

OPERATOR'S MANUAL



AIRBLAST 1070 PNE VACUUM BLASTING MACHINE

NOTICE

This user's manual describes how to handle and operate the subject machine(s) to ensure safe operation, optimum work economy and long service life.

Read this book before putting the machine into operation to ensure correct handling, operation and proper maintenance from the beginning.

Keep this book available for the operator(s) and make sure that the unit is operated and maintained according to the instructions.

In all correspondence always mention the unit type and the complete serial number shown on the data plate.

The owner is responsible to keep the machine(s) in a safe operating condition.

If any statement in this book especially with regard to safety does not comply with local legislation, the stricter of the two shall apply.

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1. Introduction

The AIRBLAST's Vacuum Blasting technology is a new concept for cleaning many types of surfaces quickly, thoroughly and without environmental pollution.

The AIRBLAST 1070 PNE machine is designed as a high capacity direct pressure-blasting machine featuring a continuous blast media feed system. This feature allows the machine to be kept compact and lightweight but with a minimum down time for media loading and machine handling.

During the blast operations, the dust and debris are separated from the re-usable abrasive for simple disposal. Only the cleaned blast media recycles to provide optimal surface preparation.

2. Responsibilities of owner and personnel

- * *Do not operate the machine before reading this manual.*
- * *Good co-operation and co-ordination is necessary, when more than one operator is required.*
- * *Do not alter or modify the machine without a written permission of the manufacturer.*
- * *Inspection and maintenance must be done as described in this manual.*
- * *A competent and responsible operator is essential to an efficient use of the machine.*
- * *Local labour and safety laws and regulations must always be observed.*
- * *The technical personnel should be familiar with all recurrent situations, during assembly, disassembly and maintenance of the machine.*
- * *The operator should be familiar with all recurrent situations while operating the machine.*
- * *If operator or technicians observe faulty or dangerous equipment or practices, they must inform the owner or other responsible person immediately.*
- * *The safety aspects should be known. Using the machine safely comes first.*
- * *The working place should be free of obstacles.*
- * *Improper use of the machine is not allowed.*

3. Safety

3.1 Safety precautions

The following are general safety precautions for use before and during operation of the AIRBLAST 1070 PNE. These precautions should be understood and followed to prevent accidents, bodily injury, or damage to the equipment. Personal safety equipment used should be of an approved type.

Safety precautions:

- * Wear safety goggles, gloves, and hearing protection at all times during blasting.*
- * Despite the very high level of containment, suitable respirators must be worn when removing hazardous or toxic coatings.*
- * Before each use carefully check the equipment for damaged loose or frayed cables, hoses, or components. Rectify any problems before use.*

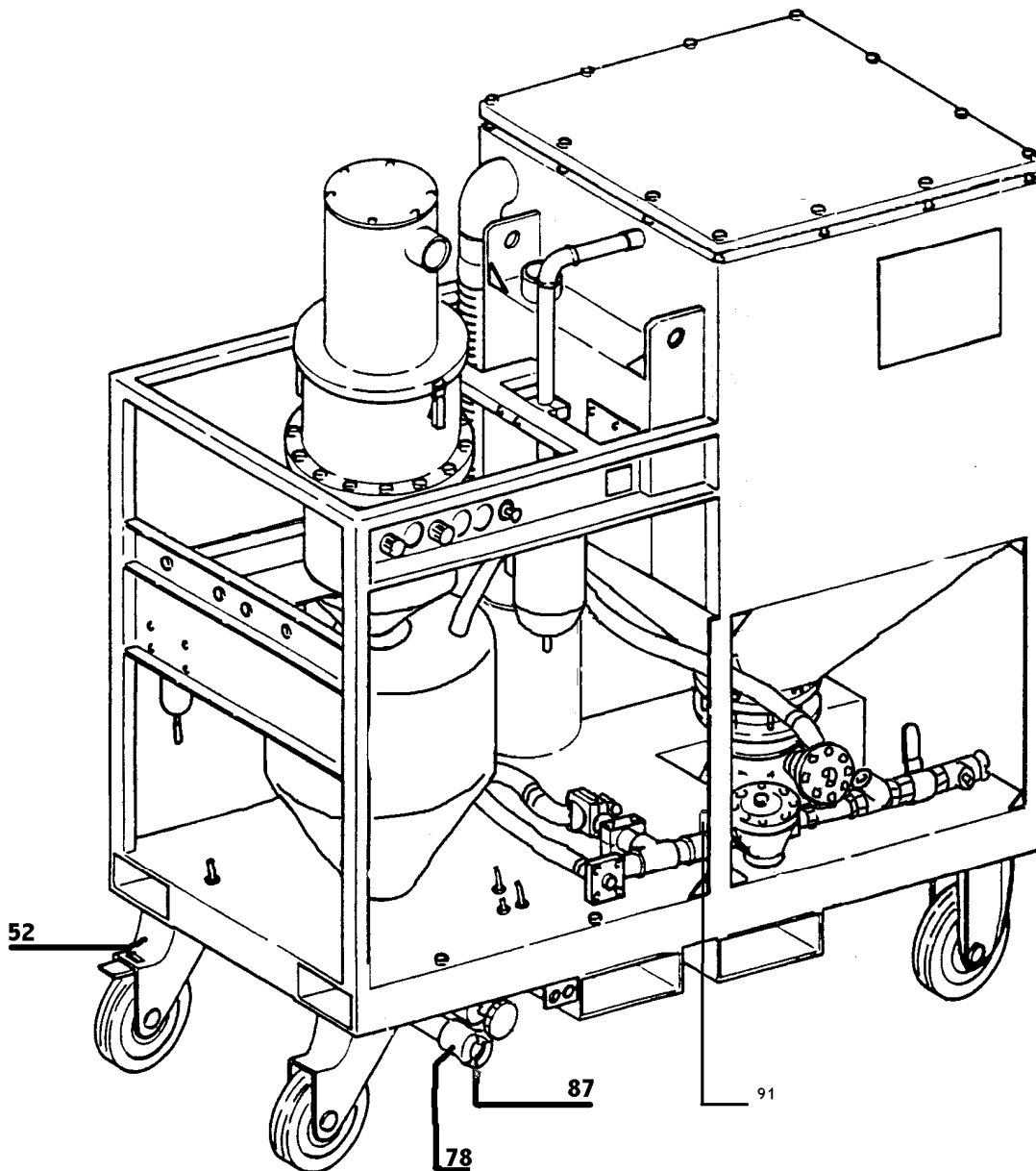
- * All hose connections with claw couplings should be provided with safety clips.*
- * Do not use worn brushes as these will allow blast media and dust to escape into the atmosphere. Check the brushes for service ability.*
- * Place the blast gun brush flat against the surface to be treated before pulling the trigger. Release the trigger and wait a few seconds for abrasive flow to stop before lifting the blast gun from the surface.*
- * Do not attempt to use this equipment without proper lighting and visibility.*
- * When opening and cleaning the dust compartment, or otherwise performing any work on the equipment where dust is generated, always wear eye protection and a proper respirator. Technicians should do this only.*

- * *Do not operate this or similar equipment in an area where explosive gasses are present.*
- * *Never aim the blast head at any part of the human body.*
- * *Do not remove the safety guards from the machine.*

3.2 Safety provisions

The machine is provided with the following safety provisions:

- * Pressure relief valve (91)
- * Spring clips (78) for the claw couplings (87)
- * Swivel castor with brake (52)



3.3 Warning/caution information

DO NOT PERFORM BLASTING DURING RAIN OR VERY HUMID CIRCUMSTANCES

COIL CABLES'S AND HOSES CAREFULLY WHEN EVER THE MACHINE IS STORED

UNCOIL ALL AIR HOSES PROPERLY WHEN ATTACHED TO THE MACHINE AND PLACE SAFETY CLIPS TO ALL COUPLINGS BEFORE APPLYING PRESSURE TO THE HOSES INSPECT REGULARLY NOZZLE, HOSES AND BRUSHES ETC. FOR WEAR.

TAKE IN ACCOUNT THAT THE NOZZLE WEARS OUT.

- THE NEEDED AMOUNT OF AIR INCREASES

- THE WEAR ON OTHER PARTS OF THE BLASTHEAD INCREASES

REPLACE NOZZLE WHEN WORN OUT LARGER THAN .2900"/7,4 M/M

NEVER AIM THE BLAST HEAD AT ANY PART OF THE HUMAN BODY

4. Technical data

Dimensions:	735x1565x1660 mm 29 x 61.6 x 65.4 Inches	
Gross abrasive capacity:	38 litres	10 US.Gal.
Weight (machine only empty):	525 kg.	1155 lb.
Shipping weight (machine only empty)	675 kg.	1155 lb.
- 15 m. hose assy & accessories:	30 kg.	66 lb.
- 10 m. hose for extension:	20 kg.	44 lb.
- 20 m. hose for extension:	40 kg.	88 lb.
Recommended compr. capacity:	8 bar, 10 m ³ /min 116 PSI, 375 cfm	
Max. blasting pressure (pr.vessel)	8 bar 116 PSI	
Max. abrasive size: 1.4 mm.	12 Mesh	
Recommended Abrasive:	chilled iron and steel grit, Aluminium oxyde	
Not recommended:	non-recyclable abrasives. <u>Do not use sand!</u>	

NOTE whenever lightweight recyclable abrasives has to be used like; glass, walnut shells or plastic use the special designed light weight abrasive dust separator.

Hose lengths

The standard hose length is 15 m.
Extension sets of 10 m. and 20 m. are available.
The maximum hose length is 45 m.

