

BINKS[®]

Instruction Manual

For

205L Ram Unit 10 70 96

Note: Read and follow all instructions and safety precautions before using this equipment

Product Description

107096 - 205 L Ram Unit (for B10 LI / A260 Air motor)

This equipment is designed for use with High Viscosity PVC, Underseal, Sound Deadeners, Mastics, Seam Sealers and Extruded Materials.

Manufacturer: - Binks PCE
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63128 Dietzenbach. DE

EU Declaration of Conformity

We: Binks declare that the above product conforms with the Provisions of Machinery Directive 2006/42/EC and the ATEX Directive 94/9/EC by complying with the following statutory documents and harmonized standards: -

Machinery Safety Standards EN ISO 12100, EN ISO 4413, EN ISO 4414 & EN12621
Pressure Equipment Regulations 1999 (SI 1999/2001)

Providing all conditions of safe use stated within the product manuals have been complied with and that the final equipment into which this product is installed has been re-assessed as required, in accordance with essential health and safety requirements of the above standards, directives and statutory instruments and also installed in accordance with any applicable local codes of practice.



H Beiersdorfer (General Manager)
8th January 2010

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General Description – Section 1.1

The Twin Post Ram Unit is designed to ensure correct 'priming' of the pump fluid section inlet and to prevent 'cavitation' when high viscosity materials are pumped. The unit will accommodate industry standard 205 Litre Barrels and is provided with a location to ensure correct vertical alignment between the Ram plate and the Barrel.

The unit consists of two double acting air cylinders mounted vertically to a base. The air cylinders apply a force through two thrust rods to a heavy-duty ram plate which 'forces' the material into the pump fluid section.

The Ram plate has two tubular seals, which accurately fit the inside of the barrel, as material is used the ram plate descends, cleaning the sides of the barrel, reducing wastage to a minimum.

A pneumatic valve is included to raise and lower the ram plate with a 'release valve incorporated to 'break' the suction seal when lifting the ram plate clear of the used material.

Ram unit options are available to have a raised base to accommodate 205L barrels supplied on wheeled trolleys or to have a mobile Ram unit which has wheels.

Also options are available to provide automatic 'change over' when using two Ram Units in Duty / Standby mode.

Specification - Section 1.2

Feature		
Down thrust at 5 bar air pressure	4.5 KN 1020 lbf	
Maximum Working Air Pressure	6 Bar 87 psi	
Air Inlet Standard Unit Air Inlet With Pump Air Set	1/4" BSP F 3/4" BSP F	
Air Quality	ISO 8573.1 Class 3.4.5	Dirt 5 microns Water +3°C@7bar (940ppm) Oil 5mg/m ³
Stroke	950 mm 37.4 ins	
Standard Unit Height – Fully Extended	2600 mm	
Weight without pump	90Kg	
Ratio of B10 - 67 Fluid Section	30:1	
Ratio of B10 - 42 Fluid Section	48:1	
Ratio of B10 - 36 Fluid Section	58:1	

