English

INSTRUCTION

MICROLEX

60 80 100

Sales & Service:

BARNES & ASSOCIATES

Ergonomic Workplace Solutions

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WHITE LAKE, MI 48386

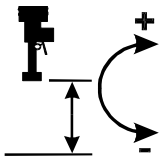
248-886-8646

www.BarnesAsso.com

Index

Symbols & Safety regulations

All operations shall be executed using small inward and outward movements of the operation control.

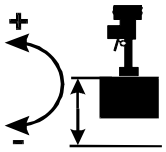


Unloaded adjustment

⚠ Max ø 80

The suction contact for the Microlex can not be larger than the indicated size. In the above example only Microlex 80 or smaller may be used.

Operate the Microlex so that no parts of the body are positioned under the lifting objects



Loaded adjustment

Familiarize yourself with equipment by reading instruction manual before use.

Be careful during assembly so that no components are forgotten or incorrectly assembled.

Adjust Microlex to required workload.

Operate Microlex calmly and methodically. Move the operation control with small and slow inward and outward movements.

Don't influence the lifting or lowering motions by lifting or pushing down the Microlex.

With power failure (Electric pump), air pressure failure (Ejector pump), press operation control inwards.

Microlex is only to be used to lift specific loads.

Microlex is only to be used by personnel who are instructed in the use of lifting equipment.

Microlex
Main Components

Common Items

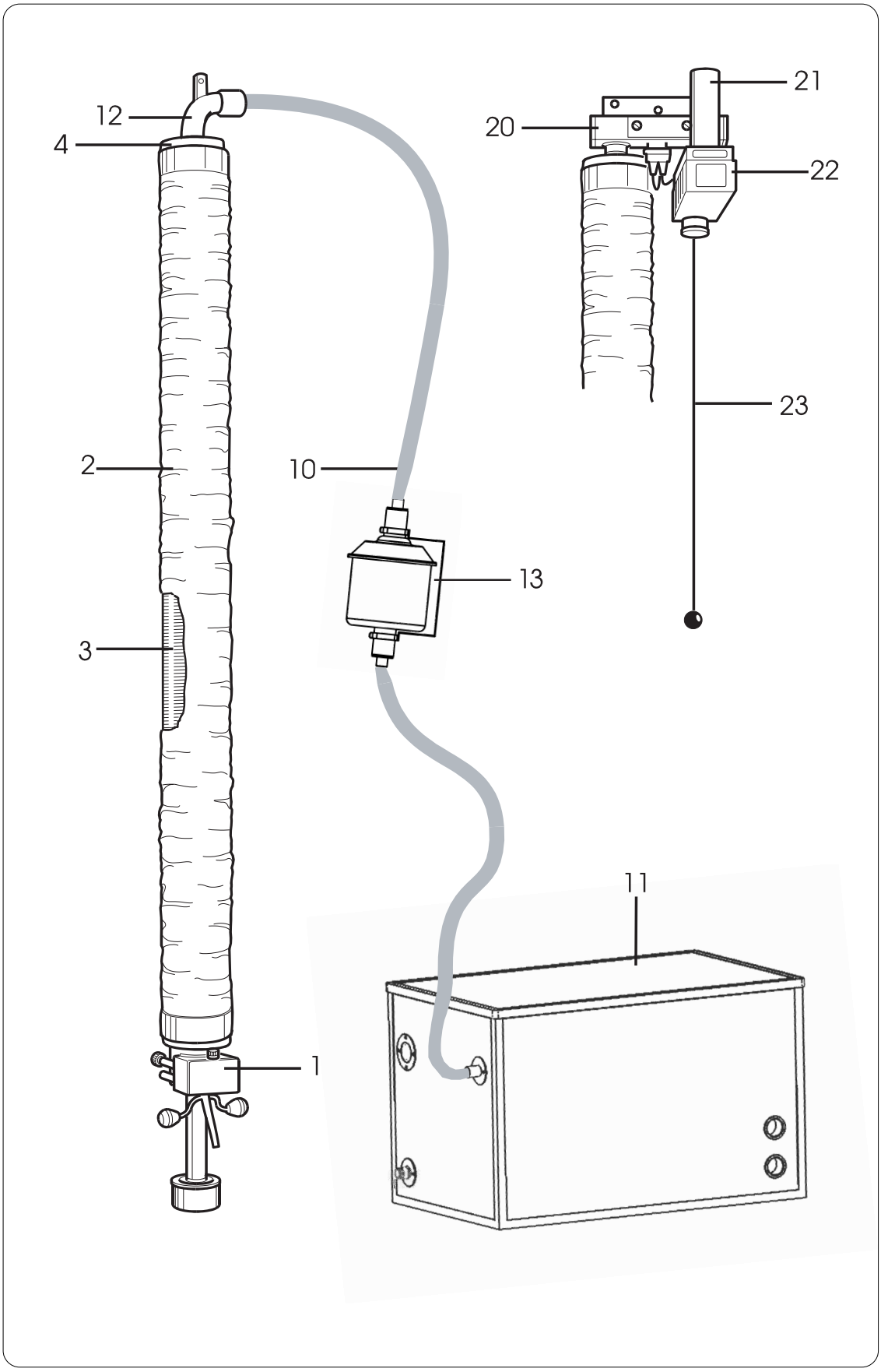
1 Microlex operation housing
2 Protective hose covering
3 Lifting hose
4 Swivel unit

Electric pump alternative

10 Vacuum hose
11 Electric driven vacuum pump
12 Pipe bend with eye bolt
13 Filter cannister

Electric pump alternative

20 Filter unit
21 Sound muffler
22 Airpressure drive ejector pump
23 Start cord


12
4
2
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11

General information

We have taken care of the safety regulations and the main components of the
Microlex system. Here after in this instruction manual we shall use the names of
the main components without further explanation.

Microlex is a lifting system where the main components must work together for
optimal performance. The safety and technical information of particular importance
shall be marked as follows :

CAUTION : Important safety regulation

IMPORTANT : Vital technical information

Special tooling for theMicrolex are not covered in this instruction manual. This information is given out by the supplier.

Work outside of the scope of the Microlex system is not described. This equipment
is not supplied by the Microlex manufacturer.

