

FLC VAC®








DISPOSABLE CONTAINERS SYSTEM
FOR THE COLLECTION OF SUCTIONED FLUIDS
WITH MECHANICAL VALVE

flow-meter™
ENGINEERING REVOLUTION IN MEDICAL TECHNOLOGY

FLOVAC® disposable containers are 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.

Practicality, Safety, Simplicity granted by:

-  **Disposable and closed system** to prevent any contamination to the plant, to the patient and to the medical staff.
-  **Different ports size** to avoid any connection mismatch.
-  **Easy identification of the ports** thanks to color code and ports function engraved on the lid.
-  **Anti-reflux system** to prevent patient and operator to come in touch with contaminated fluids in case of spillage through the ports happening during the hose disconnection. An optional non-return valve on the **PATIENT** port is also available for additional safety in the most critical applications.
-  The **mechanical valve** works as a shut-off valve and stopping the suction when the container is full. The floating valve is supplied in combination with an antibacterial filter giving further protection towards the hospital vacuum plant or any other suction equipment.



CERTIFICATIONS

All medical devices manufactured by **flow-meter™** respect and comply the requirements of Regulation (EU) MDR 2017/745, and meet the technical specifications imposed by national and international reference Standards.



FLC·VAC®

2 versions

LINER

soft bag hermetically welded to a rigid lid to be used with its reusable support jar



CANISTER

single-use rigid canister coupled with a lid hermetically fixed on it



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 a mechanical valve and antibacterial filter to protect the suction equipment or the vacuum plant. This system acts as an overflow valve, stopping the suction when the container is full



COMPLETE FLOVAC® LINE WITH MECHANICAL VALVE

flow-meter™ offers a structured range of disposable collection containers, providing different capacities and configurations.



FLOVAC®

practicality **safety** *simplicity*

from
powder



to gel

FLOVAC® LINER

The **FLOVAC® LINER** consists of a soft bag hermetically welded to a rigid lid. **LINERS** are available in 4 capacities and they work when inserted in the related PC reusable and autoclavable rigid containers.

LINERS can be supplied in different configurations: liner only and liner with prefilled gelling kit.

The **FLOVAC® LINER** has a soft but extremely resistant bag, allowing an easy extension by the operator, highly simplifying the insertion of the same into the supporting jar while assembling the system. This action is definitively important for safety and efficiency of the **LINER** for suction applications.

A regular adherence of the **LINER** to the inner surface of the supporting jar avoids the mechanical stress on the bag generated by the **VACUUM** and allows a measurement accuracy on the graduated scale and a correct intervention of the overflow system.



The supporting jars 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. A graduated scale printed on the supporting reusable jar allows an easy monitoring of the volume of the suctioned fluid.

AVAILABLE CAPACITIES	1.0 L - 1.5 L - 2.0 L - 3.0 L
SOFT BAG MATERIAL	LDPE (Low Density Polyethylene)
LID	HDPE (High Density Polyethylene)
REUSABLE JAR GRADUATION INTERVAL	50 ml
MAXIMUM SUCTION DEPRESSION	-950 mbar/5 min.
Individually packed in blisters	



Soft and resistant bag made in LDPE (Low Density Polyethylene) tested to resist to accidental fall and to the heaviest conditions.



FLOVAC®

- Sacchetto per contenitore di fluidi aspirati
- Collection liner for fluids suction canisters
- Poche de recueil pour bocal pour fluides aspirés
- Flüssigkeitenabsaugbeutel
- Bolsa para el recipiente de succión de fluidos
- Σάκος για δοχείο αναρρόφησης υγρών
- Bolsa para frasco de fluidos aspirados
- Jednorazový vak na sekret

FLOVAC® è un marchio di Flow Meter S.p.A.



2000ml

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flow-meter™
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The **FLOVAC® LINER** is individually packed in a blister giving all the indications of size, lot number, expiry date and production date. The individual packaging, besides providing protection and hygiene of the single device until its opening and use, also gives evidence of an intact and perfectly preserved product and facilitates the distribution of the individual units in the different hospital departments.



All sizes are also available with pre-filled gelling powder to grant further safety.



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When **CANISTER** is in use, it is also possible to jellify the suctioned liquids by inserting a gelling powder bag into the jar before fastening the lid.

A graduated scale, with 50 ml intervals, printed on the jar allows an easy monitoring of the suctioned volume.

