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1

# UTILISATION AND INTENDED USE

## INTENDED USE

MASTER FLUX PLUS is a device designed for conscious sedation or sedative analgesia. Conscious sedation consists in administering a mixture of nitrous oxide and oxygen to the patient.

## USE

The concentrations of the administered mixture are:

O<sub>2</sub> ≥ 30%

N<sub>2</sub>O ≤ 70%

It is administered through a nasal mask. The patient inhales the mixture by breathing actively through his/her nose.

Conscious sedation is suitable for all patients of an orthodontic practice, both adults and children.

Conscious sedation allows the patients to undergo orthodontic procedures limiting the fear and anxiety that all patients experience when they enter an orthodontic office.



### IT IS NOT SUITABLE:

- DURING PREGNANCY,
- FOR PATIENTS WITH DRUG ADDICTIONS
- FOR PATIENTS SERIOUS PULMONARY INFECTIONS
- INDIVIDUALS WITH SERIOUS MENTAL ILLNESS.



MASTER FLUX PLUS must only be administered by specifically trained medical staff.



Do not use this device to administer general anaesthesia or as a part of or in combination with a general anaesthesia system.



The sale of this device is limited by law to doctors and orthodontists only.

## ATTENTION



Do not attempt to repair, modify or calibrate this device. Unauthorised repairs, modification or abuse of this device negatively affects its performance and invalidates the warranty.



Before each use make sure the gas supplies are connected correctly



The device administers drugs solely for conscious sedation



The contra-indications for the use of the drug are stated in the safety sheet and documents attached to the drug supply. If they are not provided in attachment, request it from the gas supplier.



Do not remove the label

**2****SAFETY**

**Use of the PULSE OXIMETER must be routine during conscious sedation.**  
**The meaning of the detected values:**

Saturation values O <sub>2</sub>	Hypoxia level
≥ 95%	No hypoxia
90-94%	Low-grade hypoxia
85-89%	Moderate hypoxia
84%	Serious hypoxia

**2.1 Safety marking**

The device complies with Directive 93/42 EEC as amended.  
 The declaration is provided in attachment to the device.

**2.2 Safety devices**

The device is fitted with safety devices:

- If the oxygen (O<sub>2</sub>) pressure drops, the delivery of nitrous oxide (N<sub>2</sub>O) is automatically shut off.
- An incorporated mixing system regulates the N<sub>2</sub>O so that there is always a minimum quantity of O<sub>2</sub> in the mixture of at least 30%.
- If the gas mixture flow is shut off, the patient will breathe air from the outside through a specific safety valve.
- If the flow changes direction, returning to the device, a one-way valve protects the patient from re-inhaling exhaled gases and from accumulations of carbon dioxide (CO<sub>2</sub>).
- The flow setting knob controls the overall flow; it automatically regulates the flow of oxygen and nitrous oxide according to the set percentage.
- The 'FLUSH' button allows high flows of pure oxygen to be delivered.
- The maximum delivery of nitrous oxide (N<sub>2</sub>O) is 70% of the total flow. The amount of oxygen (O<sub>2</sub>) can never drop below 30%.

**WARNINGS & USEFUL NOTIONS**

**DURING SEDATION IT IS ESSENTIAL TO BE PRESENT AT ALL TIMES, TO KEEP THE OXYGEN AND NITROUS OXIDE GAS FLOWS UNDER CONTROL BY CHECKING THE FLOW VALUES DISPLAYED IN THE FLOW COLUMNS AND THE FLOW CONTROL BOX.**

**2.3 Disposal**

Disposal of the packaging, the device and single parts of the device must be carried out in accordance with regulations in force in the country of use.

Do not dispose of the packaging materials as household waste.

The device does not contain electrical / electronic and contains no battery.

3

TECHNICAL DATA

POWER SUPPLY

Power supply pressure	3.5 bar $\approx$ 50 PSI (max 6 bar $\approx$ 87 PSI)
Maximum flow rate	10 NL/min. (litres per minute)

WEIGHT UNIT-MOUNTED MASTER FLUX PLUS:

Weight without cylinders	42 Kg
Weight with 5 Lt cylinders	63 Kg (empty cylinders)
Weight with 10 Lt cylinders:	81 Kg (empty cylinders)

CYLINDERS FOR UNIT-MOUNTED MASTER FLUX PLUS:

Maximum height	950 mm
Maximum diameter	140 mm

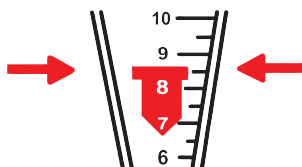
WEIGHT WALL-MOUNTED MASTER FLUX PLUS:

Weight of the flowmeter box	6.27Kg
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FLOW METER:

Accuracy gas flow	+/-10% flow indicated
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Flow rate is then measured against the flat top edge of the float, reducing parallax errors.



CONSUMPTION:

Below is an example of consumption, to be used as a theoretical reference

10 Lt MEDICAL OXYGEN CYLINDER  
CHARGED AT A PRESSURE OF 200 Bar

AVAILABLE VOLUME	2000 gaseous Litres
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10 Lt NITROUS OXIDE CYLINDER  
CHARGED WITH 7 Kg of LIQUID GAS

AVAILABLE VOLUME	4600 gaseous Litres
------------------	---------------------

BY SETTING:

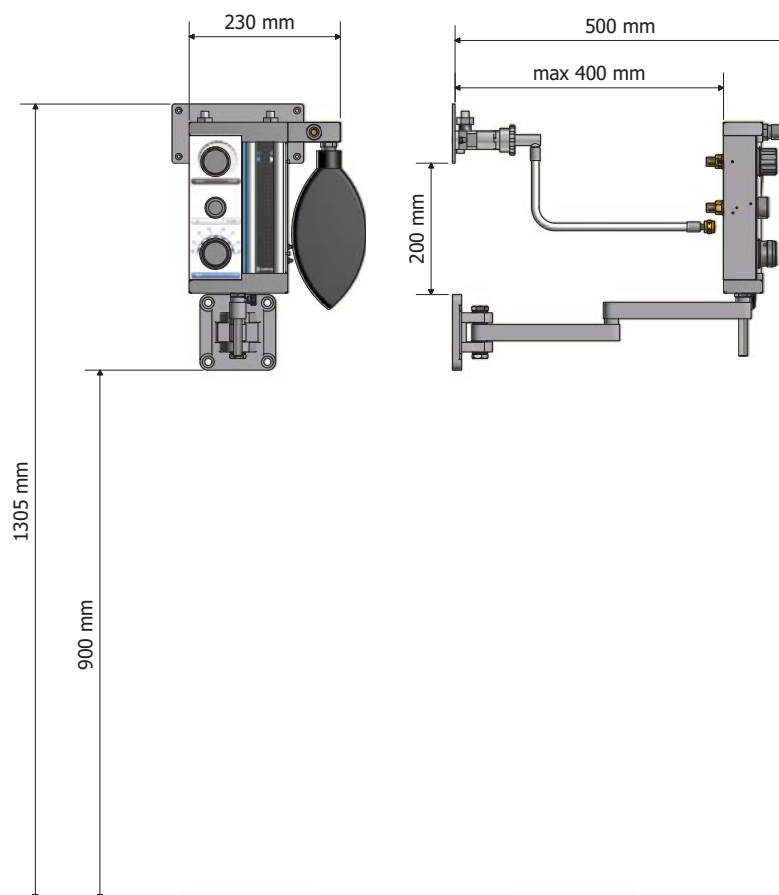
DELIVERY	10 NLt/min
MIXTURE	50 %

AUTONOMY:

