



James Heal

OPERATOR'S GUIDE

HydroView

Hydrostatic Head Tester

Covering Serial Numbers
2136/22/1000 and upwards.



PPT Group UK Ltd
t/a James Heal®
Halifax, England

Publication 290-2136-1\$F
© 2023

Published by:

PPT Group UK Ltd
t/a James Heal
Richmond Works
Halifax
HX3 6EP
United Kingdom

TELEPHONE +44 (0) 1422 366355

E-mail	halifaxinformation@pptgroup.com
Sales	halifaxsales@pptgroup.com
Internet	www.jamesheal.com
	www.pptgroup.com

© 2023

TABLE OF CONTENTS

James Heal	v
Setting the Standard	v
Areas of Expertise	v
Technical Assistance.....	6
1. General Information	6
2. Revision History	2
3. Declarations of conformity.....	3
EU Declaration of conformity	3
UKCA Declaration of conformity	3
4. Summary.....	4
Machine description and Features	6
Instrument and Components	6
Specifications	9
Electrical Specifications.....	9
Electrical Power Cable	9
Dimensions.....	10
5. Pre-Installation	11
Customer Responsibilities.....	11
Area Planning.....	12
Air Supply.....	12
Water Supply.....	12
6. Delivery, assembly, installation & commissioning	13
Delivery Inspection	13
Unpacking Checklist.....	13
Delivery and Unpacking.....	14
Moving the Instrument	16
Lifting and Moving HydroView	16
Installation Procedure.....	17
Levelling the instrument.....	18
Connections.....	19
Electrical	19
Air Supply.....	19
Water Supply.....	19
General Safety.....	20
7. Operating instructions.....	21
8. Product Overview	24
Description of Hydrostatic Pressure	24
Description of Water Resistance	24
Description of Water Repellency.....	24

9.	Introduction To HydroView.....	24
	Features & Benefits.....	24
	Standards.....	24
10.	TestWise for HydroView	25
	User Creation and Management.....	25
	User Permissions	27
	General Settings.....	27
	Report Editing.....	28
	Exporting Results	30
	Test History Management and Searches	31
	Custom Standards Creator	32
11.	General Operation & TestWise touch for HydroView	34
	Test Preparation	34
	Basic operation of pneumatic clamp.....	34
	How to Change the Clamp Pressure.....	37
	Filling the instrument	38
	Draining the system.....	40
	Changing The Test Area	41
	Loading a Specimen	43
12.	Test Screen Overview	45
	Test Screen – Graph View	45
13.	Quick Test Procedure	46
14.	Standard Test Procedure	51
15.	Drop Review + Highlight Tool.....	55
16.	Inspection, testing and maintenance	57
	Maintenance and calibration.....	57
17.	Service & Calibration.....	59
	Service & Calibration	59
18.	Spares and Service List.....	60
19.	Cleaning instructions.....	61
	Wastewater Drawer	61
	General Cleaning.....	62
20.	Fault finding, trouble shooting and repair	63

James Heal

At James Heal, we are dedicated to designing and developing high precision testing instruments and test materials for physical and colour fastness testing. Our worldwide Service and Calibration division and expert technical assistance complement our product range, adding real value to your laboratory testing activities.

Setting the Standard

We are committed to forming close relationships and have established numerous partnerships within the textile industry, from trade and standards organizations, to test houses, customers and distribution partners.

With a heritage spanning more than 150 years, we have evolved and grown through a culture of continuous improvement, resulting in a thorough understanding of the applications, operating conditions and requirements of customers worldwide – from independent testing laboratories and test houses, to fabric suppliers, manufacturers and retailers.

Using knowledge and expertise, we consistently set the industry standard through product innovation and technology, with customer and user needs, present and future, driving our technological advancements. You can be assured that with James Heal, you will always receive the highest levels of product quality and customer service. We have a global network of Agents and Distribution partners, ensuring locally available product whenever, and wherever you need it.

Areas of Expertise

Textile: Colour Fastness

- Chlorinated Water
- Dry Cleaning
- Dry Heat
- Hot Pressing
- Laundering
- Light
- Perspiration
- Phenolic Yellowing
- Print Durability
- Rubbing
- Washing
- Water

Textile: Physical

- Abrasion
- Air Permeability
- Bursting Strength
- Compression and Puncture
- Crease and Wrinkle Recovery
- Drying Rate
- Wicking
- Durability
- Flammability
- Mass per unit area
- Pilling and Fuzzing
- Shrinkage
- Seam Slippage
- Security of Attachments
- Snagging
- Spray Rating
- Stretch and Recovery
- Surface Deterioration
- Tear Strength
- Tensile Strength
- Washing and Drying
- Water Resistance

Non-Textile

- Bursting strength of nonwovens, plastics, paper and medical products
- Micro-scratching of laminates, wooden, painted, automotive and high gloss surfaces
- Physical and colour fastness testing of leather
- Rubbing fastness of laminates and wooden surfaces
- Tear strength of paper and plastic

Technical Assistance

- Operator training
- Knowledge transfer
- Applications support
- Engineering support

1. General Information

Manufactured by:

PPT Group UK Ltd
t/a James Heal®
Richmond Works
Lake View
Halifax
HX3 6EP

Telephone No: 01422 366355

This manual is valid for the James Heal® HydroView, Hydrostatic Head Tester.

This manual covers the operation and day to day maintenance for the James Heal® HydroView, Hydrostatic Head Tester. It has been written and illustrated using the best possible information at the time of publication. The manual should be regarded as part of the equipment and should be kept with it throughout its working life.

Any difference between the manual and the equipment reflects improvements introduced after the publication of the manual. Any amendments will be recorded in the Revision History table below.

Changes, technical inaccuracies, and typographical errors will be corrected in subsequent revisions.

As part of our policy for continuous product development and improvement, James Heal® reserves the right to make changes in design and specification without notice.

2. Revision History

See front cover for Publication number, e.g., 290-2136-1

Revision	Date	Originator	Details Of Revision
A	06/05/2021	AC	Operators Guide Created
B	04/05/2022	LK	Standards List Amended
C	08/06/2022	LK	European Plug Guidance Added
D	05/09/2022	GI	Model & Serial Number Amended
E	28/06/2023	LK	New Format Created
F	13/07/2026	PG	Added "How to Change the Clamp Pressure"

3. Declarations of conformity

EU Declaration of conformity

This declaration is issued under the sole responsibility of the manufacturer.

We **James Heal**
of **Richmond Works, Halifax, HX3 6EP, UK**

in accordance to the following directive(s):

2014/30/EU	The Electromagnetic Compatibility Directive
2006/42/EC	The Machinery Directive
2011/65/EU	The RoHS Directive

hereby declare that:

<i>Equipment:</i>	HydroView
<i>Models:</i>	2136
<i>Description:</i>	Hydrostatic Head Tester
<i>Serial Number:</i>	2136/22/1000 & subsequent

is in conformity with the relevant Union harmonisation legislation, based on the conformity of the following documents:

Applied Harmonised Standards:

<i>Ref. No</i>	<i>Title</i>	<i>Edition/date</i>
EN 61010-1	Safety requirements for electrical equipment for measurement, control, and laboratory use. General requirements	2010+A1:2019
EN 61326-1	Electromagnetic Compatibility (EMC) equipment for measurement, control and laboratory use.	2013

I hereby declare that the above mentioned product is in conformity with the stated Standards.

UKCA Declaration of conformity

This declaration is issued under the sole responsibility of the manufacturer.

We **James Heal**
of **Richmond Works, Halifax, HX3 6EP, UK**

hereby declare that:

<i>Equipment:</i>	HydroView
<i>Model:</i>	2136
<i>Description:</i>	Hydrostatic Head Tester
<i>Serial Number:</i>	2136/21/1000 & subsequent

is in conformity with the relevant UK Statutory Instruments (and their amendments):

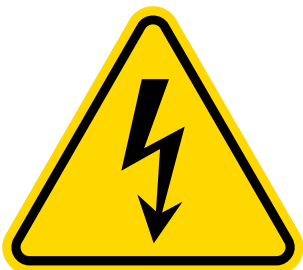
2008 No. 1597	The Supply of Machinery (Safety) Regulations 2008
2016 No. 1091	The Electromagnetic Compatibility Regulations 2016
2016 No. 1101	The Electrical Equipment Safety Regulations 2016
2012 No. 3032	The Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment Regulations 2012

Relevant designated standards:

<i>Ref. No</i>	<i>Title</i>	<i>Edition/date</i>
BS EN 61010-1	Safety requirements for electrical equipment for measurement, control, and laboratory use. General requirements	2010+A1:2019
BS EN 61326-1	Electromagnetic Compatibility (EMC) Electrical equipment for measurement, control and laboratory use.	2013

4. Summary

Always observe the following safety precautions.

	Note: All operators and customer maintenance personnel should familiarise themselves with this manual before using or servicing the equipment.
	Lifting/Movement The instrument weighs 100kg. Sufficient personnel and/or lifting devices must be used to move the instrument. The correct lifting equipment must be used, taking note of the center of gravity to ensure the lift is completed in a safe manner.
	Electric Shock No access to the internal workings of HydroView by operators, only by qualified and trained personnel. If users see exposed or damaged power cables do not use or touch the instrument and immediately seek technical assistance. Only use the specified rated voltage specifications indicated on the instrument. Ensure the mains power cable is protected from hot surfaces. The mains power cable must not be subject to foot or machine traffic & must not be placed on the floor without adequate protection. Always have all the instrument covers in place when the instrument is plugged in & the mains power switch is ON. Do not defeat or bypass built-in equipment safety features. Any adjustments must only be carried out by suitable skilled or properly instructed/supervised personnel.



Be aware of hazards on the instrument indicated by this symbol.

Moving Components

Moving components such as a clamp guard and clamp head represent crush and entanglement risks. It is important that users of the equipment understand these features and residual risks. Stand clear and do not reach into the test area when testing has commenced.

Finger Trap Hazard

When operating the instrument from its clamped position to its un-clamped position, ensure your hands are clear of the splash guard & test area.



**Eye protection
must be worn**

Eye Protection

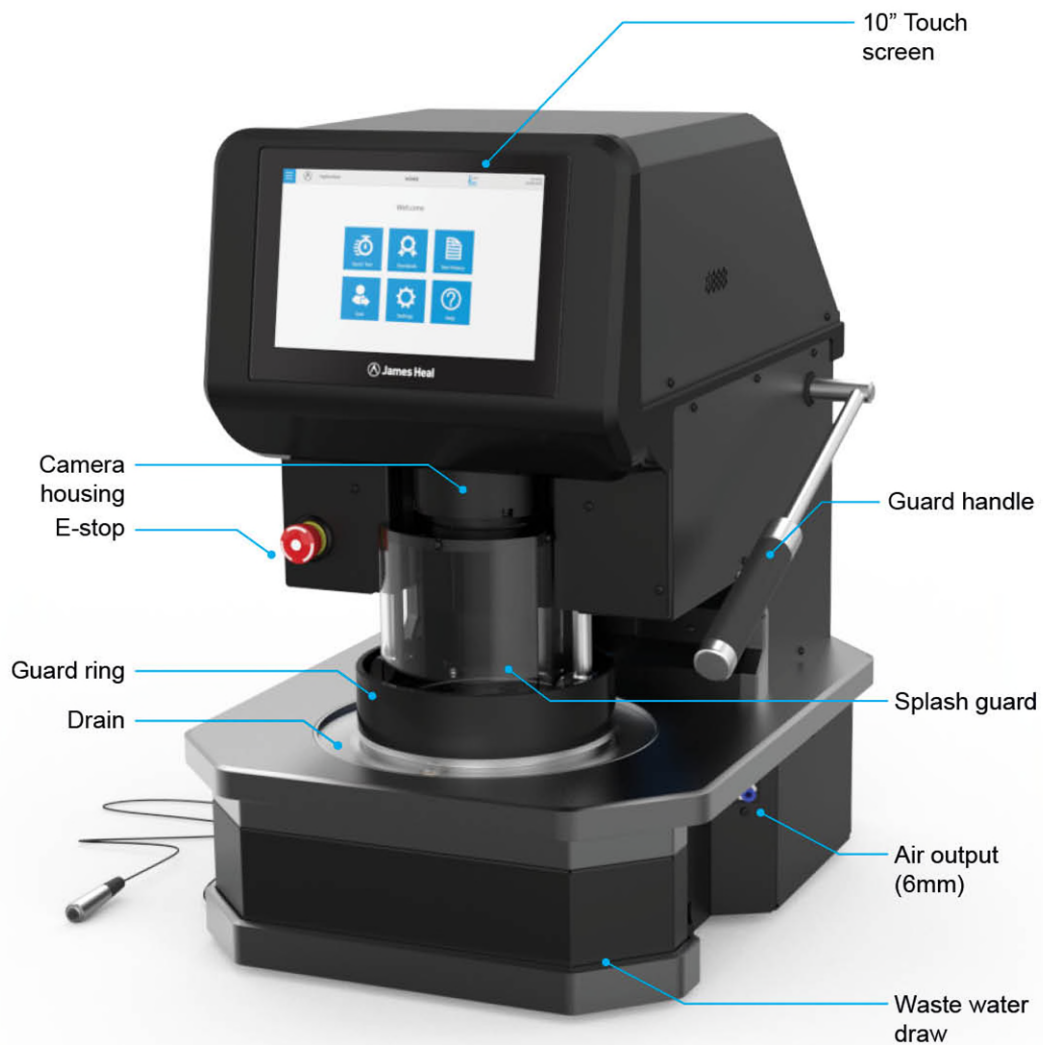
There is a possible hazard of the sample rupturing, the splashguard must be fitted when in use.

Appropriate Personal Protective (PPE) must be worn when using the instrument, performing regular testing and maintenance.

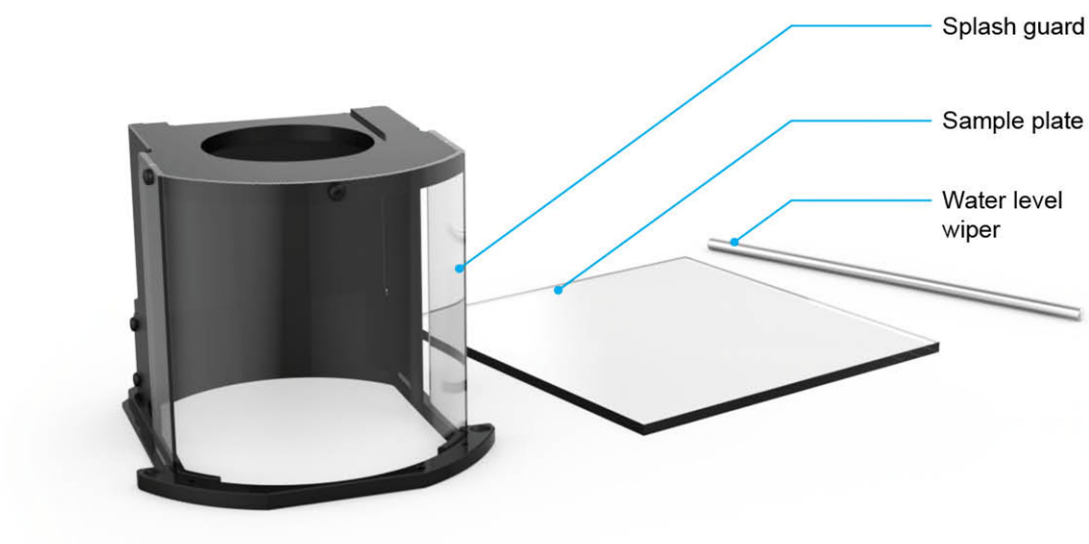
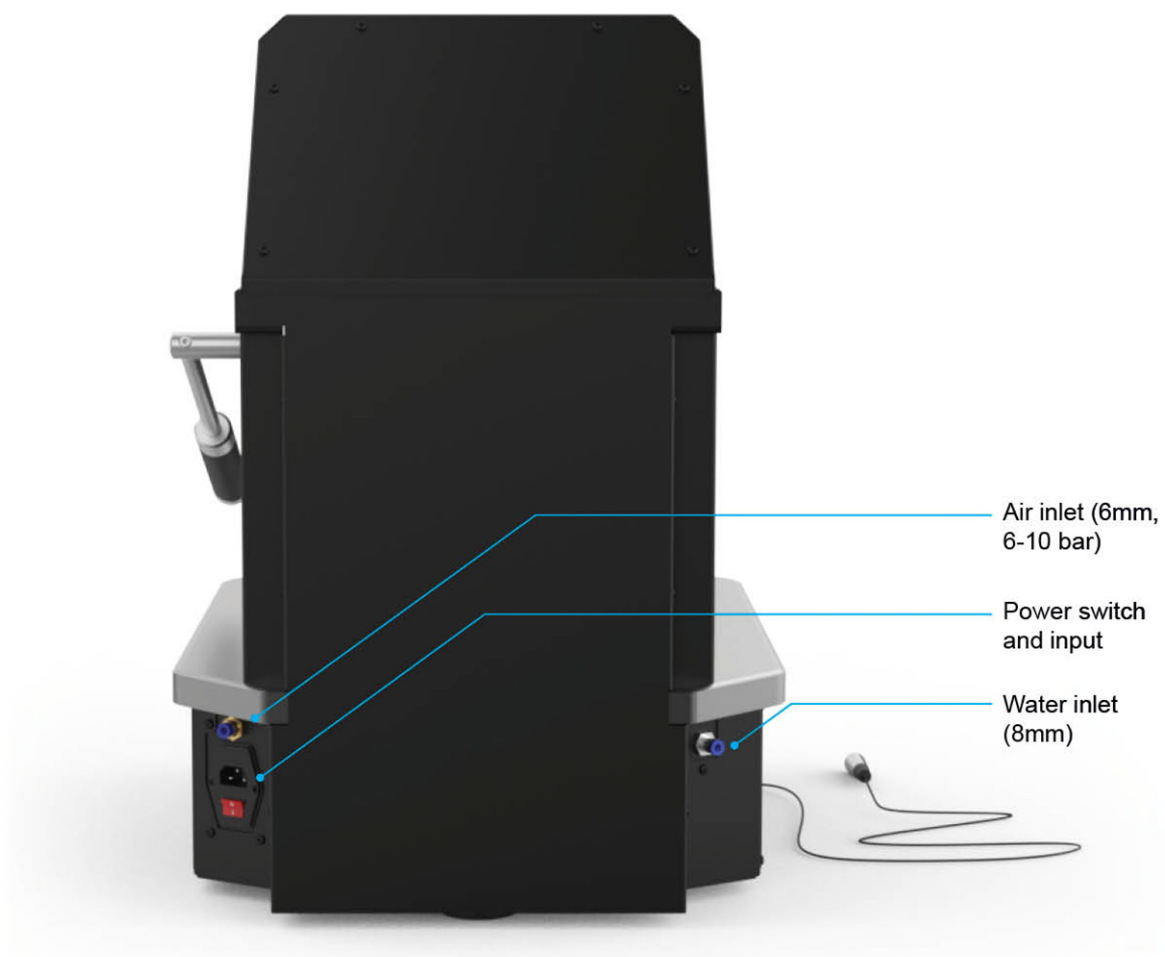
Machine description and Features

HydroView is a Hydrostatic Head Tester, used for determining the resistance of fabrics to the penetration of water.