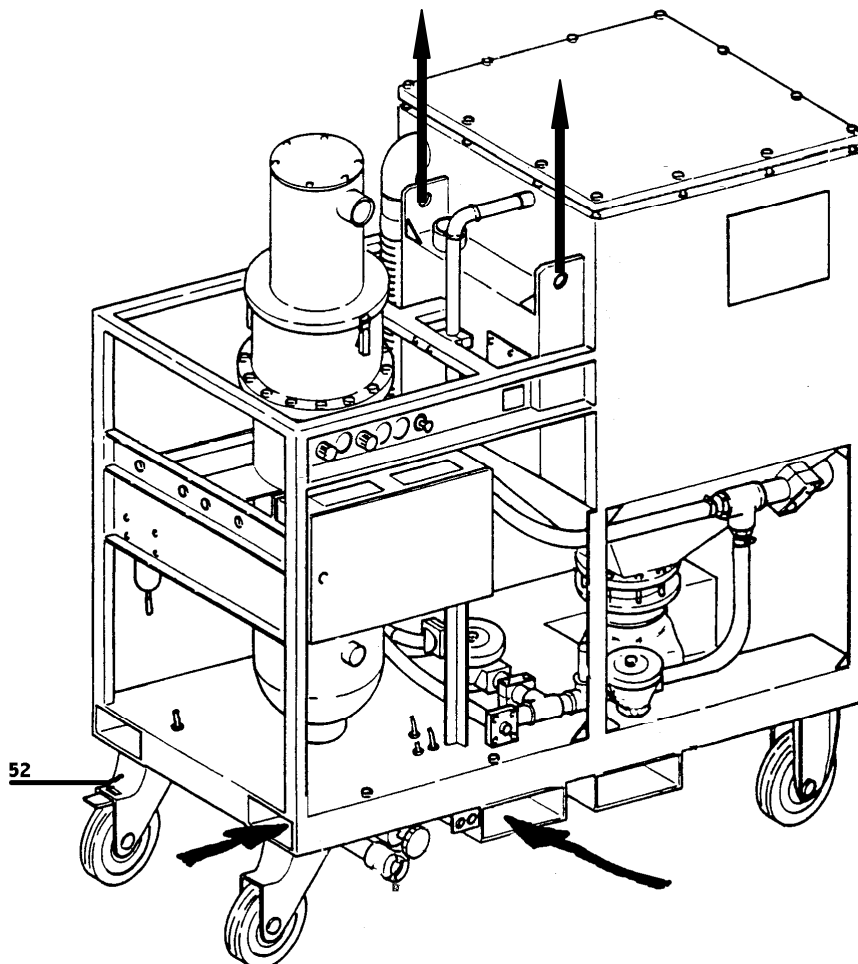
5. Parts List

- 11. Sieve
- 12. Clip
- 16. Abrasive dust separator
- 18. Sieve small
- 23. Blast head
- 25. Nozzle
- 27. Blast tube flat
- 30. Brush holder
- 33. Brush ring flat
- 36. Trigger
- 42. Housing abrasive control valve
- 38. Plug
- 40. Wing bolt
- 102. Abrasive control valve
- 45. Vacuum hose
- 48. Filter
- 55b. Pressure gauge venturi
- 55a. Pressure gauge blasting pressure
- 55c. Pressure gauge inlet air
- 56b. Button filter cleaning
- 57b. Pressure regulator venturi
- 57a. Pressure regulator blasting pressure
- 60. Dust bag
- 61. Control hoses
- 73. Blast hose
- 74. Vacuum hose
- 76. Claw coupling
- 91. Pressure relief valve
- 92. Venturi
- 93. Main air valve
- 95. Dust exhaust valve
- 82. Claw coupling
- 125. Pressure vessel

6. Transport

The bottom of the machine frame is provided with two tubular sleeves for the forks of a Fork lift truck. In this way the machine can be transported safely. Another possibility is to move the machine by crane or hoist. For this reason two lifting lugs are incorporated in the frame machine.

In case of transport always make sure that dust valve is completely closed.



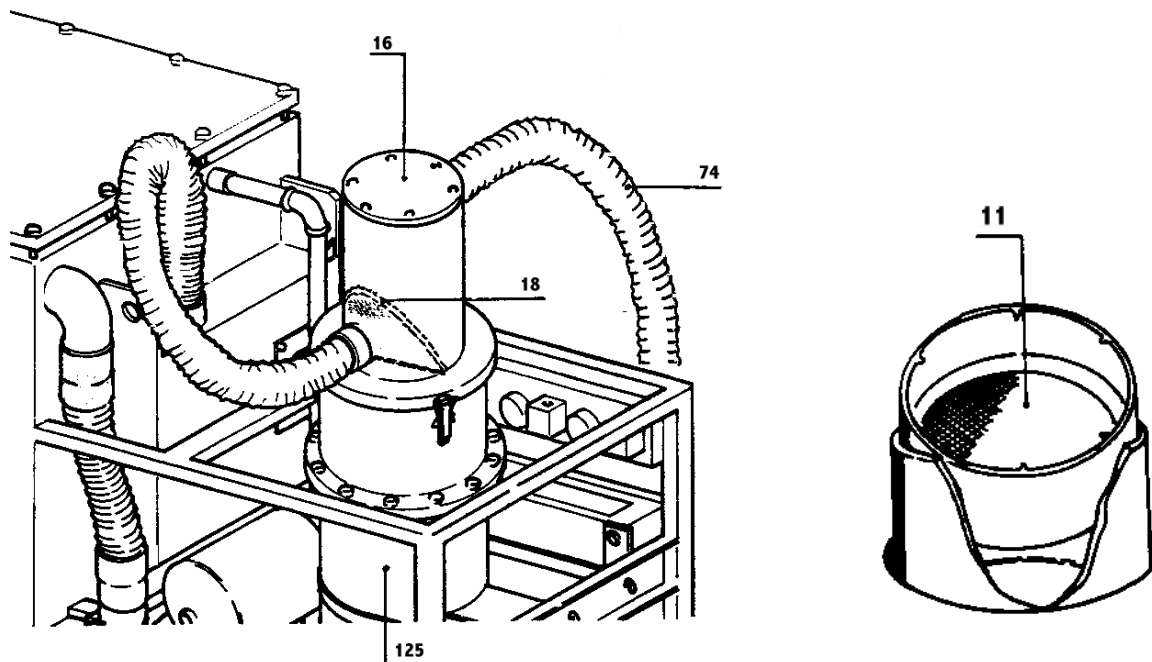
7. Machine function

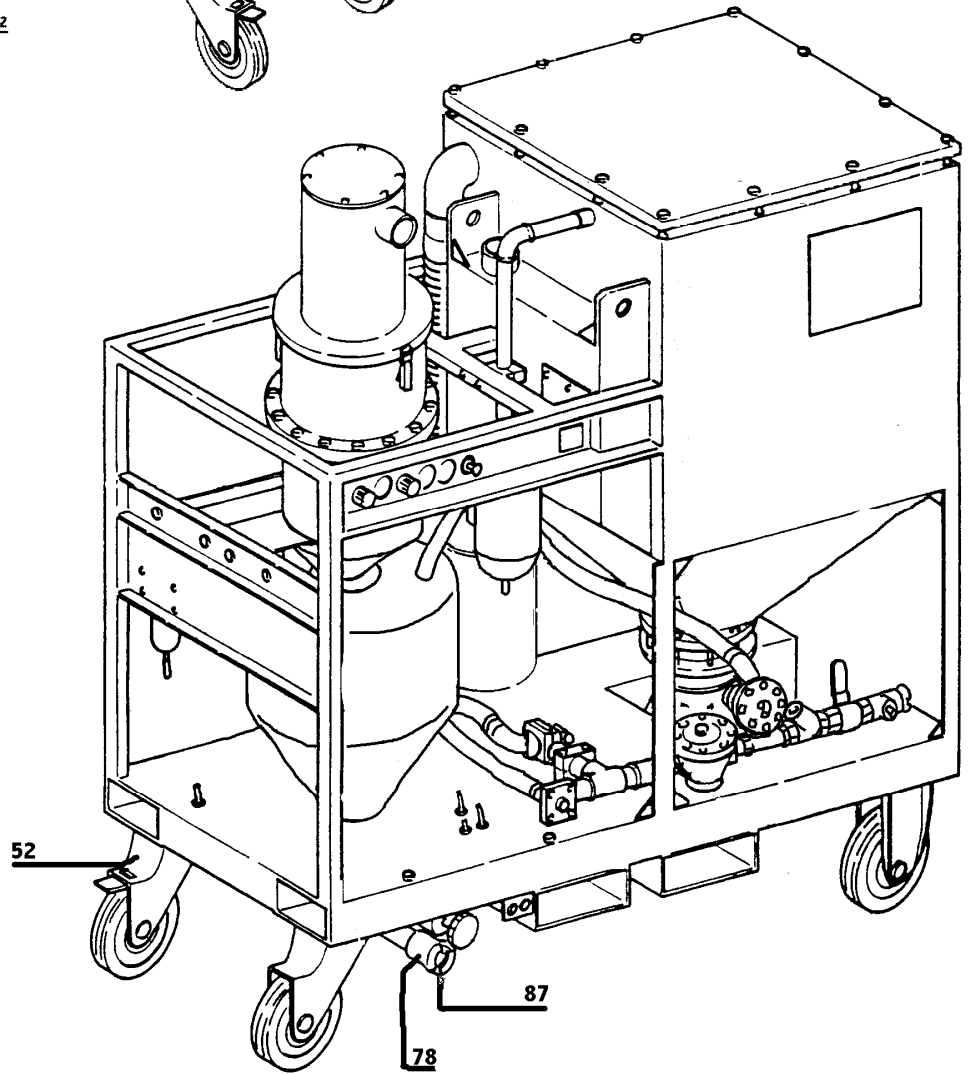
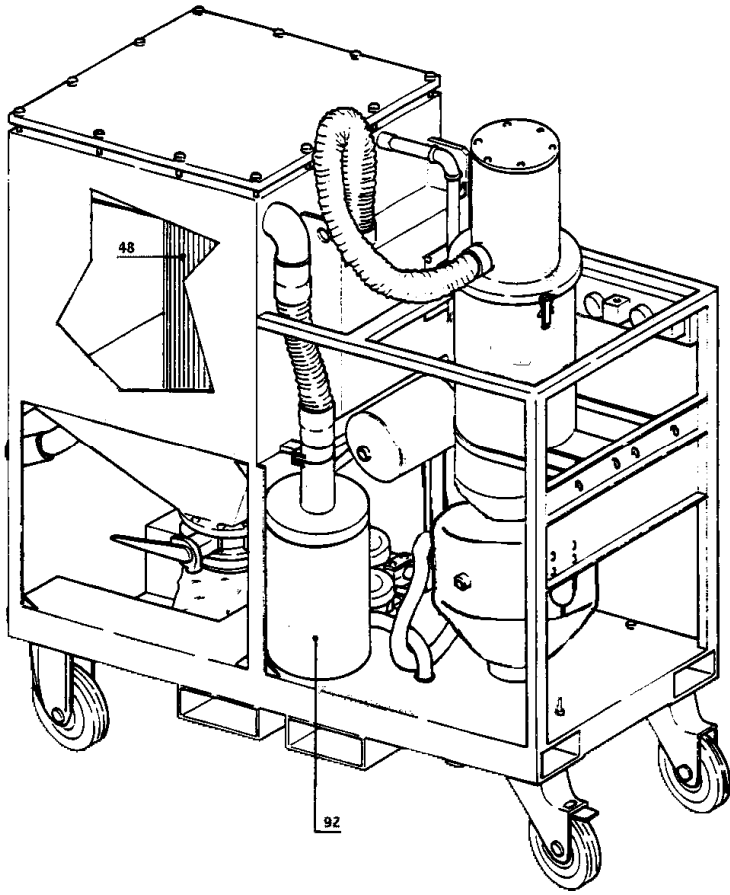
During the blasting operation the abrasive is propelled at a high speed through the blast head against the surface to be cleaned. After cleaning the surface, the abrasive - together with the rust or coating removed from the surface - is vacuumed back into the machine through the suction hose.

In the dust separator, the exhaust speed of the abrasive and dust is reduced by means of collision pads. Below the last collision pad is a fine wire mesh screen through which the dust and small spent abrasive will pass. Since these pads are placed at an angle, gravity causes the re-usable abrasive to fall back into the hopper above pressure vessel. Any larger waste particles will be caught by the sieve.

Below the last collision pad with fine mesh there is an exhaust opening leading to the filter section. The dust is drawn back to the filter chamber where the heavier dust falls directly into the bottom of the dust chamber and the remainder is drawn to the filters. The fine dust clings to the filters and the clean air is blown back into the atmosphere through the vacuum generator. To prevent the filters becoming clogged, they can be cleaned by pushing the knob on the dashboard indicating "filter cleaning" a few times each four hours (Filter back-flush system). Depending upon the abrasives being used and the surface being blasted the filters must be cleaned less or more frequent.

