



MD Range Operators Handbook

Covering Models:-

MD35/20
MD75/80
MD75/150
MD75/150V
MD75/250
MD75/250V
MD150/500
MD225/1000

Operating Manual

**Your Bambi Air Compressor is a precision engineered product.
By following these simple steps you will ensure years of trouble free use.**

Parts & Service are available from your Bambi dealer.

It is important to quote Model, Type & Serial Number in all communications.

The substitution of parts not manufactured or approved by Bambi can impair performance, service life and create potential mechanical or personnel hazards and will invalidate your warranty.

Bambi reserves the right to modify the contents of this operating booklet without notice and the information is in no way binding on the company.

Warranty

Provided the operating instructions have been followed and the compressor has been properly maintained Bambi compressors are guaranteed against faulty workmanship for a period of 1 year.

The air receiver is guaranteed for 5 years.

The guarantee does not cover damage by misuse, incorrect parts or service.

Contact Bambi Air Compressors or your retailer for further information.

Safety Precautions

What you **must** do

- Read these instructions before using your air compressor.
- Ensure the compressor has been installed, electrically connected and piped in by a properly qualified person.
- Ensure the compressor is kept upright at all times.

What you **must not** do

- Do not attempt any maintenance on the compressor until it has been isolated from the power supply.
- Do not attempt any work on the compressor until the air receiver and pipe work systems are depressurised.
- Compressed air is dangerous if misused and can prove fatal. Avoid any bodily contact with compressed air.
- During operation the motor will become quite hot to the touch. Avoid contact to prevent burns. At no time must the oil temperature be allowed to exceed 100°C.
- Never tamper with the pressure relief valve.
- Never change the oil when the compressor is still warm. Take necessary precautions to avoid contact with the skin.

Bambi SB42/46 compressor oil does not contain hazardous components and is not required to be labelled dangerous, according to the Classification, Packaging and Labelling of Dangerous Substances regulation: [CPL]Regulation 1984

Siting The Compressor

What you **must** do

- Provide adequate protection from the weather.
- Site the compressor level in both planes.
- As larger models are heavy, ensure the surface has sufficient load bearing capacity.
- Allow access for maintenance all around the compressor.
- Site in a dry area, avoiding damp or humid conditions. The site must be dust free, well ventilated and have a cool ambient temperature. 35°C should be regarded as the maximum allowable ambient.

What you **must not** do

- Enclose the compressor or allow hot air generated by the motor to re-circulate around the compressor.

Electrical Connections

All 220/240 volt compressors, except Model 225/1000 are supplied with a moulded plug in accordance with national standards. Never remove the moulded plug.

Wired in accordance with European Standard –
Blue = neutral Brown = live Yellow & Green Stripe = earth

Model 225/1000 requires a dedicated 20 amp power supply.

Operation

Refer to exploded parts diagrams and illustrations when reading this section.

Oil level

Your Bambi compressor is shipped without oil for transit. Before use you must fill the motor to the correct level.

Model 35/20

- Remove oil filler plug - *see fig 1*
- Pour oil into motor until correct level is reached - indicated on the oil sight glass, approx 500cc - *see fig 2*
- Refit the oil filler plug - but do not over-tighten.
-

Models 75/80 to 225/1000

- Remove air intake filter housing by pulling gently out of intake tube - *see fig 9*
- Pour oil into motor through the tube until the correct level is reached indicated on the oil sight glass, approx 900cc - *see fig 2*
- Refit air intake filter to intake tube

Note!

Always use Bambi SB42/46 compressor oil. Failure to do so will invalidate your warranty.

Starting & Stopping

Plug the compressor into an outlet socket of nominal voltage and fitted with a 13amp fuse.

Note!

Model 225/1000 requires a dedicated 20 amp power supply.

Switch the compressor on using the on/off control on top of the pressure switch.
– *see fig 3.*

The compressor will start running and automatically switch off at the preset pressure.

As air is used the pressure drops and the motor will restart at the preset pressure.
Approx 2 Bar differential.

Note!

Never tamper with the pressure switch settings, these are factory set.

Adjusting Outlet Pressure

Use the filter regulator to adjust the outlet pressure. The 40mm pressure gauge indicates the selected pressure. To increase line pressure rotate the black knob on top of the filter regulator in a clockwise manner, to decrease turn anti clockwise. It is possible to lock the setting by pushing the knob down until it “clicks” home – *see fig 4.*

Routine Maintenance

Draining the Air Receiver

Drain condensate from air receiver at a pressure of no more than 2 Bar.
 Slowly open the drain tap provided to allow water to flow out – *see figs 7 & 8*.
 Close drain tap when all water has drained off.
 Do not overtighten, this will damage the tap seal.
 Automatic drains where fitted do not require draining, however the drain bottle will require emptying.

Draining the Filter/Regulator Unit

Slowly open the drain screw provided to allow water to flow out – *see fig 5*.
 Close the drain screw when all water has drained off.

Note !

The waste condensate must be handled in accordance with national environmental rules.

Check Pressure Relief Valve

Ensure the air receiver is not pressurised. Unscrew the knurled end of the pressure relief valve until an audible “click” is heard. Retighten without using excessive force – *see fig 6*.

Technical

The compressor has a maximum 50% duty cycle. The motor must never be allowed to run continuously otherwise it will overheat and may become damaged.

Do not ignore air leaks. All air connections must be leak free to prevent the compressor from over heating.

The compressor is fitted with a thermal overload. In the event of excessive temperature the motor will switch off. After about 50 minutes when the motor has cooled it will automatically reset.

Note !

You must find the cause of the overload and rectify this before continuing to use the compressor.

