

MacPack III

Construction Material Testing Software

Compression Test Screen

Peak Load kN

Strength N/mm²

Status

☐ Auto Speed ☒ Auto Start ☐ Auto Scale

Load kN

-1629.8

Zero Test Speed kN/s

System Info

Graph View Machine Setting Calibrations TabPage4

Results

Description	Unit	Data
Sample No		
Lab / Client Ref		
Type		BRICK / B...
Weight	Kg	
Length	mm	
Breath	mm	
Height	mm	
Area	mm ²	
Volume	mm ³	
Density	Kg/m ³	
Load	kN	
Strength	N/mm ²	
Condition	Wet/Dry	
Tested By	Name	

Sample No

Sam No	Sam No	Sam No

Re-Fresh

Total Sample Tested

Date Testing Thursday, December 23, 2021

Intro Bricks Cubes Cores Cylinders

MacPack III
Concrete Compression Software

BS SOFTWARE DEVELOPMENT

Cyberjaya - Malaysia Since 2004
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Start Exit

MacPack - Compression Test (Brick,Cube,Core,Cylinder)

MacPack - Flexural Test (Load & Bend)

MacPack - Tensile Test.



(644364-U)

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MacPack III

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MacPack III

Introduction and software features

MacPack software are designed & developed by BS Software Development Sdn. Bhd. For construction material testing laboratories specially for concrete compression and reinforcement testing.

The word "**MacPack**" derive from Machine Package.

History of **MacPack** version starts in 2002 and upgraded to **MacPack-S** in 2007 and MacPack II in 2015. In the year end 2021 new version of **MacPack III** has been introduced. This new version has been integrated with cloud server features. Where this feature can help customer to centralize their database.

MacPack III also will integrate with Cube Test Reporting Software (**QubPack**)

Where all the data entered in QubPack will be access by MacPack for testing and upon tested, report can be generate immediately without delaying.

Why Use MacPack

- Software and PC maintenance is cheaper comparing imported readout units.
- Installation and setup will only take about an 1 hour.
- Existing calibration value can be copy to new pc.
- More brief information can be displayed in the screen.
- Software's can be updated according to revision of standards.
- Unlimited storage capacity for software while other readout unit is limited.
- Better search features for software and able to customize to user requirements.
- The speed of processing data is very much faster than readout units.
- Multiple machine can be link into this software.
- Immediate Online support to minimize down time.

MacPack III

Login Screen



BS Software Development Sdn. Bhd.
BS MacPack Application @2021
Version : 3.0.0.2

Enter your password to login

Login ID: Balan
Password:
Branch: Cyber

OK
Cancel

Date : 23/12/2021 12:40:45 PM

First Time Login

Use Login ID: admin and Password: admin
Branch: leave it blank

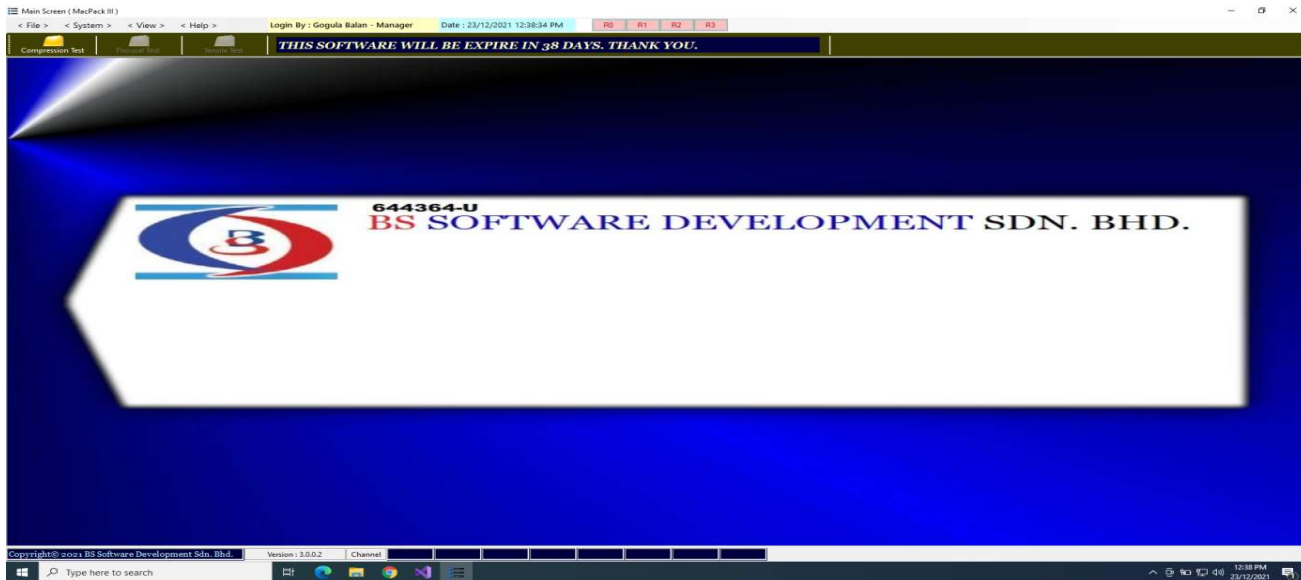
Admin ID and Password won't be able to use once there is a user record found in the system database.