Installation – Section 2.1

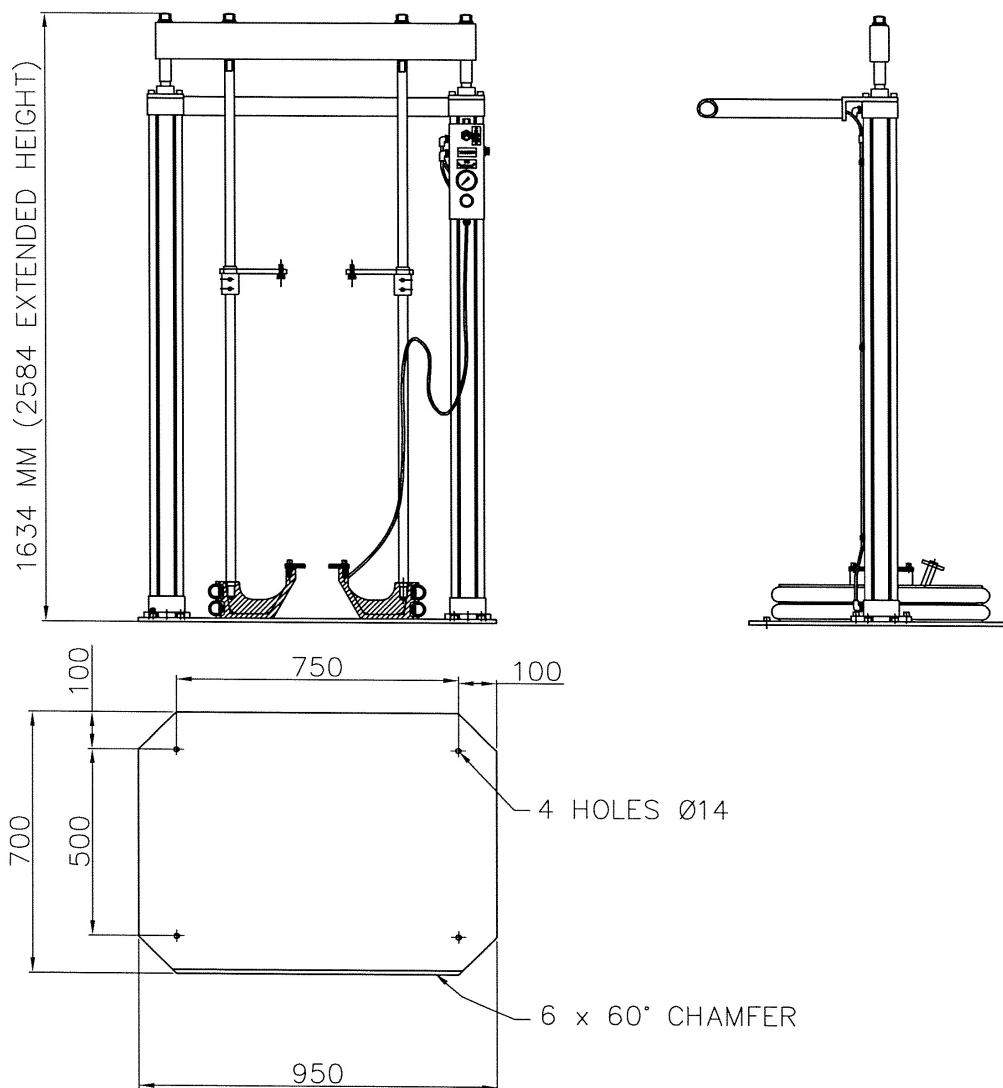
The ram plate base should be mounted on a stable and level floor.

The standard ram plate has 4 off - holes Ø 14 mm to enable the base to be securely fixed to the floor. Suitable floor fixing ‘rawbolts’ should be used which are designed to suit the floor material.

Base plate = 950mm x 700mm. Mounting holes = 750mm x 500mm

A compressed air supply is connected to the ¼” BSP F connection to control the lift and lowering of the air cylinders.

Where the optional pump air set is provided a compressed air supply is connected to the ¾” G Female connection. The air cylinder air supply is incorporated with this air connection.



Operation – Section 2.2

Operation Instructions

Setting up ram trip valve

1. Make sure that the pump is turned **off**.
2. Place an empty drum under the ram plate. With the ram pressure set at 1.5 Bar lower the ram into the drum until it has made contact with the bottom of the drum.
3. Set the trip valve so that it has just tripped, by between 5 – 10mm. Test this a number of times to make sure that the valve trips before the ram plate contacts the bottom of the drum.
4. If different drums are to be used then checks should be made to make sure that the valve is operated. As this valve will turn off the pump and start the other ram unit working.

Setting up ram pressure for different materials

1. Place a fresh drum of material underneath the ram plate.
2. Loosen the ram plate venting screw.
3. Set the ram pressure to 2 Bar.
4. Select the Up / Stop / Down controller to **Down**.
5. A slight delay will occur before the ram starts to move. This is to allow air to exhaust from the 'up' side of the cylinders.
6. Check that the ram is going down squarely into the drum.
7. As the ram plate goes into the drum, air will be pushed out of the vent screw.
8. When material starts to come out of the vent, tighten up the screw.
9. Operate pump and system under normal operating conditions. At all times checking the pump for cavitation. On very thick, non-flowing materials pressures up to 5 Bar may be required, in order to prime the pump correctly. However high ram pressures must not be used on light free-flowing materials as leaks around the ram seals could develop.
10. When the air pressure is set use the "Raising the ram from a drum" procedure, and remove drum from the unit.
11. It is now time to set the speed of the "Up and Down" motion of the ram unit.
12. Remove the cover from the control box mounted on the ram unit leaving the hoses connected. Operate the "up / down" valve and at the same time screw in or out the control valve (silencer / speed controller) item 3 from the photograph on page 11 this will speed up or slow down the motion of the ram unit. The motion needs to be slow enough so that removing an empty drum can be one smooth operation, about 1 full stroke in 30 seconds.
13. Do not use the pressure regulator to control the speed of the unit, as it will give an uneven movement.