Check for -

- Drain tap not closed properly
- Air leaks on the pneumatic fittings
- Compressor not the correct size for the work load

Preventative Maintenance

Operation	Daily	Weekly	Monthly	Annually
Drain air receiver < 15 Litres	•			
Drain air receiver > 15 Litres		•		
Drain filter regulator			•	
Check oil level		•		
Change oil				•
Replace air intake filter				•
Replace filter regulator element				•
Check pressure relief activation				•

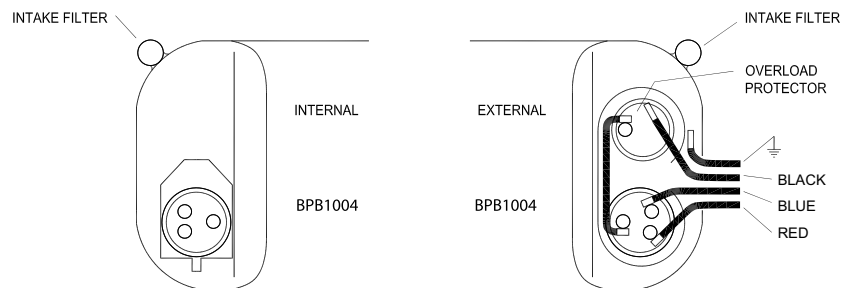
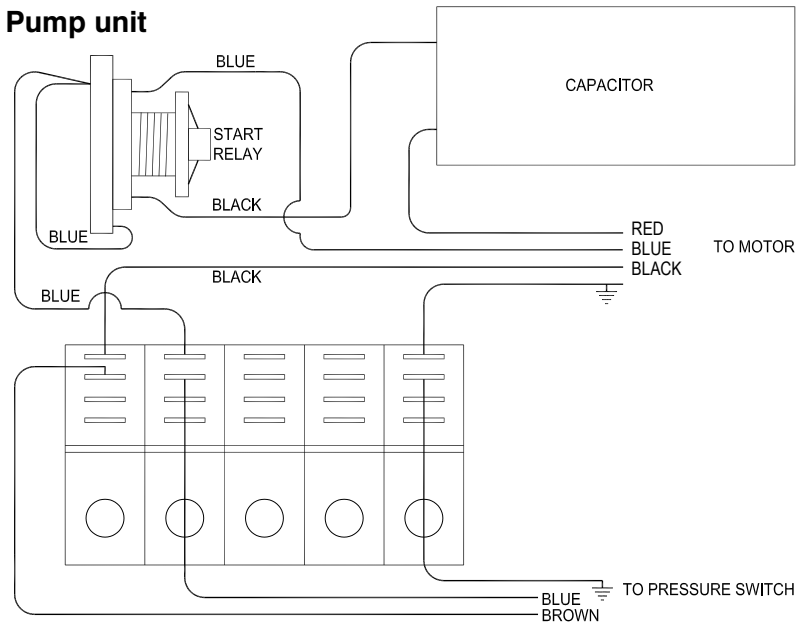
Above are to be considered minimum frequency

Technical Specification

Type 35 Pump Specification		
Voltage	220/240	110
Motor Kw / Hp	0.37 / 0.5	0.44 / 0.5
Frequency Hz	50	60
Amps	2.4	6
Watts	340	446
Displacement l/min	50	60
FAD@ 6 Bar	33	39
Type 75 Pump Specification		
Voltage	220/240	110
Motor Kw / Hp	0.5 / 0.5	0.64 / 0.5
Frequency Hz	50	60
Amps	3.6	7.8
Watts	500	733
Displacement l/min	78	94
FAD@ 6 Bar	54	64

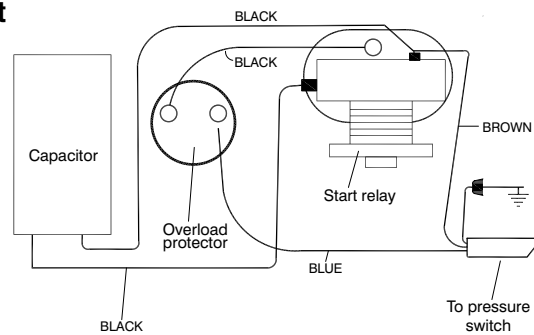
Wiring Diagram

75 Pump unit



Wiring Diagram

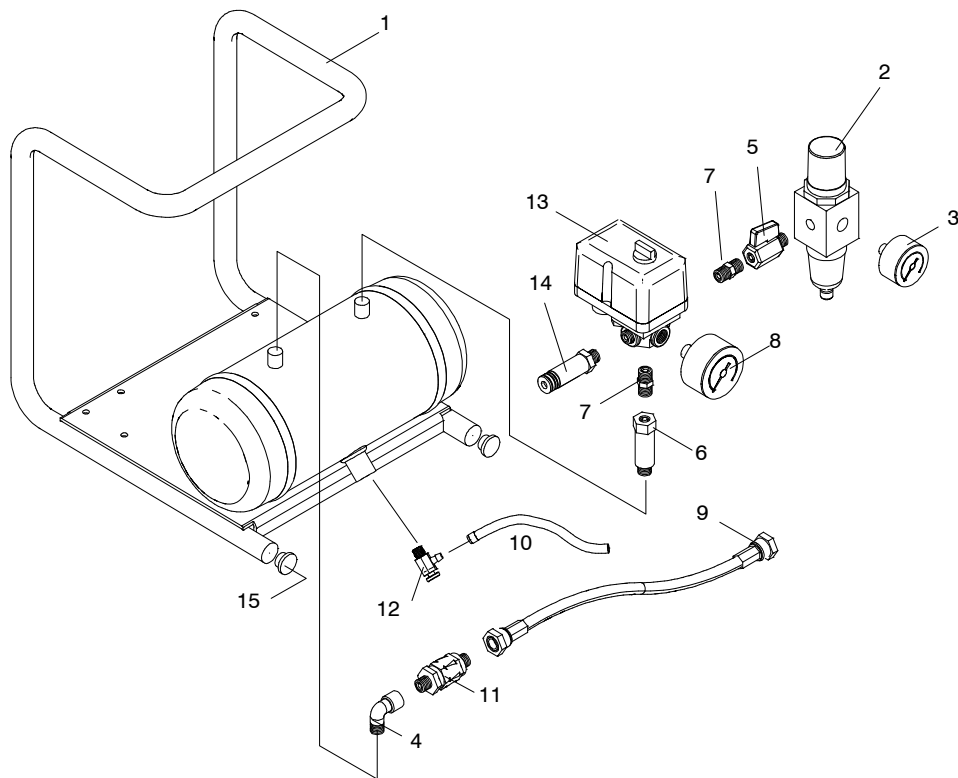
35 Pump unit



MD35/20

Ref No.	Description	Part no.
1	4 litre vessel	BPB1094
2	Filter regulator	BPB1080
3	Regulator gauge	BPB1077
4	1/4" Male/Female elbow	BPB1139
5	On/off valve	BPB1079
6	1/4" Extension	BPB0150
7	1/4" Male / 1/4" Male adaptor	BPB1078
8	Vessel pressure gauge	BPB1081
9	200mm delivery pipe	BPB1102
10	250mm drain tube	BPB0414

