

MAINTENANCE

In order to keep the features which guarantee the CE certification a proper service must be done.

ROUTINE CHECK/PREVENTIVE MAINTENANCE

As agreed by buyer, preferably before or after filling procedure:

1. Check the filling connection and take care of keeping clean it
2. Check leakage on outside of pressure reducer. In case of defect send the product to Airflow or authorized buyer to do such a maintenance
3. Check all threads for leakages using a solution of water and soap. In case of defect send the product to Airflow or authorized buyer to do such a maintenance
4. Check the accuracy of measure of flow. In case of defect send the product to Airflow or authorized buyer to do such a maintenance
5. Check the gauge pressure calibration. In case of defect send the product to Airflow or authorized buyer to do such a maintenance

PROGRAMMED MAINTENANCE

Inside the product there are parts in direct contact with medical gas which could hard on. Time interval to do servicing to such parts depends on the use degree. San-O-Sub recommends such a maintenance of more used devices after 5 years the first use. Such a servicing can be done by San-O-Sub or authorized buyer to do such a maintenance.

CLEANING

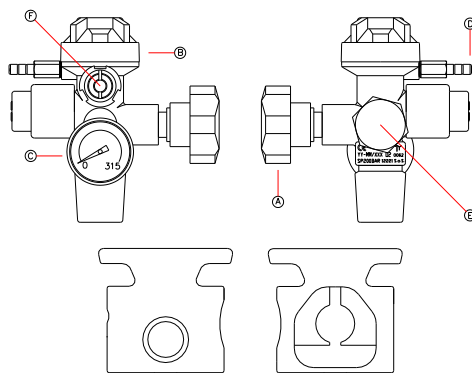
The device must be kept properly clean. For general cleaning of the external part use a wet cotton cloth with water and soap. Rinse with clean water.

TIME LIFE

The life time of the device is 10 years.

DESCRIPTION OF INTEGRATED REDUCER VALVE

- A) Hand wheel on /off valve
- B) Regulation flow
- C) High pressure gauge
- D) Link oxygen flow-out
- E) Cap for recharge tank
- F) Plug UNI or AFNOR (optional)



TRACEABILITY:

SAN-O-SUB ITALIA warrants the traceability of the product through a batch number punched on the body and an advanced computerized system.

WARRANTY:

SAN-O-SUB ITALIA warrants every single product for 2 (two) years from the date printed on the making lot. The warranty will be settled next to SAN-O-SUB ITALIA. The warranty is not valid for imprudent or incorrect use.

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EQUIPMENT FOR GASES

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OXYGEN INTEGRATED REDUCER VALVE WITH INTEGRATED RESIDUAL VALVE TECHNICAL DATA AND USE



ATTENTION: READ THOSE INSTRUCTIONS BEFORE TO USE; THE INOBSERVANCE CAN MAKE EXPLOSION OR HEAVY DAMAGE. PERSONAL NOT AUTHORIZED OR NOT TRAINED DOES NOT USE THIS PRODUCT.

CE 0123, directive 93/42 CE

π 0062, directive 99/36 CE

Technical data:

| | |
|----------------------------|--|
| Inlet thread (to tank): | model 12221: 25E (conical), UNI, 0-15 l./min model 12222: 25E (conical), UNI, 0-5 l./min model 12223: 17E (conical), UNI, 0-15 l./min model 12224: 17E (conical), UNI, 0-5 l./min |
| Kit plug UNI (optional): | model 12067, G1/4" |
| Kit plug AFNOR (optional): | model 12064, G1/4" |
| Pression IN: | 10 ÷ 200 bar (1.000 ÷ 20.000 kPa) |
| Pression OUT: | 3.5 bar (2.800 kPa) |
| Flow adjustable: | model 0-15 l./min: 1, 1.5, 2, 3, 4, 6, 9, 12, 15 lt./min. model 0-6 l./min: 0.5, 1, 1.5, 2, 2.5, 3, 4, 5, 6 lt./min. |
| Thread IN: | According to national standards |
| Thread OUT: | hose |
| Accuracy: | ±10% o ± 0,5 l./min. |
| Overflow valve | calibrated during assembly |
| Residual pression: | 3 ÷ 5 bar (300 ÷ 500 kPa) |
| Gauge: | 0 ÷ 315 bar (0 ÷ 31.500 kPa), class 2.5, Ø 40 rear, thread G1/8" |

DESCRIPTION:

Integrated pressure reducer valve and flowmeter model RO.118 are manufactured in brass EN 737/3 chromed externally and assembled carefully according to the model. All the models have pressure relief valve preset from the manufacturer and cannot be tampered. The product is to be used in the control and distribution of medical gases. The reducer is suitable for assembly on medical cylinders in accordance with existing standards. 25E or 17E and with all the norms that rule gas distribution. Before use check that the reducer is suitable for the same medical gas indicated on the cylinder. The reducer is to be used with max pressure of 232 bar and in case of preset pressure, outlet is 4 bar. In case of the reducer contain residual pressure system it is necessary use the adapter connection to open no return valve placed into re charge system.