Delivery

Take particular care upon delivery of the goods that the ordered components comply with the delivery note.

CAUTION : The delivered equipment is only to be used as intended and in accordance with the original order. Should a change of use desired contact the supplier for advice.

Read the instruction manual before assembly in order to avoid assembly and initial running problems.

From a safety perspective it is important to have a sound working knowledge of the equipment.

IMPORTANT : The vacuum pump is sensitive to jolts and bumps.

IMPORTANT : The direction of rotation is controlled by the rotation indicator on the electric motor and through checking the air stream from the sound muffler. 3-Phase Pump operation can be damaged with incorrect rotation direction.

Assembly

Electric pump alternative

The vacuum pump unit can be assembled up to 65 ' from the Microlex. If a longer distance is required, contact the supplier.

IMPORTANT : The vacuum pump unit shall be installed in well ventilated area to avoid overheating.

IMPORTANT : If the pump is not installed on the floor, particular attention should be paid to insuring stability of the unit.

Allowance should be made in deciding the vacuum hose length for the operation of the Microlex. Make sure that the vacuum hose does not come into contact with objects that can cause damage.

Ejector pump alternative

The inner dimension of the air pressure connection is 1/4" thread. A ½" air pressure hose is recommended for connection.

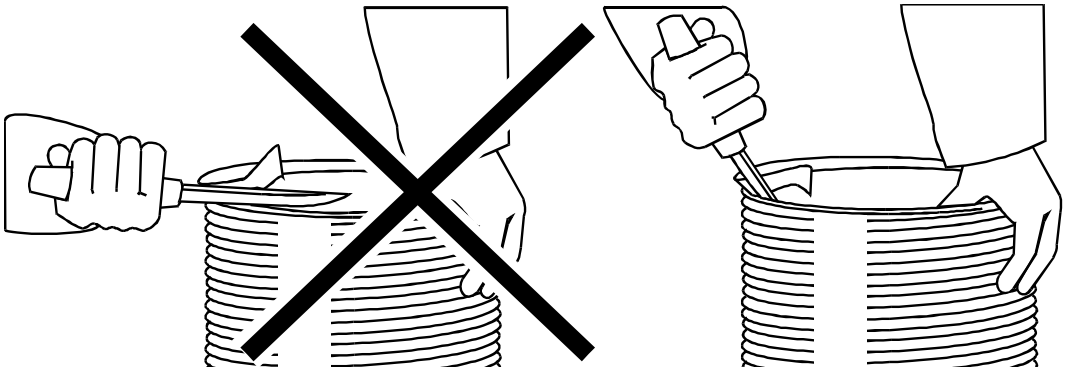
IMPORTANT : Be sure that incoming air pressure is free from pollutants and moisture. The water seperator and particle filter are installed on the supply air pipe.

IMPORTANT : The ejector pump requires adequate air pressure. Avoid air pressure reduction caused by use of thin air hoses, 90 degrees connections etc.. . The pump requires at least 6 bar pressure with air consumption of :

Type 100 pump : 400 l / min
Type 150 pump : 600 l / min

CAUTION : When not in use, the Microlex should hang at least 1/2" from the floor.
Vacuum pump must be turned off.

In the case of low ceiling height the lifting hose must be shortened (see diagram). Remove the protective hose covering from the operation housing. Remove the tape and screw off the lifting hose. Calculate the required length of lifting hose that must be removed in order to obtain the required floor clearance for the Microlex. Cut off the hose and reinforcing from the reinforcing wire and screw on the shortened hose to the operation housing. Firmly retape around the exposed hose with a margin of 1 cm over the plastic protection. Reconnect the protective hose covering.

