



DISPOSABLE CONTAINERS FOR SUCTION APPLICATIONS **FLOVAC®**

CONTAINER WITH HYDROPHOBIC VALVE

flow-meter™
ENGINEERING REVOLUTION IN MEDICAL TECHNOLOGY

FLOVAC® DISPOSABLE CONTAINERS SYSTEM FOR THE COLLECTION OF SUCTIONED FLUIDS

The FLOVAC® disposable containers system is designed and manufactured for “high flow and high vacuum” applications in medical suction field to collect the organic fluids. This system is the best expression of safety, practicality and simplicity of use, both for the operators and for hospital plants and environment, thanks to the use of absolutely reliable manufacturing materials. The hermetic lid sealing makes the disposal procedure particularly hygienic, simple and safe for the patient and for the staff charged to remove and handle the device. The replacement operations are very simple, reducing to the minimum the plant stops in each application. Moreover, **flow-meter™** designed and developed a complete range of accessories aimed at covering the most of hospital applications.

FLOVAC® DISPOSABLE CONTAINERS TWO VERSIONS:



LINER

A disposable soft liner bag in 3 sizes hermetically welded to a rigid lid. This bag has to be placed in the related FLOVAC® system PC reusable and autoclavable support rigid container.



CANISTER

A complete disposable system. A single-use rigid canister in 3 sizes and a lid coupled with spring clips to prevent any accidental opening and to give hermetical sealing.

PRACTICALITY
SAFETY
SIMPLICITY



LINER AND CANISTER VERSIONS ARE:

Available in three sizes: 1.0 L, 2.0 L and 3.0 L.

Supplied (option) in package with 1.8 m hose or with 1.8 m hose and vacuum breaker.

Equipped with ports allowing the connection to the suction line (female), to the patient (male connection), plus the **TANDEM** port, to increase the collection capacity by using two or more containers connected in cascade.

Equipped with an anti-reflux, hydrophobic and antibacterial filter **GORE® Microfiltration Media for Surgical Suction** to protect the suction equipment or the vacuum plant. This filter acts also as an overflow valve, deactivating the suction when the container is full.

TANDEM PORT

HOW TO INCREASE THE CAPACITY OF SUCTIONED FLUIDS COLLECTION BY CONNECTING IN CASCADE MORE CONTAINERS

According to the fluid volume expected to be suctioned, the system gives 3 options of sizes. In case the volume is exceeding the maximum size available, it is possible to increase the capacity through the **TANDEM** port. This allows the cascade connection of two or more containers, increasing dramatically the system collection capacity.



TECHNICAL CHARACTERISTICS

LINER

Soft bag material: LDPE
(Low Density Polyethylene).
Lid: HDPE
(High Density Polyethylene).
Individually packed in blisters.

CANISTER

Jar material: High-Clarity PP
(High Clarity Polypropylene).
Lid: HDPE
(High Density Polyethylene).
Connection between jar and lid through
pressure seal with permanent fastening
spring clips.
Jar storage using concentric cone
system with 4 lower blocking ribs.



