100 KG ABE Mobile Fire Extinguisher

Model Number	MBP100
Extinguisher Capacity	100 kg
Mass: Extinguisher charged	146 kg approx)
Diameter of body	400 mm
Height overall	1250 mm
Operating Pressure	1500 kPa
Standard Test Pressure	2.5 Mpa
Range	3-5 metres

Rating 10A – 80BE

DOCUMENT TITLE

100kg ABE TYPE
STORED PRESSURE DRY POWDER
FIRE EXTINGUISHER

MODELS: **MBP100**

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COVER PAGE/REVISION STATUS

CONTENTS

1. PURPOSE

These dry powder type fire extinguisher are designed to be used on Class A fires, Class B fires and Class E fires.

Class A fires are defined as fires involving combustible materials such as wood, paper, cloth etc.

Class B fires are defined as fires involving flammable and combustible liquids, petrol, oil and grease etc.

Class E fires are defined as fires involving energised electrical equipment.

These extinguishers are not suitable for fires involving combustible metals such as magnesium, zirconium etc. or for fires involving cooking oils and fats.

2. GENERAL DESCRIPTION AND OPERATION

These extinguishers have a stainless steel body fitted with a brass bodied valve assembly. They contain 100 kg of ABE20 powder pressurised with dry nitrogen and a small amount of helium to 1500kPa.

Operation: The valve is a hand wheel clamping type which, when operated, allows the powder to flow through the valve and hose to the nozzle, where it is discharged as a straight stream at the fire. By employing the squeeze spray gun "on/off" control principal (intermittent discharge), the operator can move from point to point conserving extinguishant and pressure while fighting the fire.

A 'pull out type safety pin is used in the valve assembly to prevent accidental discharge of the extinguisher.

The operating procedure for the extinguisher is both written and shown pictorially on the label of the extinguisher. The procedure being:

i) Pull out the safety pin.
ii) Open operating head.
iii) Roll out hose.
iv) Open discharge control assembly, aim nozzle at base of fire.

As the extinguisher incorporates a siphon tube, it must be used in the upright position. When the operating head is open, it causes the check to lift from its seating valve, open the spray gun, allowing the contents to be discharged. Close the spray gun and instantly cuts off the flow of extinguishant. The operation may be repeated as often as desired (with decreasing effectiveness) until the extinguisher is empty.

Note: The extinguisher must be recharged immediately after any use.

3. SPECIFICATIONS

Model Number	MBP100
Extinguisher Capacity	100 kg
Mass: Extinguisher charged	146 kg (approx)
Diameter of body	400 mm
Height overall	1250 mm
Operating Pressure	1500 kPa at 23℃
Temperature Range	-30℃ ~ +65℃
Standard Test Pressure	2.5 Mpa
Performance: Discharge time	223.3 seconds (approx)
Range	3-5 metres

4. MATERIALS AND CONSTRUCTION

a) CYLINDER

The cylinder body is fabricated from stainless steel, with pressed stainless steel top and bottom shells, all welds being TIG. A stainless steel neck ring is TIG welded into the top end of the cylinder to accept the valve assembly.

All cylinders are pressure tested to 2.5 MPa in accordance with AS 2030.1.

b) VALVE ASSEMBLY

The valve assembly is hand wheel clamping type and fitted with a 'pull out' type safety pin to prevent accidental operation. The assembly screws into the cylinder neck ring and uses a nitrile 'O' ring to affect the seal.
Valve check stem is machined from brass and is fitted with nitrile `O'rings to affect a seal between the check stem and valve body bore and seat surfaces.

Valve body is a nickel plated machined brass forging.

c) PRESSURE GAUGE

The gauge screws directly into the valve body and indicates the nitrogen or air pressure in the cylinder. Its colour printed face shows the normal operating pressure (1500 kPa) and the operable pressure range of the extinguisher.

d) SIPHON TUBE ASSEMBLY

The siphon tube assembly is manufactured from plastic tubing.
The top end is threaded to connect the
siphon tube to the siphon tube adaptor nut.

e) SAFETY PIN

A stainless steel safety pin is fitted in the valve assembly to prevent accidental discharge of the extinguisher. This 'pull out' type pin must be removed from the extinguisher before it can be operated.

f) LABEL

The label indicates the extinguisher contents, fire rating, and the class of fire for which it is approved. The label also features (both written and pictorial) simple operating instructions, and states the Standard and Licence number to which the extinguisher is produced.

g) NOZZLE AND HOSE ASSEMBLY

The hose assembly is made up of braid reinforced black EPDM hose to which is fitted a brass connector (for attachment to the valve) and a spray gun. It is designed to deliver a scattered stream of powder at the fire when the extinguisher is operated.

5. EXTINGUISHANT

Model MBP100 extinguisher is charged with 100kg Presto ABE powder .
And it is pressurised with air or nitrogen to 1500 kPa.