FLOVAC



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FLOVAC® CANISTER

The **FLOVAC® CANISTER** is a complete disposable system. It consists of a single-use rigid canister coupled with a lid hermetically fixed on it thanks to spring clips preventing any accidental opening.

The **FLOVAC® CANISTER** when fastened to the lid by the operator, becomes a complete sealed container to be disposed after the use.

CANISTERS are available in 3 capacities (1.0 L - 2.0 L - 3.0 L).



To avoid jars getting stuck or unexpected inner scraping, **CANISTERS** are equipped with four ribs inside the bottom area stopping properly the jar position when one inside the other.

AVAILABLE CAPACITIES	1.0 L - 2.0 L - 3.0 L
JAR MATERIAL	High-Clarity PP (High Clarity Polypropylene)
LID	HDPE (High Density Polyethylene)
JAR GRADUATION INTERVAL	50 ml
Connection between jar and lid through pressure seal with permanent fastening spring clips	
Jar storage using concentric cone system with 4 lower blocking ribs	



Spring clips to grant a permanent and safe fastening to the rigid jar by the operator.





practicality

both for the operators and for hospital plants and environment, thanks to the use of absolutely reliable manufacturing materials. The different ports size avoid any connection mismatch.

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The lid

In detail

The lids are 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 by the hospital staff.

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 mechanical valve with antibacterial filter and its protection.



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

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



Detail of the mechanical valve.

OVERFLOW VALVE

mechanical float type

FILTER

antibacterial HEPA microfiberglass Air Filter

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 4 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.

Main accessories for TANDEM connection

TANDEM

hose connection for containers.



Vacuum "T" connection for **TANDEM** system (for wall and rail **TANDEM** applications only).



TROLLEY

Connection in cascade of two or more devices to increase the collection capacity



RAIL APPLICATION

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Through **continuous product** development and a constant search for reliability to guarantee the safety of patients, caregivers and the hospital environment, **flow-meter™** has developed **complex production systems** that, starting with individual components, can now produce collecting devices of exceptional quality very competitively.

safety

In detail

FLOVAC® mechanical



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.



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.

