

Flexible extraction arm

FLEX-3 | FLEX-4
ULTRAFLEX-3 | ULTRAFLEX-4



EN

Installation and user manual

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EN | ORIGINAL INSTRUCTION

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To improve comprehension for people whose first language is not English, we have written parts of this manual in Simplified Technical English (STE). STE is a controlled language originally developed for aerospace industry maintenance manuals. It offers a carefully limited and standardized subset of English, along with specific writing rules.

PREFACE

Using this manual

This manual is intended to be used as a work of reference for professional, well trained and authorised users to be able to safely install, use, maintain and repair the product mentioned on the cover of this document.

Pictograms and symbols

The following pictograms and symbols are used in this manual:

	TIP Suggestions and recommendations to simplify carrying out tasks and actions.
	ATTENTION A remark with additional information for the user. A remark brings possible problems to the user's attention.
	CAUTION! Procedures, if not carried out with the necessary caution, could damage the product, the workshop or the environment.
	WARNING! Procedures which, if not carried out with the necessary caution, may damage the product or cause serious personal injury.
	WARNING! Fire hazard! Important warning to prevent fire.
	WARNING! Explosion hazard! Important warning to prevent explosions.
	Personal protective equipment (PPE) Instruction to use respiratory protection when you do service, maintenance and repair jobs, as well as during functional testing. We recommend to use a half-face respirator according to EN 149:2001 + A1:2009, class FFP3 (Directive 89/686/EEC).
	Personal protective equipment (PPE) Instruction to use protective gloves when you do service, maintenance and repair jobs.

Text indicators

Listings indicated by "-" (hyphen) concern enumerations.
Listings indicated by "•" (bullet point) describe steps to perform.

1 INTRODUCTION

1.1 Identification of the product

The identification plate contains, among other things, the following data:

- product name
- serial number



1.2 General description

The (Ultra)Flex is a flexible extraction arm with a rotatable hood *RotaHood*, that is 360° rotatable. The hood contains a throttle valve and a focus extraction spoiler that directs the air into the hood.

There are two types of arms:

1.2.1 Flex-3 | Flex-4

These arms are provided with the *EasyLift* advanced friction system for light, user-friendly positioning of the arm.

1.2.2 UltraFlex-3 | UltraFlex-4

These arms are provided with the *BalanceWheel* spring balance system for ultra-light, user-friendly positioning of the arm.

1.3 Options and accessories

For more ease of use you can select one of the following accessories:

- WL | Working light
- WL-AST | Working light + automatic start/stop
- WCS | Welding cable sensor

1.4 Product combinations

The (Ultra)Flex arms are suitable for mobile and stationary welding fume extraction systems.



Refer to Fig. I on page 11 for details.

They are also suitable for use in central fume extraction systems¹.

1.5 Technical specifications



Refer to the available product data sheets for detailed product specifications.

Physical dimensions and properties

Arm length:	
- Flex-3 UltraFlex-3	- 3 m
- Flex-4 UltraFlex-4	- 4 m
Diameter	Ø 203 mm
Material:	
- tubes and hood	- polypropylene copolymere with UV stabilization
- hoses	- glass fibre reinforced PVC + metal springs
Weight:	
- Flex-3 UltraFlex-3	- 15 kg
- Flex-4 UltraFlex-4	- 17 kg

Performance

Recommended airflow	max. 1600 m³/h
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1.6 Working reach

Refer to Fig. II on page 12.

1.7 Pressure drop

Refer to Fig. III on page 12.

1.8 Ambient and process conditions

Process temperature:	
- min.	- 5°C (41°F)
- nom.	- 20°C (68°F)
- max.	- 45°C (113°F)
Max. relative humidity	80%
Outdoor use allowed	no

1. Systems with a central extraction duct, with or without filtration

2 PRODUCT DESCRIPTION

2.1 Components

The product consists of the following main components and elements:

Fig. 2.1

- A Connection flange with rotating hinge
- B Rubber seal
- C Flexible hose
- D Arm section (wall/unit side)
- E Middle hinge
- F Extraction hood (*RotaHood*)
- G Handle
- H Rotary knob for throttle valve control
- I Throttle valve
- J Hood hinge
- K Arm section (hood side)

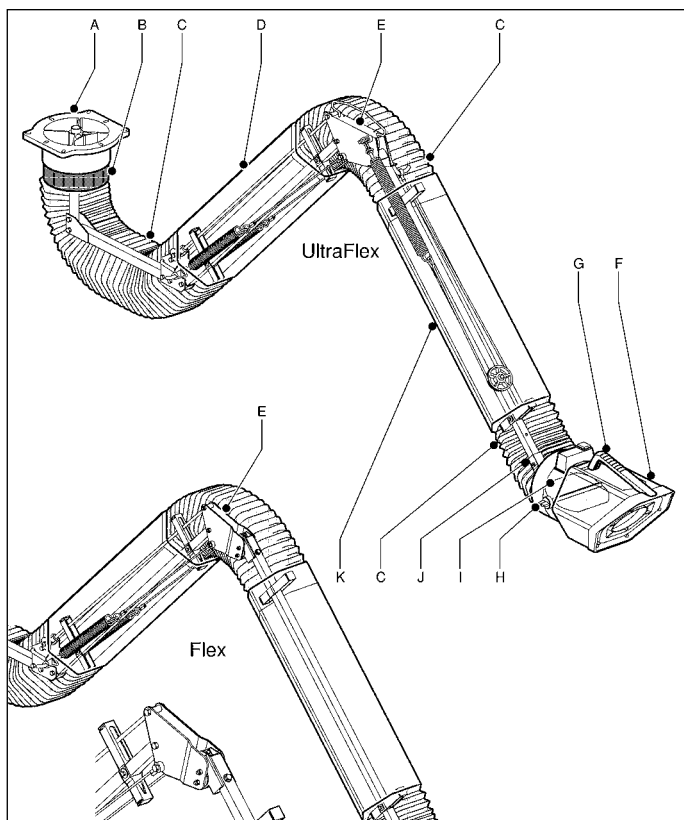


Fig. 2.1 Main components and elements

2.2 Operation

2.2.1 Mobile use

The welding fume is extracted through the hood of the extraction arm by the fan of a mobile fume extractor². The arm discharges the polluted air to the filter unit.

The arm is fitted with a throttle valve to regulate the airflow.

2.2.2 Stationary use

The welding fume is extracted through the hood of the extraction arm by a single or central fan. The arm discharges the polluted air to an extraction duct with filter unit or directly to the atmosphere.

The arm is fitted with a throttle valve to regulate the airflow.

2. Type: MFD, MFS or MFE

3 SAFETY

General

The manufacturer does not accept any liability for damage to the product or personal injury caused by ignoring of the safety instructions in this manual, or by negligence during installation, use, maintenance, and repair of the product mentioned on the cover of this document and any corresponding accessories. Specific working conditions or used accessories may require additional safety instructions. Immediately contact your supplier if you detect a potential danger when using the product.

The user of the product is always fully responsible for observing the local safety instructions and regulations. Observe all applicable safety instructions and regulations.

User manual

- Everyone working on or with the product, must be familiar with the contents of this manual and must strictly observe the instructions therein. The management should instruct the personnel in accordance with the manual and observe all instructions and directions given.
- Do not change the order of the steps to perform.
- Keep the manual with the product.

Users

- The use of this product is exclusively reserved to authorised, trained and qualified users. Temporary personnel and personnel in training can only use the product under supervision and responsibility of skilled engineers.
- Stay alert and keep your attention to your work. Do not use the product when you are under the influence of drugs, alcohol or medicine.
- The product is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.
- Children must be supervised not to play with the product.

Intended use³

The product has been designed exclusively for extracting fumes and particles which are released during the most common welding and cutting processes. Using the product for other purposes is considered contrary to its intended use. The manufacturer accepts no liability for any damage or injury resulting from such use. The product has been built in accordance with state-of-the-art standards and recognised safety regulations. Only use this product when in technically perfect condition in accordance with its intended use and the instructions explained in the user manual.

Technical specifications

Do not change the specifications given in this manual.

Modifications

Modification of (parts of) the product is not allowed.

Product combinations

If the product is used in combination with other products or machines, the safety instructions in the documentation of these products also apply.

3. "Intended use" as explained in EN-ISO 12100-1 is the use for which the technical product is suited as specified by the manufacturer, inclusive of his directions in the sales brochure. In case of doubt it is the use which can be deduced from the construction, the model and the function of the technical product which is considered normal use. Operating the machine within the limits of its intended use also involves observing the instructions in the user manual.