Operation – Section 2.2

Lowering the ram onto material

1. Place a fresh drum of material underneath the ram plate. (Correct drum location is achieved with the 2 Cap head screws in the base plate)
2. Loosen the ram plate venting screw.
3. Select the Up / Stop / Down controller to **down**.
4. Make sure that the ram pressure is to the correct pressure. (see Setting up ram pressure)
5. A slight delay will occur before the ram starts to move. This is to allow air to exhaust from the 'up' side of the cylinders.
6. Check that the ram is going down squarely into the drum.
7. As the ram plate goes into the drum, air will be pushed out of the vent screw.
8. When material starts to come out of the vent, tighten up the screw.
9. The ram is now ready to use.

Raising the ram from a drum

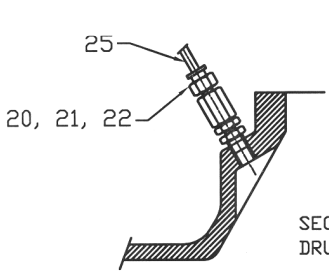
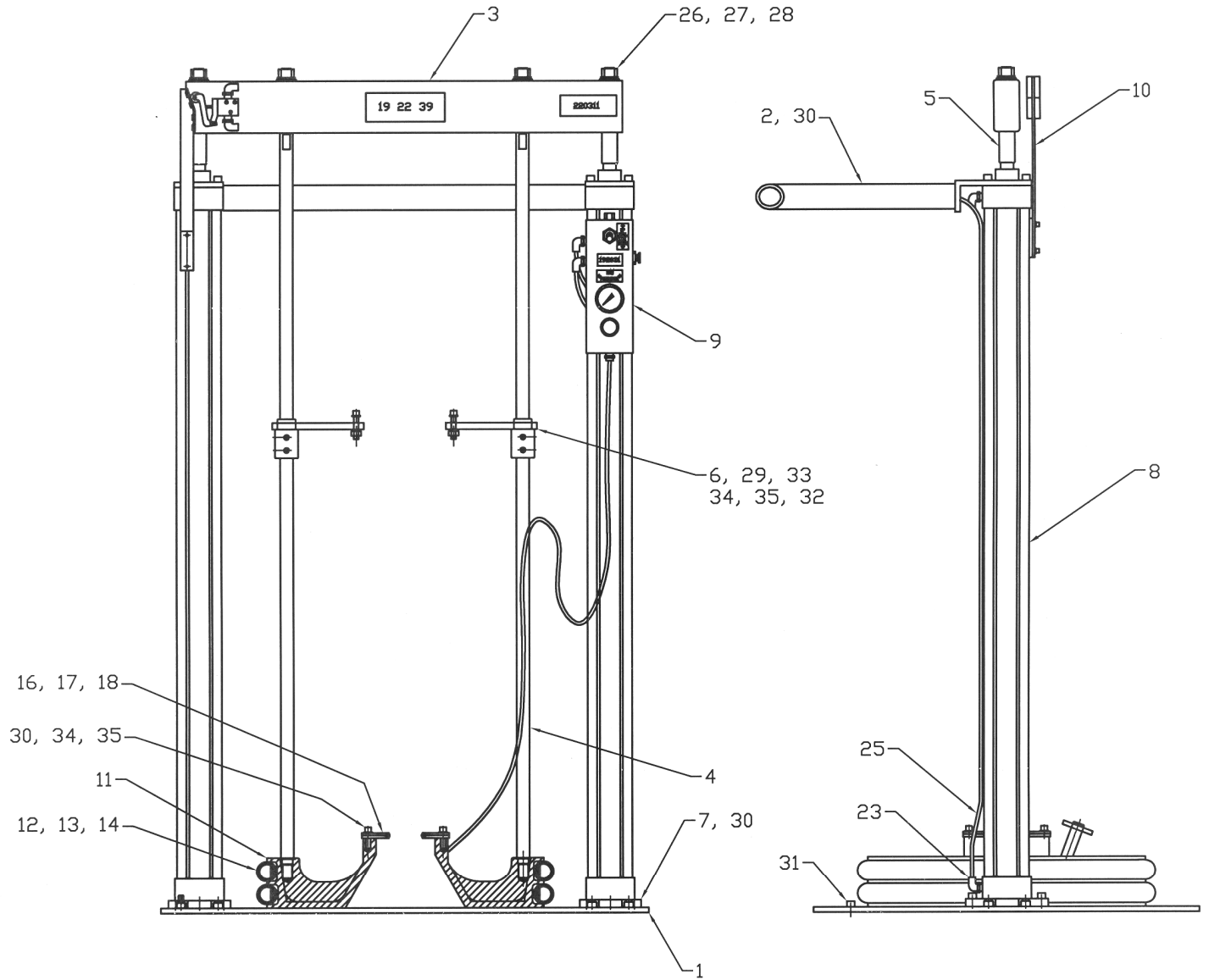
1. Make sure that the pump is turned **off**, air pressure relieved and pump pressure also relieved (equipment by others)
2. Select the Up / Stop / Down controller to **up**.
3. As the ram starts to move inject small bursts of compressed air by pressing the Drum Release button mounted on the side of the unit. This will slowly push the drum off the ram.
4. Be very carefully not to inject too much air, as air can escape between the ram plate seal and the drum. This is not dangerous but can make a unnecessary mess that requires cleaning.