Instrument and Components







Specifications

	James Heal™ HydroView
Machine Only W x D x H (mm / inches)	W 460 x D 593 x H 666mm W 18.11 x D 23.35 x H 26.22"
Weight (kg / lbs)	100kg
Electrical Requirements	Voltage: 120-240V Frequency: 50/60Hz Current: 1A

Electrical Specifications

Note: The electrical installation should conform to the codes and requirements of the country or locality in which the equipment is to be installed.

Voltage: 120-240Vac

Frequency: 50/60Hz

Current: 1AT

Fusing: 2 x 1AT Time delay fuses

Caution: Double-pole neutral fusing.

This instrument is supplied with European mains plug lead.

Using European plug leads can result in polarity reversal.

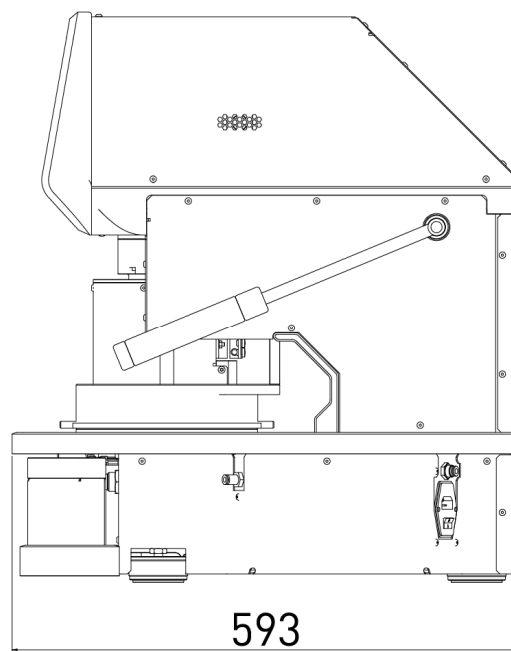
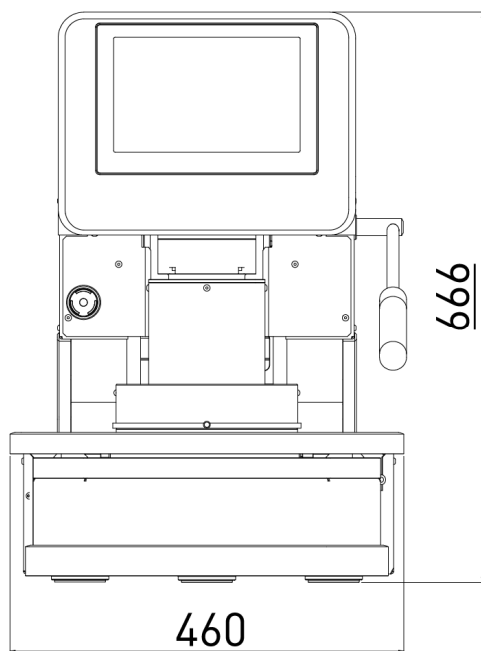
Therefore, double fusing is used within this equipment.

This ensures that protection is provided for both phase-to-ground faults & phase-to-neutral faults.

Electrical Power Cable

The equipment is provided with a 2-meter-long power cord for UK, EURO & U.S.A mains connection.

Dimensions



5. Pre-Installation

Customer Responsibilities

The James Heal™ HydroView instrument will be shipped in one crate, if ordered as a standalone instrument. The contents of which will need transporting to the install site by James Heal or associated agent.

James Heal or associated agent will install this instrument, we advise all installers to be familiar with the Safe Working Procedure Document of HydroView before commencing installation.

Prior to installation check content of delivery using the Unpacking Checklist below.

General responsibilities include:

Providing James Heal with delivery instructions.

Warning Symbol	Hazard & Warnings
	Handling Equipment Provide the necessary equipment such as a genie lift or forklift for unloading the 100kg unit. Personnel Provide enough people to unload/unpack/transfer the equipment. Electrical Only use the specified rated voltage specifications indicated on the instrument. Delivery Route Ensure the delivery route is clear with no obstacles. Unit Minimum width: 460mm Minimum height: 666mm Minimum Depth: 593mm Minimum weight: 100kg

Area Planning

HydroView is a heavy test instrument. Care needs to be taken when installation takes place, preventing damage or compromise of the test instrument, which could result in invalid results.

1. The final location of HydroView has a weight bearing capacity of at least 100kg, the customer must ensure that the work surface can support this weight.
2. The final location is set at a usable access height, for users to load the samples and interact with the touch screen.
3. Adequate space for safe operating and installation of the equipment is recommended at a minimum of 1000mm/39.4" in front of the machine.
4. Ensure the work surface is level in both directions. Some adjustment can be achieved through the adjustable feet on the instrument.
5. Ensure there is the correct electrical power supply where the instrument is going to be placed.
6. It is recommended that the work surface is stain and chemical resistant for ease of cleaning.
7. Ensure the correct air supply is installed prior to delivery:

Air Supply

- 10 Bar for best clamping performance.
- 6mm outside Diameter Pipe (same side as power supply).
- Ensure the water supply is positioned at the correct side of the instrument:

Water Supply

- 8mm Outside Diameter Pipe (opposite side to power supply at the rear of the instrument.)

6. Delivery, assembly, installation & commissioning

Delivery Inspection

Your James Heal™ HydroView was carefully inspected and tested prior to shipment. Upon its arrival, inspect the crate for damage. Unpack the machine as soon as possible and conduct a thorough examination of the unit and its components. Do this in the presence of the carrier if possible. If damage is noted, take photographs of the damaged portions and immediately file a claim with the carrier. NOTE: If the carrier is not notified within 48 hours of delivery, they cannot be held responsible.

Warning Symbol	Hazard & Warnings
	Beware of sharp edges, splinters, pinch points, exposed nails and staples when unpacking. Wear safety shoes, leather gloves and safety glasses.

Unpacking Checklist

List of components/assemblies that will be delivered:

Stock Code	Item name	Quantity
905-400	HydroView Instrument	1
551-302	Splash Guard	1
551-222	Wastewater Drawer	1
794-763	Handheld Button / Switch	1
551-301	Sample Plate	1
794-819	Pneumatic Adaptor	1
551-204	Water Level Wiper	1
	2m: 8mm OD Black Nylon Tube (Water)	1
327-378	2m: 6mm OD Soft Nylon Tube Blue (Air)	1
551-305	8mm Pipe Sinker	
785-118	Blue 'J' Cloth	1
142-304	Mains Lead Set Straight (UK, EURO, U.S.A.)	1

Delivery and Unpacking

1. The HydroView is delivered on a pallet contained within a wooden crate.



2. Remove the locating screws in the top of the crate and then remove the lid from the top of the crate.



3. On top of the HydroView is a box containing accessories and additional packaging. Remove the box from the top of the crate and place somewhere safely.



4. Remove the screws from the front panel of the crate, starting at the bottom and remove from the front of the crate.



5. Undo all other screws from around the crate and remove the three panels away from the wooden crate the machine is on.



6. Cut the shrink wrap and other wrapping from around the machine.

NOTE: the machine is metal and can be damaged by knives scratching the surface. Care must be taken when cutting the packaging.



Moving the Instrument

Warning Symbol	Hazard & Warnings
	Personal Protective Equipment Ensure safety shoes and nonslip gloves are used to move/install the instrument.
	Lifting/Movement The instrument weighs 100kg. Trained personnel and lifting devices must be used to move the instrument. The correct lifting equipment must be used, taking note of the center of gravity to ensure the lift is completed in a safe manner.
	Delivery Route Ensure the delivery route is clear with no obstacles.

Lifting and Moving HydroView

1. Using the correct lifting equipment, move the machine to the bench space the machine will be located.	
2. Raise the machine up to the height of the bench before sliding it off the pallet onto the bench.	

Installation Procedure

Note: All operators & maintenance personnel should familiarize themselves with this manual before using or servicing the equipment.

Warning Symbol	Hazard & Warnings
	Electrical Only use the specified rated voltage specifications indicated on the instrument. Ensure the mains power cable is protected from hot surfaces. The mains power cable must not be subject to foot or machine traffic & must not be placed on the floor without adequate protection. Always have all the instrument covers in place when the instrument is plugged in & the mains power switch is ON. Do not defeat or bypass built-in equipment safety features. Any adjustments must only be carried out by suitable skilled or properly instructed/supervised personnel.

Ensure path to installation site is clear of obstacles and suitable lifting equipment is available, (i.e., genie lift or forklift truck).

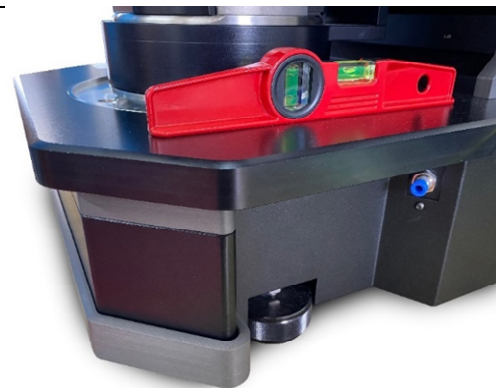
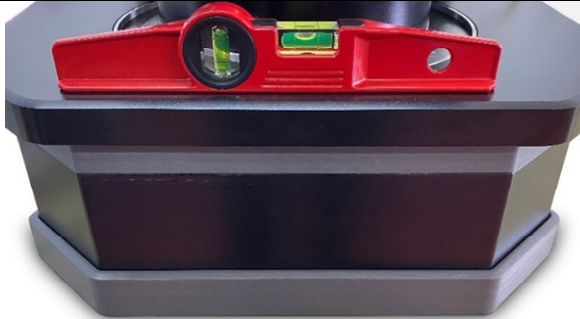
Ensure HydroView is placed on an appropriate load bearing work surface at the correct height for operatives to load test samples and interact with the touch screen comfortably.

It is important the instrument is levelled during the installation of the instrument, see next page).

Ensure it is located close to a power supply.

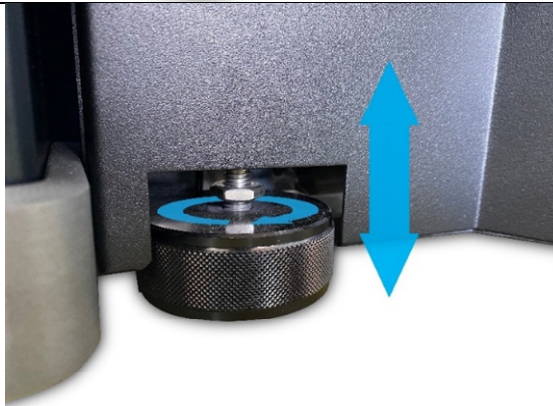
Levelling the instrument

1. Check the level of the instrument using a spirit level.



2. Adjust the left and right feet to ensure that the test area is level.

It is important that the test area is level to ensure that there is no air trapped under the test specimen.



Connections

Electrical

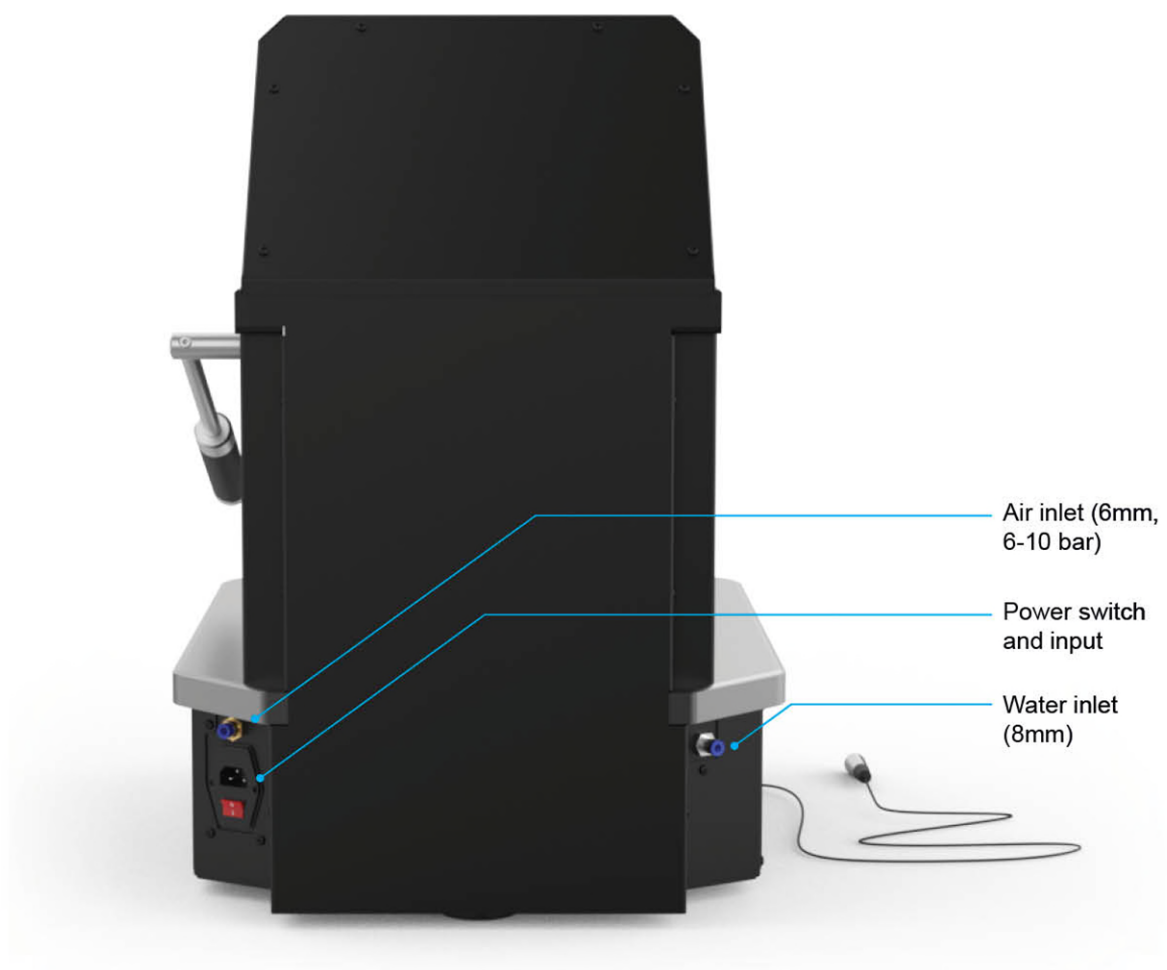
- Stand the instrument on a firm and level surface.
- Connect the electrical power supply to the mains input using the appropriate mains cable provided taking note of the electrical specifications.

Air Supply

- 10 Bar for best clamping performance.
- 6mm outside Diameter Pipe. (Same side as power supply.)

Water Supply

- 8mm Outside Diameter Pipe (opposite side to power supply at the rear of the instrument.)



General Safety

Warning Symbol	Hazard & Warnings
	Emergency Stop button This Emergency Stop button is designed to bring the clamp mechanism to an immediate halt in an emergency. When pressed, the button will latch in the stop position. To release the Emergency Stop button, twist the red cap in a clockwise direction. Attempting to start a test with the button in the stop position will result in a warning message being displayed. WARNING – the emergency button merely stops the instrument – it does not isolate the instrument from the electrical supply.
	Personal Protective Equipment Ensure safety shoes and nonslip gloves are used to move/install the instrument. Lifting/Movement The machine weighs 100kg. Sufficient personnel and/or lifting devices must be used to move the instrument. The correct lifting equipment must be used, taking note of the center of gravity to ensure the lift is completed in a safe manner. Delivery Route Ensure the delivery route is clear with no obstacles. Electrical Only use the specified rated voltage specifications indicated on the instrument. Ensure the mains power cable is protected from hot surfaces. The mains power cable must not be subject to foot or machine traffic & must not be placed on the floor without adequate protection. Always have all the instrument covers in place when the instrument is plugged in & the mains power switch is ON. Do not defeat or bypass built-in equipment safety features. Any adjustments must only be carried out by suitable skilled or properly instructed/supervised personnel.

	Do not use an extension lead. Do not defeat or bypass built-in equipment safety features. Any adjustments must only be carried out by suitable skilled or properly instructed/supervised personnel.
--	--

7. Operating instructions

Operator Safety

Note: All operators should familiarize themselves with this manual before using the instrument.

Warning Symbol	Hazard & Warnings
	Emergency Stop button This Emergency Stop button is designed to bring the clamp mechanism to an immediate halt in an emergency. When pressed, the button will latch in the stop position. To release the Emergency Stop button, twist the red cap in a clockwise direction. Attempting to start a test with the button in the stop position will result in a warning message being displayed. WARNING – the emergency button merely stops the instrument – it does not isolate the instrument from the electrical supply.
 Eye protection must be worn	Eye Protection There is a possible hazard of the sample rupturing, the splashguard must be fitted when in use. Appropriate Personal Protective (PPE) must be worn when using the instrument, performing regular testing and maintenance.



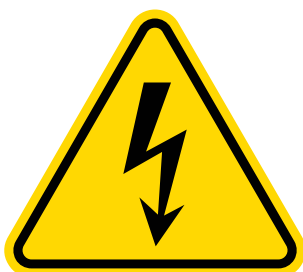
Be aware of hazards on the instrument indicated by this symbol.