OXYGEN	400 min
NITROUS OXIDE	950 min



**Figure 1**



**Figure 2**

## 04

## UNPACKING

The packing shall not undergo any shock and shall be handled with care avoiding letting it roll or fall.



The packaging shall be stored for the whole warranty period.  
The manufacturer does not accept returns deprived of their original packing.



Do not use appliances with clear damages due to the transport.



Remove the packaging and check the appliance condition.

The devices must be kept safe in a dry location and at a temperature between +5 / +40 °C.



**IT IS FORBIDDEN TO STACK MASTER FLUX PLUS UNITS**

## 05

## DESCRIPTION OF COMPONENTS

## AVAILABLE VARIATIONS:

UNIT-MOUNTED (*Figura 1*)

WALL-MOUNTED (*Figura 2*)

## PARTS

FIGURE	POSITION	Q.TY	CODE	DESCRIPTION
8	A	1		'FLOW' KNOB
	B	1		'FLUSH' BUTTON
	C	1		' % N2O ' KNOB
	D	1		02 FLOW RATE GAUGE
	E	1		N2O FLOW RATE GAUGE
	F	1	3MEDN0001	RUBBER BAG
	G	1		MASK CONNECTION NOZZLE
	H	1		NIPPLE N2O
	I	1		NIPPLE O2

3	1	1	SMFA144	PLASTIC COVER
	2	1	SMFA506	FLOWMETER BOX
	3	3	SMFA223	SPACER
	4	3	CM25021	M5 THUMB SCREW
	5	3	3MECQ0010	SPACER
	6	3	CM20015	WASHER
	7	3	CM25019	M6 THUMB NUT
	9	2	SMFA237	GAS EXTRACTION NOZZLE
4	10	1	SMFA313	PIN
	11	1	SMFA364	O2 TUBE
	12	1	SMFA365	N2O TUBE
	13	1	SMFA301	WALL-MOUNTED SUPPORT
	14	1	SMFA501	WALL PLATE
	15	1	CM30011	PIN SECURING KNOB
6	R1	1	1513A4	O2 REDUCER (ITA)
	R2	1	MF011ZMF	N2O REDUCER (ITA)
	L	1		VALVE
	M	1		PRESSURE GAUGE
5	17	1	MF820ZMF	COMPLETE CIRCUIT
	18	1	MF835ZMF	MASK 1 WITH FITTINGS
	19	1	MF836ZMF	MASK 2 WITH FITTINGS
	20	1	MF837ZMF	MASK 3 WITH FITTINGS
	21	1	MF838ZMF	MASK 4 WITH FITTINGS
		1	MF824ZMF	CIRCUIT CONNECTION TO ASPIRATOR
9	34	1	SMFA197	FILTER - SMFA260
	35	1		TUBE – SMFA199
	36	1		FITTING – SMFA257
11	29	1	1504/A OPZIONAL	SPIRAL TUBE - CM88051
	30	1		FITTING – SMFA278
	31	1		OXYGEN TUBE – CM84022
	32	1		RESUSCITATION BAG – 1025-2
	33	1		RESUSCITATION MASK – CM84014

