	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 1 / 17

Emetteur : CRAN Jérôme

Vérificateur : LANCIEUX Cédric

## 1. Purpose

Define housing and duct assembly.  
Define filter change procedure, step by step, with or without safe change bag, for bag-in bag-out CAMSAFE safe change housing.



## 2. Scope

These instructions concerns people who are in charge of filter change and housing installation.

## 3. CAMSAFE delivery

**Items should be inspected (visual inspection) as soon as they have been delivered**, in order to ensure that they have not been damaged during transport.

In case of noticed damage, a **mention of Reserve** must be written immediately on the delivery bond by warehouse people.


**Within 48 hours** after delivery, once a global inspection will be done, warehouse people will have to confirm the mention of Reserve and details of the damage with an official letter. This letter will have to be sent to the forwarder **+copy to CAMFIL**.

**CAUTION :** In case of missing or damaged items, **CAMFIL will not supply additional items without this copy of official letter**.

## 4. Preliminary remarks

**Before operating, it is recommended to read entirely these instructions ...**

**Ventilation must be shut down at the housing level and must not be in positive or negative pressure during the entirely operation .**

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 2 / 17

These instructions are split in three parts :

**Part 1 : Duct and housing mounting**

**Part 2 : filter change without safety bag.**

**Part 3 : filter change with Camfil original safe change bag.**

In order to avoid to generate dust, we advise people to change the filter not too close from a working space.

CAMSAFE products must be stored in a sheltered space.

## **5. Required tools for operation**

Duct mounting :

A set of flat 13mm key

Filter change without safe change bag :

No tool is required.

Filter change with safe change bag :


⇒ 1 electric welding machine.

⇒ 1 pair of scissors.

Operator safety :

The operator must respect on site safety rules (protective cloth, mask, gloves, glasses...)

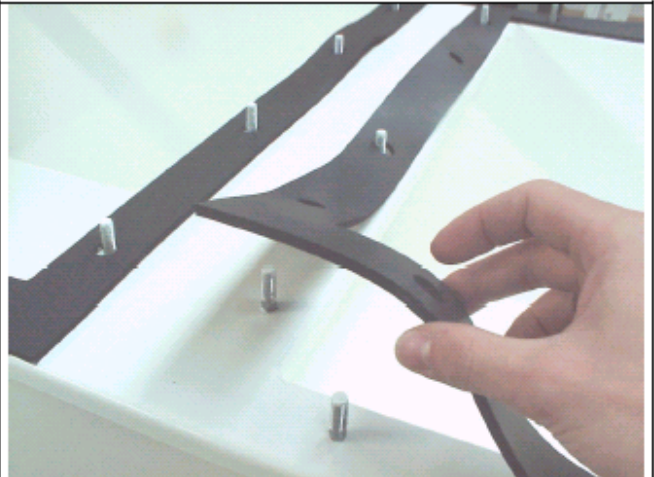
**It is recommended to wear at least gloves and a suitable protective suit**

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 3 / 17

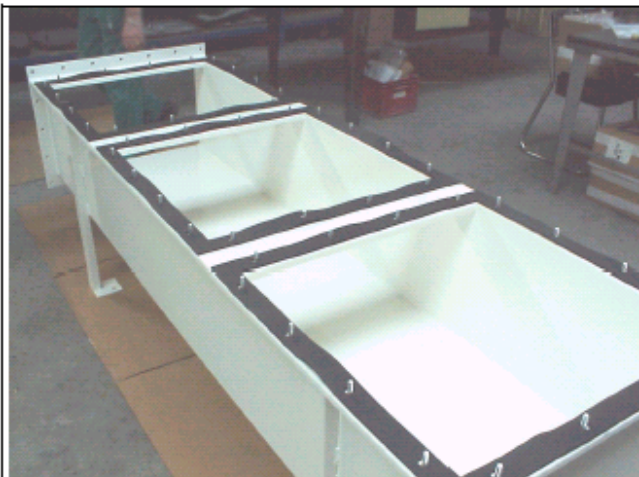
## FIRST PART : HOUSINGS & DUCTS ASSEMBLY



Housings and ducts are delivered separately, not assembled.  
Put downstream duct in place, let space to move all around




Put the gasket in place, with holes on thread bars. Gasket have no side, they are symmetrical.