FLOVAC® HYDROPHOBIC

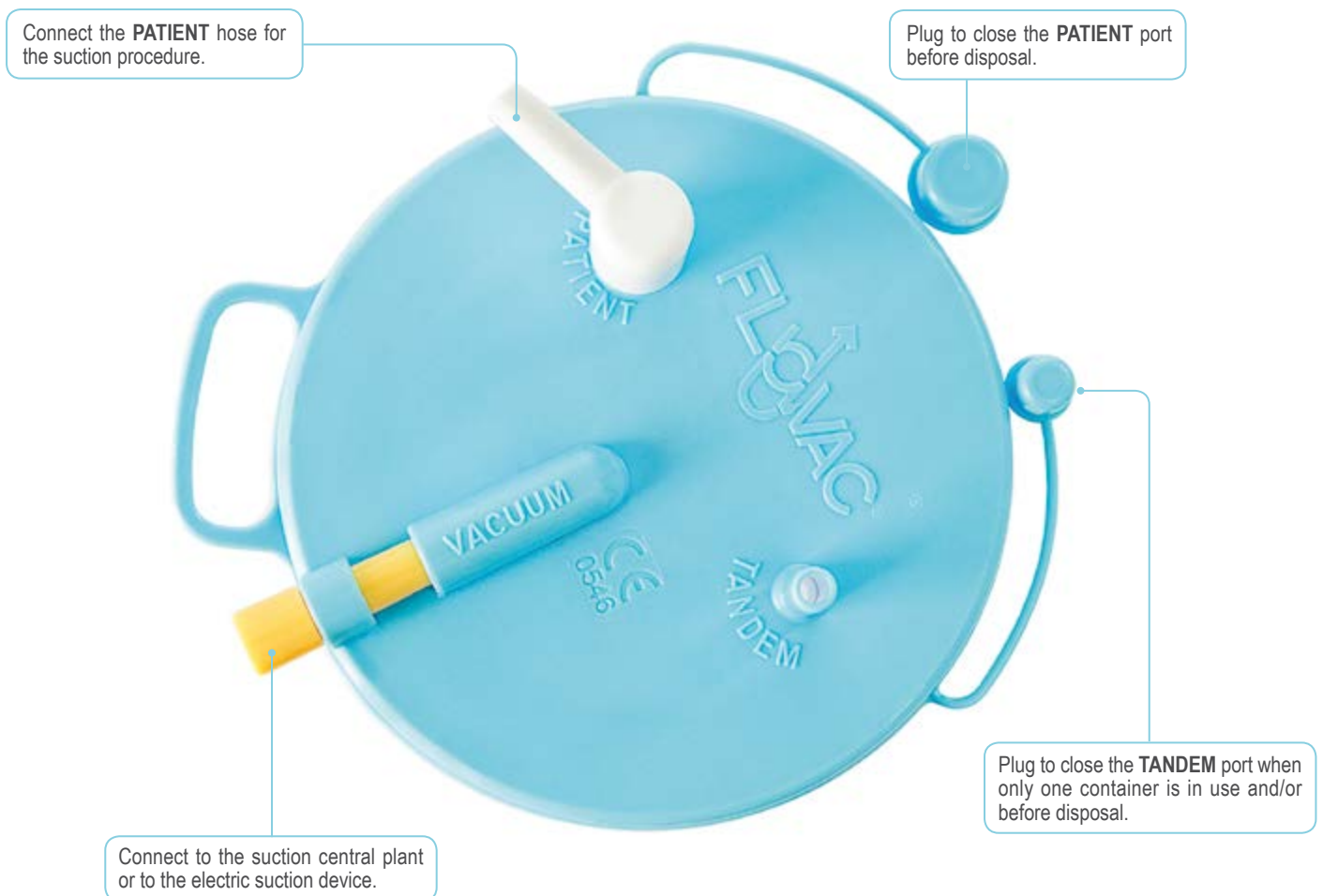
Lid material	HDPE (High Density Polyethylene)
VACUUM port	conic female connection
PATIENT port	male connection Ø 14.0 ÷ 15.5 mm (Ø 8.0 ÷ 9.2 mm with elbow connector)
TANDEM port	male Ø 8.0 ÷ 9.2 mm connection
Maximum flow value	42 L/min. at -750 mbar (-570 mm Hg)
Jar external scale graduation	50 ml intervals
Patient hose size	inner Ø ≥ 6 mm (recommended Ø 7.5x11.2 mm - L=2.5 m max)
Vacuum hose size	inner Ø ≥ 6 mm - L=1.8 m max

FILTER	main characteristics
Filtration efficiency (typical)	>99.999995% with particle size of 0.1µ
Membrane	100% expanded PTFE GORE® Microfiltration Media for Surgical Suction
Prefilter	microfiberglass
Support	non-woven PE/PES



THE FLOVAC® LID

The lids are obviously different between the **LINER** version, having the collection bag welded and integrated, and the **CANISTER** version, where the lid is a cover able to get complete sealing when firmly placed and connected onto the jar. In both **FLOVAC®** versions all connections and handling devices are concentrated on the lid. **PATIENT** and **VACUUM** ports (one male and the other female, to avoid any misconnection), the **TANDEM** port, the handle to help the bag removal after use (**LINER** version) and for easy transport, two plugs, connected to the lid through integrated plastic wirings, to close and seal the **PATIENT** port and the **TANDEM** port after use. In case of suction with one jar only, this **TANDEM** port must be plugged before use. The male **PATIENT** port fits a removable 90° elbow with connection diameter 8.0÷9.2 mm for normal suction operations. In case of suction with expected collected fluids containing bone fragments it is enough to remove the elbow getting access to the direct vertical connecting port having diameter 14.0÷15.5 mm. The lower part of the lid fits the special hydrophobic filter and its conical protection.



