

# 2008 Model Tester

## Operating Instructions

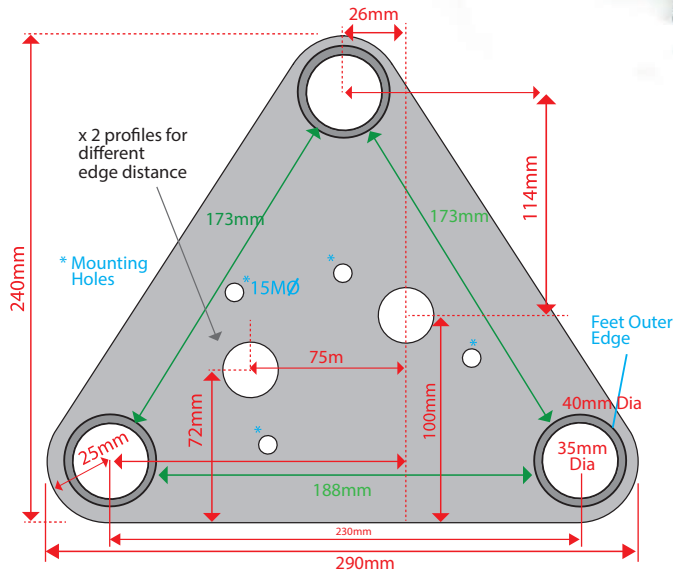


## Model 2008 Tester Parts

1. Operating Nut
2. Digital Gauge
3. Load Spreading Bridge
4. M20 Connecting Rod
5. M20 Adjustable Nut
6. 22mm Ratchet Spanner
7. Threaded Adaptors M12-M30
8. Spirit Level



## Model 2008 Bridge Footprint



## GENERAL DESCRIPTION

The Hydrajaws model 2008 Heavy Duty Tester is designed for establishing linear loading of mechanical and resin anchors, eye type anchors, threaded bar, re-bar and structural bolts and fixings to a maximum load of 145kN.

## TECHNICAL SPECIFICATIONS

### Intelligent digital pressure gauge

- 0-145kN (4 segment LCD display)
- Accurate to +/-2.5% FSD
- Indication of pull-out load
- Rise and fall output
- Maximum load achieved function
- Calibration in kN
- Traceable Calibration Certificate supplied valid for 1 year
- Material: stainless steel and ceramic
- Battery Powered (PP3)

## USE OF THE TESTER AS DIRECTED

The tester is intended for use by skilled personnel with the appropriate training and knowledge of the applicable safety precautions.

**It is essential that the operating instructions are read before the tester is operated for the first time.**

**Always keep these operating instructions together with the tester.**

**Ensure that the operating instructions are with the tester when it is given to other persons.**

## CONTENTS

	Page
2008 Model Tester Parts	2
General description	3
Technical Specifications	3
Kit contents	4
<b>1. LOAD SPREADING BRIDGE - set up</b>	<b>5</b>
<b>2. General Testing Procedure - set up</b>	<b>6</b>
<b>3. General Testing Procedure - Operating the tester</b>	<b>7</b>
<b>4. Eyebolt Testing</b>	<b>8</b>
<b>5. Re-bar operating instructions</b>	<b>9</b>
<b>6. 2008 MODEL TESTER ASSEMBLY TO 12.5 TON LOAD SPREADING BRIDGE</b>	<b>11</b>
<b>6. GENERAL GUIDELINES FOR TESTING</b>	<b>11</b>
<b>7. Operating the digital gauge</b>	<b>12</b>
<b>8. Operating instructions for optional Bluetooth Digital Gauge</b>	<b>13</b>
<b>9. Changing the gauge battery</b>	<b>14</b>
<b>10. Calibration/Repair/ Replacement of gauge</b>	<b>14</b>
<b>11. Bluetooth Digital Option - Cable removal</b>	<b>15</b>

## SAFETY RULES

- Modification of the tester, or tampering with it's parts is not permissible.
- Observe the information printed in the operating instructions applicable to operation care and maintenance.
- The tester and its accessories may present hazards when used incorrectly by untrained personnel or not as directed.
- Use only the genuine Hydrajaws accessories or ancillary equipment listed in the operating instructions.