Do it for every housing place

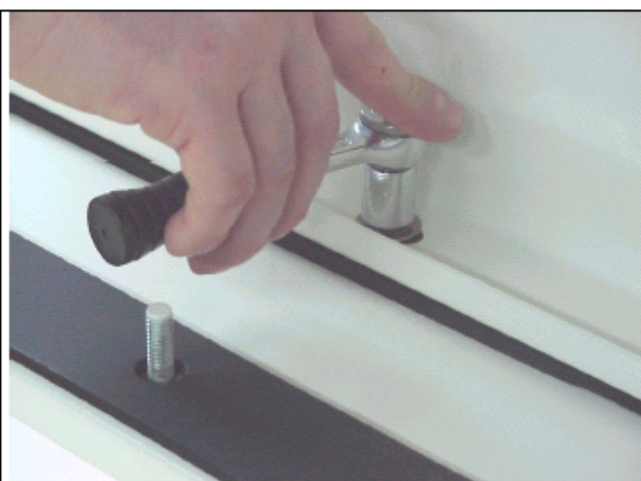


Put a first housing, do not hit the thread bars.

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 4 / 17



Put washers and nuts in place



Bring the nuts in contact, do not tight yet



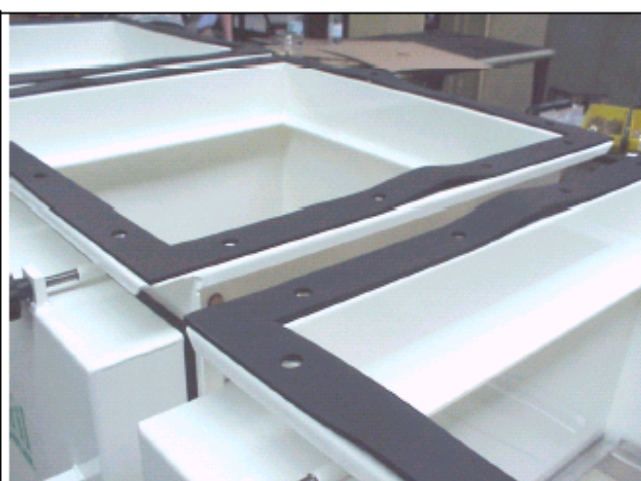
Do it for every housing



Access between housing is from behind




Tightening through a clutch key is possible, do not tight yet



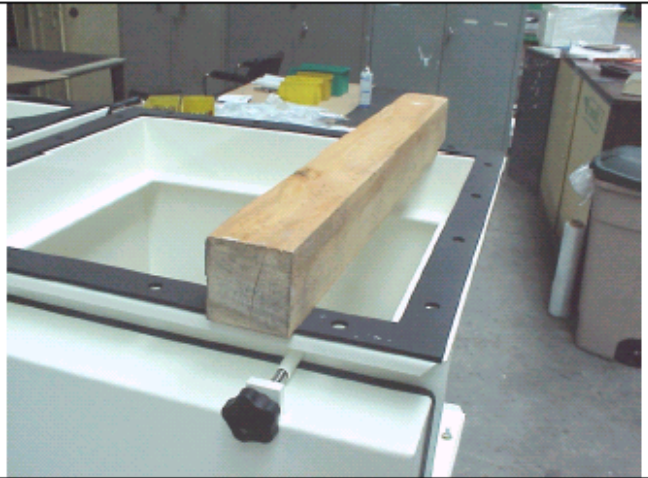
Put every gasket in position.

**Advise** : Mastic or glue dots can be useful in order to keep the gasket in position.

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 5 / 17



The assembly is ready to receive the upstream duct




A wooden part is useful on each end,



it allows to put the duct in place without damaging the gaskets.



2 people are needed to remove the wooden parts.