Moving Components

Moving components such as a clamp guard and clamp head represent crush and entanglement risks. It is important that users of the equipment understand these features and residual risks. Stand clear and do not reach into the test area when testing has commenced.

Finger Trap Hazard

When operating the instrument from its clamped position to its un-clamped position, ensure your hands are clear of the splash guard & test area.



Electric Shock

No access to the internal workings of HydroView by operators, only by qualified and trained personnel. If users see exposed or damaged power cables do not use or touch the instrument and immediately seek technical assistance.

Mains switch is located on the rear right hand side of the instrument.



Water Spills

Make sure any water spills are cleared up immediately to prevent slips hazards in the lab environment.

	Water in the System Regular cleaning of the system is required to prevent the risk of waterborne diseases such as Legionnaires. See Cleaning & Maintenance section for further details on how to clean the system. Working Area The area around the instrument should be kept clean, dry and clear of any waste material. The equipment must only be operated in an environment with adequate lighting with no shadow or stroboscopic effects. <u>DO NOT ALLOW</u> general access to HydroView. Only competent and trained personnel should operate the equipment. HydroView should be stored in a controlled environment where only authorized personnel have access. Warranty Do not attempt to gain access to the internal workings of HydroView. If HydroView is tampered with this will invalidate the warranty.
--	---

8. Product Overview

Warning: The equipment must not be used for any purpose other than for that which it was intended.

Description of Hydrostatic Pressure

Hydrostatic pressure is the force distributed over an area exerted by water.

Description of Water Resistance

The water resistance of a fabric is the characteristic to resist wetting and penetration by water.

Description of Water Repellency

The water repellence of a fabric is the characteristic of fibre, yarn, or fabric to resist wetting by water.

9. Introduction To HydroView

Please read this operator guide before commencing installation and use of HydroView.

Features & Benefits

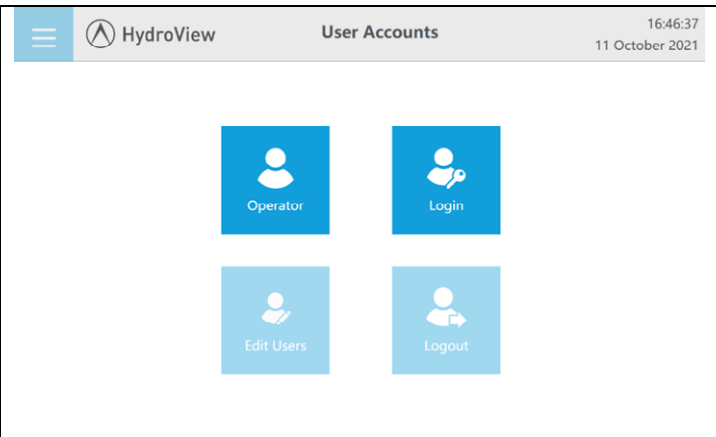
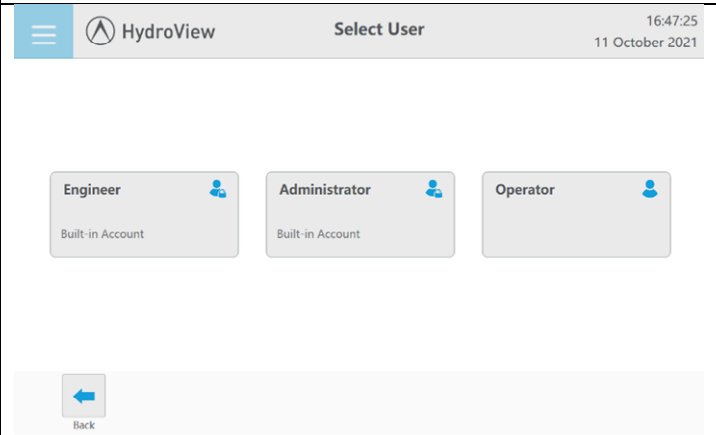
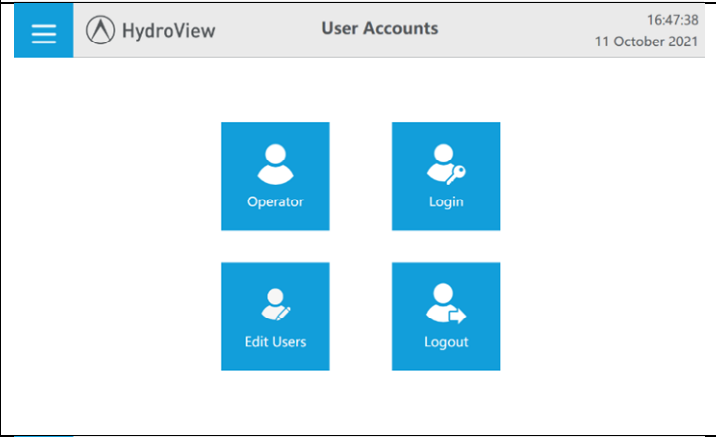
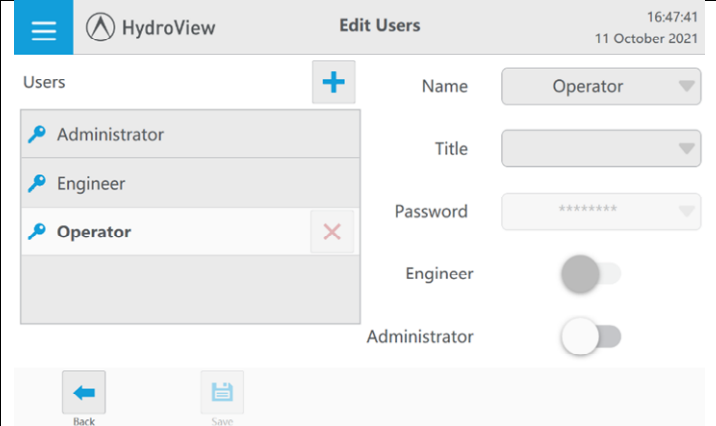
- 10.1" Touchscreen user interface with TestWise Touch Integration
- Integrated Camera for post-test analysis
- Integrated custom test report generator
- User controllable Audio and Light Alerts
- Integrated wastewater drawer
- Integrated water level control
- Specimen illumination control
- Automatic burst detection
- Capable of providing 10 bar, a 100 meter head of water to specimen.

Standards

- | | |
|-------------------------|-------------|
| • EN ISO 811 | • AATCC 127 |
| • EN 343 | • AATCC 208 |
| • EN ISO 9073-16 | • GB/T 4774 |
| • NWSP 080.6R0 | • BS 2823 |
| • JIS L 1092 – Method A | |

10. TestWise for HydroView

User Creation and Management

1. Administrators can create individual user profiles to be used on the instrument - allowing users to own test results.	
2. Login as administrator or engineer.	
3. Select edit users.	
4. To create a new user press the plus button. To delete a user press the red X. If you delete a user by mistake hit back and select no, so no changes are made.	

5. Edit/Enter a new username by selecting the username button.

A keyboard will be displayed to allow you to type a new name.

Select the tick button to confirm.

6. Add a title and a password to the user in the same way.

You can provide the new users with administrator permissions, (See below)

Select save to create new user. This will return you to the user account menu.

Log out.

Once logged out, select Login and select the new user, enter the password if you have set one for the new user.

User Permissions

Administrator

Testing: Standards and Quick Test
Standards: Management
Test History: Management
Reports: Export and Customisation
System: Management

Operator

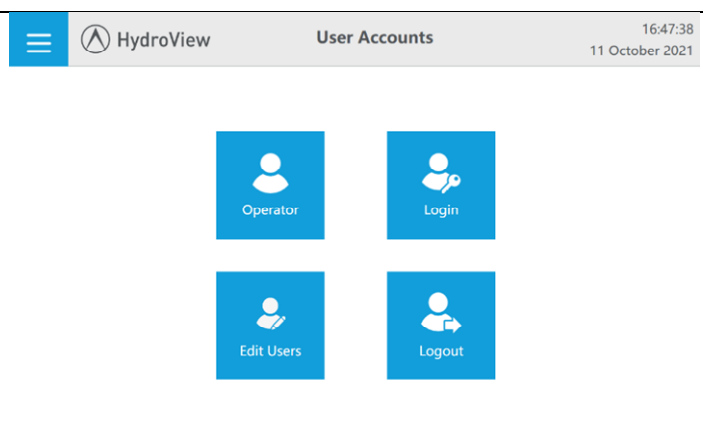
Testing: Standards and Quick Test.
Test History: Management
Reports: Export and Customisation

Engineer

Calibration and Instrument Set Up
Plus management of all other features

General Settings

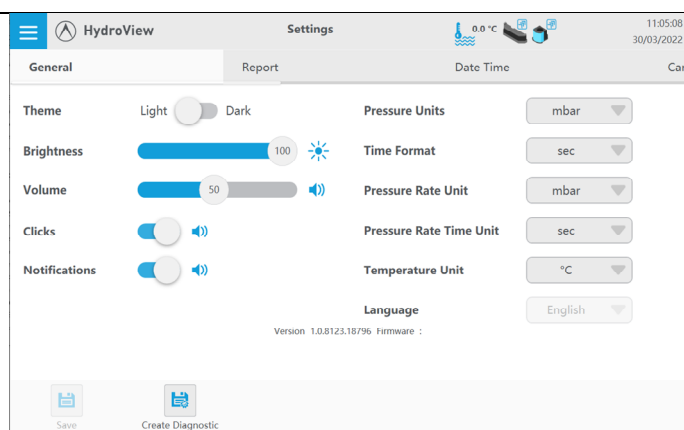
Login and select settings icon from the home screen.



Various system settings can be controlled. Not all users can access all setting menus.

Theme: Light and Dark
Screen brightness: 10 – 100%
Volume: 5 – 100%
Sounds: clicks and notifications
Default Test Parameters:
- Pressure Unit
- Time Format
- Pressure Rate Unit
- Pressure Rate Time Unit
- Temperature Unit

See your administrator to change the system language.

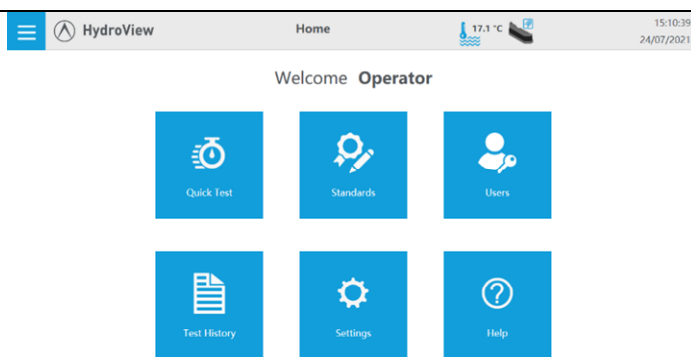


Report Editing

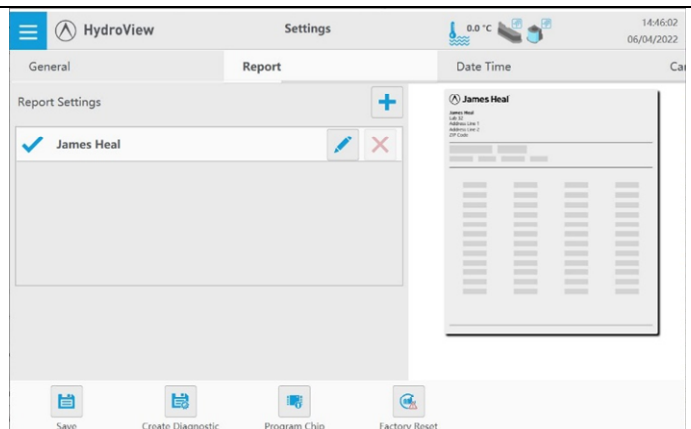
1. To create new report tiles login as an administrator.

Regular operators can edit existing report titles but can't create new ones.

Select settings from the home screen.

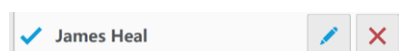


2. From the settings screen, select report on the menu bar.

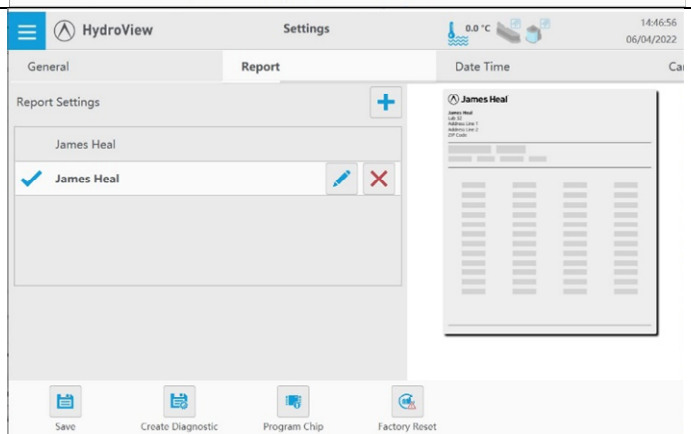


3. To create a custom report header for your PDF reports, select the plus icon.

Select the copied report header, it will be highlighted with a blue tick.



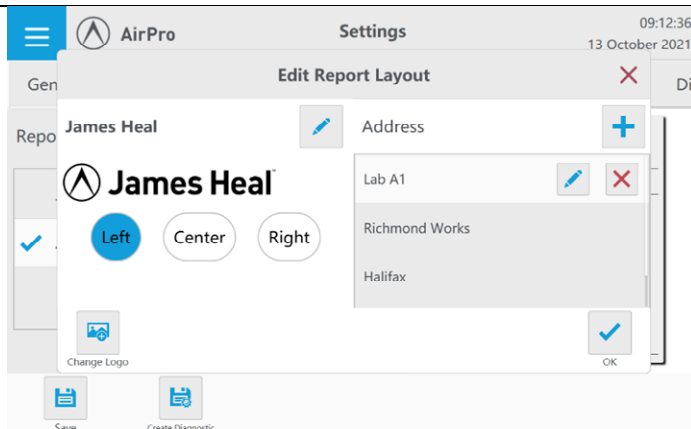
Select the pencil icon to edit the report header.



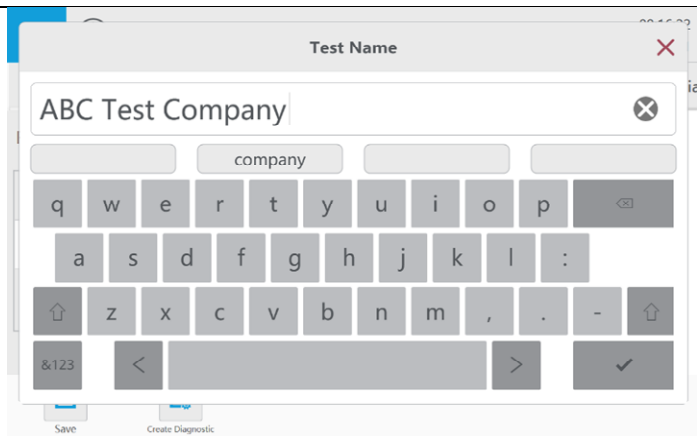
4. Here you can enter your company name or a customer's name.

Add a logo and align it.

Add multiple lines for address and contact details.



5. Select the pencil icon on the left-hand side of the screen to edit the report title / company.



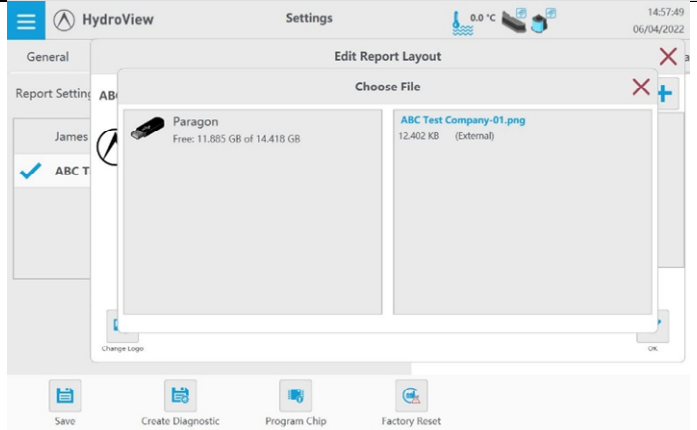
6. To change the header logo you will need your logo on a USB as a JPG or PNG file. Select the change logo icon.



Select your logo file and select the upload icon.



This will then display your uploaded logo on the report layout screen.

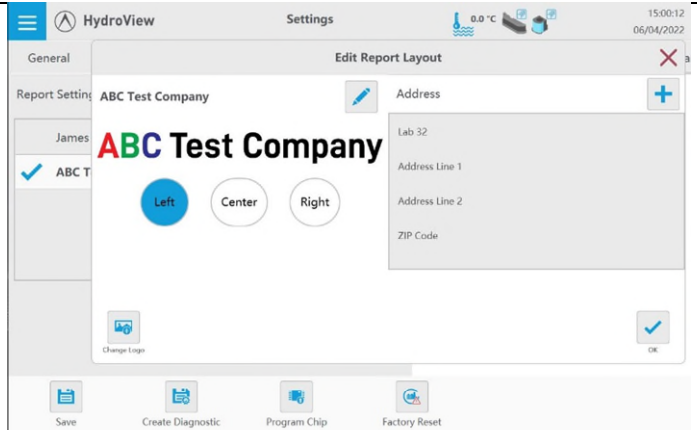


7. Add your address, contact or other useful details you would like to add to the header.

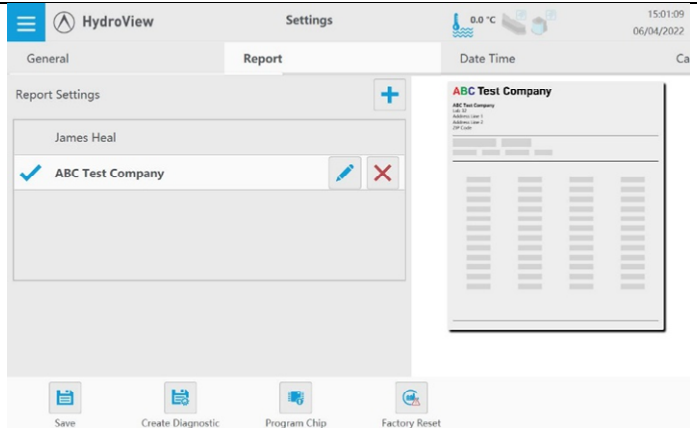
Select the plus button to add fields.