Ref No.	Description	Part no.
11	Non-return valve	BPB1086
12	1/4" Drain tap	BPB1138
13	Pressure switch	BPB1074
14	1/4" 10 Bar relief valve	BPB1084
15	Handle insert	BPB0078

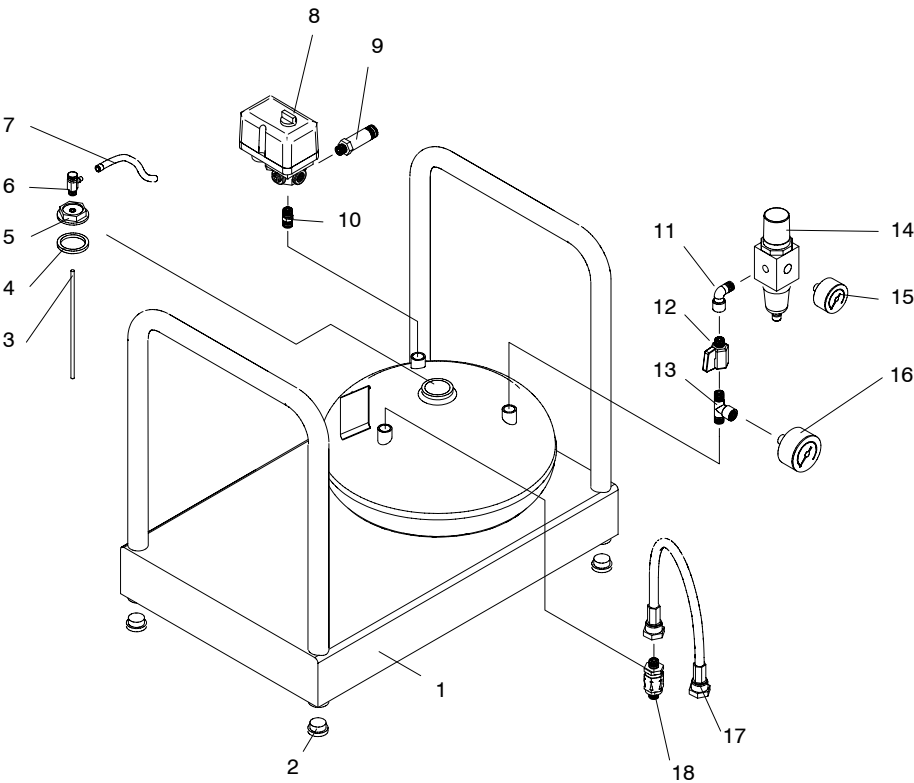


On auto drain machines the pressure switch part number is BPB0550
and the unloader valve is part number BPB1205.

MD75/80

Ref No.	Description	Part no.
1	8 litre vessel	BPB1100
2	Black round tube insert	BPB0076
3	235mm Nylon syphon tube	BPB0028
4	Inspection plug seal	BPB0502
5	Inspection plug	BPB0255
6	Drain tap	BPB1138
7	250mm drain tube	BPB0414
8	Pressure switch	BPB1074
9	1/4" 10 Bar relief valve	BPB1084
10	1/4" Male / 1/4" Male adaptor	BPB1078

Ref No.	Description	Part no.
11	1/4" Male/Female elbow	BPB1139
12	On/off valve	BPB1079
13	1/4" Male/Male/Female tee	BPB1095
14	Filter regulator	BPB1080
15	Regulator gauge	BPB1077
16	Vessel pressure gauge	BPB1081
17	200mm delivery pipe	BPB1102
18	Non-return valve	BPB1086

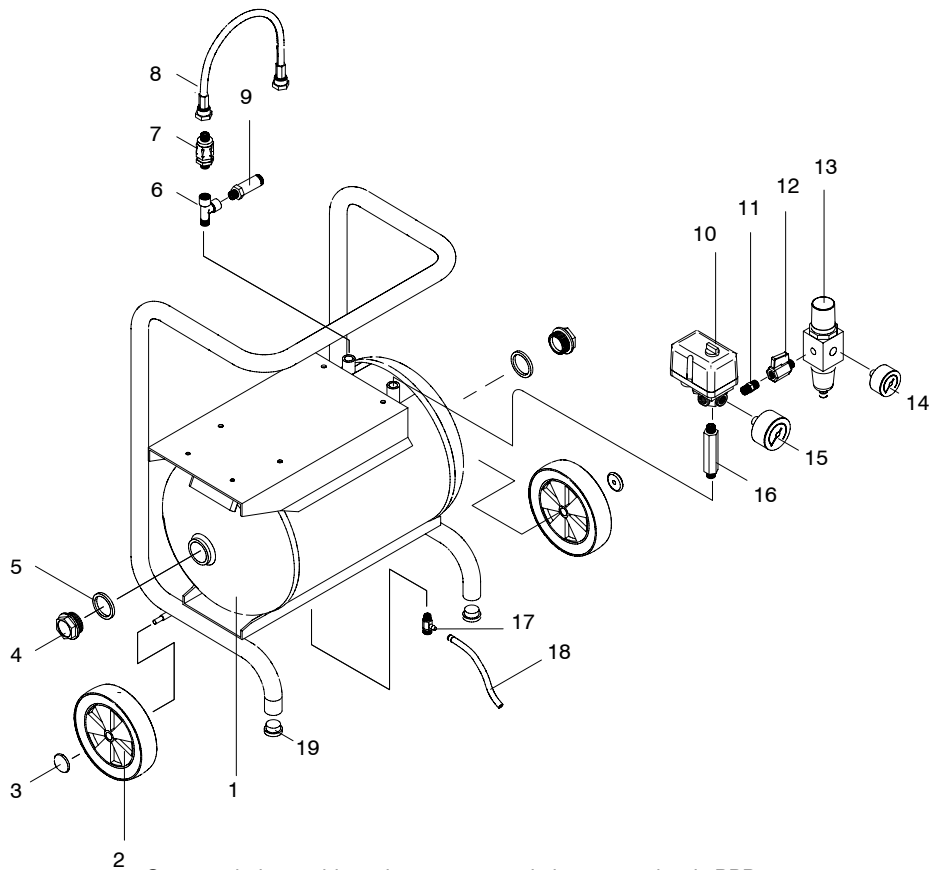


On auto drain machines the pressure switch part number is BPB0550
and the unloader valve is part number BPB1205.