There will be message pop out if the ID or Password didn't match.

There will be message pop out if unable to find the configuration or database file.

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Main Screen



Initial Setup Procedure

- 1) Goto < System > select 'Purchaser Info'
- 2) Goto < System > select 'Create New User'
- 3) Goto < System > select 'Machine Info'
- 4) Goto < System > select 'Calibration'

QubPack software Link

- 1) Goto < System > select 'QubPack Link'

To setup Datalogger Device

Double click at the 1st Channel text box.

MacPack III comes with multiple levels

- Code 1100 - where user only can access to Compression Mode
- Code 1010 - where user only can access to Flexural Mode
- Code 1001 - where user only can access to Tensile Mode
- Code 1111 - where user can access all the Mode

This code stated in Software Register Screen

- Upon installation, you'll have 40 days free trial.
- Ensure to register the software before the free trial day expire.

Red Color Button (R0 to R3)

- This is for Automatic Machines and letter R is Relay
- Additional Relay Module is needed for this function.

MacPack III

Purchaser Info

Purchaser Info

Company # 644364-U Country Malaysia

Name BS Software Development Sdn. Bhd.

Address SB-11-06, Tower B, Menara Paragon,
Persiaran Bestari, Cyber 11,
63000 Cyberjaya, Selangor DE

Tel. / Fax 012-3205915

Email bssoftwaredevp@yahoo.com

Select Logo

Edit Delete Print Exit

How to add purchaser information

- Click 'Add' button then fill all the relevant fields
- select your country from the combo box and select company logo (if wanted)
- Click 'Save' at last

Create New User

Create New User

User ID	User Name	Access
Balan	Gogula Balan	Manager
Harrish	Harrish	Supervisor
Shanjivv	Shanjivv	Technician

User Details

User ID

User Name

User Password

Re-Type Password

Access Level

Technician

Supervisor

Show Password

Exit

How to create new user

- Click 'Add User' button then fill in all the relevant fields.

ACCESS LEVEL

- Technician - Only able to carry out the test
- Supervisor - Able to carry out the test and Add/Edit Machine settings
- Manager - Able to access all sections

MacPack III

Machine Info

The screenshot shows the 'Machine Information' window. The 'Machine List' table contains one entry: 'UT2000' with name 'Unit Test 2000kn'. The 'Machine Info' section has fields for Code, Name, Capacity (kN), and Model. The 'Machine Settings' section includes 'Failure (%)', 'Base (kN)' with 'Low' and 'High' sub-fields, 'Drop (kN)' with 'Ab-Normal' sub-field, and 'Speed (N/mm²)' with 'Min' and 'Max' sub-fields. The 'Devices' section has checkboxes for 'Transducer' and 'Weighing Scale', each with a 'Channel' dropdown. The 'Relays' section has checkboxes for 'Solonite Valve', 'Main Motor', and 'Rapid Motor', each with a 'Relay' dropdown. At the bottom are buttons for 'Add', 'Edit', 'Save', 'Delete', and a large red 'EXIT' button.