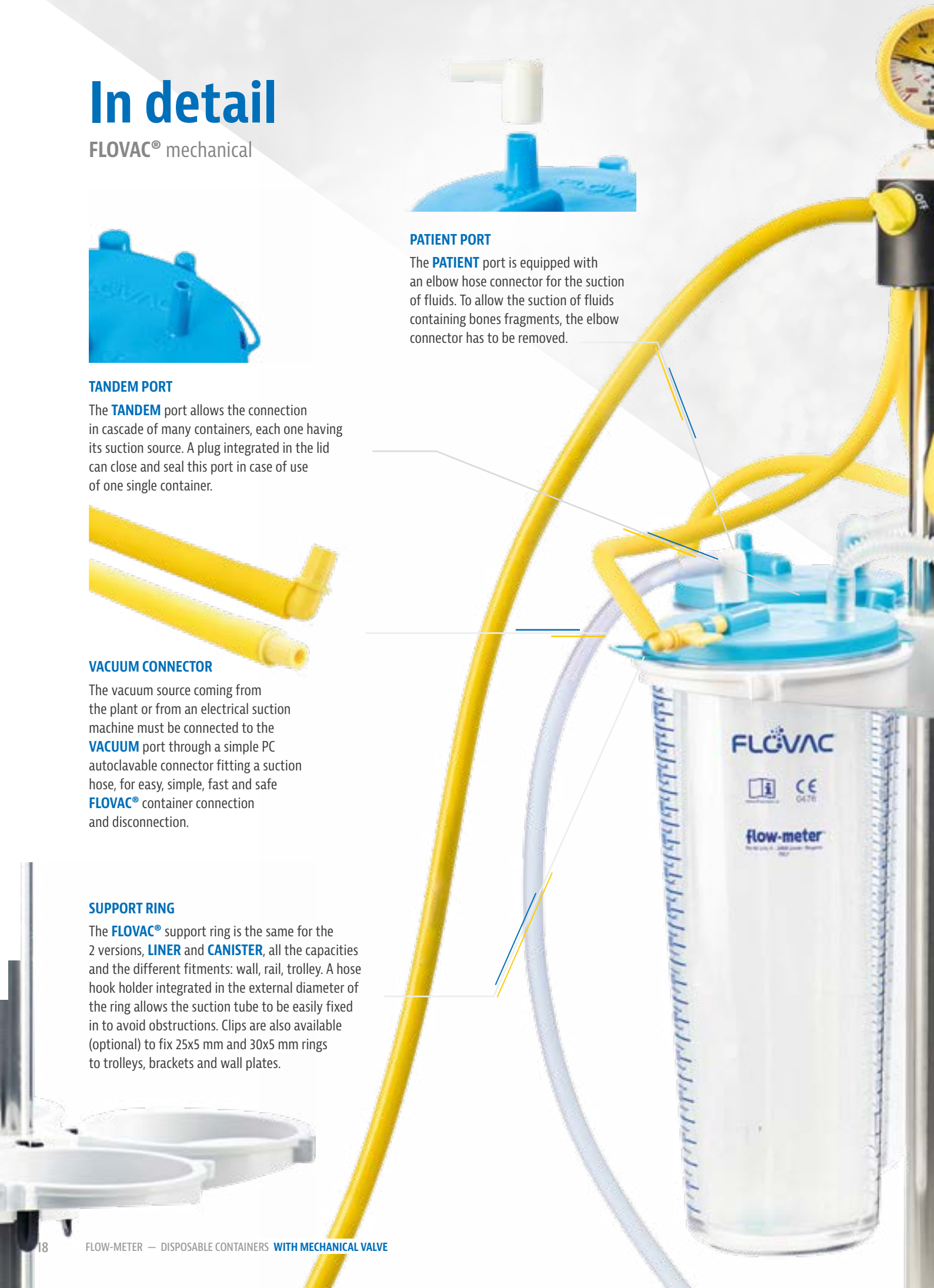
SUPPORT RING

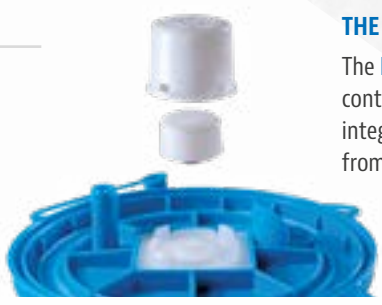
The **FLOVAC®** support ring is the same for the 2 versions, **LINER** and **CANISTER**, all the capacities and the different fits: wall, rail, trolley. A hose hook holder integrated in the external diameter of the ring allows the suction tube to be easily fixed in to avoid obstructions. Clips are also available (optional) to fix 25x5 mm and 30x5 mm rings to trolleys, brackets and wall plates.



PATIENT PORT

The **PATIENT** port is equipped with an elbow hose connector for the suction of fluids. To allow the suction of fluids containing bones fragments, the elbow connector has to be removed.





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 prevent accidental opening.

SUCTION KIT

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The suction kit composed by 1.8 m disposable suction hose or 1.8 m hose plus disposable vacuum breaker can be required separately.

VACUUM PORT

This connection to the vacuum source is conical to guarantee a perfect contact sealing, to get simple connection and removing. In addition, it is "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. Moreover the vacuum port is equipped with an ON-OFF switch to close the port after use and before disposal to grant a perfect sealing.

THE OVERFLOW VALVE

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The **FLOVAC® MECHANICAL VALVE** disposable containers fit in the lid a floating valve with integrated antibacterial filter to protect the plant from any contamination.



Gelling kit

The gelling kit gives further safety to an highly efficient system. It is a special absorbing powder transforming liquids in a semi-solid mass.

This grants 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.

The gelling powder is also 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.

LINER
supplied in small pouches already inserted into the container bag (on request)



CANISTER
pouches to be inserted into canisters before use (on request)



Gelling powder gel in 500 g. bottles with funnel/doser to be used for both **LINER** and **CANISTER** versions

Gelling powder bag for **CANISTER FLOVAC®** only



Gellified suctioned liquid

Soft and resistant bag made in LDPE (Low Density Polyethylene) with specific surface finishing reducing its adhesion to the jar walls once the liner is full and allowing an easier extraction. It is tested to resist to accidental fall and to the heaviest conditions

Jar made of Polycarbonate:
- Easy cleaning
- Graduated scale for easy reading of the volume of the suctioned fluids



simplicity

The **FLOVAC**[®] container production departments are equipped with industrial automation systems integrating new processing technology to improve working conditions, create new business models, increase productivity and improve production quality.



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Accessories

for FLOVAC® disposable containers



Reusable support jars (for LINER version) in polycarbonate, autoclavable (121 °C - 15 min.)

