---|
| | Front | Back | |
| Zone 1 | 223 | 223 | |
| Zone 2 | 222 | 226 | |
| Zone 3 | 225 | 224 | |
| Zone 4 | 224 | 227 | |
| Average | 224.16 | | At commencement of weld |
| Fixed Point Sensor | | 226-230 | Measured during Phase 1 and 2 |

**Quality / Process Checklist**

| | |
|---|---|
| Is weld area protected? | Yes |
| Have the pipes been cleaned before placing in machine? | Yes |
| Are pipe ends covered? | Yes |
| Is pipe faced correctly? | Yes |
| Have pipe faces been cleaned? | Yes |
| Have pipe ends been checked for gap? | Yes |
| Is pipe aligned within 10% of wall thickness? | Yes |

**Alignment Photo**



**Finished Weld Photo**



**Notes**

Good test weld

3 of 5 weld number 20220316094485977

**Sketch Pad**

**OH&S Take 5**

| STOP (Ask Yourself) | |
|---|---|
| Am I aware of crushing points? (hydraulic movement) | Yes |
| Am I aware of sharp objects? (facing blades) | Yes |
| Am I aware of burning? (heating plate) | Yes |
| Have I protected myself from energy sources? (electrical, hydraulic, temperature) | Yes |

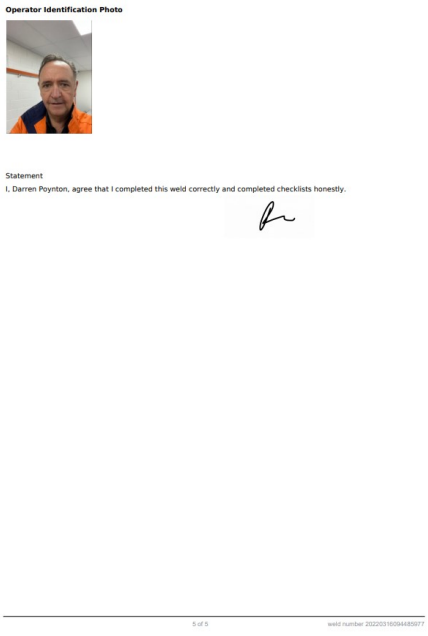
| THINK | |
|---|---|
| If a procedure or work instruction exists for the job am I familiar with it? | Yes |
| Am I trained, competent and authorised to do the job? | Yes |
| Do I have fit for purpose tools, equipment and PPE? | Yes |
| Can I control the risks associated with my task that effect the health and safety of myself or those around me and / or impact the environment? | Yes |
| If a permit is required for the job has a JSA or SWM etc. been completed? | Yes |

| IDENTIFY | |
|---|---|
| Have I identified all the hazards and existing controls for the job? | Yes |
| Have I identified all the hazards and existing controls in the surrounding areas? | Yes |

| CONTROL | |
|---|---|
| Am I satisfied existing controls are adequate? | Yes |

**PROCEED - PERFORM THE TASK SAFELY**

4 of 5 weld number 20220316094485977



**Operator Identification Photo**



Statement

I, Darren Poynton, agree that I completed this weld correctly and completed checklists honestly.

5 of 5 weld number 20220316094485977

# Reports – Short, long and export to excel

There are multiple reports and sort functions available within the FMS, below is an example of a short report and long report and below them is an example of an excel report

GoPoly Pty Ltd
PO BOX 509
Patterson Lakes
Vic 3197

darren@gopoly.com.au
0418108101

**PEWeldBank Weld Summary (Short)**

| Date | Weld Number | Start Time | Operator | Pipe Size | SDR | Job number |
|---|---|---|---|---|---|---|
| 29-03-2022 | 20220329175386668 | 17:53 | Darren Poynton | 63 mm | 11 | 12341234 |
| 29-03-2022 | 20220329174986668 | 17:49 | Darren Poynton | 63 mm | 11 | 12341234 |
| 29-03-2022 | 20220329173886668 | 17:38 | Darren Poynton | 63 mm | 11 | 12341234 |
| 29-03-2022 | 20220329173286668 | 17:33 | Darren Poynton | 63 mm | 11 | 12341234 |
| 29-03-2022 | 20220329172586668 | 17:25 | Darren Poynton | 63 mm | 11 | 12341234 |
| 29-03-2022 | 20220329172086668 | 17:20 | Darren Poynton | 63 mm | 11 | 12341234 |
| 28-03-2022 | 20220328165886668 | 16:58 | Darren Poynton | 160 mm | 17 | 12341234 |
| 28-03-2022 | 20220328133786668 | 13:37 | Darren Poynton | 160 mm | 17 | 12341234 |
| 27-03-2022 | 20220327120188222 | 12:01 | Darren Poynton | 160 mm | 17 | P001 |
| 27-03-2022 | 20220327085285977 | 08:53 | Darren Poynton | 160 mm | 17 | test1 |
| 25-03-2022 | 20220325090485977 | 09:04 | Darren Poynton | 160 mm | 17 | test1 |
| 22-03-2022 | 20220322103785977 | 10:37 | Darren Poynton | 160 mm | 17 | test1 |
| 21-03-2022 | 20220321201285977 | 20:23 | Darren Poynton | 160 mm | 17 | test1 |
| 18-03-2022 | 20220318131485977 | 13:17 | Darren Poynton | 160 mm | 17 | test1 |
| 16-03-2022 | 20220316111385977 | 11:15 | Darren Poynton | 160 mm | 17 | test1 |
| 16-03-2022 | 20220316094485977 | 09:47 | Darren Poynton | 160 mm | 17 | test1 |
| 15-03-2022 | 20220315065685977 | 06:56 | Darren Poynton | 160 mm | 17 | test1 |
| 10-03-2022 | 20220310142885977 | 14:28 | Darren Poynton | 160 mm | 17 | test1 |
| 10-03-2022 | 20220310142085977 | 14:20 | Darren Poynton | 160 mm | 17 | test1 |
| 09-03-2022 | 20220309130485977 | 13:05 | Darren Poynton | 125 mm | 11 | test1 |
| 08-03-2022 | 20220308115885977 | 12:00 | Darren Poynton | 125 mm | 11 | test1 |
| 07-03-2022 | 20220307133685977 | 13:37 | Darren Poynton | 160 mm | 17 | test1 |
| 07-03-2022 | 20220307132485977 | 13:25 | Darren Poynton | 160 mm | 17 | test1 |
| 04-03-2022 | 20220304103985977 | 10:39 | Darren Poynton | 160 mm | 17 | test1 |
| 04-03-2022 | 20220304102685977 | 10:26 | Darren Poynton | 160 mm | 17 | test1 |
| 04-03-2022 | 20220304101085977 | 10:10 | Darren Poynton | 160 mm | 17 | test1 |
| 04-03-2022 | 20220304095885977 | 09:58 | Darren Poynton | 160 mm | 17 | test1 |
| 04-03-2022 | 20220304091185977 | 09:11 | Darren Poynton | 160 mm | 17 | test1 |
| 03-03-2022 | 20220303230285977 | 23:02 | Darren Poynton | 160 mm | 17 | test1 |

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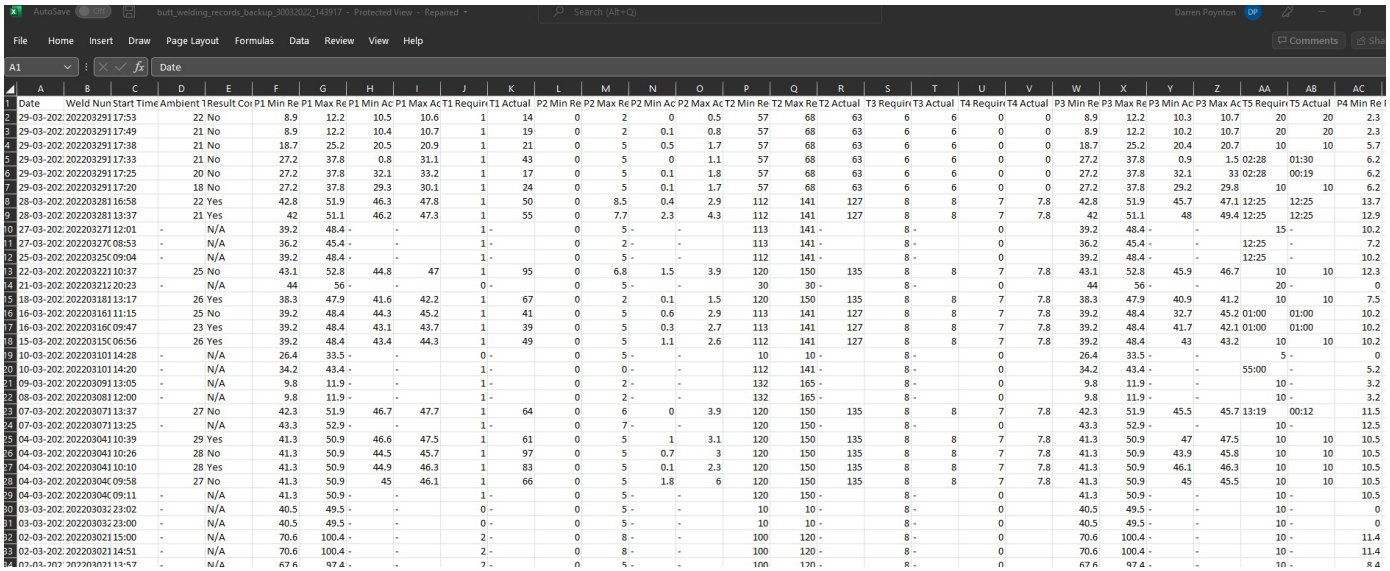
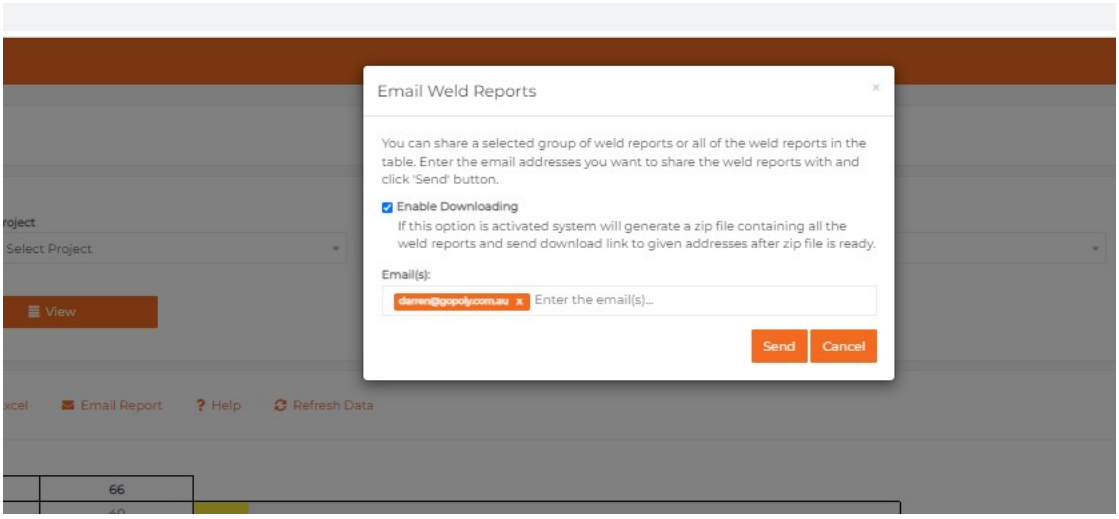
**PEWeldBank Weld Summary (Long)**

| Date | Weld Number | Start Time | Operator | Pipe Size | SDR | Wall Thickness | Machine RAM | Job number |
|---|---|---|---|---|---|---|---|---|
| 29-03-2022 | 20220329175386668 | 17:53 | Darren Poynton | 63 mm | 11 | 5.7 mm | 626 mm² | 12341234 |
| 29-03-2022 | 20220329174986668 | 17:49 | Darren Poynton | 63 mm | 11 | 5.7 mm | 626 mm² | 12341234 |
| 29-03-2022 | 20220329173886668 | 17:38 | Darren Poynton | 63 mm | 11 | 5.7 mm | 316 mm² | 12341234 |
| 29-03-2022 | 20220329173286668 | 17:33 | Darren Poynton | 63 mm | 11 | 5.7 mm | 194.7 mm² | 12341234 |
| 29-03-2022 | 20220329172586668 | 17:25 | Darren Poynton | 63 mm | 11 | 5.7 mm | 194.7 mm² | 12341234 |
| 29-03-2022 | 20220329172086668 | 17:20 | Darren Poynton | 63 mm | 11 | 5.7 mm | 194.7 mm² | 12341234 |
| 28-03-2022 | 20220328165886668 | 16:58 | Darren Poynton | 160 mm | 17 | 9.4 mm | 194.7 mm² | 12341234 |
| 28-03-2022 | 20220328133786668 | 13:37 | Darren Poynton | 160 mm | 17 | 9.4 mm | 194.7 mm² | 12341234 |
| 27-03-2022 | 20220327120188222 | 12:01 | Darren Poynton | 160 mm | 17 | 9.4 mm | 194.7 mm² | P001 |
| 27-03-2022 | 20220327085285977 | 08:53 | Darren Poynton | 160 mm | 17 | 9.4 mm | 194.7 mm² | test1 |
| 25-03-2022 | 20220325090485977 | 09:04 | Darren Poynton | 160 mm | 17 | 9.4 mm | 194.7 mm² | test1 |
| 22-03-2022 | 20220322103785977 | 10:37 | Darren Poynton | 160 mm | 17 | 10.0 mm | 194.7 mm² | test1 |
| 21-03-2022 | 20220321201285977 | 20:23 | Darren Poynton | 160 mm | 17 | 9.4 mm | 194.7 mm² | test1 |
| 18-03-2022 | 20220318131485977 | 13:17 | Darren Poynton | 160 mm | 17 | 10.0 mm | 194.7 mm² | test1 |
| 16-03-2022 | 20220316111385977 | 11:15 | Darren Poynton | 160 mm | 17 | 9.4 mm | 194.7 mm² | test1 |
| 16-03-2022 | 20220316094485977 | 09:47 | Darren Poynton | 160 mm | 17 | 9.4 mm | 194.7 mm² | test1 |
| 15-03-2022 | 20220315065685977 | 06:56 | Darren Poynton | 160 mm | 17 | 9.4 mm | 194.7 mm² | test1 |
| 10-03-2022 | 20220310142885977 | 14:28 | Darren Poynton | 160 mm | 17 | 9.4 mm | 194.7 mm² | test1 |
| 10-03-2022 | 20220310142085977 | 14:20 | Darren Poynton | 160 mm | 17 | 9.4 mm | 194.7 mm² | test1 |
| 09-03-2022 | 20220309130485977 | 13:05 | Darren Poynton | 125 mm | 11 | 11.0 mm | 753 mm² | test1 |

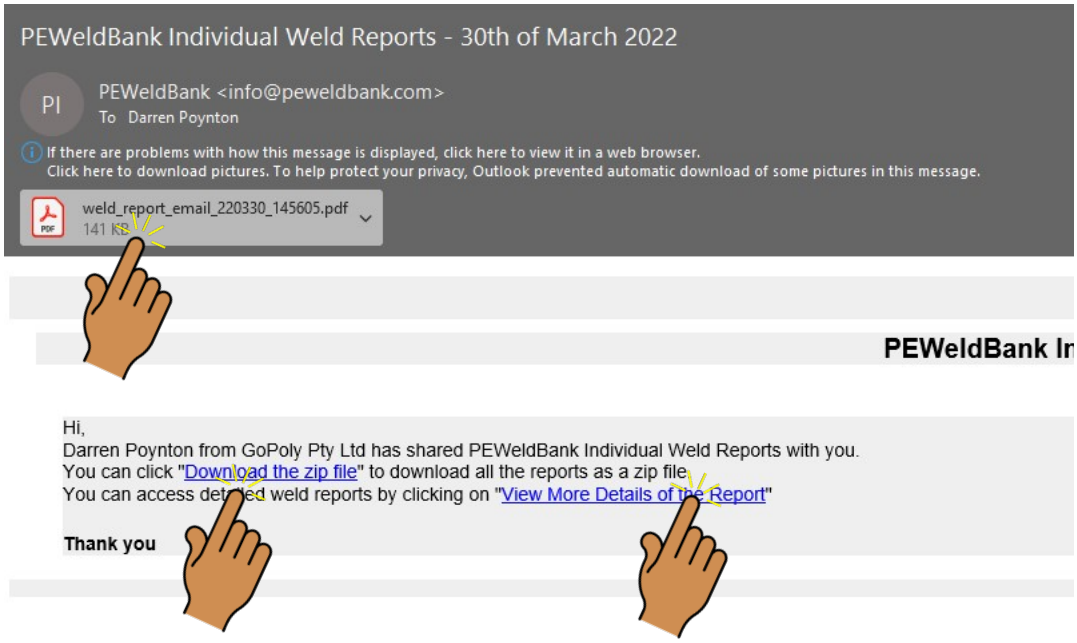


# Reports - Email directly to client

The email report option allows you to select welds and then email them to your client. Please note these reports take a short while to generate, if it doesn't come through please ask your client to check their junk or spam box




Your client will receive email similar to this, with 3 options for viewing reports




See 3 report options on next page

# Reports - Email directly to client

The first one is a summary.