The single-chamber pressure vessel functions as follows: By means of a pneumatic solenoid and trigger action, the pressure vessel is pressurised. The pressure vessel is always pressurised as long as the trigger is activated. Now the abrasive, under pressure, passes through the abrasive control valve into the blast hose. At the end of the blast hose the abrasive passes a nozzle and gets propelled against the surface inside a blast head. Whenever the upper chamber is depressurised, the valve on top of it will open and the abrasive stored above it will flow in to the upper chamber.





8. Setting up for operation

8.1 Installation instruction

Connect the machine to a compressor with a minimum capacity of 10 m³/min (375 CFM) and a maximum pressure of 9 bar (130 PSI) at the compressor. The pressure vessel of the machine has not been designed to operate above 116 PSI. To ensure optimal operation of the machine, you must use dry, clean, oil-free air. It is recommended that a water separator is installed in the supply air line, as close to the AIRBLAST 1070 PNE as possible. If the compressor you are using does not have an outlet air after-cooler built in, you also need a stand-alone after cooler during warm, humid operations.

AIR COMPRESSOR → AIR COOLER → WATER SEPARATOR → AIRBLAST 1070

Be certain that the compressed air supply hose is connected to the coupling on the back of the machine. Be sure to use safety clips on all hose connections!

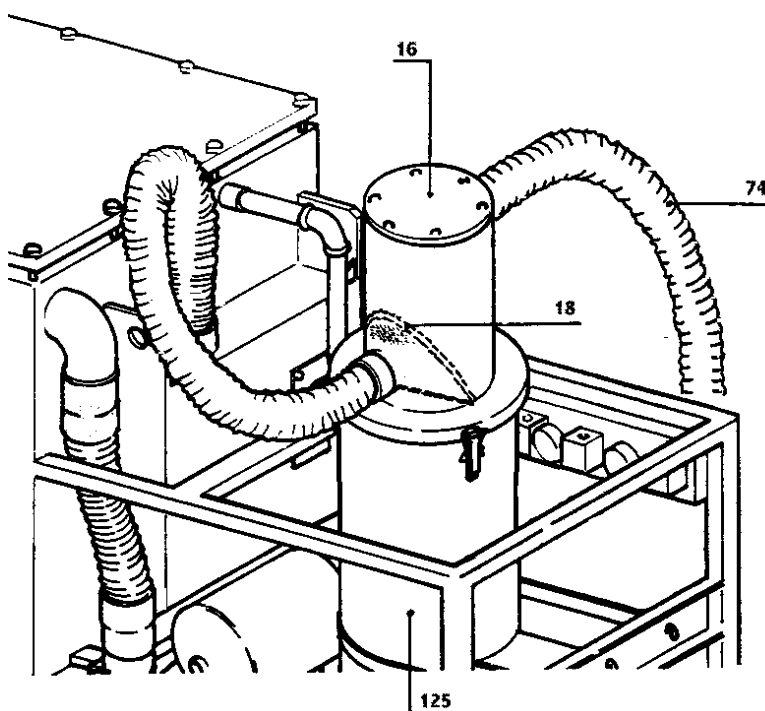
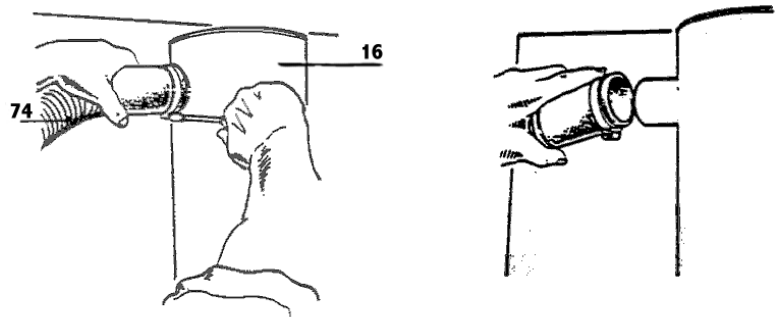
- * Be sure that the inside diameters of the air hoses are correct and that there are no obstructions. Avoid using small diameter hose couplings as well as an excessive number of couplings. The correct minimum hose/coupling diameters are as follows.

Hose Length	Inside diameter
To 5 meter (16')	31.75 mm (1 ¼")
To 25 meter (82')	38.1 mm (1 ½")
To 50 meter (164')	50.8 mm (2")
To 250 meter (820')	63.5 mm (2 ½")

1. First connect the blast hose with the claw coupling on to the machine.
2. Connect the suction hose of the blast head to the top vacuum connection of the dust separator .
3. Connect the start/stop control hoses to the connection on front side of the machine.

8.2 Filling the machine

- * Remove both hoses from the dust separator and disconnect the three clips. Now, the dust separator can be removed.
- * Fill the machine up by pouring abrasive through the sieve up till the Pop up valve is covered. (this is a total of approx 25 liters or 100 kgs of metallic abrasive!!) Do not overfill the pressure vessel because this will lead to a waste of abrasive.
- * Then replace the dust separator on the machine, fasten the clips and connect the suction hoses and. Do not drop paper or other foreign material into the machine. These particles can cause blockages.



8.3 Adjustments

Throughout this manual, you may be asked to "test run" the machine for adjustment and diagnostic purposes. It is recommended that you have a flat piece of scrap steel nearby the machine. In this way the operator can run the blast gun within reach of the machine and make the necessary adjustments.

Remember to wear personal safety equipment.

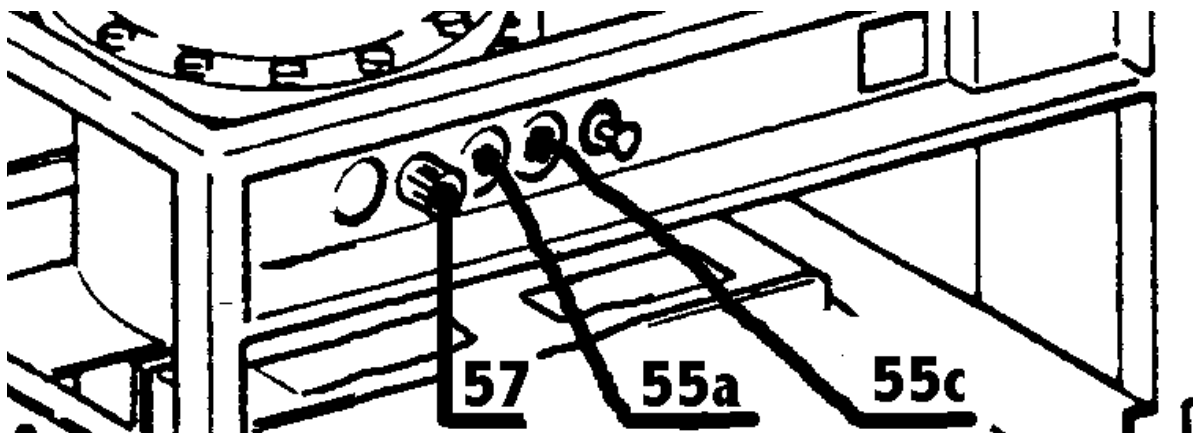
8.3.1 Setting the pressure

* The first step to calibrating the machine is to adjust the blasting pressure. This is done by the pressure regulator on the operating panel and is indicated by pressure gauge on the operating panel.

* Hold the blast head as described in the proceeding paragraph, open the ball valve and squeeze the trigger. **Keep the blast head on the surface.** Allow the machine to operate for a few seconds and note the reading on both the pressure gauges. For efficient machine operation it is important that the blast pressure is adjusted in such way that no abrasive or dust is spilled at the blast head.

Additionally, it may be desirable to decrease the pressure when blasting on a soft surface or such as cement or to increase the pressure when blasting with steel abrasives. In case of a lower blast pressure, adjustment of the vacuum can be obtained. The vacuum controlled by air pressure adjustment on the vacuum generator is an option. Ask your dealer/manufacturer for advice. Adjust the blast pressure by turning the knob on the control panel.

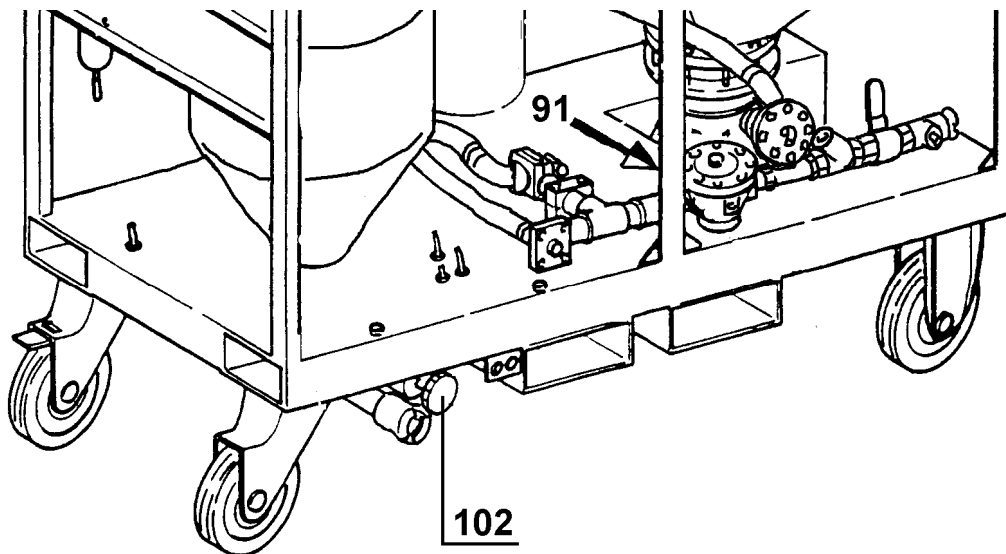
NOTE: never attempt to operate the machine at a blast pressure lower than 1 bar (15 PSI).



8.3.2 Adjustment of the abrasive control valve

- * To establish the correct abrasive flow, you must first close the valve clockwise until you just feel the valve seat. Do not close the valve too firmly or you may damage the rubber diaphragm.
- * Then open the valve by turning from 3 to 3½ turns counter clockwise.
- * Test blast to determine if a smooth blasting sound is obtained together with an optimum blasting pattern. Adjust as necessary, an eighth (1/8) of a turn at a time, to obtain the desired blasting pattern. The actual adjustment for abrasive flow is dependent on the abrasive type, size and operating pressure selected. Check the pressure on the gauges.

NOTE . DO NOT TURN THE ABRASIVE CONTROL VALVE DURING OPERATION.