Installation

- The installation of this product is exclusively reserved to authorised, trained and qualified engineers.
- During installation, always use Personal Protective Equipment (PPE) to avoid injury. This also applies to persons who enter the work area during installation.
- Use sufficient climbing gear and safety guards when working on a higher level than 2 metres (local restrictions may apply).
- Do not install the product in front of entrances and exits which must be used for emergency services.
- Mind any gas and water pipes and electric cables.
- Make sure that the workspace is well illuminated.
- Stay alert and keep your attention to your work. Do not install the product when you are under the influence of drugs, alcohol or medicine.
- Air containing particles such as chromium, nickel, beryllium, cadmium, lead etc., should never be recycled. This air must always be brought outside the working area.

Use

	WARNING! Fire hazard! Do not use the product for: - polishing applications in combination with grinding, welding or any other application that generate sparks (fibers from polishing or abrasive flap disks are highly flammable and pose a high risk of filter fires when exposed to sparks) - arc-air gouging - extracting flammable, glowing or burning particles or solids or liquids - extracting of aggressive fumes (such as hydrochloric acid) or sharp particles - extracting dust particles which are released when welding surfaces treated with primer - sucking cigarettes, cigars, oiled tissues, and other burning particles, objects, and acids
	WARNING! Explosion hazard! Do not use the product for explosion-hazardous applications, e.g.: - aluminium laser cutting - grinding aluminium and magnesium - explosive environments or explosive substances/gases
	WARNING! Do not use the product for: - extraction of hot gases (more than 70°C/158°F continuously) - flame spraying - oil mist - heavy oil mist in welding fume - extraction of cement, saw dust, wood dust etc.

- Inspect the product and check it for damage. Verify the functioning of the safety features.
- During use, always use Personal Protective Equipment (PPE) to avoid injury. This also applies for persons who enter the work area.
- Check the working environment. Do not allow unauthorised persons to enter the working environment.
- Protect the product against water and humidity.
- Make sure the room is always sufficiently ventilated; this applies especially to confined spaces.
- Make sure that the workshop, in the vicinity of the product, contains sufficient approved fire extinguishers (suitable for fire classes ABC).

Service, maintenance and repairs

- Obey the maintenance intervals given in this manual. Overdue maintenance can lead to high costs for repair and revisions and can render the guarantee null and void.
- Always use Personal Protective Equipment (PPE) to avoid injury. This also applies for persons who enter the work area.
- Make sure the room is sufficiently ventilated.
- Use tools, materials, lubricants and service techniques which have been approved by the manufacturer. Never use worn tools and do not leave any tools in or on the product.
- Safety features which have been removed for service, maintenance or repairs, must be put back immediately after finishing these jobs and it must be checked that they still function properly.
- Use sufficient climbing gear and safety guards when working on a higher level than 2 metres (local restrictions may apply).
- Clean the area afterwards.

	ATTENTION Service, maintenance and repairs must be performed in accordance with directive TRGS 560 and TRGS 528 by authorised, qualified and trained persons (skilled) using appropriate work practices.
 	Personal protective equipment (PPE) Wear respiratory protection and protective gloves during service, maintenance and repairs.

4 INSTALLATION

4.1 Tools and requirements

You need the following tools and requirements to install the product:

- basic tools



4.2 To be sourced locally

When you install the extraction arm on wall brackets, you need additional wall mounting hardware, which depends on the wall type. Refer to the manual of the wall brackets for mounting instructions.



4.3 Unpacking

Make sure that the product is complete. The package contains:

- rotating hinge (complete)
- 2 arm sections (assembled) with rubber seals
- rubber seal (2)
- extraction hood (*RotaHood*)
- flexible hose (for the hood hinge)
- end stop⁴
- mounting material



If parts are missing or damaged, contact your supplier.

The flexible hoses are tied with a strap. You must cut the straps before mounting.

4. When you install the arm on a mobile unit, the end stop is redundant

4.4 Mounting possibilities

You can install the extraction arm in three different ways.

For mounting on:

- a mobile unit (welding fume extractor type MFD, MFS or MFE), proceed with paragraph 4.4.1
- wall brackets (type NMB), proceed with paragraph 4.4.2
- an extension crane (type NEC), proceed with paragraph 4.4.3



WARNING

Leave the tape around the two arm sections until you have completely installed the arm, including the hood.

4.4.1 Mounting on a mobile unit⁵

Fig. 4.1

- Loosen the four fastening bolts of the control panel cover.
- Remove the cover.
- Install the rotating hinge (C) on the mobile unit with the hexagon-head bolts and the washers. Make sure that:
 - the cable lead-through hole (B) is situated at the front of the unit; and
 - the long end of the pin (A) is pointing to the rear, in line with the cable lead-through hole (B)

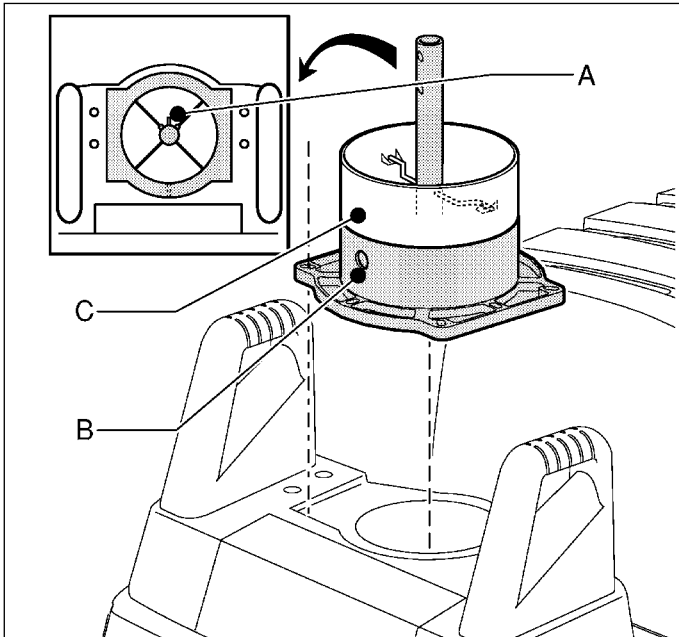


Fig. 4.1 Rotating hinge on mobile unit

Fig. 4.2

- Slide the rubber seal (B) around the rotating hinge (C).
- Fold back 2/3 of the seal.
- Put the flexible hose⁶ around the rotating hinge (C). Make sure that at least one metal ring of the hose covers the ridges of the rotating hinge.
- Unfold the seal and put it over the hose to make the connection airtight.
- Install the cover. Tighten the four fastening bolts firmly.

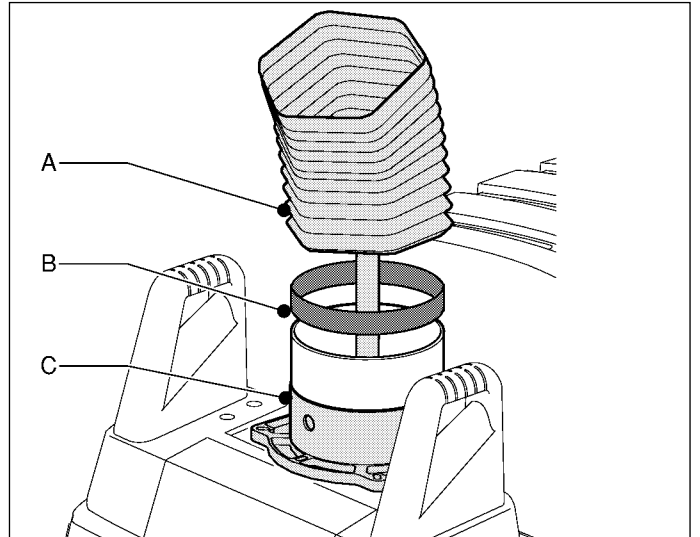


Fig. 4.2 Flexible hose

Fig. 4.3

- Install the hinge of the extraction arm (B) on the hinge rod (C) of the mobile unit with the bolts and nuts. For this purpose use the two indicated mounting holes (A).

In case the extraction arm is provided with a working light (WL) or a working light with automatic start/stop (WL-AST), you must now connect the supply cable (NCW-4). For this purpose refer to the corresponding manual.

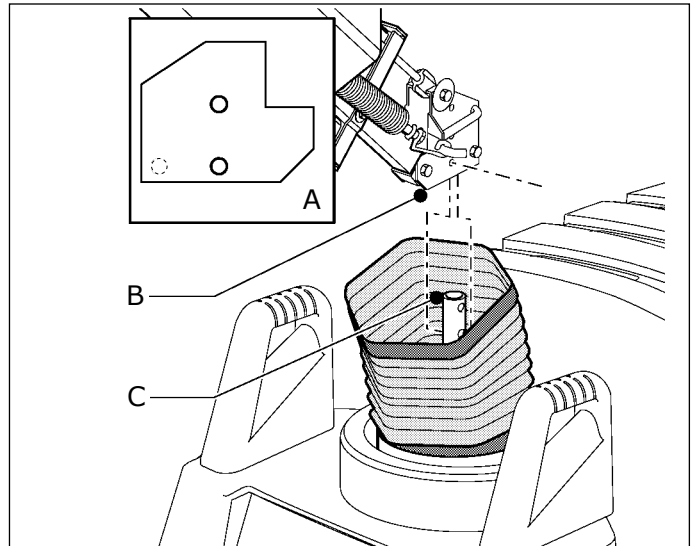


Fig. 4.3 Arm on hinge rod

- Install the flexible hoses on the arm sections and make the connections airtight with the rubber seals.
- For mounting of the hood, proceed with paragraph 4.4.4.