MD75/150

Ref No.	Description	Part no.
1	15 litre vessel	BPB1099b
2	140mm wheel	BPB1144
3	Starlock washer	BPB1091
4	Inspection plug	BPB0243
5	Inspection plug seal	BPB0502
6	1/4" Male/Female/Female tee	BPB1109
7	Non-return valve	BPB1086
8	200mm Delivery pipe	BPB1102
9	1/4" 10 Bar relief valve	BPB1084
10	Pressure switch	BPB1074
11	1/4" Male / 1/4" Male adaptor	BPB1078
12	On/off valve	BPB1079

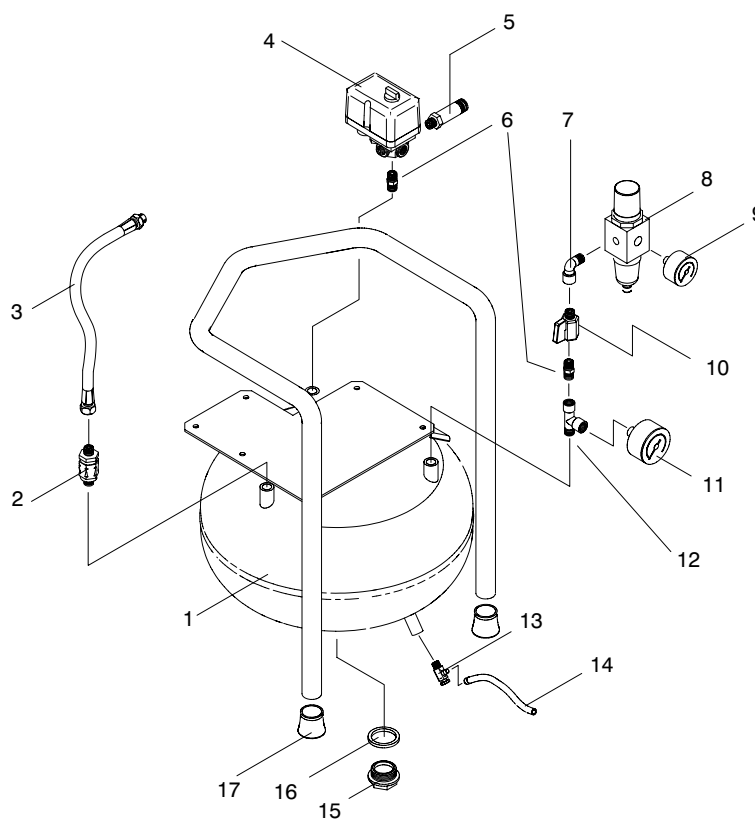
Ref No.	Description	Part no.
13	Filter regulator	BPB1080
14	Regulator gauge	BPB1077
15	Vessel pressure gauge	BPB1081
16	1/4" Extension	BPB0152
17	Drain tap	BPB1138
18	250mm drain tube	BPB0414
19	Black round tube insert	BPB0076



On auto drain machines the pressure switch part number is BPB0550
and the unloader valve is part number BPB1205.

MD 75/150V

Ref No.	Description	Part no.	Ref No.	Description	Part no.
1	15 litre vessel	BPB1099	11	Vessel pressure gauge	BPB1081
2	Non-return valve	BPB1086	12	1/4" Male/Female/Female tee	BPB1109
3	500mm delivery pipe	BPB1087a	13	Drain tap	BPB1138
4	Pressure switch	BPB1074	14	250mm drain tube	BPB0414
5	1/4" 10 Bar relief valve	BPB1084	15	Inspection plug	BPB0243
6	1/4" Male / 1/4" Male adaptor	BPB1078	16	Inspection plug seal	BPB0502
7	1/4" Male/Female elbow	BPB1139	17	Rubber foot	BPB0247
8	Filter regulator	BPB1080			
9	Regulator gauge	BPB1077			
10	On/off valve	BPB1079			

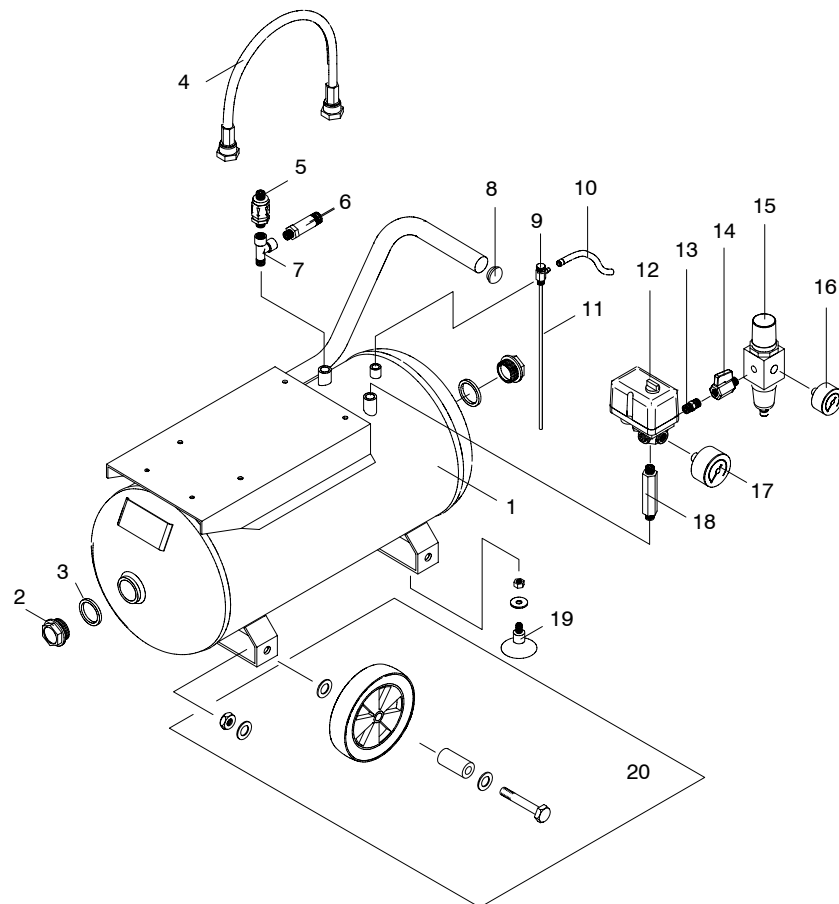


On auto drain machines the pressure switch part number is BPB0550
and the unloader valve is part number BPB1205.