Parts Lists – Section 3.1

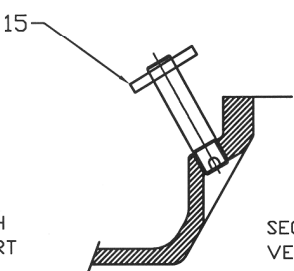
Parts List - 107096 Ram Unit				
Item	Part No.	Description	Qty	Remarks
1	192277	Base plate	1	
2	192278	Cross beam hoop	1	
3	192279	Support beam	1	
4	192280	Tie rod	2	
5	192281	Shaft adapter	2	
6	192708	Mounting bracket for B10 LI air motor	2	Or A260
7	192283	Foot for cylinder	2	
8	192250	Ram cylinder	2	
9	107049	Ram control box assy.	1	
10	107050	Trip rod assy.	1	Optional Extra
14	181672	Strap buckle	2	#
23	174645	Ø6 x 3/8" BSP hose elbow	4	#
24	174646	Ø6 hose tee	2	#
25	170230	Ø6 x 4 hose	8M	#
26	163148	M20 hex. nut	4	
27	165098	Ø20 plain washer	4	
28	165139	Ø20 spring washer	4	
29	165567	M10 x 50lg cap head setscrew	4	
30	164733	M10 x 25lg cap head setscrew	24	
31	163948	M10 x 10lg cap head setscrew	2	Drum Location
32	163941	M10 x 12lg grub screw	8	
33	163127	M10 hex. nut	4	
34	165095	Ø10 plain washer	8	
35	165075	Ø10 spring washer	8	
36	107054	Follower plate assembly	1	
37	163126	M12 Nut for spacer bar	4	Not shown
38	164470	Ø12 Washer for spacer bar	4	Not shown
39	502426	Spacer Bar for air motor	4	Not shown

List - 107054 Follower Plate Assembly Parts				
Item	Part No.	Description	Qty	Remarks
11	205027	Ram Plate	1	
12	207064	Wiper Ring	2	
13	202522	Strapping	2	
14	181672	Strap Buckle	2	
15	185450	Valve Stem Assy	1	
16	181422	Gasket	1	
17	192288	Pump Tube Plate	2	
20	173686	1/8" BSP Non-Return Valve	1	
21	171267	1/4"-1/8" BSP Bush	1	
19	171624	¾" BSP Taper Plug	1	
22	174644	Ø6 x 1/8" BSP Hose Coupling	1	
18	162701	'O' Ring Ø54.3 x 5.7	1	
30	164733	M10 X 25 Lg Cap Hd Setscrew	4	
34	165095	Ø10 Plain Washer	4	