THE FLOVAC® JAR

The jars too are obviously different between the **LINER** version, where the **PC** reusable jar has the function to support the disposable bag, and the **CANISTER** version, where the jar, when fastened with the lid, becomes a complete sealed container to be disposed after the use. In both versions a graduated scale printed outside the jar allows an easy monitoring of the volume of the suctioned fluid. The jars, both in **LINER** and **CANISTER** versions, have a conical shape to get small size packaging, to save transport costs and space during the storage. To avoid jars getting stuck or unexpected inner scraping, four ribs inside the bottom area stop properly the jar position when one inside the other.

LINER



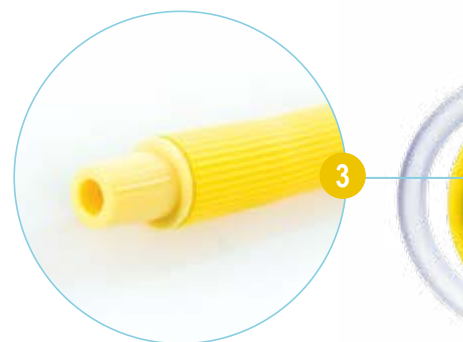
CANISTER

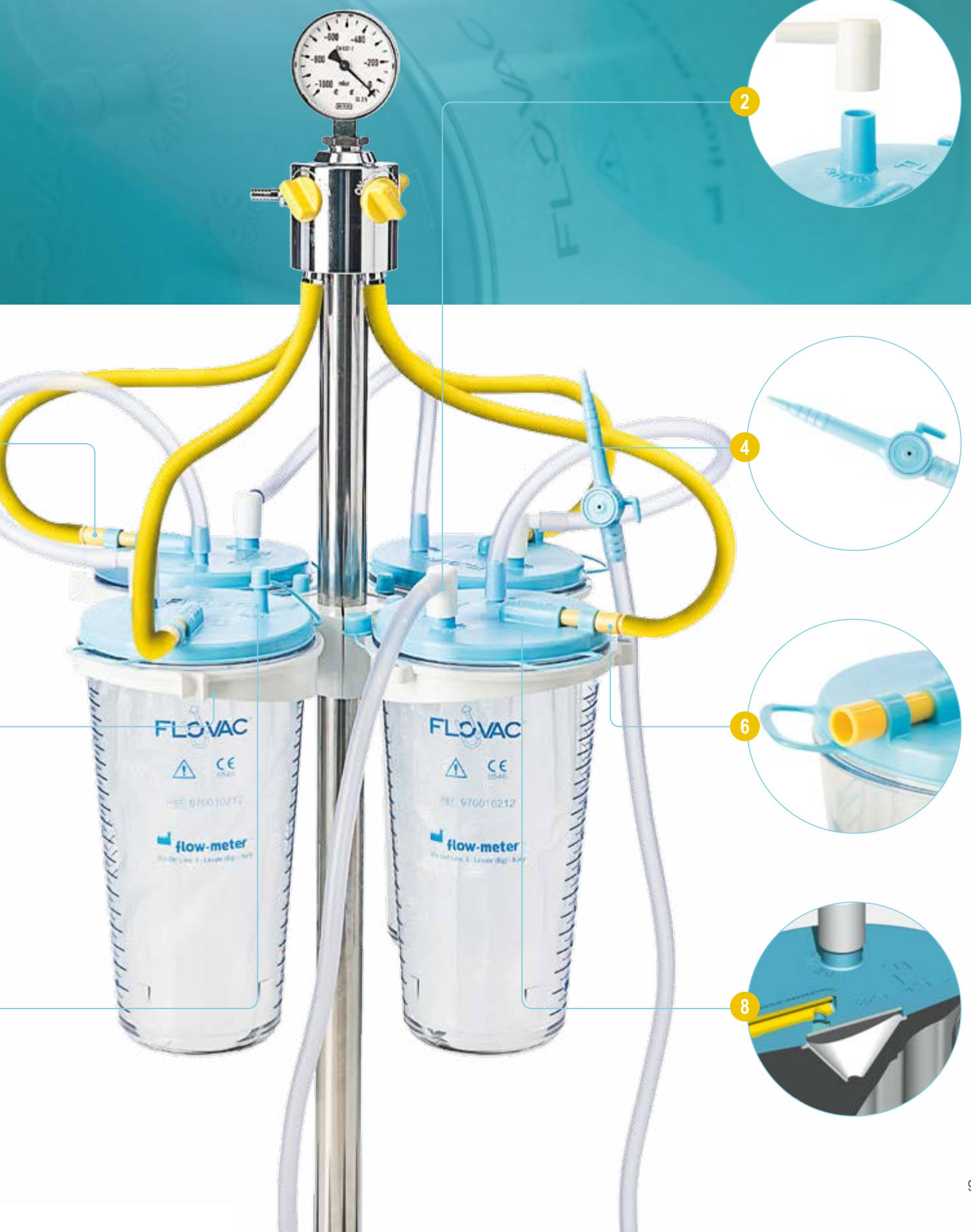


FLOVAC® HYDROPHOBIC IN DETAIL



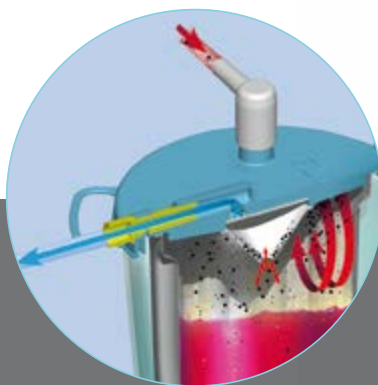
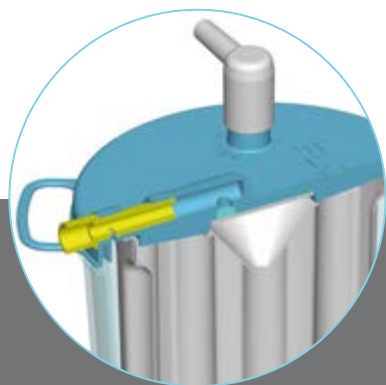
1	CANISTER lid fixing - The FLOVAC® container lid in the CANISTER version fits 5 spring clips to grant a permanent and safe fastening to the rigid jar to prevent any leakage and the accidental opening. Never try to reopen the container when lid placed and clips fastened. An eventual second closing cannot guarantee sealing and accidental opening.
2	PATIENT port - The PATIENT port allows the suction of fluids containing bones fragments, once the elbow connector is removed.