9. Operation of the machine

9.1 Inspection procedure before starting up

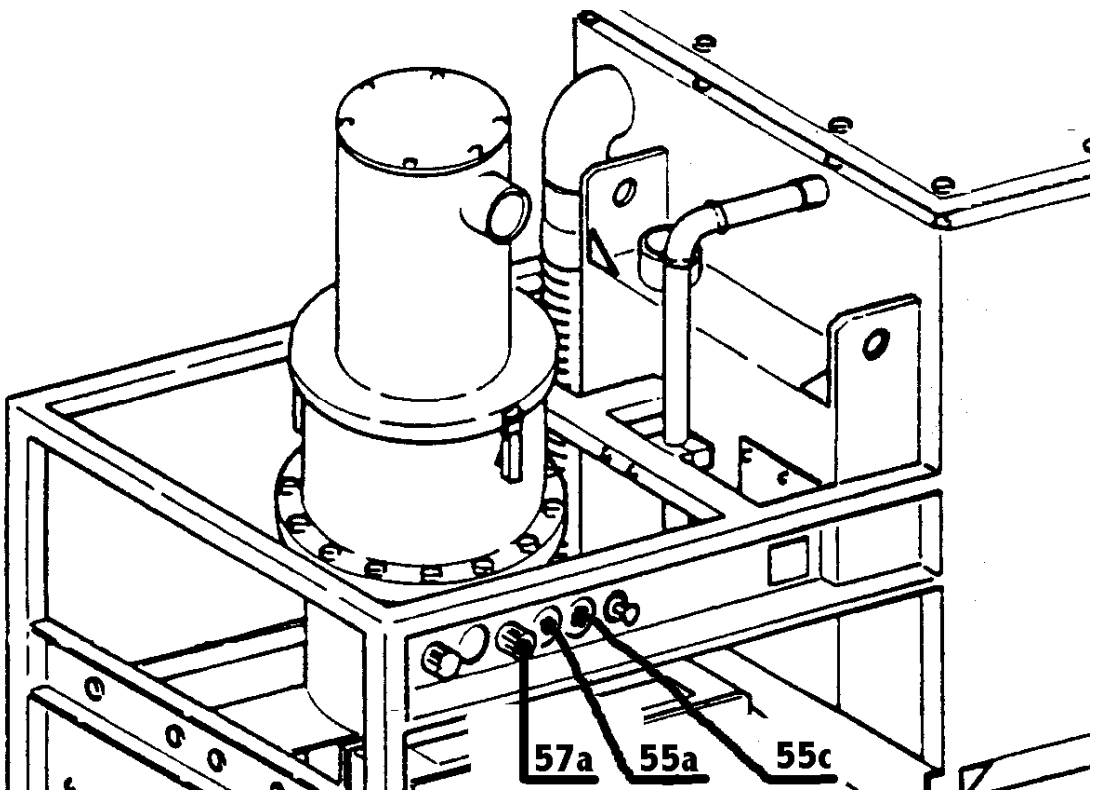
Before putting the machine into operation, the following has to be checked:

- * Check all the coupling connections and check the locking by means of the safety clip.*
- * Check the pressure gauges for the right values.*
- * Check the amount of abrasive.*
- * **Check if the dust exhaust valve is closed completely.***
- * Check if all personal safety equipment is present.*
- * Check the machine visually for loose components and general safety provisions.*
- * Check the quality of the hoses and nozzle*
- * Check the quality of the blast head, the brush and blast tube; ensure that the brushes seal well.*
- * Finally check at last the general functioning of the machine.*

9.2 Operating instructions

To put the machine into operation the following has to be done:

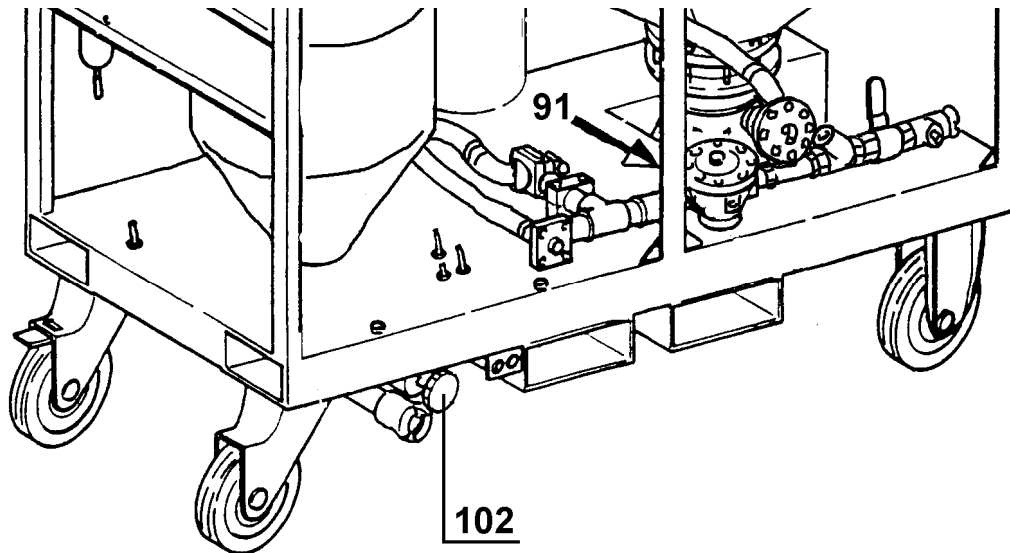
- * Uncoil the hoses as much as possible and prevent unnecessary bends.*
- * Open the main air valve.*
- * Check if the inlet pressure gauge indicates a steady pressure of approximately 116 PSI. If this gauge reading is not obtained, see chapter 8.3.1.*
- * Place the blast head on the surface to be blasted. Make sure the brush seals off properly.*



- * *The machine is activated by squeezing the trigger.*
- * *Move the blast head smoothly over the surface. Avoid tilting or jerking movements as this will lead to loss of abrasive and may cause dust and an uneven blasted surface.*
- * *The speed at which you move the blast head will depend on the type and thickness of coating being removed, the type of abrasive being used and the pressure you are blasting with.*
- * *To stop the machine, release the trigger. Wait a few seconds for the abrasive and dust to be vacuumed back, before removing the blast head.*

Empty the machine as follows:

- * *Place a container under the vessel.*
- * *Close the main air valve.*
- * *Disconnect the abrasive control valve on the coupling just above the valve.*



9.3 Taking the machine out of operation

To take the machines out of operation follow the instructions below:

- * Close the compressor valves and open the main air valve (the pressure is releasing).*
- * Disconnect the machine from the compressor by loosening the coupling.*
- * Coil up the hoses with care for storage.*
- * If necessary cover the machine with a tarpaulin.*

10. Maintenance

To ensure this operational condition, the "User" should take care of the following:

Daily maintenance:

Check before start up

- Check gaskets in claw couplings and replace if necessary.
- Check blast head on wear (holes)

and every 1½ - 2 hrs of continuous blasting,

- Check hoses and brush and blast tube and replace them as they are worn.
- Empty or replace dust bag.
- Check abrasive level in pressure vessel and refill if necessary. **Max filling till brass cone is just covered by abrasive**
- Check and clean sieve in top of pressure vessel.

Weekly maintenance:

- Check nozzle on wear (using a 7.4 mm drill bit) and replace if necessary.
- Check vacuum hoses on wear.
- Check all claw couplings on wear and replace if necessary.

Monthly maintenance:

- Check the sieve of the dust separator on wear and replace if necessary.
- Check air relief hose of the pressure vessel and replace if necessary.
- Check fitting pipe behind the blast hose connection under the machine on wear and replace if necessary.
- Check blast hose on wear and replace if necessary.

Yearly maintenance:

- Check filters in filter chamber by opening filter housing cover and see if dust is drawn through the filters. If so, replace filters.
- Check top valve in pressure vessel on wear and replace if necessary.

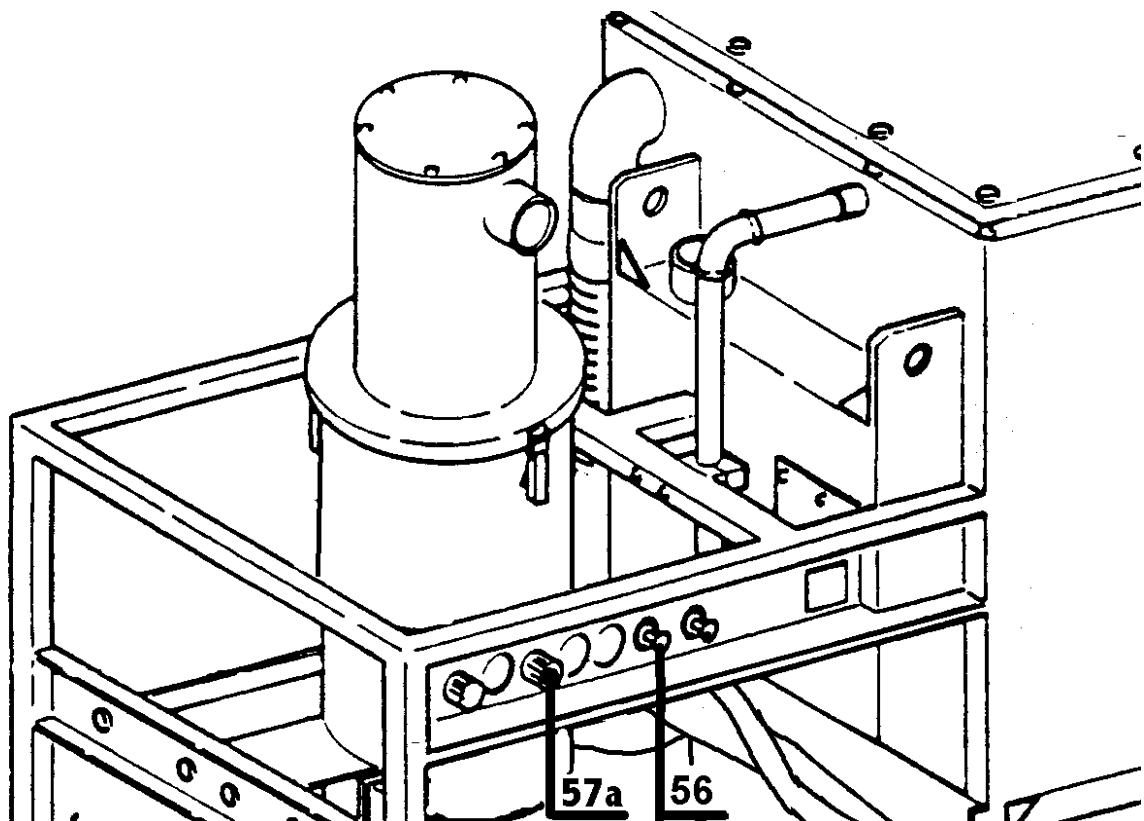
General:

- * Do not use the machine in humid or wet conditions and/or on wet surfaces.
- * Always use clean and dry abrasive.
- * Install a water separator with a minimum capacity of 10 m³/min (375 CFM) in the air-line from the compressor. In case there is no automatic drain, open the drain a little.
- * Uncoil the hoses as much as possible and prevent unnecessary bends.
- * Drain the dust from the dust storage tank. If necessary this has to be done more often.
- * In case of extreme weather conditions pay extra attention to the air supply. Ensure a **CLEAN, DRY and OIL-FREE** air supply.
- * In case of difficult or complicated troubles always contact your dealer / manufacturer for advice.

