



Beacon International
BB100 Modular Shower System
User Manual & Operating Instructions
Standard Equipment Range



BB100

User Manual & Operating Instructions

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1. Introduction and company history.

Thank you for purchasing a BB100 Modular Shower System.

We are sure your BB100 will work hard for you and give you many years of good service with an excellent return on your investment.

Beacon International Ltd have been manufacturing asbestos removal equipment since the early 1990's.

Since the company's early beginnings, it has grown substantially and has large manufacturing plant covering 35,000 square feet.

Beacon now specialise in manufacturing market leading equipment for the asbestos removal markets around the world.

Please see our website for more details on our wide range of products.

www.beaconinternational.co.uk

This equipment has been manufactured by:

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2. General Health and safety advise



Asbestos is a class 1 carcinogenic and must be handled with care.

Being exposed to asbestos can cause asbestosis, mesothelioma and lung cancer.

It is imperative that the correct training has been given prior to any individual working with asbestos.

Approved breathing apparatus must be used at all times whilst you are working with asbestos.

2.1 Health and Safety Executive.

For health and safety guidance relating to asbestos, please use the HSE website <http://www.hse.gov.uk/asbestos/>

2.2 For further information regarding the requirements of a Modular Shower System, refer to the Contractors guide, HSG247.



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3. Calculating Airflow Required for Adequate Air Changes in Shower Cubicles

The BB100 modular shower system is designed to provide a high standard of shower facility and clean changing area for operatives to use on site.

In addition to this the BB100 is designed to allow adequate ventilation and to provide protection from airborne fibre migration from Dirty through to Clean areas.

The BB100 incorporates a Negative Pressure Unit which is designed to be used with the BB100 and create air changes within the cubicles giving the users protection from contamination.

Current regulations stipulate a minimum of 30 air changes per hour within the shower system.

For a 3-stage system, a minimum airflow of 180m³/h is required.

For a 5-stage system, a minimum airflow of 300m³/h is required.

The Negative Pressure Unit produced specifically for the BB100 produces between 350m³/h and 400m³/h.

N.B. These airflow figures assume the correct voltage is available on site, please check your supply before starting work.

Beacon offer a Voltage & Amperage in-line metering system which is available for monitoring onsite power supply and is available to hire or buy.

For reference and information regarding airflow and enclosure calculations, please follow the link below.

<http://www.hse.gov.uk/research/rrpdf/rr988.pdf>



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4. Transportation

Your BB100 is designed to be as light as possible whilst still being strong and robust when fully assembled.

It is important to handle the BB100 shower panels with care whilst transporting them. Any damage caused to the panels could potentially affect the structure of the fully assembled system.

The BB100 is designed to provide a safe shower and changing facility, it is in your own interest and safety to transport the system carefully. During transiting in a vehicle, ensure the panels and roof and base sections are securely fastened down in the vehicle to prevent movement and damage whilst on route.

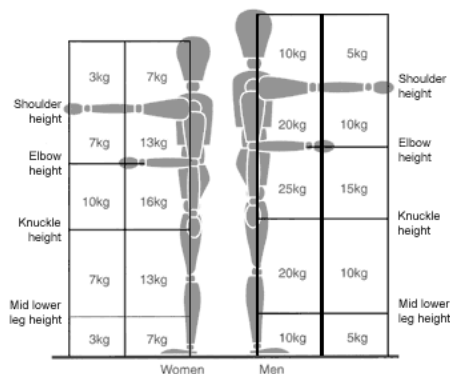
See picture below for an example of a secure load prior to transiting.



4.1 Manual Handling

When you are loading your BB100 on and off of vehicles, please ensure you lift using the correct technique, keep your back straight and bend your legs.

Please the diagram below for recommended lifting values at various heights.