3	VACUUM connector - The vacuum source coming from the plant or from an electrical suction machine must be connected to the VACUUM port through a simple PC autoclavable connector fitting a suction hose, for easy, simple, fast and safe FLOVAC® container connection and disconnection.
4	Suction kit - The full FLOVAC® collection containers range is also available in option with a 1.8 m disposable suction hose, or 1.8 m hose plus disposable vacuum breaker.
5	Support ring - The FLOVAC® support ring is the same for the 2 versions, LINER and CANISTER , the 3 sizes 1, 2, 3 liters and the different fitment: wall, rail, trolley. A spring clip integrated in the external diameter of the ring allows the suction tube to be easily fixed in to avoid obstructions.
6	VACUUM port - This connection to the vacuum source is conical to guarantee a perfect contact sealing, to get simple connection and removing and “female” to avoid any misconnection with the PATIENT “male” port. This possibility exists in case of new FLOVAC® system installations or when new health staff starts practicing with the system. The different ports connection avoids this possibility.
7	TANDEM port - The TANDEM port allows the connection in cascade of many containers, each one having its suction source. A plug integrated in the lid can close and seal this port in case of use of one single container.
8	The FILTER - The FLOVAC® HYDROPHOBIC disposable containers fit in the lid a hydrophobic filter GORE® Microfiltration Media for Surgical Suction acting as an overflow valve and giving full antibacterial, anti-foaming and electrosurgical smoke protection.