Manual cleaning of the filters ("back flush")

Clean the filters as described below:

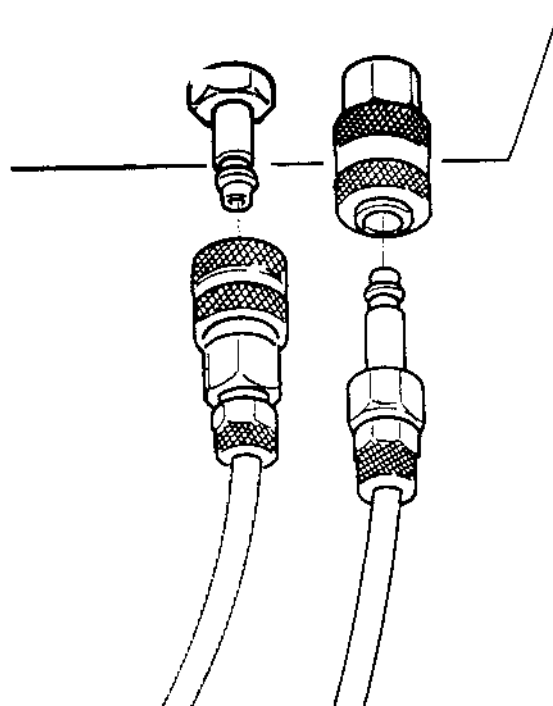
- * Close the main air valve .
- * Press and release the button on the control panel one time. The two filters will be cleaned and after a few seconds the dust from this filter is set in the bottom of the dust storage tank.
- * The dust stored in the bottom of the tank may be removed by opening the large butterfly valve at the bottom. Make sure that a dust bag is attached to the pipe!!.
- * Make sure that after emptying the tank the butterfly valve is closed completely. **A leaking valve causes loss of suction power and will damage the valve.**
- * The dust bag should regularly be emptied or replaced.
- * Wear a respirator during dust bag replacement.



11. Trouble shooting

Machine will not start.

<i>Cause</i>	<i>Check</i>	<i>Repair</i>
<i>Poor or no air supply</i>	<i>Check if air pressure reading at gauge is at least 1.5 bar (20 psi)</i>	<i>Resolve air supply problem</i>
<i>Defective trigger</i>	<i>Check if control hoses are not bent. Disconnect the blue hose at the machine and check if pressurised air is released.</i>	



Machine starts but no blasting.

Cause	Check	Repair
<i>No or not enough abrasive</i>	<i>Close main air valve. Remove abrasive dust separator and check the level of abrasive in the pressure vessel.</i>	<i>Add abrasive</i>
<i>Pressure regulator closed or set to low</i>	<i>Check pressure reading on the pressure gauge (blast pressure). Pressure should read not lower than 20 PSI.</i>	<i>Re-adjust pressure regulator</i>
Cause	Check	Repair
<i>Blockage</i>	<i>Waste material may be blocking the nozzle or the abrasive control valve</i>	<i>Disassemble nozzle and clean.</i>
<i>Improper trigger operation</i>	<i>Continuously starting and stopping in short bursts may not allow enough time for abrasive to fall down in the lower chamber of the pressure vessel.</i>	

Machine blasts, but not continuously.

Cause	Check	Repair
<i>No or not enough abrasive</i>	<i>Close main air valve. Remove abrasive dust separator and check the level of abrasive in the pressure vessel.</i>	<i>Add abrasive</i>
<i>Poor air supply</i>	<i>Volume or pressure of air supply is inadequate. Will “drop off” after a short period of operation. Compressor capacity is not sufficient. Air supply contains oil and or water.</i>	<i>Check if the air supply is sufficient and if the proper hose (diameter) is used. Clean or place a water separator into the supply line.</i>
Cause	Check	Repair
<i>Trigger does not operate.</i>	<i>Machine is not blasting because the control hose is bent or connected improper.</i>	<i>See: “machine will not start.”</i>
<i>Too much or little abrasive at the blast head.</i>	<i>Abrasive control valve improperly adjusted. Abrasive level too low in pressure vessel.</i>	<i>Re-adjust abrasive control valve.</i>

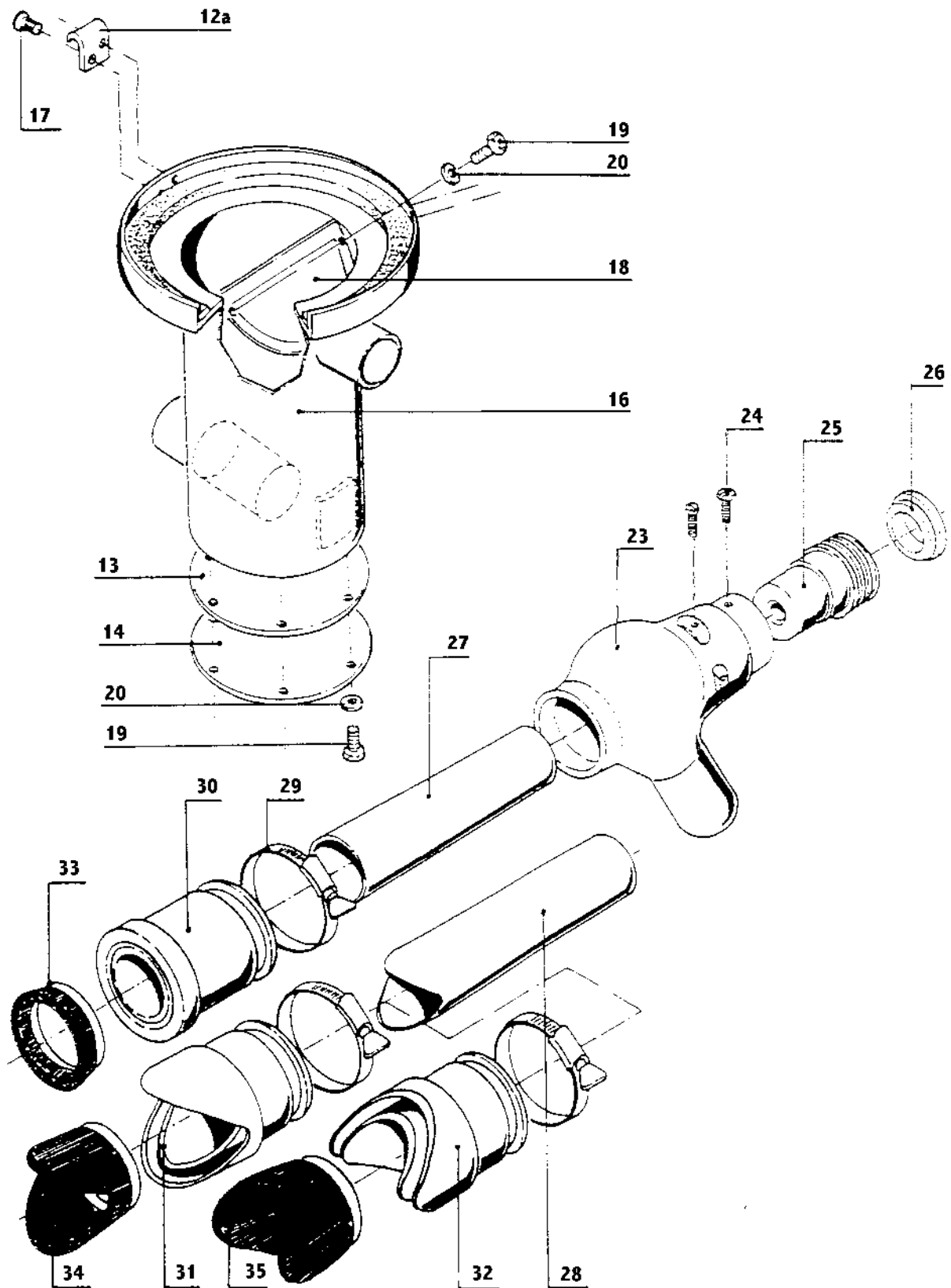
12. Parts

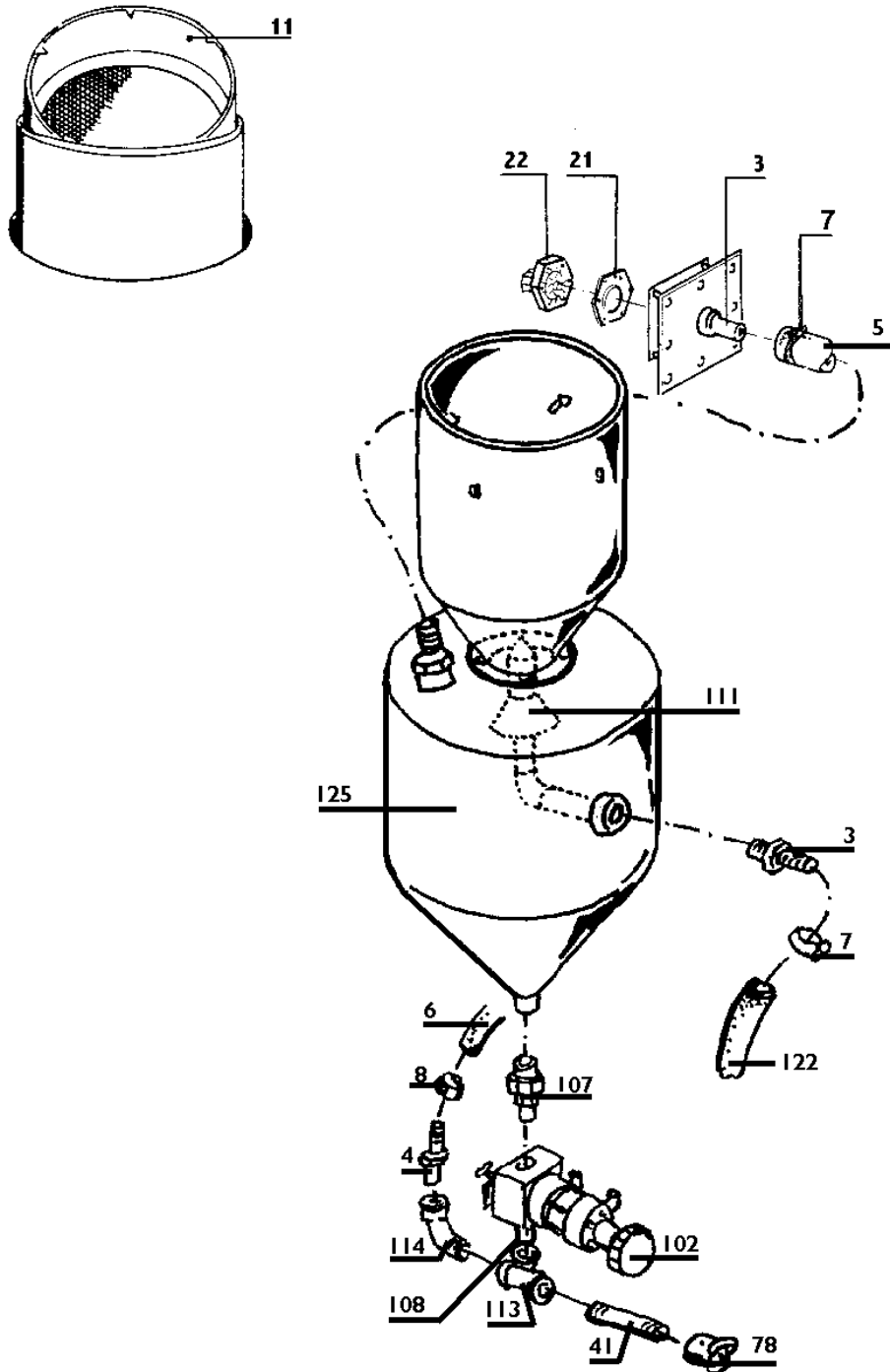
<u>Part nr.</u>	<u>Articlenr.</u>	<u>Description</u>
1	8630404051	Quick relief valve
2	8605207	Diaphragm for quick relief valve
3	8605210	Hose nipple 1"
4	8632440075	Hose nipple 3/4"
5	8602518	Abrasive hose 1" (per mtr.)
6	8614050203	Air hose 3/4" per m.
7	8632810038	Hose clamp 26x38
8	8632810028	Hose clamp 19x28
9	8605209	Hose connector
10	8632830030	Pipe mounting bracket
11	8633240060	Sieve
12	8633010021	Clip 1070
12A	863301026	Hook 1070
13	8633835204	Gasket dust separator
14	8633220065	Cover dust separator
16	8633220063	Abrasive dust separator 1070
17	8627040036	Slotted head screw M4x6
18	8605211	Sieve dust separator
19	8627760012	Hex bolt M6x12
20	8627330010	Washer M6 flat
21	8613825005	Diaphragm
22	8630425026	Cover exhaust valve
23	8605233	Blast head housing (small)
24	8627045016	Slotted head screw M5x16
25	8605214	Nozzle BC 1/4"
26	8605240	Nozzle gasket
27	8605216	Blast tube flat (small)
28	8605205	Blast tube 90 degrees (small)
29	8605301	Hose clamp 70x90
30	8605213	Brush holder flat rubber (small)
31	8605204	Brush holder outer corner (small)
32	8605203	Brush holder inner corner (small)
33	8605200	Brush ring flat (small)
34	8605202	Brush ring outer corner (small)
35	8605201	Brush ring inner corner
36	86570220	Trigger 1070 complete
37	8630440021	Dosing block 1070
38	8630440022	Plug
39	8633801840	O Ring