MD75/250

Ref No.	Description	Part no.
1	24 litre vessel	BPB1088b
2	Inspection plug seal	BPB0502
3	Inspection plug	BPB0243
4	200mm Delivery pipe	BPB1102
5	Non-return valve	BPB1086
6	1/4" 10 Bar relief valve	BPB1084
7	1/4" Male/Female/Female tee	BPB1109
8	Handle insert	BPB0076
9	Drain tap	BPB1138
10	250mm drain tube	BPB0414
11	Siphon tube	BPB0029
12	Pressure switch	BPB1074

Ref No.	Description	Part no.
13	1/4" Male / 1/4" Male adaptor	BPB1078
14	On/off valve	BPB1079
15	Filter regulator	BPB1080
16	Regulator gauge	BPB1077
17	Vessel pressure gauge	BPB1081
18	1/4" Extension	BPB0152
19	Wheel kit	BPB0157
20	Wheel kit	BPB0157

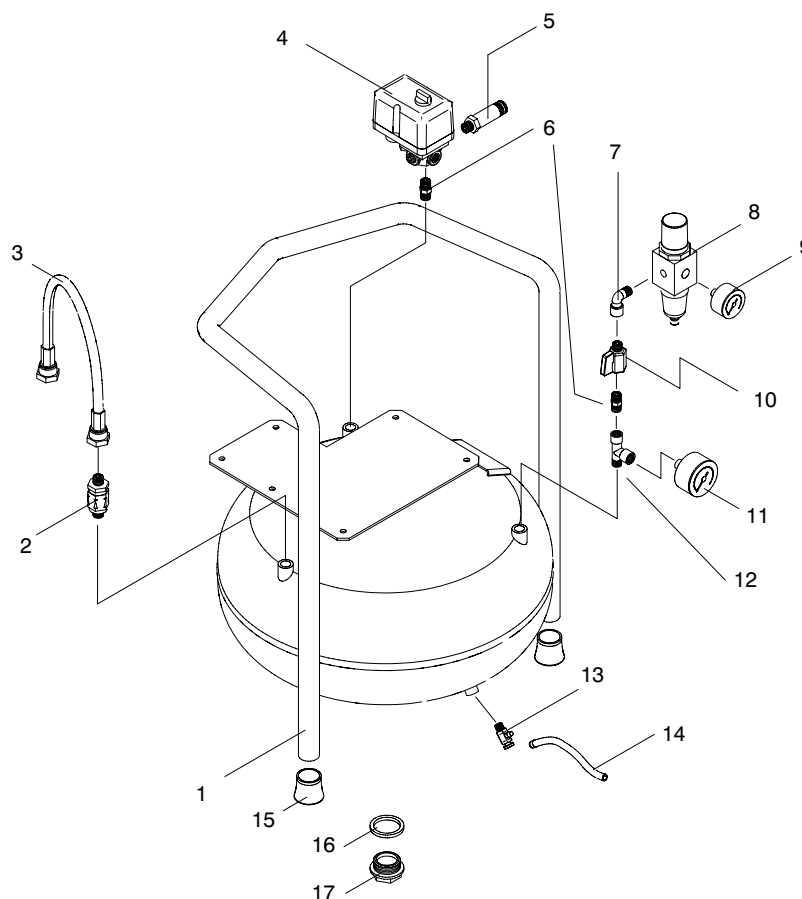


On auto drain machines the pressure switch part number is BPB0550
and the unloader valve is part number BPB1205.

MD 75/250V

Ref No.	Description	Part no.
1	24 litre vessel	BPB1088
2	Non-return valve	BPB1086
3	500mm Delivery pipe	BPB1087a
4	Pressure switch	BPB1074
5	1/4" 10 Bar relief valve	BPB1084
6	1/4" Male / 1/4" Male adaptor	BPB1078
7	1/4" Male/Female elbow	BPB1139
8	Filter regulator	BPB1080
9	Regulator gauge	BPB1077
10	On/off valve	BPB1079
11	Vessel pressure gauge	BPB1081
12	1/4" Male/Female/Female tee	BPB1109

Ref No.	Description	Part no.
13	Drain tap	BPB1138
14	250mm drain tube	BPB0414
15	Rubber foot	BPB0247
16	Inspection plug seal	BPB0502
17	Inspection plug	BPB0243

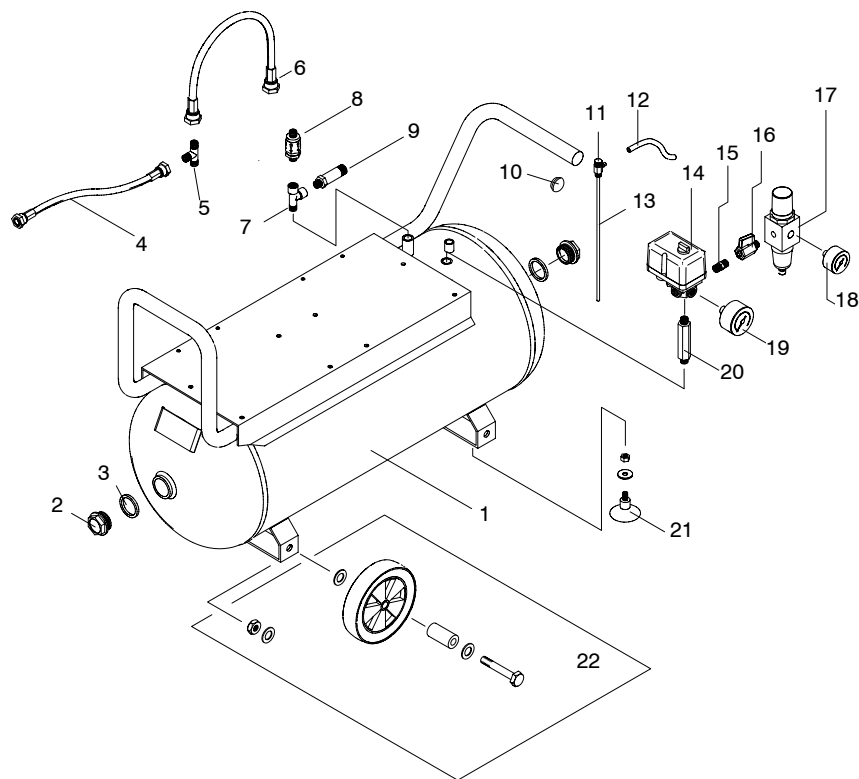


On auto drain machines the pressure switch part number is BPB0550
and the unloader valve is part number BPB1205.