How to add new machines

- Click 'Add' button then fill all the relevant fields
- Code should not duplicate or same with other machine
- **Machine Settings - Failure (%)**
 - Is where the test will complete if the (kN value/Peak * 100)
- **Machine Settings - Base(kN) Low**
 - when kN value above this value the cycle will start
- **Machine Settings - Base(kN) High**
 - when kN value above this value, decimal value will removed.
- **Machine Settings - Drop(kN) Ab-Normal**
 - when a sample reached the peak value, the kN value will drop thereafter and it shouldn't drop more than this stated value otherwise status of test will displayed as Ab-Normal.
- **Machine Settings - Speed(N/mm²)**
 - the speed of testing should within the Min and Max value. If the speed is within this range than the speed textbox color will be green else color will be red.
- **Devices**
 - devices such as Transducer or Weighing Scales shall refer to the Main Screen Channel textbox (bottom)
- **Relays (Automatic Test Machine only)**
 - select the relays which controls your machine pumps/motors

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Calibration Screen

Calibration Forms

Data Logger

- Channel 0
- Channel 1
- Channel 2
- Channel 3
- Channel 4
- Channel 5
- Channel 6
- Channel 7

Calibration Values

Channel : 0

Zero: 3.749

Span: 456.4567

Strength Round to : 0.1

Load kN Decimal : 1

Fine Tuning

	Expected	Readout	Factor
1	100	105	0.9524
2	200	205	0.9756
3			
4			
5			
6			

Load kN

Before Fine Tuning: -1711.26

-1629.8

Calibrate

Load: [] Calibrate

Set Load Value

Save Exit

Calibration Data

23/12/2021

Save Update to Ch

ZERO Start

0	50	100	200	400	800	1000	1300	1600	2000	2500	3000

0.000000

0.000000

0.000000

0.000000

0.000000

0.000000

0.000000

0.000000

0.000000

0.000000

0.000000

0.000000

How to calibrate

- Click the channel you desire to calibrate, the Zero and Span textbox shouldn't be blank.
- In Load kN frame, click 'Calibrate' button and enter the load at calibrate load textbox than compress until the required kN then click the 'Set Load Value' button. Release the pressure, wait till the reading stable than press the same button again. System will display the new Zero and Span value. Click the Save button. Refresh the screen by selecting the channel again. You may see the new values of Zero & Span.

- Fine Tuning

This function will be used to increase the accuracy of the readings

Exp: Actual reading suppose to be 1500kN but system shows 1530kN, you may type in

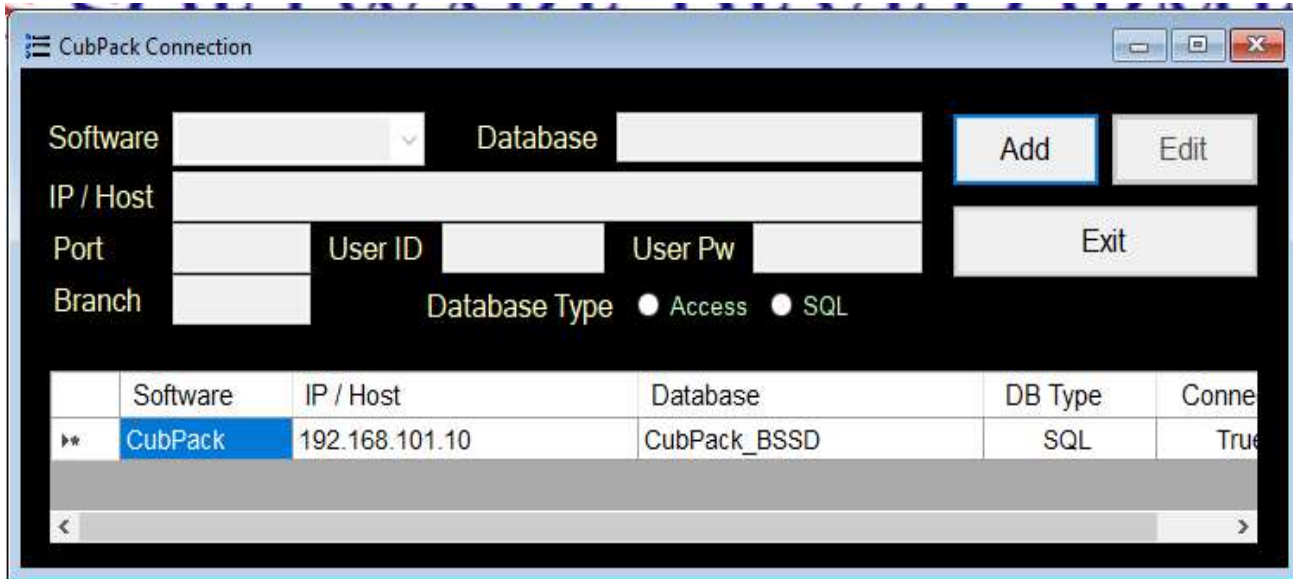
Expected = 1500, Readout = 1530. The factor will be calculated and system will adjust automatically.