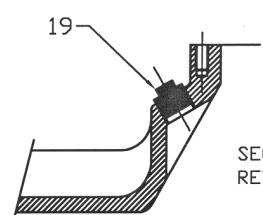
Assembly Drawing – Section 3.2



SECTION THROUGH DRUM RELIEF PORT



SECTION THROUGH VENT PORT

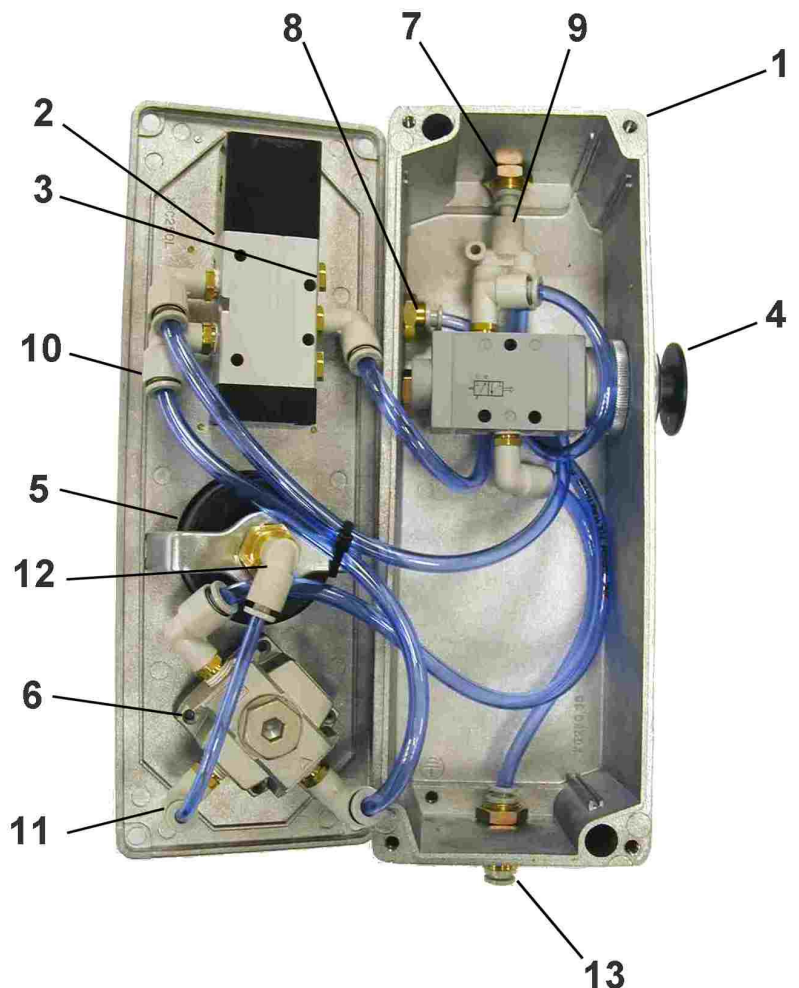


SECTION THROUGH RETURN PORT

Assembly Drawing – Section 4.2

Parts List - 107049 Ram control box assy.				
Item	Part No.	Description	Qty	Remarks
1	192253	Control box	1	
2	192254	5/3 – 1/8”BSP control valve	1	#
3	192255	1/8”BSP silencer / speed controller	2	#
4	192256	3/2 - 1/8” BSP valve	1	#
5	192257	0 – 10 bar panel mounted gauge	1	#
6	192258	1/8” BSP regulator (set to 2 – 5Bar)	1	#
7	192259	Ø6 x 1/4” BSP bulkhead	1	
8	192260	Ø6 bulkhead elbow	2	
9	192261	Ø6 ‘Y’ coupling	1	
10	192262	Ø6 x 1/8” BSP elbow	7	
11	192263	Ø4 x 1/8” BSP elbow	1	
12	192264	Ø4 x 1/8” BSP female elbow	1	
13	192265	Ø6 bulkhead	1	

- 250580 Recommended spares kit for 107049



Important Information - Section 4.1**Directions for Working Safety**

This Product has been constructed according to advanced technological standards and is operationally reliable. Damage may, however, result if it is used incorrectly by untrained persons or used for purposes other than those for which it was constructed.

The locally current regulations for safety and prevention of accidents are valid for the operation of this product under all circumstances.

International, national and company safety regulations are to be observed for the installation and operation of this product, as well as the procedures involved in maintenance, repairs and cleaning.

These instructions are intended to be read, understood and observed in all points by those responsible for this product. These operating and maintenance instructions are intended to ensure trouble free operation. Therefore, it is recommended to read these instructions carefully before start-up. Binks PCE cannot be held responsible for damage or malfunctions resulting from the non-observance of the operating instructions. These instructions including regulations and technical drawings may not be copied, distributed, used for commercial purposes or given to others either in full or in part without the consent of Binks PCE.

We reserve the right to alter drawings and specifications necessary for the technical improvement of this product without notice.

High Pressure/Electrostatic Warning

High pressure equipment can be dangerous if used incorrectly, serious bodily injury may occur if the following instructions are ignored. Installation and maintenance should only be carried out by suitably qualified personnel.