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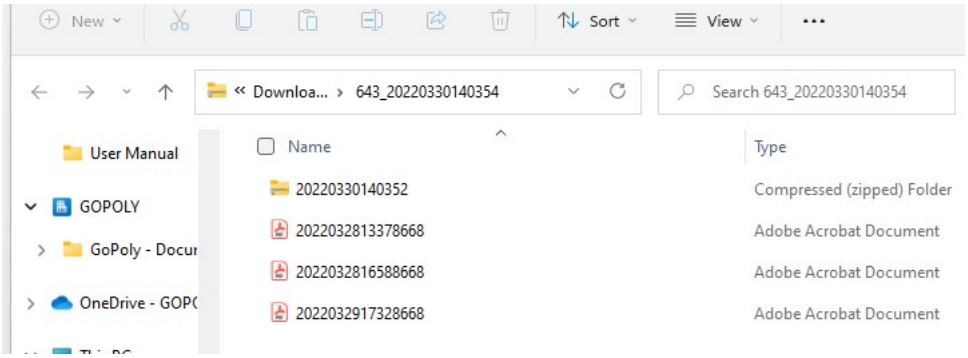
0418108101

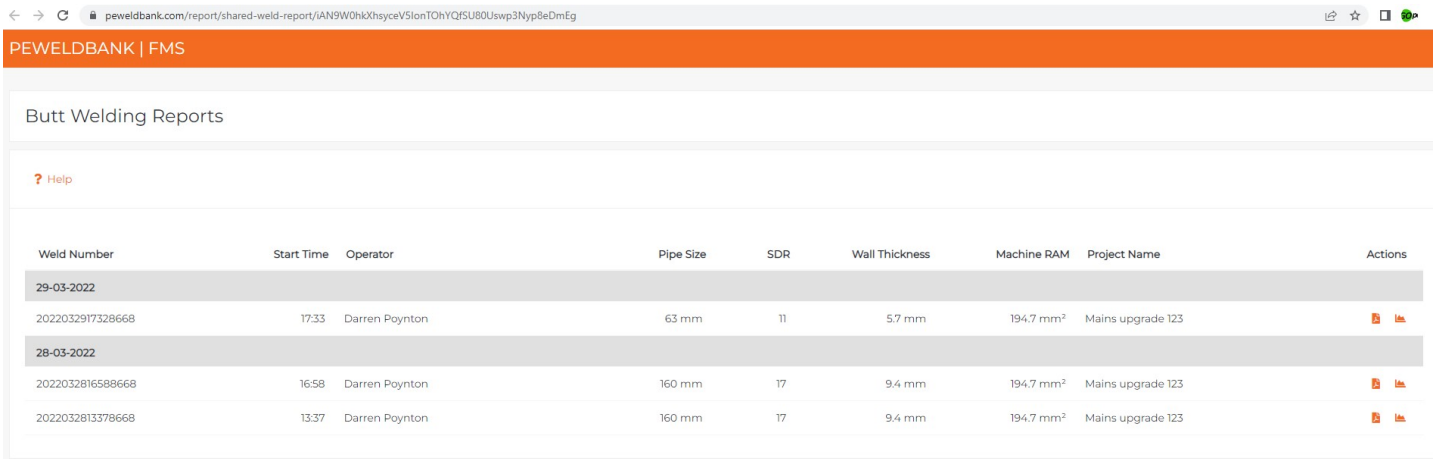
**PEWeldBank Weld Summary (Email)**

| Weld Number | Start Time | Operator | Pipe Size | SDR | Wall Thickness | Machine RAM | Project Name |
|---|---|---|---|---|---|---|---|
| **29-03-2022** | | | | | | | |
| 2022032917328668 | 17:33 | Darren Poynton | 63 mm | 11 | 5.7 mm | 194.7 mm² | Mains upgrade 123 |
| **28-03-2022** | | | | | | | |
| 2022032816588668 | 16:58 | Darren Poynton | 160 mm | 17 | 9.4 mm | 194.7 mm² | Mains upgrade 123 |
| 2022032813378668 | 13:37 | Darren Poynton | 160 mm | 17 | 9.4 mm | 194.7 mm² | Mains upgrade 123 |

The second is a Zip file holding of each selected weld each PDF is a full 4-5 page report.




The third option gives your client a full report for each weld and access to the weld graph



# Smartphone / Tablet User Guide

**www.PEWeldBank.com**

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PEWeldBank.com

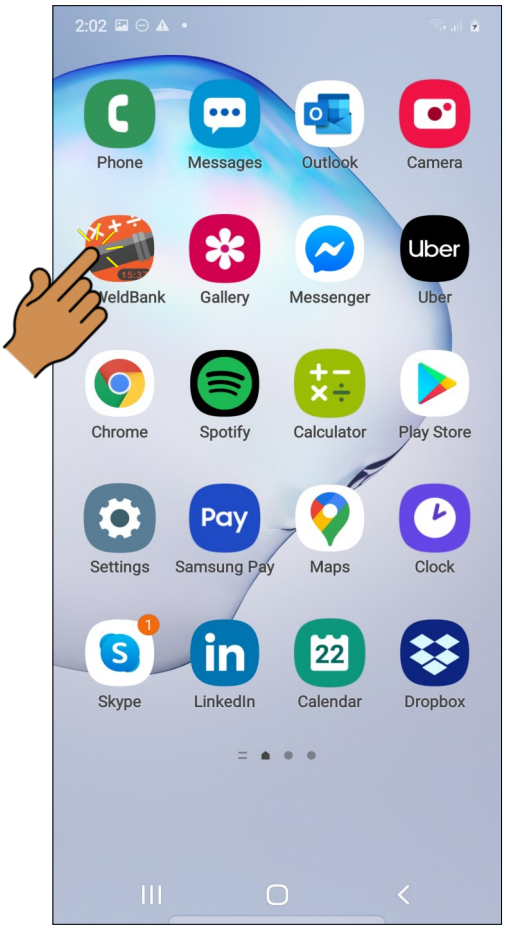
## Download *PEWeldBank* app in your preferred store for FREE

Go to search on Google Play or Apple App store enter “peweldbank”

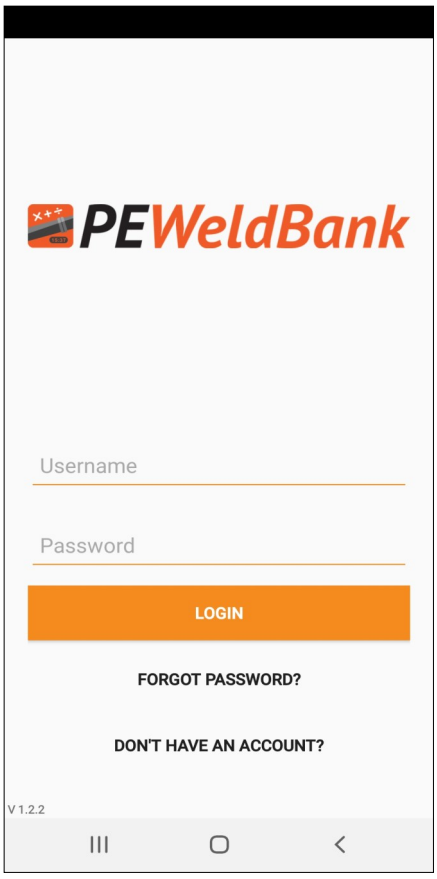
GET IT ON Google Play

Download on the App Store

Once downloaded to your Smartphone or tablet, click on the *PEWeldBank* icon




Use your Username and Password to log in, this will take you to the home screen.

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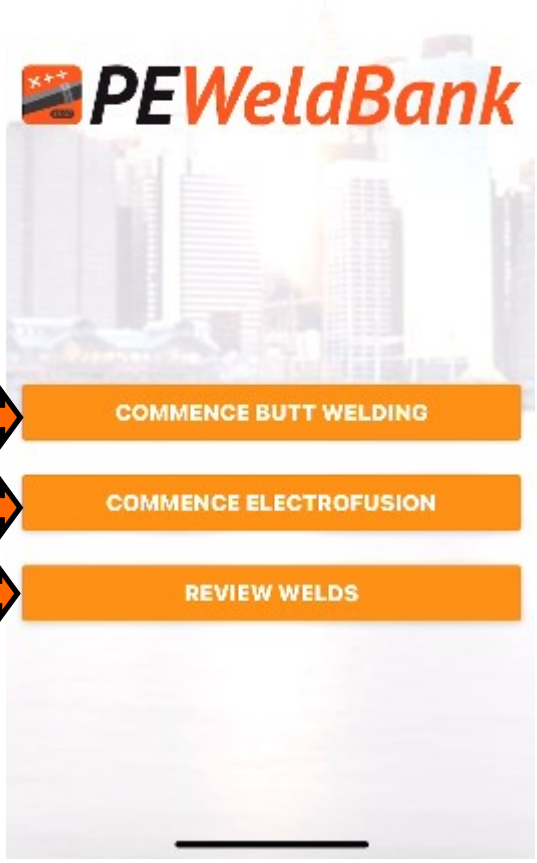
## Home Screen

Operation is very easy to access via the Home Screen

Drop Down Menu


Tap here to start a Butt weld

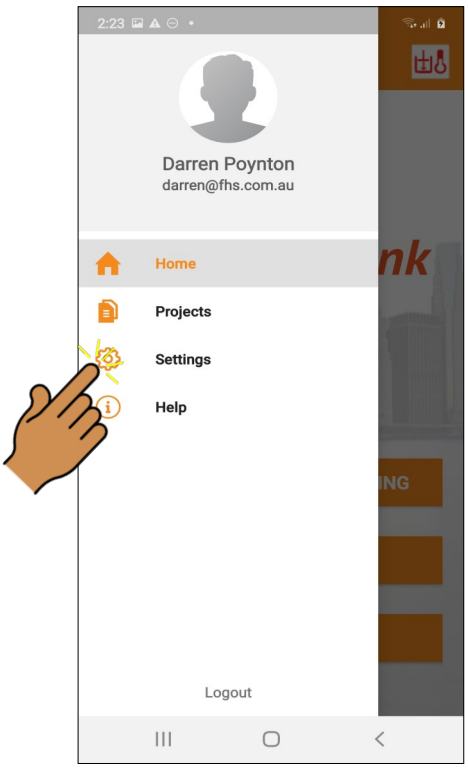
Tap here to start an Electrofusion weld

Tap here to review weld

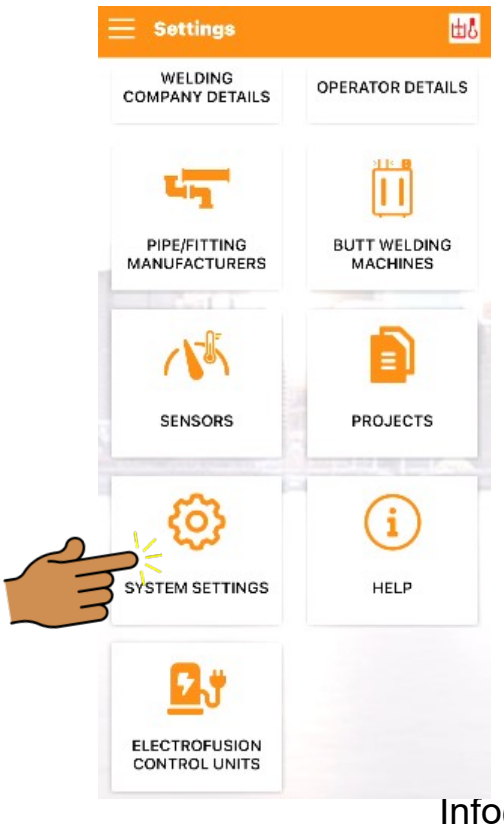
# Smartphone / Tablet - Default System Settings

Click on dropdown menu


Click on menu item



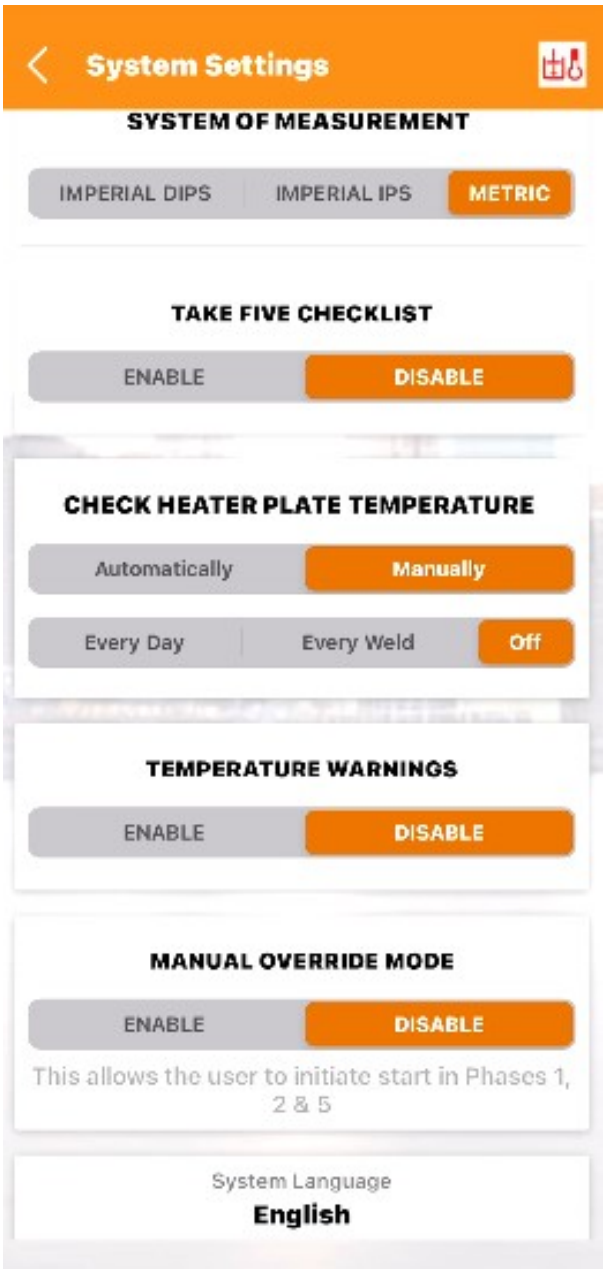

Select **System Settings** to Edit Settings



## Smartphone / Tablet - Default System Settings

# Select your preferred defaults before welding

***These changes can only be made by user with Superadmin or Admin level***




### SYSTEM OF MEASUREMENT

Choose preferred measurements

### TAKE 5 CHECK LIST

By enabling this, the app will ask the user to complete Welding Safety questions at the start of a weld session

### CHECK HEATER PLATE TEMPERATURE

By enabling this, the app will ask the user to check heater plate temperature at selected interviews or turn this feature off.

### TEMPERATURE WARNINGS

When enabled user will be notified if temperature goes out of range

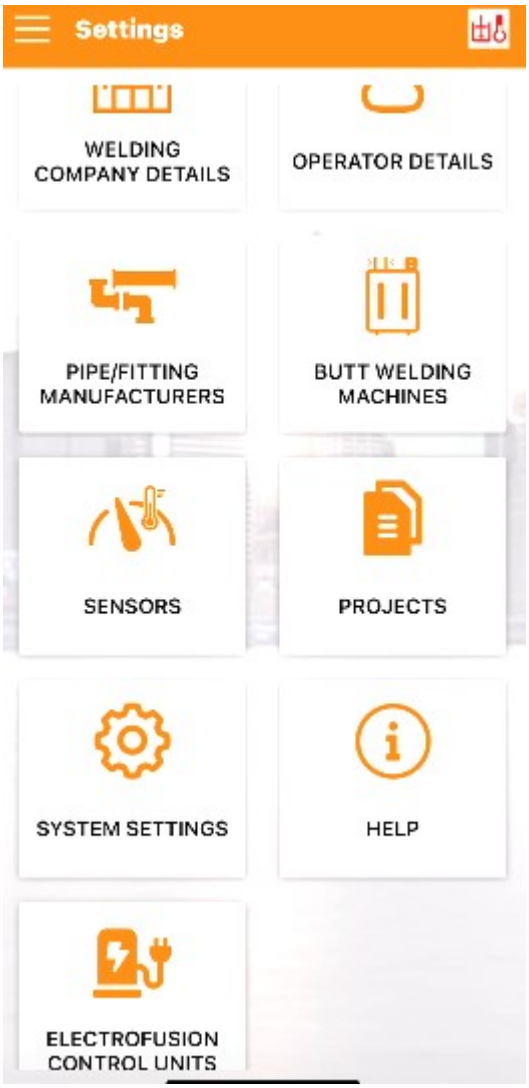
### MANUAL OVERIDE MODE

This enables to initiate start in Phases 1, 2 & 3

### SYSTEM LANGUAGE

Enables user to choose different languages

## Smartphone / Tablet - Settings

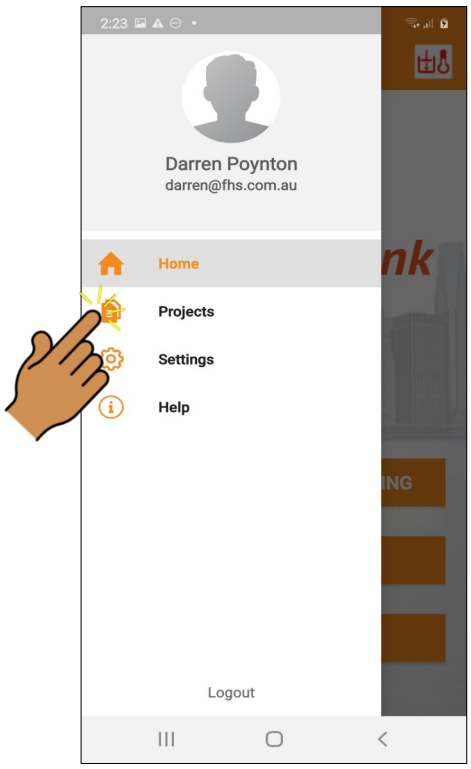



All of these options except for Sensors, System Settings and some of the Operator Details can also be edited via the FMS

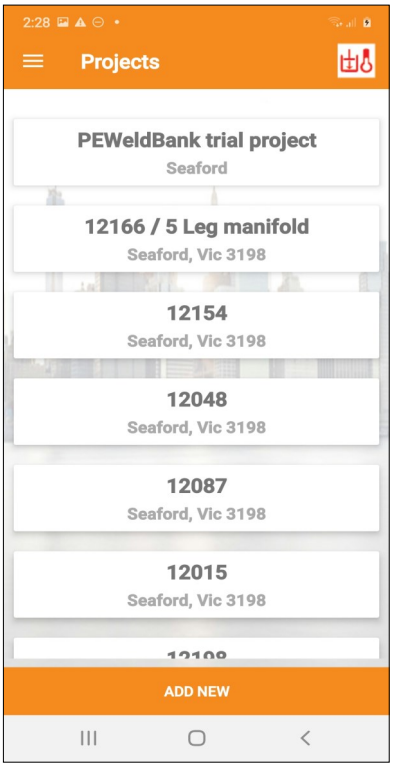
# Smartphone / Tablet Menu Screens

Click on dropdown menu

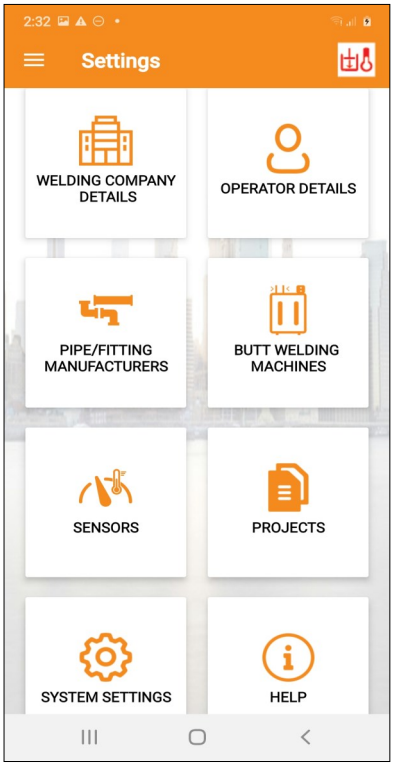

Click on menu item




Select **Projects** to Edit or Add New Projects




Select **Settings** to Edit Settings



PEWeldBank

# Connection to Hydraulic circuit

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# Fitting Hydraulic Transmitter / Transducer to Machine

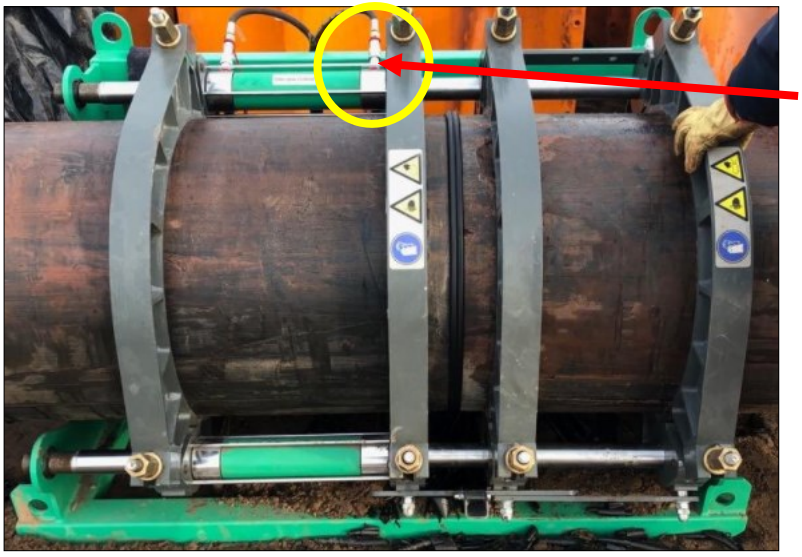
## Hydraulic Connection

Many machines have a test port already fitted.