Then simply select the cross to delete or the pencil to edit.



8. When you are happy with your customer header select ok, select the save button to save the custom report header.

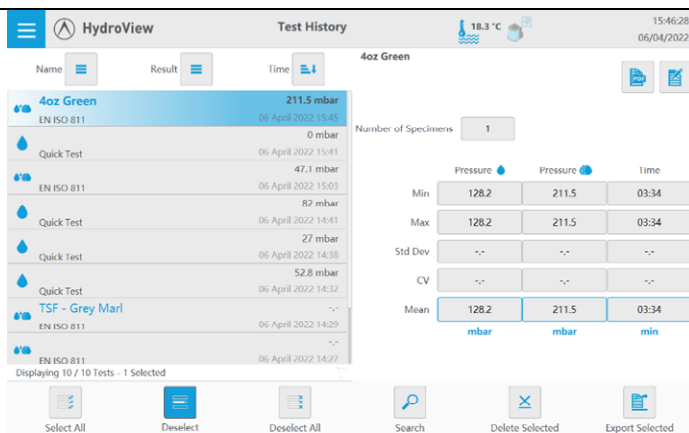
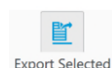


Exporting Results

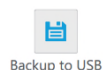
1. To select individual tests for export select and hold, the result will be highlighted blue.

The selected test results will be displayed on the right-hand side.

Select export selected:



2. Select the USB device you would like to save to on in the right-hand column.



Backup to USB



Save To PDF

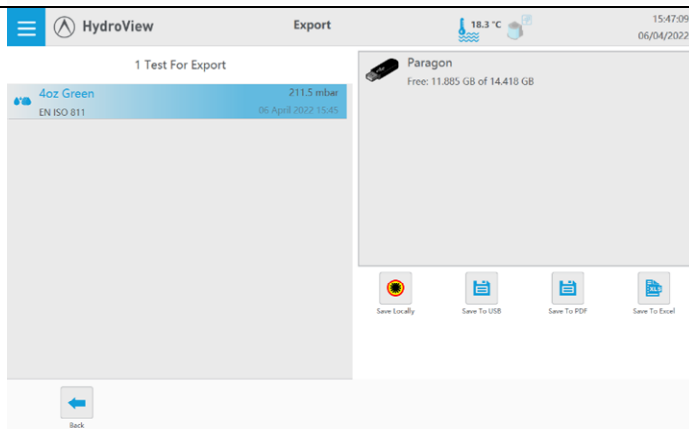


Save To Excel

You can back up the raw HydroView files to the USB.

Export the test report as a PDF.

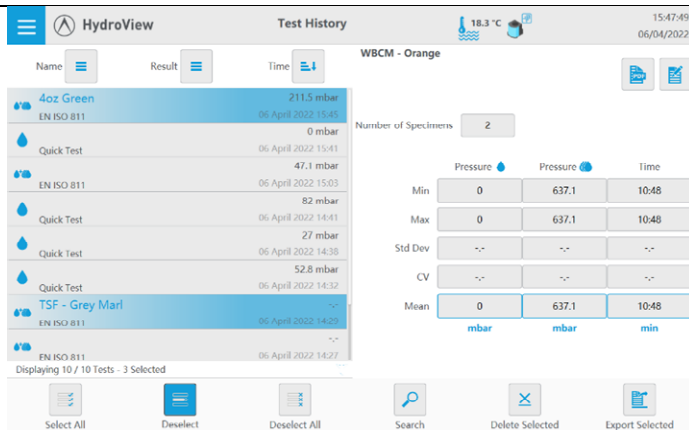
Export the results as an excel file.



3. You can select multiple tests for export at the same time.

Simply select and hold each test to highlight these and then select export selected.

You can also search and block select searches. See page 30 test history management and searches for more detail.



Backup the raw HydroView files to the USB.



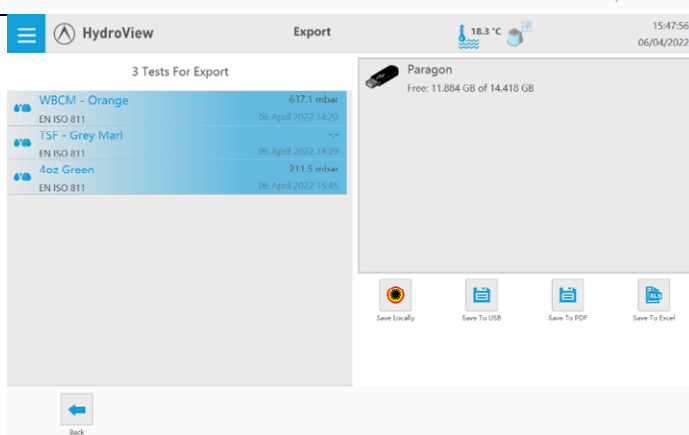
Save To PDF



Save To Excel

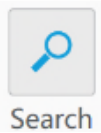
Export the test report as a PDF.

Export the results as an excel file.

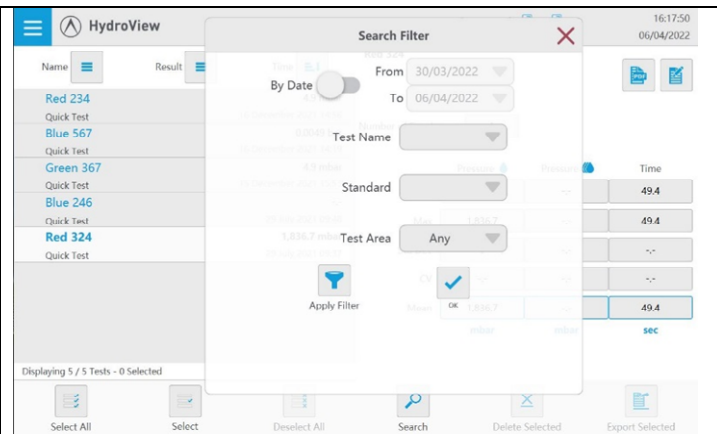


Test History Management and Searches

1. You may want to search for past results or to delete old results that are no longer needed in HydroView.



Select the search icon to open the search filter.

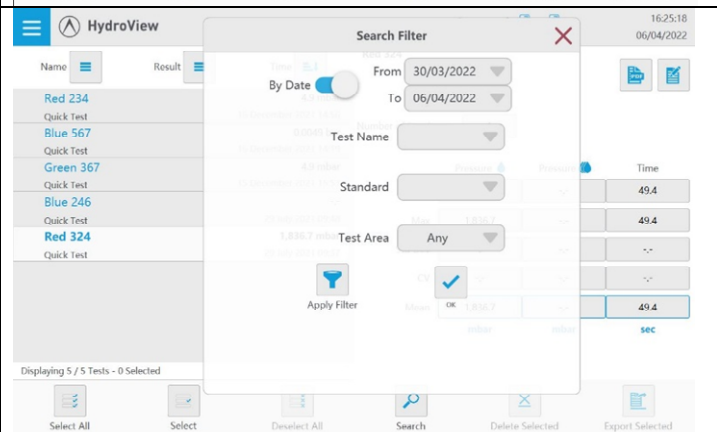


2. You can quickly filter and search a variety of ways.

Simply press the search button.

You can filter by:

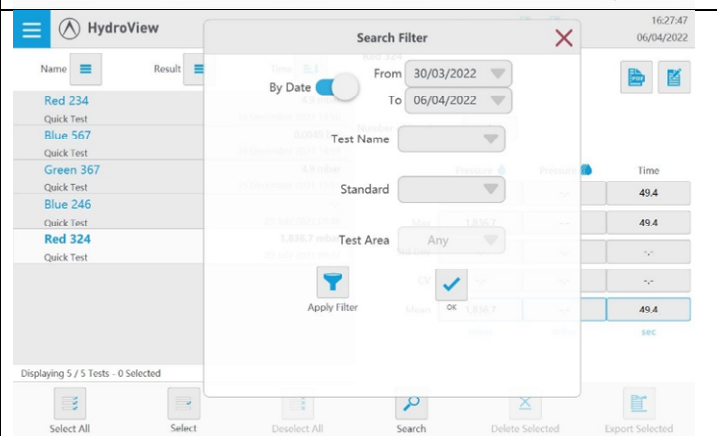
Date
Test name
Standard
Test area



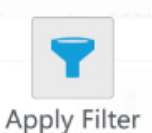
3. To filter by date simply switch on the by date filter and select the dates that you would like to filter to start from and end at.

Select the ok button to finish your selection.

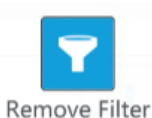
To search by test name, standard or test area simply select the field and input the search criteria.



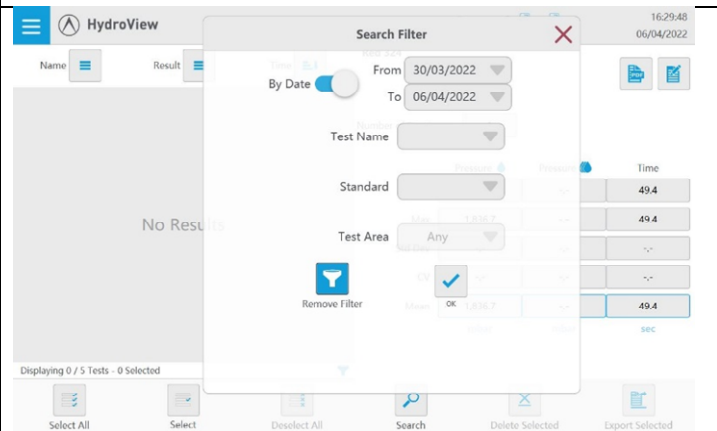
4. To apply any filters select the apply filter button.



Then press ok to view the filtered results.



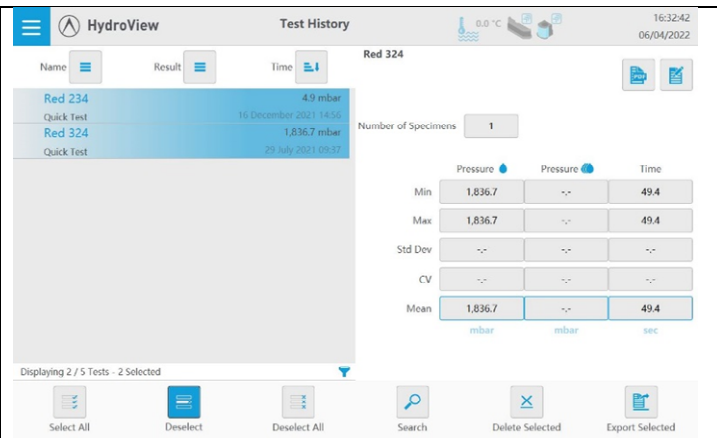
To remove the filter, return to the search filter menu and then select remove filter.



5. Once a search filter has been applied, you can select all by pressing the select all button.

This is useful for exporting all the tests that have been identified by the filter, you may also want to delete these files if you do simply select delete selected.

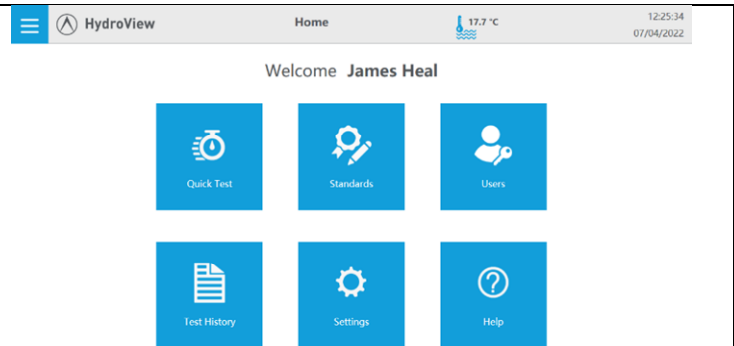
The system will check if you are sure that you would like to delete these files before completing.



6. We recommend backing up and then deleting your test history from the instrument at regular intervals to prevent the system from becoming cluttered.

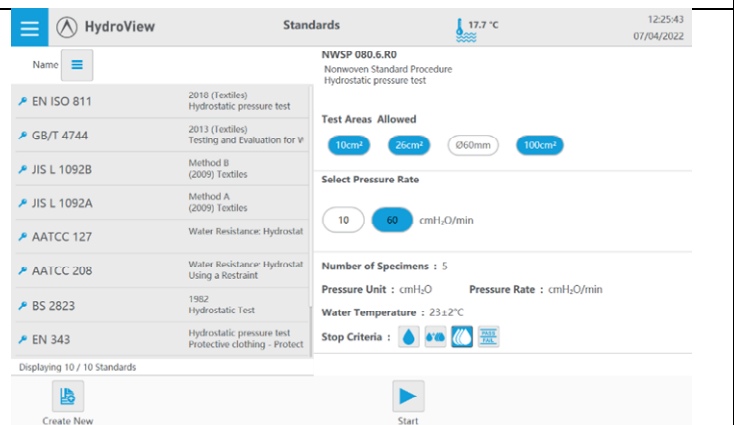
Custom Standards Creator

1. From the home screen select the standards selector menu.



2. To create a new standard select create new.

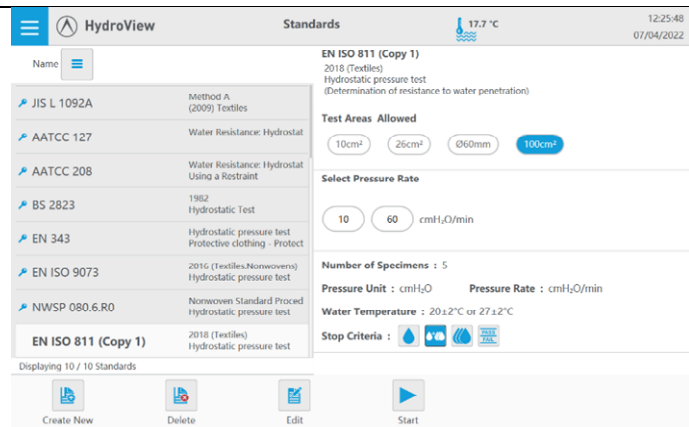
Depending on which standard you have selected the 'create new' will make a copy of that standard.



3. Once a copy has been made you can then edit the new standard.

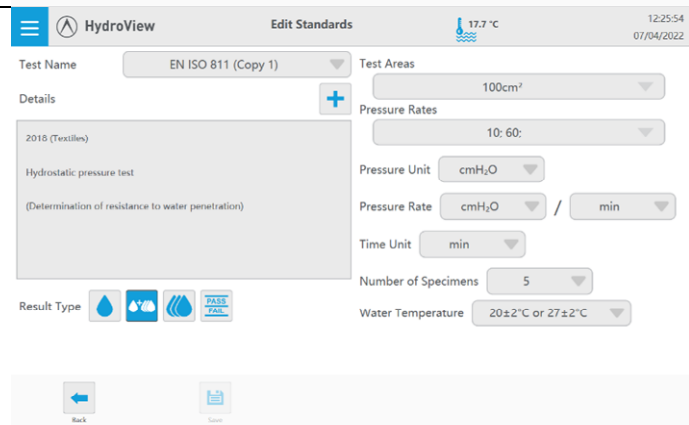
Select the new copy and then select edit.

You can't edit pre-set standards.

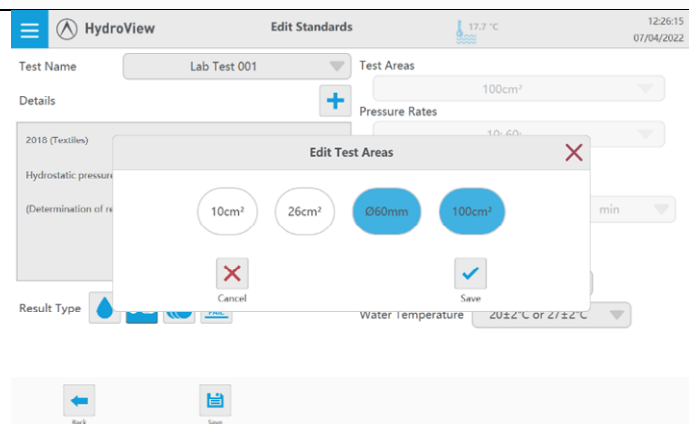


4. From the edit standards menu you can rename the standard name and provide detail on the standard.

Customise the valid test areas and pressures for your test, as well as the default result unit.



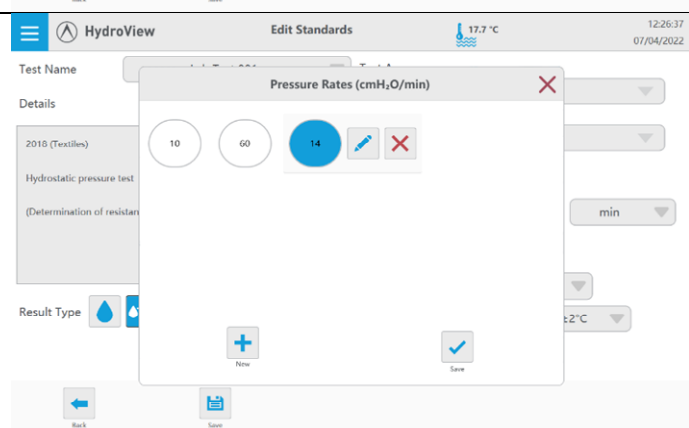
5. Select or deselect relevant test areas.