15 pieces/package
1.0 L

12 pieces/package
1.5 L

10 pieces/package
2.0 L

5 pieces/package
3.0 L

Available also in blue version 1.0 L and 2.0 L only.



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



Wall bracket

- **25x5 mm** slide wall plate (standard)
- **30x5 mm** slide wall plate
- **45x5 mm** slide wall plate



Bracket for 30x10 mm and 50x10 mm rail

in technopolymer available in **25x5 mm** slide, **30x5 mm** slide or **45x5 mm** slide



Clip fixing

25x5 mm and 30x5 mm rings to trolleys, brackets and wall plates

50 pieces/package



Polycarbonate connector

reusable polycarbonate connector to supply the **VACUUM** port

25 pieces/package



Hose with connector

hose \varnothing 7.5x11.2 mm - L=0.37 m with connector to supply the **VACUUM** port

50 pieces/package



Polycarbonate elbow connector

reusable polycarbonate elbow connector to supply the **VACUUM** port

25 pieces/package



Hose with elbow connector

hose \varnothing 7.5x11.2 mm - L=0.37 m with elbow connector to supply the **VACUUM** port

45 pieces/package



Specimen container

10 pieces/package



Gelling powder gel

in 500 g. bottles with funnel/doser

10 pieces/package



Disposable VACUUM breaker

50 pieces/package



Hose with VACUUM breaker

hose \varnothing 7.5x11.2 mm - L=1.8 m with disposable **VACUUM** breaker

100 pieces/package



Gelling powder bag

special gelling powder bag for all sizes of **CANISTER FLOVAC®**

50 pieces/package



Vacuum "T" connection

for **TANDEM** system (for wall and rail **TANDEM** applications only)

100 pieces/package



TANDEM connection system

100 pieces/package



Trolleys

4-places trolley for FLOVAC® container with handle and:

- 4 support rings
- 4 ON-OFF taps
- control vacuum gauge



Braking castor

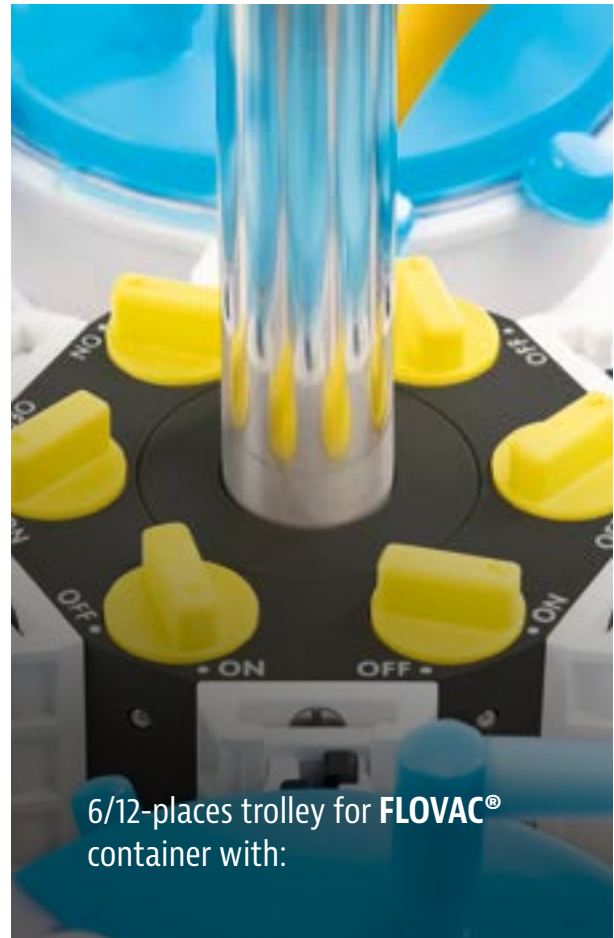
- 4 support rings



- 4 support rings
- 4 ON-OFF taps



- 4 support rings
- 4 ON-OFF taps
- vacuum regulator **EASYVAC®** or **EasyVAC® PLUS**



6/12-places trolley for **FLOVAC®** container with:

- 4 support rings
- 4 ON-OFF taps
- side fitting vacuum regulator **EASYVAC®** with safety jar **EASYSAFE®**.