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 6 / 17



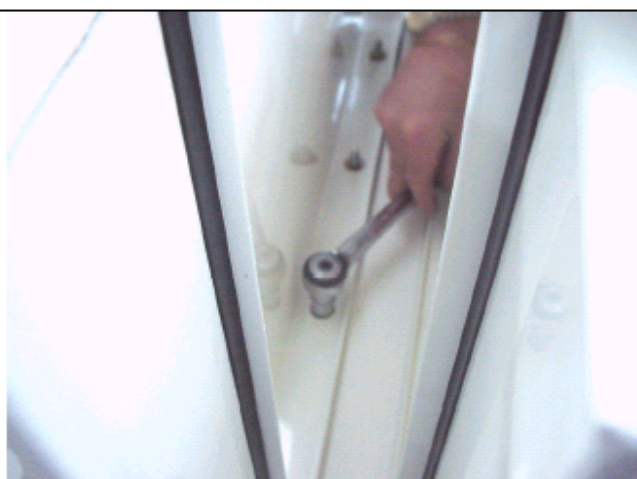
Remove the covers to have access to ...




... nuts around the collar.



Check the housings alignment.



Tight all the nuts to recommended torque 1m.kg.  
In case of a leak it is possible to tight slightly more.

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 7 / 17

## PART 2 : FILTER CHANGE WITHOUT SAFETY BAG

**VENTILATION UNIT MUST BE SHUT DOWN FIRST !  
WEAR A SUITABLE PROTECTIVE SUIT !**

### *Step 1 : Door opening*



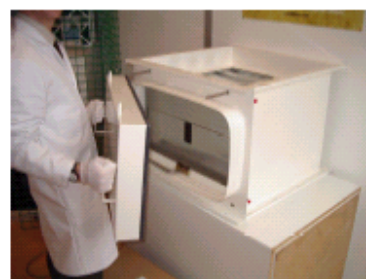
The door is clamped by 4 buttons.




Unscrew and remove bottom buttons.



Unscrew and remove top buttons



Remove the door .

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 8 / 17

### ***Step 2 : Used filter removal***



Unlock filter by turning to right the clamping lever.



Pull out the used filter by the handle.



Extract the filter by pulling it out gently and carrying it from underneath.



Extract entirely the filter taking care not to hurt it on the housing.

Check carefully gasket plan and if necessary clean it with alcohol and a smooth non fluffy wiper

### ***Step 3 : Fit new filter***



Hold new filter taking care not to touch the filtering media and push it gently inside the Camsafe housing.




ATTENTION : filter gasket must be on top and filter side with handle must be placed in front



Push gently the filter until it stops.



Clamp the filter by turning to left the clamping lever.  
Airtightness is guaranteed only by using specified CAMFIL filters.

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 9 / 17

### *Etape 4 Door closing*



Fit the door in.  
Attention : the door can fit  
in only if the clamping lever  
is correctly placed.



Screw top buttons without  
tightening.




Screw bottom buttons with-  
out tightening.



Screw progressively buttons until tightening .



As soon as buttons are  
tightened, Camsafe hous-  
ing is ready for operation.

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 10 / 17

## PART 3 : FILTER CHANGE WITH A SAFETY BAG

**VENTILATION UNIT MUST BE SHUT DOWN FIRST !  
WEAR A SUITABLE PROTECTIVE SUIT !  
FOR YOUR SAFETY FOR THE FOLLOWING PROCEDURE USE ONLY ADEQUATE  
ORIGINAL CAMFIL SAFE CHANGE BAG**

### *Step 1 : Door opening*



The door is clamped by 4 buttons .



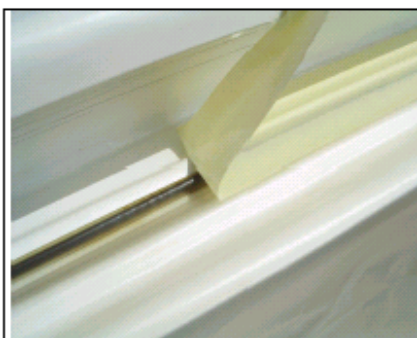
Unscrew and remove bot-  
tom buttons



Unscrew and remove top  
buttons.




Remove the door.



### **CAMFIL ADVISE :**

During operation we strongly advise to secure the bag ring on the collar by the mean of adhesive tape.

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 11 / 17

### Step 2 : Used filter removal



Unroll the Camfil safe change bag.



Unlock filter by turning to the right the clamping lever.



Pull out the used filter by the handle.