4.2 Storage

When storing your BB100 modular shower units, the following instructions must be adhered to:

- Always store your BB100 in a clean and dry environment.**
Storage in a damp and wet area will increase the risk of bacteria which could cause serious ill health to operators of the equipment.
- Always thoroughly wash and clean off panels after each job has finished.**
- Ensure there is no dirty residue or contamination left in the base sections, thoroughly wash and clean these with shower mats removed.**
- Where applicable, ensure the BB100 NPU is securely sealed with a transit plate with a clean pre filter fitted prior to disassembling the BB100 shower system.**



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5. BB100 System Assembly Instructions

The Beacon BB100 Modular shower system is designed specifically with ease of assembly in mind. There are no clips, the system is locked together with custom made corner post sections, originally designed by Beacon International in 2005.

The BB100 can easily be assembled by 2 persons in less than 15 minutes, once assembled the BB100 is very sturdy and robust.

5.1 Siting your BB100 in a suitable location.

It is critical that you find a flat standing on which to assemble your BB100, an uneven surface will compromise the integrity of the panel joints and will affect the function of the door opening and seals etc. See Fig 1.

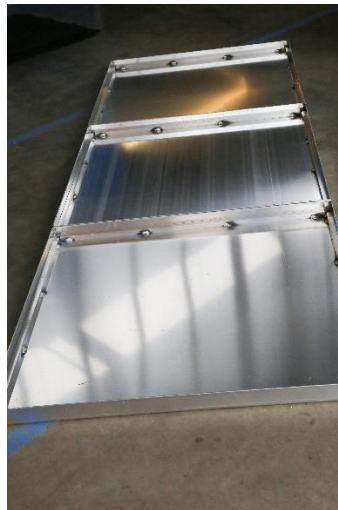


Fig 1.

5.2 Assembling the first cubicle.

Always start assembling the BB100 at the Clean End cubicle first.

Identify the clean end door which will be labelled as “Clean” and where applicable will be fitted with a code lock.

Connect 2 corner posts, one to each of the inside vertical channels of the clean end door panel. See Fig 2.



Fig. 2

Next, with the two corner posts connected to the clean end door, drop the door panel over the outside lip of the base. See Fig. 3



Fig. 3

While one person holds the clean end door upright, another person can now slot a side panel into the corner post section. Please note, there is a rivet on the side panels which is slightly proud of the aluminum. This must be inward facing to the top of the panels.

These rivets are designed to create an interference fit with the corners pieces, once one side has been securely connected to the door panel, the two panels will be self-supporting. See Fig 4.



Fig 4.

Next the second side panel can be added. For UK systems, this panel has the hole cut out for the electric box that powers the locker box heater. Slot the side panel into the corner post.

Next the clean – shower door can be added, prior to offering it up to the two sides, connect two more corner pieces to the opening side of the door surround channel. The shower – clean door must open into the clean cubicle.

Then offer the door up to the two sides and connect the corner pieces to each side panel.



Fig 5.

To complete the structure of the clean end cubicle, drop the roof over the two doors and two sides. The roof locks all four panels securely into place leaving you with a very robust cubicle. See Fig 6.



Fig 6.

5.3 Assembly of the Shower (middle) Cubicle.

Repeat the process of the first cubicle, add and slot the two side panels into the corner sections which are connected to the shower door panel. See Fig 7.



Fig 7.

Now connect the shower-dirty door panel to the two shower side panels and then add the roof panel to the shower cubicle. See Fig 8.



Fig 8.

5.4 Assembly of the Dirty End Cubicle.

Repeat the process, this time add the two dirty end side panels to the shower-dirty door section. Then connect the dirty end door to the two side panels and again, see Fig 9. Finally, drop the roof over the complete cubicle.



Fig 9.

5.5 Added Ancillary Components and Fittings.

Layout shower comfort mats into each cubicle. See Fig 10.



Fig 10.

Mount the electric connection boxes to the clean and dirty end cubicle side panels. (UK HSG247 Models only) See Fig 11.



Fig 11.

Now place the personal locker box into the clean end cubicle and plug the heater unit into the electric socket box. Fig 12 & 13.



Fig 12 & 13.

Next, mount the electric box into the dirty end and place the BB100 Internal NPU inside, taking care to insert the exhaust spigot through the side panel. The NPU is held in place by 5 plastic headed bolts which allow easy assembly and removal. See Fig 14.