6. FINISH

Extinguisher Body:	Finished in red powder coat to approximate colour R13 of AS 2700.
Valve Body:	Brass, Nickel plated

7. QUALITY ASSURANCE

The company is a registered quality assured supplier operating to the ISO 9001 Quality Standard. All components are manufactured to conform to drawing tolerances and specifications that meet the specific design requirements and are subject to strict quality control at every stage of manufacture.

8. APPROVALS AND RATINGS

Approved to Australian Standard 4265
Licence no. 102557

Rating statement:

9KG of the same extinguishant as used in this extinguisher has obtained a 10A:80B rating under test condition for portable fire extinguisher given AS/NZS 1850.

Note: This statement does not imply a particular rating for this extinguisher.

9. INSTALLATION

Although components are corrosion resistant, extinguishers installed where they may be subject to aggressive environments (such as marine) shall be protected from possible deterioration.

10. SERVICING

10.1 INSPECTION and MAINTENANCE

Periodic inspection and testing of these extinguishers should be carried out. Maintenance of fire protection equipment. Installation and maintenance of hand operated fire fighting equipment for use in buildings, as appropriate for the country where installed.

10.2 SAFETY PRECAUTIONS

Before attempting any repairs ensure that all propellant gas has been expelled from the extinguisher.

10.3 RECHARGING INSTRUCTIONS

Recharging of these extinguishers requires no special tools. However, the repair of detail parts is impractical and all defective parts should be replaced with new parts, which are issued in kit form. To act as a guide to servicing agents, details of replacement kits are shown in the drawings at the back of this Technical Data Sheet.

Additionally the following steps should be followed:

Note: Before commencing, check the date of the last pressure test, which will have been recorded on the maintenance record tag.
If pressure testing is required, it must be carried out before any recharging of the extinguisher takes place.

Proceed as follows:

i) Observe the **Safety Precautions** as listed in 10.2, paying particular attention to ensure all propellant gas pressure has been released.

ii) Remove hose assembly from the extinguisher valve assembly.

iii) Remove valve/siphon tube assembly from the extinguisher body.
Unscrew slowly, if there is any residual pressure an audible sound will be noticeably heard.
The valve should not be further removed until sound ceases.

iv) Empty out contents.

v) Thoroughly clean out internal passages of valve assembly.
If any form of sticking occurs strip down the valve by unscrewing the siphon tube assembly and check assembly. Replace any faulty or damaged components.

vi) Inspect 'O' ring on valve body and replace if damaged.

vii) Place anti-over fill tube into neck ring of cylinder.

viii) Fill with 100kg Presto ABE powder.

ix) Lightly lubricate valve body 'O' ring with petroleum jelly.

x) Screw valve/siphon tube assembly into cylinder neck, ensuring that the under face of shoulder on the valve body makes contact with the top face of the neck ring, thus retaining the sealing 'O' ring correctly. (**NOTE:** Firm hand tightening is sufficient)

xi) Pressurise the extinguisher with air or nitrogen.

SAFETY PRECAUTION
Ensure that the pressurising equipment used, fully complies with the Apparatus Safety Requirements of AS3676 Section 5.

PROCEDURE
Note: When pressurising through a schrader valve, ensure that the extinguisher valve is closed and safety pin is engaged.
When pressurising through a re-charging adaptor, clamp the extinguisher valve in the open position.

a) Start by connecting the pressurising line to the schrader valve or recharge adaptor (as applicable) with the system pressure regulator set to a maximum of 150kPa above the extinguisher working pressure.

b) Open the system pressure control valve and charge the extinguisher to its correct working pressure of 1500kPa. The pressure to be taken from the calibrated pressure line gauge, not the extinguisher gauge.

c) Upon reaching the extinguisher working pressure, close the supply valve and if the extinguisher has been pressurised using a re-charging adaptor release the extinguisher operating lever to close the extinguisher valve and engage the safety pin.

d) Turn off the system pressure supply and release the line pressure by opening the systems release valve. Disconnect the supply line from the extinguisher at the schrader valve or re-charging adaptor, as applicable.

e) Where fitted remove the re-charging adaptor from the extinguisher valve.

f) Check extinguisher gauge pointer is in the green operating range. If not replace faulty gauge, to do this the extinguisher must be depressurised first, see 10.2.

g) Check the extinguisher for leaks as described in 10.4.

10.4 **Testing for Leaks**

i) Put the fire extinguisher in the clear water pool.

ii) Carefully observe the presence of air bubbles.

Note: If bubbles appear repeat recharging instructions, using "trouble shooting" (see table below) as a guide to the cause of the leak. Rectify accordingly.