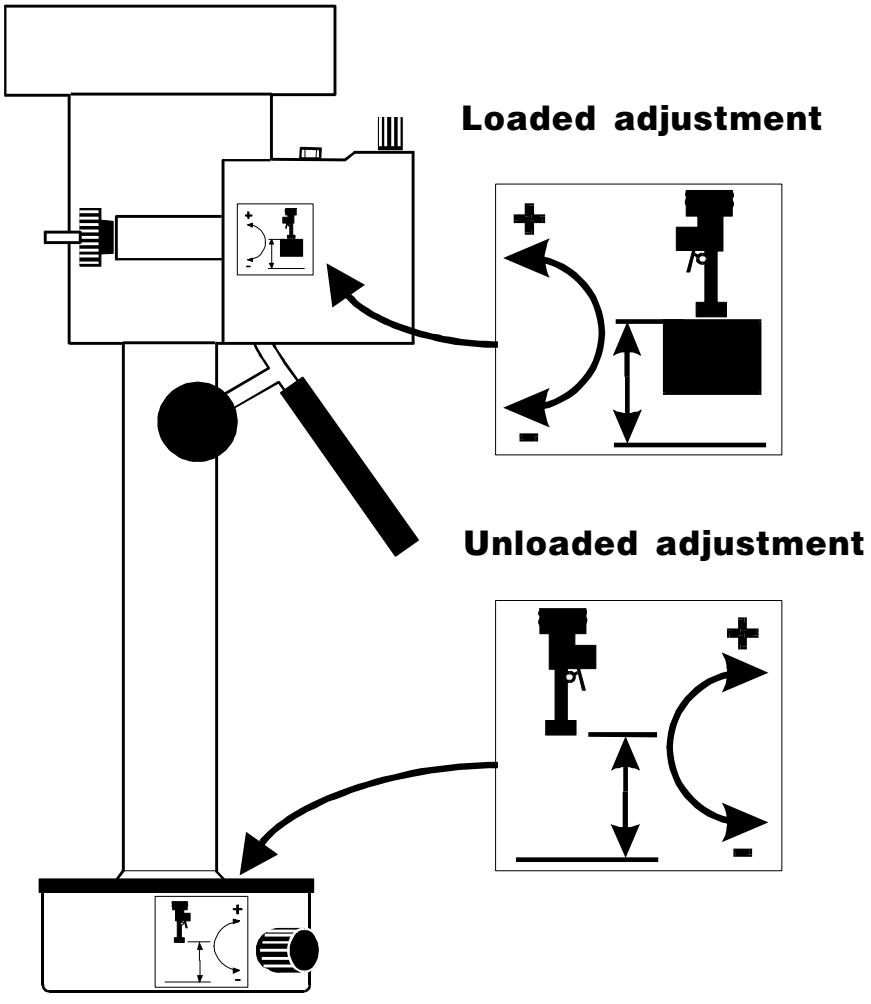


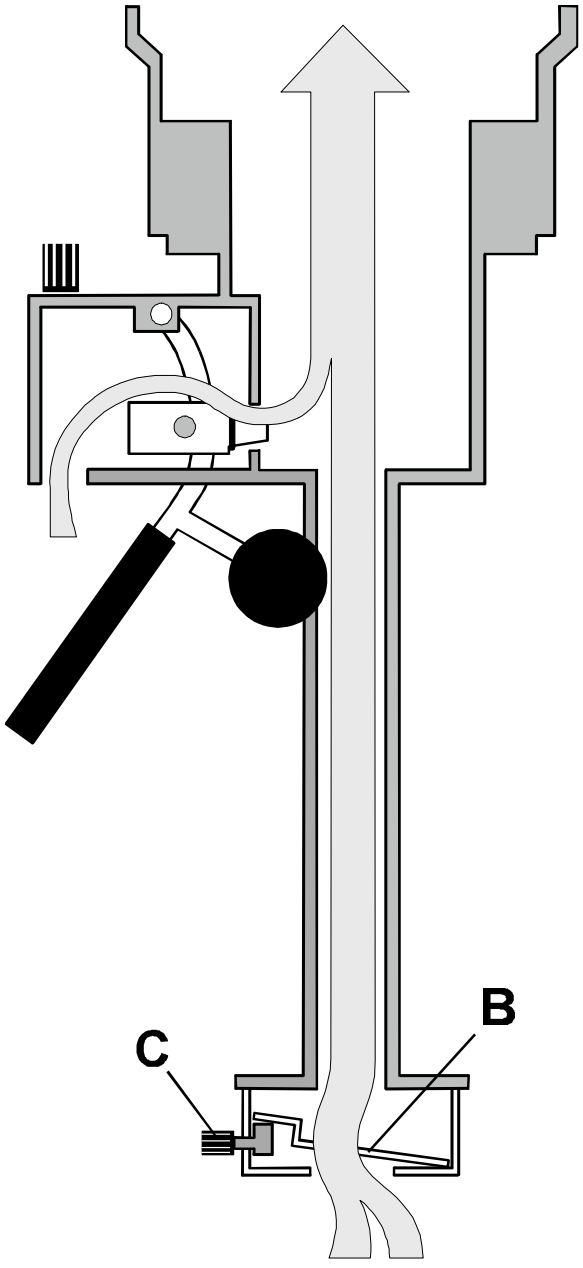
Excess plastic protection should be cut away. The elasticity in the lifting hose can be retained by cutting with the thread as shown in the right hand diagram.

Adjustment of the unloaded Microlex

When the vacuum pump unit is in operation, suction builds up within the Microlex. In order to avoid complete compression of the Microlex, compensating air enters the shock valve B. This compensating air reduces suction in the lifting hose. The amount of compensating air is controlled by the regulator C (see diagram on opposite page).

Placement of operating signs :





B= Chock valve
C= Regulator

Loaded Microlex operation

When a load tightens against the suction contact, compensating air is only allowed in through the operating valve A (see opposite page)

Operating valve : position 1

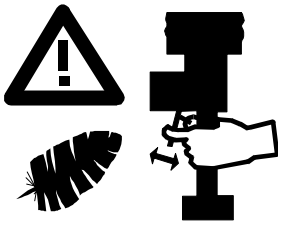
No lifting motion has been attained. Too much compensating air flows in, suction in the lifting hose is not enough to obtain a lifting motion.

Operating valve : position 2

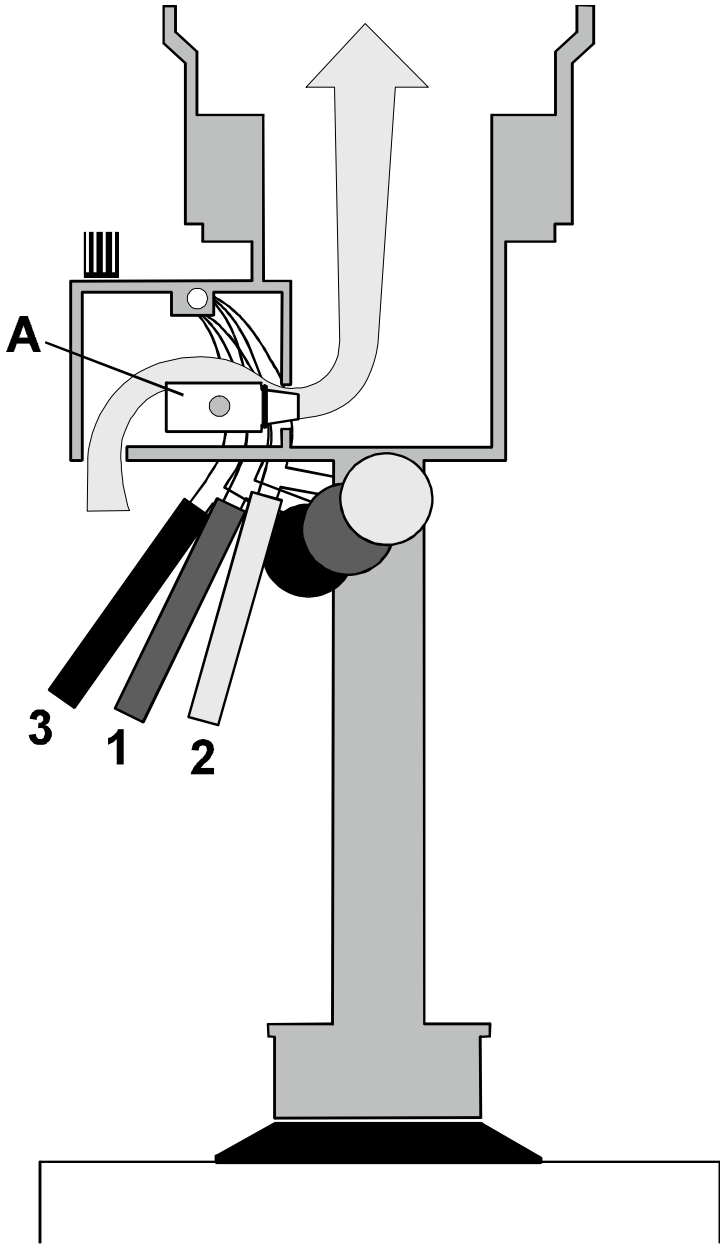
The valve tightens completely. The vacuum in the lifting hose increases and the hose compresses, a lifting motion occurs.