If your machine does not have a test point, you will need to fit a tee with test point to **the closing side of your pressure circuit**.

A tee with connection point can be fitted to a machine where the hoses are fitted to the pressure control unit. Any hydraulic company should be able to fit one for you.

See Appendix 1 for examples.



Note:

This is the closing side of the hydraulic cylinder, follow this hose back to your controller. As we set up more machines we will keep a library of connections, please don't hesitate contacting us for assistance with initial set up.

# Bluetooth Pressure Sensor Setup

How to connect pressure sensor to Butt welder See also “Appendix 1”

****Before starting ensure both Sensors are fully charged****

Plug charge cable into charging port and charge until the red light turns to green (6 hours)

## Pressure Sensor Components

Connect orange cable here


**1** Bluetooth Pressure Sensor

**2** Hydraulic Transducer

**3** Orange or Black Hydraulic Sensor Connection cable

**4** Charging Port

**5** Charging Indicator Light (Red/Green)

**6** Bluetooth Connection Status Light (Blue)

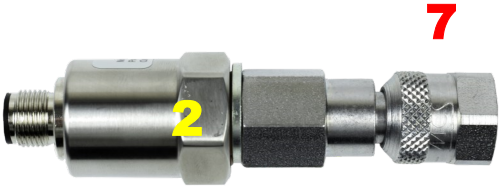
**7** Hydraulic connection

**8** Hydraulic Sensor Port 1

**9** Hydraulic Sensor Port 2 (Spare)

**10** QR code

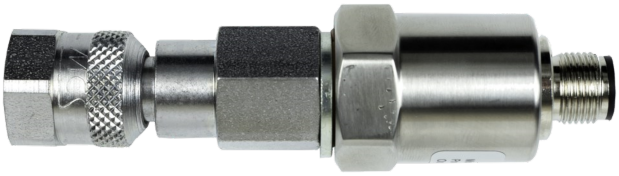

On the Rear of both Sensors there is a **QR Code** that you scan to enable sensor when prompted by phone or tablet or just select connect to nearest sensor.

## Hydraulic Connection Continued

**Stauff 20 test point**

available from your local PEWeldBank reseller or hydraulics supplier



**The PEWeldBank Transmitter**

This fits to the Stauff test point

Fit the PEWeldBank transmitter to the test point.

Now fit the Orange cable supplied to the Bluetooth pressure sensor **Port 1** as shown below.

PEWeldBank

# Connection to Heater Plate

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# Temperature Sensors dated January 2020

## Bluetooth Temperature Sensor Setup

How to use sensor with heater plate.

****Before starting ensure Sensors are fully charged****

Plug charge cable into charging port and charge until the red light turns to green (5 hours)

### Pressure Sensor Components

Connect surface probe here


1 Bluetooth Temperature Sensor

2 Surface Temperature Probe

3 Charging Port

4 Charging Indicator Light (Red/Green)

5 Bluetooth Connection Status Light (Blue)

6 Spare Port

7 Port for surface probe (marked Fixed)

8 QR code


On the Rear of both Sensors there is a **QR Code** that you scan to enable sensor when prompted by phone or tablet

# Temperature Sensors dated March 2022 & later

## Bluetooth Temperature Sensor Setup

How to connect your Temperature Sensor to your heater plate. “See Appendix 2”

****Before starting ensure Sensors are fully charged****

Plug charge cable into charging port and charge until the red light turns to green (5 hours)

### Pressure Sensor Components

**1** Bluetooth Temperature Sensor

**2** Surface Temperature Probe

**3** Charging Port

**4** Charging Indicator Light (Red/Green)

**5** Bluetooth Connection Status Light (Blue)

**6** Port for Surface probe

**7** Port for Fixed PT100 connection

**8** QR code

**9a** PT100 connection cable for Ritmo*

**9b** PT100 connection cable for others*



On the Rear of both Sensors there is a **QR Code** that you scan to enable sensor when prompted by phone or tablet

* see appendix 2


9a

9b

# Pairing Sensors to Phone or Tablet

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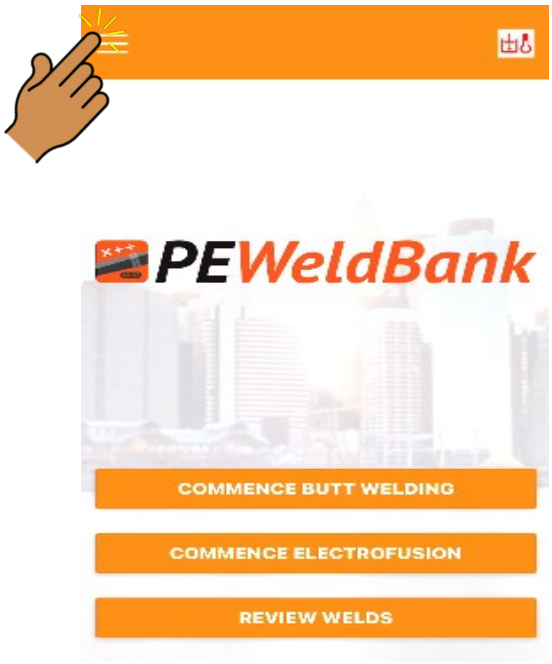
# Bluetooth Setup & Pairing of Sensors

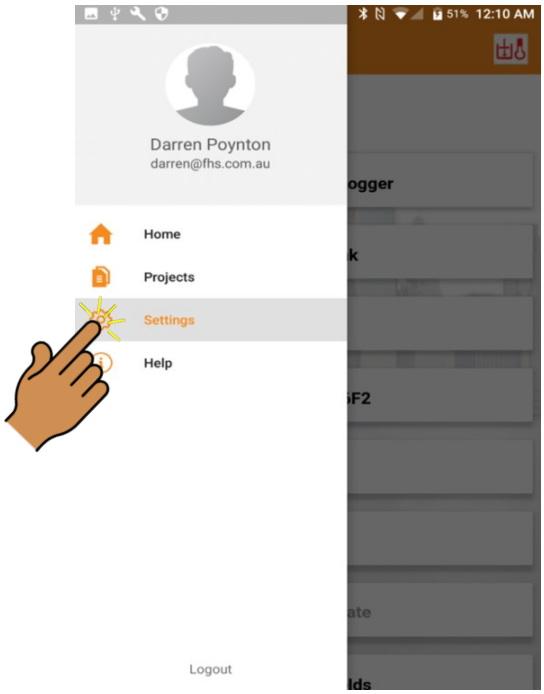
*N.B. you can only use sensor set with **PEWeldBank Fusion Logger** subscription, For initial pairing you must also have administrator user level permission and connection to the internet*

Ensure that Bluetooth is enabled on your smartphone / tablet.  Follow the prompts

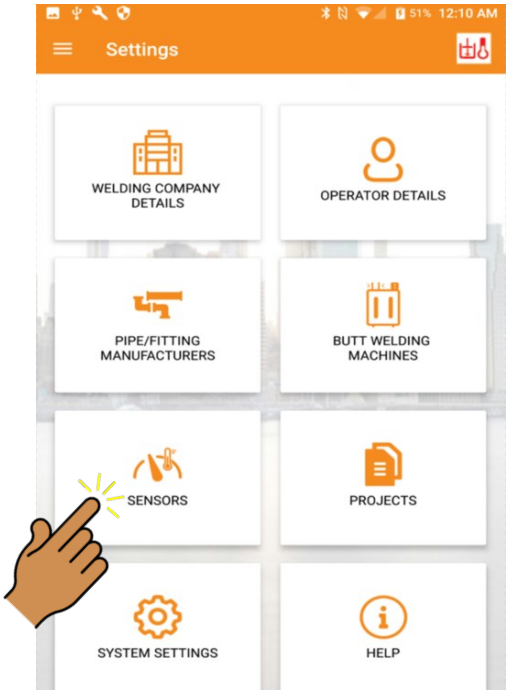
1. Click **Dropdown Menu**




2. Click **Settings**




3. Click **Sensors**




4. Click **Add New**

# Bluetooth Setup & Pairing of Sensors Continued

## Pairing of Sensors

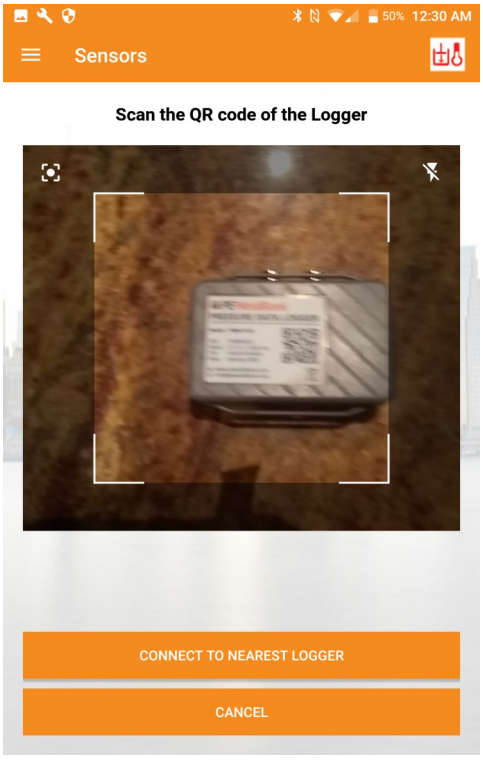
- Connect Pressure sensor to pressure at least 2 bar.
- For the Temperature sensor holding the Surface Temperature Probe against heater plate (at least 80°c / 176°f) will activate the sensor.
- The status light will flash, enabling you to proceed with Bluetooth pairing.

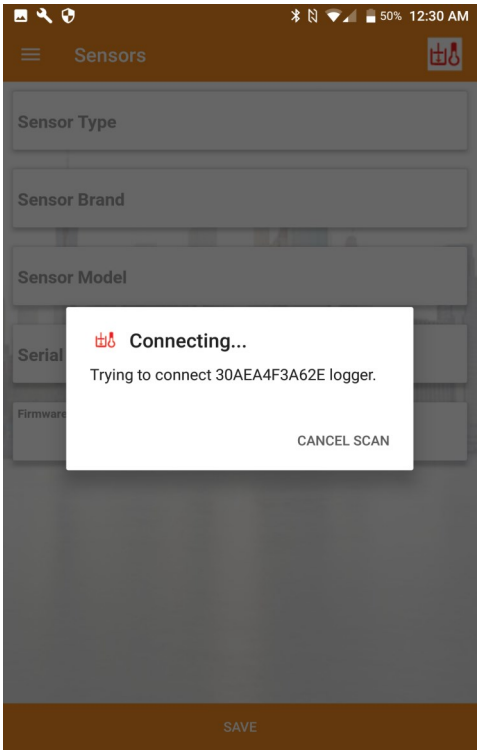

## Alternatively

- Remove and replace the battery from the sensor, this will activate and status light will flash for 2 minutes enabling you to proceed with Bluetooth pairing.
- Status light must be flashing fast before proceeding.


Follow instructions in Dropdown menu on smartphone or tablet [settings] [sensors] [add new] [save]

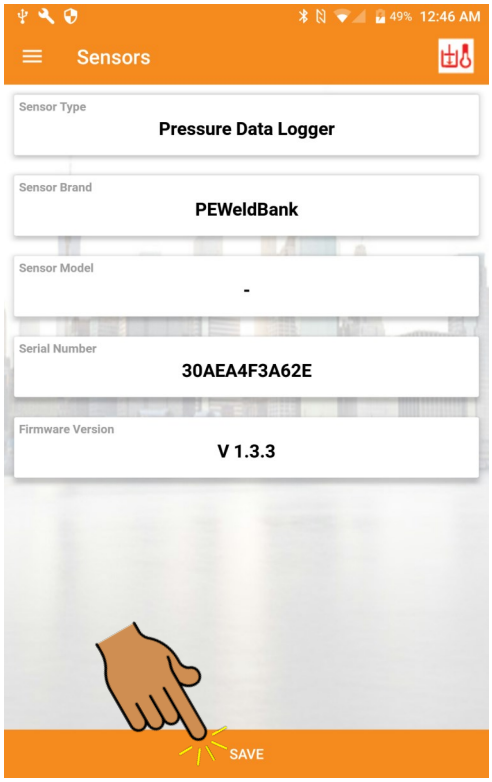
**Scan QR code:**



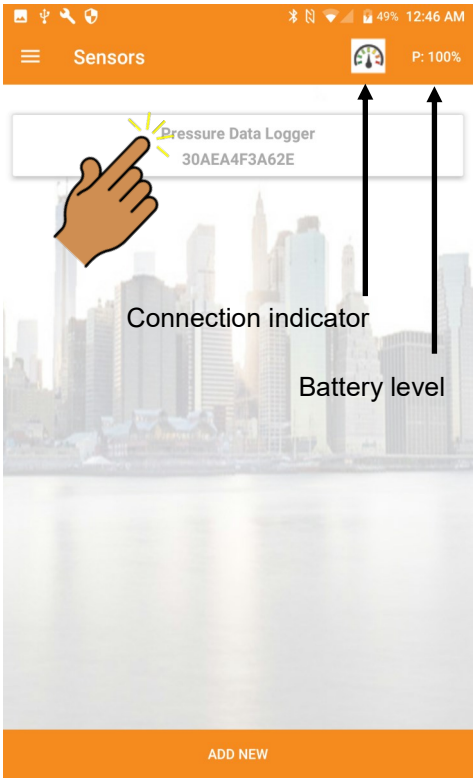



# Bluetooth Setup & Pairing of Sensors Continued

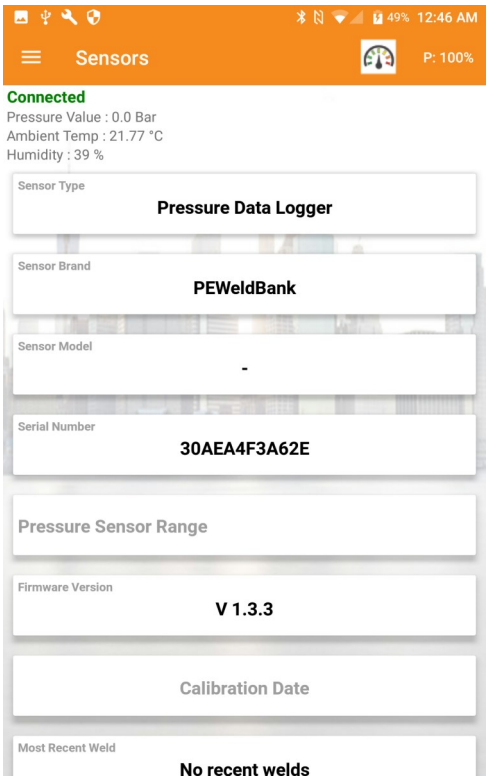
Click Save




Check connected sensor




Connected




When connected blue Light on the sensor will flash slowly


Click Drop down menu to return to home screen follow instructions again for second sensor

**To remove a sensor** from Phone or Tablet select sensor you want to remove and click and hold for 2 seconds then delete, for iOS swipe then delete

# Welding Procedure for App

Also see Basic Welding Machine Operating Procedure

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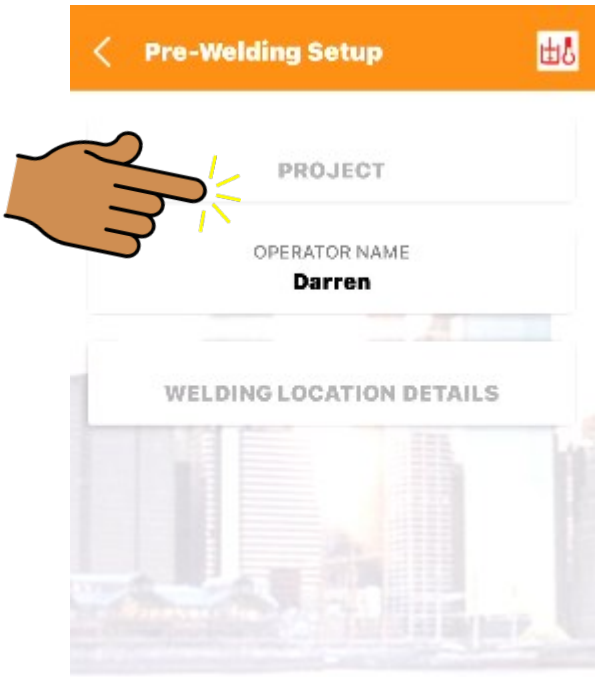
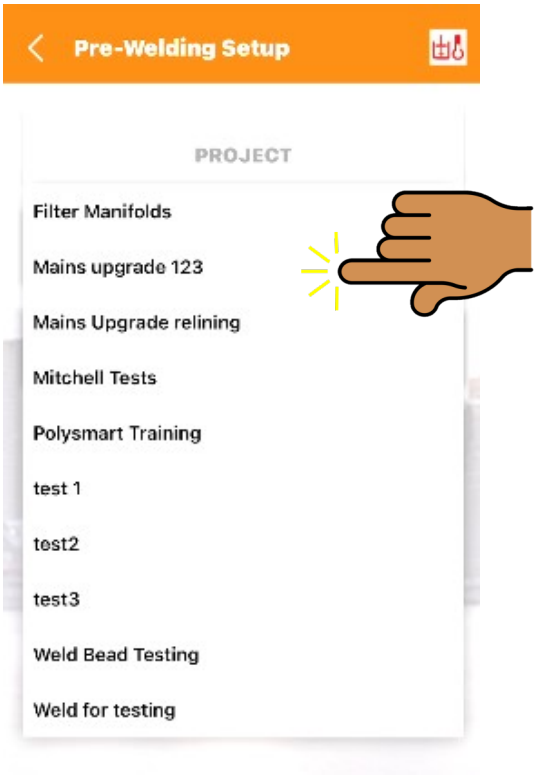
# Home Screen: Commence Butt welding or Electrofusion

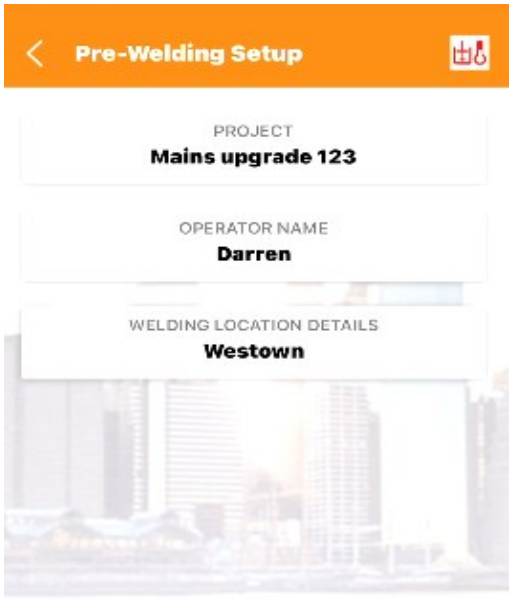

From this screen you can commence Butt welding or Electrofusion.