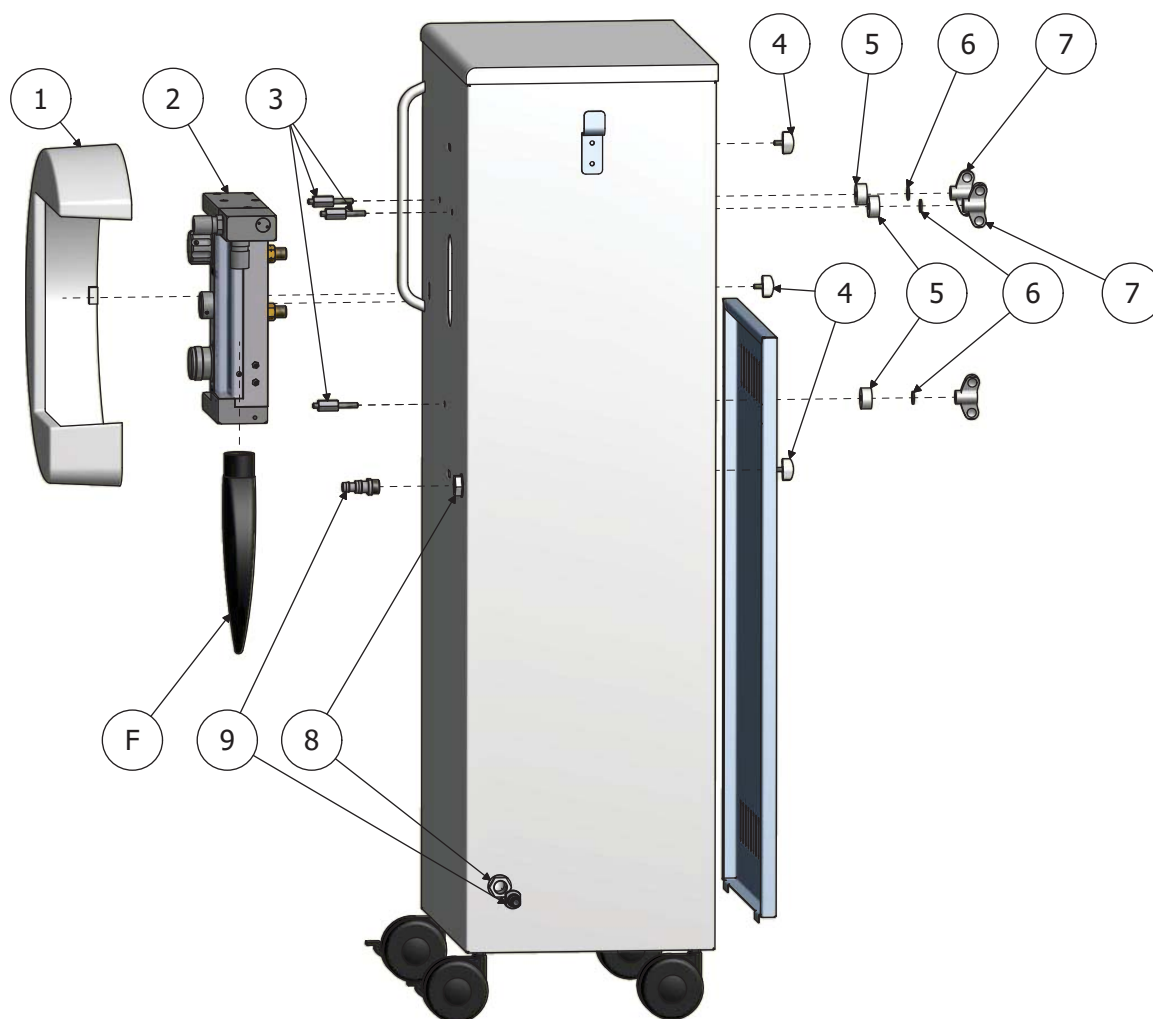
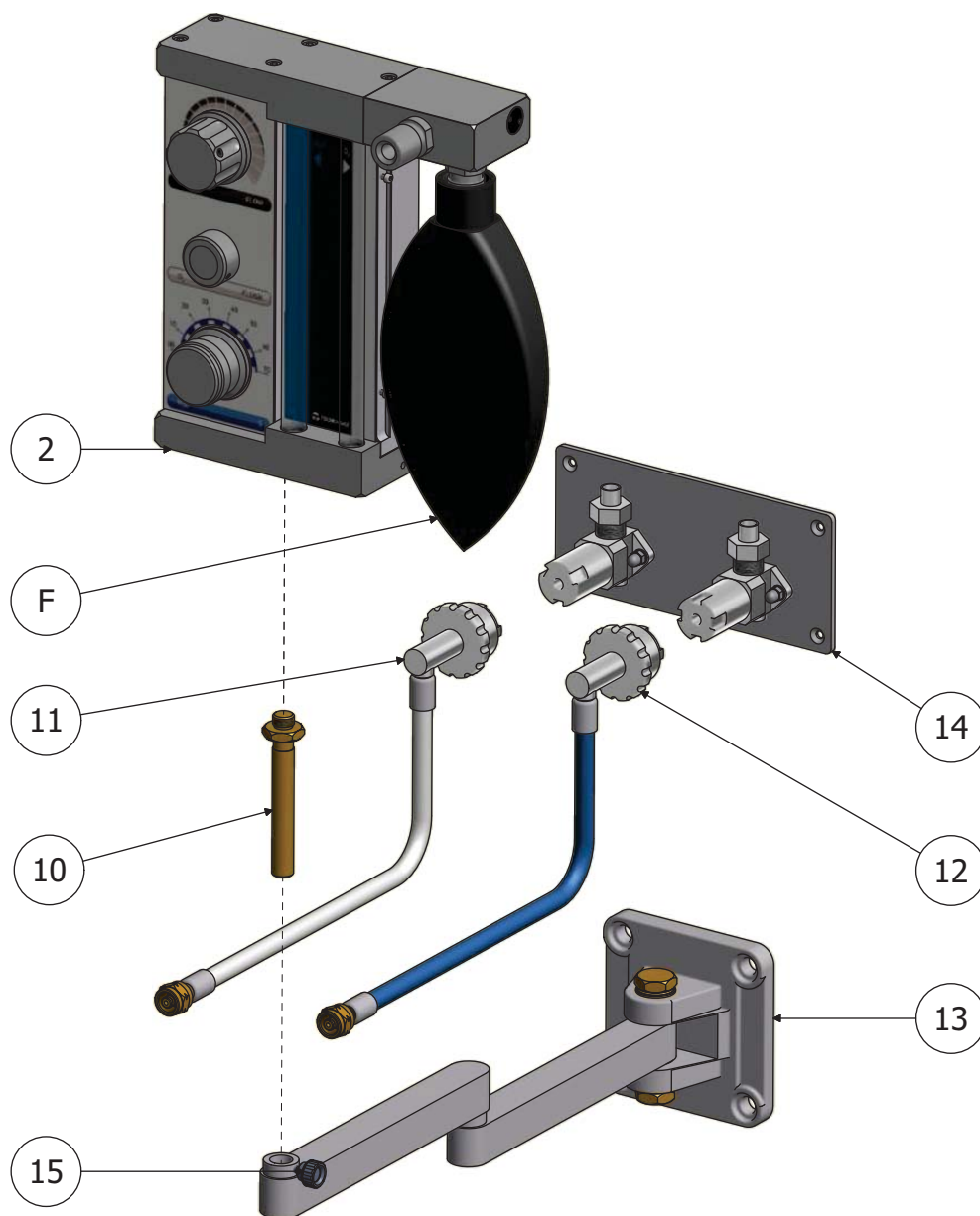


Figure 3



**Figure 4**

## 06

## INSTALLATION



Remove the packaging and check the conditions of the equipment.  
Do not use equipment that presents evident damage due to transportation.

**6.1 Installation of unit-mounted MASTER FLUX PLUS****FLOWMETER BOX INSTALLATION (Figure 3)**

Screw the 3 steel spacers **(3)** onto the flowmeter box **(2)**.  
Remove the protections from the flowmeter box supply nipples.  
Install the flowmeter box on the unit by inserting the steel spacers **(3)** into the relative holes on the unit, securing them to the unit using 3 plastic spacers **(5)**, 3 washers **(6)** and the three thumb nuts **(7)** supplied.

**FRONT COVER INSTALLATION (Figura 3 Pos 1)**

Position the plastic cover near the three holes on the unit.  
Attach the plastic cover by screwing on the three thumb screws **(4)** supplied.

**EXHAUST NOZZLE INSTALLATION**

If you are using the exhaled gas exhaust tube **(Figure 9 art SMFA197)**, screw the supplied nozzles onto the plastic fittings **(Figura 3 Pos 8/9)**.



Figure 5

**CYLINDER INSTALLATION (NOT SUPPLIED) (Figure 6)**

Attach the reducers to the cylinders (see instruction manual for reducers).

For **5 lit** cylinders install the shelf and attach it using the relative shelf stops.

For **10 and 14 lit** cylinders position the shelf on the bottom of the unit.