MD150/500

Ref No.	Description	Part no.
1	50 litre vessel	BPB1097
2	Inspection plug	BPB0243
3	Inspection plug seal	BPB0502
4	300mm Delivery pipe	BPB1087
5	1/4" Male/Female/Male tee	BPB0158
6	200mm Delivery pipe	BPB1102
7	1/4" Male/Female/Female tee	BPB1109
8	Non-return valve	BPB1086
9	1/4" 10 Bar relief valve	BPB1084
10	Handle insert	BPB0076
11	Drain tap	BPB1138
12	250mm drain tube	BPB0414

Ref No.	Description	Part no.
13	Siphon tube	BPB0034
14	Pressure switch	BPB1074
15	1/4" Male / 1/4" Male adaptor	BPB1078
16	On/off valve	BPB1079
17	Filter regulator	BPB1080
18	Regulator gauge	BPB1077
19	Vessel pressure gauge	BPB1081
20	1/4" Extension	BPB0152
21	Wheel kit	BPB0157
22	Wheel kit	BPB0157

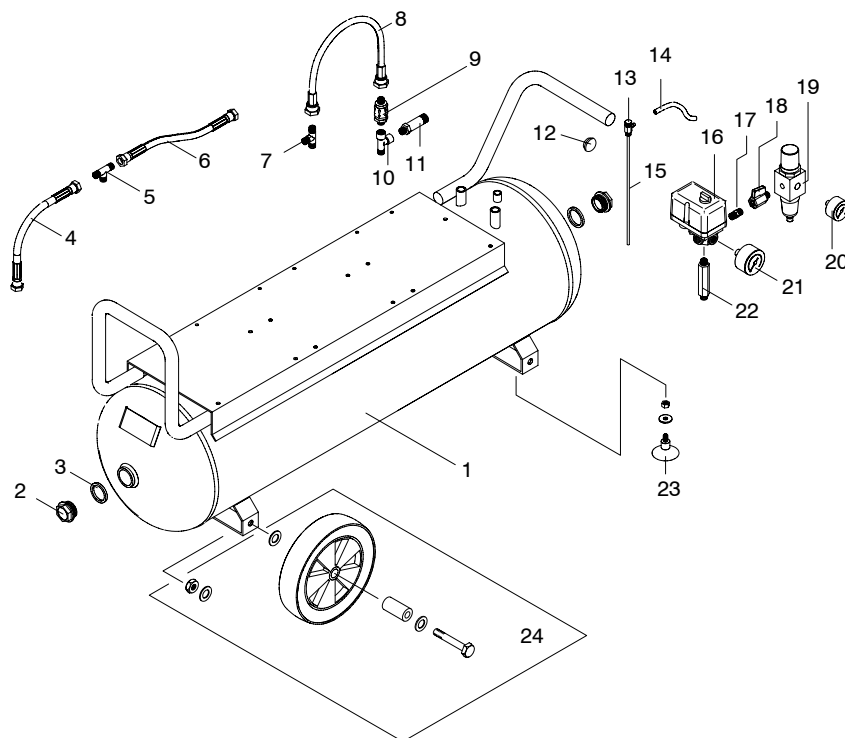


On auto drain machines the pressure switch part number is BPB0550
and the unloader valve is part number BPB1205.

MD225/1000

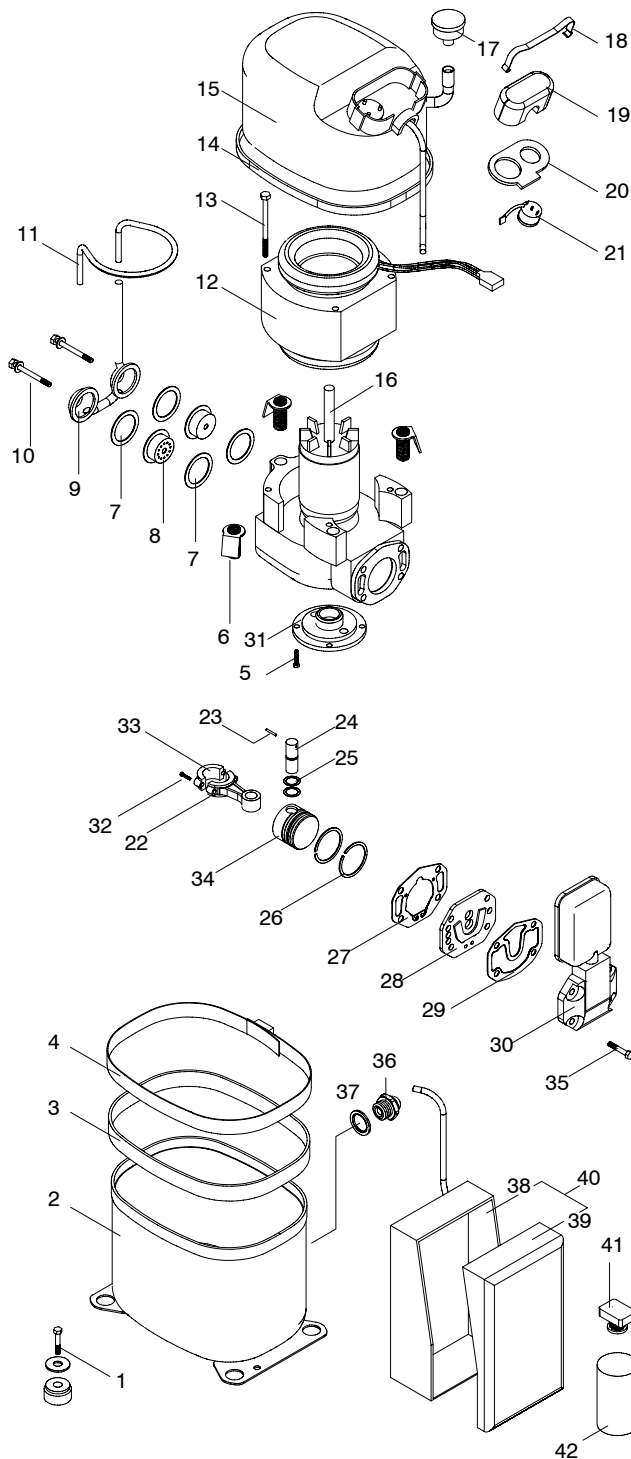
Ref No.	Description	Part no.
1	100 litre vessel	BPB1105
2	Inspection plug	BPB0243
3	Inspection plug seal	BPB0502
4	300mm Delivery pipe	BPB1087
5	1/4" Male/Male/Female tee	BPB1095
6	300mm Delivery pipe	BPB1087
7	1/4" Male/Male/Female tee	BPB1095
8	300mm Delivery pipe	BPB1087
9	Non-return valve	BPB1086
10	1/4" Male/Female/Female tee	BPB1109
11	1/4" 10 Bar relief valve	BPB1084
12	Handle insert	BPB0076