- Calibrator Load Cell

This part of development is in progress. The intention of this part is, the calibrator load cell will be directly calibrate this system.

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CubPack Link Setup



The screenshot shows the 'CubPack Connection' window. It contains several input fields and buttons. The 'Software' field is a dropdown menu with 'CubPack' selected. The 'Database' field is a text box containing 'CubPack_BSSD'. The 'IP / Host' field is a text box containing '192.168.101.10'. The 'Port' field is a text box. The 'User ID' and 'User Pw' fields are text boxes. The 'Branch' field is a text box. The 'Database Type' section has two radio buttons: 'Access' and 'SQL', with 'SQL' selected. There are 'Add', 'Edit', and 'Exit' buttons. Below the input fields is a table with the following data:

	Software	IP / Host	Database	DB Type	Conne
▶▶	CubPack	192.168.101.10	CubPack_BSSD	SQL	True

What is CubPack Link

- This is a link setup form to CubPack Software.
- CubPack is a software where it monitors all the test samples.
- Test data from this MacPack will be saved directly to CubPack database
- MacPack will download all the details of the test sample such as
 - Client Name, Project Title, Grade, Structure Element and sample due date from the server.
- This works with LAN and Online

MacPack III

Datalogger Link Setup

Form Comm Port Settings

Device_Type
☐ Adam ☐ Arduino ☐ Direct
Type

Instrument
Baud Rate
Parity
DataBits
StopBits

Serial Port Settings
Comm Port
MDI Form Channel
Decimal

ADAM Tranducer
ADAM Module Type
ADAM Address Channel

Test Read
Value :

Add Edit Save Delete Exit

	Device Type	Equip Type	Channel	Comm Port	Decimal	Adam Model	ADAM Address	ADAM Channel	Com BaudRate	Com Parity	Com Databit	Com Stopbit
»	ADAM	Tranducer	0	COM3	2	ADAM 4017	1	0	9600	None	8	1

How to link Data Logger to this system

- You have 3 ways to link, Using ADAM Data Device, Arduino Device or Direct Indicator
- Click Add button than select Device Type, Comm Port other requirements.
- MDI Form Channel is where the reading will be shown once connected.
- Once done click Save than Exit the system completely.

Upon login, system will open the said comm port and display the values in respective channel textbox.

MacPack III

Software Registration

Software Registration

Company	BS Software Development Sdn. Bhd.		
Address	SB-11-06, Tower B, Menara Paragon, Persiaran Bestari, Cyber 11, 63000 Cyberjaya, Selangor DE	Tel. No	012-3205915
		Fax No.	
		Country	MALAYSIA
Email	bssoftwaredevp@yahoo.com		
Processor ID	178BFBFF00630F01	MacPack Version	3.0.0.2
Motherboard ID	PBZVV00WB8X3GB	Date Installed	30/11/2021
Mac Address	5820B17679F4		
OS Type	Microsoft Windows 10 Pro		
Drive ID	D470ADBB	Register Online	Register Manually
Option Bits	☒ Option 1 ☒ Option 2 ☐ Option 3 ☒ Option 4 ☐ Option 5 ☐ Option 6 ☐ Option 7 ☒ Option 8 ☒ Option 9 ☐ Option 10 ☐ Option 11 ☐ Option 12 ☐ Option 13 ☐ Option 14 ☐ Option 15 ☐ Option 16		
Product ID	1100	Serial	10512
Expires	31/01/2022		
Key Code	5KTEAT3LEFOV723WO4D4AB5BMQ		
Packages	☒ Compression ☐ Flexural ☐ Tensile		
Remarks			
	Activate Online	License Activation	Manually Activate

How to register your software

- before clicking the 'Register Online' button, please ensure all the company particulars are filled.
- You may click 'Activate Online' button to activate via online or type in the Key Code given by provider then click 'License Activation' button to activate
- To request for Key Code, click the 'Register Manually' button to print your computer and company information then email to software provider for key code.