4.4.2 Mounting on wall brackets⁷



For mounting of the wall brackets, refer to the corresponding manual.

5. Type: MFD, MFS or MFE

6. Supplied with the mobile welding fume extractor

7. Type: NMB

Fig. 4.4

- Install the wall brackets.
- Install the rotating hinge (C) on the wall brackets (E) with the hexagon-head bolts and the washers. Make sure that:
 - the cable lead-through hole (A) is situated at the wall side; and
 - the long end of the pin (B) is pointing to the front, in line with the cable lead-through hole (A)

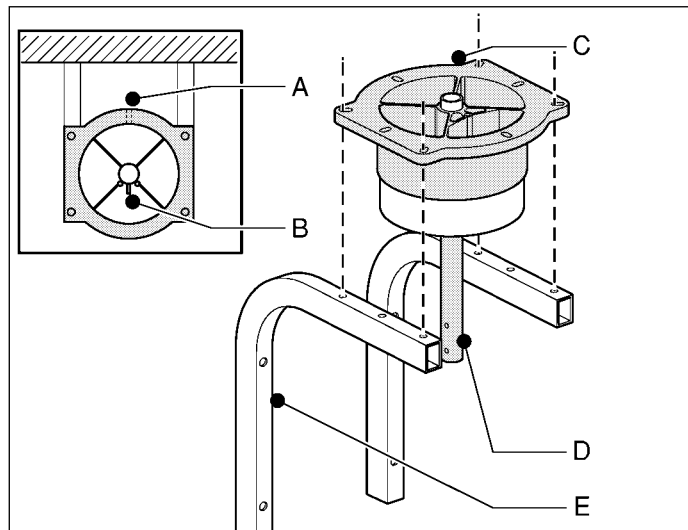


Fig. 4.4 Rotating hinge on wall brackets

Fig. 4.5

- Install the hanging adapter⁸ (D) on the hinge rod (C) with the bolts and nuts.
- Install the spring bracket (F).
- Slide the rubber seal (A) around the rotating hinge (B).
- Fold back 2/3 of the seal.
- Put the flexible hose⁹ (E) around the rotating hinge (B). At least one metal ring of the hose must cover the ridges of the rotating hinge.
- Unfold the seal and put it over the hose to make the connection airtight.

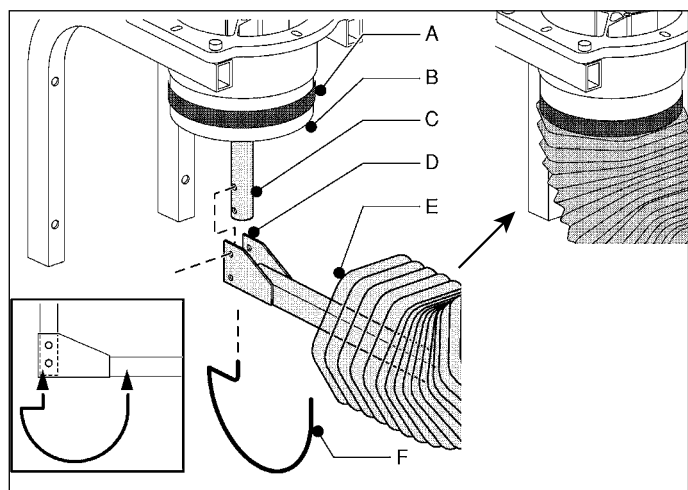


Fig. 4.5 Hanging adapter on hinge rod

Fig. 4.6

- Slide the end stop (D) on the hinge (C) of the extraction arm and install them both on the hanging adapter (B) with the bolts and nuts. For this purpose use the two indicated mounting holes (A).

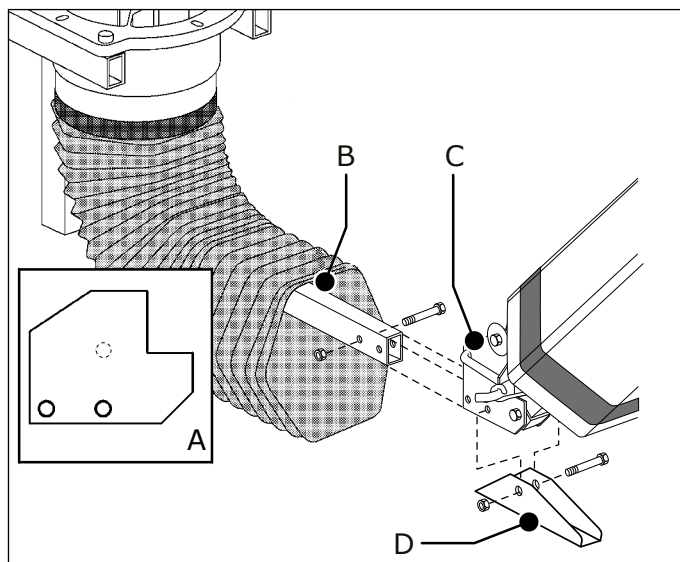


Fig. 4.6 Arm on hanging adapter

In case the extraction arm is provided with a working light (WL) or a working light with automatic start/stop (WL-AST), you must now connect the supply cable (NCW-11). For this purpose refer to the corresponding manual.

UltraFlex arms only:

The UltraFlex arms are supplied with a distance spring to protect the flexible hose. The spring is attached to the middle hinge of the arm with a piece of tape.

Fig. 4.7

- Take the distance spring (A) and install it at the middle hinge (B).

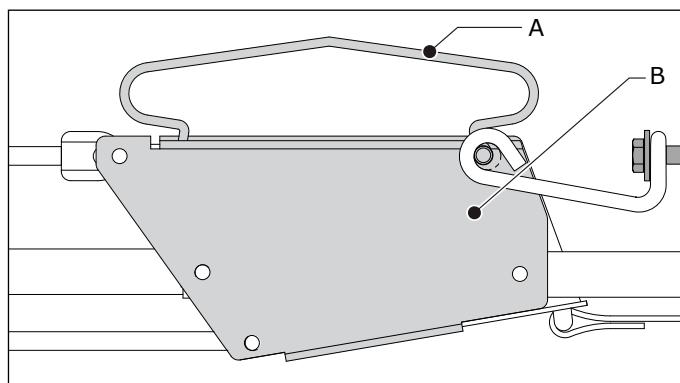


Fig. 4.7 Distance spring

Flex and UltraFlex arms:

- Install the flexible hoses on the arm sections and make the connections airtight with the rubber seals.
- For mounting of the hood, proceed with paragraph 4.4.4.

4.4.3 Mounting on an extension crane¹⁰



For mounting of the extension crane, refer to the corresponding manual.

8. Supplied with the wall brackets (NMB)

9. Supplied with the wall brackets (NMB)

10. Type: NEC

Fig. 4.8

- Install the rotating hinge (A) on the mounting brackets (C) of the extension crane with the hexagon-head bolts and the washers. Make sure that:
 - the cable lead-through hole (E) is situated at the side of the crane; and
 - the long end of the pin (D) is pointing to the front, in line with the cable lead-through hole (E)

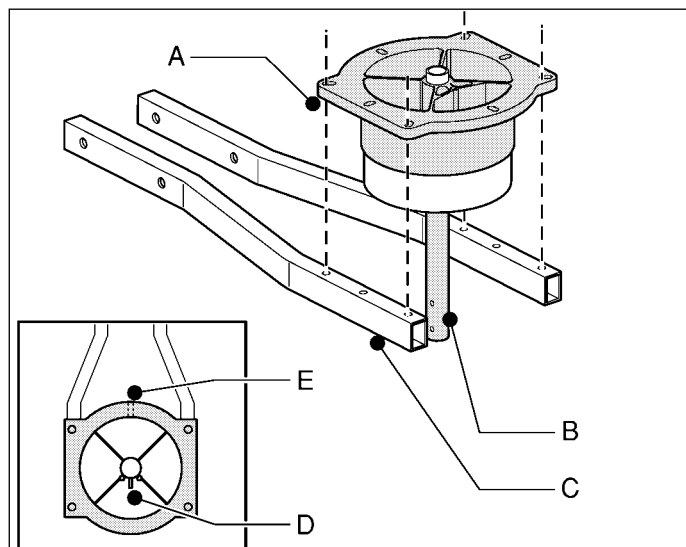


Fig. 4.8 Rotating hinge on crane

To install the arm on the rotating hinge:

- proceed with the instructions of **Fig. 4.5** and further

4.4.4 Mounting of the hood



WARNING

Leave the tape around the two arm sections until you have installed the hood.