6. Set valid test pressures.

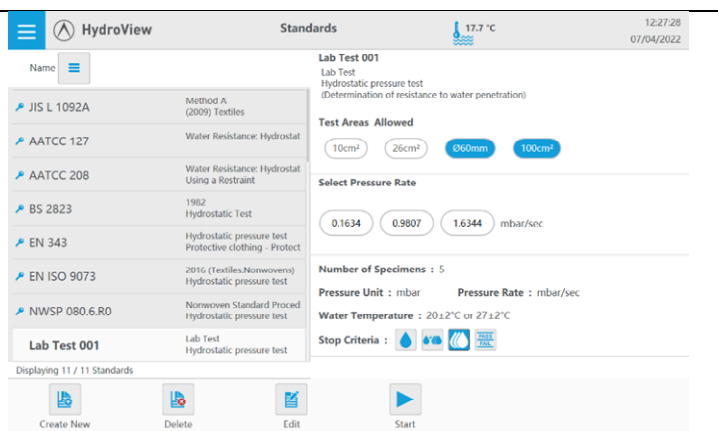
The following default test fields can be customised:

- Pressure Unit
- Rate Unit / Time
- Time Unit
- Number of Specimens required
- Temperature Parameter
- Result Type



7. Example of customer standard.

Select start to begin testing with this new standard.



11. General Operation & TestWise touch for HydroView

Test Preparation

Basic operation of pneumatic clamp

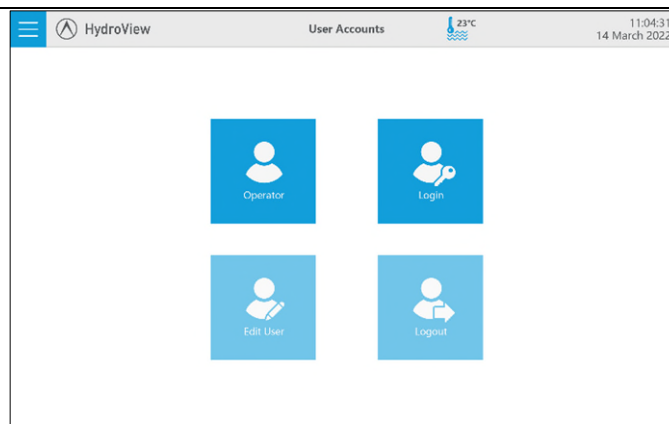
1. Ensure the **6mm compressed airline** is inserted into the inlet for the system pressure. It should be set to a pressure of no more than 10 bar and at a minimum of 6 bar.

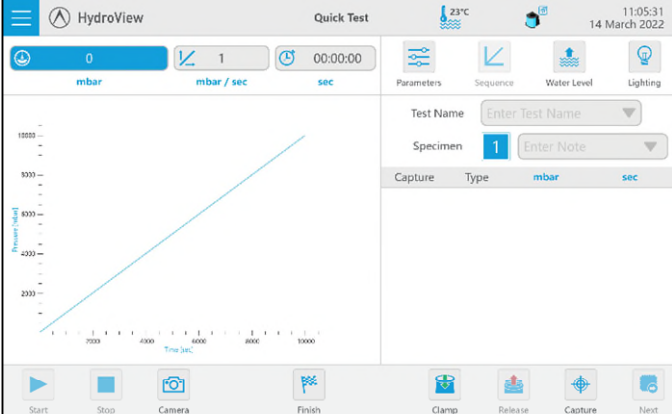
At low pressures you may not be able to affectively clamp specimen.

2. Turn on the instrument, the power switch is located on the right-hand side, lower panel of the instrument.

3. Login and select quick test.

Select operator or login to your user account.



4. If the clamp and manual guard are both in their upper position you will need to close the clamp. To close or clamp a specimen, lower the manual guard first. <i>If the clamp is active or down, see point 7.</i>	
5. Make sure the splash guard is inserted before trying to activate the clamp.	
6. Then press the clamp button this will operate the clamp.  Clamp	
7. To release the clamp press the release button do this before raising the manual guard.  Release If the manual guard has already been raised, return it to the down position. The clamp will not raise unless the manual guard ring is down.	

7.1. If you need to remove the splash guard for any reason remove it before raising the manual guard.

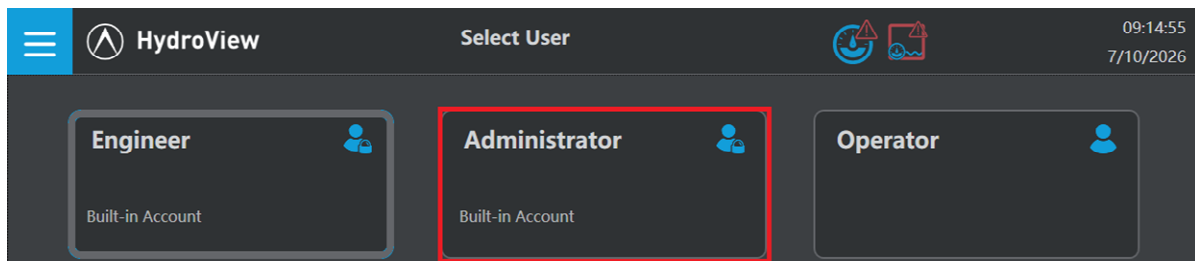


8. Once clamp is raised you can now move up the manual guard handle, to allow access to the test area.

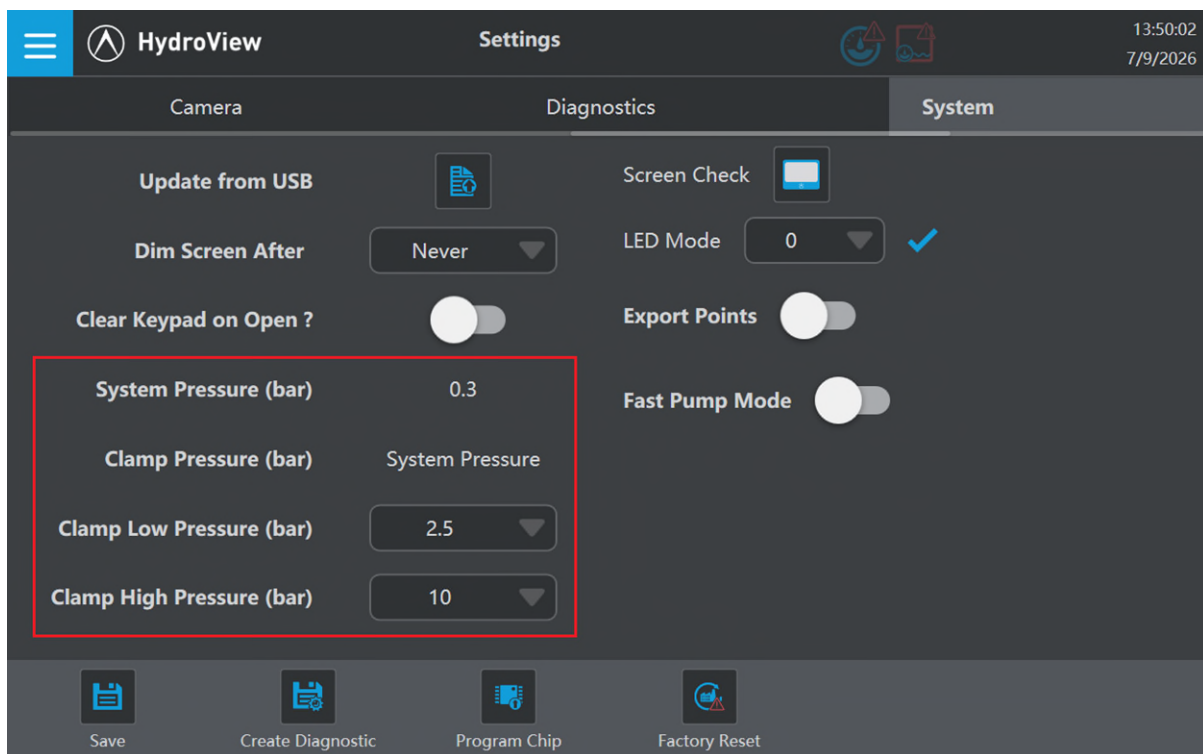


How to Change the Clamp Pressure

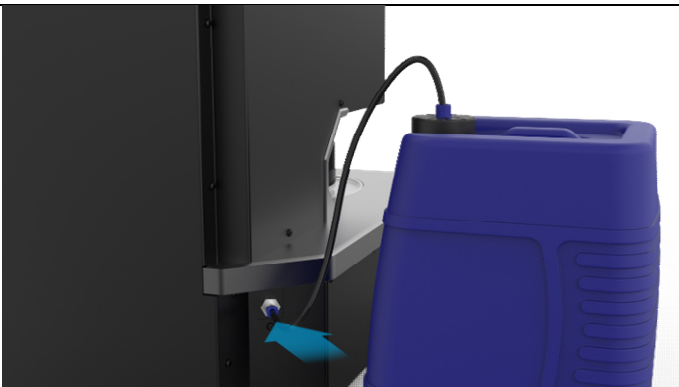
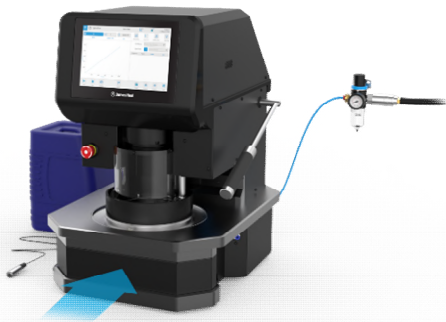
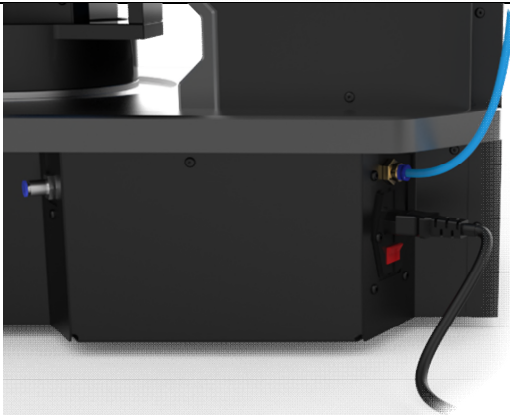
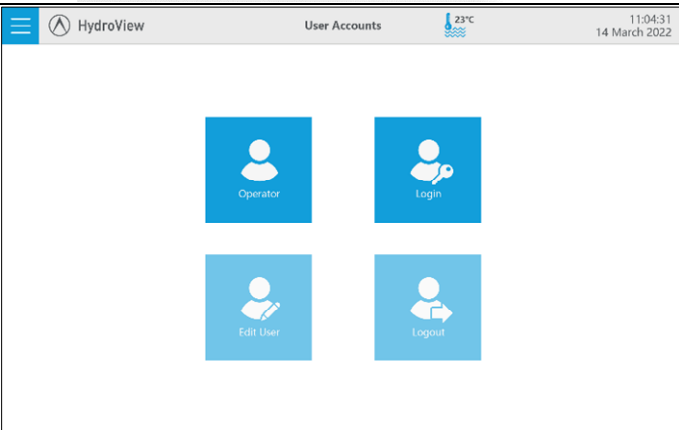
The pneumatic specimen clamp is set to 10 bar as default. This pressure is usually suitable for the majority of specimens. However, if the fabric is delicate and shows signs of damage after clamping with 10 bar pressure, it is possible to reduce the pressure. To do this, the operator must login to the instrument as an Administrator.



If High Pressure is set above 8.5 bar, then it will switch to whatever the System Pressure is (10 bar for example) but is not controlled and the clamp pressure then relies on the System Pressure. Below 8.5 bar, the Clamp Pressure is controlled by a pressure control (ITV) valve. Clamp Pressure below 8.5 bar will show the actual current clamping pressure if less than or equal to 8.5 bar, or just "System Pressure" if above 8.5 bar.



Filling the instrument

1. Identify a vessel of water, a minimum of 2.2 Litres is required to fill the instrument. (The specification of water that should be used will be specified in the standard you are testing to.) 2. Insert 8mm diameter pipe into vessel of water, ensure it remains submerged preventing air being drawn into the system.	
3. Ensure your wastewater drawer is installed correctly before filling the instrument.	
4. Turn on the instrument, the power switch is located on the right-hand side, lower panel of the instrument.	
5. Log in as any user type and select quick test.	

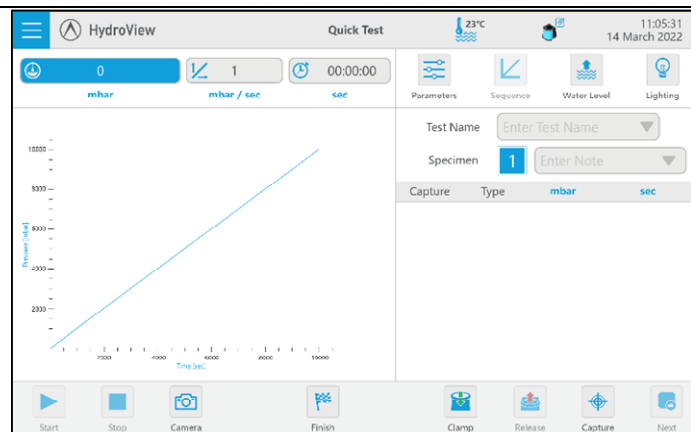
6. Check the manual guard and pneumatic clamps are in their upright position. (see page 35 for the basic operation of the pneumatic clamp.)



5. Select the water level symbol.



Water Level

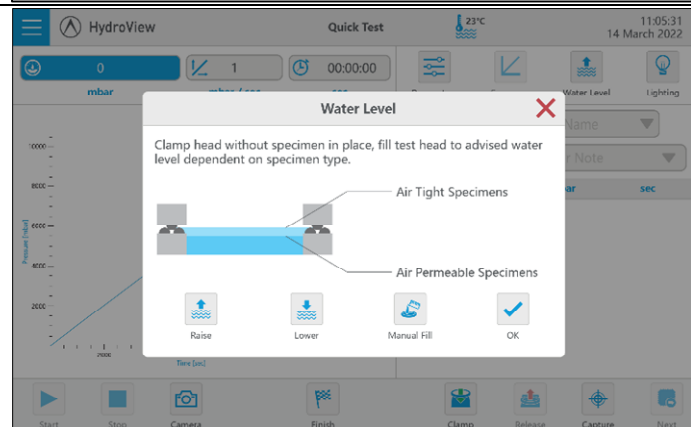


6. Select the raise button on the water control menu. The instrument will automatically fill until the water is just in the specimen area.



Raise

Wait for the system water level to equalise when filling the instrument.



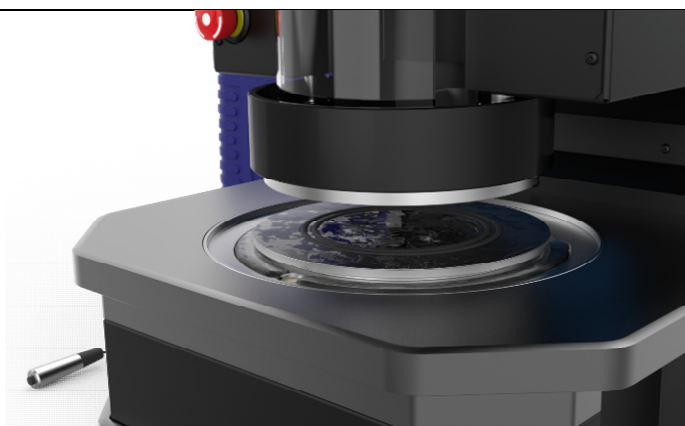
7. Hold the fill button to adjust the final fill level.

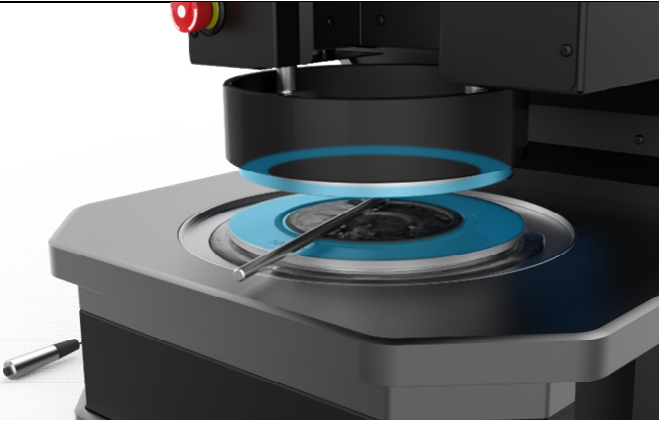


Raise

If debris can be seen in the test area overflow the water until it runs clear.

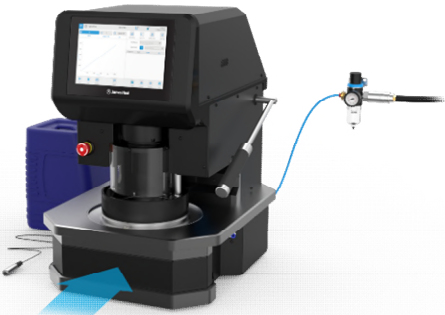
Check there is sufficient spare water in your external vessel if there is a significant build-up of debris.

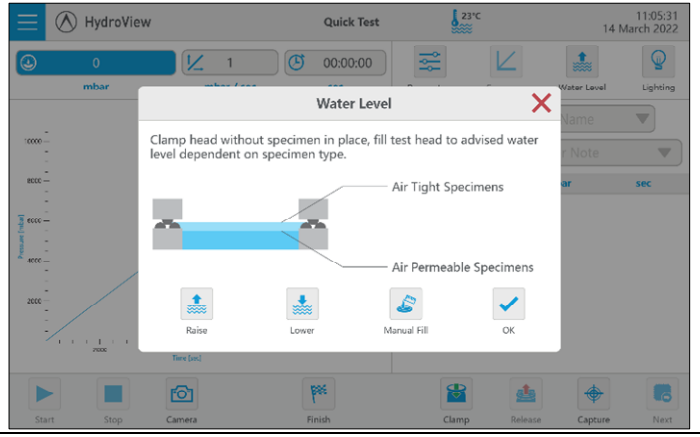


8. To manually fill the instrument, the splash guard needs to be removed. Select manual fill to enable this.  Manual Fill	
9. Once the water is running clear make sure you empty the wastewater drawer and return it to the instrument before commencing testing.	
10. Before starting a test, ensure that the water level is set to the level as documented in the specific standard being used to test. The water wiper can be used to assist this. Ensure both the upper and lower O-ring seals and clamp surface are dry before inserting the sample.	