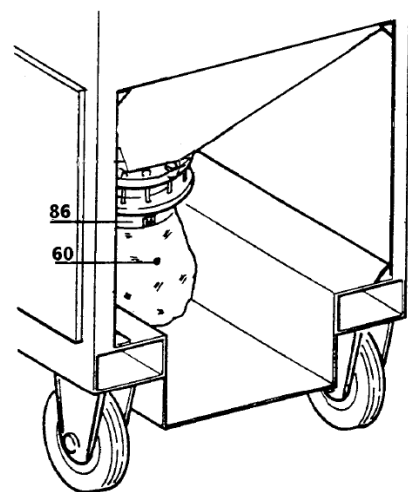
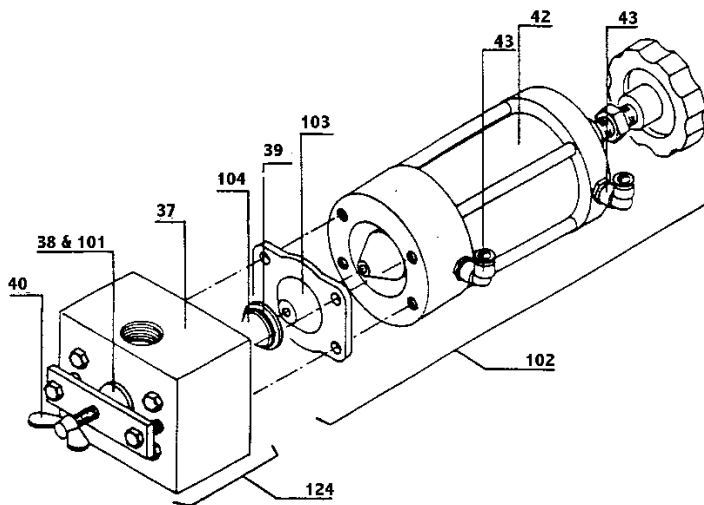
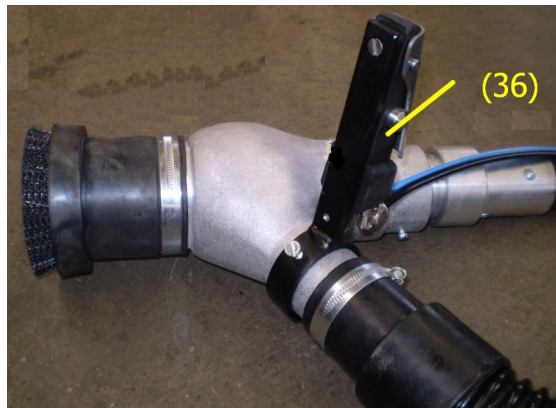
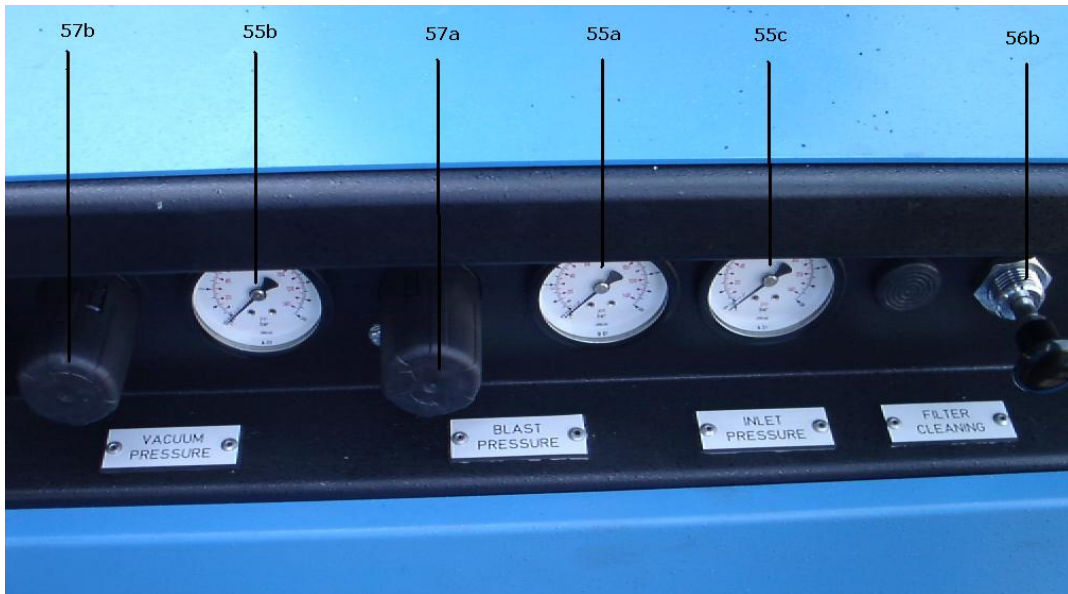
<u>Part nr.</u>	<u>Articleno.</u>	<u>Description</u>
40	8627801035	Wing bolt
41	8632030220	Fitting pipe
42	8630440030	Abrasive control valve
43	8632425020	PL knee 8x1/4"
44	8632030115	Fitting pipe
45A	8605265	Vacuum hose 2"
46	8634030085	Hose connector 2 1/2"
46A	8605271	Hose connector 2"
47	8632810095	Hose clamp 77-95
47A	8632810085	Hose clamp 68-85
48	8608119	Filter 1070 (2)
49	8632810075	Venturi bracket
50	8634200079	Wheel, fixed
51	8634200059	Swivel castor
52	8634200069	Swivel castor with brake 1070
53A	8605267	Connector female
53 B	8605268	Connector male (3/8)
54	8631610106	Handle ball valve
55	8631425008	Pressure gauge
56B	8630405090	Air valve back flush
57AB	86570224	Pressure regulator
58	8614040068	Air hose 8x6 per m.
59	8614040042	Air hose 4 x 2.5 per m
60	8635201060	Dust bag 1070
61	8634010335	Control hose double
62	86570223	Bolts
63	8627230121	Nut M8 lock fibre
64	8627330080	Washer M8
65	8633240200	Panel, filter housing
66	8633240180	Front panel
67	8633240210	Side panel
68	8633240190	Back panel
69	8633240220	Top plate (vessel)
70	8633240230	Top plate (back flush)
71	8606108	Hose set 1070 - 15 m. machine connection
72	8606117	Hose set 1070 - 10 m. extension
72 a	8606115	Hose set 1070 - 20 m. extension
73	8634010325	Abrasive hose
74	8605264	Vacuum hose 2 1/2 "
75	8633805706	"O" ring hose set
76	8632420096	Claw coupling