- 6/12 support rings
- 6/12 ON-OFF taps
- side fitting vacuum regulator **EASYVAC®** with safety jar **EASYSAFE®**









Product codes











FLOVAC® disposable containers

		DESCRIPTION	CODE	PCS. PER BOX
FLOVAC® "LINER" VERSION SINGLE-USE SOFT LINER BAG IN A REUSABLE SUPPORT CONTAINER				
 <p>LINER FLOVAC® Mechanical valve</p>		1.0 L	000036060	48
		1.5 L	000036063	48
		2.0 L	000036061	48
		3.0 L	000036062	48
 <p>LINER FLOVAC® Mechanical valve</p>		1.0 L with gelling powder bag included	000036068	48
		1.5 L with gelling powder bag included	000036074	48
		2.0 L with gelling powder bag included	000036069	48
		3.0 L with gelling powder bag included	000036070	48
 <p>Reusable FLOVAC® support container</p>		1.0 L	970010211	15
		1.5 L	970010327	12
		2.0 L	970010212	10
		3.0 L	970010213	5
 <p>Blue reusable FLOVAC® support container</p>		1.0 L	970010289	15
		2.0 L	970010290	10




FLOVAC® disposable containers and accessories

		DESCRIPTION	CODE	PCS. PER BOX
FLOVAC® "CANISTER" VERSION SINGLE-USE RIGID COLLECTION JAR WITH LID				
 <p>CANISTER FLOVAC® Mechanical valve</p>		1.0 L	000036065	60
		2.0 L	000036066	40
		3.0 L	000036067	30
FLOVAC® LINE ACCESSORIES				
 <p>Support ring for FLOVAC® container</p>		with 25x5 mm slide (standard)	970010210	-
		with special slides 45x5 mm	970010215	-
		with special slides 41x4 mm	970010214	-
		with special slides 30x5 mm	970010220	-
 <p>ON-OFF tap</p>		for fitting on FLOVAC® container support ring	000010057	-
 <p>ON-OFF tap</p>		with control vacuum gauge, for fitting on FLOVAC® container support ring	000010056	-
 <p>ABS wall plate with fitments</p>		slide 25x5 mm	920200004	-
		slide 30x5 mm	920200029	-
		slide 45x5 mm	920200477	-
 <p>ABS rail clamping bracket for 25÷35x10 mm rail</p>		with slide 25x5 mm	000230500	-
		with slide 30x5 mm	000230510	-
		with slide 45x5 mm	000230515	-

FLOVAC® accessories

		DESCRIPTION	CODE	PCS. PER BOX
FLOVAC® LINE ACCESSORIES				
	Clip	fixing 25x5 mm and 30x5 mm rings to trolleys, brackets and wall plates	000036107	50
	TANDEM connection system		000036103	100
	Vacuum "T" connector for wall and rail TANDEM applications		930070304	100
	Reusable FLOVAC® suction system connector	polycarbonate	000036102	25
	Reusable FLOVAC® suction system connector	with hose diam 7.5x11.2 mm, length = 0.37 m	000036101	50
	Reusable FLOVAC® suction system elbow connector	polycarbonate	000036105	25
	Reusable FLOVAC® suction system elbow connector	with hose diam 7.5x11.2 mm, length = 0.37 m	000036104	45
	Specimen container		000036100	10
	Gelling powder in 500 g. bottles	with funnel/doser	000036149	10
	Disposable vacuum breaker		000320000	50

FLOVAC® accessories and trolleys

		DESCRIPTION	CODE	PCS. PER BOX
FLOVAC® LINE ACCESSORIES AND TROLLEYS				
	Disposable vacuum breaker with 1.8 m hose		000320010	100
	Gelling powder bag for CANISTER FLOVAC®	any size	000036150	50
		4 support rings, basic version	000260953	-
		with 4 ON-OFF taps and 4 support rings	000260945	-
		with ON-OFF taps and vacuum gauge, 4 support rings	000260950	-
		with ON-OFF taps and EASYVAC® vacuum regulator, 4 support rings	000260955	-
	Trolley for FLOVAC® system	with ON-OFF taps and EasyVAC® PLUS vacuum regulator, 4 support rings	000260944	-
		with ON-OFF taps and side mounting EASYVAC® vacuum regulator and EASYSAFE® safety jar, 4 support rings	000260957	-
		with 6 ON-OFF taps and side mounting EASYVAC® vacuum regulator and EASYSAFE® safety jar, 6 support rings	000260947	-
		with 12 ON-OFF taps and side mounting EASYVAC® vacuum regulator and EASYSAFE® safety jar, 12 support rings	000260946	-

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