TO IDENTIFY THE PRODUCT:

On the body of valve-group there are marked::

- Name or chemical symbol of gas in use
- Years and month of making and lot's number
- Connection type - tank
- Producer mark
- Maximum inlet pressure
- CE and π logo , number of bureau certification

INTEGRATED VALVE OXYGEN TANK FITTING INSTRUCTIONS:

Minimum equipment:

Pneumatic wrench

Torque meter wrench up to 300 Nm

Adapter from torque meter to integrated valve

1. Close cylinder into pneumatic wrench
2. Check connection thread of cylinder and valve that must be cleaned from any trace of GREASE, OIL or DUST because those materials can make a real danger of FIRING or EXPLOSIONS.
3. Place 2 or 3 turns of Teflon tape on the thread of the valve
4. Place deep tube on the bottom of thread valve connection.
5. Screw the integrated valve by hand until hard force resistance
6. Go on with operation with torque meter wrench with adapter following the instructions: 120 Nm for 17E thread, 200 Nm 25E thread / UNI EN ISO 13341. For the aluminium cylinders the torque must be respectively 80 and 100 Nm.



ATTENTION: take care to don't manage high pressure gauge during this operation.

RECHARGE TANK WITH INTEGRATED VALVE



ATTENTION: refilling only with pure oxygen

1. Close the cylinder into a cylinder holder or rank to the wall with a chain.
2. Check that the seal is present on the medical valve. Remove the seal and check that the thread is not damaged.
3. Check that the high pressure gauge shows zero
4. Remove the cup on the re-filling port (UNI 11144/2 for Italy) and check the presence and integrity of nylon seal. If it's damaged you must substitute it. In any case make the substitution of the seal every 6 months.
5. Turn on the valve.
6. Pressurize the re-filler station until max pressure of 200 bar.
7. Turn off slowly the valve max with clockwise rotation up to 3-4 Nm torque.
8. Check HP manometer that show max oxygen high pressure.
9. Depressurize the re-filling station.
10. Remove the hose's re-filling.
11. Screw plug on re-filler port with 40-50 Nm torque.

USE

Before to use the reducer follow these procedures:

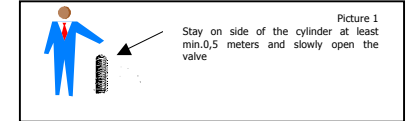
1. Check that the complete cylinder must be in good condition and Fasten the cylinder on the wall or use an appropriate trolley.
2. Check that there are not any trace of grease, oil, dust or dirty.
3. Check the presence of re-filling port plug and complete good condition of the integrated valve
4. There are not any trace of damages caused from falling down.

If all of this conditions are verified, you can go on to use.

1. Connect at the outlet of regulator the medical device that you require by means of rubber tubing, checking that they support the outlet pressure of regulator and that the medical gas is compatible.
2. Stay at the side of the cylinder and open slowly the valve turning anticlockwise the hand wheel of the unit.



ATTENTION: opening quickly the valve may cause auto combustion of the internal components.



3. Check that the manometer shows the oxygen pressure on the tank and there are no leakages from pressure relief valve. In case of leakage stop the use of regulator, close the cylinder and return for maintenance
4. Turn clockwise the hand wheel of index flow meter and select litres/ min: oxygen flow starts
5. At the end of therapy close the hand wheel valve with a torque about 3 or 4 Nm
6. To wait until pressure manometer shows zero and close index flow meter with anticlockwise rotation.

PRECAUTIONS FOR USE WITH OXYGEN: INCORRECT USE MAY RESULT IN SERIOUS INJURY OR DEATH

1. Make particular attention when using medical oxygen gas min. 99,5% and with a sealed cylinder valve. Max working pressure must be 200 bar.
2. **Fix oxygen cylinder to a wall** or on a trolley. **Never** use tank expired.
3. If you note any abnormality during use such as leakage, abnormal noise, loss of oxygen from relief valve, freezing, or faulty gauge, etc.
4. Suspend use and ask immediately for assistance from your local agent.
5. Verify the integrity of the unit, the valve and washer of valve connection. For more safety, substitute after every use. **DO NOT use** near heating source or bare flame. **DO NOT use oil.** USE pressure regulator with care. **DO NOT contaminate** with dust or greasy hands. CHECK at least every 6 months or at intervals as agreed by user (hospital or health company).

Check leakage on outside of pressure reducer following point 3 above mentioned.

Check all threads for leakages using a solution of water and soap.

Check the accuracy of measure of flow. In this case it is best to seek technical help from your local agent.