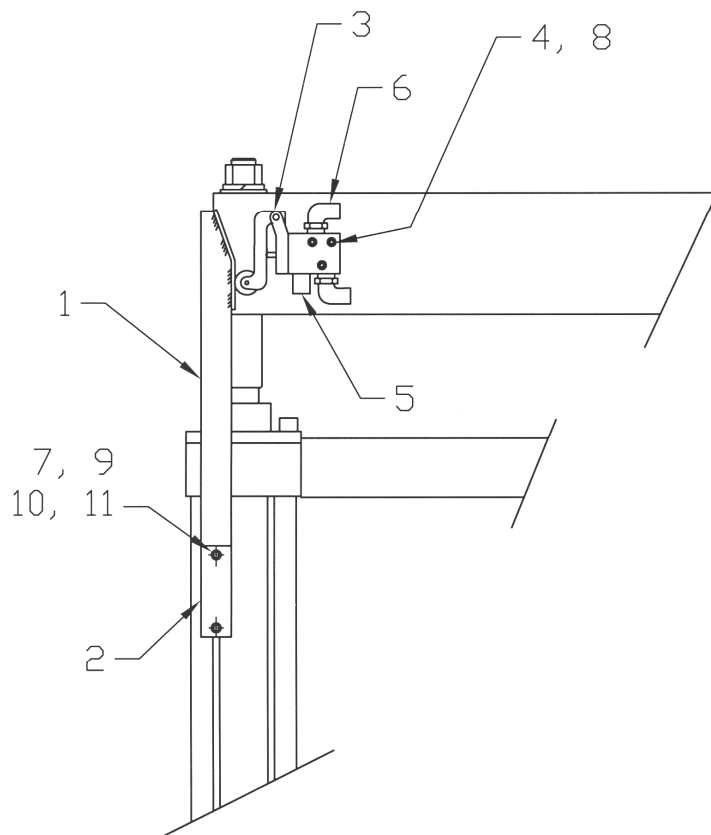
1. Before attempting any work on a high-pressure system ensure material pump, hydraulics, compressed air motor are isolated where relevant.
2. Relieve all pressure from the system. Note: It is possible for pressure to get locked into a system, therefore ensure all sections of the system are checked thoroughly for remaining pressure.
3. Take care when releasing fittings
4. Always replace worn hoses immediately
5. Never plug a leak with your finger, adhesive tape or other stop gap devices
6. Always ensure equipment is suitably earthed before running, to avoid any chance of electrostatic build up.

Accessories – Section 5.1

Accessories			
Item	Part No.	Description	Remarks
1	107050	Trip Valve Kit	Trip Valve, Striker and Fittings (Factory Fitted) <i>(Use with item with item 2 and 4 to operate Pump air motor 'shut off')</i>
2	107055	Pump Control Unit	Filter Regulator / Pump Saver / Auto 'shut off' (Factory Fitted)
3	107056	Pump Control Unit	Filter Regulator / Pump Saver (Factory Fitted)
4	107053	Pump Control Unit	Filter Regulator / Auto 'shut off' (Factory Fitted)
5	107057	Auto Change Over Panel	To Automatically change over to a Standby Ram Unit when the Duty Ram Unit is empty (Bottom Position)
6	107866	Filter Housing St St	191833 – 200 Micron Element St St 191834 – 400 Micron Element St St 192523 – 600 Micron Element St St 192524 – 1200 Micron Element St St
7	107867	Filter Housing Carbon St	
8	107876	Twin Filter Housing Assembly St St	Filter Element to be Specified Separately
9	107877	Twin Filter Housing Assembly Carbon St	Filter Element to be Specified Separately
10	192133	Pump Adapter 4.2 / 220	To connect Pump Fluid Inlet to Ram Plate
11	192132	Pump Adapter 6.7	To connect Pump Fluid Inlet to Ram Plate
12	193273	Pump Adaptor 880	To connect Pump Fluid Inlet to Ram Plate