Ref No.	Description	Part no.
13	Drain tap	BPB1138
14	250mm Drain tube	BPB0414
15	Siphon tube	BPB0035
16	Pressure switch	BPB1074
17	1/4" Male / 1/4" Male adaptor	BPB1078
18	On/off valve	BPB1079
19	Filter regulator	BPB1080
20	Regulator gauge	BPB1077
21	Vessel pressure gauge	BPB1081
22	1/4" Extension	BPB0152
23	Wheel kit	BPB0604
24	Wheel kit	BPB0604



On auto drain machines the pressure switch part number is BPB0550
and the unloader valve is part number BPB1205.

Motor / Pump Parts: 75 model



Ref No.	Description	Part no.
1	Mounting set	BPB1008
2	Bottom casing	BPB1011
3	Large rubber gasket	BPB1007
4	Closing ring	BPB1005
5	Bearing bolt	BPB1025
6	Mounting spring	BPB1038a
7	Delivery gasket	BPB1026
8	Delivery mufflers	BPB1128
9	Pressure pipe	BPB0132
10	Pressure pipe bolt	BPB1027
11	Pressure pipe horse shoe	BPB0108
12	Stator 110v	BPB0799
12	Stator 240v	BPB1023
13	Stator bolt [4 off]	BPB1022
14	Small rubber gasket	BPB1006
15	Top casing	BPB1004
16	Cylinder block	BPB1012
17	Air filter	BPB1003
18	Overload clip	BPB1001b
19	Overload cover	BPB1001b
20	Overload gasket	BPB1001b
21	Overload	BPB1001a
22	Con rod & washers	BPB1013a
23	Split pin	BPB1015
24	Gudgeon pin	BPB0100
25	Con rod washers	BPB0102
26	Piston rings (2)	BPB1013c
27	Valve plate gasket	BPB1014
28	Valve plate	BPB1015
29	Cylinder head gasket	BPB1016
30	Cylinder head	BPB1017
31	Bottom bearing	BPB1024
32	Con rod bolt	BPB0103
33	Con rod & washers	BPB1013a
34	Piston & rings	BPB1013b
35	Cylinder head bolt [4]	BPB1018
36	Sight glass	BPB1009
37	Sight glass seal	BPB1010
38	Electrical cabinet back	BPB1002f
39	Electrical cabinet cover	BPB1002e
40	Electrical cabinet	BPB1002
41	Start relay 240v	BPB1002a
41	Start relay 110v	BPB1002d
42	Capacitor 240v	BPB1002b
42	Capacitor 110v	BPB1002g

Ref No.	Description	Part no.
1	Oil filler plug	BPB0079
2	Oil filler plug seal	BPB0098
3	Top casing	BPB1058
4	Closing ring	BPB1059
5	Sealing gasket	BPB1057
6	Air intake filter	BPB1003
7	Capacitor - 220/240v	BPB1051
7	Capacitor - 110v	BPB0137
8	Terminal box cover	BPB1047
9	Terminal box cover clip	BPB1048
10	Start relay - 220/240v	BPB1053
10	Start relay 110v	BPB0138
11	Overload 220/240v	BPB1052
11	Overload - 110v	BPB0139
12	Mounting set (4)	BPB1055
13	Sight glass	BPB1009
14	Sight glass seal	BPB1010
15	Bottom casing	BPB1056
16	Outlet elbow	BPB0065
17	Delivery pipe gasket	BPB1042
18	Delivery bolt	BPB1039
19	Delivery pipe	BPB1041
20	Sealing ring bolt/nut	BPB1060
21	Bearing bolt (3)	BPB1028
22	Bearing	BPB1029
23	Gasket	BPB1044
24	Mounting spring (3)	BPB1038
25	Valve plate gasket	BPB1033
26	Valve plate	BPB1034
27	Cylinder head gasket	BPB1035
28	Cylinder head	BPB1036
29	Cylinder head bolt (4)	BPB1037
30	Stator bolt (4)	BPB1032
31	Stator - 220/240v	BPB1031
31	Stator - 110v	BPB0334
32	Motor block	BPB1030