Fig 14.

The coat hooks need fitting into the clean and dirty cubicles, these are secured in placed by nylon bolts and wingnuts. See Fig 15.



Fig 15.

The shower head assemble is attached to the wall by a purpose made bracket, see Fig 16 & 17 which shows how this is located.

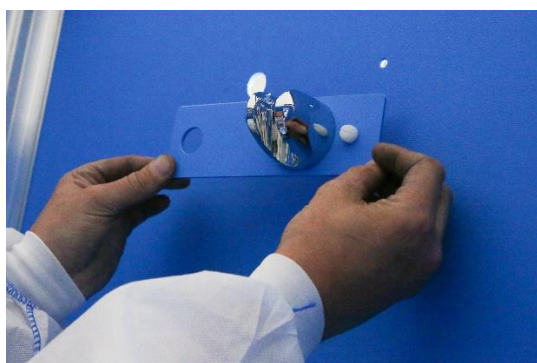


Fig 16.



Fig 17.

Next thread the suck up assembly tube through the shower panel as shown in Fig 18.



Fig 18.

A sink has been manufactured specifically for this modular shower system, this is a requirement for UK models (HSG247). The sink is bolted to the shower side panel as shown in Fig 19 and is secured in place by M6 plastic headed nuts and bolts.

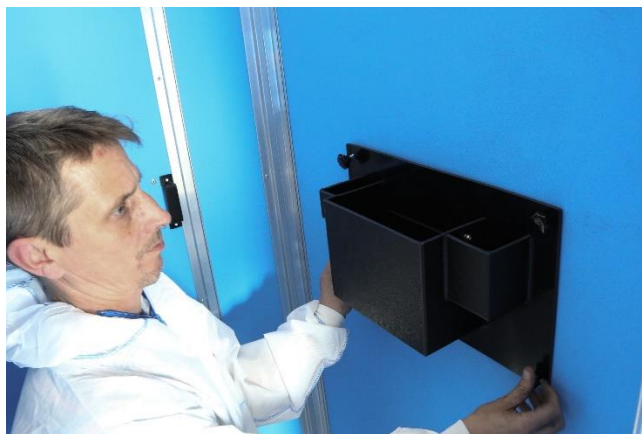


Fig 19



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6. BB100 Service and Maintenance

The BB100 modular shower system is designed to provide a temporary shower facility on site in locations where it is not possible to site a trailer type decontamination unit.

The panels and corner pieces must be kept in good order, this is critical to maintaining the integrity of the structure when assembled.

Should any parts become damaged, contact Beacon International to arrange either a repair or new parts.

Please see parts list for a full breakdown of componentry.

When an NPU is used, DOP and PAT tests need to be carried out in line with legislation, water management systems and electrical components also need to be tested.

6.1 Daily Checks

When the BB100 is assembled, it needs to be checked at regular intervals, at least once a day. It is essential that all panels are securely fitted with roofs and bases positioned correctly to hold the panels securely in place.

When an NPU is used, manometer readings must be checked and clean pre-filters fitted as required.

Waste water filters also need to be checked when a water management or a waste water filtration system is connected to the BB100.

6.2 Weekly Inspections

The weekly check sheet on the following page can be used to record any problems encountered with your BB100 and associated equipment.

Please see example maintenance log on the following page.

Maintenance Log Example

Equipment History Sheet – Weekly Inspections

Hygiene Unit ☐BB100 NPU ☐

Model:

Unit Serial No.

Date of last test / /

Date next test due / /

[illegible]

6.3 Service and Testing (BB100 – NPU)

Service and DOP (dispersed oil particulate) testing must be carried out by a qualified company, it is a legal requirement that companies carrying out servicing and testing of asbestos removal equipment hold a HSE Ancillary Licence.

Testing intervals can vary from one country to another.