Accessories – Section 5.1

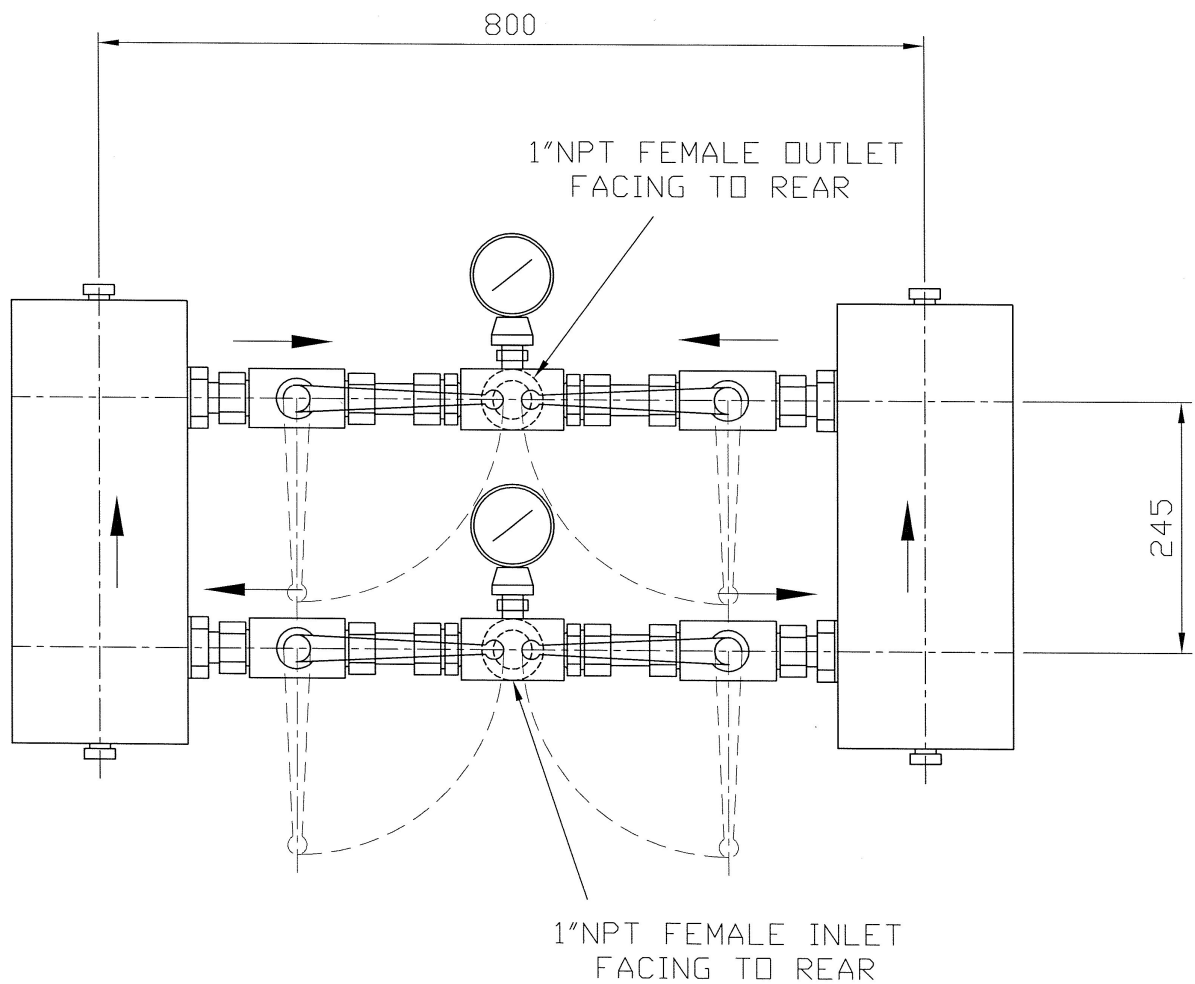
Parts List - 107050 Trip valve Kit				
Item	Part No.	Description	Qty	Remarks
1	192289	Trip rod	1	
2	192290	Trip rod spacer	1	
3	192251	3/2 Trip valve	1	#
4	192291	Valve spacer	3	
5	192252	1/8" BSP silencer	1	
6	192263	Ø4 x 1/8" BSP push in elbow	2	
7	192276	M4 cylinder nut	2	
8	163949	M4 x 50 long screw	3	
9	165528	M4 x 16 long screw	2	
10	165091	Ø4 plain washer	2	
11	165088	Ø4 spring washer	2	
# - Recommended spares for 107050				



