



SUCTION OF FLUIDS

DEVICES, ACCESSORIES &
ASSEMBLY DIAGRAMS

VACUUM REGULATORS, REUSABLE AND DISPOSABLE CONTAINERS
FOR COLLECTION OF ORGANIC LIQUIDS, VENTURI SUCTION UNITS,
WATER MANOMETERS

The range of devices with applications in **suction of fluids** includes: vacuum regulators devices to be connected to centralized vacuum systems, even with low scale for pediatric applications, and the matched fluid collection containers for small volumes, which also have function to protect the plant, the large fluid collection containers of various capacities, both reusable and disposable, the water manometers, the Venturi system suction devices, the trolley suction systems and all related accessories, connections and support containers systems.

APPLICATIONS

The wide line of products always allows to provide the best solution for client needs and the supply of countless combinations for the various requirements of use.



hospitals



emergency

ATTENTION TO HEALTH

The suction of body fluids requires special attention for protection of patients and health professionals to prevent viral and bacterial contamination. Safety is the key word in **flow-meter™** to guide the continuous devices development and the research for new solutions.



safety



research and
development

All devices are manufactured in full compliance with the strict technical standards applied within the EU, and meet the requirements of the Regulation (EU) MDR 2017/745 in order to guarantee the use in complete and absolute safety, even in the most extreme conditions.

DIAGRAM OF OPTIONS

MATCHING VACUUM REGULATORS, CONNECTIONS, COLLECTION JARS

SUCTION OF FLUIDS		SUCTION OF FLUIDS	64
1	 EasyVAC⁺ PLUS DGT vacuum regulator		70
2	 EasyVAC[®] PLUS vacuum regulator		72
3	EASYVAC[®] vacuum regulator		74
4	 EasyAIR[®] "Venturi system" suction unit		80
5	AV/500 Venturi suction unit		82
6	VA water manometer		84
7	VD water manometer		84
8	 EasySAFE[®] PLUS safety jar		90
9	EASYSAFE[®] PSU safety jar		92
10	MAK/300 PC small volume collection jar		94
11	MAK/500 PC small volume collection jar		94
12	MAK/300 PC "Antibacteria" small volume collection jar		94
13	MAK/500 PC "Antibacteria" small volume collection jar		94
14	Outlet hose connector, direct fitting		104
15	MAK/2000 PC collection jar, direct fitting		96
16	MAK/1000 PC collection jar, direct fitting		96
17	MAK/4000 PC (or PSU) collection jar, pressure lid		96
18	MAK/1000 PC (or PSU) collection jar, screw lid		96
19	MAK/2000 PC (or PSU) collection jar, pressure lid (or screw lid)		96
20	FLOVAC[®] disposable container		98
21	Support basket for MAK/4000 collection jar		106
22	Support ring for MAK/1000 collection jar		106
23	Support ring for MAK/2000 collection jar		106
24	Support ring for FLOVAC[®] disposable container		106
25	ON-OFF tap for FLOVAC[®] disposable container support ring		-
26	Clip fixing 25x5 mm rings for trolleys, brackets and wall plates		106
CONNECTIONS AND ACCESSORIES FOR SUCTION DEVICES			
A	VACUUM AND AIR PROBES WITH THREAD CONNECTION AFNOR NF-S 90-116 · AFNOR NF-S 90-116 · EASYFIX [®] · UNI 9507 BS 5682 · DIN 13260-2 · SS 875 24 30 · JIS T 7101 · SANS 1409 · OHMEDA	SUCTION OF FLUIDS	103-154
B	VACUUM AND AIR PROBES WITH HOSE CONNECTION AFNOR NF-S 90-116 EASYFIX [®] · UNI 9507 · BS 5682 · DIN 13260-2 SS 875 24 30 · JIS T 7101 · SANS 1409 · OHMEDA	SUCTION OF FLUIDS	104-155
C	RAIL CLAMPING SYSTEMS AND WALL BRACKETS	SUCTION OF FLUIDS	105
ACCESSORIES			
D	Hose for medical gas (vacuum or medical air)	ACCESSORIES	152
			161