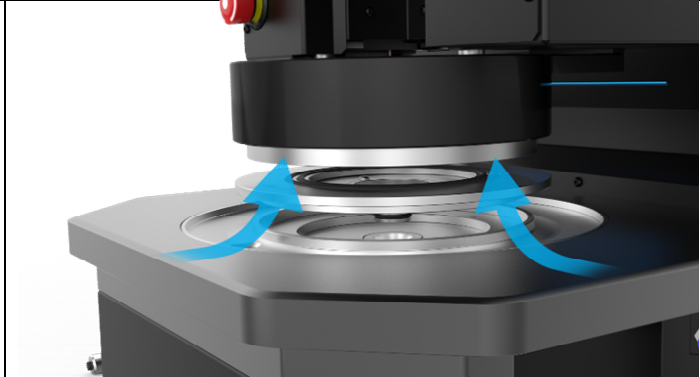
Draining the system

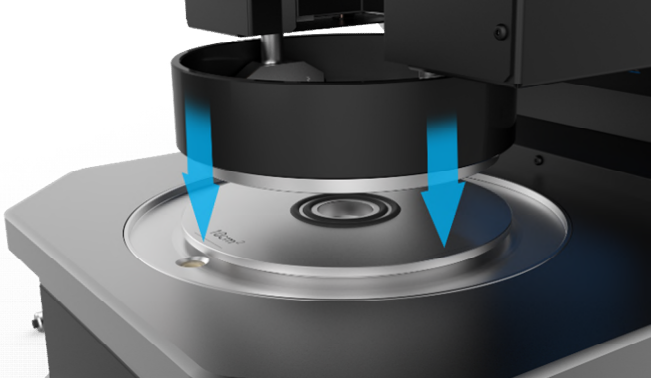
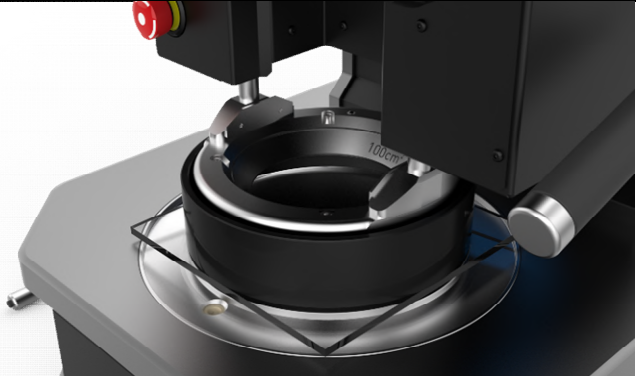
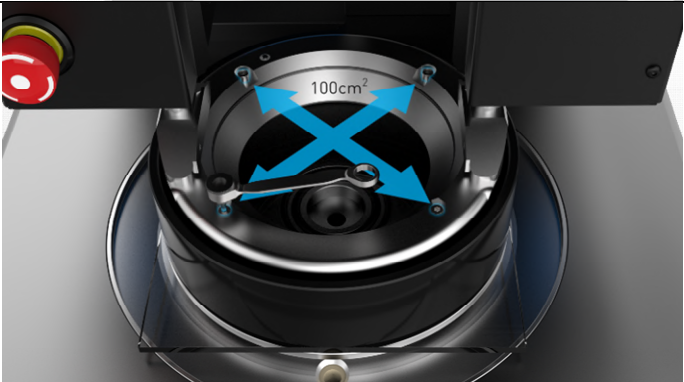
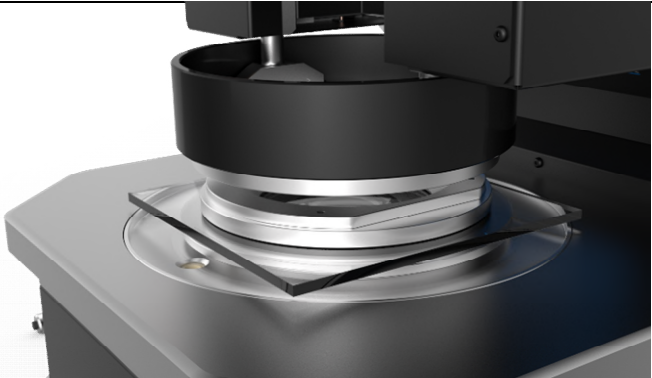
It is important to drain the system when leaving the instrument unused for long periods. As many standards use specified grades of water, it is recommended that the water should be drained and changed regularly to maintain the quality of the water being used.

1. Ensure the wastewater drawer is inserted and empty.	
---	--

2. On the quick test menu, select water level.	
3. Select lower, this will empty the system water directly into the wastewater drawer.  Lower	
4. Remove the wastewater drawer and empty, ready for the next round of testing.	

Changing The Test Area

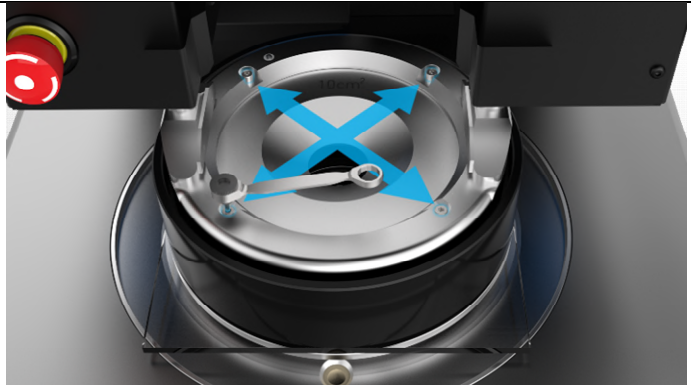
1. Empty the instrument of water prior to starting the test area change. See next pages for details. Ensure that the clamp and guard is in its up position with the splash guard removed.	
2. To remove the lower test area, lift the lower plate using the grove and pull directly up. This may require some force to overcome the o-ring that holds the plate in place. Any water be left behind in the lower test plate should be dried before fitting the new test plate.	

3. Store the lower plate in a safe place to avoid damaging the test area o-rings and the lower seal o-ring.	
4. Locate the replacement lower clamp, push down until the test area is level and secure. Turn the plate so that the test area size is shown at the front on the instrument.	
5. To remove the upper clamp head, first place the plastic specimen restraint over the lower head. Lower the manual guard, to give access to the top of the upper ring.	
6. You can then begin to remove each of the four mounting cap head screws. Loosen each of the screws in a sequence, do not remove them one by one. This will prevent the screw threads from being damaged and will also lower the upper clamp head down. Assistance maybe required to hold the upper clamp head from beneath while the screws are removed.	
7. Once the clamp is free, remove and place in a safe place so that the o-rings are not damaged. You will need to return the clamp guard to its upright position.	

8. The upper clamp should now be replaced with the new size to match the lower clamp ring.

Assistance maybe required to hold the upper clamp head from beneath while the screws are removed.

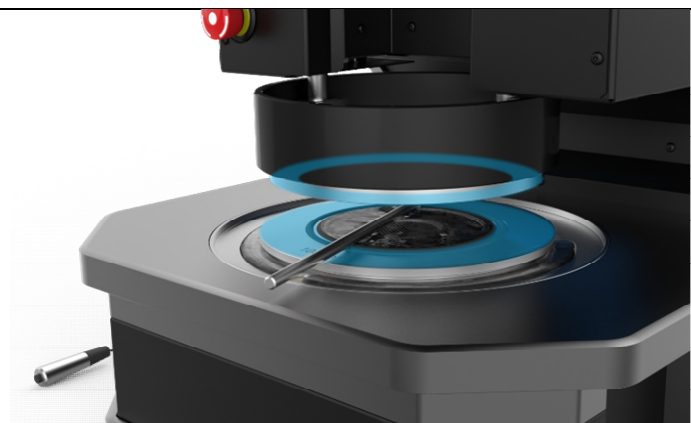
Ensure that all four screws are secured in place before commencing any testing.



Loading a Specimen

1. Before starting a test, ensure that the water level is set to the level as documented in the specific standard being used to test.
The water wiper can be used to assist this.

Ensure both the upper and lower o-ring seals and clamp surface are dry before inserting the sample.



2. Carefully pull the sample to be tested across the surface of the test area.

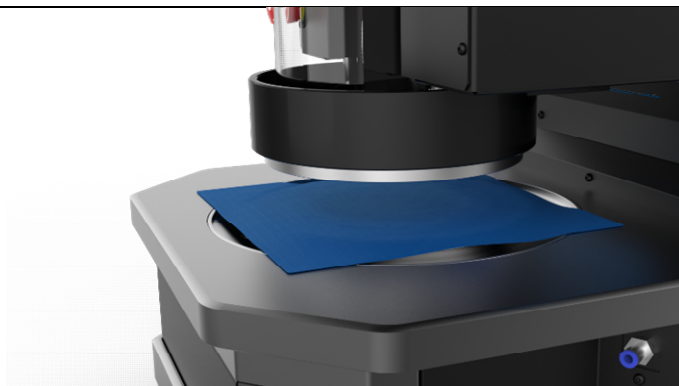
The sample should be inserted face down unless otherwise specified in the test standard being followed.

It is important if you are testing specimens that are not air permeable that no air is trapped between the specimen and the water. This could impact the results of your test.



3. When positioning the specimen make sure it is aligned centrally.

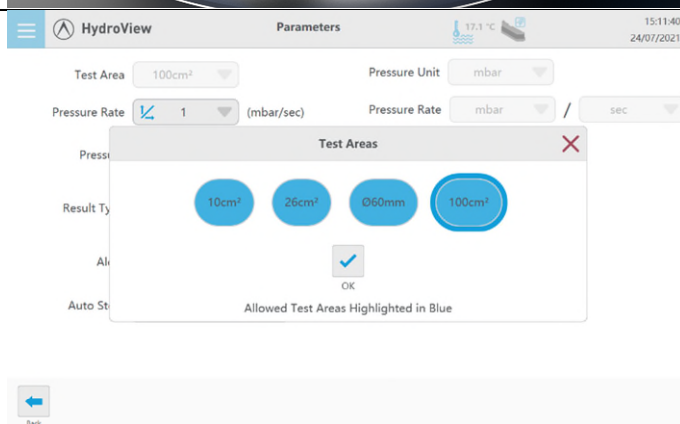
For smaller specimens, the guide markers can help to align.



4. Before starting a test, select the correlating test area in the test parameters menu.



Parameters

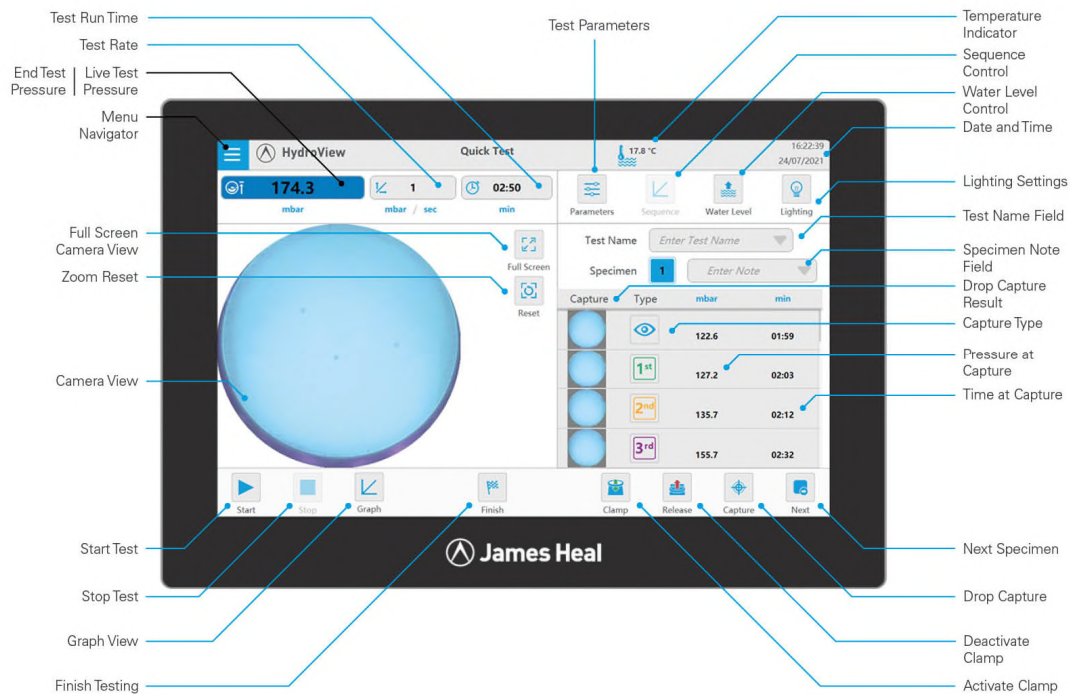


12. Test Screen Overview

Test Screen – Graph View



Test Screen – Camera View



13. Quick Test Procedure

1. Once logged in select quick test.

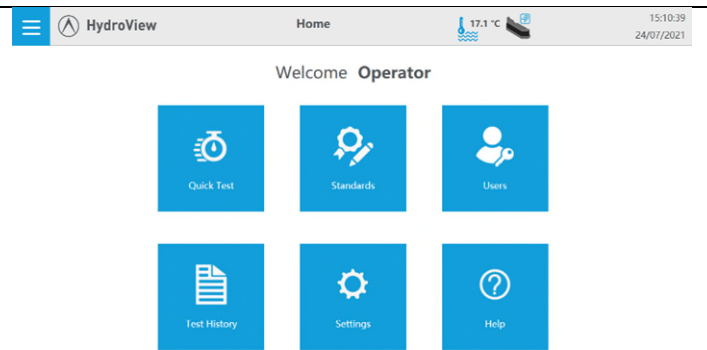
Set up the instrument before adjusting the system parameters prior to testing.

See:

Filling the instrument

Changing the test area

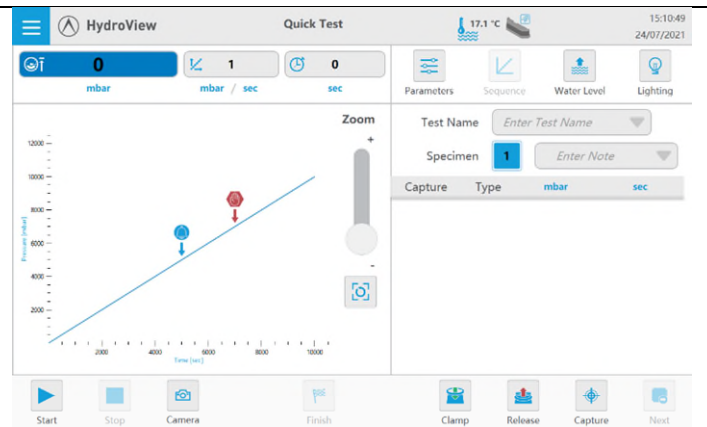
Loading a specimen



2. To set the parameters of the test, select the parameters icon.

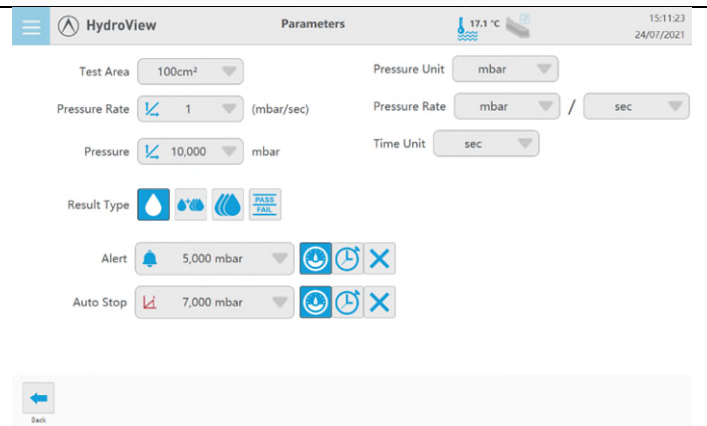


Parameters



3. Adjustable parameters for testing:

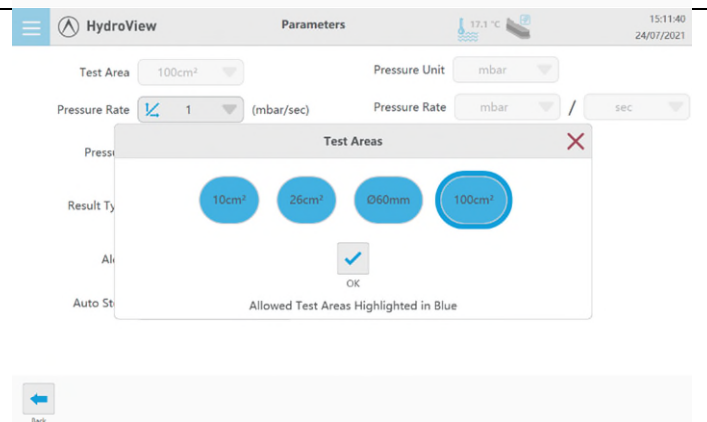
- Select the test area to be used
- Set test pressure unit and rate unit
- Set the rate of rise
- Result type / Test type:
First drop, First + Third, Third or Pass/Fail
- Audible Alert Value
- Auto Stop



3.a. Select the correct test area installed in the HydroView.

Test Area

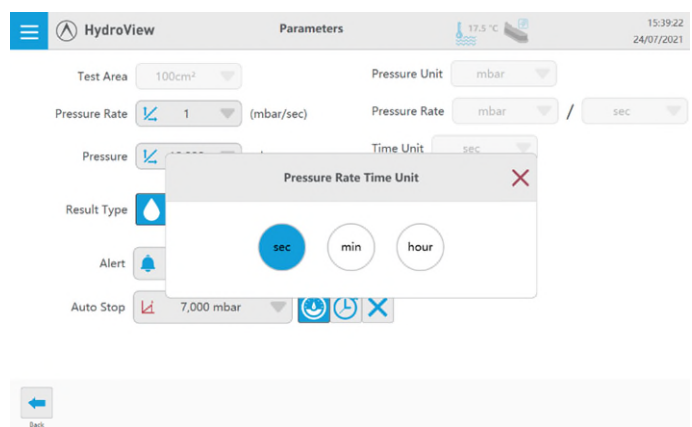
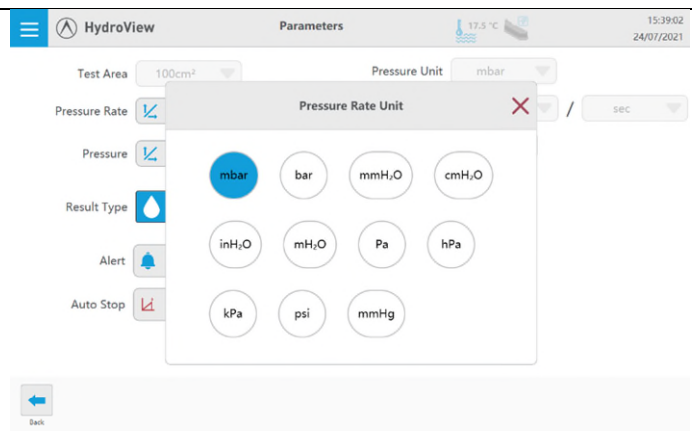
100cm²



3.b. Select the pressure unit the results will be displayed in.