## KIT CONTENTS

1. Model 2008 Tester Body
2. 22mm Operating Nut
3. 0-145kN Digital Gauge (Bluetooth version optional for recording data via suitable mobile device)
4. Offset Load Spreading Bridge plate with 10mm eye hook
5. 3 Telescopic legs with fully adjustable swivel feet
6. M20 Connecting Rod 400mm
7. M20 Adjustable Nut
8. M24 Ratchet Spanner
9. 5 Threaded Adaptors M20 > M12, M16, M20, M24, M30
10. Spirit level
11. Allen Keys
12. Spare screws
13. Carry Case with Foam Filler
14. Operating Instructions
15. Calibration Certificate



## 1. LOAD SPREADING BRIDGE - set up

The bridge has been designed specifically for the model 2008 tester and directs reaction loads away from the fixing (**fig 1**). The lightweight aluminium load spreading bridge fits in the carry case disassembled (**fig 2**). The bridge is simple to assemble and adjust. Three fully adjustable telescopic legs offer 11 height positions 25mm apart (**fig 3**). The legs are held in place with steel ball pins.

The swivel feet offer 30mm of fine adjustment.

The triangular shape bridge plate is deliberately offset to offer two different close to edge testing distances in relationship to the fixing under test.

The tester can be secured to the bridge plate in two positions with the supplied cap screws (**fig 4**). Securing the tester to the plate is not crucial when the tester is being operated in a horizontal position however is essential when the tester is in a vertical position or inverted.

Fig 1



Fig 2



Fig 3



Fig 4



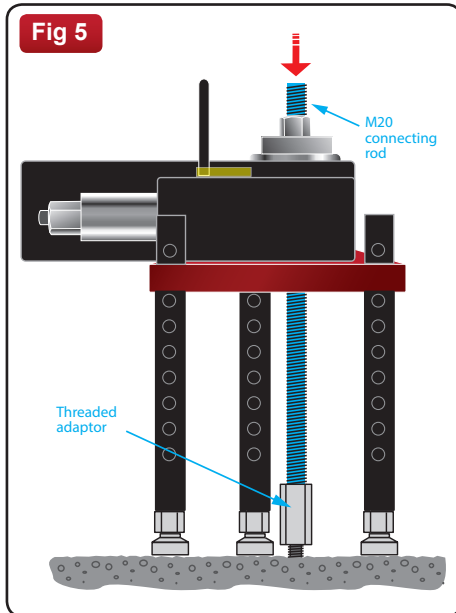


## 2. General Testing Procedure - set up

Assemble the load spreading bridge.

Secure the tester to the bridge if appropriate.

Position the tester and bridge over the fixing and using the M20 connecting rod pass this through the tester and bridge (fig 5).



Connect the M20 connecting rod to fixing using the appropriate threaded adaptor (fig 6).

The standard tester kit features five metric threaded adaptors:

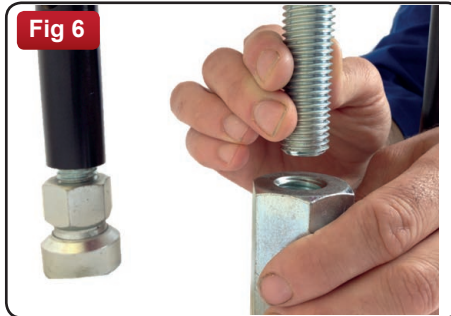
M20>M12, M20>M16, M20>M20,  
M20>M24 or M20>M30.

Note: Other metric thread sizes are available via special order.

Imperial UNC adaptors are available from stock.

Sizes; 3/8", 1/2", 5/8", 3/4" & 1"

Install M20 adjusting nut (fig 7) on top of the threaded pull rod.