VACUUM REGULATORS

Comparison - Main information

	p. 70  EasyVAC® PLUS DGT	p. 72  EasyVAC® PLUS	p. 74  EASYVAC®
GAUGE	digital vacuum gauge with settable scale (mbar/hPa or mmHg)	standard control vacuum gauge with double scale (mbar/hPa or mmHg)	standard control vacuum gauge with double scale (mbar/hPa or mmHg)
TYPE	with membrane	with membrane	with membrane
KNOB	adjusting knob with Push&Lock system and soft grip inserts	adjusting knob with Push&Lock system and soft grip inserts	adjusting knob
ON/OFF	quick I/O push switch button	quick I/O push switch button	quick I/O push switch button
			

EasyVAC[®] PLUS DGT

Digital vacuum regulators



Excellence in **INNOVATION**
Breakthrough **TECHNOLOGY**
Intelligent **DESIGN**

The EasyVAC[®] PLUS DGT continuous suction digital vacuum regulators range is suitable in all medical suction applications in hospitals and nursing homes.

STRUCTURE

The device is made of a strong techno-polymer body, with a quick I/O switch button, a suction adjustment Soft Grip inserts knob for an easy handling with a "Push & Lock" position system and a digital vacuum control gauge with monochromatic LCD back-lighting display, available in three possible end-of-scale choices: -250 mbar, -600 mbar and -1000 mbar. A protective silicone cover and a techno-polymer support prevent gauge damages caused by possible shocks received during transport or use. The EasyVAC[®] PLUS DGT digital vacuum regulators are manufactured with outlet threaded connection for screwing in the usual collection containers for suctioned fluids, or for direct connection to the EasySAFE[®] PLUS safety jar, through a specific quick release integrated connection. The use of the EasySAFE[®] PLUS safety jar is highly recommended to get a complete suction device able to guarantee total protection of the vacuum regulator and plant.

Main information



The digital vacuum gauge has a monochromatic LCD back-lighting display indicating the depression supplied value settable by the end users to be read in mbar/hPa or mmHg.



The frontal part of the digital gauge is equipped with 3 buttons: one to switch ON/OFF the EasyVAC[®] PLUS DGT, the other 2 for various settings.



The quick opening of the front cover facilitates the cleaning and maintenance procedures.

Related products



Safety jars
from p. 89



Collection jars
from p. 96



Probes
and Accessories
from p. 103

	EasyVAC [®] PLUS DGT 250	EasyVAC [®] PLUS DGT 600	EasyVAC [®] PLUS DGT 1000
SIZES (LxWxH)	91x106x185 mm	91x106x185 mm	91x106x185 mm
WEIGHT	0.50 Kg	0.50 Kg	0.50 Kg
MAXIMUM SUCTION FLOW	50 L/min. ±5 L/min. at -220 mbar	72 L/min. ±5 L/min. at -550 mbar	105 L/min. ±5 L/min. at -950 mbar
MAXIMUM AVAILABLE NEGATIVE PRESSURE EFFECTIVE VALUE	-220 mbar ±20 mbar	-550 mbar ±20 mbar	-950 mbar
OVER DEPRESSION PROTECTING VALVE	preset with anti-clogging system	preset with anti-clogging system	N/A
DIGITAL VACUUM GAUGE	0 ÷ -250 mbar/hPa (0 ÷ -187 mmHg) numerical display of the vacuum value and a sector bar proportional to the adjusted de-pressure	0 ÷ -600 mbar/hPa (0 ÷ -450 mmHg)	0 ÷ -1000 mbar/hPa (0 ÷ -750 mmHg)
SUCTION VALUE ADJUSTMENT SYSTEM	with membrane		
STANDARD INLET CONNECTION	ISO G. 1/4" M		
OUTLET CONNECTION	ISO G. 1/2" M. + quick release system for EASYSAFE [®] or EasySAFE [®] PLUS safety jar connection		
I/O SWITCH	quick push switch button		
READING RESOLUTION	1 mbar/hPa (1 mmHg)		
POWER SOURCE	rechargeable lithium-ion battery 3.7V - 2040mAh		
CONTROL BUTTONS	ON/OFF and SETTINGS TO: <ul style="list-style-type: none"> · select the unit scale (mbar/hPa or mmHg) · set the timer for the automatic switch off of the regulator · set up a warning at a specific vacuum value · fix the time of the back-lighting · zeroing the device at any time 		