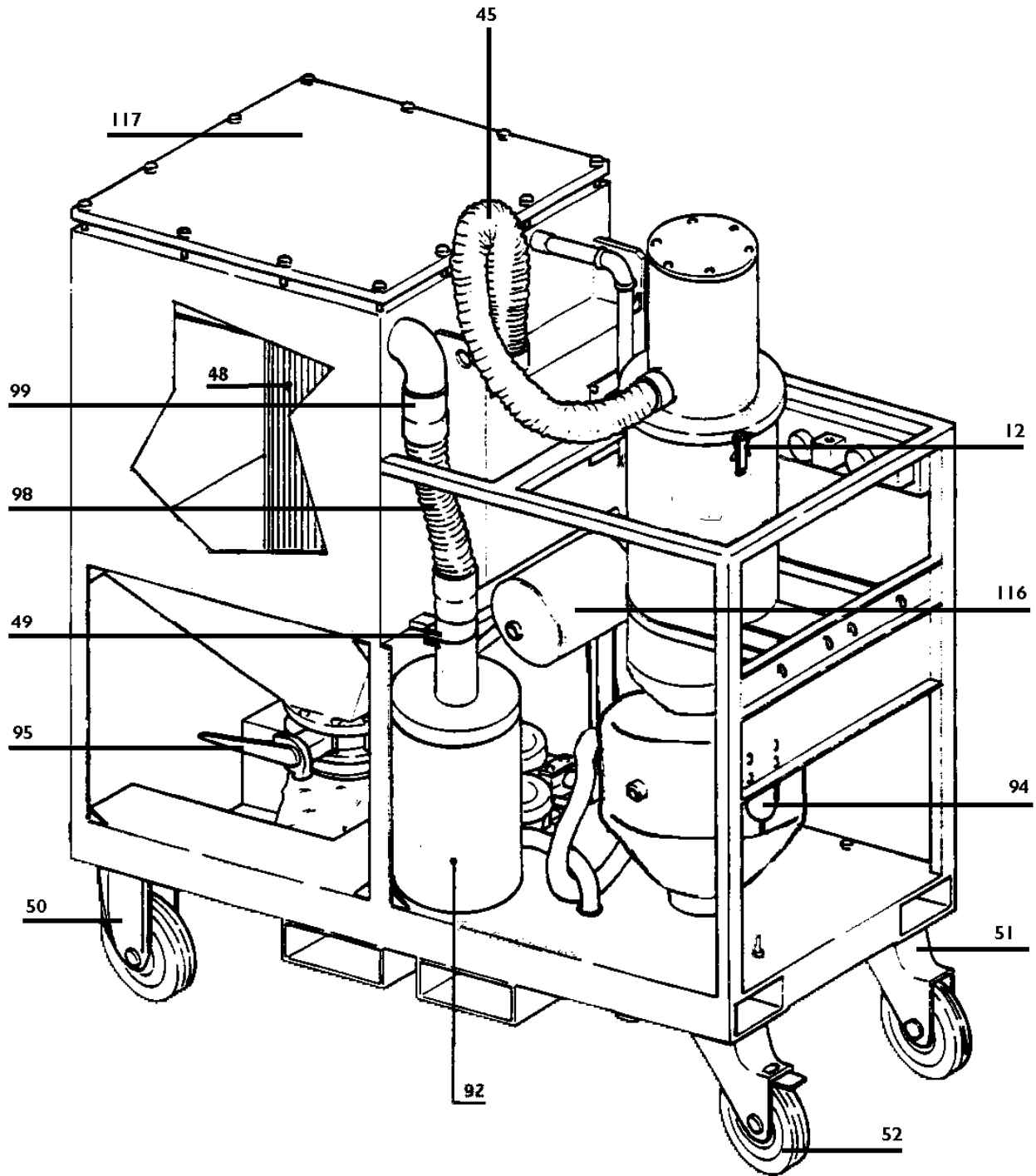
<u>Part nr.</u>	<u>Articlenr.</u>	<u>Description</u>
77	86570221	Tyrap
78	8632420095	Claw coupling
79	8634030060	Membrane set reducing valve
80	8627046013	Bolt
81	8627040014	Self tapping screw
82	8632420110	Claw coupling
83	8632445050	Hose nipple
84	8632445060	Hose socket
85A	8605269	Connector female
85B	8605270	Connector male
86	8635202005	Belt
87	8632420104	Safety clip
88	8632830040	Pipe mounting bracket
89	8630435009	Air filter
90	8630435007	Sieve for air filter
91	8630420008	Pressure relief valve
92	8630640030	Vacuum generator 1070
93	8631610115	Main air valve
94	8631410010	Water separator
95	8605909	Dust exhaust valve
96	8656000151	Control box
97	8631430060	Pressure regulator
98	8614020075	Vacuum hose
99	8634020075	Rubber sleeve
100	8613815010	Gasket
101	863801840	O-ring
102	8605922	Abrasive dosing valve complete
103	8605500	Diaphragm
104	8630445020	Cone
106	8631809075	Fitting knee
107	8631824175	Fitting coupling
108	8631828075	Fitting bushing
109	8610110085	Connection pipe
110	8631240046	Bushing
111	8656000137	Lower valve complete
112	8631829075	Fitting plug
113	8631813075	Fitting T piece
114	8631804075	Fitting elbow
115	8656000157	Upper valve complete
116	8610720010	Accumulator tank (back flush)
117	8633240240	Cover filter chamber
118	8644440000	Nylon washer

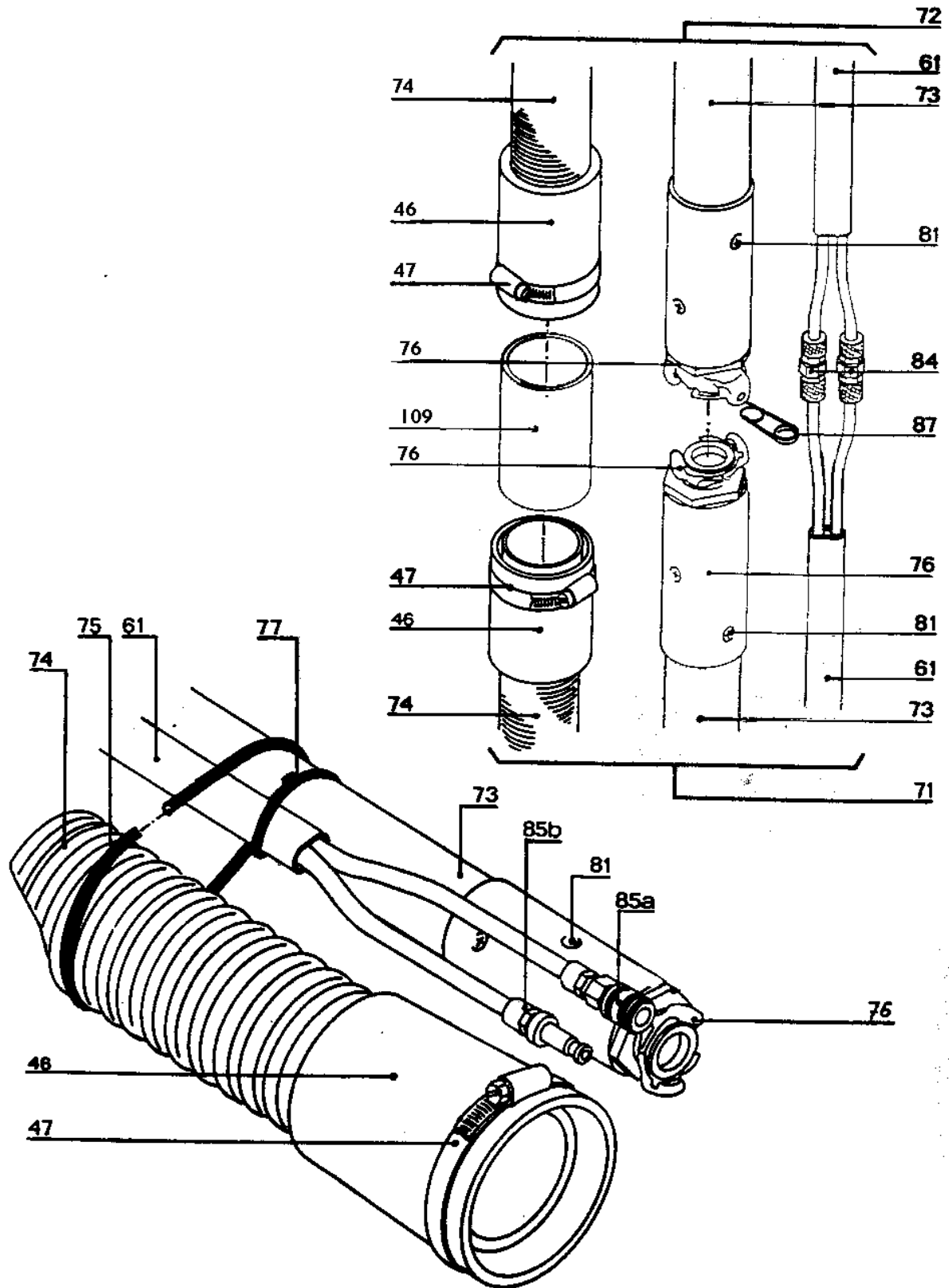
<u>Part nr.</u>	<u>Articlenr.</u>	<u>Description</u>
119	8631809275	<i>fitting knee</i>
120	86570222	<i>Nylon washer</i>
121	86570223	<i>Fastener</i>
122	8614050253	<i>Air hose 1"</i>
124	8630440024	<i>Dosing block assy</i>
125	8610710020	<i>Pressure vessel</i>