Operation valve : position 3

Valve A is completely open. In this position, compensating air flows freely in through the valve, decreasing suction causing a downward motion. Removal of the load is possible from the Microlex when the goods have reached the floor or alternatively have reached a goods platform.



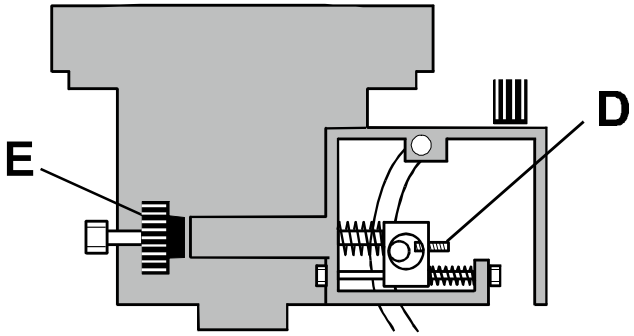
IMPORTANT : The operation control should be used carefully.



A= Operating valve

Adjustment of the loaded Microlex

While lifting a load the Microlex can be adjusted so that the load hangs freely. The height at which a load hangs can be set in using regulator E. Correct adjustment of the Microlex allows the opportunity to release the operation control and with both hands freely move the load and Microlex sideways. When lifting different loads the Microlex should be adjusted to suit the average weight of the loads.



Adjustment of lowering speed while loaded.

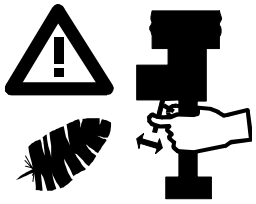
This adjustment should only be carried out by suitably qualified personnel. The adjustment is carried out using an appropriate allen key. The adjustment screw D is found under the cover marked with the Microlex name.

- First adjust the loaded Microlex (regulator E)
- If a slower lowering motion is required screw in adjustment screw D.
- If a faster lowering motion is required screw out adjustment screw D.

Working with Microlex

All operations shall be executed using inward and outward movements of the operation control.

Work calmly and methodically without hastily executed movements.



Do not lift any loads until the Microlex (including all hanging parts) is positioned directly over the objects to be lifted.

CAUTION : Never aid the lifting motion of the Microlex. Never hold the load while the operation control is in the outward position.

IMPORTANT : Never allow the Microlex to hold the load longer than necessarly required.

Maintenance

DAILY :

If the Microlex operates in a dusty environment the filter shall be checked and cleaned. The filter can be shaken clean or cleaned with the help of compressed air. A blocked filter reduces the Microlex´s lifting capacity.

WEEKLY :

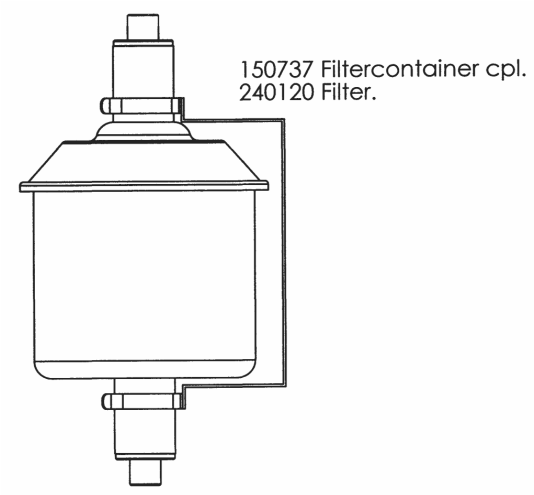
Check the filter, lifting hose and suction contacts rubber seal. Listen carefully for unusual sounds from the pump.

Check the shock valve. Start the pump. Lift up an object with uniform surface and with a minimum weight of 2.5 lb. Turn off the vacuum pump while the operation control is completely pressed inwards (pos.2). The Microlex should sink slowly to the ground, if the shock valve functions correctly.

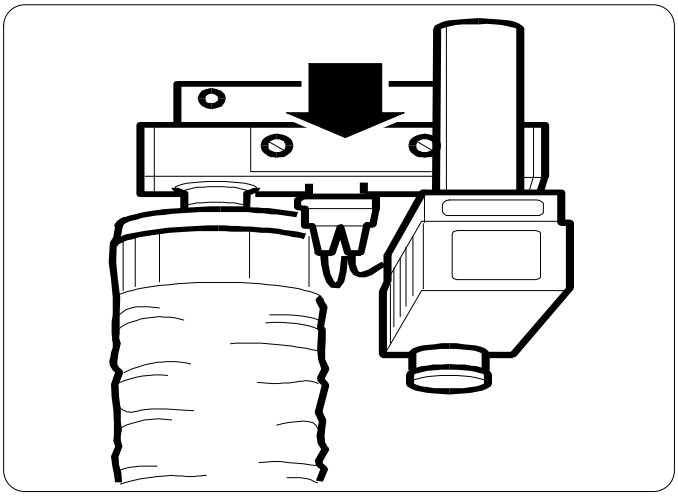
QUARTERLY :

Check that the Microlex´s overhead support is not damaged. Check that the vacuum hose(electric pump) is air tight and free of abrasions. Check that all nuts and bolts are firmly tightened (but not over-tightened).

Filter placement



Electric pump alternative



Ejector pump alternative

Fault correction during assembly

The Microlex does not lift upon initial operation :

- Check the Microlex, lifting hose, operation housing and suction seal. All of these shall be correctly installed and air tight.