You can also review previous welds or allocate a second GPS  location

## Select Project



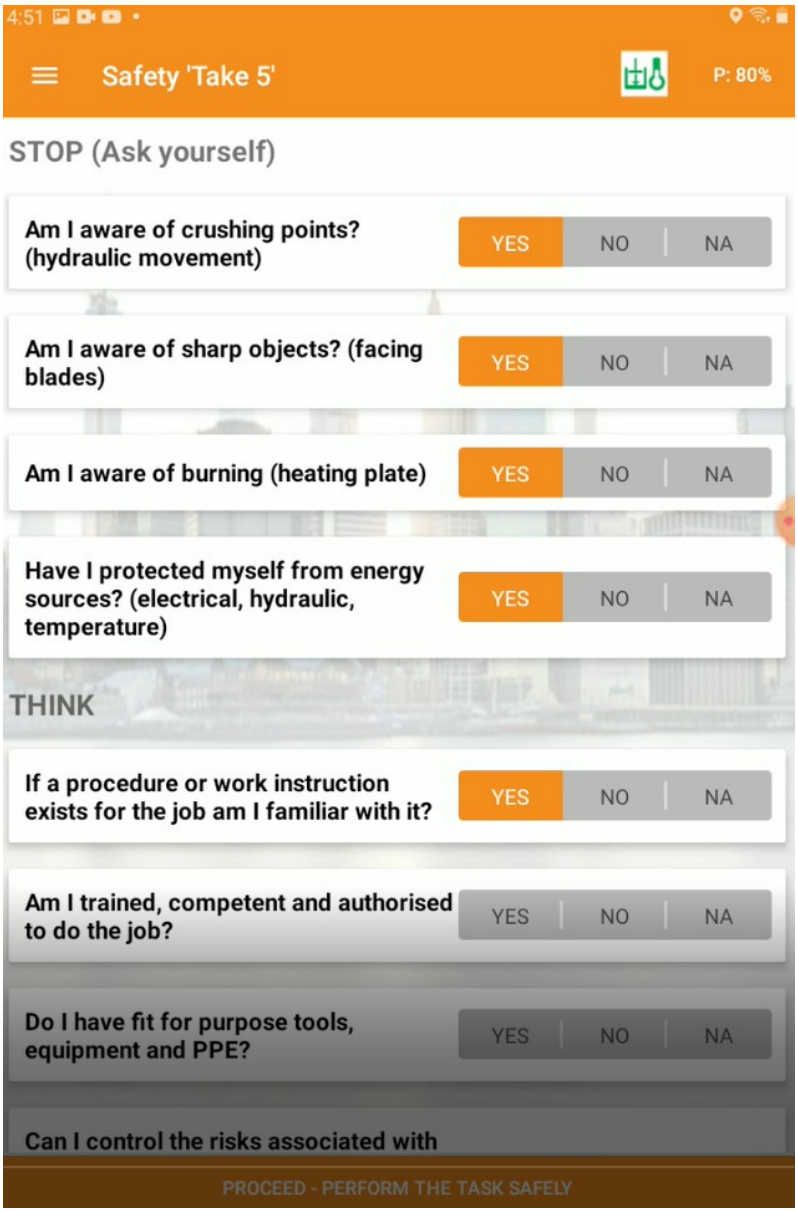


From this screen you need to select a project.

The Projects can be set up from within this app or from the FMS.

Note: You must have Admin access to set up projects, however User or Admin may select a project to use.

## Safety “Take Five”

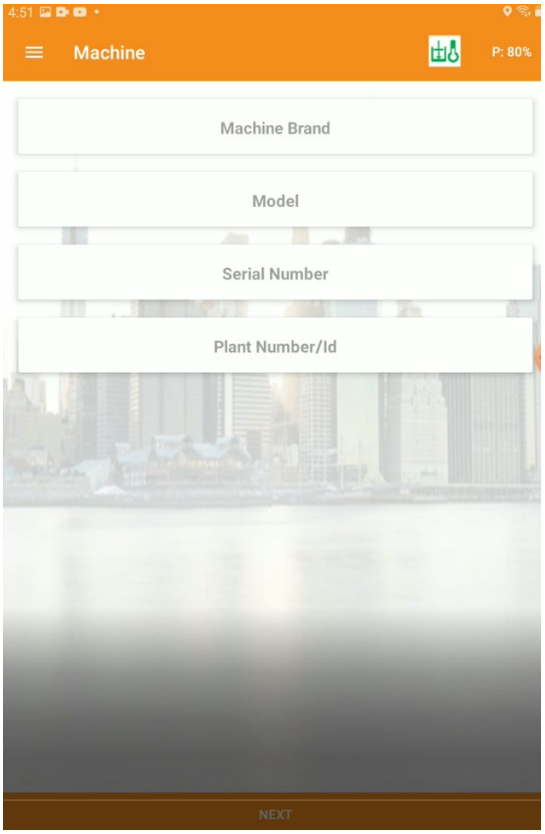


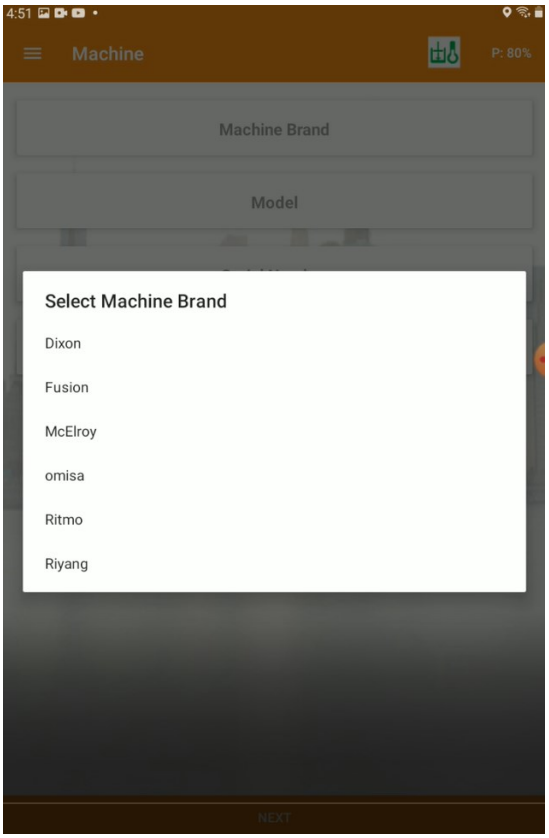

This is a 12 question OH&S assessment, these questions are asked of the user at the start of the welding session.

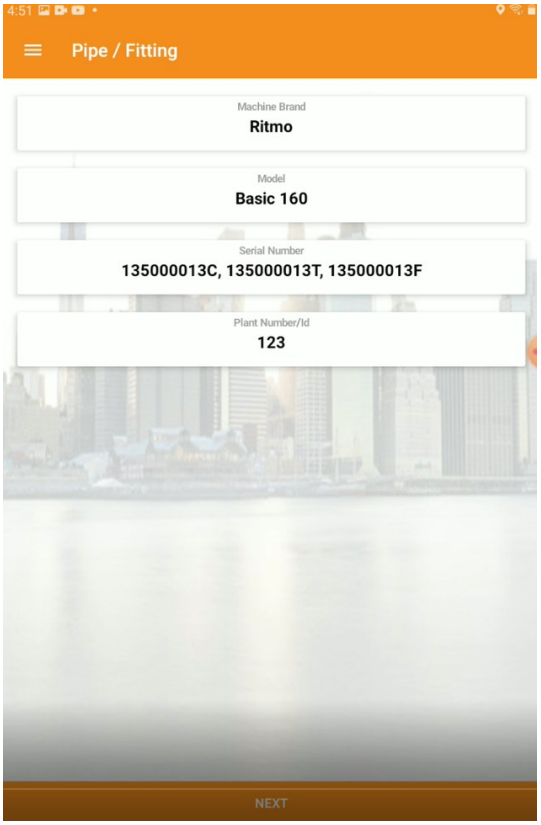
This information is collected and recorded within reports, available within FMS

By default this option is disabled, this option may be enabled within System Settings

## Machine selection



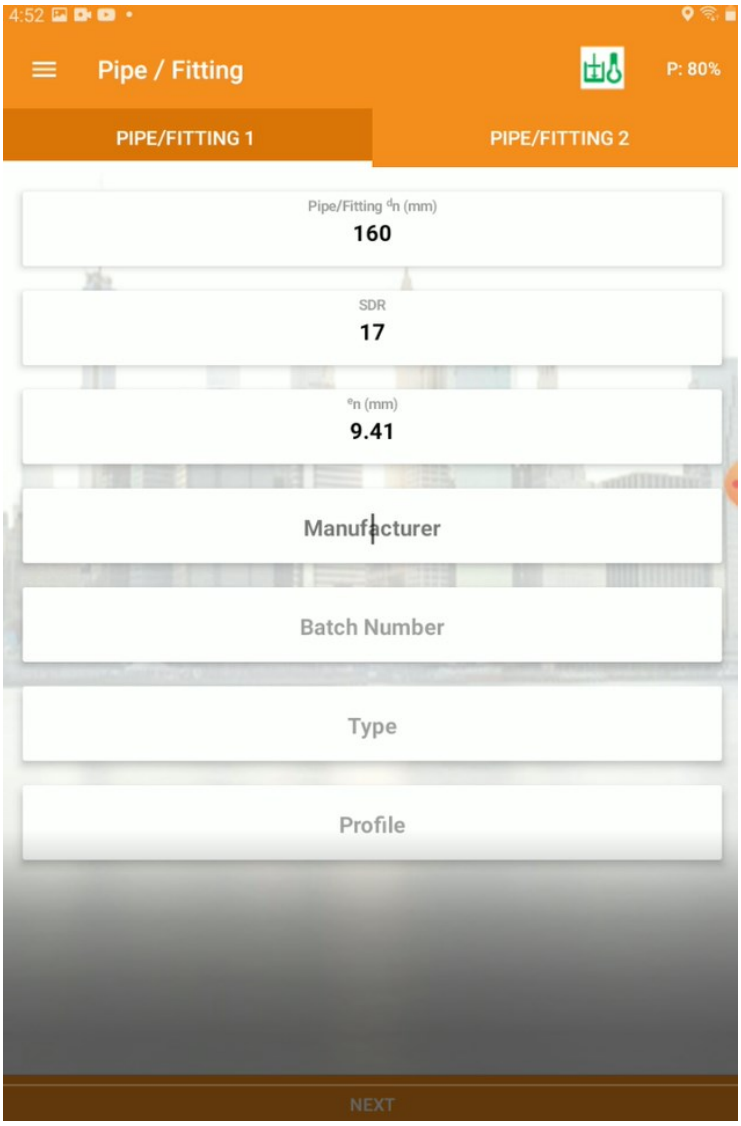

From this screen you will need to select a Machine.

Machines can be added and edited from within this app or from the FMS.

Note: You must have Admin access to set up projects, however User or Admin may select a machine to use.

By selecting machine it will use stored hydraulic ram information for pressure calculations, and machine data in re-ports.

## Pipe / Fitting selection




From this screen you will need to select a Pipe size and SDR, pipe wall thickness is automatically calculated but can be adjusted manually.

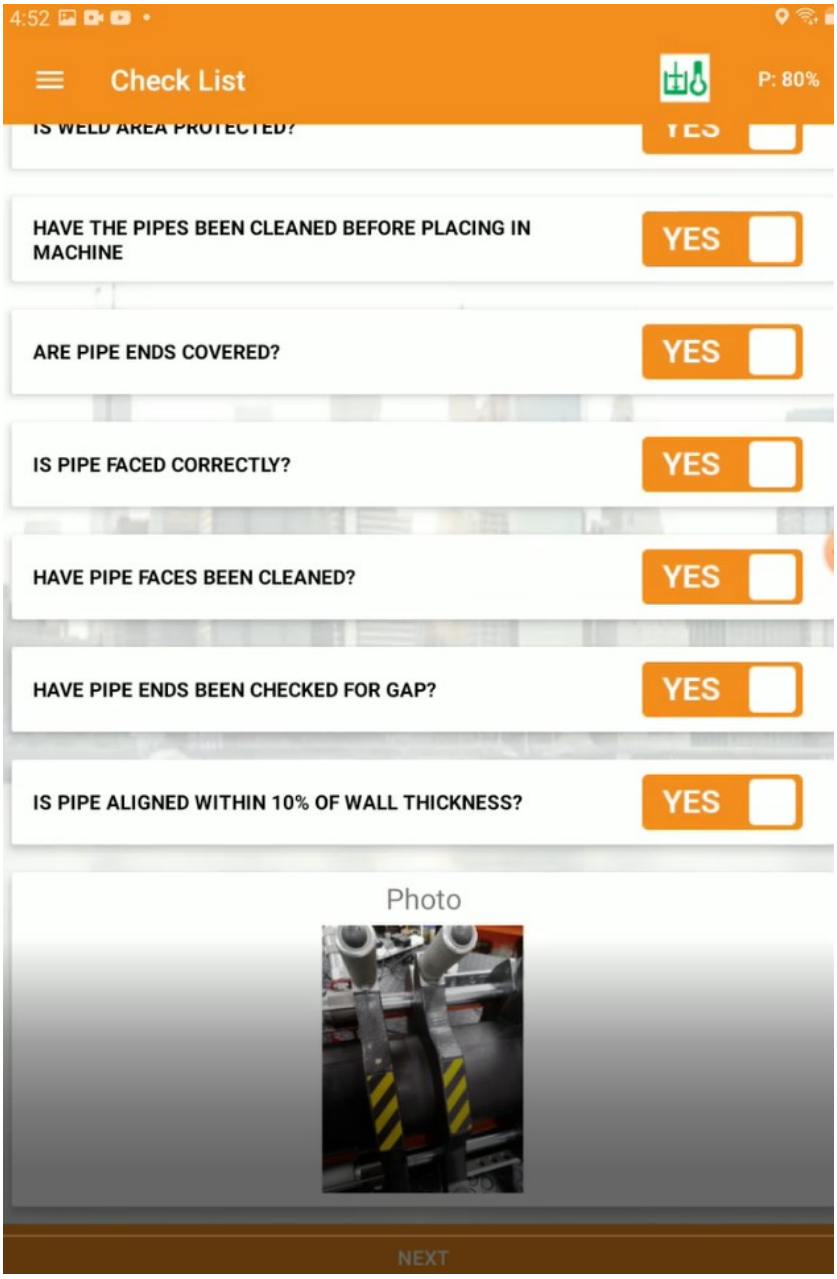
Manufacturer, Type and Profile fields are optional.

Pipe data can be added and edited from within this app or from the FMS.

Note: You must have Admin access to set up projects, however User or Admin may select a machine to use.

By selecting machine it will use stored hydraulic ram information for pressure calculations, and machine data in reports.