- 1 **Digital vacuum gauge** with monochromatic LCD display and back-lighting to be activated by the operator
 - Scale settable in mbar/hPa or mmHg by the end user
 - Numerical display of the vacuum value and a sector bar proportional to the adjusted de-pressure
 - Reading resolution is 1 mbar/hPa (1 mmHg)
- 2 Charging and power supply port: **USB type C**.
- 3 **Buttons for ON/OFF** [⏻] and settings [▲▼]
- 4 Vacuum adjusting knob with **Push&Lock system** and **Soft Grip inserts** for easy handling. Quick I/O push switch-button.
- 5 De-pressure excess safety valve (for **EasyVAC® PLUS DGT 250** and **EasyVAC® PLUS DGT 600** only) with anti-clogging system.



▶ WATCH THE VIDEO



EasyVAC® PLUS DGT 250
adjusted at -150 mbar

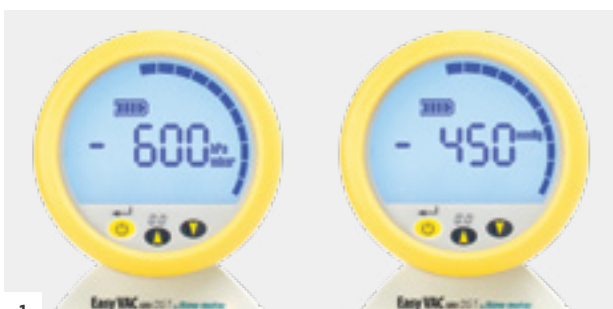


EasyVAC® PLUS DGT 600
adjusted at -450 mbar



EasyVAC® PLUS DGT 1000
adjusted at -600 mbar with **EasySAFE® PLUS**
safety jar (optional)

EasySAFE® PLUS safety jar p. 90



1

ON/OFF and SETTINGS TO:

- select the unit scale (mbar/hPa or mmHg)
- set the timer for the automatic switch off of the regulator
- set up a warning at a specific vacuum value
- fix the time of the back-lighting
- zeroing the device at any time



2



3



4



5

EasyVAC[®] PLUS

Vacuum regulators



Excellence in **INNOVATION**
Breakthrough **TECHNOLOGY**
Intelligent **DESIGN**

The EasyVAC[®] PLUS continuous suction vacuum regulators range is suitable in all medical suction applications in hospitals and nursing homes.

STRUCTURE

The device is made of a strong techno-polymer body, with a quick I/O switch button, a suction adjustment Soft Grip inserts knob for an easy handling with a "Push & Lock" position system and a vacuum control gauge with three possible end-of-scale choices: -250 mbar, -600 mbar and -1000 mbar. A protective silicone cover and a techno-polymer support prevent gauge damages caused by possible shocks received during transport or use. The EasyVAC[®] PLUS vacuum regulators are manufactured with outlet threaded connection for screwing in the usual collection containers for suctioned fluids, or for direct connection to the EasySAFE[®] PLUS safety jar, through a specific quick release integrated connection. The small sizes of the EasyVAC[®] PLUS vacuum regulators help in installing multiple sets of medical gas devices into the wall terminal units. The extreme rationality and simplicity, combined with the sophisticated technical execution, allow both operators and patients to appreciate the safety and reliability of this medical device.