UK – 6 Months

France – 12 Months

Netherlands – 12 Months

Italy – 12 Months

Greece – 12 Months

Turkey 12 Months

Australia – 6 Months

New Zealand – 6 Months

When NPU's have been DOP and electrically tested, a test certificate must be supplied by the testing company, this certificate must be kept on record by both the owner of the NPU and by the company carrying out the testing.

Testing must be carried out by trained personnel using only calibrated test equipment.

As the manufacturer, Beacon International automatically issue service reminders in the UK when your NPU is due for service and testing.

If you have purchased your machine through a distributor, they will notify you when your equipment is due for its periodic test.

6.4 Spares and Accessories for your BB100 and associated equipment.

Beacon International manufacture modular shower units as well as a wide range of other asbestos removal equipment.

Spare parts and accessories are available for our whole range of equipment. See parts list on the following page which includes part reference number and description for each part that makes up the BB100.

BB100 Parts List

Part No.	Component Description
	SIDE PANEL (PLAIN) (MOD04)
MOD02	BLUE POLY PROP SIDE PLASTIC
MOD16	'U' CHANNEL (SECTION C)
	SIDE PANEL C/W MIRROR (MOD06)
MOD94	295x295 MIRROR
MOD02	BLUE POLY PROP PLASTIC
MOD16	'U' CHANNEL (SECTION C)
	SIDE PANEL (MOD04) C/W HOLE FOR SUCK UP MOUNTING
MOD02	BLUE POLY PROP PLASTIC
MOD16	'U' CHANNEL (SECTION C)
	SIDE PANEL (MOD04) C/W HOLES FOR COAT HOOK RAIL
MOD02	WHITE POLY PROP PLASTIC
MOD16	'U' CHANNEL (SECTION C)
	ROOF ASSEMBLY COMPLETE (MOD12)
C109	15x3 GASKET
MOD10	2x2" ALUMINIUM FRAME
MOD11	950x950mm NATURAL PPC
	ALUMINIUM CORNER SECTION (MOD13)
C225	10x6 GASKET
MOD14	CORNER POST (SECTION A)
	DOOR PANEL COMPLETE (MOD08e)
C001	NAME PLATE
C109	15x3 GASKET
MOD27	CLEAR FLAP
MOD27a	FLAP SECURING BAR (PLASTIC)
MOD03	WHITE POLYPROP DOOR PLASTIC
MOD15	SECTION B
MOD16	'U' CHANNEL (SECTION C)
MOD17	SECTION D
MOD20	MAGNETIC TAPE
MOD21	BB100 DOOR HANDLE
MOD22	ALUMINIUM 'L' JOINER
MOD47	HINGE
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	SHOWER HEAD/HOSE ASSEMBLY (D079)
D021	¼ TURN VALVE
D058J	EXTENDED COUPLER
D065a	½" HOSETAIL (ROUND)
D080	SHOWER HEAD/HOSE CONNECTOR
D081	SHOWER HEAD
D083	SHOWER HOSE
WMC21	15mm COPPER PIPE
WMC22	SOLDER RING ELBOW
	SUCK UP ASSEMBLY (MOD25)
MOD64	ABS TUBE
MOD62	90° ABS BEND
MOD63	ABS TANK CONNECTOR
D065b	¾" HOSETAIL
	TOOLBOX COMPLETE (MOD19a)
D022A	15mm RUBBER WASHER
D064	HOSE CONNECTOR
D079	SHOWER HEAD/HOSE ASSEMBLY
MOD18	RUBBER Mallet
MOD19	TOOLBOX
MOD23	COAT HOOK RAIL C/W SCREWS & WINGNUTS
MOD24	SHOWER HEAD MOUNTING PLATE ASSEMBLY C/W SCREWS & WINGNUTS
MOD25	BB SUCK UP ASSEMBLY
MOD28	SCREW & WINGNUT SET
Part No.	Description
MOD01	SHOWER MAT
MOD04	SIDE PANEL C/W HOLES FOR COAT HOOK MOUNTING (PLAIN)
MOD06	SIDE PANEL C/W MIRROR
MOD07	SIDE PANEL C/W HOLE FOR SUCK UP MOUNTING
MOD08e	DOOR PANELS
MOD09	ALUMINIUM BASE
MOD12	ROOF ASSEMBLY COMPLETE
MOD13	ALUMINIUM CORNER SECTION
MOD19a	TOOLBOX COMPLETE