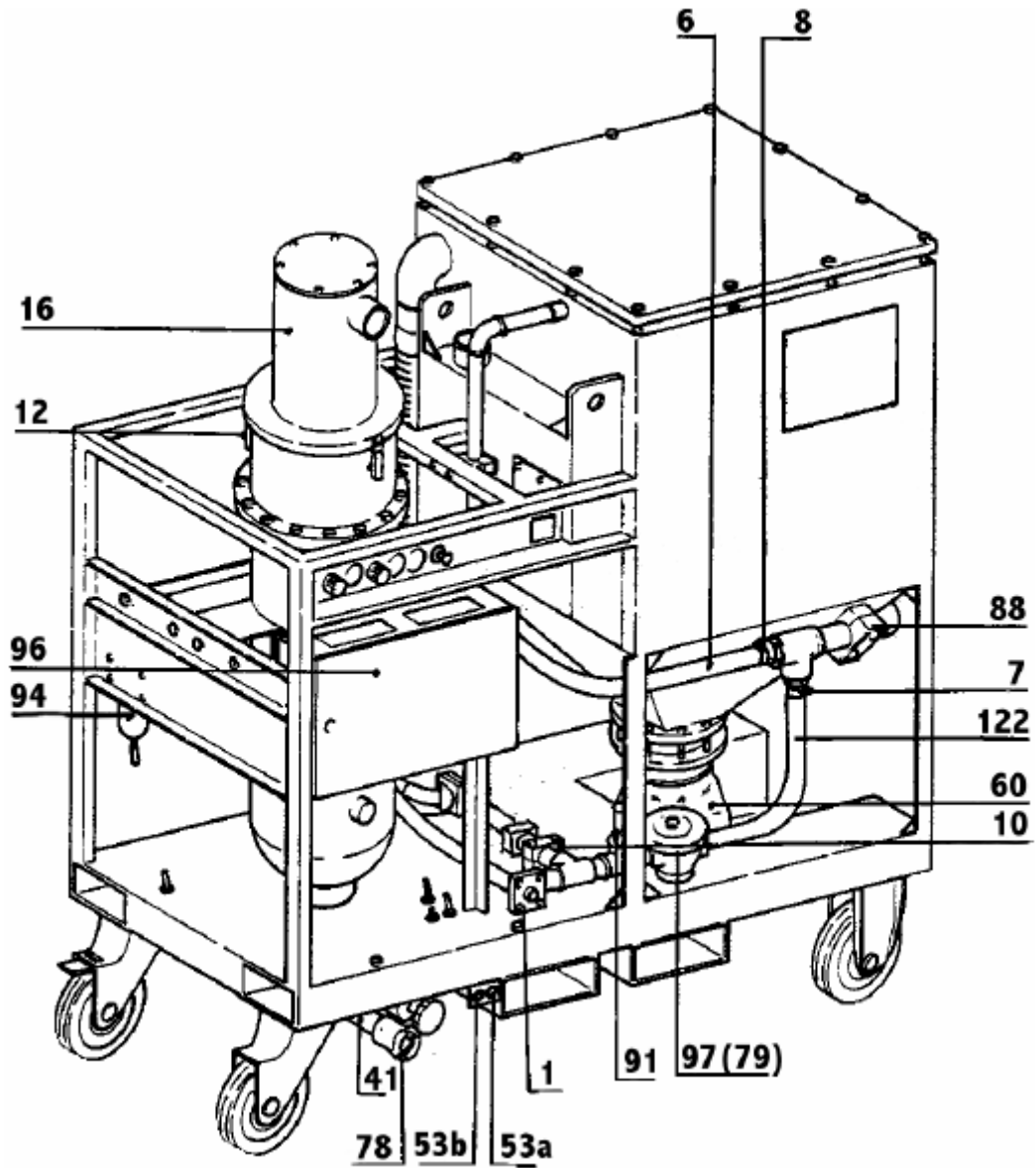


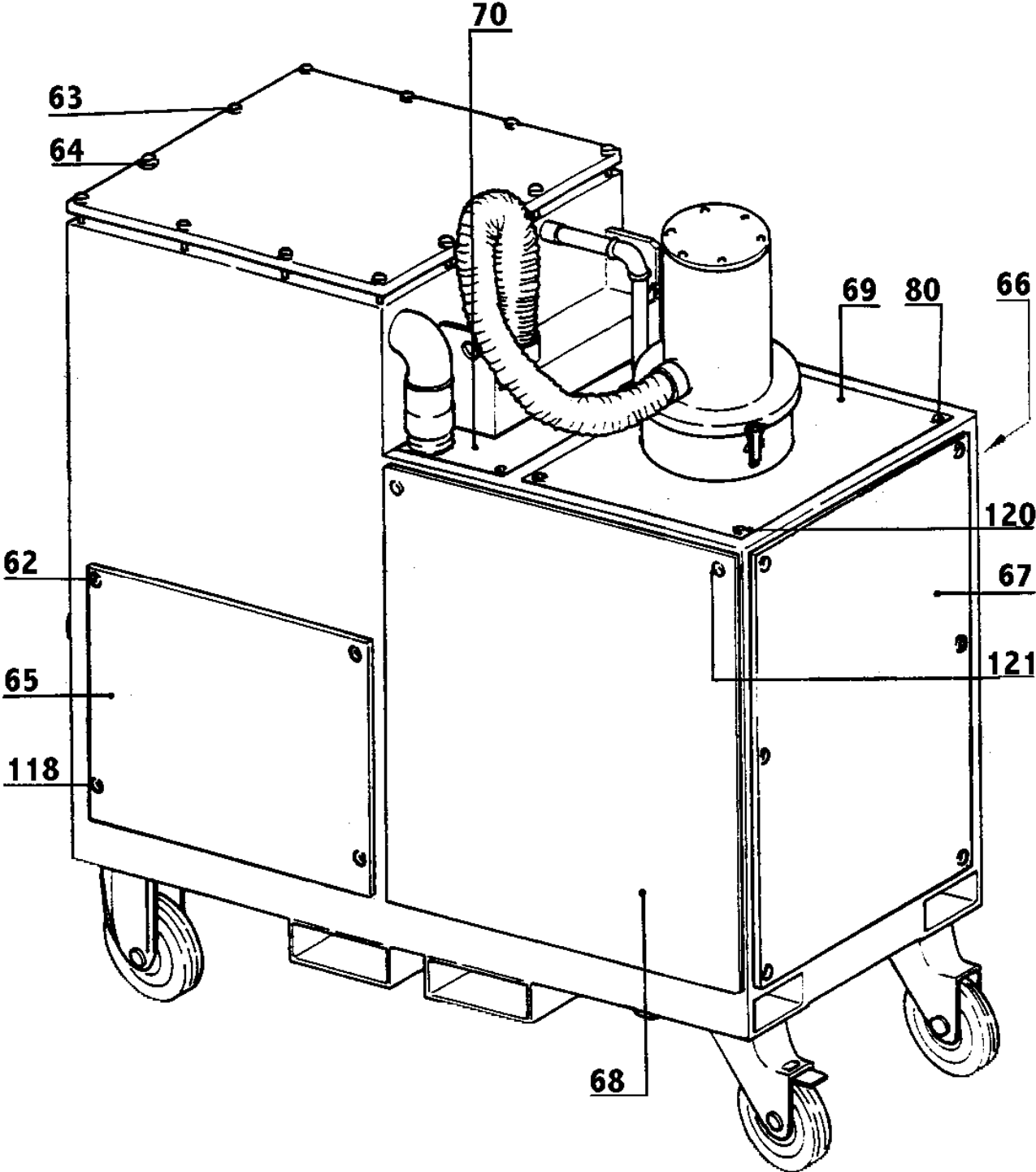


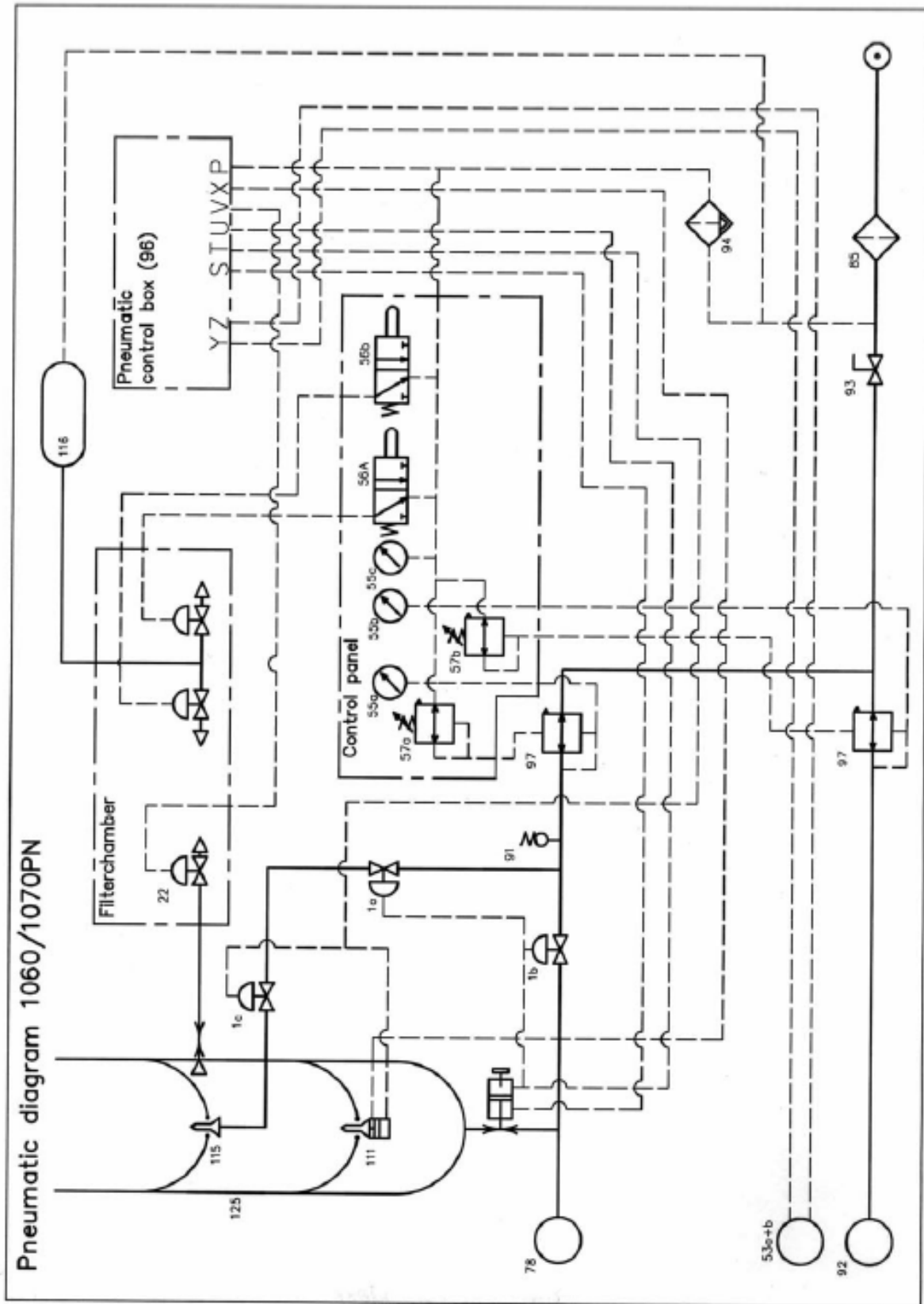


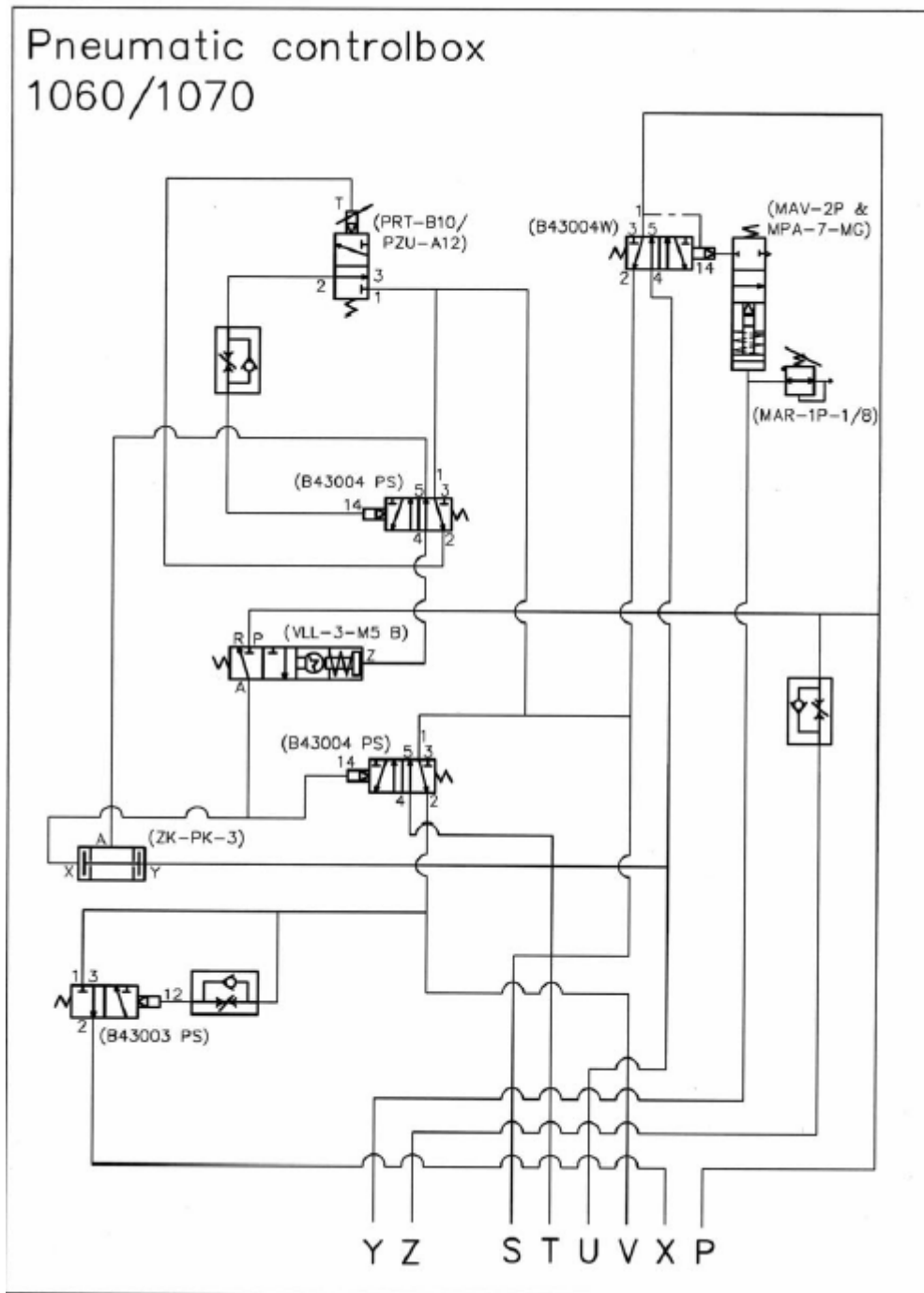












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