- Take an airtight, smooth plate, attach it to the suction contact, press in the operation control (pos 2) and listen for leakage from the entire Microlex system. In the case of an ejector pump, the pressure gauge (on the underside of the ejector) should read between 50-70%, but not under 50%.

Ejector pump

- If an adequate vacuum level is not maintained then a pressure gauge should be connected directly to the air pressure intake on the ejector pump.There after start the ejector and check that the pressure gauge reads at least 6 bar.

Electric pump

- Check that the pump operates in the right direction. Check the rotation indicator on the electric motor and check the air stream from the sound muffler (3 phase pumps).

- Check the vacuum hose is correctly assembled and does not leak. Listen for blowing sounds from the vacuum hose and associated connections.

- Unusual sounds and vibrations - contact the supplier.

REMEMBER : If the Microlex does not lift, then there is insufficient suction in the lifting system.

Fault correction during usage

The Microlex slowly loses lifting capacity :

- Check the filter, most probably blocked.
- Check the lifting hose for leakage or other damage.

The Microlex has difficulty lifting while fully extended (lowest position) while the lifting force increases as indicated by a lifting hose compression :

- Most probably leakage in the lifting hose. Temporarily fix with tape. Change lifting hose as soon as possible.
- Check the suction housing.

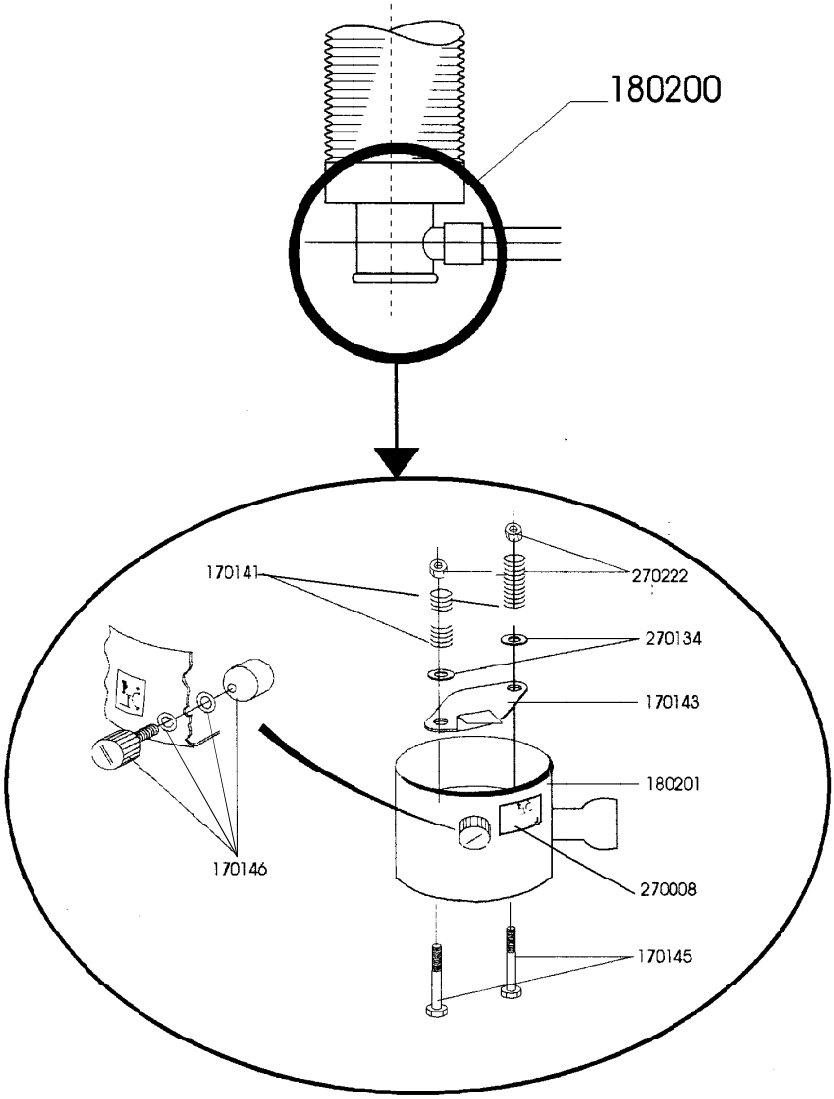
Sluggish operation control performance :

- Check and clean operation controls bearing.

Shock valve does not work :

- Change swivel unit.