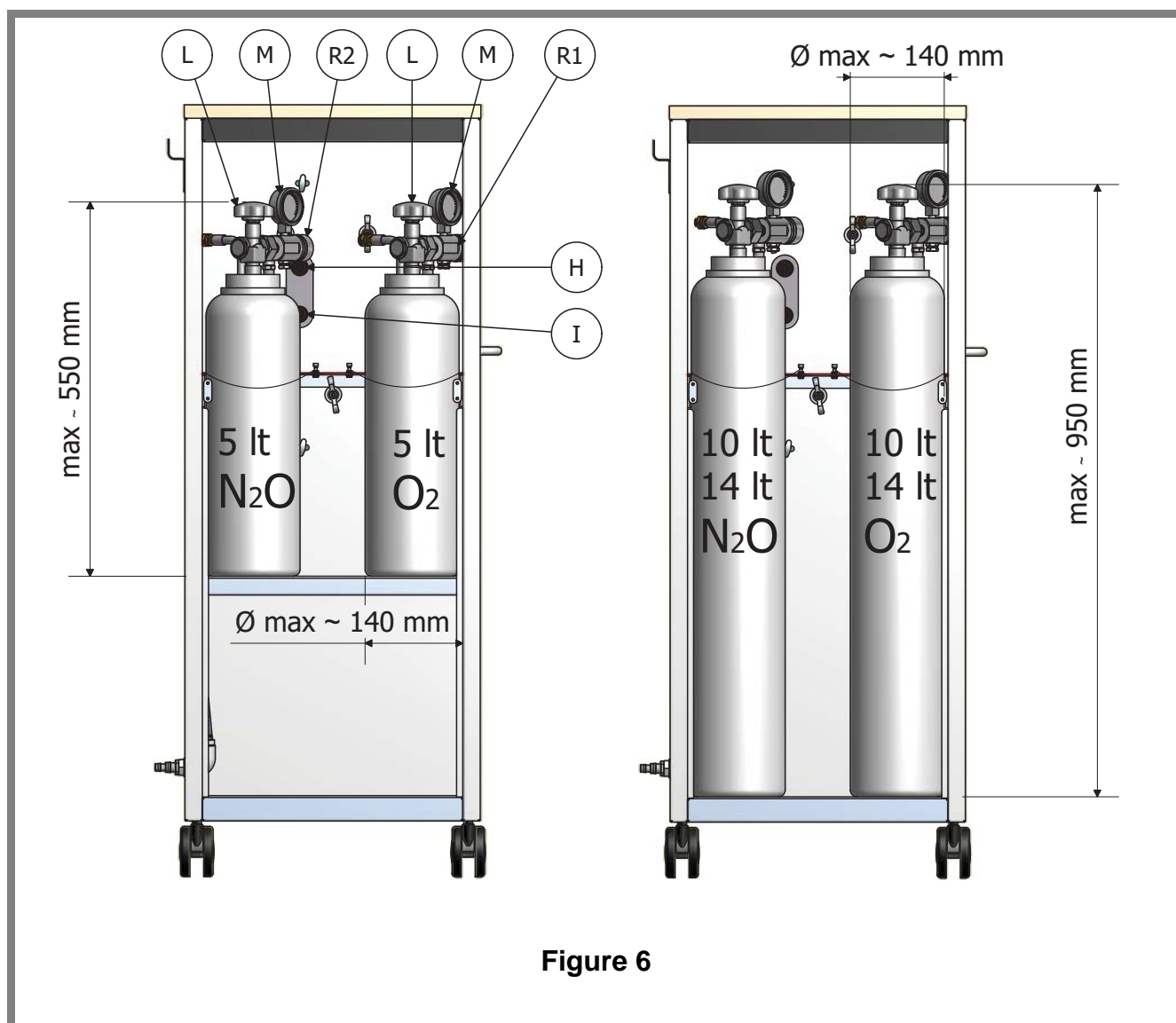
The reducer pressure gauges (**M**) must be placed in such a way that they are visible to the operator.

**Secure the cylinders to the unit using the relative chain or spring included in the supply.**

Screw the **O<sub>2</sub> reducer (R1)** tube end nut onto the flowmeter box supply nipple (**I**) (**RIGHT THREADING**).

Screw the **N<sub>2</sub>O reducer (R2)** tube end nut onto the flowmeter box supply nipple (**H**) (**LEFT THREADING**).

Close the rear door with the two magnets located on the top of it.



**Figure 6**

## 6.2 Installation of wall-mounted MASTER FLUX PLUS

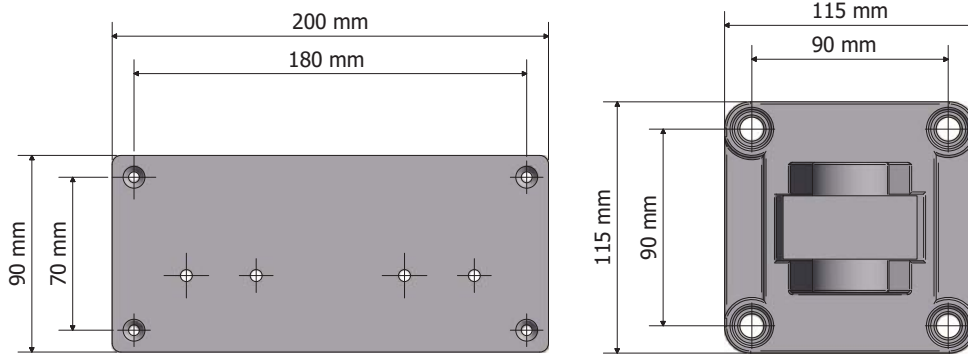


Figure 7

### (FIGURE 4)

Attach the MASTER FLUX PLUS **SUPPORT** to the wall **(13)** using 4 Ø14 mm M8 wall dowels.

Attach the MASTER FLUX PLUS **PLATE** to the wall **(14)** using 4 Ø 8(mm) wall dowels.

Screw the pin **(10)** onto the base of the flowmeter box.

Slot the pin into the end of the support **(15)**.

Lock the pin to the support using the relative threaded knob.

Screw the nut on the **N<sub>2</sub>O** tube onto the **N<sub>2</sub>O** flowmeter box supply nipple  
**(RIGHT threading)**.

Connect the nut on the **O<sub>2</sub>** tube to the **O<sub>2</sub>** flowmeter box supply nipple  
**(LEFT threading)**.

**Connect the free ends of the tubes to the wall outlets** (press the couplings and turn to lock the coupling to the outlet).