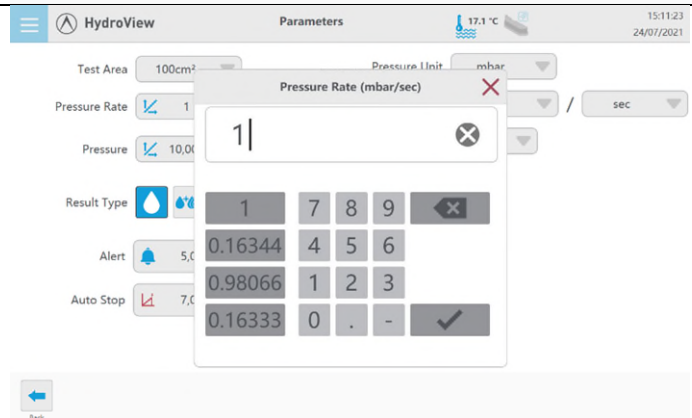
Pressure Unit mbar

Pressure Rate mbar / sec



3.c. Define a value for the tests rate of rise.

Pressure Rate 1 (mbar/sec)



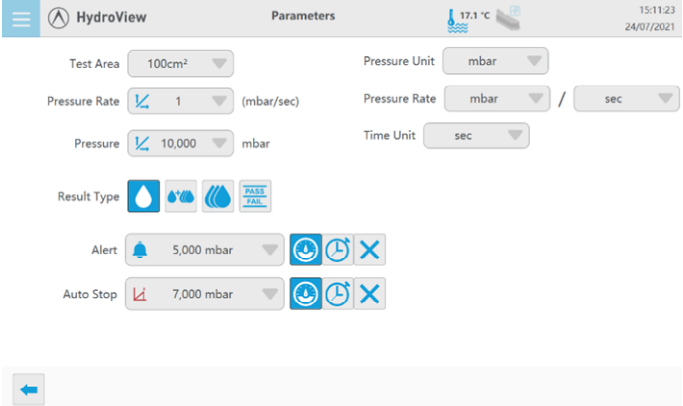
3.d. Define your test result.

Result Type    

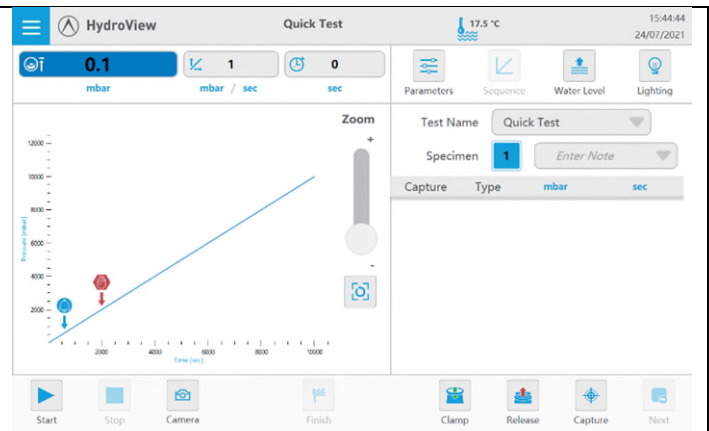
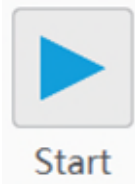
First Drop: Provides a mean result on the pressure or time at which the first drop is identified across tests specimen.

First and Third: Provides a mean result on the pressure or time at which the first drop and third drop is identified across test specimen.

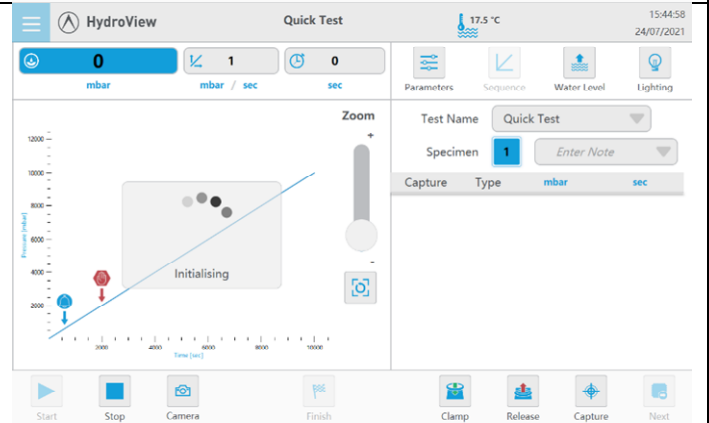
First Drop: 	First and Third: 
Third: 	Pass / Fail: 

Third: Provides a mean result on the pressure or time at which the third drop is identified across tests specimen. Pass / Fail: If a drop is detected before a specified pressure or time is met the result will be marked as a failure. If the specimen meets or exceeds the pre-set values, the specimens result will be a pass.	
3.e. Define a value for the test alarm. You can specify it at a time or at a pressure. Alert  5,000 mbar  	
3.f. Define a value for the auto stop, this will automatically stop the test at the set time or pressure. Auto Stop  7,000 mbar  	
3.g. Once all test parameters have been set, select back. The machine is now set for testing.  Back	
4. Before starting testing load a specimen (Pages 41-42) and ensure the guard clamp is in its lower position and the splash guard is inserted. Select clamp to lower the pneumatic.  Clamp	

5. Once the specimen is clamped start the test by pressing the start button.

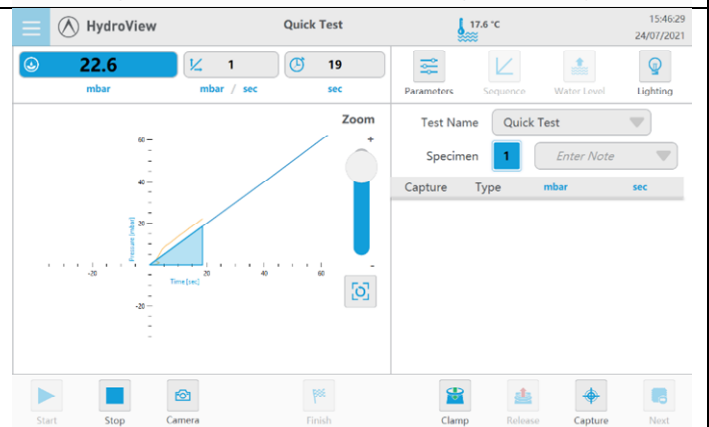
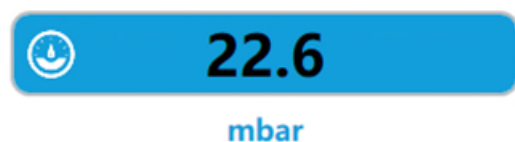


6. Once the test has started the instrument will briefly initialise before applying pressure to the specimen.

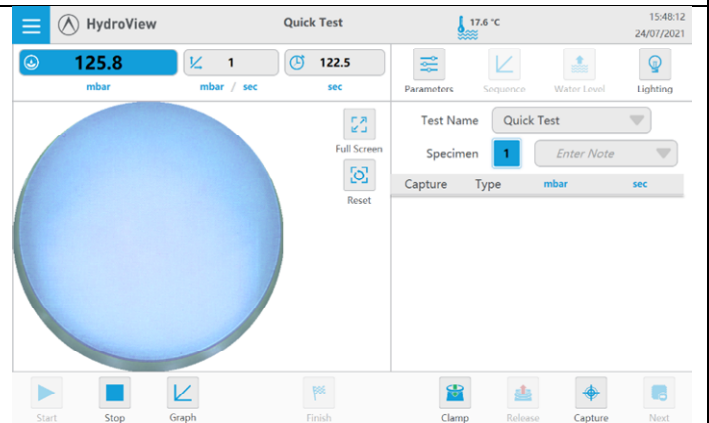
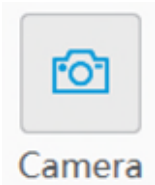


7. Once initiated the pressure rise will be displayed on the graph, use the smart zoom to see the pressure rise.

The actual pressure rise is displayed in the live test pressure field.



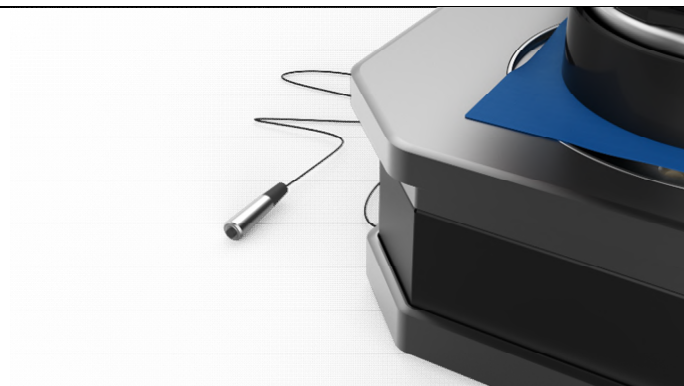
8. To view the specimen on the screen simply select the camera icon. Press the graph icon to return to the graph view.



9. To capture a drop use the capture button located on the screen or the manual hand switch.

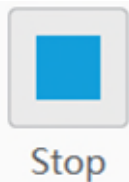


The manual hand switch will capture when releasing the button.

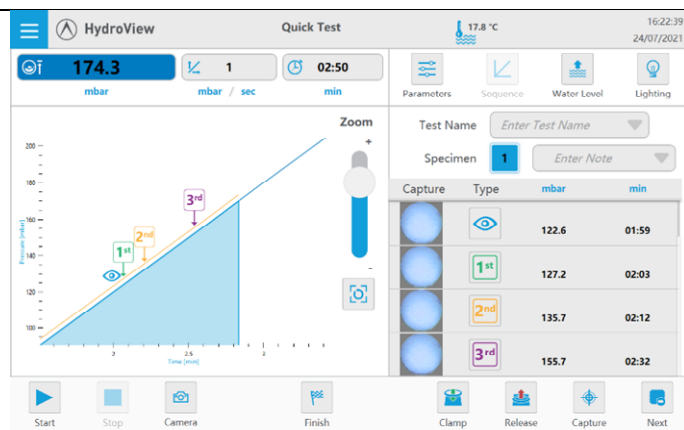


10. Drops identified will appear on the right-hand side of the screen on the results menu.

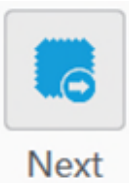
Once the end point has been identified select the stop icon.



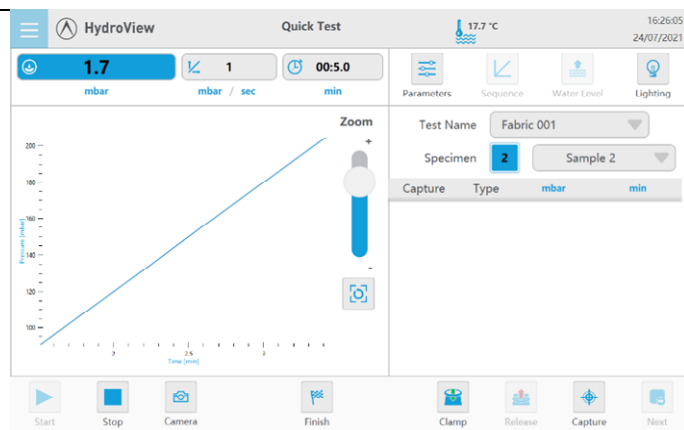
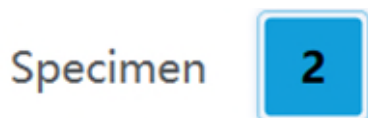
The test will only automatically stop if a burst or a sudden drop in pressure is detected.



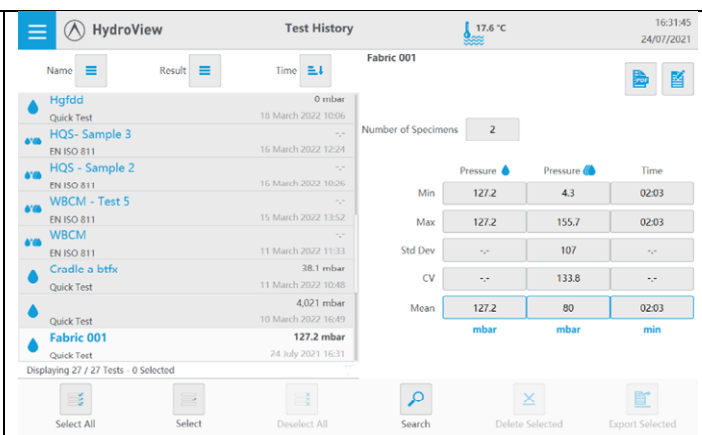
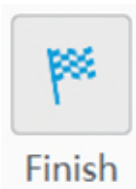
11. Once the test is complete select next to test the next specimen.



The specimen counter will keep track of the number of tests you have completed.



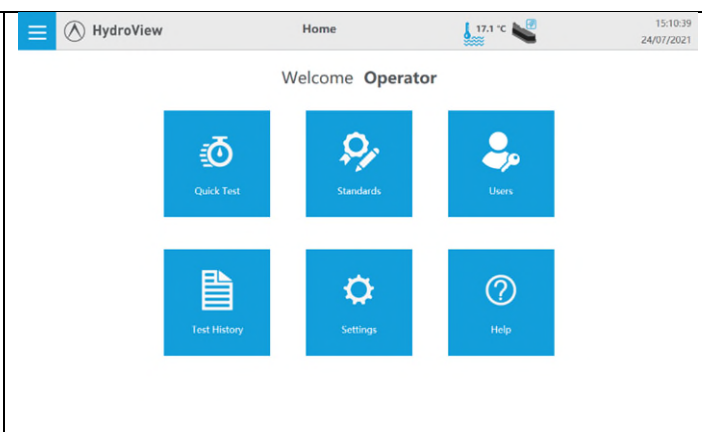
12. After completing the desired number of tests select finish. This will then collate the data from all the tests and save the results to be reviewed in the test history menu.



14. Standard Test Procedure

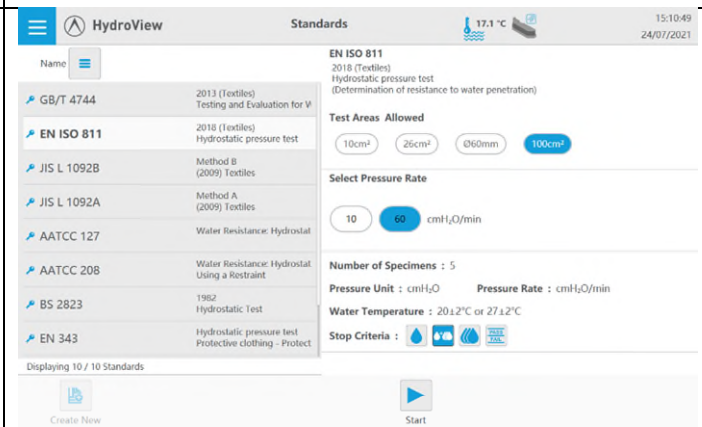
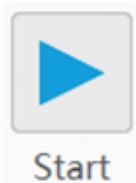
1. Once logged in select standard test.

HydroView should be set up before adjusting the system parameters prior to testing. See:
 Filling the instrument
 Changing the test area
 Loading a specimen



2. Select the pre-set standard from the list on the left. The specifics of the standard are displayed on the right-hand side of the screen.

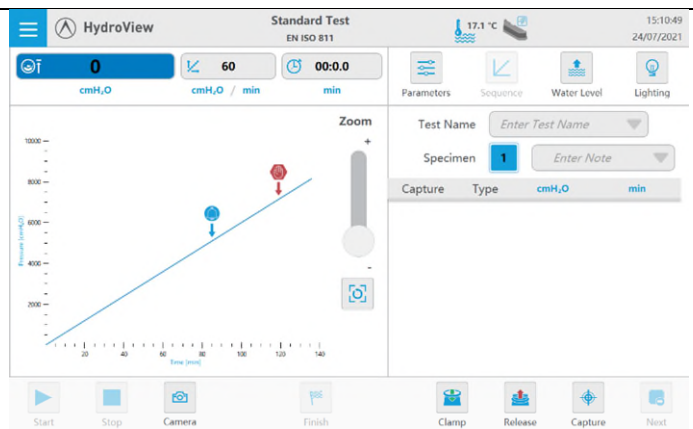
To use the standard select start in the navigation bar at the base of the screen.



3. The default unit and test area will be selected for the standard. You can change the test area and unit used within the test from the parameters screen if you would like to deviate from the standard.



Parameters



3. Adjustable parameters for testing:

- Select the test area you are using.
- Set test pressure unit and rate unit
- Set your rate of rise.
- Result type can't be changed in standard tests.*
- Audible Alert Value
- Auto Stop

3.a. Select the correct test area installed in HydroView.

Test Area

100cm²

Only use the test area highlighted in blue. Other test areas do not conform to the standard selected.



3.b. Select the pressure unit your test result will be displayed in.