Adjust the 3 telescopic legs to an appropriate height, take up any initial slack using the threaded pull rod so that the fixing under test remains connected with no movement between the connecting rod nut and the top of the tester.

Ensure the tester is level by adjusting the swivel feet against the level bubble on the top of the tester body (fig 8).

Each threaded swivel foot features 30mm of fine adjustment.

Tighten with ratchet spanner (fig 9).



## 3. General Testing Procedure - Operating the tester

Switch the digital gauge on (see separate gauge operating instructions in this manual).

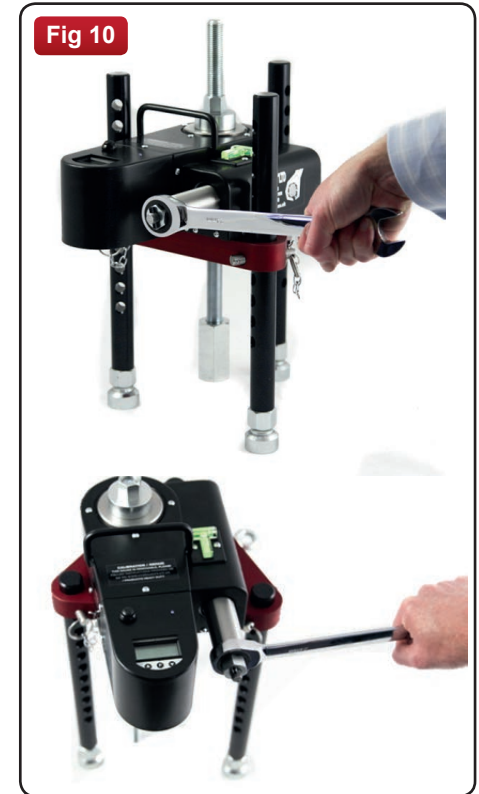
Commence applying the load to the fixing by turning the hexagon nut on the end of the operating piston in a clockwise direction by hand until tight or reading appears on gauge.

Apply load using the ratchet spanner (fig 10) and observe the reading on the gauge until the required test load is reached. This reading could decay due to first movement or creep on the anchor. Continue to apply the load to the required reading and observe that the loading remains steady. Should a serious drop in the indicated load occur again, the fixing is likely to be insecure and should be investigated.

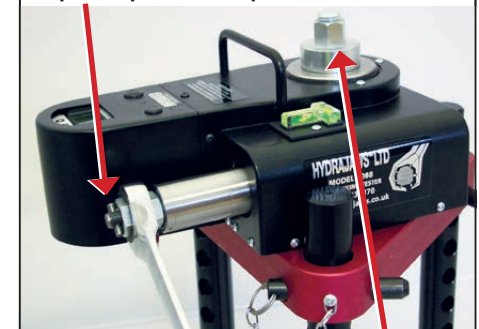
*As the digital gauge is very accurate a drop off will be noticeable but this should stabilise after a period of time. If the reading continues to drop off, further investigation of the fixing would be required.*

To release the load, reverse the ratchet ring spanner and turn the hexagon nut anticlockwise and observe the load reading on the gauge until it approaches zero. Unwind the operating nut by hand until it is resting on the stop and unwind the adjustable nut and remove.