Motor / Pump Parts: 35 model

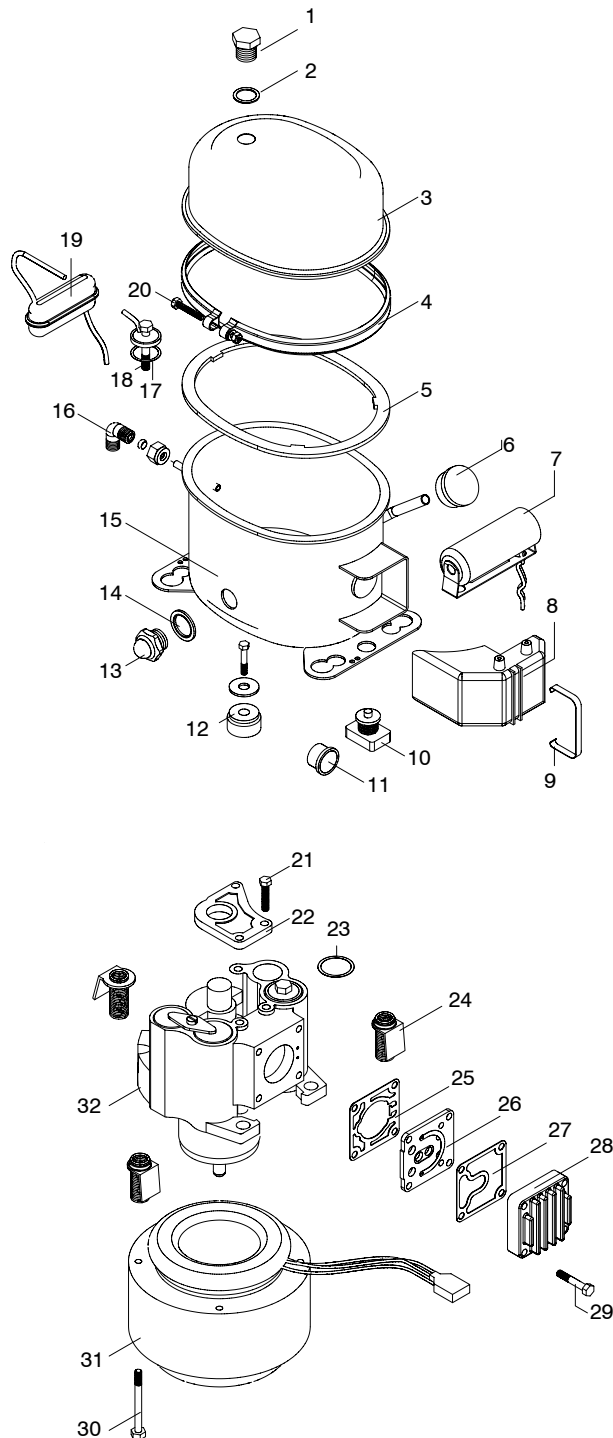


Fig 1

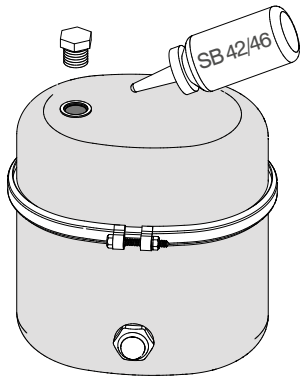


Fig 2

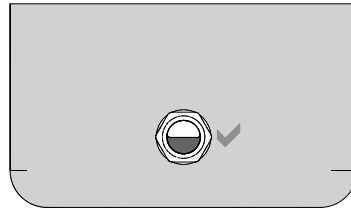


Fig 3

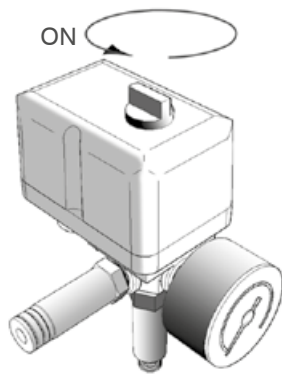


Fig 4

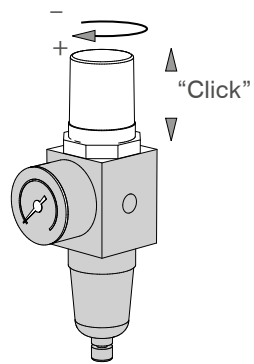


Fig 5

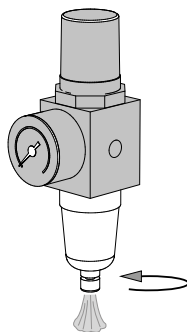


Fig 6

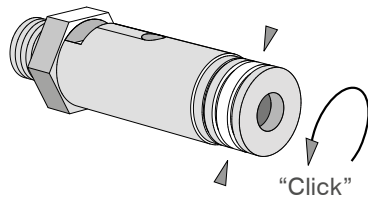


Fig 7

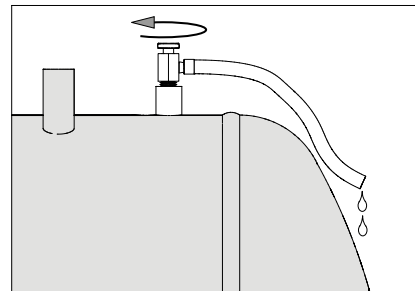


Fig 8

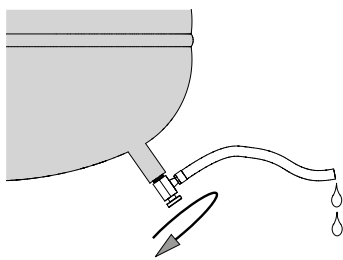
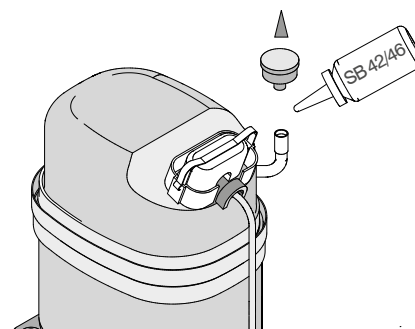


Fig 9



SERVICE RECORD

Date installed _____

Date	Maintenance work	Signature / Company

SERVICE KITS

BPB1122A Service Kit type 35 pump unit
BB24D (2 Kits) BB50D (2 Kits)

BPB1124A Service Kit type 75 pump unit
150/500 (2 Kits) 225/1000 (3 Kits)

NOTES

When you require the best quality of Air for your Dental Surgery, or Medical use there is just one name to consider – Bambi.

With over 37 years in the manufacture of precision Air compressors, Bambi have developed the most comprehensive range of Dental, Medical and Scientific Air Compressors manufactured in the United Kingdom.



We supply the comprehensive range of Bambi Air Compressors available to meet the needs of the smallest rural Dental practice through to the largest multi room surgeries for NHS practices, including private Surgeries, Clinics and Laboratories.

Our team can assist with all the technical advice you need including selecting and specifying the correct Air Compressor for your needs, delivery options and installation requirements. Our Service Team can install and maintain your equipment in an efficient and safe condition and protect your 2 Year Warranty on your equipment, and 5 Year Warranty on the Air Receiver.

J&J Air Systems 

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Cert. No: GBQF1045
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