SAFETY IN DETAIL WHY HYDROPHOBIC FILTER AND HOW DOES IT WORKS?

The **FLOVAC® HYDROPHOBIC** filter is made of 3 layers having antibacterial, smoke filtration and hydrophobic functions. The filter **GORE® Microfiltration Media for Surgical Suction** stops the suction when wet because the fluid reaches the maximum collection level. In normal suction conditions the filter works with the maximum of efficiency, granting a bacterial protection towards the hospital vacuum plant or other suction sources. It becomes like an impenetrable barrier, when wet, stopping the suction also when foams or surgical smokes have been suctioned, getting contact with the filter. **GORE® Microfiltration Media for Surgical Suction** is a trademark of W. L. Gore & Associates, Inc.



CONTAINER FLOVAC® HYDROPHOBIC

A special hydrophobic filter **GORE® Microfiltration Media for Surgical Suction** stops the suction when the fluid reaches the maximum collection level, assuring in the meantime a complete hospital vacuum plant bacterial protection during the normal suction.

MEMBRANE FILTER

The filter **GORE® Microfiltration Media for Surgical Suction** is the best answer to grant hygiene and safety for patients and operators in the medical suction field.



GELLING KIT

The gelling kit gives further safety to an highly efficient system. It is a special absorbing powder having an efficient germicidal action and transforming liquids in a semi-solid mass. This grants handling with higher safety for operators charged to clean, handle and transport potentially infected materials.

This process allows to absorb and incorporate all liquids suctioned in the **FLOVAC®** containers and to prevent dangerous contamination risks for the health staff in case of biological fluids accidental leakage. The correct necessary quantity of gelling powder is supplied in small water-soluble pouches, already inserted into the container bag in **LINER** version, or supplied in 50 pieces boxes for use in **CANISTER** version. In this case one single gelling bag needs to be placed into the container before fastening the lid. When suction is made with collection systems using prefilled gelling kit, **LINER** or **CANISTER** versions, it is not recommended to use the containers connected in **TANDEM**. For applications in **TANDEM**, the gelling powder is available in 500 g. bottles with funnel/doser so that to be poured into the **FLOVAC®** containers by the operators after the use and before disposal.



ACCESSORIES FLOVAC®

DISPOSABLE CONTAINERS



Reusable support jars (**LINER** version) 1.0 L, 2.0 L, 3.0 L in polycarbonate, autoclavable.



Support ring for **FLOVAC®** container with 25x5 mm hook (standard) with 30x5 mm hook with 41x4 mm hook with 45x5 mm hook.



ON-OFF tap with or without control vacuum gauge, for fitting **FLOVAC®** container support ring.



25x5 mm slide wall plate (standard) 30x5 mm slide wall plate 45x5 mm slide wall plate.



Bracket for 30x10 mm rail in technopolymer with 25x5 mm slide.



Reusable polycarbonate connector to supply the **VACUUM** port.
25 pieces/box



Hose Ø 7.5x11.2 mm - L=0.38 m with connector to supply the **VACUUM** port.
50 pieces/box



Hose Ø 7.5x11.2 mm - L=0.38 m for **TANDEM** connection.
50 pieces/box



Disposable **VACUUM** breaker.
50 pieces/box



Hose Ø 7.5x11.2 mm - L=1.8 m with disposable **VACUUM** breaker.
100 pieces/box



Specimen container.
10 pieces/box



Gelling powder in 500 g. bottles with funnel/doser.
10 bottles/box



Special gelling powder bag for all sizes
of **CANISTER FLOVAC®**.
50 pieces/box

ACCESSORIES FLOVAC® DISPOSABLE CONTAINERS



4-places trolley for **FLOVAC®** container with 4 support rings, ON-OFF taps and vacuum regulator.



4-places trolley for **FLOVAC®** container with 4 support rings, ON-OFF taps and side fitting vacuum regulator with safety jar.



4-places trolley for **FLOVAC®** container with 4 support rings, and handle.



4-PLACES TROLLEY

4-places trolley for **FLOVAC®** container
with 4 support rings, ON-OFF taps
and control vacuum gauge.



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