BB100 – NPU Parts List

Part No.	Description
C001	Name Plate - Engrave on top of name plate BS 8520-2:2009
C002	Manometer
C068	NPU Transit Plate Clip
C069	NPU Transit Plate Strike
C070	Gasket 20mmx5mm (Per metre)
C085	Red Warning Label
C109	Gasket 15mmx3mm (Per Metre)
C181	MHS-DCU Clamp Bolt (Male)
C182	MHS-DCU Clamp Bolt (Female)
C188	1ft Tubular Heater Guard
E001	110v 16a Plug Top
E009	230v European Plug Top
E011	1.5mm 3 Core Arctic Yellow Cable
E015	Conclamp Locknut
E017	15 Amp Terminal Block
E044	Extended Cable Gland
E045	1.5mm 3 Core Arctic Blue cable
E060	M6 Earth Bolt
E061	M6 Earth Nut
E062	110v 16A Panel Socket
E092	1ft Tubular Heater
F003	12x12x2 Pre Filter
F018	305x305x68mm HEPA Filter
M005	110v 0.3 H.P. Motor
M006	230v 0.3 H.P. BB100-NPU Fan Assembly
P032	MHS-DCU Case Complete



Elgee Works
Victoria Street
Desborough
Northants
NN14 2LX

DECLARATION OF CONFORMANCE

Beacon International Ltd BB100 Modular Shower System & BB100 NPU

This is to certify that Beacon International Ltd furnishes its products supplied to the European Community in accordance with the following directives and health and safety requirements.

- | | |
|---------------------------------------|---|
| <input type="checkbox"/> 93/68/EEC | CE Marketing Directive |
| <input type="checkbox"/> IEC 335-1 | General Safety Requirements, Part 1 |
| <input type="checkbox"/> IEC 335-2-41 | Specific Safety Requirements, Part 1 |
| <input type="checkbox"/> IEC335-2-51 | Specific Safety Requirements, Part 2 |
| <input type="checkbox"/> 73/23/EEC | Low Voltage Directive (115v & 230v) |
| <input type="checkbox"/> 89/336/EEC | Electromagnetic Compatibility Directive |
| <input type="checkbox"/> 89/392/EEC | Machine Directive |

I further certify that the products here listed have been constructed in accordance with good engineering practices in regard to safety and quality by means of compliance through certification with ISO9001: 2008 International Quality System Standard.

BB100 Manufactured to HSG247

BB100-NPU Manufactured to BS8520-2:2009

A Lewis-Thomas

Date 01/07/2017

A. Lewis-Thomas
(Director)



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7. BB100 Technical Information

7.1 BB100 Cubicles & BB100 Components – Dimensions & Weights

Part Description	Item Weight	HSG247 3 STAGE	3 STAGE (Cubicles Only)	5 STAGE (Cubicles Only)
	Weight per item	Total Weight	Total Weight	Total Weight
Base	11	33	33	55
Roof	5	15	15	25
Side Panel	12	72	72	120
Door Panel	22	88	88	132
Corner Post	1.5	18	18	30
Floor Mat	4	12	12	20
Accessory Kit	5	5	5	5
Respirator Cupboard	9	9		
BB100-NPU	20	20	0	0
	TOTAL	327 Kilo	243 Kilo	387 Kilo