### NOTES ON THE CENTRALISED SYSTEM



Installation must be carried out by specialised technicians. The centralised system must be set up in compliance with regulations in force  
European Directive 93/42/EC

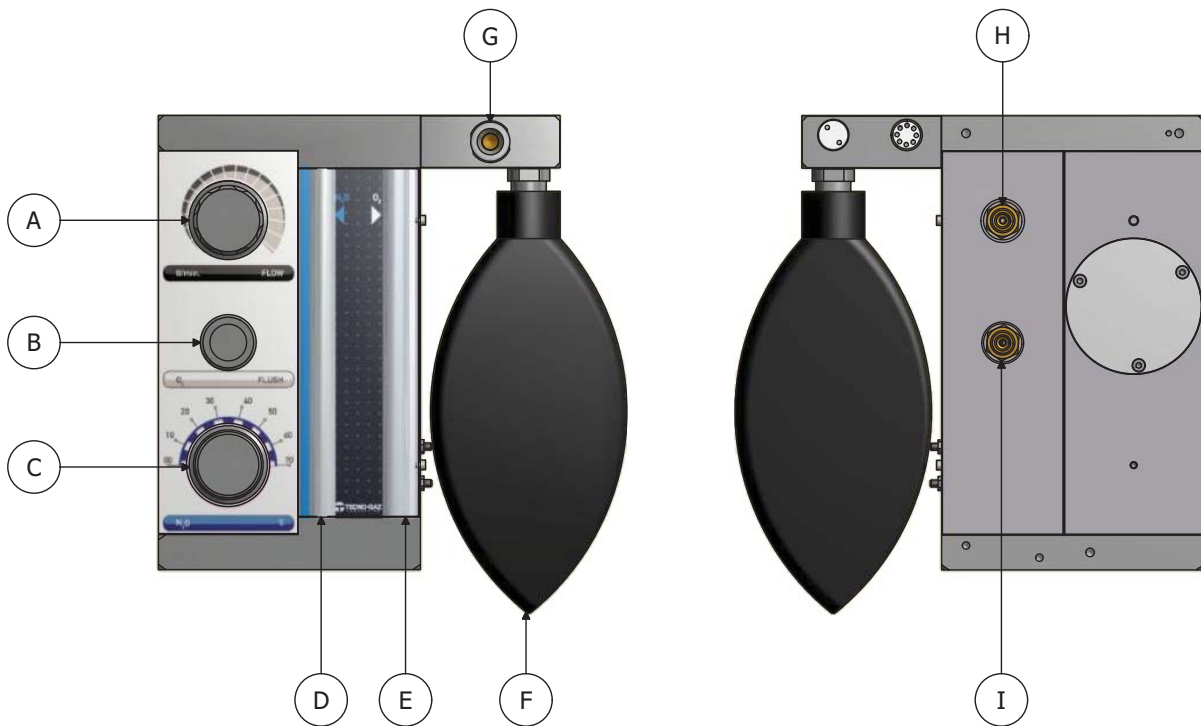
Connect the wall outlet to the equipotential point on the electrical system, with the supplied loop connectors.

The supplied reducers must be connected to the cylinders of the centralised system.

The outlet of the **N<sub>2</sub>O** reducer includes a flexible tube that is connected on one end to a male fitting with **1/4" G** threading for connection to the system.

The outlet of the **O<sub>2</sub>** reducer includes a flexible tube that is connected on one end to a male fitting with **1/8" G** threading for connection to the system.

The fastening plate is not supplied.

**6.3 Connecting circuits and accessories:****Figura 8****(Figura 8)**

Connect the Rubber bag **(F)** to the flowmeter box by pressing it onto the relative nozzle.

The mask kits are connected to the device by the nozzle **(G)**.

The gas exhaust tube will be connected in different ways, based on the type of gas evacuation system that is being used.

**(see 6.4 - EVACUATION OF EXHALED GASES).**

## **6.4 Evacuation of exhaled gases:**

To safeguard the work environment and the staff, the exhaled gases must be conveyed outside of the work environment.

Two systems can be used to discharge the gases externally:

- Direct connection to the outside of the office
- Connection to a surgical aspirator.

It is important to evaluate:

- Whether the aspirator is suitable for the evacuation of the gases (**N<sub>2</sub>O** and **O<sub>2</sub>**)
- The aspirator exhaust must be outdoors and ventilated.

**Make sure it is compliant with regulations in force in the country of use.**

### **Direct connection to the outside of the office**

#### **UNIT-MOUNTED MASTER FLUX PLUS**

Screw the nozzles (**Figure 3 Pos 8/9**) onto the unit.

Remove the supplied valve (**Figure 5 Pos 17**).

Connect the mask circuit gas exhaust tube to the nozzle (**Figure 3 Pos 9**).

Connect the gas evacuation spiral tube (**Figure 9**) to the nozzle (**Figure 3 Pos 8**) on the unit.

Connect the end of the spiral tube to the outside and make sure there is a final filter.

#### **WALL-MOUNTED MASTER FLUX PLUS**

Connect the gas exhaust tube to the mask circuit to the nozzle (**Figure 9 Pos 36**).

Connect the end of the spiral tube to the outside and make sure there is a final filter (**Figure 9 Pos 34**).



**Figure 9 (Art SMFA197)**

### **Connection to a surgical aspirator**

Connect the mask circuit gas exhaust tube to the supplied fitting (**Figura 5 Pos 17**).

Connect the fitting to the surgical aspirator tube (Ø11 mm).

### **Valve adjustment**

Turn the perforated ring nut on the valve (**Figura 5 Pos 17**) until the holes close.

Start gas delivery by setting ~10 l/min.

Start the surgical aspirator by setting the minimum aspiration value.

Observe the bar (**Figura 8 Pos F**).

Turn the perforated ring nut on the valve gradually opening the holes until the bag reaches its ideal condition of **“HALF FULL HALF EMPTY”**