**DO NOT CONTINUE TO UNWIND AGAINST THE STOP, OTHERWISE SERIOUS DAMAGE WILL OCCUR.**



**WARNING**  
DO NOT unwind the piston past the stop!



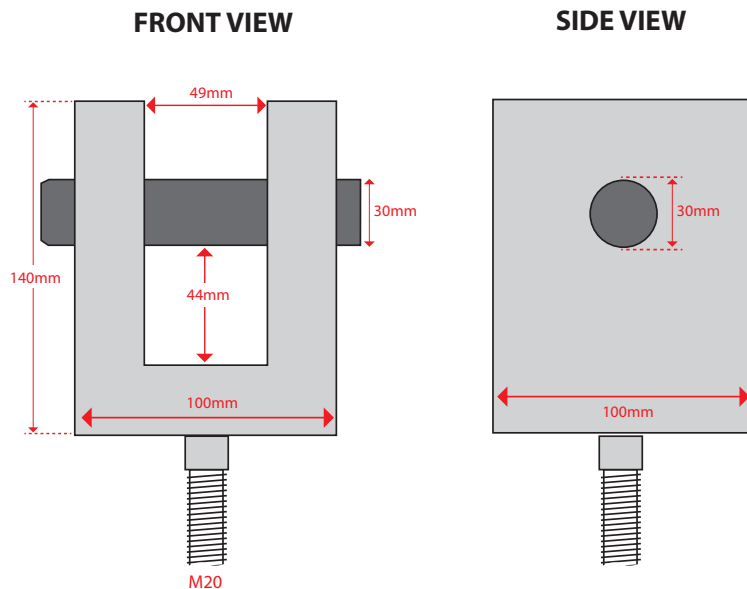
If after a test, the operating nut has been unwound fully however the top piston remains tight, untighten the adjustable nut with the ratchet spanner.

## 4. Eyebolt testing

1. Screw the M20 connecting rod into the heavy duty clevis and ensure the thread engages fully so is flush with the block.
2. Adjust the 3 telescopic legs on the bridge so that the pin lines up with the eye under test. Place the pin through the eye and secure the clevis and pin.
3. Take up any further slack by either adjusting the thread on the feet and/or tightening the M20 adjustable nut.
4. Apply the load by operating the ratchet spanner clockwise observing the reading on the gauge.
5. After the test release the load by operating the ratchet spanner anti-clockwise and remove the clevis and pin.



### Heavy duty clevis sizes



## 5. Re-bar operating instructions

1. The Model 2008 Portable Heavy Duty Tester will accept Rebar adaptors 6mm, 8mm, 10mm, 12mm, 14mm, 16mm, 18mm, 20mm & 22mm re-bar directly through the cylinder.
2. Place the tester and triangular load spreading bridge directly over the re-bar by passing through the cylinder hole.
3. Place the tapered barrel over the re-bar with the smaller diameter to the bottom until it rests on top of the cylinder. Insert the collet (3pcs) into the barrel and this will sit flush or just inside (**fig 11**).
5. Adjust the fine thread at the base of each foot and on the triangular load spreading bridge legs by turning each foot clockwise until all the slack is taken up and the collet has gripped onto the re-bar. Failure to do this procedure may result in the tester running out of stroke. (10mm) (**fig 12**).
6. Ensure the tester is level by observing the spirit level on top of the tester case (**fig 13**).

Fig 11



Fig 12



Fig 13



## 5. Re-bar operating instructions *continued..*

- Operate the tester by using the M24 ratchet spanner to the desired load (**fig 14**).
- Once the test is complete, release the load fully and lower the threaded feet on each leg by turning the legs anti clockwise. Full adjustment needs to be made so that the barrel can be removed from the collet.
- Hit the top edges of the barrel with a hammer downwards until the collet can be removed, further adjustment to lower the bridge legs may be required. (**fig 15**).



Fig 14

Fig 15



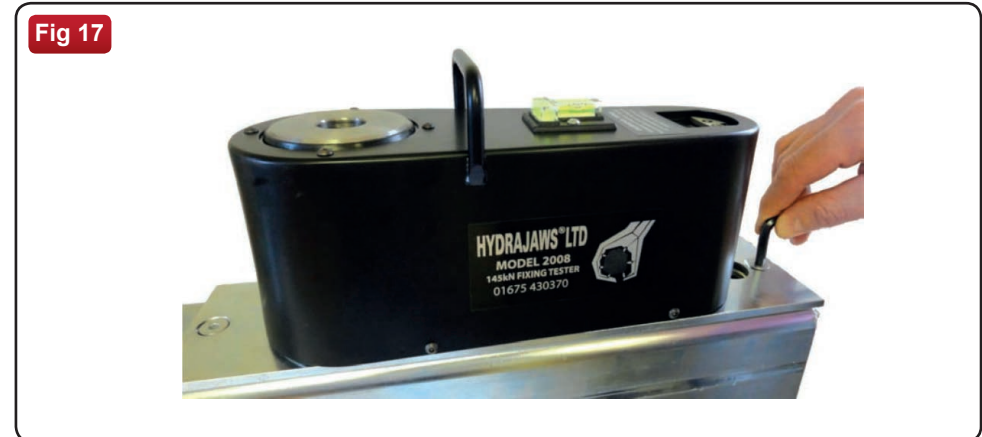
## 6. 2008 MODEL TESTER ASSEMBLY TO 12.5 TON LOAD SPREADING BRIDGE