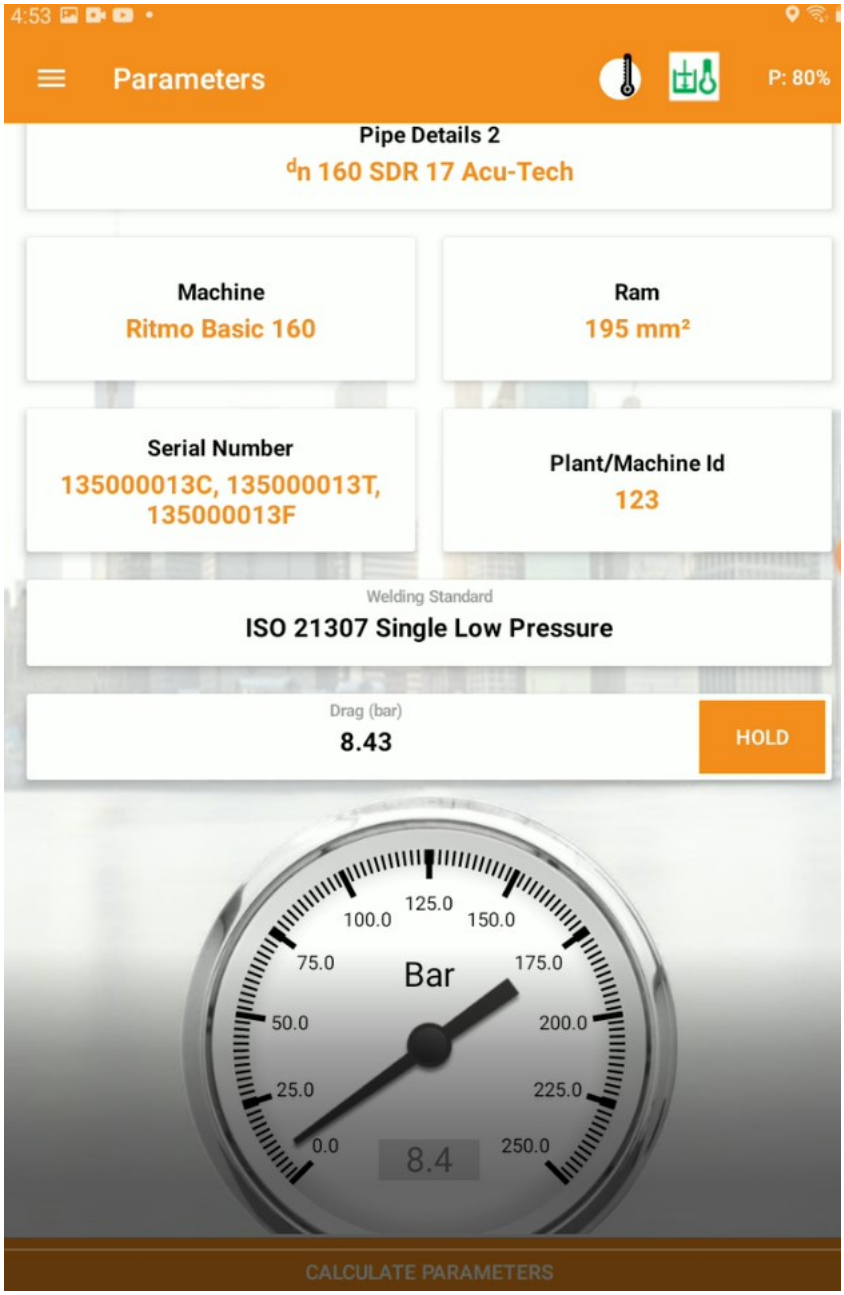
## Pre weld check list




This check list has 7 questions optional questions, these questions default to NO and are included on reports, however you do not need to answer these to be able to move onto the next screen.

Upon selecting yes to the last question the camera will be activated to allow user ot take a photo of pipe alignment and gap.

## Parameters

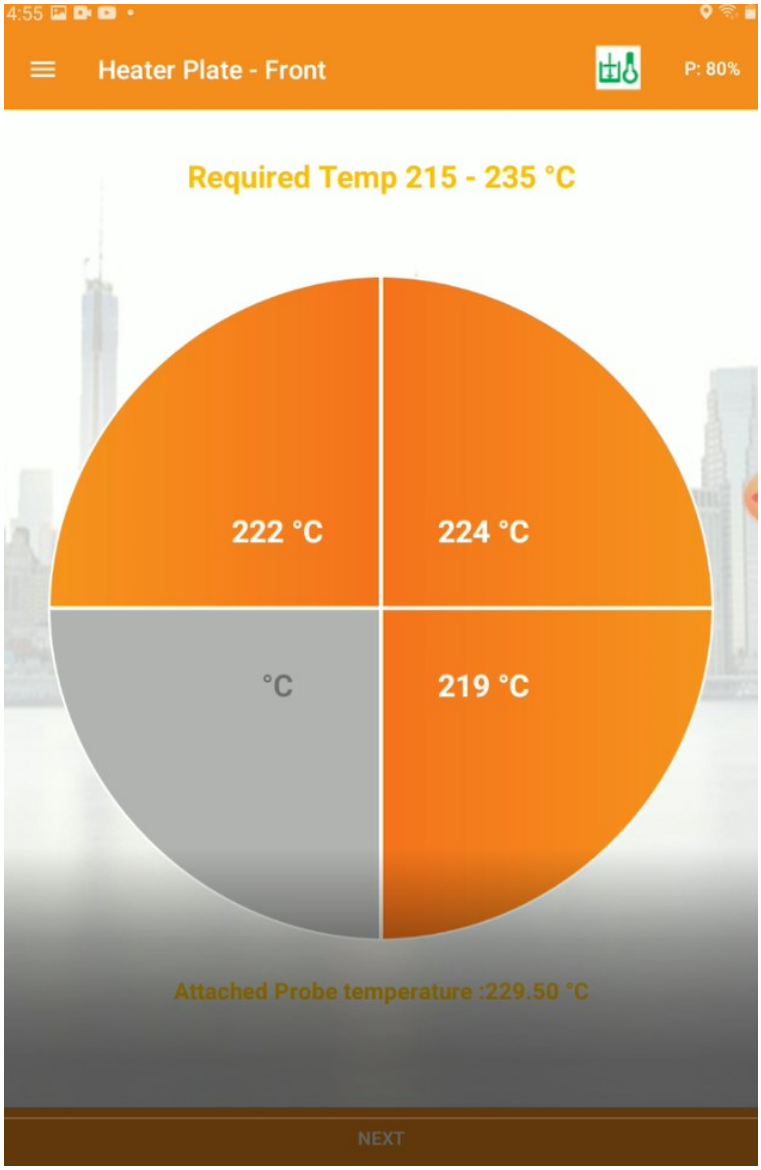



The Parameters screen displays a review of pipe and machinery and asks user to enter preferred welding standard, this preference is set as a default until the start of a new session.

The drag also needs to be entered in this screen.

Note: The Pressure Gauge will be active only when sensor set is supplied and paired.

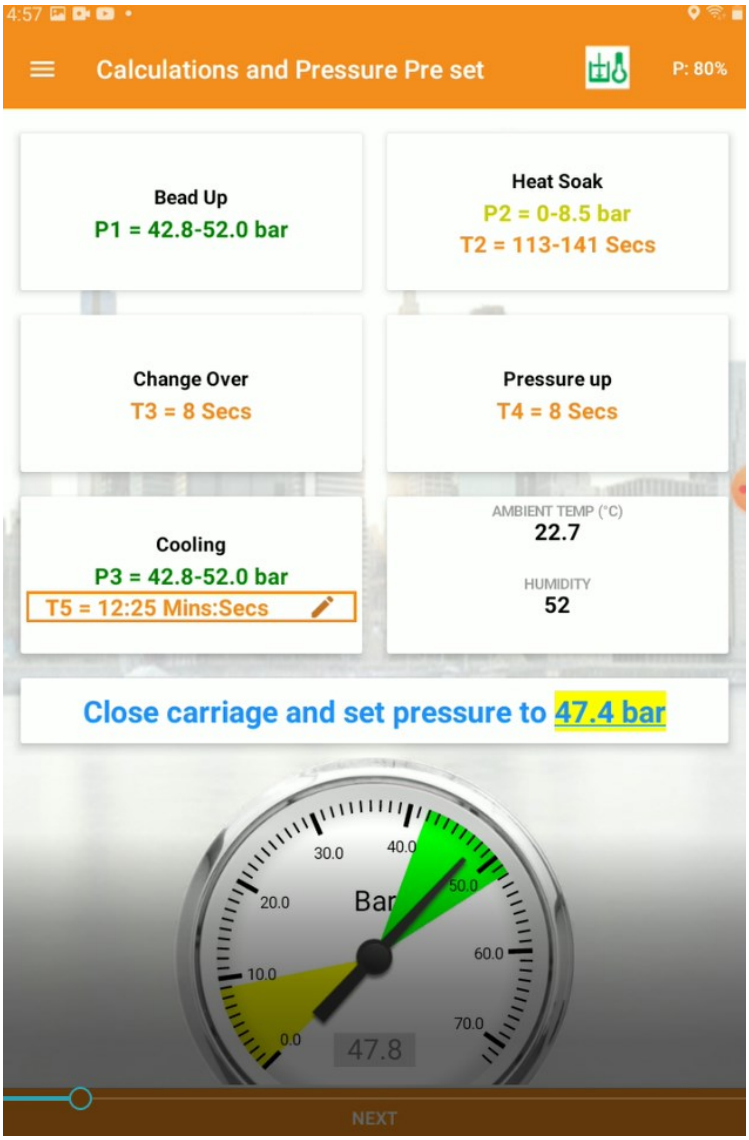
## Check Heater plate




When connected to temperature sensor set, this screen automatically logs temperature during Bead up and heat soak phases, also using the supplied surface temperature probe the user can accurately record the surface temperature  at the start of the welding session or at the start of every weld or turn to manual entry,

This temperature recording options can be adjusted within system settings

## Calculation and Pressure Pre set

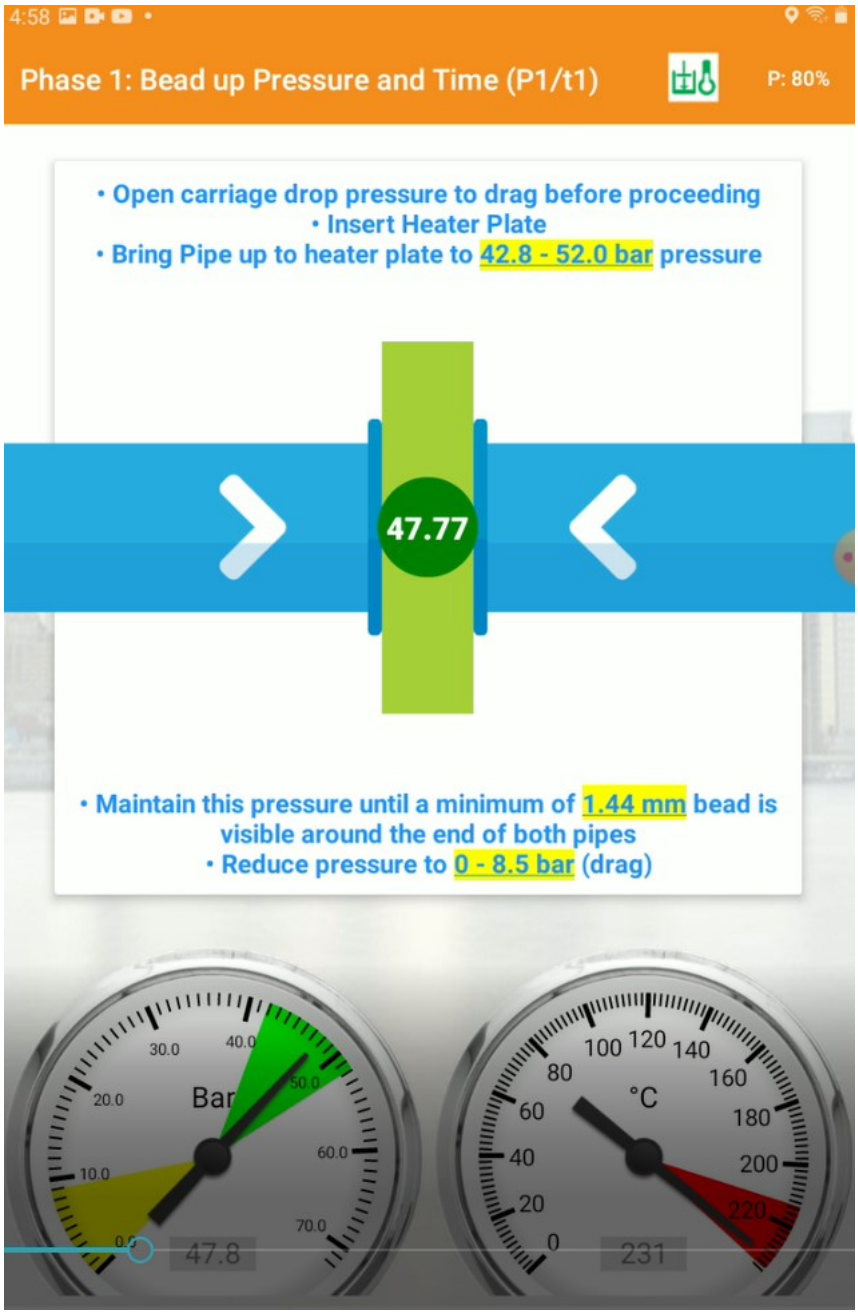



When connected to pressure sensor set, this screen automatically logs Ambient temperature and Humidity, if not connected to sensor set these can be added manually.

This screen also allows the user to manually adjust T5 cooling time to allow for Reduced cooling times or extending the time when allowance for rough handling is required. This adjustment is noted on weld reports!

Most importantly the user must set pressure for Phase 1 and Phase 5 at this point.

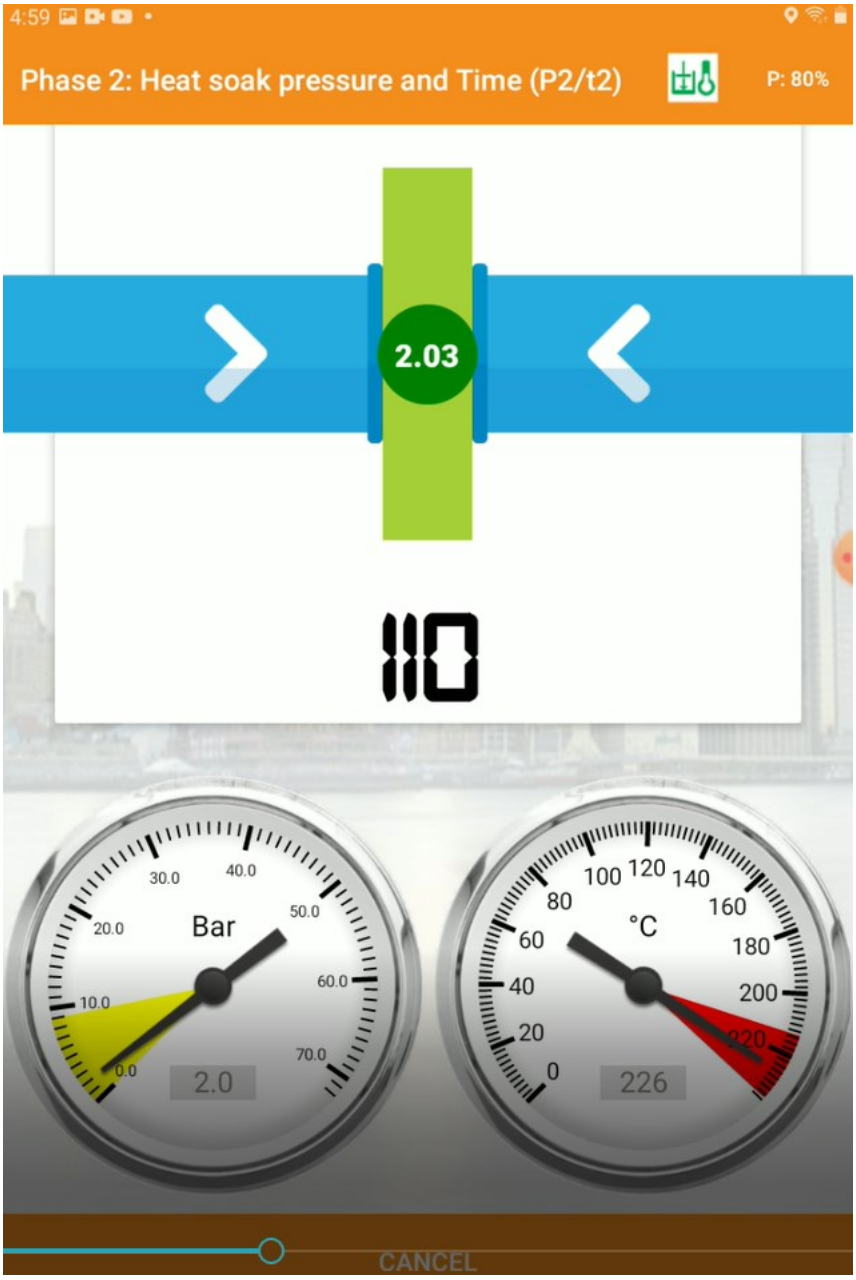
## Phase 1: Bead up




Phase 1 screen Instructs the user what to do and when to reduce pressure to Drag.

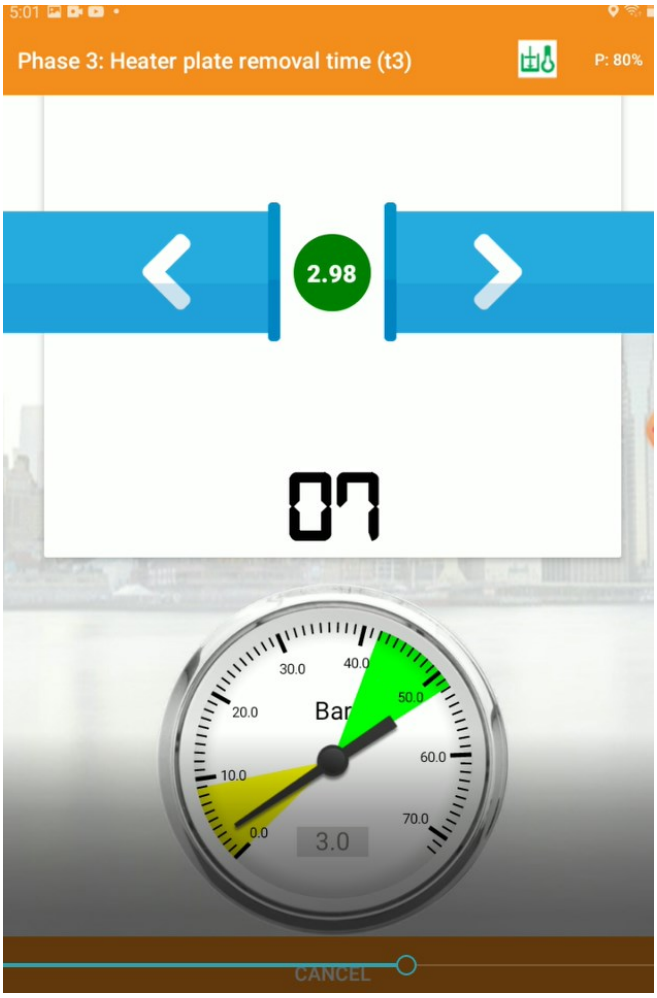
Temperature can also be monitored during this Phase