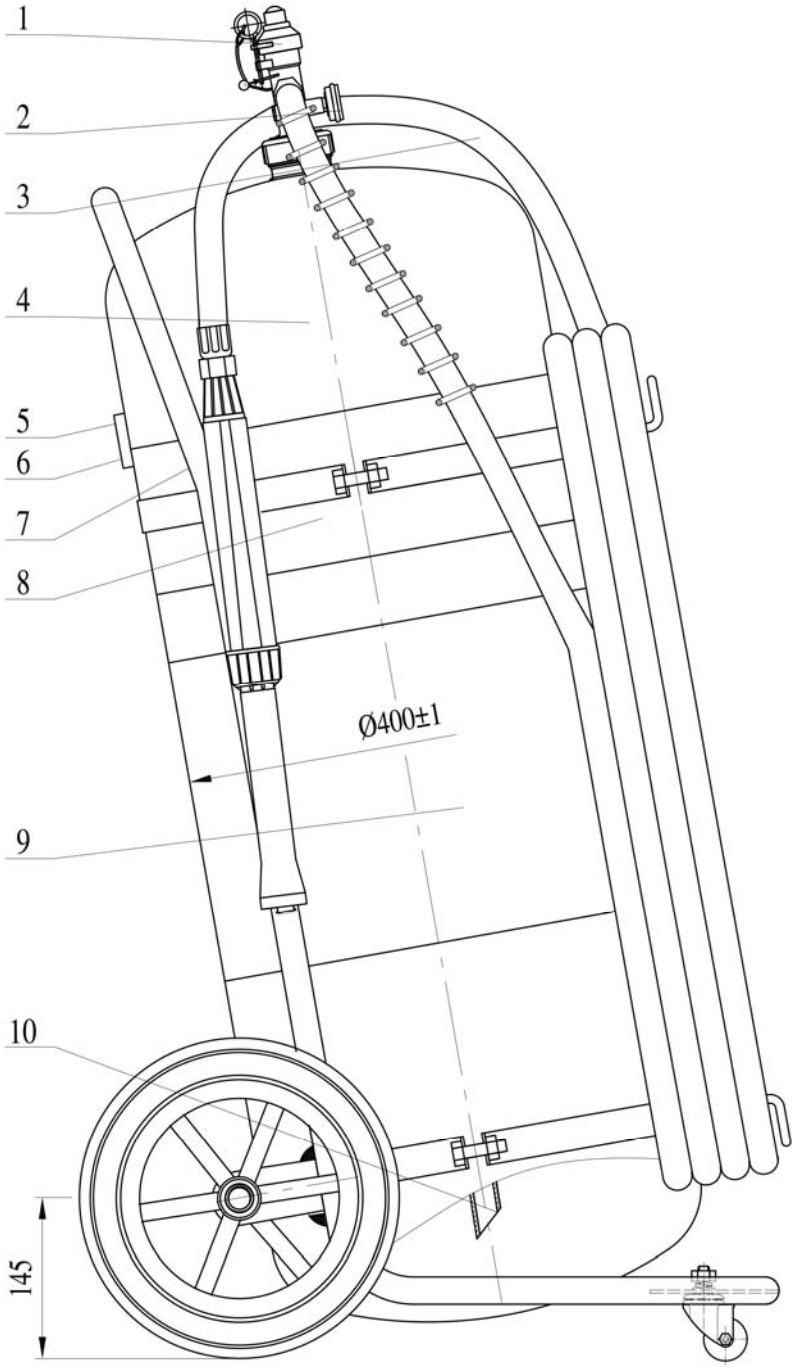
iii) If no leaks are detected, drain all solution from valve and dry thoroughly..

iv) Remount hose assembly into valve outlet and park nozzle into hose clip.

v) Pass sealing tie through safety pin.

TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Leakage at valve outlet.	Foreign matter on check seat. Imperfection of seat surface. Faulty/damaged check stem	Clean surface of check. Polish seat surface. Replace check stem.
Leakage at valve/cylinder neck joint.	'O' ring defective or foreign matter on sealing surfaces.	Replace 'O' ring and clean all sealing surfaces.
Leakage at schrader valve (when fitted).	Faulty valve cores.	Replace valve core.
Leakage at pressure gauge.	Faulty gauge or thread of stem not sealed effectively.	Replace gauge if faulty. If threads not sealing remove gauge, clean threads and apply Loctite 569 and remount.



ITEM	CSP PART	DESCRIPTION	QTY
	MBP100 (RH301409)	100KG ABE POWDER FIRE EXT	1
1	RH300114	VALVE ASSEMBLY	1
2	RH300512	PRESSURE GAUGE 1500 kPa	1
3	RH300426	HOSE ASSEMBLY	1
4	RH500281	CYLINDER ASSEMBLY	1
5	RH301405-2	NAME CARD	1
6	/	RIVET(SUS304)	4
7	RH301409-1	TROLLEY BACK SUPPORT	1
8	/	IDENTIFICATION BAND (WHITE)	1
9	RH301409-T	LABEL	1
10	RH300305-1090	DIP TUBE (Q235)	1