- Screw the three M24 legs into the bridge to the desired height and adjust to a level position. (Lock the x3 M24 nuts to the underside of the bridge).
- Remove the silver locating plate from the top of the bridge using the 5mm allen key and remove the 2 M8 x 15 counter sunk screws.
- Secure the plate to the Model 2008 tester using holes marked A with the x 2 M8 x 25 counter sunk screws and this will allow the tester to be parallel when mounted on the bridge.
- Holes marked B will allow the tester to be at 90 degrees to the bridge if required.
- Secure the plate to the load spreading bridge with the x 2 M8 x 15 counter sunk screws (**fig 17**).
- Spare screws are also provided for the tester assembly and bridge assembly.

Fig 16



Fig 17



PLEASE NOTE THAT THE MAXIMUM CAPACITY OF THIS LOAD SPREADING BRIDGE IS 12.5 TON (125kN). This load should not be exceeded.



## 7. Operating the digital gauge

### Operate Gauge in 'Normal rise and fall' mode

Press button **P** to switch gauge on to 'Normal rise and fall mode'.

This will give a load reading in kN rising as the operating handle on the tester is turned clockwise. By turning the handle anti-clockwise the load will decrease and show the reading decreasing.

Press **P** to switch off gauge when finished.



### Operate Gauge in 'Peak Hold' mode

1. Press button **P** to switch gauge on
2. Press **▼** then **P**. On display 'OFF' will appear.
3. Press **▲** twice to display MAX.
4. Press **P** to display PASS.
5. Press **▲** and **▼** together for about 3 seconds then release.  
A small vertical arrow **↑** will appear in left hand side of screen.
6. To zero reading press **▲** and wait 2 seconds.

Gauge is now in peak hold mode and will display the maximum load achieved and retain this even when the load has decreased.

### Return to 'Normal rise and fall' mode

1. Press **▼** then **P** and display shows MAX.
2. Press **▲** and display reads OFF.
3. Press **P** twice and display reads 0.
4. Press **▲** and **▼** together twice until display reads - 0.0

(The last digit may not read 0 due to ambient temperature.)

Press **P** to switch off gauge.

The maximum load capacity of the MAN-SD1S-C transducer at the base of the gauge is 0-145kN and the gauge should not be loaded above this figure as permanent damage will occur. Eventually the battery will require replacement (when warning indicator comes on) and the battery fitted under the removable cover on the back of the gauge. Replace with type PP3 9 volt unit.

## To Zero the gauge

If the gauge is reading a small amount (0.32 for example) when no load is applied - use the following instructions to re-set the display to zero.

First release any pressure held in the Hydraulic Coupler by pushing in the pin at the base of the coupler.



### CAUTION:

DO NOT ZERO THE GAUGE WHEN IT IS UNDER LOAD.

- Press **P** to turn on then **▼**, display='Pdu'
- Press **P** display = 'OFF'
- Press **P** display = 'PASS'
- Press **P** display = '0'
- Press **▲** until reading reaches '5'
- Press **P** display = 'ZERO'
- Press **P** display = 'SET'
- Press **P** display = 'PSET'
- Press **P** display = '5'
- Press **P** display = '0.0'

## 8. Operating instructions for optional Bluetooth Digital Gauge

Hydr jaws revolutionary digital technology captures test results using an Android OS mobile device and dedicated software application, allowing for instant visual graphs onsite for anchors & eyebolts. The digital system using Bluetooth produces real time visual graphs for each test.