Fig. 4.9

- Slide a rubber seal over the end of the arm section.
- Fold back 2/3 of the seal.
- Put the flexible hose and the other seal (in that sequence) temporarily over the end of the arm section (hood side).
- Install the hood on the U-section (A) with the bolt and nut.

In case the extraction arm is provided with a working light (WL) or a working light with automatic start/stop (WL-AST), you must now connect the supply cable. For this purpose refer to the corresponding manual.

- Slide the hose on the arm section. Make sure that at least one metal ring of the hose covers the ridges of the tube.
- Slide the other side of the hose over the rim of the hood. Make sure that at least one metal ring of the hose covers the ridges of the hood.
- Make the connections airtight with the rubber seals.

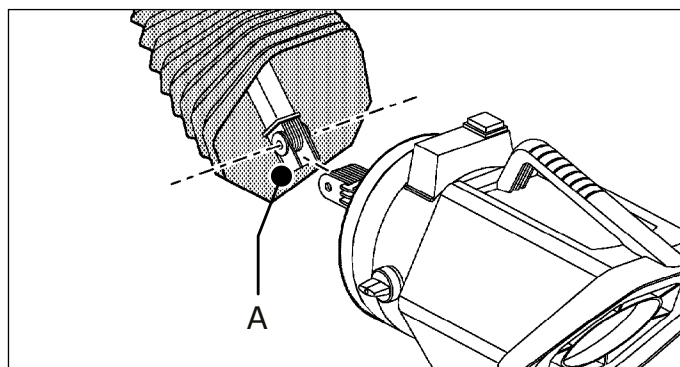


Fig. 4.9 Mounting of the hood

- Remove the tape that connects the two arm sections.
- Install the flexible hoses on the arm sections and make the connections airtight with the rubber seals.

5 USE



Personal protective equipment (PPE)

During use, use PPE to avoid injury. This also applies for persons who enter the work area.

5.1 Controls

The hood of the arm is provided with a handle for easy positioning and a throttle valve to regulate the airflow. All movement of the arm is controlled from the hood.

Fig. 5.1

A Throttle valve

B Handle

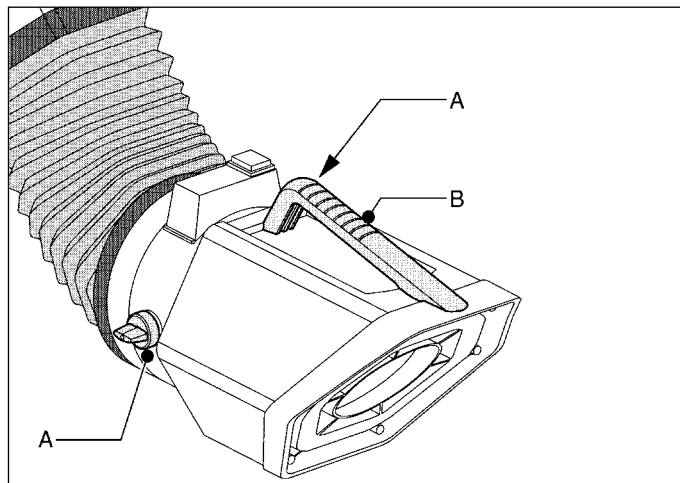


Fig. 5.1 Controls

5.2 Use

Fig. 5.2

- Use the handle (ref. Fig. 5.1B) to position the hood of the arm at max. 480 mm (19 in.) from the source of pollution.
- Make sure that the throttle valve (ref. Fig. 5.1A) is open.
- If present / desired:
 - Turn on the working light.
- Turn on the connected extraction device^{11 12}.

11. Such as a mobile welding fume extractor, an extraction fan or extraction system

12. If you have an automatic start/stop (WL-AST or WCS), the extraction device will start automatically when you start welding

- Start welding.
- If desired, partly close the throttle valve to adjust the airflow.
- When the welding position changes, move the hood to the correct position in relation to the weld.
- Turn off the connected extraction device approx. 20 seconds after finishing welding¹³.

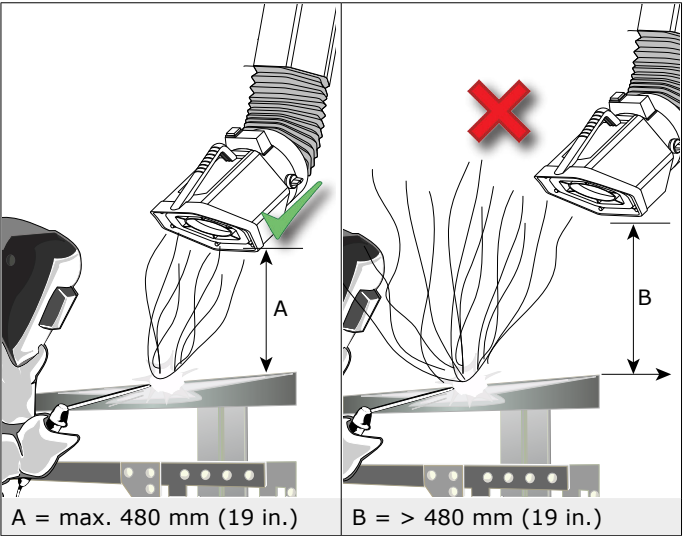


Fig. 5.2 Correct position of the hood

6 MAINTENANCE

6.1 Periodic maintenance

The product has been designed to function without problems for a long time with a minimum of maintenance. In order to guarantee this some simple, regular maintenance and cleaning activities are required which are described in this chapter.



WARNING!
Overdue maintenance can cause fire.

The indicated maintenance intervals can vary depending on the specific working and ambient conditions. Therefore we recommend to thoroughly inspect the complete product once every year beside the indicated periodic maintenance. For this purpose contact your supplier.

Component	Action	Frequency: every X months	
		X=3	X=6
General			
Outside of the arm	Clean with a non-aggressive detergent	X	
Flexible hoses	Check for cracks or damages. Replace if necessary		X
Inside of the arm	Clean thoroughly		X
Throttle valve	Check the functioning		X
Hood hinge	Check the horizontal and vertical movement of the hood. If necessary, clean the hood hinge or adjust the friction; refer to paragraph 6.2.1		X

Component	Action	Frequency: every X months	
		X=3	X=6
Rotating hinge	Lubricate the axle; refer to paragraph 6.3		X
Steel cables	Check for wear		X
Flex-3 Flex-4			
Hinge points	Check and lubricate; refer to Fig. IV (C) on page 13		X
Middle hinge	Check the friction. Adjust if necessary; refer to Fig. IV (A) on page 13		X
UltraFlex-3 UltraFlex-4			
Hinge points	Check and lubricate; refer to Fig. V (C) on page 14		X
Steel cable near the BalanceWheel	Check and lubricate; refer to Fig. V (B) on page 14		X
Balance construction	Check the balance of the extraction arm. Adjust if necessary; refer to Fig. V (A) on page 14		X

6.2 Balance system

If the extraction arm, or a part of it, does not stay in the desired position, you must adjust the friction and/or balance system.

To examine and adjust the balance system, do the following.

Fig. 6.1

- Pull the arm (including the hood) into a horizontal position.
- Fold the arm.
- Move the arm and hood up and down, left and right in straight and folded position.

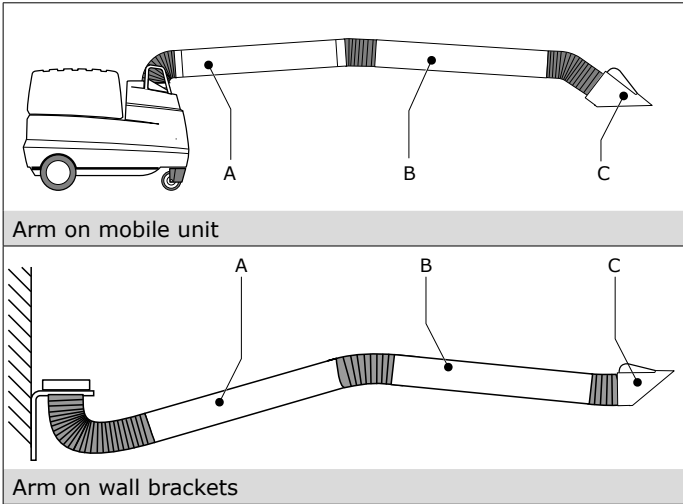


Fig. 6.1 Arm in horizontal position

In case you can easily move the entire arm (incl. the hood) and it stays in any position, the balance system is correctly adjusted.