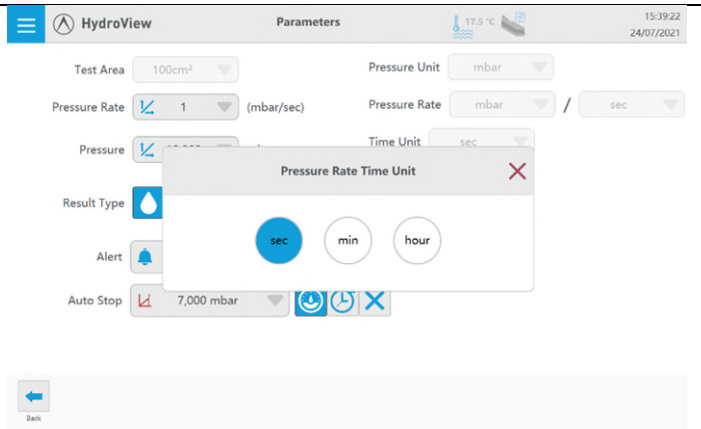
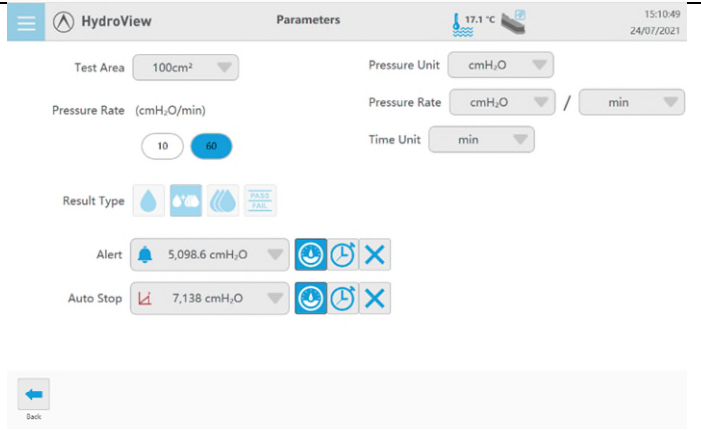
Pressure Unit

mbar

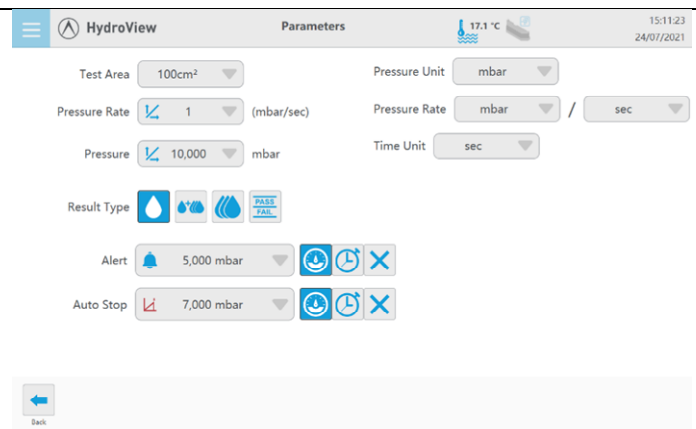
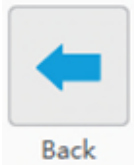
Pressure Rate

mbar

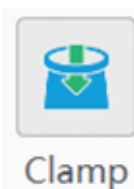
sec

						
3.c. Define a value for the tests rate of rise. Pressure Rate (cmH₂O/min) 10 60 The pressure rates applicable to the standard will be displayed, ensure the correct one is selected for test.						
3.d. The test result will be automatically defined by the standards selected; this can't be changed. <i>If any deviations from standard are required, a copy of the standard would need to be created in the standards manager before changes can be made.</i>	<table><tr><td>First Drop: </td><td>First and Third: </td></tr><tr><td>Third: </td><td>Pass / Fail: </td></tr></table>		First Drop: 	First and Third: 	Third: 	Pass / Fail: 
First Drop: 	First and Third: 					
Third: 	Pass / Fail: 					
3.e. Define a value for the test alarm. Time or pressure can be specified. Alert  5,000 mbar 						
3.f. Define a value for the auto stop, this will automatically stop the test at the set time or pressure. Auto Stop  7,000 mbar 						

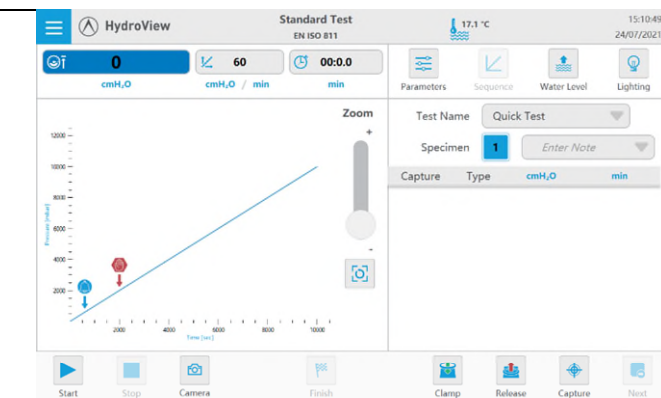
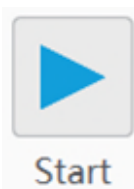
3.g. Once all test parameters have been set, select back. The machine is now set for testing.



4. Before starting testing, load a specimen and ensure the guard clamp is in its lower position and the splash guard is inserted. Press clamp to lower the pneumatic.

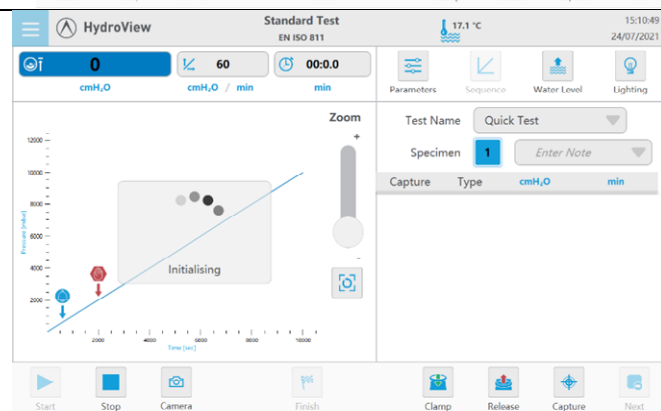


5. Once the specimen is clamped start the test by pressing the start button.



6. Once the test has started it will briefly initialise before applying pressure to the specimen.

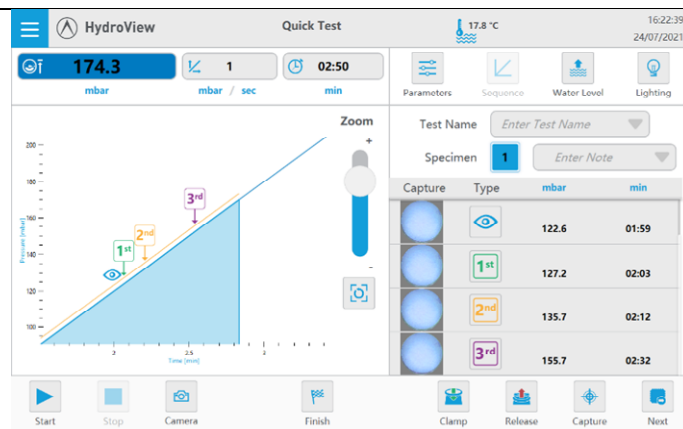
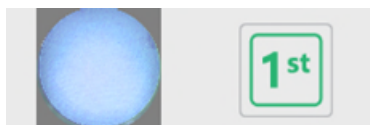
[Follow next steps from point 7 in section 10 - Quick Test Procedure.](#)



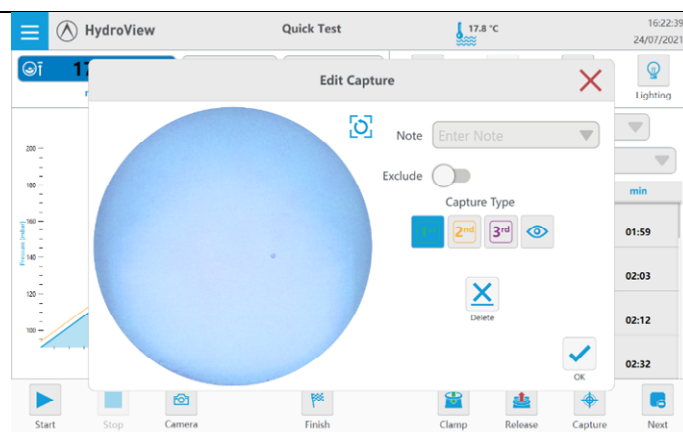
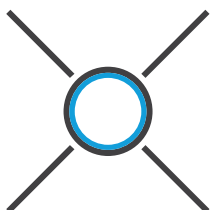
15. Drop Review + Highlight Tool

1. During a test, drops that are identified by users selecting capture or using the manual hand switch will be displayed on the right-hand side of the screen.

When a drop is identified, it will automatically be identified as the first (1st) drop. To change this to an observation select the captured image or the icon in the right-hand column.

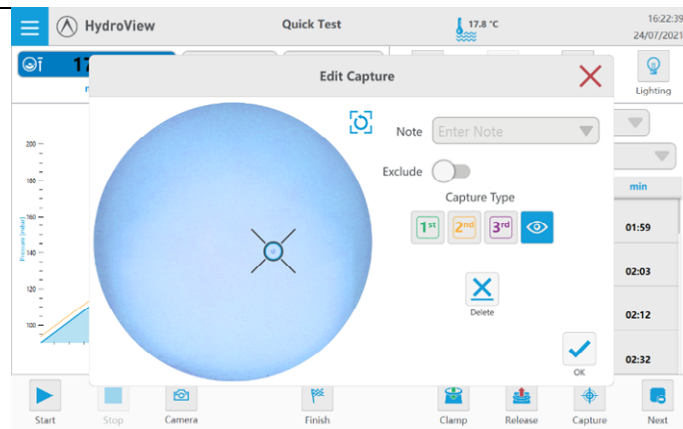
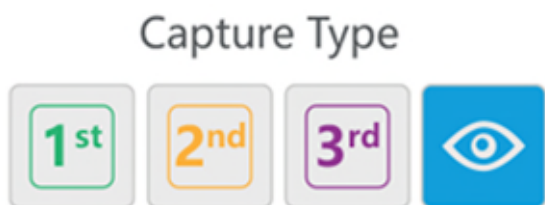


2. On the edit capture screen drops can be highlighted on the specimen. To do this identify the drop that should be highlight on the left-hand specimen image and hold your finger on the area where you would like to mark the drop.



3. From the edit capture screen, the order in which the drops were captured can be changed or an observation assigned.

Select one of the capture types from the list:



4. Notes can be added to specific results along with exclude the drop or observation. Administrator privileges provided further editing of the results. For example, the capture can be deleted.

For general users, all captures will remain for review at the end of testing.

Note

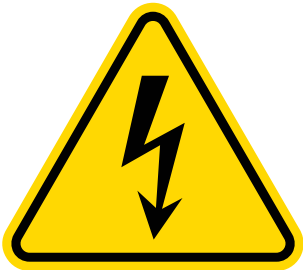
Enter Note

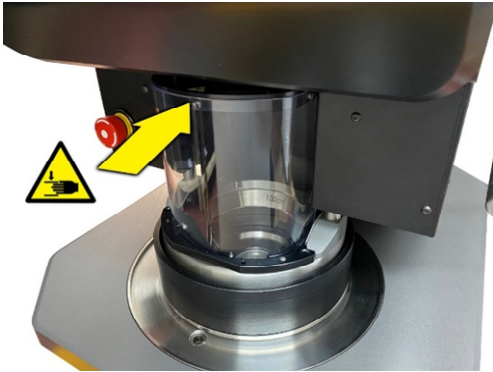


16. Inspection, testing and maintenance

Maintenance and calibration

Note: All operators should familiarize themselves with this manual before using the equipment.

Warning Symbol	Hazard & Warnings
	Electrical Always isolate the HydroView from the electrical supply before carrying out authorized maintenance work on the instrument. Access to the electrical mains power switch must not be obstructed. Any maintenance, servicing or adjustments must only be carried out by suitably skilled or properly instructed/supervised personnel.
	Cleaning & Maintenance Cleaning & maintenance should only be carried out by trained/competent personnel. Water in the System Regular cleaning of the system is required to prevent the risk of waterborne diseases such as Legionnaires' disease. See Cleaning & Maintenance section for further details on how to clean the system.
	Water Spills Make sure any water spills are cleared up immediately to prevent slip hazards in the laboratory environment. Moving Components Moving components such as a clamp guard and clamp head represent crush and entanglement risks. It is important that users of the equipment understand these features and residual risks. Stand clear and do not reach into the test area when testing has commenced. Working Area <u>DO NOT ALLOW</u> general access to HydroView. Only competent and trained personnel should operate the equipment.

	HydroView should be stored in a controlled environment where only authorized personnel have access. Warranty Do not attempt to gain access to the internal workings of HydroView. If HydroView is tampered with this will invalidate the warranty.
Warning Symbol	Hazard & Warnings
 Eye protection must be worn	Personal Protective Equipment (PPE) Appropriate Personal Protective Equipment (PPE) must be worn for cleaning to prevent burns to skin and eye damage when using cleaning agents.
	Finger Trap Hazard When operating the splash guard from its clamped position to its un-clamped position, ensure your hands are clear of the test area. 

17. Service & Calibration

James Heal Service & Calibration is a totally comprehensive, worldwide support programme.

When you buy instrumentation from us, it is the beginning rather than the end of an association.

Our aim is simple:

To precisely provide the services you need to maintain and protect the value of your investment.

For any enquires you may have regarding your instrument please contact James Heal Service & Calibration by e-mail or telephone.

In all communications, please quote the serial number of your instrument, the firmware version number and the software version number, e.g., 2136/22/1001 and V1.00. These can be found on the operator touch screen within the Settings > General menu.

E.g., Serial Number: 2136/XX/1XXX Version: X.X.XXXX.XXXXXX Firmware: vX.pX

James Heal Service & Calibration contact details:

Telephone +44 (0) 1422 366355

Service & Calibration

- Worldwide Service
- ISO 17025 based calibration service
- 18 Months' Warranty

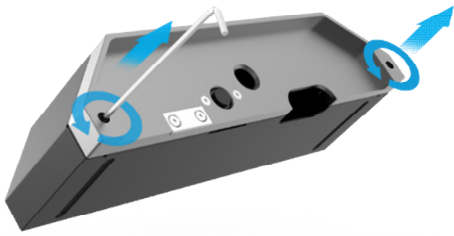
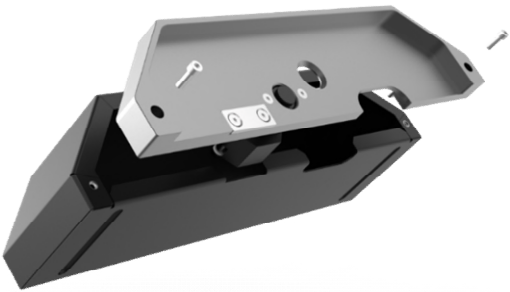
18. Spares and Service List

Part Spares	Quantity Provided	Stock code
Splash Guard	1	551-302
Wastewater Draw	1	551-222
Handheld Button / Switch	1	794-763
Sample Plate	1	551-301
Pneumatic Adaptor	1	794-819
Water Level Wiper	1	551-204
2m: 8mm OD Black Nylon Tube (Water)	1	
2m: 6mm OD Soft Nylon Tube Blue (Air)	1	327-378
8mm Pipe Sinker	1	551-305
Blue 'J' Cloth	1	785-118
Mains Lead Straight (US, EURO, UK)	1	142-304
100cm ² Sample Clamp Kit	1	794-365
60mm Diameter Sample Clamp Kit	1	794-366
26cm ² Sample Clamp Kit	1	794-367
10cm ² Sample Clamp Kit	1	794-368
ISO Certificate	1	201-903

19. Cleaning instructions

Wastewater Drawer

Steps 1 - 2 below should be completed daily.
Steps 3- 4 should be completed monthly.

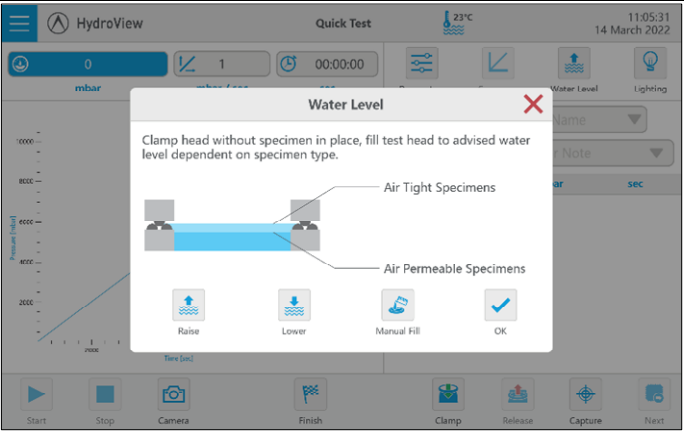
1. Drain the system documented in previous pages and remove wastewater draw from the instrument.	
2. Pour any water from the wastewater drawer away.	
3. Remove the two M4 bolts from the lid of the wastewater drawer. This will provide access to the inside of the main body to clean any residue that may build up over time. Do not remove any of the other fixings.	
4. Once the main drawer body has been cleaned return the lid and fixings.	

General Cleaning

Do not use harsh abrasive cleaner on the instrument, use water and a nonabrasive cloth to remove any build-up of residue that may form over time.

Regular cleaning of the system is required to prevent the risk of waterborne diseases such as Legionnaire's Disease.

20. Fault finding, trouble shooting and repair

Fault	Probable Cause	Action
The equipment does not power on.	No power supply to equipment.	Check if plug is connected. Check if power is switched on.
Screen not functioning	Water on screen	Ensure the touch screen is dry and free from water.
Test Stopped and cannot be started.	Emergency-stop activated	Ensure the emergency-stop (red button) hasn't been activated, by twisting the button. The touch screen should also indicate that the e-stop is engaged.
Water pump not filling instrument and making a loud noise.	Airlock in pump	 Use the raise and lower buttons on the water level to free the air lock.
Test results not saving.	Device data capacity full.	See page 30 to back up and delete old data.
System running slow	Device data capacity full.	Power off and restart the instrument. See page 30 to back up and delete old data.
Software Update		Please contact your installer or agent regarding software updates, or if you experience any bugs with your software.

Warning

If the above action does not resolve the problem or the problem is not listed, switch off the unit and call a qualified technician for assistance.