Accessories – Section 5.1

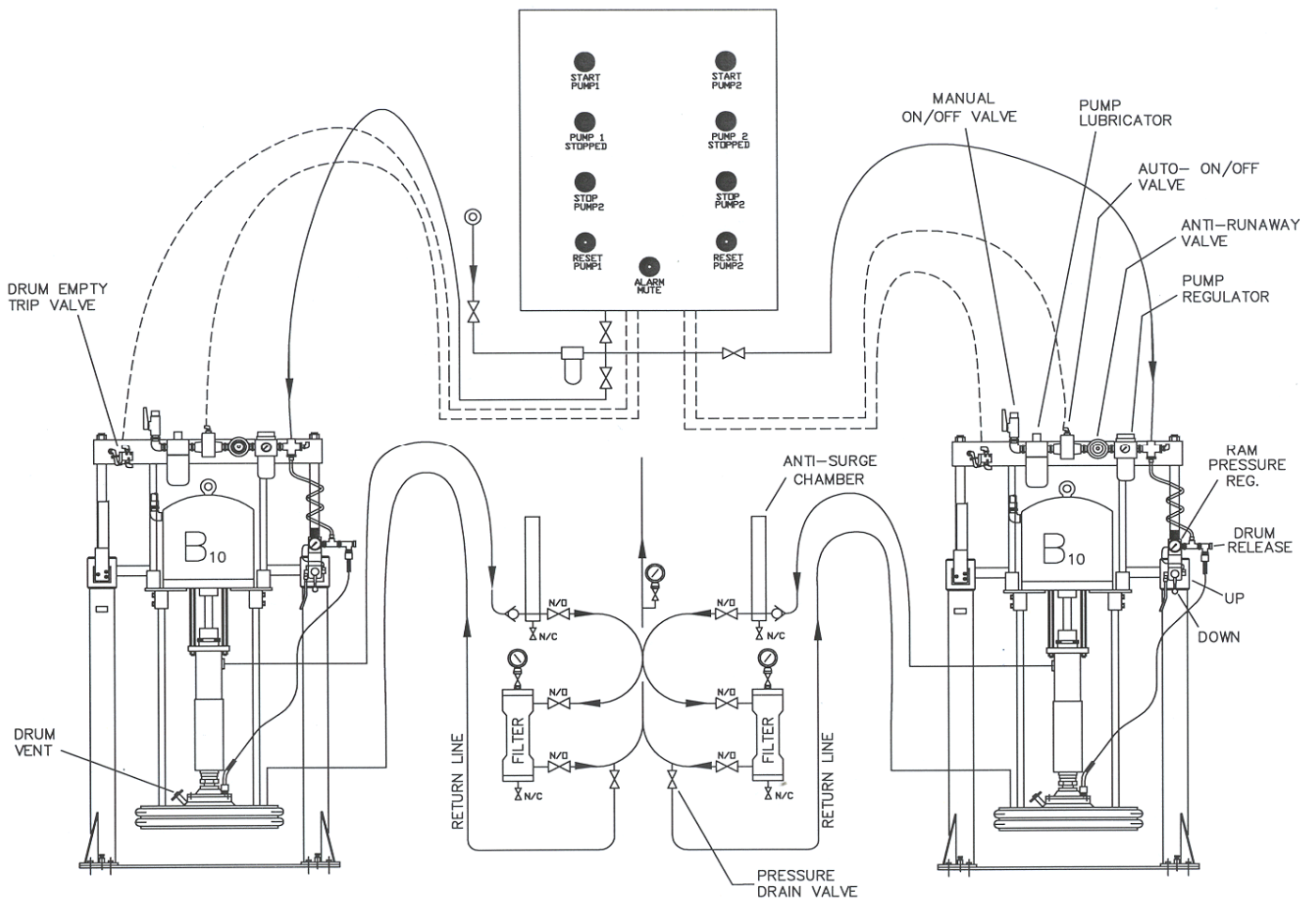
Duty / Standby Filter Assembly

- 107876 Stainless Steel Version
- 107877 Carbon Steel Painted Version



Accessories – Section 5.1

View showing Typical System using 107057 Auto Change Over Panel & 107876/77 Duty / Standby Filter Assy



Spare Parts – Section 5.2

# Spare Parts Kit For - 107096 Ram Unit				
250579				
Item	Part No.	Description	Qty	Remarks
1	207064	Wiper ring	2	#
2	202522	Strapping	2	#
3	181672	Strap buckle	4	#
4	181422	Gasket	1	#
5	162701	'O' ring Ø54.3 x 5.7	1	#
6	173686	1/8" BSP non-return valve	1	#
7	174644	Ø6 x 1/8" BSP hose coupling	1	#
8	174645	Ø6 x 3/8" BSP hose elbow	4	#
9	174646	Ø6 hose tee	2	#
10	170230	Ø6 x 4 hose	8M	#

Spare Parts Kit For - 107049 Ram Control Box Assy				
250580				
Item	Part No.	Description	Qty	Remarks
1	192254	5/3 – 1/8" BSP control valve	1	
2	192255	1/8" BSP silencer	2	
3	192256	3/2 - 1/8" BSP valve	1	
4	192257	0 – 10 bar panel mounted gauge	1	
5	192258	1/8" BSP regulator	1	

Spare Parts For - 107050 Trip Valve Kit				
Item	Part No.	Description	Qty	Remarks
1	192251	3/2 Trip Valve	1	



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