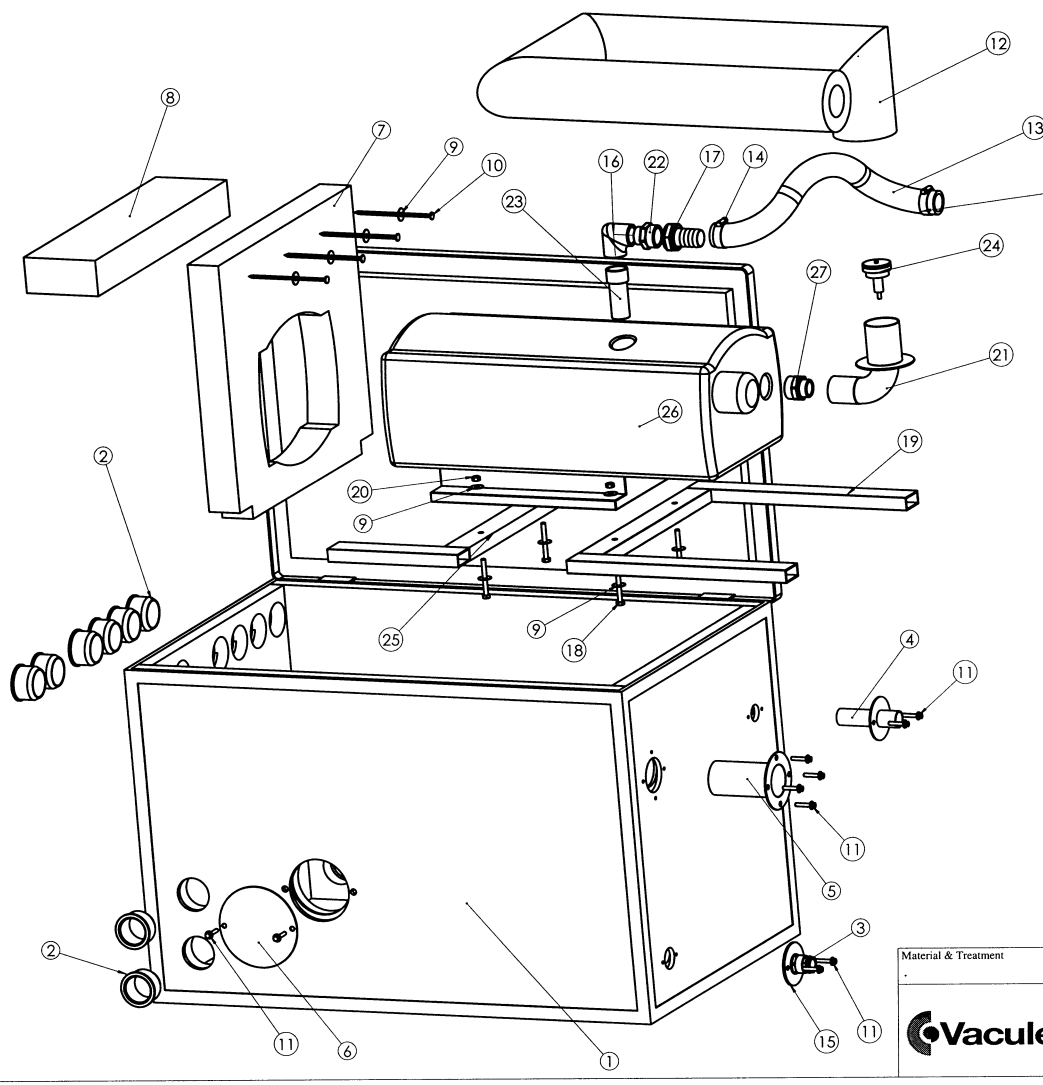
Vakuumhus Microlex: Förlängt Handtag Kompl.
Vacuum House Microlex: Extended Handle Compl.



Konstr. Design	Ritad Drawn	Kop. Copy	Kontr. Contr.	Std. Stand.	Ersatt av Replaced by	Ersätter Replacrd by	Artikelnummer Article number
	N.B		N.B				180200

Vacutrade USA
1406A N Market St
Monticello, IL 61856
Tel: 217-762-3010
Fax: 217-762-2915

Styckelista Part list	Utgåva Edition	Datum Date
Microlex: Vacuum House : Extended Handle Compl.	1998-03-03	1998-03-03
Sökväg: O:\Handbok\Microlex\Sprängsk\180200	Ritningsnummer Drawing number 180200	