A button and active LED on the top of the Model 2008 tester housing indicates that the tester is equipped with this feature (fig 18).

To switch on the Bluetooth element simply press the button and the LED light will eliminate and begin to flash. Open the software application on the mobile device and select the tester gauge to establish a connection. When a Bluetooth connection has been established the LED will become constant.

Turn on the digital gauge as normal via the P button and operate as normal. Loadings will be visible on the tester gauge and results will be recorded on the mobile device\*.



Fig 18

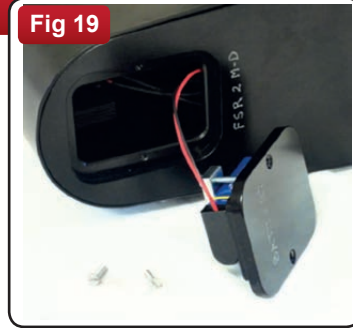


\*Separate instructions for use of the Hydr jaws Bluetooth Digital will be provided.

The Bluetooth digital gauge can be retro fitted to a Model 2008 tester.

## 9. Changing the gauge battery

The battery (PP3) is changed by removing the battery cover (2 x M3 flat head screws) in base of tester. Undo battery strap and remove battery by disconnecting. Replace battery and reassemble connections, do not over-tighten battery strap and replace cover (fig 19).



## 10. Calibration / Repair / Replacement of gauge

The gauge on this unit can be removed for calibration, repair or replacement, please follow the Instructions below:

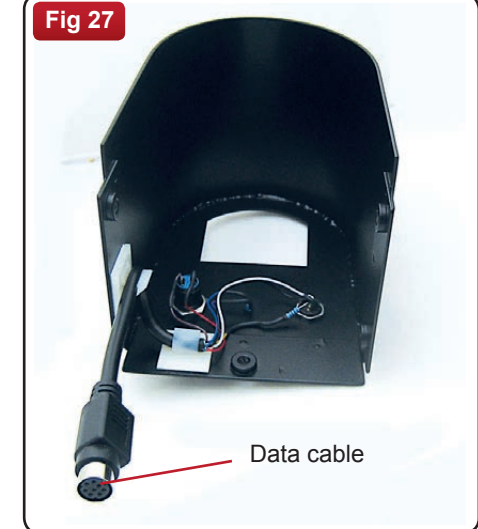
1. Remove the front cover piece from the main case by removing the x5 M4 dome head screws with the allen key provided. Once undone the case will simply lift off (fig 20, 21 & 22).
2. To remove the gauge, reach inside the case and disengage the gauge from the hydraulic coupling by pulling the coupler connector back (fig 23 & 24).
3. Unplug the battery by removing the battery connector (fig 25).
4. To install the gauge, push the coupler connector back before pushing the gauge home into position (fig 26).
5. To re-assemble reverse procedure.



## 11 Bluetooth Digital Option - Cable removal

If Hydrajaws Bluetooth Digital is fitted (A button and active LED on the top of the Model 2008 tester housing indicates that the tester is equipped with this feature) then an extra cable needs to be disconnected.

1. Follow procedure for removing dust cover, gauge and battery.
2. The data cable can be disconnected by pulling firmly (fig 27).





**FOR MORE INFORMATION  
ON HYDRAJAWS AND A  
FULL RANGE OF TESTING  
APPLICATIONS PLEASE VISIT  
THE WEBSITE AT:  
WWW.HYDRAJAWS.CO.UK**



**HYDRAJAWS<sup>®</sup>**  
**LIMITED**

20/21 The Courtyard  
Gorse Lane  
Coleshill  
Birmingham  
B46 1JA, UK.

Tel: +44 (0)1675 430 370  
Fax: +44 (0)1675 465 950

email: [tester@hydrajaws.co.uk](mailto:tester@hydrajaws.co.uk)  
[www.hydrajaws.co.uk](http://www.hydrajaws.co.uk)