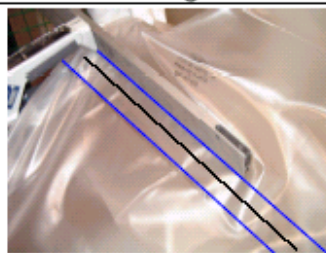
Pull out the used filter gently at the end of the safety bag



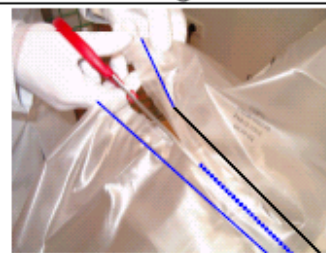
Put the used filter in its bag in front of Camsafe housing.



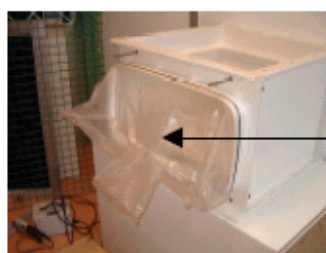
Make a first welding line above the filter in order to seal hermetically the bag.



Make 2 other welding lines, with about 1cm space




With a pair of scissors, cut off the safety bag over the centre line



« stump »

After cutting off is made, a part of the bag (so called "stump") remains on Camsafe housing. This part will be removed later : **DON'T REMOVE IT NOW !**  
The used filter is now packed in a plastic bag hermetically sealed ready to be put in the adequate waste disposal.

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 12 / 17

### Step 3 : New filter preparation



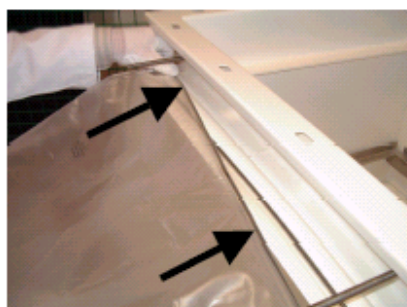
Put the new filter on the floor with filter handle on top. Pull on a new Camfil safe change bag.



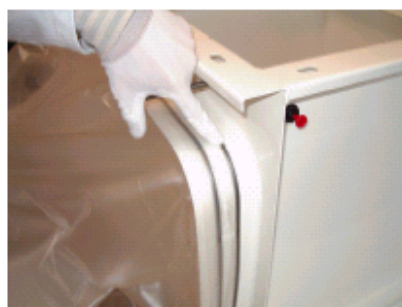
Slide Camfil safe change bag in order to put the filter to the closed end of the bag.



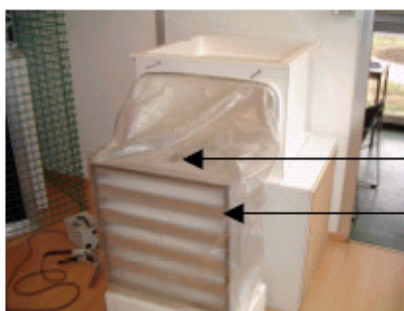
Turn it up side down and place it in front of the housing, filter gasket positioned on visible side.



Put the new Camfil safe change bag on the groove, over the "stump".




Put the O-ring of the new Camfil safe change bag into the "inner" groove.



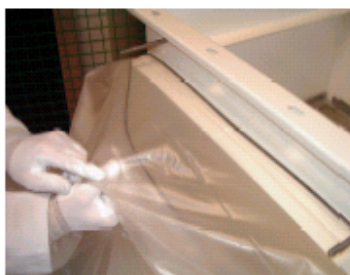
Filter handle

Filter gasket

Check that the filter handle is on the top side and that filter gasket is on the visible side.

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 13 / 17

#### **Step 4 : Stump extraction**



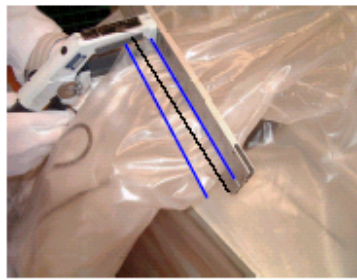
Loosen the "stump" from the outer groove and pull it in the "appendix" of the new Camfil safe change bag.



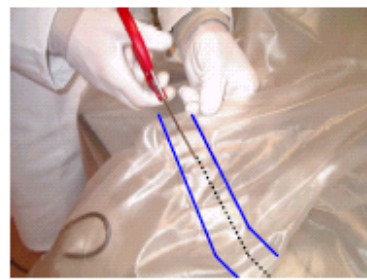
Put the "stump" inside the "appendix" of the new Camfil safe change bag.