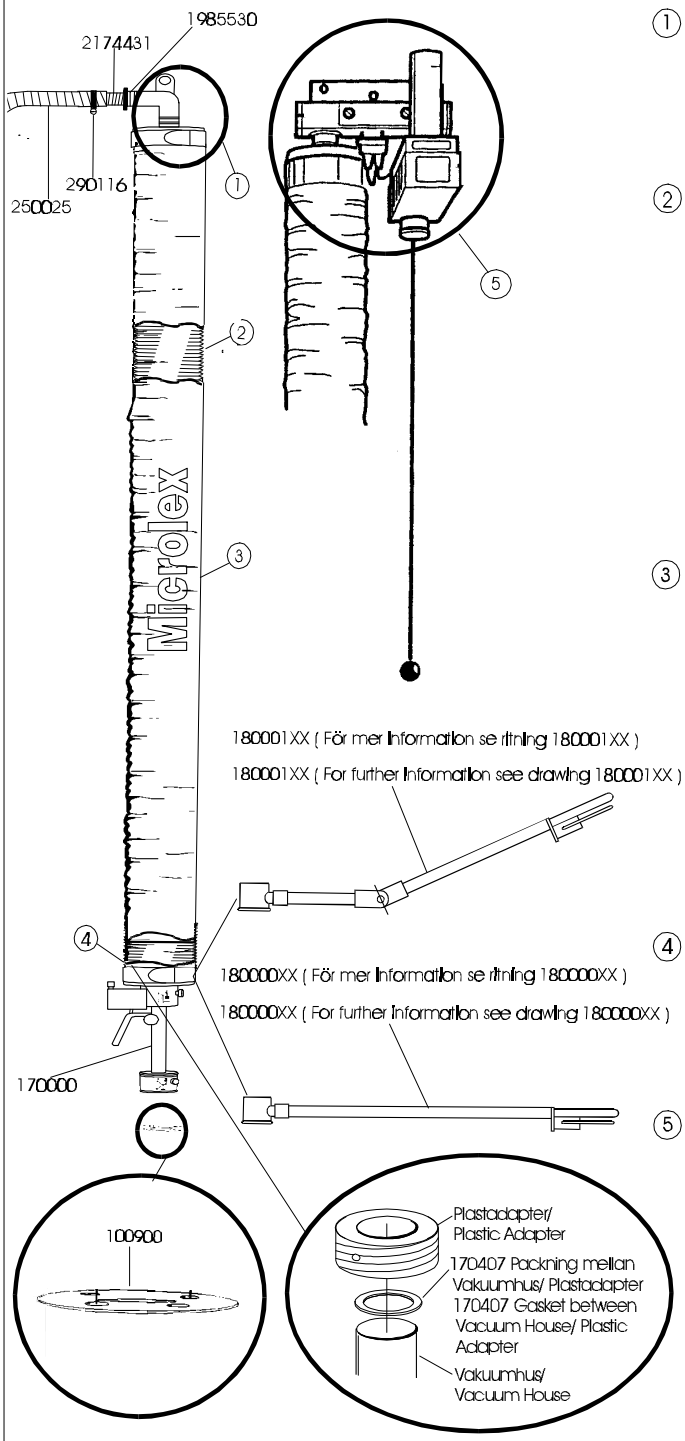


No.	Qt.	Parts to pump 802	Parts to pump 702 (replaces parts in the left column)
1	1	150730 Sound absorbing box	
2	10	350014 Rubber inset 40-50	
3	1	350017 Cabel inlet cpl	
4	1	150721 Hose connection	
5	1	350012 Hose connection	
6	1	100011 Cover plate	
7	1	150733 Sound absorbing wall	
8	1	150732 Sound absorbing cover	150734 Sound absorbing cover
9	12	270137 Washer 19x6,2x1	
10	4	350099 Nail, 125 mm	
11	10	700906 Screw 5.5x25 mm	
12	1	150731 Silencer	150738 Silencer
13	1	150724 Hose, d26/D35	
14	2	258005 Hose clamp 26-38mm	
15	1	350700 Cover plate	
16	1	150725 Pipe, angled	
17	1	2174431 Hose connection cpl.	
18	4	700812 Screw M6S M6x55	
19	1	150723 Support, 355 mm	
20	4	270275 Nut, Nylock M6	
21	1	150720 Pipe, angled	
22	1	1985530 Connection R3/4-R1	
23	1	150726 Socket	
24	1	150727 Silencer, Becker	
25	1	150722 Support, 210 mm	
26	1	G007623 Pump, type VT4.40	G007775 Pump, type VT4.25
27	1	1985274 Connection R1-R1	

Material & Treatment .							Weight .
Vaculex AB	Designer .	Approved AL	Scale .	Format A3	Replaced article .		Date 010104
	Article name **Pump, 802 & 702**					Article number **10X802 & 10X702**	Edition **1**

Lyftenhet Microlex: 60, 80, 100, 120

Lift Unit Microlex: 60, 80, 100, 120



①

P/N	Swivel Electric Complete
170450	Microlex 60
170451	Microlex 80
170452	Microlex 100
170453	Microlex 120

②

P/N	Lift Tubes
250060	Microlex 60 2.5 m
251060	Microlex 60 3 m
252060	Microlex 60 4 m
250080	Microlex 80 2.5 m
251080	Microlex 80 3 m
252080	Microlex 80 4 m
250100	Microlex 100 2.5m
251100	Microlex 100 3 m
252100	Microlex 100 4 m
250120	Microlex 120 2.5 m
251120	Microlex 120 3 m
252120	Microlex 120 4 m

③

P/N	Cover Sock
157060	Microlex 60 2.5 m
157063	Microlex 60 3 m
157064	Microlex 60 4 m
157080	Microlex 80 2.5 m
157083	Microlex 80 3 m
157084	Microlex 80 4 m
157100	Microlex 100 2.5 m
157103	Microlex 100 3 m
157104	Microlex 100 4 m
157120	Microlex 120 2.5 m
157123	Microlex 120 3 m
157124	Microlex 120 4 m

④

P/N	Plastic Adapter Lower
170408	Microlex 60
170409	Microlex 80
170410	Microlex 100
170411	Microlex 120

⑤

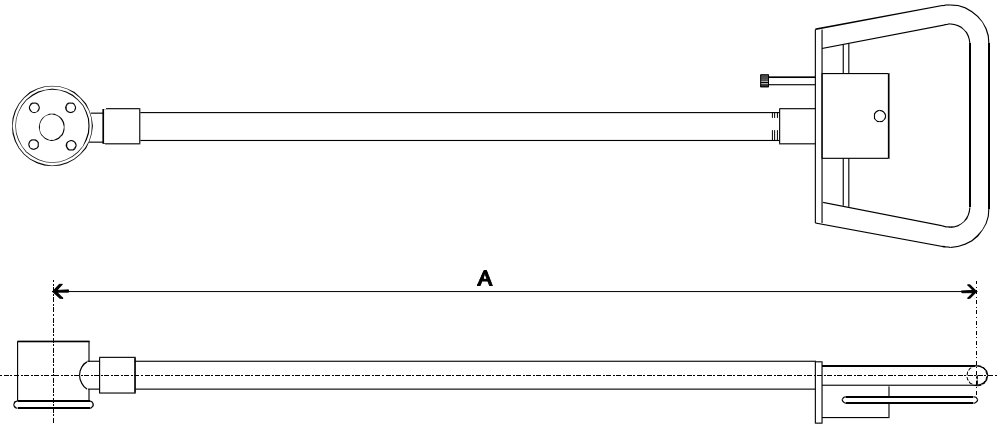
P/N	Pump Unit Ejector Complete
100210062	L 100 / Microlex 60 adapter
100215062	L 150 / Microlex 60 adapter
100210082	L 100 / Microlex 80 adapter
100215082	L 150 / Microlex 80 adapter
100210102	L 100 / Microlex 100 adapter
100215102	L 150 / Microlex 100 adapter
100210122	L 100 / Microlex 120 adapter
100215122	L 150 / Microlex 120 adapter

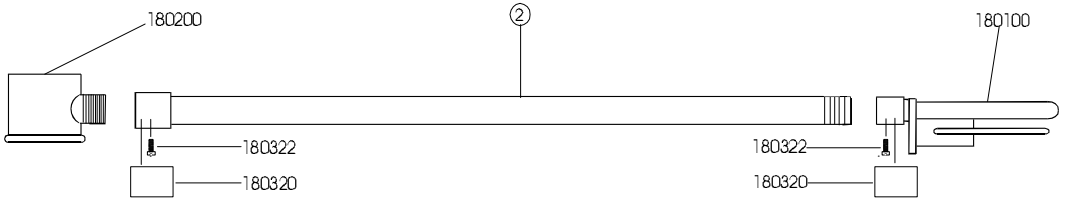
	Ritad Drawn			Kontr.	Godkänt	Replacing	Article number
	N.B		N				

Vacutrade USA
Tel: 217-762-3010
Fax: 217-762-2915

Part list	Edition Date	
Microlex: Lift Unit : 60, 80, 100, 120.	1998-03-03	1998-03-03
Handbook\Microlex\	Drawing number 1 10X XXX XX X	

① Manöverenhet Microlex: Fast, Förlängd Komplett
① Manoeuvre Unit Microlex: Rigid, Extended Complete





①	Art.Nr.	Manöverenhet Komplett
	Art.No.	Manoeuvre Unit Complete
	18000002	(A) 250 mm C-C
	18000004	(A) 400 mm C-C
	18000006	(A) 600 mm C-C
	18000008	(A) 800 mm C-C
	1800000A	Fri längd upp till / Free length up to: 1200 mm

* ②	Art.Nr.	Fast Del
	Art.No.	Rigid Part
	180202	(A) 250 mm C-C
	180203	(A) 400 mm C-C
	180204	(A) 600 mm C-C
	180205	(A) 800 mm C-C

* Vid beställning av artiklar ur tabell 2 är det den totala längden enligt måttangivelse A som anges i tabellen.Det är inte rörets längd som anges.