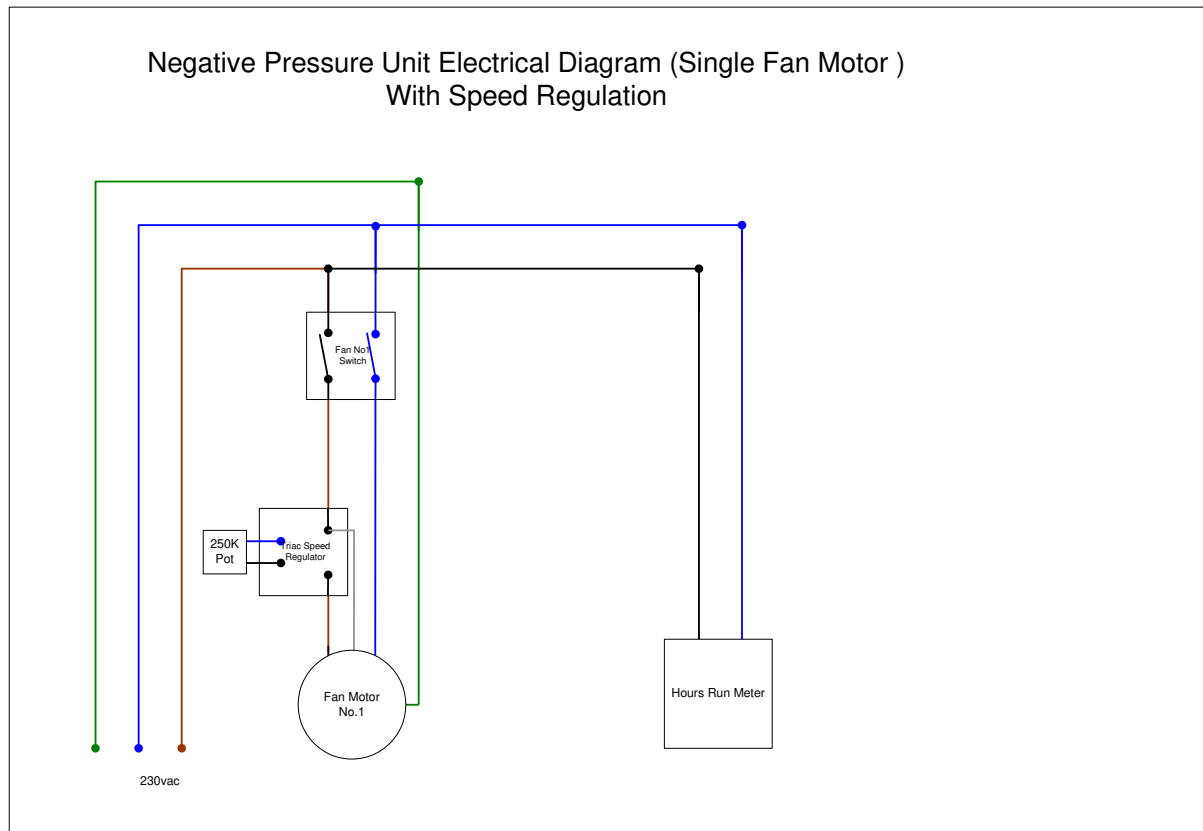
7.2 BB100-NPU Dimensions Weights and Performance

Model	BB100-NPU
Length mm	385
Width mm	525
Height mm	622
Weight (Kg)	20
Motors	1
Motor Power Watts	240
Voltage Available	110 / 230
Amperage 110v / /230v	1.6 / 0.75
Airflow m3/h	400
Pre Filter G4	290x290x45
HEPA Filter 99.997%	305x305x68

7.3 BB100-NPU Sound Levels

Distance	Airflow	Sound Level
1.0 Mtr	400m3/h	76.4dB
5.0 Mtr	400m3/h	73.6dB
10.0 Mtr	400m3/h	70.8dB

7.4 BB100-NPU Wiring Diagram



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8 Warranty

Beacon International Ltd offer warranty to the original purchaser of equipment.

Warranty will cover defects in both materials and workmanship for the period of one year from date of purchase.

The warranty excludes any consumable parts such as motor brushes, blocked filters or general wear and tear.

The warranty also excludes any accidental or intentional damage to equipment.

If the equipment is supplied through a distributor, the warranty must be claimed for through that distributor.

No claim will be granted without evidence of the validity of the claim, ie. Proof of purchase.

Beacon International Ltd reserve the right to charge in full or part for any repairs that are a result of misuse, neglect or wear and tear.