### **ATTENTION**

**By changing the flow delivery it may be necessary to adjust the correct aspiration flows of the exhaled gases.**

7

OPERATION OF THE APPLIANCE

7.1 Control panel

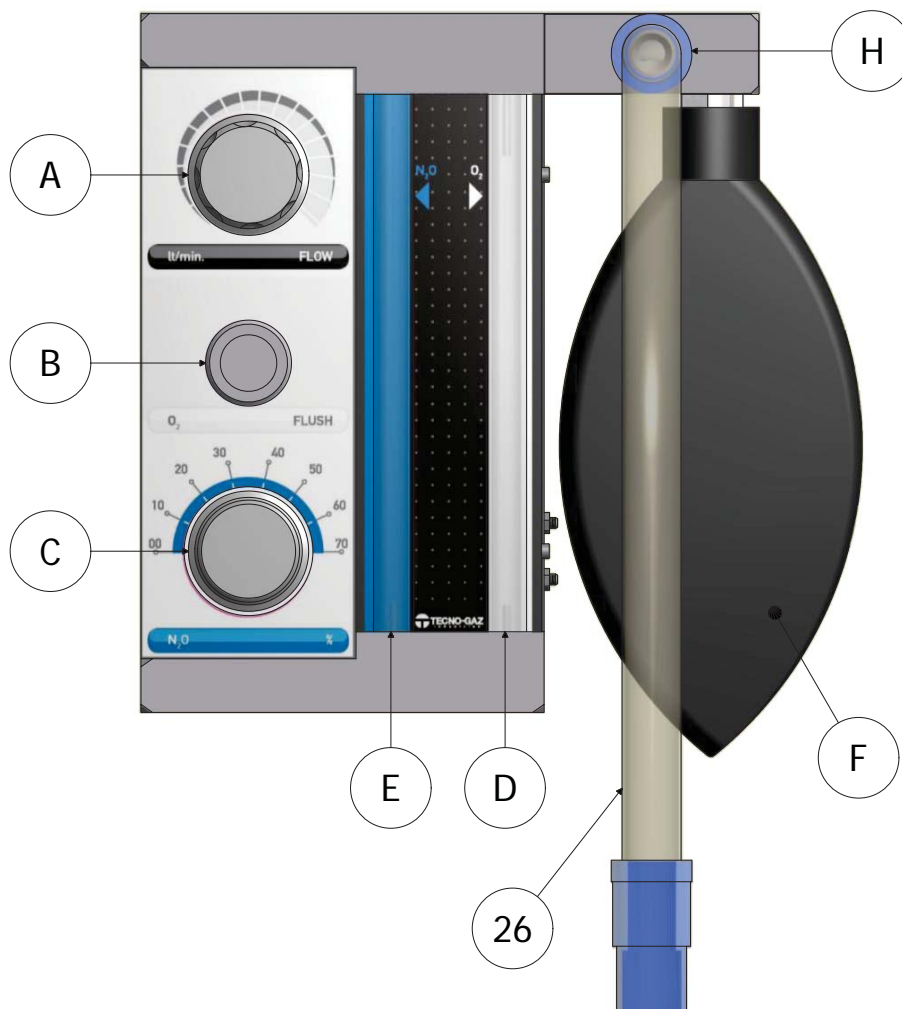


Figure 10

CONTROL KEYS (FIGURE A10)

A	FLOW DELIVERY ADJUSTMENT
B	EMERGENCY BUTTON 'FLOW'
C	ADJUSTMENT OF % OF NITROUS OXIDE MIXTURE

CONTROL DEVICES

E	PURE NITROUS OXIDE FLOW
D	PURE OXYGEN FLOW
F	BAG (CHECK - SUITABLE FLOW TO PATIENT)



## 7.1 Instructions for use

Before using the unit-mounted MASTER FLUX PLUS version, lock the wheels that have brakes on them by pressing the tabs downwards.

If it is necessary to move the equipment (for example from one room to another), disengage the brakes on the wheels, grip the relative handle and **pull the device avoiding impact and sudden movements that could cause it to fall accidentally.**

**Only move and place MASTER FLUX PLUS on flat and smooth surfaces.**

**Make sure the cylinders are stable and secured correctly.**

**Close the cylinders before moving the device.**

**Do not use the handles to lift the device.**

When using MASTER FLUX PLUS in its wall-mounted version, it is possible to move and position the flowmeter box as required by gripping the relative handle.

**DO NOT LEAN ON AND DO NOT REST OBJECTS ON THE FLOWMETER BOX (BOTH WALL AND UNIT-MOUNTED VERSIONS).**

**DO NOT FORCE THE ARM OF THE WALL-MOUNTED VERSION.**

**SLOWLY open the valves on the O<sub>2</sub> and N<sub>2</sub>O cylinders turn the valves counter-clockwise (Figure 6 Pos L).**

Read the pressure on the pressure reducer pressure gauges, (see TECHNICAL DATA) to estimate the autonomy of the oxygen cylinder.

Choose the most suitable mask for the patient.

Place the mask on the patient fitting it on well around his/her nose.

Secure the mask to the loop on the back of the head rest of the dental chair.

Make sure that the tubes for the mask circuit do not get bent or chocked.

The operator must be stationed in such a way that he/she can visually control:

- **The rubber bag**
- **The flow gauges**



**During the procedure constantly check the flows displayed on the columns (Figure 10 Pos D, E).**



**Before leaving the patient, even briefly, shut off sedation.**

### Figure 10

Make sure that the %N<sub>2</sub>O knob (Pos C) index displays 0.

**Using the FLOW knob (Pos A) administer a flow of 3 Lt/min of oxygen for 30 seconds.**

**INSTRUCT THE PATIENT TO BREATHE IN AND OUT FROM THE NOSE.**

Use the **FLOW knob (Pos A)** to adjust the flow.

Gradually adjust the flow, check the status of the bag (**Pos F**) which must take on a shape that we will define as **half full half empty**.

Make the patient breathe for at least one minute before **evaluating the flow**.

Once the **ideal flow** and the pulmonary capacity of the patient have been determined, adjust the gas elimination valve as explained in paragraph 6.4 '**Evacuation of exhaled gases**'.

**It is possible to change the percentage of nitrous oxide using the % knob (Figure 10 Pos C).**

**The columns display the amount of Nitrous oxide and Oxygen that is delivered in litres/min.**

**The sum of the two flows is the amount initially set based on the patient's respiratory capacity.**



PROCEDURE SPECIFICATIONS FOR CHILDREN:	PROCEDURE SPECIFICATIONS FOR ADULTS:
<p><b>The flow for CHILDREN is approximately 4-5 Lt/min.</b></p> <ul style="list-style-type: none"> <li>- Turn the 'FLOW' knob clockwise to set the flow at 4/5 l/min and instruct the patient to breathe for ~1 minute.</li> <li>- Check the flow setting on the O<sub>2</sub> flow column <b>(Figure 10, Pos E)</b>.</li> <li>- The bag must be <b>half full half empty</b>.</li> </ul>	<p><b>The flow for ADULTS is approximately 6-8 Lt/min.</b></p> <ul style="list-style-type: none"> <li>- Turn the 'FLOW' knob clockwise to set the flow at 6-8 l/min and instruct the patient to breathe for ~1 minute.</li> <li>- Check the flow setting on the O<sub>2</sub> flow column <b>(Figure 10, Pos E)</b>.</li> <li>- The bag must be <b>half full half empty</b>.</li> </ul>

Using the **% N<sub>2</sub>O knob (Figure 10 Pos C)** administer nitrous oxide, set it at **20%**, wait a few minutes and see how the patient reacts.