Make a first welded line just above the "stump" in order to seal hermetically the "appendix" .




Make 2 other welding lines, with about 1cm space



With a pair of scissors, cut off the safety bag over the centre line



After cutting off, it remains a small plastic bag hermetically sealed enclosing the "stump" ready to be put in the appropriate waste disposal.

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 14 / 17

### Step 5 : Fitting the new filter in



Now the new filter can be fit in.



Lift the filter enclosed in the Camfil safe change bag.



Slide the bag along the filter until the filter is at the opening of Camsafe housing.



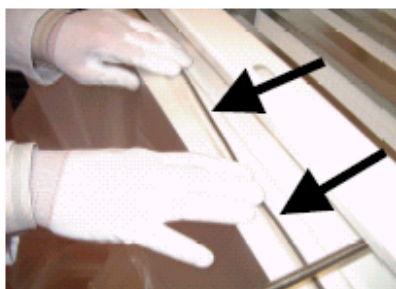
Fit gently the filter in.




Push gently the filter until it stops.  
Attention : be careful not to stick the bag.



Clamp the filter by turning to left the clamping lever.  
Airtightness is guaranteed only by using specified CAMFIL filters.



Slide the O-ring of the new Camfil safe change bag from the "outer" groove to the "inner" groove

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 15 / 17

### Step 6 : Door closing



Roll up the new Camfil safe change bag.



Pack the bag into the opening of the Camsafe housing.



Fit the door in. Be careful not to pinch the bag.  
Attention : the door can fit in only if the clamping lever is correctly placed.



Screw top buttons without tightening..




Screw bottom buttons without tightening.



Screw progressively buttons until tightening.



As soon as buttons are tightened, Camsafe housing is ready for operation.


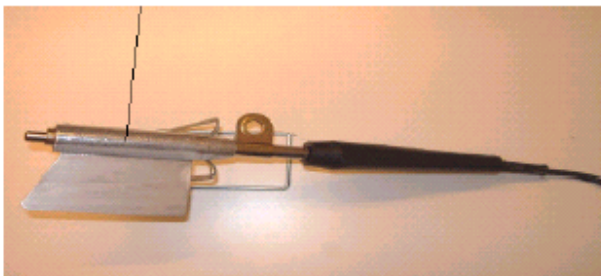




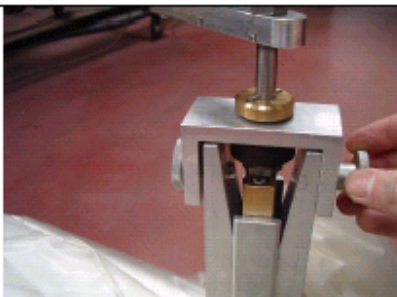

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 16 / 17


## 6. Option manual bag welding device







Required tools for operation :

- ⇒ 1 CAMFIL –FARR manual bag welding device
- ⇒ collars (Colson or Rilsan type lg 150 mm)

Note : It is strongly advised to wear an over suit during operation

<i>Filter extraction and welding</i>		
		
Put the used filter in front of the housing	Cutting and welding part	
		
Bag holding part	Unscrew	Split the 2 parts
		
Insert the bag in the U shape	Pull the compression part after having pull the moving part	Turn clockwise to press the bag into the U shape
<p><b>In order to secure the cutting operation, once the bag pressed, it is possible to put 2 collars ( Colson or Rilsan type) on each side of the device.</b></p>		

	INSTRUCTIONS	DTU3041-C
	INSTRUCTIONS FOR USE	Date for application: 2004-05-01
	CAMSAFE	Page 17 / 17

 <p>Press the bag down to the slotted part</p>	 <p>Cut the bag by insertion of the hot knife into the slot</p>	 <p>Insert with a shaking movement down to the end of the slot</p>
<p><b>WARNING ! During this operation you must not touch the bag out of the slot .</b>  <b>The knife is hot, it would damage the bag tightness.</b></p>		
 <p>Unscrew the internal part</p>	 <p>Take the 2 bag ends out of the device</p>	 <p>The welding must be done on the whole cross section</p>

**Process is the same to evacuate the old bag through the sox**