For adjustment of the extraction hood (C):

- proceed with paragraph **6.2.1**

For adjustment of the arm section (hood side) (B):

- proceed with paragraph **6.2.2**

For adjustment of the arm section (wall/unit side) (A):

- proceed with paragraph **6.2.3**

13. If you have an automatic start/stop (WL-AST or WCS), the extraction device will stop automatically after a certain stop delay

6.2.1 Hood hinge

Friction too high

If it is difficult to move the hood, it is possible that the hood hinge is polluted. In that case, do the following.

- Disassemble the flexible hose.
- Cut the cable ties and pull down the rubber protection cover¹⁴.
- Clean the hood hinge.
- Adjust the friction (see instructions of Fig. 6.2).
- Install the protection cover over the hood hinge and attach it with two new cable ties.
- Install the flexible hose. Make sure that the connection is airtight.

Friction too low

If the hood does not stay in the desired position, you must tighten the friction.

Fig. 6.2

- Disassemble the flexible hose.
- Cut the cable ties and pull down the rubber protection cover.
- Determine which part of the hinge needs adjustment:
 - vertical movement (A); or
 - horizontal movement (B)
- Tighten the corresponding bolt and nut.
- Install the protection cover over the hood hinge and attach it with two cable ties.
- Install the flexible hose. Make sure that the connection is airtight.

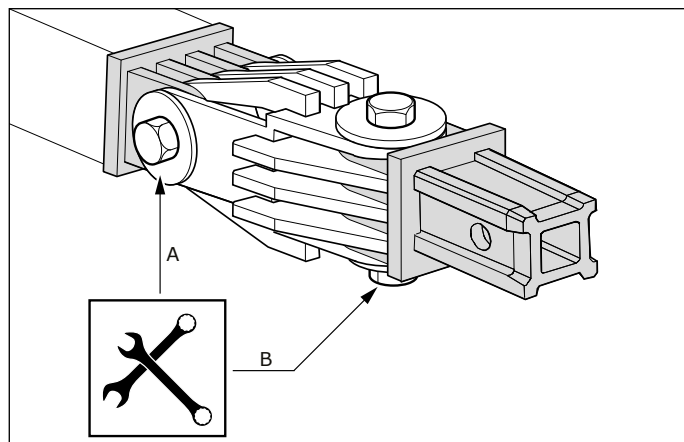


Fig. 6.2 Hood hinge

6.2.2 Arm section (hood side)

To adjust the balance, you must disconnect the flexible hose of the middle hinge. When it is done, install the hose and make the connections airtight with the rubber seals.

Flex arms

Fig. 6.3 (also refer to Fig. 6.1B)

- Pull the arm (including the hood) into a horizontal position.

If the arm section falls down:

- Turn the bolt M8 (A) clockwise to tighten the friction.

If the arm section is hard to move down:

- Turn the bolt M8 (A) counterclockwise to loosen the friction.

If the arm section is hard to move up:

- Turn the bolt M8 (B) counterclockwise until you can move up the arm section smoothly.

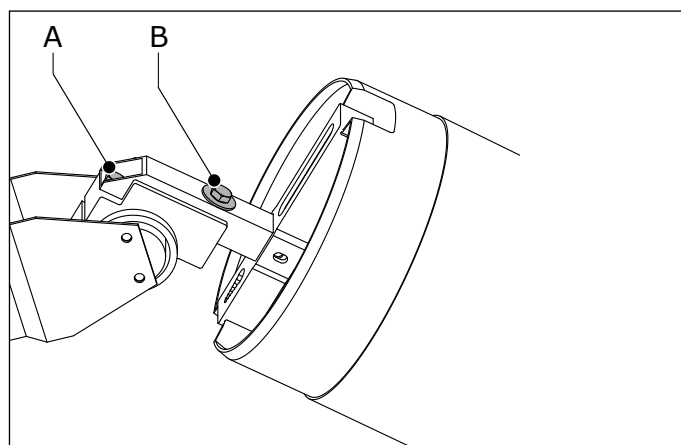


Fig. 6.3 Middle hinge – Flex

UltraFlex arms

Fig. 6.4 (also refer to Fig. 6.1B)

- Pull the arm (including the hood) into a horizontal position.

If the arm section falls down:

- Tighten the bolt (A) to increase the spring tension.

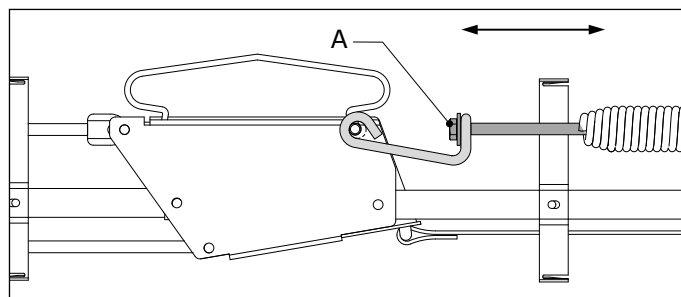


Fig. 6.4 Middle hinge – UltraFlex

6.2.3 Arm section (wall/unit side)

To adjust the balance, you must disconnect the flexible hose of the hinge at the wall/unit side. When it is done, install the hose and make the connections airtight with the rubber seals.

Fig. 6.5 (also refer to Fig. 6.1A)

- Pull the arm (including the hood) into a horizontal position.

If the entire arm falls down:

- Tighten the bolt (A) to increase the spring tension. Make sure that the spring (B) does not turn while you tighten the bolt.

14. If the rubber protection cover is damaged, you must replace it

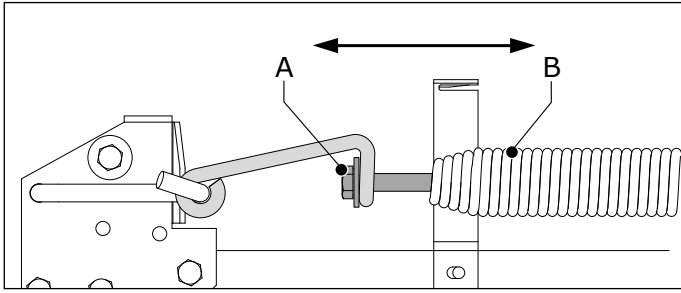


Fig. 6.5 Hinge of the wall/unit side

6.3 Lubrication of the rotating hinge

To make sure that the rotating hinge can turn freely, you must lubricate the axle regularly.

Fig. 6.6

- (B) Apply grease into the grease nipple with a grease gun.

Recommended grease type: standard EP2 bearing grease

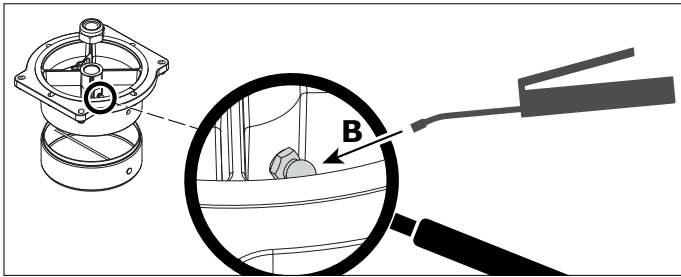


Fig. 6.6 Lubrication of the rotating hinge

7 TROUBLESHOOTING

If the product does not function (correctly), consult the checklist below to see if you can remedy the error yourself. Should this not be possible, contact your supplier.



WARNING!

Obey the safety regulations that are written in chapter 3 when you carry out the activities below.

Symptom	Problem	Possible cause	Solution
General			
Extraction capacity is insufficient	Pollution of the facility	Throttle valve is closed	Open the throttle valve
		Flexible hose(s) torn or loose	Replace flexible hose(s) or install correctly
		Rubber seal(s) torn or installed incorrectly	Replace rubber seal(s) or install correctly
		Outside air is extracted into the connected duct system	Make the duct system airtight

Symptom	Problem	Possible cause	Solution
Extraction hood not in balance	Hood does not stay in the desired position	Not enough friction	Adjust the friction of the hood hinge; refer to paragraph 6.2.1
	You cannot move the hood in the desired position	Too much friction	
Entire arm (both arm sections) falls down	Arm does not stay in the desired position	Spring tension too low	Increase the spring tension of the hinge at the wall/unit side; refer to paragraph 6.2.3

Flex-3 | Flex-4

Extraction arm creaks or squeaks	Arm does not move smoothly	Insufficient lubrication	Lubricate the hinge points; refer to Fig. IV (C) on page 13
Movement problem of the hood side of the arm	Friction in the middle hinge	Not enough friction due to aging	Adjust the friction in the middle hinge; refer to paragraph 6.2.2 (Flex arms)
		Too much friction	
		Too much friction due to pollution	Clean the friction mechanism in the middle hinge

UltraFlex-3 | UltraFlex-4

Extraction arm creaks or squeaks	Arm does not move smoothly; excessive wear of parts	Insufficient lubrication	Lubricate the hinge points; refer to Fig. V (C) on page 14
			Lubricate the steel cable near the BalanceWheel; refer to Fig. V (B) on page 14
The hood side of the arm falls down	Arm does not stay in the desired position	Spring tension too low	Increase the spring tension; refer to paragraph 6.2.2 (UltraFlex arms)

8 SPARE PARTS

The following spare parts are available for the products;



8.1 Flex-3 | Flex-4

Refer to exploded view Fig. VI on page 15 and the spare parts list on page 16

8.2 UltraFlex-3 | UltraFlex-4

Refer to exploded view Fig. VII on page 17 and the spare parts list on page 18

9 DISPOSAL

After life of the product, dispose of it in accordance with federal, state or local regulations.