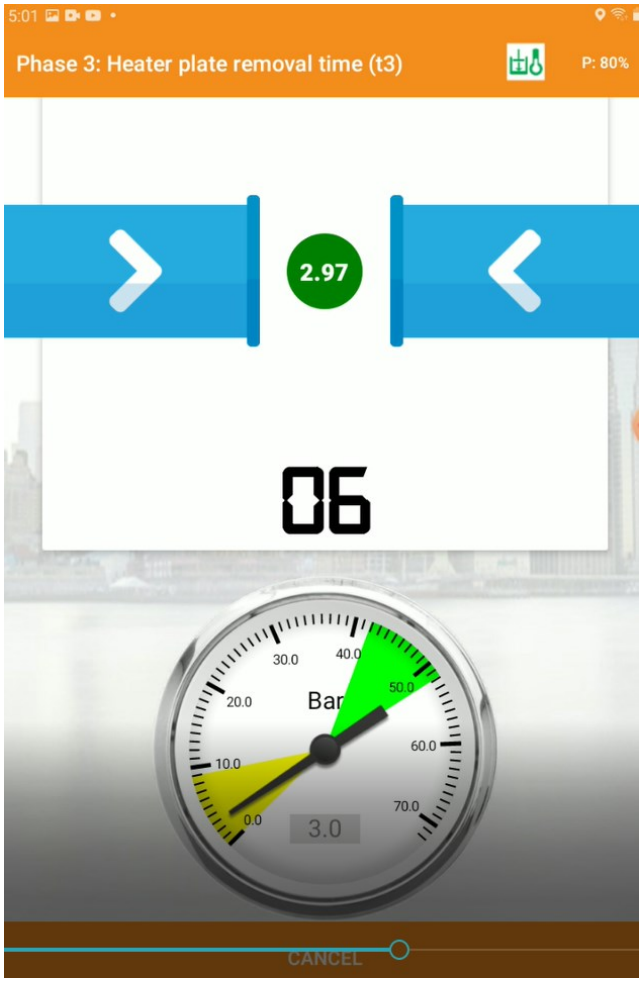
## Phase 2: Heat Soak




After bead up as soon as user drops to Drag pressure or below the Heat soak timer begins count down (the pressure is recorded during this phase)

## Phase: 3. Heater Plate Removal

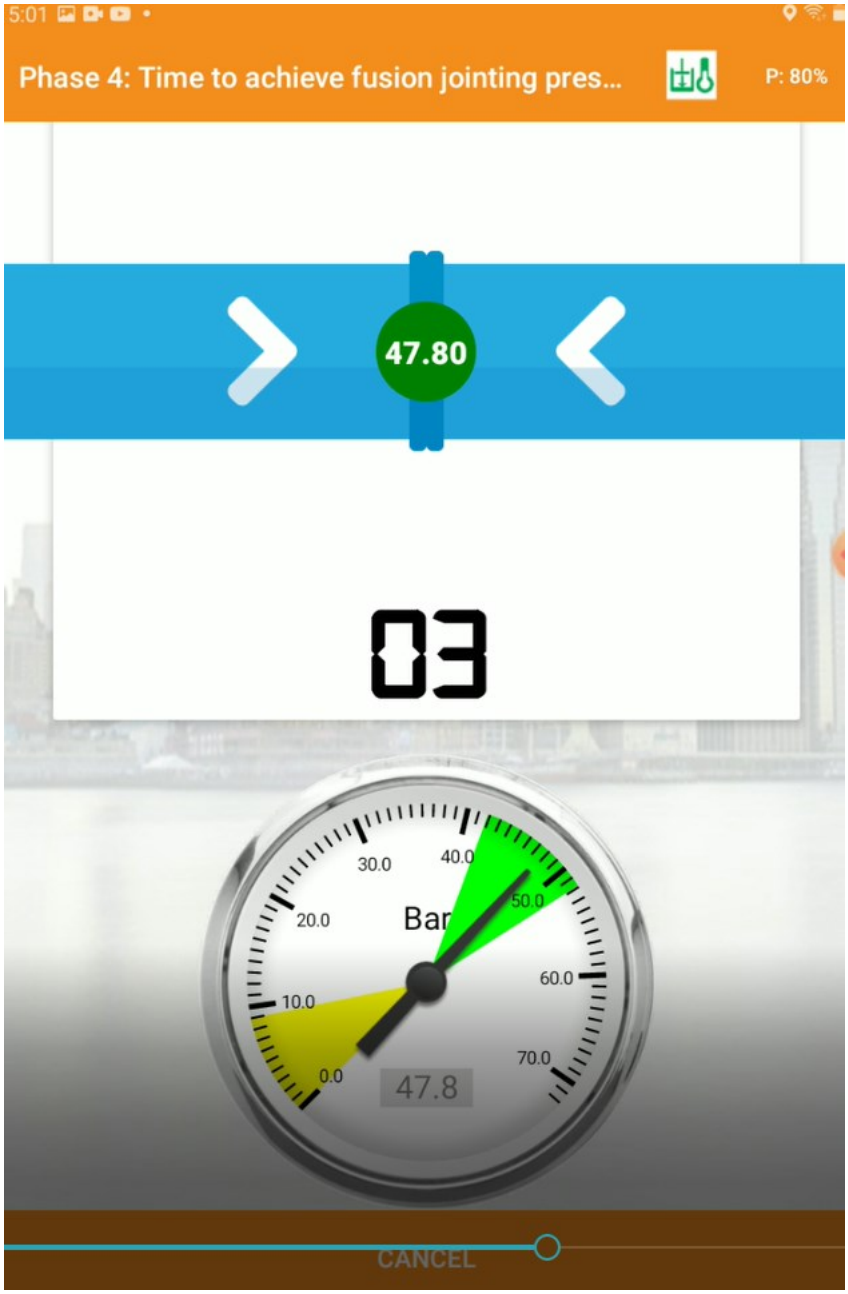



User is notified by a alarm to remove heater plate and bring ends back together within displayed time

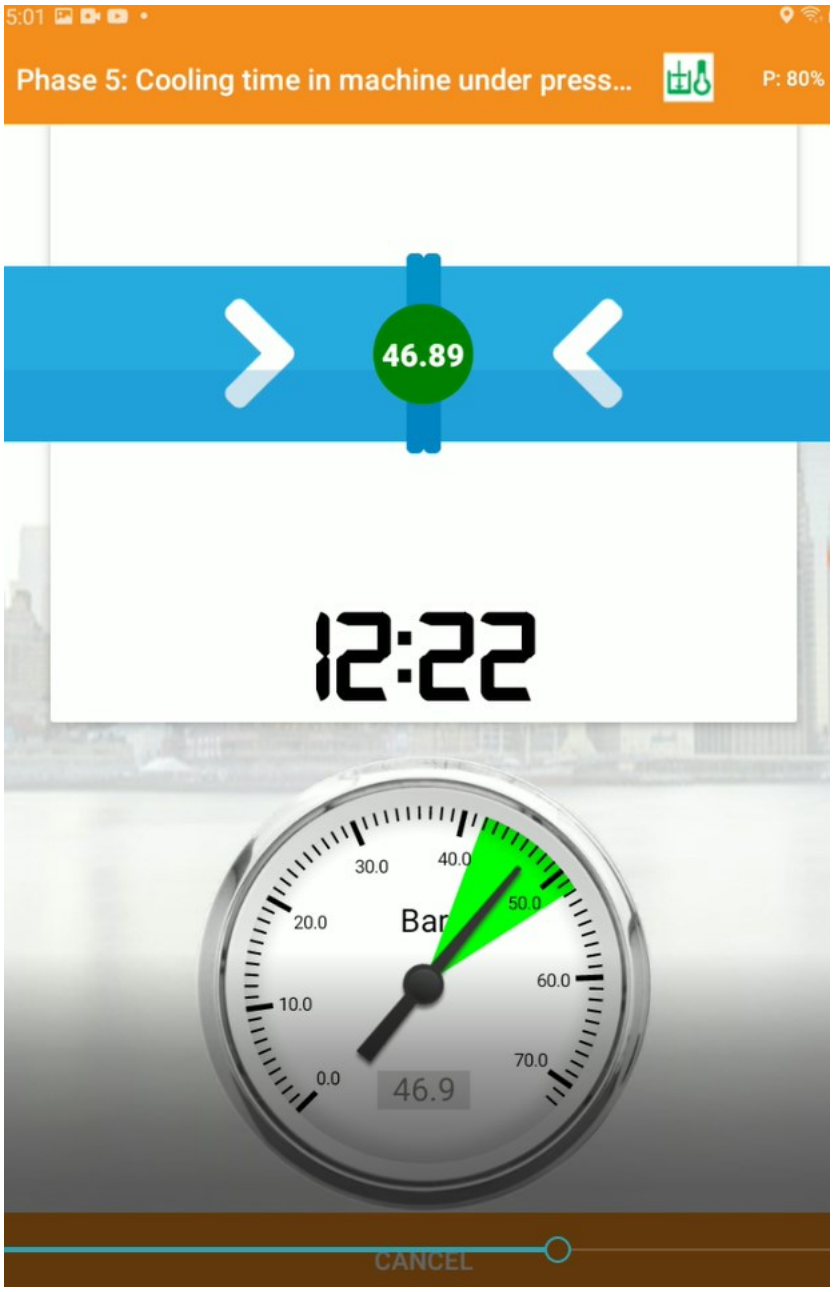
## Phase 4: Pressure up

### (for high Pressure welding this Phase is incorporated within Phase 3)



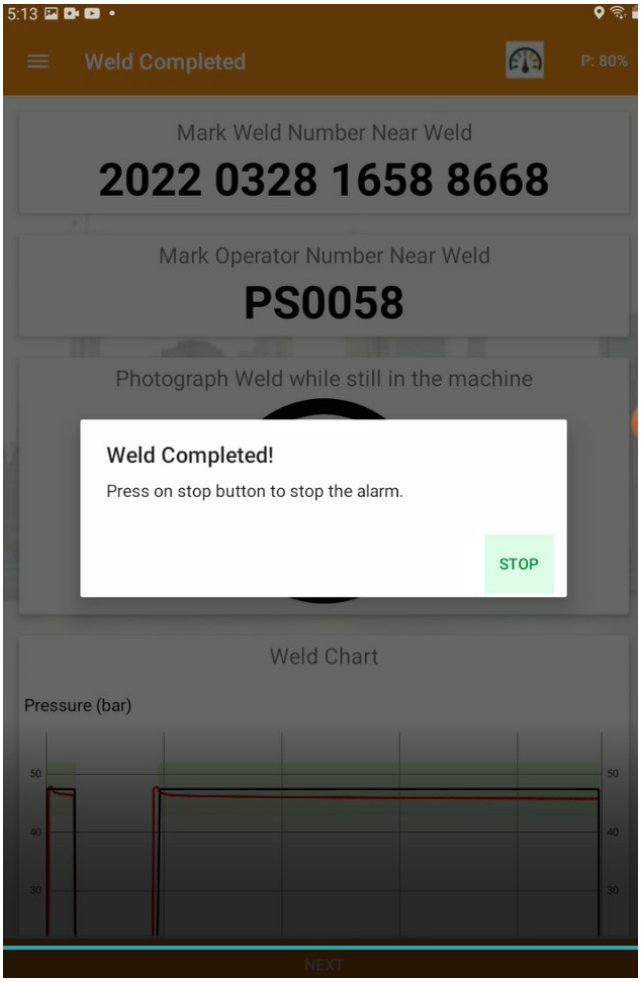

User is notified by a alarm to bring ends back up to weld pressure within displayed time.

## Phase 5 Cooling time in Machine under Pressure




Timer automatically starts for cooling time

## Weld Completed




Once weld is completed the user is prompted to mark the unique weld number and welder id onto the pipe next to the weld

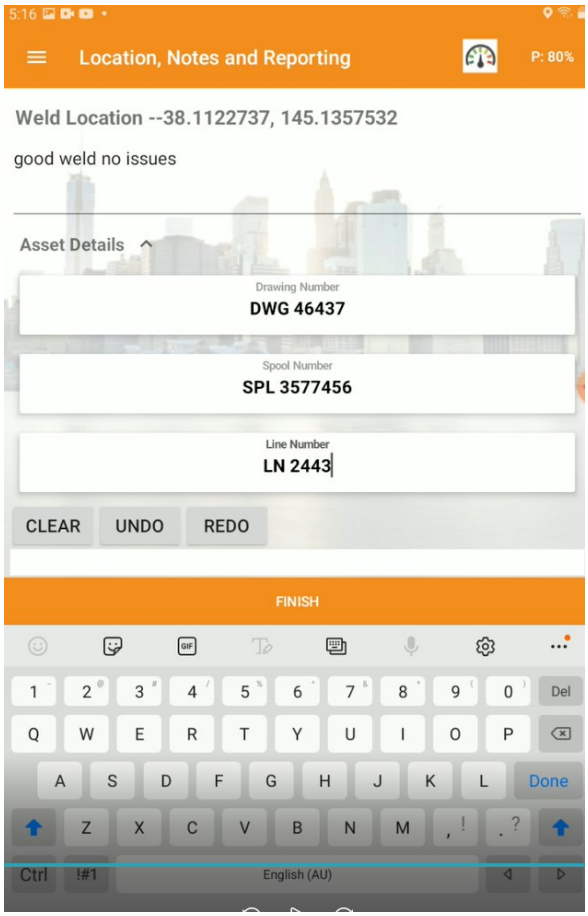
The unique number is made up from the following information.

| Year | | | | | Month | | Day | | | Hour | | Minute | | | Part of user ID | FMS created from project | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 0 | 2 | 2 | | 0 | 3 | 2 | 8 | | 1 | 3 | 3 | 7 | | 8 | 6 | 6 | 8 | - |

The user is prompted to take a photo including the unique ID number of completed weld while still in machine.

The graph gives the user the opportunity to review the weld before progressing.

# Location, Notes and Reporting




The GPS is automatically recorded and displayed in this screen

The User can also enter comments

And further Asset details including :

Drawing Number

Spool Number

Line number

There is an area here to include a ;

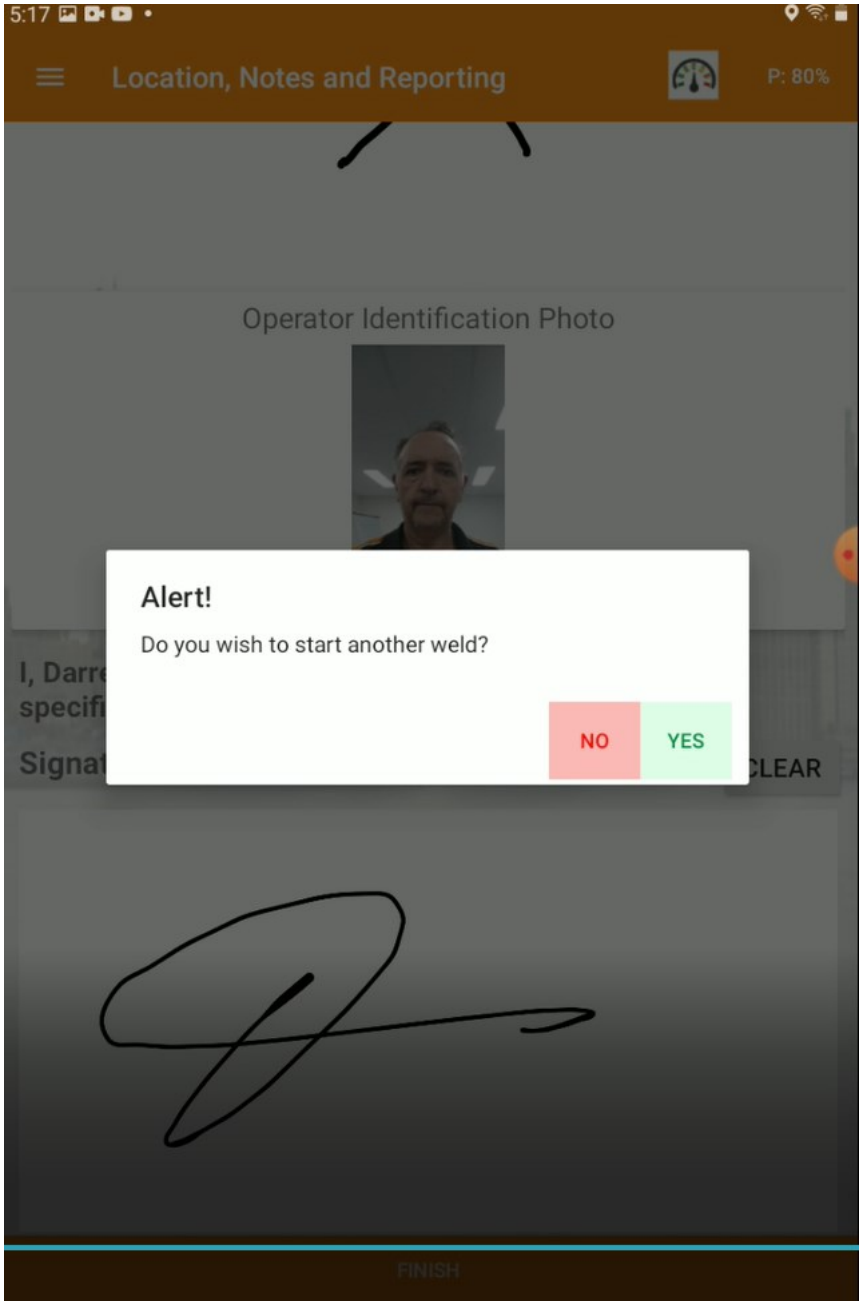
Sketch

Operator Identification Photo

Operator Signature

The information here is not compulsory except for the signature.

## Do you wish to start another weld




At this point the user  can choose to finish the session or continue to another weld, if they choose to continue they are taken back to the check list screen and all other data parameters are still set to the same as previous weld.

If the user choses No the system returns to the Home screen

PEWeldBank

# Basic Welding Machine Operating Procedure

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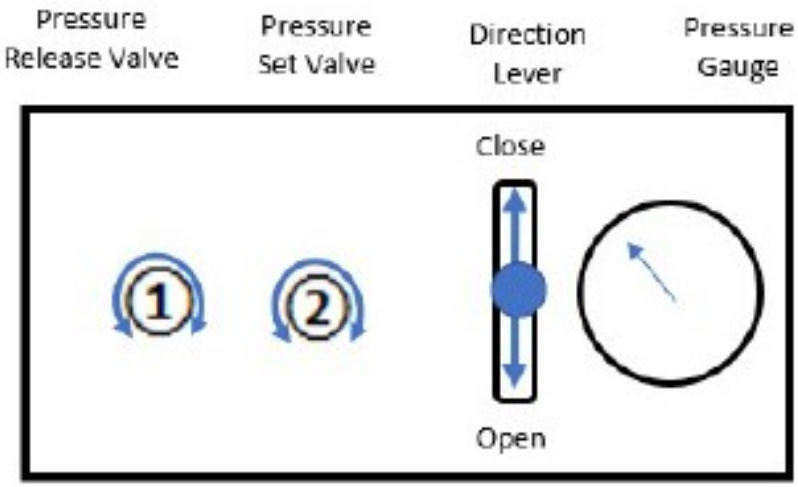
# Hydraulic Valve Control Sequence when using PEWeldBank (On de-mand flow)



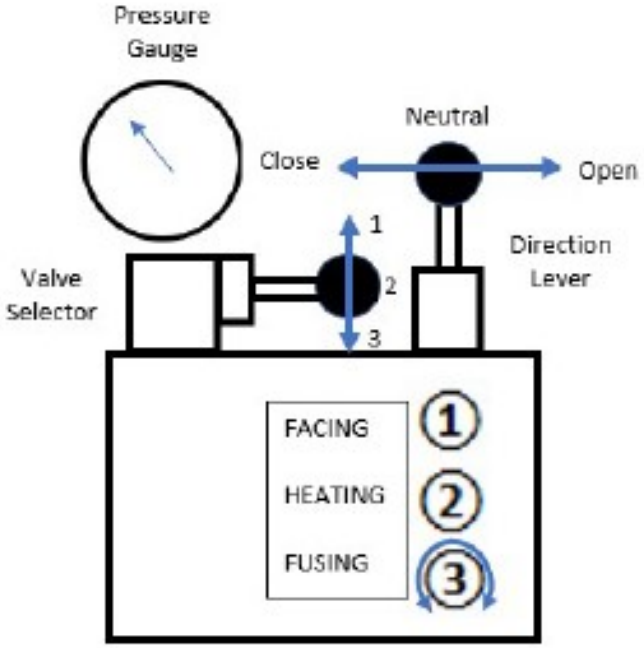

Generic Pressure control unit. Most basic units run similarly but valves may be arranged differently.