MacPack III

Testing Screen Brick and Cube

Compression Test Screen

Peak Load **0.0** kN
Strength **0.0** N/mm²
Status: Testing in progress....
☐ Auto Speed ☐ Auto Start ☐ Auto Scale

Load kN **0.0**
Zero Test Speed **0.0** kN/s

System Info
Graph View Machine Setting Calibrations TabPage4
Code **UT2000** Capacity **2000**
Name Unit Test 2000kn
Model U2000kn
gnReal **0.00** Transducer Channel **0**
Zero **-1711.26** Scale Channel **10**

Results

Description	Unit	Data
Sample No		22-00001
Lab / Client Ref		1234
Type		BRICK / B...
Weight	Kg	2.54
Length	mm	210
Breath	mm	100
Height	mm	65
Area	mm ²	21000
Volume	mm ³	1365000
Density	Kg/m ³	1860
Load	kN	0.0
Strength	N/mm ²	0.0
Condition	Wet/Dry	Dry
Tested By	Name	Gogula Ba...

Sample No

Sam No	Sam No	Sam No

Intro Bricks
Condition
☒ Saturated
☐ As-Receive
Size (mm)
☒ 210 x 100 x 65
☐ 220 x 100 x 65
☐ Blank
Lab Marking
Weight (Kg)
Size (mm)
Length **210** Width **100** Height **65**

Re-Fresh
Total Sample Tested
Date Testing Wednesday, March 30, 2022

Start STOP

Compression Test Screen

Peak Load **0.0** kN
Strength **0.0** N/mm²
Status: Testing in progress....
☐ Auto Speed ☐ Auto Start ☐ Auto Scale

Load kN **0.0**
Zero Test Speed **0.0** kN/s

System Info
Graph View Machine Setting Calibrations TabPage4
Code **UT2000** Capacity **2000**
Name Unit Test 2000kn
Model U2000kn
gnReal **0.00** Transducer Channel **0**
Zero **-1711.26** Scale Channel **10**

Results

Description	Unit	Data
Sample No		22-00001
Lab / Client Ref		1234
Type		CUBE
Weight	Kg	8.11
Length	mm	150
Breath	mm	150
Height	mm	150
Area	mm ²	22500
Volume	mm ³	3375000
Density	Kg/m ³	2400
Load	kN	0.0
Strength	N/mm ²	0.0
Condition	Wet/Dry	Wet
Tested By	Name	Gogula Ba...

Sample No

Sam No	Sam No	Sam No

Intro Cubes
Condition
☐ Saturated
☒ As-Receive
Size (mm)
☒ 50 ☐ 75 ☐ 100 ☐ 150
☐ Blank
Lab Marking
Weight (Kg)
Size (mm)
Length **150** Width **150** Height **150**
☒ QubPack

Re-Fresh
Total Sample Tested
Date Testing Wednesday, March 30, 2022

Start STOP

MacPack III

Testing Screen Core and Cylinder

Compression Test Screen

Peak Load **0.0** kN
Strength **0.0** N/mm²
Status: Testing in progress...

☐ Auto Speed ☐ Auto Start ☐ Auto Scale

Load kN **0.0**
Zero Test Speed **0.0** kN/s

System Info
Graph View Machine Setting Calibrations TabPage4
Code: UT2000 Capacity: 2000
Name: Unit Test 2000kn
Model: Ut2000kn
gnReal: 0.00 Transducer Channel: 0
Zero: -1711.26 Scale Channel: 10

Results

Description	Unit	Data
Sample No		22-00005
Lab / Client Ref		456
Type		Core
Weight In Air	Kg	0.761
Weight In Water	Kg	0.433
Diameter	mm	75.35
Length	mm	78.13
Cross Sec. Area	mm ²	4459
Len/Dia Ratio		1.037
Density	Kg/m ³	2320
Correction Len/Dia		1.014
Correction Reinforcement		1.00
Peak Load	kN	0.0
Core Strength	N/mm ²	0.0
In-situ Cube Strength	N/mm ²	0.0
Tested By	Name	Gogula Ba...

Sample No

Sam No	Sam No	Sam No

Re-Fresh
Total Sample Tested
Date Testing: Wednesday, March 30, 2022

Intro Cores
Condition: ☐ Saturated ☒ As-Receive Lab Marking
Drill Directions: ☐ Horizontal ☒ Vertical
Weight in (Kg): Air Water
Mea (mm): Diameter Length
Cor Factor for Reinforcement

Start STOP

Compression Test Screen

Peak Load **0.0** kN
Strength **0.0** N/mm²
Status: Testing in progress...