If the patient is not sedated gradually increase the percentage (ex 30%).

**THE PERCENTAGE OF NITROUS OXIDE ADMINISTERED TO THE PATIENT MUST BE: THE LOWEST POSSIBLE LEVEL TO OBTAIN GOOD SEDATION (BASE LINE).**

**Once the patient's BASE LINE has been established, note down the FLOW value and the %N<sub>2</sub>O on his/her medical record, this data will be useful for future procedures.**

	<p><b>THE GAS MIXTURE THAT IS ADMINISTERED TO THE PATIENT: MUST NOT EXCEED 70% NITROUS OXIDE MUST NOT BE LOWER THAN 30% OXYGEN</b></p>
	<p><b>If the patient reports symptoms of discomfort (nausea, dizziness, head ache) immediately stop administration.</b></p> <p><b>The "FLUSH" button (B - figure A10) is located on the device.</b></p> <p><b>By pressing this button the bag will fill with oxygen.</b></p> <p><b>By pressing the bag we will administer the patient with elevated quantities of pure oxygen.</b></p>

### **END OF TREATMENT**

The treatment will end when the orthodontist has finished the procedure on the patient.

To end treatment:

- **Shut off the NITROUS OXIDE supply by turning (counter-clockwise) the %N<sub>2</sub>O knob (C – figure A10) to the end stop (0%).**
- **Administer (as at the beginning of treatment) a flow of 3 Lt/min of oxygen for 2 minutes**
- **Shut off the OXYGEN supply by turning (counter-clockwise) the FLOW knob (A – figure A10) to the end stop.**
- **Loosen the loop that secures the tube and take the mask off of the patient.**

**Before signing the patient out keep him/her under observation (waiting room) for ~5÷10 minutes.**

**The doctor may deem it necessary to increase the observation period.**

### **CLOSING THE CYLINDERS**

**Once the doctor has finished using the device it is IMPORTANT to close the cylinders. Close the valve on the Nitrous oxide cylinder (N<sub>2</sub>O), (turning it clockwise). Close the valve on the Oxygen cylinder (O<sub>2</sub>), (turning it clockwise).**

## RESUSCITATION WITH MASTER FLUX PLUS

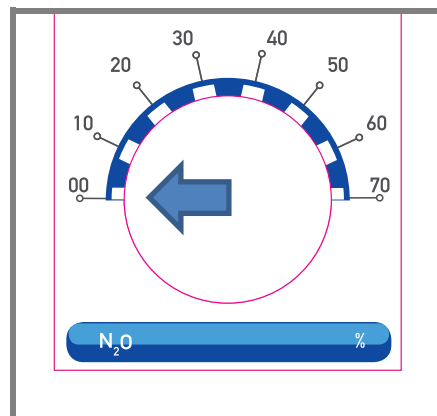
KIT Art. 1504/A (Not included) (Figure 11)



RESUSCITATION procedures WITH MASTER FLUX PLUS must be carried out with the **%N<sub>2</sub>O** knob that regulates the percentage of nitrous oxide in position 0%.

**SLOWLY** open the oxygen cylinder valve (turn the valve counter-clockwise); make sure that the nitrous oxide cylinder is closed (turn the valve clockwise).

Take the MASTER FLUX PLUS mask kit off by sliding it off of the spiral tube.



Insert the relative fitting (30) into the spiral tube.

Remove the bag (F) and put the cap (T).

Connect the end of the oxygen treatment tube (31) to the fitting (30).

Connect the other end of the oxygen treatment tube to the bottom stud of the resuscitation bag (32) through the relative coupling.

Connect the mask (33), to the valve on the resuscitation bag.

Ruotare la manopola **FLOW** per erogare Ossigeno al flusso desiderato, **CONTROLLARE I FLUSSI VISUALIZZATI**.

Turn the **FLOW** knob to deliver Oxygen at the required flow rate, CHECK THE FLOWS DISPLAYED ON THE FLOW COLUMNS.

**The nitrous oxide column E=0**

**The oxygen column D= SET FLOW**

Place the mask on the patient.

Act on the resuscitation bag in accordance with the resuscitation instructions.

Once use of the device is finished it is **IMPORTANT** to close the valve on the Oxygen cylinder (by turning it clockwise).