Fig. I Product combinations

	MOBILE use	STATIONARY use	
Extraction arm:	Flex-3 Flex-4 UltraFlex-3 UltraFlex-4	Flex-3 Flex-4 UltraFlex-3 UltraFlex-4	
	+	↙	+
Extension crane:			NEC-2 NEC-2 + EXT-NEC-4
		+	+
Wall brackets:		NMB	TNB
		+	+
Fan:		↘	FAN-28 FAN-42
			↙
Filter unit:	MFD MFS MFE	+	SFD SFS

Fig. II Working reach

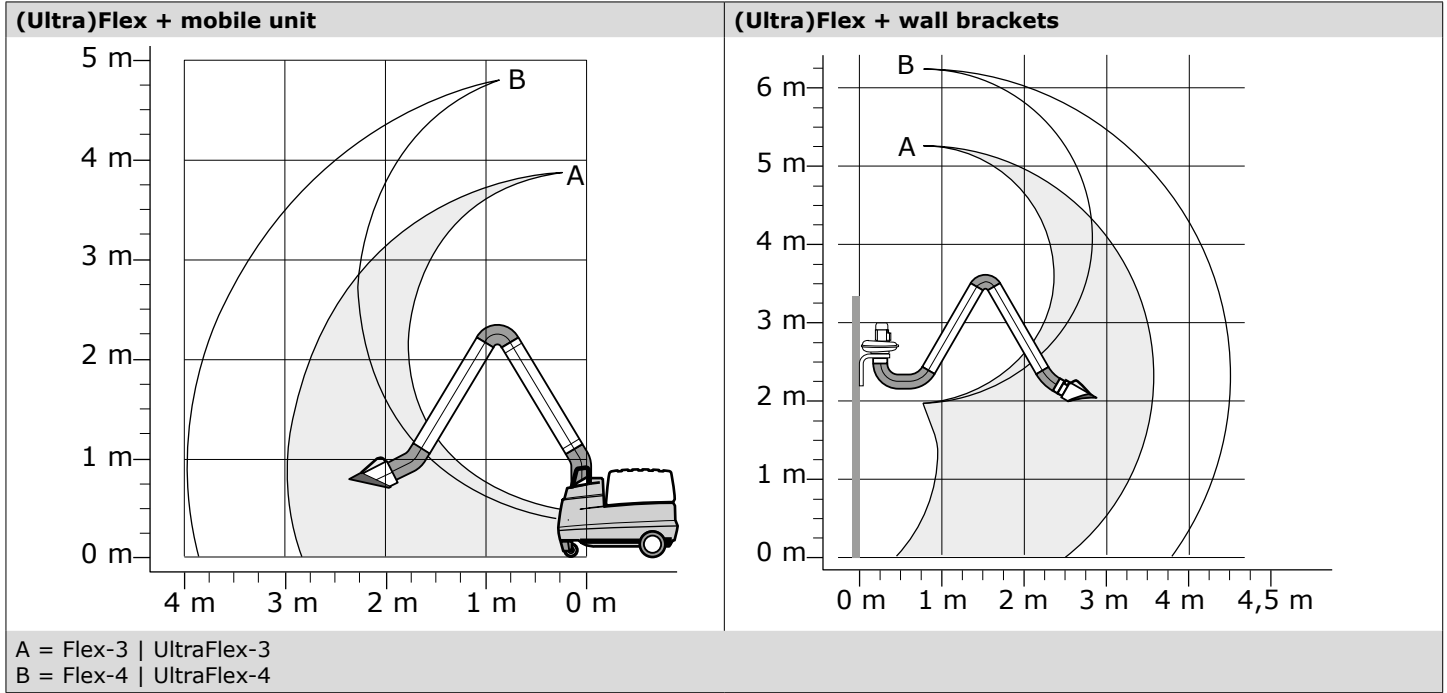


Fig. III Pressure drop

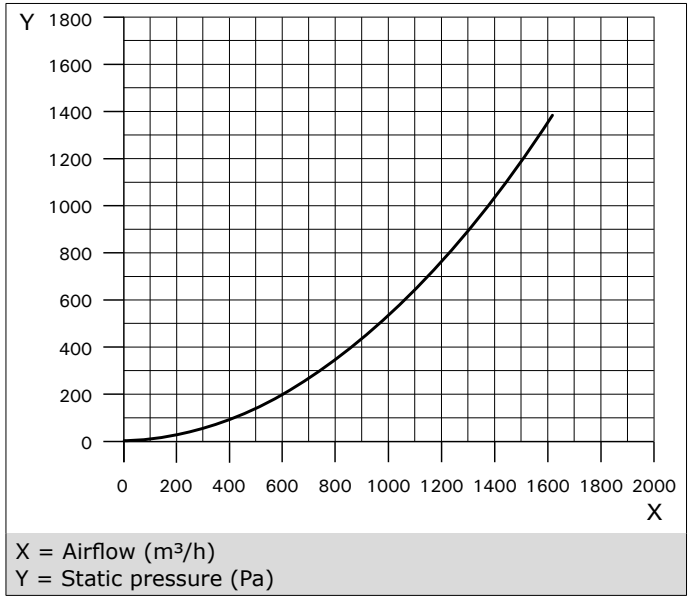


Fig. IV Maintenance points **Flex-3 | Flex-4**

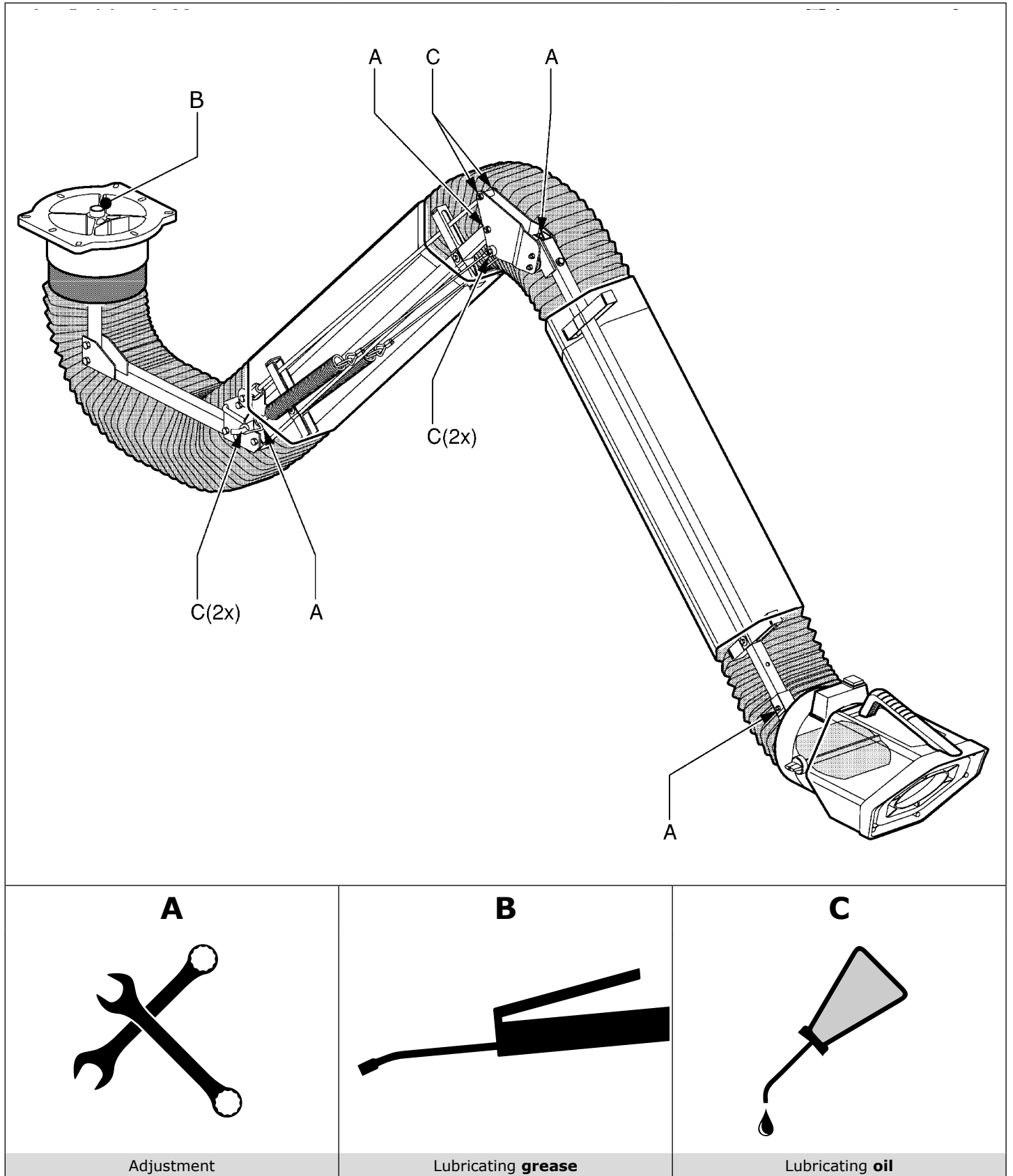


Fig. V Maintenance points **UltraFlex-3 | UltraFlex-4**

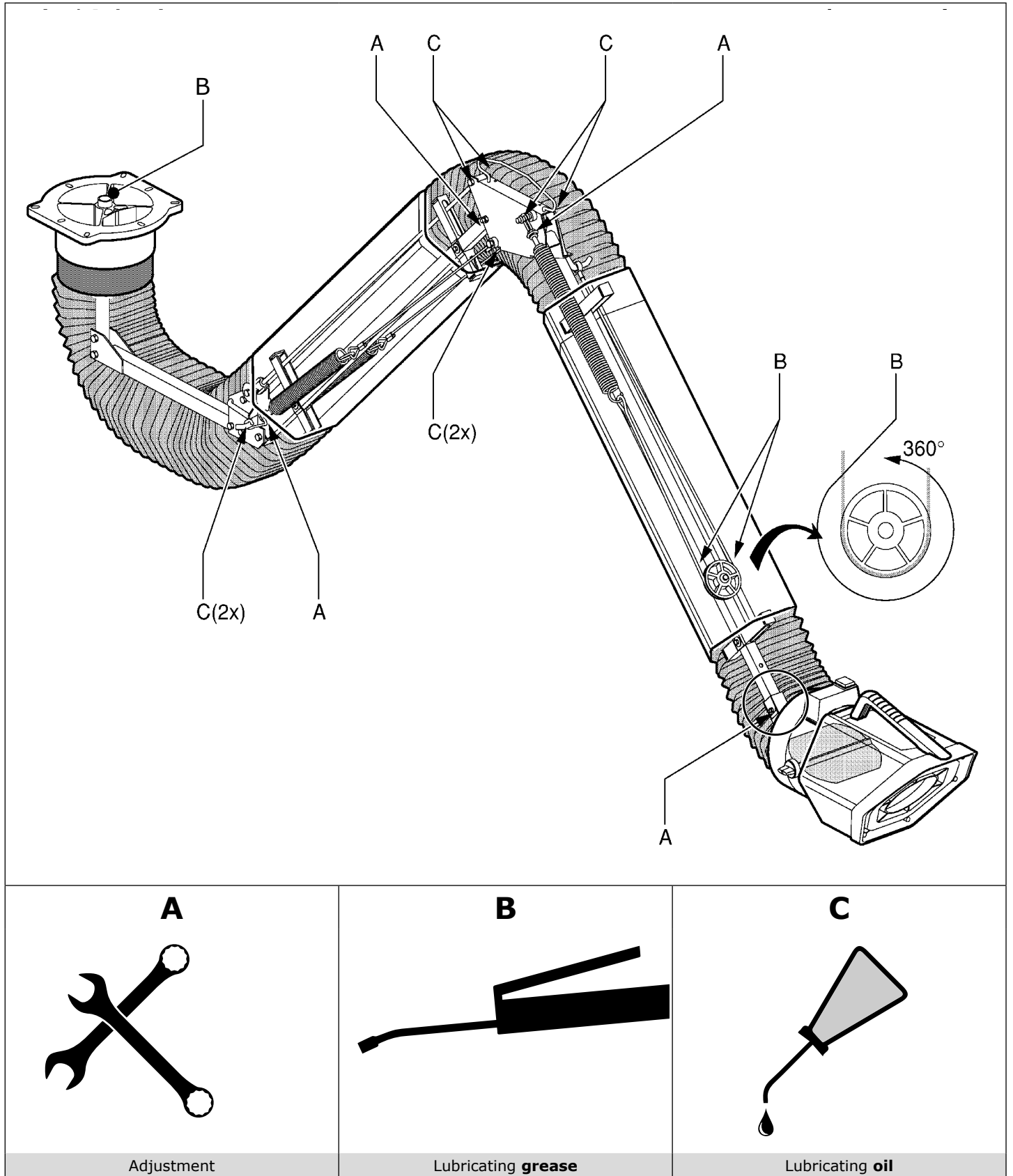
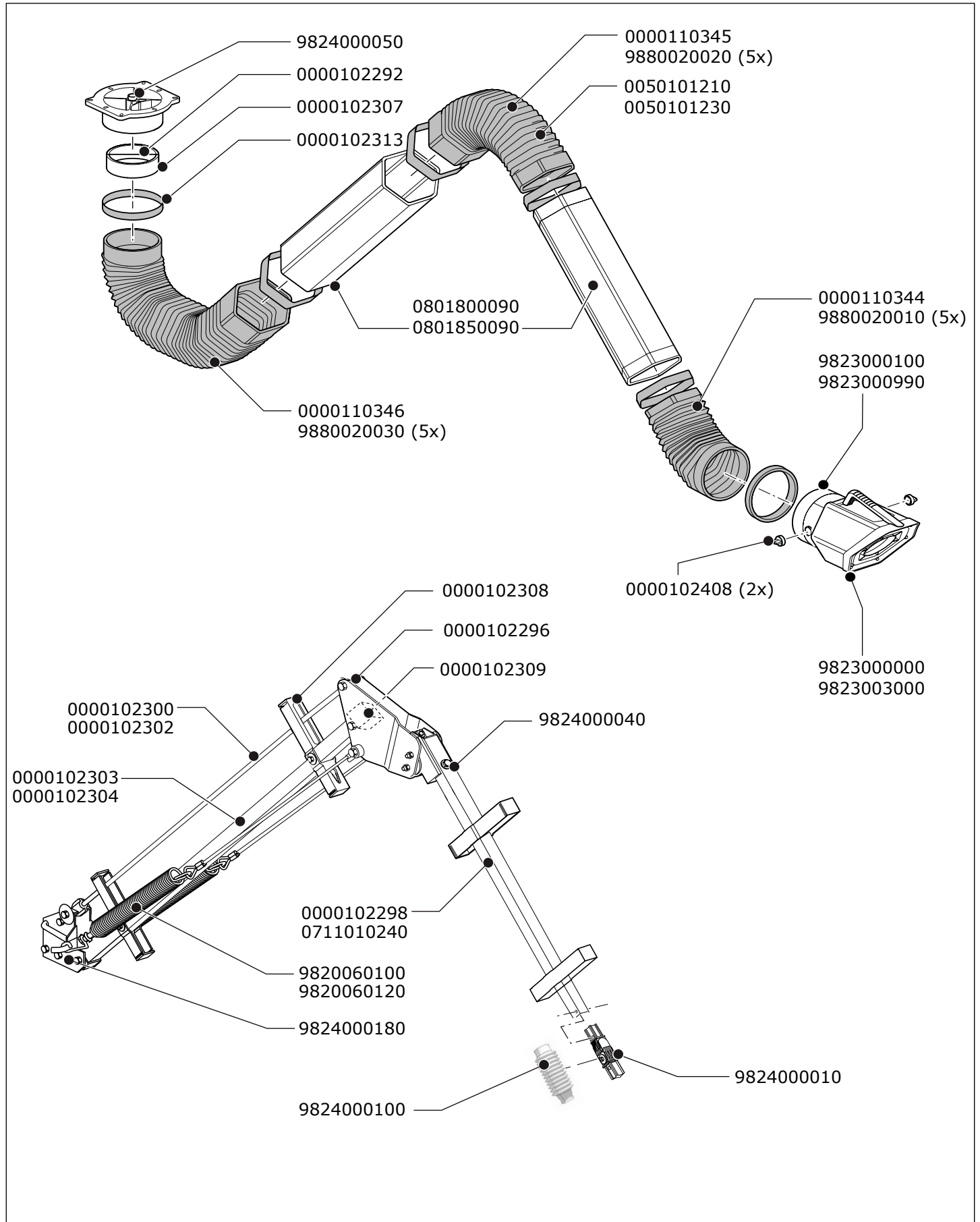