☐ Auto Speed ☐ Auto Start ☐ Auto Scale

Load kN **0.0**
Zero Test Speed **0.0** kN/s

System Info
Graph View Machine Setting Calibrations TabPage4
Code: UT2000 Capacity: 2000
Name: Unit Test 2000kn
Model: Ut2000kn
gnReal: 0.00 Transducer Channel: 0
Zero: -1711.26 Scale Channel: 10

Results

Description	Unit	Data
Sample No		22-00002
Lab / Client Ref		7412
Type		Cylinder
Weight	Kg	12.36
Diameter	mm	150
Length	mm	300
Area	mm ²	17671.46
Volume	mm ³	5301437.60
Density	Kg/m ³	2330
Load	kN	0.0
Strength	N/mm ²	0.0
Condition	Wet/Dry	Wet
Tested By	Name	Gogula Ba...

Sample No

Sam No	Sam No	Sam No

Re-Fresh
Total Sample Tested
Date Testing: Wednesday, March 30, 2022

Intro Cylinders
Condition: ☐ Saturated ☒ As-Receive Lab Marking
Size (mm): ☒ 100 ☐ 150 ☐ Blank
Weight (Kg)
Diameter: 150 Length: 300

Start STOP

MacPack III

Result Listing Screen

Test Results Listing

Type
☐ Block ☒ Cube ☐ QubPack
☐ Core ☐ Cylinder

Search Option
☒ By Date From 31/03/2021 To 31/03/2022
☐ By Sys # Sys # To

Generate

Printed on 31/03/2022 11:31:27 AM

BS Software Development Sdn. Bhd.
SB-11-06, Tower B, Menara Paragon,
Persiaran Bestari, Cyber 11,
63000 Cyberjaya, Selangor DE
Tel : 012-3205915 Fax :
bssoftwaredevp@yahoo.com

CUBE RESULT LISTING

Sample No	Sam Ref	Date Test	Weight	Len	Bre	Hei	Density	Load	MF	MPa	Tested By	Machine
21-00012	11	10-04-2021 - 1:38 PM	8.00	150	150	150	2370	67.85	A	3.0	Balan	UT2000
21-00013	77	10-04-2021 - 3:00 PM	8.00	150	150	150	2370	44.11	A	2.0	Balan	UT2000
21-00014	11	10-04-2021 - 3:45 PM	7.90	150	150	150	2340	213.72	A	9.5	Balan	UT2000
21-00015	12	10-04-2021 - 3:47 PM	2.36	100	100	100	2360	170.25	A	17.0	Balan	UT2000
21-00016	13	10-04-2021 - 3:51 PM	2.33	100	100	100	2330	647.13	A	64.7	Balan	UT2000
21-00017	23	03-09-2021 - 11:12 AM	8.20	150	150	150	2430	102.10	A	4.5	Balan	UT2000
21-00018	12	03-09-2021 - 11:22 AM	8.00	150	150	150	2370	203.00	A	9.0	Balan	UT2000
21-00019	11	03-09-2021 - 12:00 PM	7.88	150	150	150	2340	0.00	A	0.0	Balan	UT2000
21-00020	12	03-09-2021 - 12:01 PM	8.00	150	150	150	2370	0.00		0.0	Balan	UT2000
21-00022	51	09-09-2021 - 1:47 PM	8.00	150	150	150	2370	190.90	A	8.5	Balan	UT2000

Select Type of result than search option by date or system number.

- Click 'Generate' button to pop up the results

Test Results Listing

Type
☐ Block ☐ Cube ☐ QubPack
☐ Core ☒ Cylinder

Search Option
☒ By Date From 31/03/2021 To 31/03/2022
☐ By Sys # Sys # To

Generate

Printed on 31/03/2022 12:44:26 PM

BS Software Development Sdn. Bhd.
SB-11-06, Tower B, Menara Paragon,
Persiaran Bestari, Cyber 11,
63000 Cyberjaya, Selangor DE
Tel : 012-3205915 Fax :
bssoftwaredevp@yahoo.com

CYLINDER RESULT LISTING

Sample No	Sam Ref	Date Test	Wt Air	Dia	Len	Area	Density	Load kN	MF	Cyl Str	Tested By	Machine
21-00004	14	07-09-2021 12:46 PM	10.80	150	300	17671.46	2040	173.8	A	9.8	Balan	UT2000