After Facing, cleaning, alignment and Recording Drag pressure

1. Close Pressure Release Valve ①
2. Close carriage and set Pressure Set Valve ② to XX bar
3. Press [NEXT] on PEWeldBank.
4. Open carriage this will drop pressure to drag or less.
5. Insert Heater Plate.
6. Bring Pipe up to heater plate to XX bar pressure and hold Direction Lever for several seconds.
7. When you have bead up size
8. Reduce to 0-Drag Using Pressure Release Valve ①
   And Wait for Heat Soak Time.
8. Open Carriage: Just enough to remove heater plate.
9. Remove Heater Plate and Close carriage, hold Direction Lever for several seconds.

(Continual flow:- Hydraulic pump runs continually,
On demand flow :- Hydraulic pump only runs when lever activated)

# Valve Control Sequence when using PEWeldBank (Continual flow)




After Facing, cleaning, alignment and setting Heating / Drag pressure.

1. Close carriage and set Fusing pressure valve ③ to XX bar
2. Press [NEXT] on PEWeldBank
3. Open carriage ALL THE WAY this will drop pressure to drag or less.
4. Insert Heater Plate
5. Bring Pipe up to heater plate to XX bar pressure
6. When you have bead up size
7. Reduce to 0-Drag

To do this correctly you must move "Valve Selector" to 2 position and wait for pressure to drop to below drag, then move "Direction Lever" to neutral. And Wait for Heat Soak Time

8. Open Carriage:, move "Valve Selector" down to Fusion Position 3, move "Direction Lever" to the right, just enough to remove heater plate.
9. Remove Heater Plate and Close carriage.
10. To avoid pressure spike, slow carriage speed just before closure.

(Continual flow:- Hydraulic pump runs continually,
On demand flow :- Hydraulic pump only runs when lever activated)

# Review welds and add second GPS location

**www.PEWeldBank.com**

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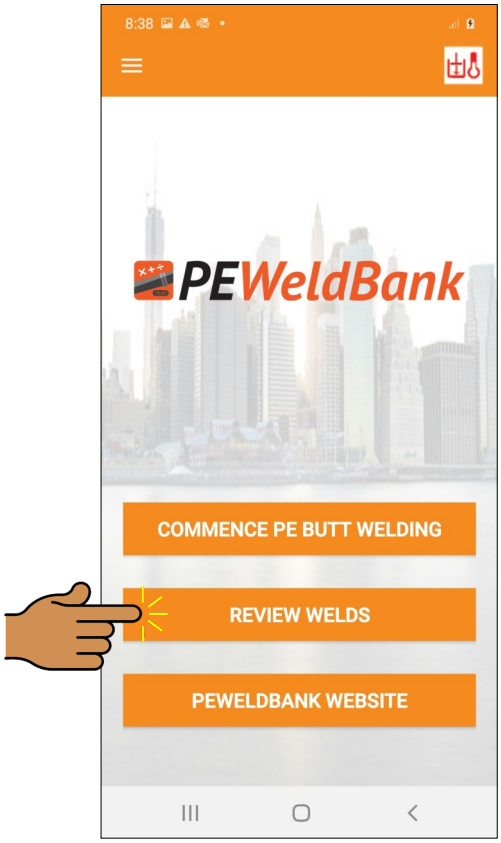
# How to Review Welds on Smartphone or Tablet

Go to the **HOME SCREEN**

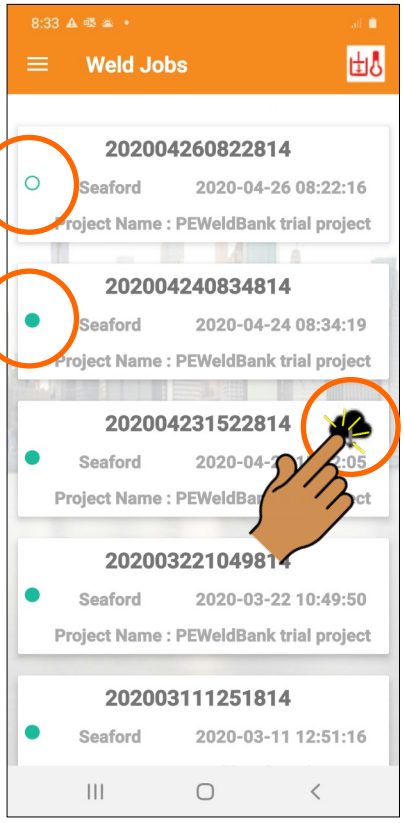
Click on **REVIEW WELDS**




Empty green circle indicates that weld has been recorded on Tablet / Phone, but is waiting to be uploaded to FMS

Full green circle indicates that the weld is recorded on Tablet / Phone *and* FMS

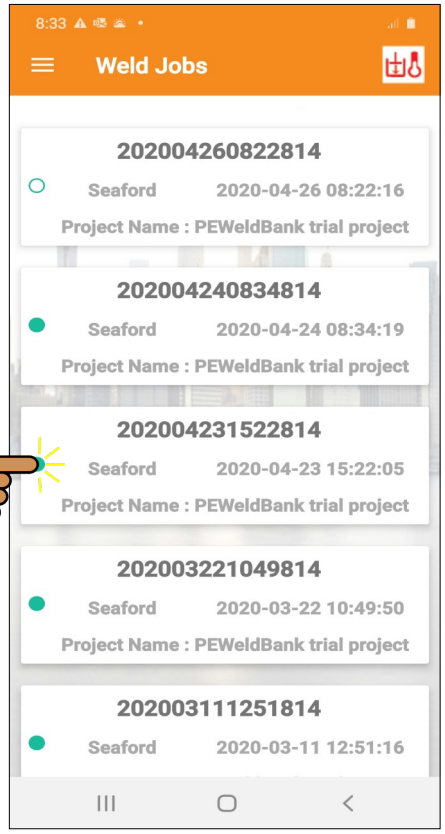
If you see a cloud icon this means this weld is only on the FMS but can be downloaded to the Tablet / Phone by clicking on icon

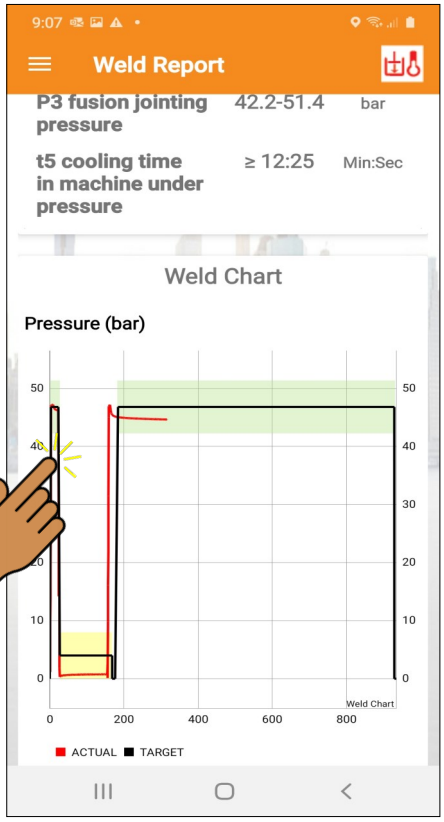


# How to Review Welds - Insert 2nd GPS Location

A valuable feature of ***PEWeldBank*** is the ability to add a 2nd GPS location. This is particularly useful where the installation location is different to where the welding was undertaken.

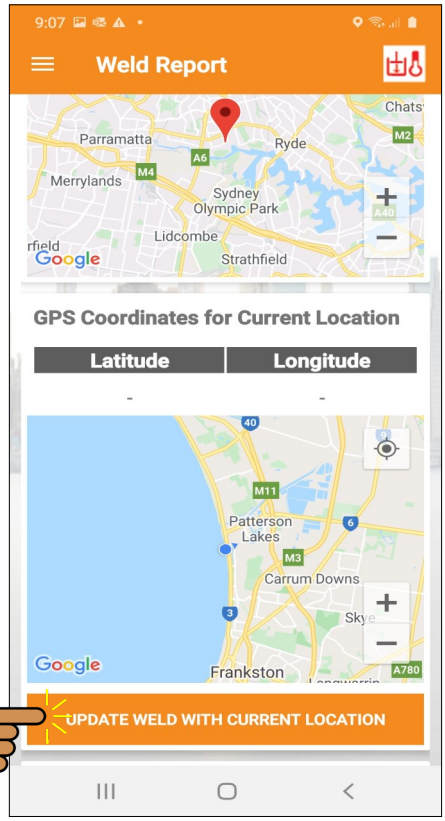
From the Review Welds screen (see previous page), select a weld you want to review or add the second GPS location.




The on-screen Report shows all information about this weld

Zoom into graph to see finer detail




Scroll down further to find the GPS location.

Click here to update weld location, this does not change original information it simply adds a second GPS location for this weld which will be available on reports.

# Trouble shooting

**www.PEWeldBank.com**

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## Troubleshooting

| Pressure Sensor | | |
|---|---|---|
| Problem | Reason | Solution |
| No fast flashing blue status light on sensor | Sensor connected to wrong side of hydraulics | Make sure it is connected to closing side of hydraulics (this is generally the cylinder inlet closest to middle of machine see photo) |
| | Sensor not connected to hydraulic with | Connect transducer cable to transducer and sensor and increase pressure, fast flashing should start within 10 seconds |
| | Orange transducer connected to wrong port on sensor | Connect transducer cable to Port "1" on sensor |
| | Battery low or flat on sensor | Charge sensor until Charging light shines green |
| | | Check operation of sensor by momentarily removing and replacing battery, Blue Status light should flash fast |
| Zero pressure reading on smartphone | | Check above information |
| I have fast flashing blue light but wont connect to smartphone | Bluetooth turned off in smartphone | Turn Bluetooth to on in smartphone |
| | | Smartphone must be connected to internet for initial pairing |
| | Camera disabled | Allow camera settings in smartphone |
| | | Try connecting to nearest sensor rather than scanning qr code |
| | Not paired | Check in PEWeldBank on smartphone settings > sensors, your sensor should be listed here (check that the number matches number on sensor) delete any sensor not currently required |
| | Battery low or flat on sensor | Charge sensor until Charging light shines green |
| | Battery low or flat on smartphone | Charge smartphone |
| | Sensor not connected to | Check above information |
| Zero pressure reading on smartphone | | Check above information |
| Pressure reading on Machine Gauge is different to smartphone | Machine Gauge is probably incorrect | All PEWeldBank transducers are highly accurate and calibrated when packed, if concerned have your gauge tested. |

## Troubleshooting

| Temperature Sensor | | |
|---|---|---|
| **Problem** | **Reason** | **Solution** |
| No fast flashing blue status light on sensor | Surface Probe not in contact with Hot heater plate | Hold Surface Probe against Hot heater plate for at least 10 seconds this will activate sensor |
| | Battery low or flat on sensor | Charge sensor until Charging light shines green |
| | Surface Probe not connected to correct port on sensor | Connect Surface probe to "Fixed" port on sensor |
| | | Check operation of sensor by temporally removing and replacing battery, Blue Status light should flash fast |
| I have fast flashing blue light but wont connect to smartphone | Bluetooth turned off in smartphone | Turn Bluetooth to on in smartphone |
| | | Smartphone must be connected to internet for initial pairing |
| | Camera disabled | Allow camera settings in smartphone |
| | | Try connecting to nearest sensor rather than scanning qr code |
| | Not paired | Check in PEWeldBank on smartphone settings > sensors, your sensor should be listed here (check that the number matches number on sensor) delete any sensor not currently required |
| | Battery low or flat on sensor | Charge sensor until Charging light shines green |
| | Battery low or flat on smartphone | Charge smartphone |
| | Surface probe must be held against heater plate | Hold Surface Probe against Hot heater plate for at least 10 seconds this will activate sensor |
| Temperature reading on heater plate controller is different to smartphone | Temperature reading is possibly incorrect or reading core temperature, not surface temperature | All PEWeldBank surface probes are accurate and calibrated when packed, if concerned have your heater plate independently tested. |

## Calibration Details

In accordance with

ASTM F3124-15. Standard Practice for

Data Recording the Procedure used to Produce Heat Butt Fusion Joints in Plastic Piping Systems or Fittings.

GOPOLY Pty Ltd (the manufacturer of the PEWeldBank sensor set) recommends bi-annual calibration. However, local governance may have different requirements, so we suggest that you check with the relevant authorities in your area.

**Pressure Transducers** come with a 5-year performance guarantee from the instrument manufacturer, the Pressure Transducers can be tested / compared against qualified instruments.

**Surface Temperature Probes** come with a 2-year performance guarantee from the instrument manufacturer. The Surface Temperature Probes can be tested / compared against qualified instruments.

**Independent Laboratory Testing / Calibration** may be requested in some cases. If so, we recommend that you contact your local PE Weld Bank reseller or a local testing / calibration laboratory to calibrate Pressure Sensor / Transducer and Temperature Sensor / Surface Temperature Probe, or return to GOPOLY for this service.

# Appendix 1 Connection of Hydraulic test point

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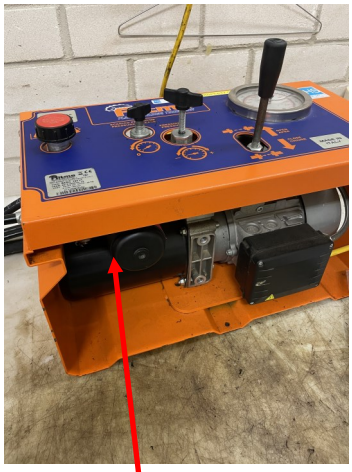
# Appendix 1a

## Ritmo Basic with steel case



N.B. first ensure that there is no pressure in system.

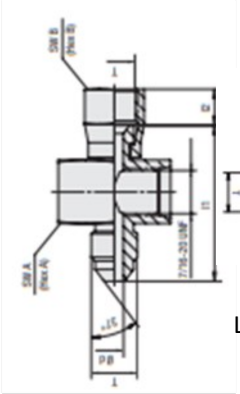
Remove hydraulic hose from control box

Fit “Stauff Swivel run tee”

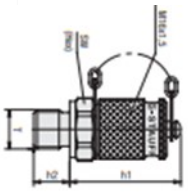
Fit hydraulic hose to “Stauff Swivel run tee”

Fit “Stauff Test point”

Fit PEWeldBank Transducer to Stauff test point 20.



Line item “1”



Line item “19”

PEWeldBank Transducer (supplied)

# Appendix 1b

## Ritmo Basic with Plastic case

N.B. first ensure that there is no pressure in system.

You will need to remove top cover from control box.

Remove hydraulic hose from control box

Fit item “1”

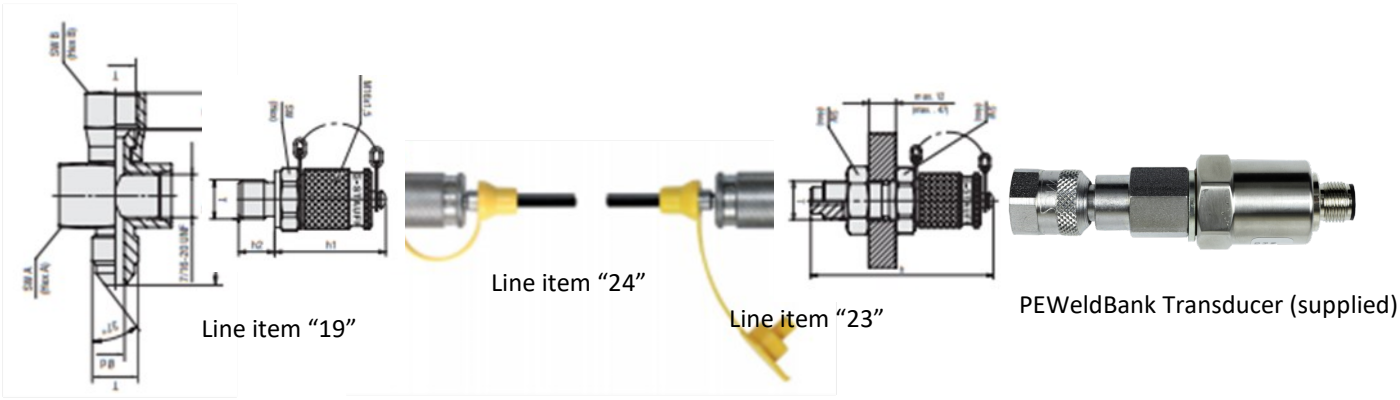
Fit hydraulic hose to item “1”

Fit item “19 to 1”

Drill hole into plastic case and fit item “23”

Connect Line item 24 to item 19 and Line item “23

Fit PEWeldBank Transducer to item “23”



Line item “1”

Line item “19”

Line item “24”

Line item “23”

PEWeldBank Transducer (supplied)

# Appendix 1c

# Dixon EHF 225 & 350

N.B. first ensure that there is no pressure in system.

Remove male quick connect fitting from the control box

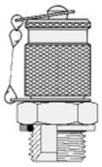
Fit item 26 and 25

Refit quick connect fitting

Fit item 21 into tee

Fit PEWeldBank Transducer to  item “21”

PEWeldBank Transducer (supplied)



Line item “21”

Line item “26

Line item “25

# Appendix 1d

## +GF+ TM Series

N.B. first ensure that there is no pressure in system.