* When ordering articles from table 2, it is the length according to measurement A which is mentioned in the table. It is not the length of the pipe which is specified.

Konstr. Design	Ritad Drawn	Kop. Copy	Kontr. Contr.	Std. Stand.	Ersatt av Replaced by	Ersätter Replacing	Artikelnummer Article number
	N.B		N.B			1998-01-26	

Vaculex AB
Aminogatan 22
431 53 Mölndal, Sweden
Tel:+46 31-274760
Fax:+46 31-274366

Styckelista Part lista

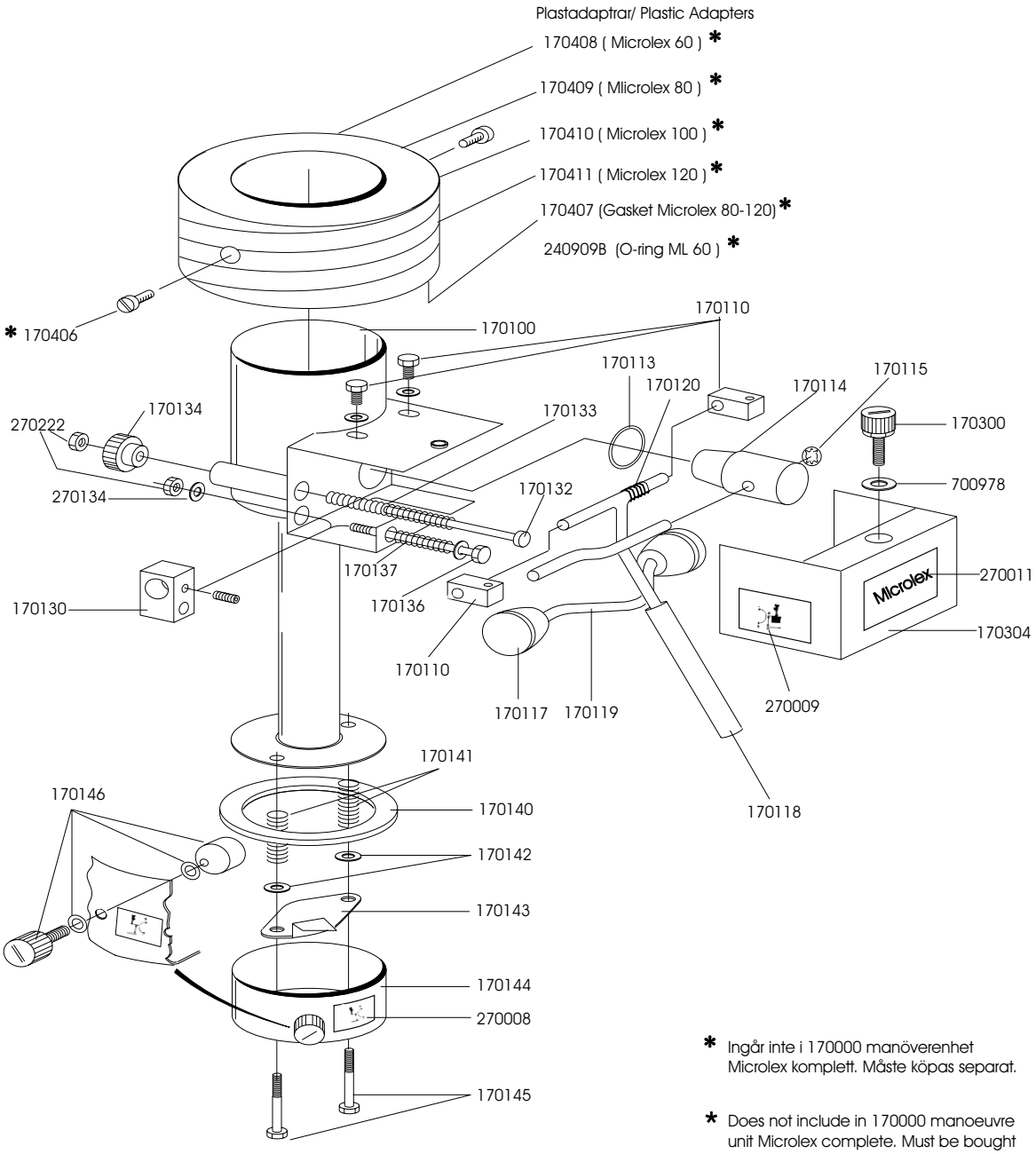
Manöverenhet Microlex: Fast, Förlängd Komplett
Manoeuvre Unit Microlex: Rigid, Extended Complete

Sökväg: O:\Handbok\Microlex\Sprängsk\180000XX

Utgåva Edition	Datum Date
1998-03-03	1998-03-03

Ritningsnummer Drawing number
180000XX

Manöverenhet Microlex Komplett
Manoeuvre Unit Microlex Complete



* Ingår inte i 170000 manöverenhet Microlex komplett. Måste köpas separat.

* Does not include in 170000 manoeuvre unit Microlex complete. Must be bought separately.

Konstr. Design	Ritad Drawn	Kop. Copy	Kontr. Contr.	Std. Stand.	Ersatt av Replaced by	Ersätter Replacing	Artikelnummer Article number
	N.B		N.B			1998-03-03	170000

Vaculex AB
Aminogatan 22
431 53 Mölndal, Sweden
Tel:+46 31-274760
Fax:+46 31-274366

Styckelista Part list	Utgåva Edition	Datum Date
Manöverenhet Microlex Komplett Manoeuvre Unit Microlex Complete	1999-10-28	981028
Sökväg: F:\Gemensam\Katalog\Handbok\Microlex\Sprängsk\170000	Ritningsnummer Drawing number: 170000\7	