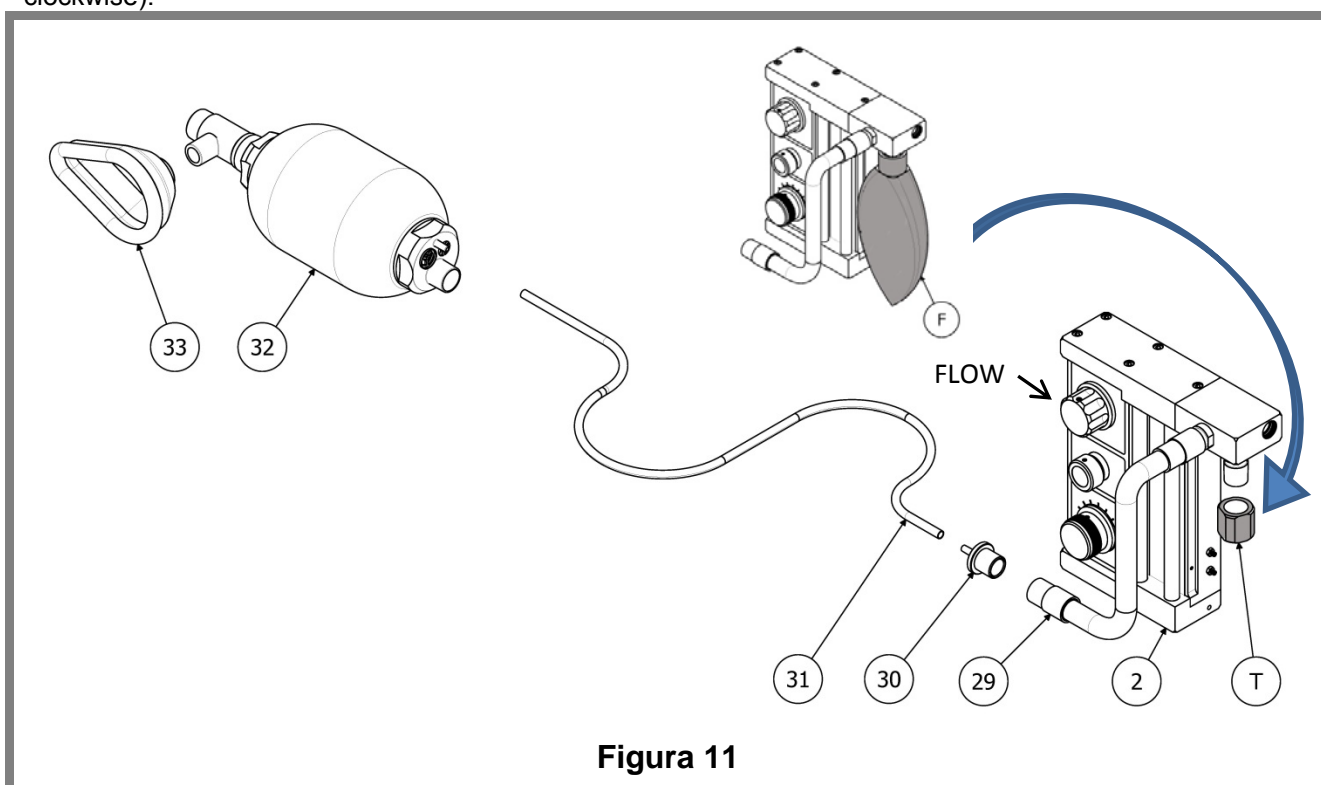


Figura 11

**8****MAINTENANCE****CHANGING THE CYLINDERS**

If cylinder pressure is very low ~10÷20 bar, proceed with changing or re-charging the cylinders.

**Slowly close the valves (turn counter-clockwise).**

Discharge the system by opening it from the “FLOW” and ‘%’ knob, then close it back up.

Take the pressure reducers out, keeping them in a covered and clean location. (See installation)

**Re-charging, checking and periodic inspection of the cylinders must be carried out by specialised companies in compliance with regulations in force in the country of use.**

**8.1 Cleaning**

**Use detergents that are not aggressive to plastic**

**Clean the surfaces of the device with a dry cloth.**

**Before and after use clean, wipe or sterilise the parts that come into contact with the patient or his/her breath.**

**Cleaning table for MASTER FLUX PLUS parts**

FIG/POS	MATERIAL	CODE	DESCRIPTION	STEAM STERILISATION	STERILISATION USING ETHYLENE OXIDE	DISINFECTION USING QUATERNARY SALTS
3 / F	LATEX	3MEDN0001	RUBBER BAG	NO	OK	OK
3 / 2	VARIOUS	SMFA506	FLOWMETER BOX	NO	NO	NO
11 / 29	NON-TOXIC PVC	CM88051	SPIRAL TUBE	NO	OK	OK



**THE STANDARD KIT IS DEPENDING ON THE MODEL**

## 8.2 Scheduled maintenance



Before using the device make sure that the BAG, the SPIRAL TUBE and the MASK KIT are intact.



If MASTER FLUX PLUS has not been used for over a month make before an operational check.

MASTER FLUX PLUS is complete with security parts that are regulating the correct check of the device. Anyhow we recommend to check the functioning of the device doing the periodical standard tests.

- Function test: check that the device is working properly accordingly the instructions listed in par. 7.1 'Instruction for use'
- Check the floating balls in the graduated columns; they must be able to rotate on themselves and move free in the measuring cone when regulating the flow. Be also sure that the set values are stable.
- Check the button FLUSH: press it and check that the N2O floating ball is going to 0 (zero), oxygen on the other hand must reach max providing level. Leave o2 FLUSH button: the O2 supply must be interrupted.
- Check the hold of N2O supply. Choose gas supply at 50% concentration. Close the bottle as if the bottle would be empty. Check that after some seconds the N2O supply is completely stopped.
- Check for leaks: Close the "FLOW" knob . Open the valves on the Oxygen and Nitrous oxide cylinders and read the values provided by the pressure gauges. Close the cylinder valves. Wait ~ 5 minutes and read the new values displayed on the pressure gauges. If the values are the same, the device does not have any leaks.



Use original parts and accessories only

### PRESSURE REDUCERS

FOLLOW THE INSTRUCTIONS PROVIDED IN THE MANUALS OF THE DEVICES.

**SITUATIONS THAT MAY ARISE DURING OPERATION:**

Problems	Possible causes	Solution
It does not deliver oxygen	Empty cylinder	Re-charge the cylinder
	Pressure reducer not working	Change the reducer
	Problems inside the flowmeter box	Have the device checked by Tecno-gaz
It does not deliver nitrous oxide	No oxygen	Charge the cylinder
	Pressure reducer not working	Change the reducer
Nitrous oxide gauge pointing upwards	Incorrect manoeuvre	Clear the 'FLOW' knob to zero Restore correct operation
	Internal problem	Have the device checked by Tecno-gaz

## 10 PROCEDURES FOR AFTER SALE SERVICE

In case of damage or for overhaul contact directly the phone service of:

TECNO –GAZ S.p.A.

Strada Cavalli 4, 43038, Sala Baganza, Parma, ITALIA.

[www.tecnogaz.com](http://www.tecnogaz.com)

<b>PHONE</b>	+39 0521 83.80
<b>FAX</b>	+39 0521 83.33.91
<b>@</b>	info@tecnogaz.com

The service staff shall decide whether the return to the manufacturer or the intervention of a technician is necessary; after checking the device the service staff will draw up a quote to be submitted to the distributor which, on its turn, will submit it to the final customer for subscription.

Upon reception of the subscribed quote the device will be repaired and then shipped back within the times indicated on the quote form.

In case of shipment of the device to the manufacturer follow the compulsory indications below:

- Use the original packaging, in case you do not have it anymore, use a suitable packaging. The goods shipment risk is charged to the sender.
- Only send the flow meter box and the pressure reducers, placed individually in clean cellophane.  
The reducers must not be contaminated (detergents, alcohol, oils ...). If assistance does not consider the packaging to be suitable, the reducers will be scrapped.
- Write down and include into the package a document describing accurately the anomaly or the service required.
- Free port shipment is required, otherwise the supported transport costs will be charged.

All no original packages we will receive shall be disposed of.

The machine will be shipped back in its original packaging (the cost for the packaging will be charged to you) through the customer's forwarder.



**A****ACCESSORIES**

<b>MF820ZMF</b>	<b>COMPLETE CIRCUIT</b>
<b>MF835ZMF</b>	<b>MASK 1 WITH FITTINGS</b>
<b>MF836ZMF</b>	<b>MASK 2 WITH FITTINGS</b>
<b>MF837ZMF</b>	<b>MASK 3 WITH FITTINGS</b>
<b>MF838ZMF</b>	<b>MASK 4 WITH FITTINGS</b>
<b>MF824ZMF</b>	<b>CIRCUIT CONNECTION TO ASPIRATOR</b>



**GLI ARTICOLI IN DOTAZIONE VARIANO IN BASE ALLA CONFIGURAZIONE DEL DISPOSITIVO**