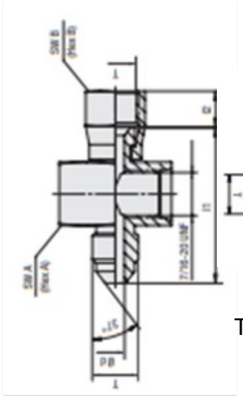
Remove male quick connect hydraulic coupling from control box

Fit TBC

Re-Fit male coupling to “TBC”

Fit “TBC

Fit PEWeldBank Transducer to TBC



TBC

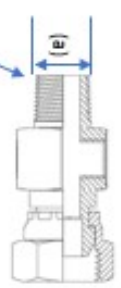
PEWeldBank Transducer (supplied)

TBC

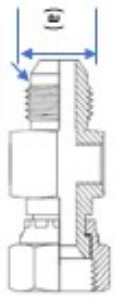
Please contact your local hydraulics company or PEWeldBank reseller for fittings.

The following is a guide, we will add to this as more information becomes available.

Hydraulic Test Port Tee Identification




| Line No | "BSPT" Male x BSPP Female Swivel BSPP Test Port Tee | | | |
|---|---|---|---|---|
| | Part Number | Description | OD mm (a) | Price |
| 1 | BTM-BSF-BPF-0404 | 1/4 BSPT M/F Test 1/8 BSPP | 13.03± | |
| 2 | BTM-BSF-BPF-0606 | 3/8 BSPT M/F Test 1/8 BSPF | 16.50± | |
| 3 | BTM-BSF-BPF-0808 | 1/2 BSPT M/F Test 1/8 BSPP | 20.59± | |
| 4 | BTM-BSF-BPF-1212( | 3/4 BSPT M/F Test 1/8 BSPPF | | |
| 5 | BTM-BSF-BPF-1616( | 1 BSPT M/F Test 1/8 BSPPF | | |




| | "JIC" Male x JIC Female Swivel BSPP Test Port Tee | | | |
|---|---|---|---|---|
| | Part Number | Description | OD mm (a) | |
| 6 | JIM-JIF-BPF-070702 | 7/16 JIC M/F Test 1/8 BSPPF | 10.97± | |
| 7 | JIM-JIF-BPF-090902 | 9/16 JIC M/F Test 1/8 BSPPF | 14.13± | |
| 8 | JIM-JIF-BPF-121202 | 3/4 JIC M/F Test 1/8 BSPPF | | |
| 9 | JIM-JIF-BPF-141402 | 7/8 JIC M/F Test 1/8 BSPPF | | |
| 10 | JIM-JIF-BPF-171702 | 1-1/16 JIC M/F Test 1/8 BSPPF | | |
| 11 | JIM-JIF-BPF-212102 | 1-5/16 JIC M/F Test 1/8 BSPPF | | |


| | ORFS Male x JIC Female Swivel BSPP Test Port Tee | | | |
|---|---|---|---|---|
| | Part Number | Description | OD mm (a) | |
| 13 | ORM-ORF-BPF-090 | 9/16 ORFS M/F Test 1/8 BSPPF | | |
| 14 | | | | |
| 15 | G-M0914 | NIPPLE 9/16 JIC X 14 METRIC | | |
| 16 | A-J-0609 | ADAPTOR BSPT X 9/16 JIC M/F | | |
| 17 | | | | |
| 18 | | | | |


| | BSPP Male x Test 20 Male | | | |
|---|---|---|---|---|
| | Part Number | Description | OD mm (a) | |
| 19 | BPM-TEST-0220 | **1/8 BSPPM x TEST 20 M | 9.60± | |
| 20 | BPM-TEST-0420 | 1/4 BSPPM x TEST 20 M | 10.90± | |
| 21 | BPM-TEST-0620 | 3/8 BSPPM x TEST 20 M | 13.05± | |
| 22 | BPM-TEST-0820 | 1/2 BSPPM x TEST 20 M | | |

** Suits above Test Port Tees

| | Test 20 Bulk Head Coupling & hose | | |
|---|---|---|---|
| | Part Number | Description | |
| 23 | 432-5612 | Test 20 Bulk Head Coupling | |
| 24 | Test 20 hose x 400mm | Test 20 hose x 400mm | |

| | Misc | | |
|---|---|---|---|
| 25 | BTM-BTM-0404 | 1/4" BSPTM x 1/4" BSPTM Nipple | |
| 26 | BTF-BTF-BTF-0404( | 1/4" BSPT Female Tee* TPT | |

*branch tapped 1/4" Parallel

Please contact your local hydraulics company or PEWeldBank reseller for fittings.

The following is a guide, we will add to this as more information becomes available.

| | | | Price | |
|---|---|---|---|---|
| 1<br>19 | Ritmo Basic 160-315 in steel case | BTM-BSF-BPF-040402<br>BPM-TEST-0220 | | Remove hose from pressure side of block and install these fittings |
| 1<br>19<br>23<br>24 | Ritmo Basic 160-315 in Plastic case | BTM-BSF-BPF-040402<br>BPM-TEST-0220<br>432-5612<br>Test 20 hose x 400mm | | Remove top from case install tee between hose and block, drill hole in case install 432-5612 fitting then connect with supplied hose |
| 1<br>19 | Omisa Whiteline Basic 160-315 in | BTM-BSF-BPF-040402<br>BPM-TEST-0220 | | Remove hose from pressure side of block and install these fittings |
| 15<br>16<br>7<br>19 | Riyang (OLD) Silver machine | G-M0914<br>A-J-0609<br>JIM-JIF-BPF-090902<br>BPM-TEST-0220 | | Remove original nipple and Fit these fittings under accumulator and swing down on 45 degrees |
| 7<br>19 | Worldpoly 160-315 WHD160/315 | JIM-JIF-090902<br>BPM-TEST-0220 | | Remove hose that connects to block from gauge and install these fittings |
| 21<br>25<br>26 | Dixon EHF225 & 355 | BPM-TEST-0420<br>1/4" BSPTM x 1/4" BSPTM N<br>1/4" BSPT Female Tee*TPT | | Remove Male Quick connect and install these fittings refit male quick connect |
| | Technodue | | | |

# Appendix 2
# Updating Sensor Firmware

**www.PEWeldBank.com**

Info@PEWeldBank.com

## Updating Sensors Firmware ONLY VIA iOS (apple)

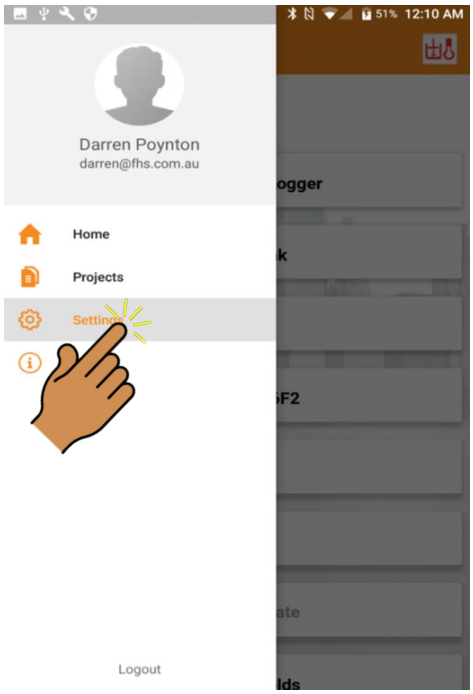
*N.B. only use iOS device to update Firmware NOT Android*

*Temperature Sensors V1.0.4 and Pressure Sensors V1.3.7 or earlier cannot be updated and must be returned to GoPoly for update.*

Ensure that Bluetooth is enabled on your iOS smartphone / tablet. Follow the prompts

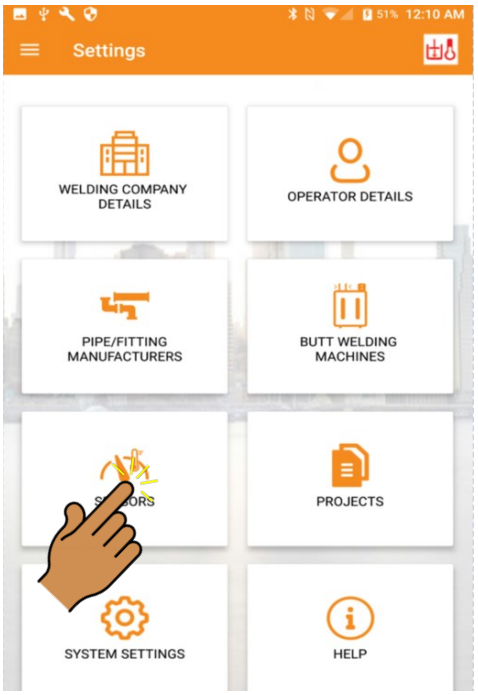
1. Click **Dropdown Menu**


2. Click **Settings**

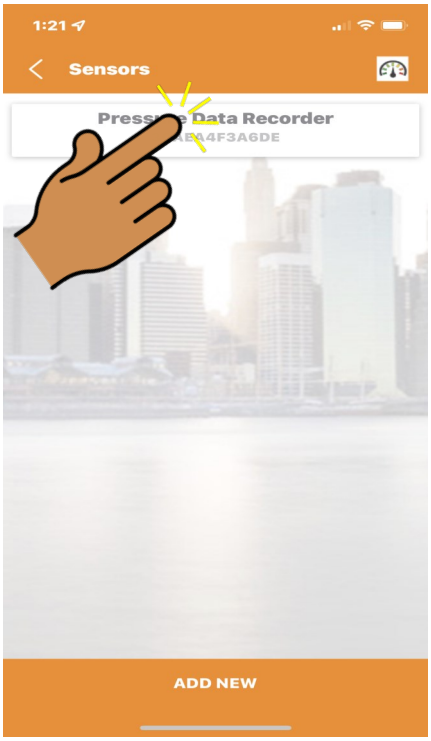


# Updating Sensors Firmware

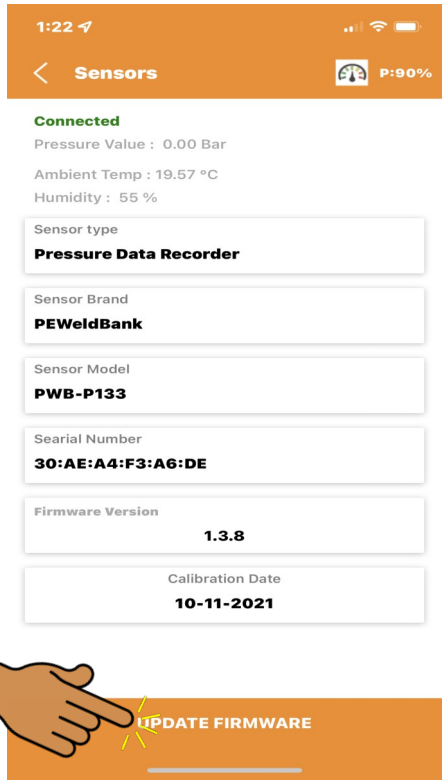
3. Click **Sensors**




4. Click **sensor**

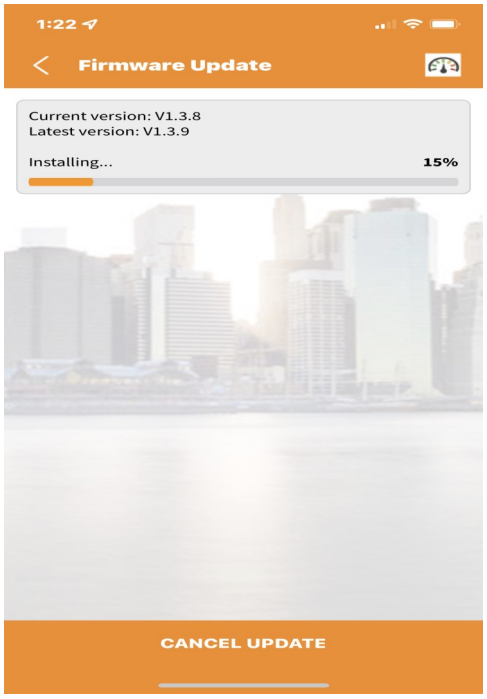



5 Click **Update Firmware**



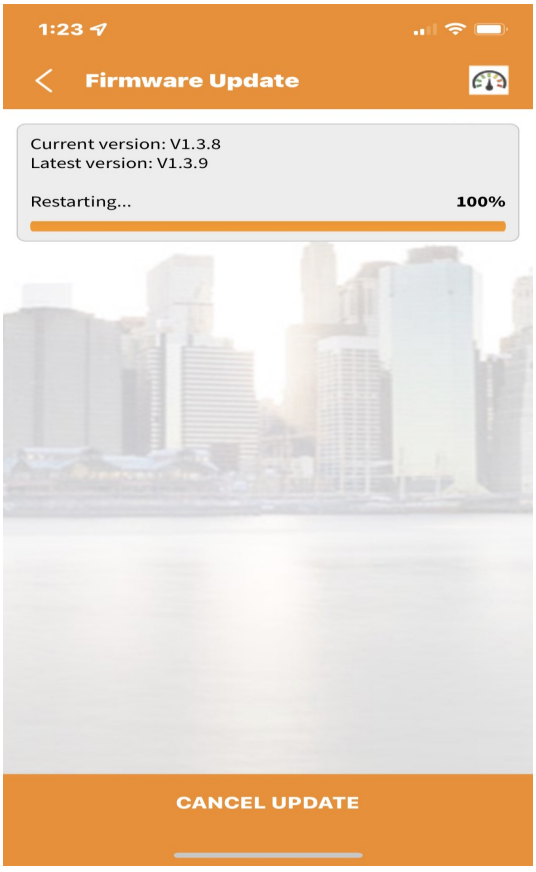

6 Click **Start Update**

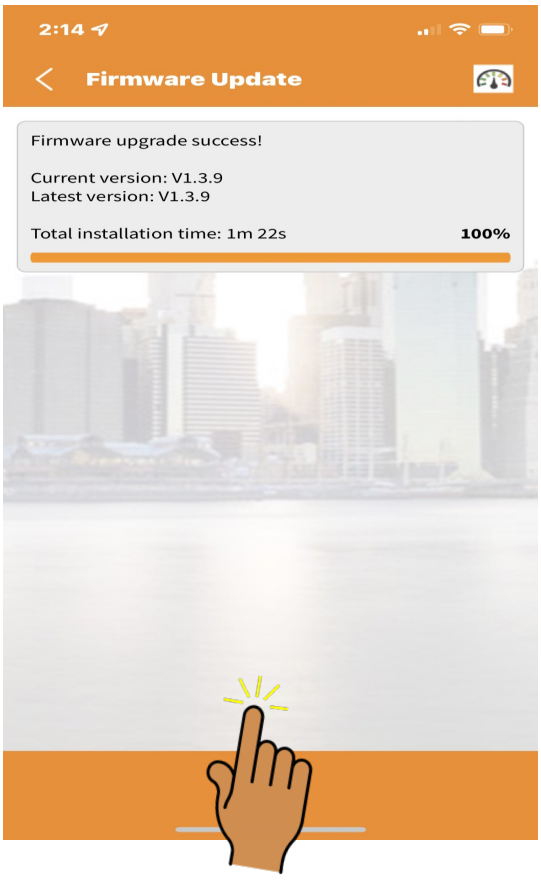
# Updating Sensor Firmware




7. Firmware updated

5 Click **Finish**



# Appendix 3
# Connection to Heater Plate via PT100 internal sensor

**www.PEWeldBank.com**

Info@PEWeldBank.com


The Sensors dated March 2022 and later allow for connection to the Butt welding machines heater plate internal PT100 probe (where available)

Many machines have provision to plug in a data logger or temperature sensor. i.e. Ritmo, Worldpoly and GF, in most cases this may be used to connect to PE Weld Bank

## McElroy and Dixon

Many McElroy and Dixon heater plates have a small temperature gauge inserted into the heater plate this can be removed and a PT100 probe inserted for connection directly to PEWeldBank

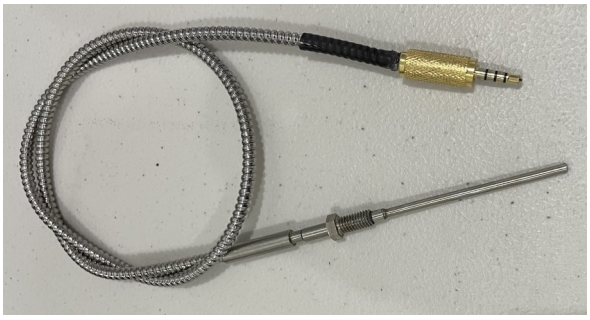
This 1m long lead is included. One end is to plug into the Fixed sensor port (3.5mm 4 pole) the other end will plug into most Ritmo Basic and Delta model machines (5.5 x 2.1mm DC Barrell plug).


This 1m long lead is included. One end is to plug into the Fixed sensor port (3.5mm 4 pole) the other end has 4 wires allowing fitment of you own plug to suit your machine. (Red = FORCE — , White = RTD —, Green = RTD +, Black = FORCE +. For connection to 2 wire probe join [Red+White] & [Green+Black]

For connection to your machine, plugs can be purchased from your local electronics supplier, these are examples of plugs that are compatible to many Worldpoly and GF machines, you will need to contact your machine supplier for wiring diagrams

GF example

Worldpoly example



This lead is compatible to many Dixon and McElroy machines where you can remove the existing small dial ther-mometer and replace with this PT100 probe. (these can be made to order)

## Appendix 4

User Hierarchy;

| PE Weld Bank User Heirarchy | | | |
|---|---|---|---|
| | SUPER ADMIN* / WELDER | ADMIN / WELDER | WELDER |
| Person that initially set up system | Yes | No | No |
| Edit Company Details | Yes | No | No |
| Maintain Credit Card Details | Yes | No | No |
| Adding / Deleting / Pairing Sensors | Yes | Yes | Yes |
| Adding / Deleting / Editing:<br>- Users<br>- Projects<br>- Butt Welding Machinery<br>- Electrofusion Machinery<br>- Setting preferances for:<br>- OH&S check list<br>- Heater Plate Temperture Recording<br>- Custom Weld Number | Yes | Yes | No |
| Reviewer:<br>- Approve / Reject Welds | Yes | Yes | No |
| Select:<br>- Projects<br>- Machines<br>- Welding Standards<br>- Conduct Welding | Yes | Yes | Yes |

N.B. App system settings are device based not user based,
i.e. if user was to log into a different device the settings may not be correct for this user.

*To change Super admin user the Super admin must send an email to info@peweldbank.com and nominate the new Superadmin user from the user list

## For further information:

Please contact PEWeldBank:

Email: info@PEWeldBank.com

Please note that our sales and support office is based in Melbourne Australia, we will respond to all enquiries as soon as possible, however we have a number of resellers worldwide that may be able to assist you.

See our website for your nearest reseller.

www.peweldbank.com/reseller