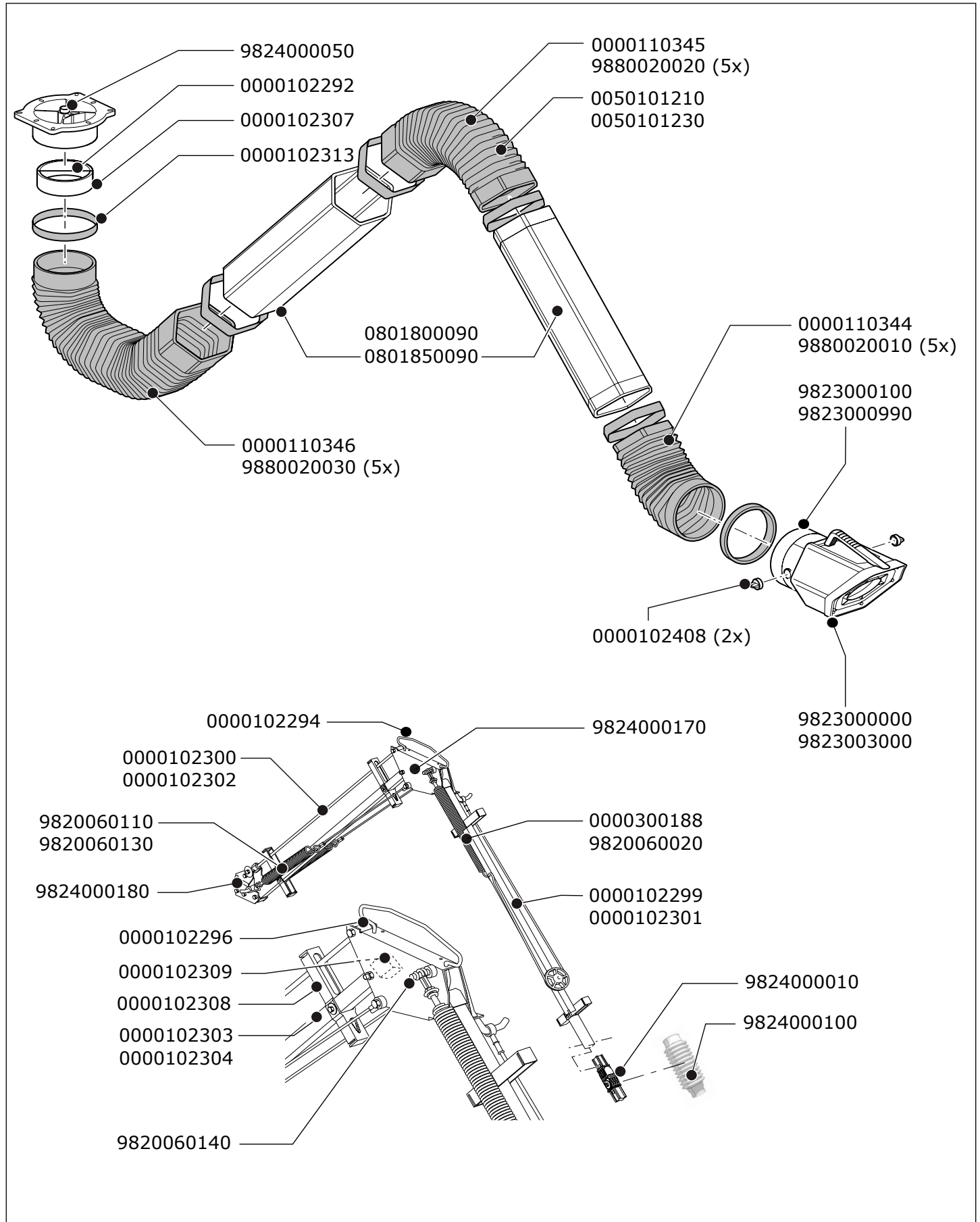
Fig. VI Exploded view Flex-3 | Flex-4



Spare parts list Flex-3 | Flex-4

Article no.	Description
General	
0000102292	Spring for collar rotating hinge (Ultra)Flex
0000102296	Aluminium fork M8
0000102307	Collar rotating hinge
0000102308	Tube holder (Ultra)Flex
0000102309	Plastic plug (Ultra)Flex (black)
0000102313	Rubber collar Ø 203 mm
0000102408	Knob for throttle valve RotaHood (2 pieces)
0000110344	Hose hood side (Ultra)Flex
0000110345	Hose middle (Ultra)Flex
0000110346	Hose wall/unit side (Ultra)Flex
0050101210	Hose set (Ultra)Flex for mounting on mobile unit
0050101230	Hose set (Ultra)Flex for wall mounting
9823000000	RotaHood, complete
9823000100	Throat RotaHood, complete
9823000990	Throat RotaHood HD, complete
9823003000	RotaHood HD, complete
9824000010	Hinge set RotaHood, incl. protection cover
9824000040	Friction clamp Flex complete
9824000050	Rotating hinge (Ultra)Flex
9824000100	Rubber protection cover hood hinge
9824000180	Hinge wall/unit side (Ultra)Flex-3/4
9880020010	Hose hood side (Ultra)Flex (5 pieces)
9880020020	Hose middle (Ultra)Flex (5 pieces)
9880020030	Hose wall/unit side (Ultra)Flex (5 pieces)
Flex-3	
0000102302	Threaded rod (Ultra)Flex-3
0000102304	Inner tube (sendzimir) wall/unit side (Ultra)Flex-3
0711010240	Inner tube (aluminium) hood side Flex-3
0801850090	Arm section Flex-2/(Ultra)Flex-3
9820060100	Spring replacement set Flex-3 wall/unit side
Flex-4	
0000102298	Inner tube (aluminium) hood side Flex-4
0000102300	Threaded rod (Ultra)Flex-4
0000102303	Inner tube (sendzimir) wall/unit side (Ultra)Flex-4
0801800090	Arm section (Ultra)Flex-4/NEC
9820060120	Spring replacement set Flex-4 wall/unit side

Fig. VII Exploded view UltraFlex-3 | UltraFlex-4



Spare parts list UltraFlex-3 | UltraFlex-4

Article no.	Description
General	
0000102292	Spring for collar rotating hinge (Ultra)Flex
0000102294	Distance spring hose middle UltraFlex
0000102296	Aluminium fork M8
0000102307	Collar rotating hinge
0000102308	Tube holder (Ultra)Flex
0000102309	Plastic plug (Ultra)Flex (black)
0000102313	Rubber collar Ø 203 mm
0000102408	Knob for throttle valve RotaHood (2 pieces)
0000110344	Hose hood side (Ultra)Flex
0000110345	Hose middle (Ultra)Flex
0000110346	Hose wall/unit side (Ultra)Flex
0050101210	Hose set (Ultra)Flex for mounting on mobile unit
0050101230	Hose set (Ultra)Flex for wall mounting
9820060140	Starlock + circlip (10 pieces) for arms after 2006
9823000000	RotaHood, complete
9823000100	Throat RotaHood, complete
9823000990	Throat RotaHood HD, complete
9823003000	RotaHood HD, complete
9824000010	Hinge set RotaHood, incl. protection cover
9824000050	Rotating hinge (Ultra)Flex
9824000100	Rubber protection cover hood hinge
9824000170	Middle hinge UltraFlex-3/4
9824000180	Hinge wall/unit side (Ultra)Flex-3/4
9880020010	Hose hood side (Ultra)Flex (5 pieces)
9880020020	Hose middle (Ultra)Flex (5 pieces)
9880020030	Hose wall/unit side (Ultra)Flex (5 pieces)
UltraFlex-3	
0000102301	Inner tube (aluminium) hood side UltraFlex-3
0000102302	Threaded rod (Ultra)Flex-3
0000102304	Inner tube (sendzimir) wall/unit side (Ultra)Flex-3
0801850090	Arm section Flex-2/(Ultra)Flex-3
9820060020	Spring replacement set (Ultra)Flex-3 hood side
9820060110	Spring replacement set UltraFlex-3 wall/unit side
UltraFlex	
0000102299	Inner tube (aluminium) hood side UltraFlex-4
0000102300	Threaded rod (Ultra)Flex-4
0000102303	Inner tube (sendzimir) wall/unit side (Ultra)Flex-4
0000300188	Spring replacement set UltraFlex-4 hood side
0801800090	Arm section (Ultra)Flex-4/NEC
9820060130	Spring replacement set UltraFlex-4 wall/unit side