Main information



EasyVAC[®] PLUS has a vacuum control gauge with double scale and it is available in three possible end of scale choices.



The quick opening of the front cover facilitates the cleaning and maintenance procedures.

Related products



Safety jars
from p. 89



Collection jars
from p. 96



Probes
and Accessories
from p. 103

	EasyVAC [®] PLUS 250	EasyVAC [®] PLUS 600	EasyVAC [®] PLUS 1000
SIZES (LxWxH)	91x106x185 mm		
WEIGHT	0.47 Kg	0.37 Kg	0.37 Kg
MAXIMUM SUCTION FLOW	50 L/min. ±5 L/min. at -220 mbar	72 L/min. ±5 L/min. at -550 mbar	105 L/min. ±5 L/min. at -950 mbar
MAXIMUM AVAILABLE NEGATIVE PRESSURE EFFECTIVE VALUE	-220 mbar ±20 mbar	-550 mbar ±20 mbar	-950 mbar
OVER DEPRESSION PROTECTING VALVE	preset with anti-clogging system	preset with anti-clogging system	N/A
VACUUM GAUGE	0 ÷ -250 mbar	0 ÷ -600 mbar	0 ÷ -1000 mbar
MAX. DEPRESSION SUPPLY VALUE	-950 mbar		
SUCTION VALUE ADJUSTMENT SYSTEM	with membrane		
STANDARD INLET CONNECTION	ISO G. 1/4" M		
OUTLET CONNECTION	ISO G. 1/2" M. + quick release system for EASYSAFE[®] or EasySAFE[®] PLUS safety jar connection		
I/O SWITCH	quick push switch button		

- 1 **Vacuum gauge** with colored sectors and double scale (mbar/hPa or mmHg), for easy reading of set vacuum values. Silicone cover and anti shock support.
- 2 **Quick I/O** push switch-button.
- 3 **Vacuum adjusting knob** with Push&Lock system and Soft Grip inserts for easy handling. Adjustment assembly **quick release cover** 1/12 turn.
- 4 De-pressure excess safety valve (for **EasyVAC® PLUS 250** and **EasyVAC® PLUS 600** only) with anti-clogging system.
- 5 ISO G. 1/2" M. + quick release system for **EasySAFE® plus** or **EASYSAFE®** safety jar connection.



▶ WATCH THE VIDEO



EasyVAC® PLUS 250



EasyVAC® PLUS 600



EasyVAC® PLUS 1000 with EasySAFE® PLUS safety jar (optional)

EasySAFE® PLUS safety jar p. 90

The use of the **EasySAFE® plus** safety jar is highly recommended to get a complete suction device able to guarantee total protection of the vacuum regulator and plant.



1



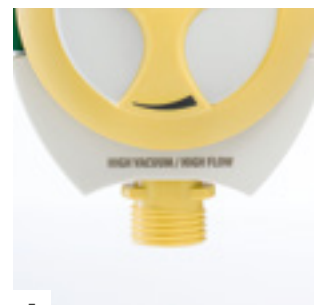
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EASYVAC®

Vacuum regulators

The EASYVAC® continuous suction vacuum regulator is particularly suitable for all medical suction applications in hospitals and nursing homes.

STRUCTURE

The device is made of a strong techno-polymer body, with a quick I/O switch-button, a suction adjustment knob and a control vacuum gauge with three possible end-of-scale choices: -250 mbar, -600 mbar and -1000 mbar. A protective silicone cover prevents gauge damages caused by possible shocks received during transport or use.

The EASYVAC® vacuum regulators are also designed, through a threaded connection, for connecting directly or indirectly to the normal collection containers for suctioned fluids or for direct connection to the EASYSAFE® safety jar, through a specific quick release integrated connection.

The extreme rationality and simplicity, combined with the sophisticated technical execution, allow both operators and patients to appreciate the safety and reliability of this medical device.

Main information



EASYVAC® has a vacuum control gauge with double scale and it is available in three possible end of scale choices.

Related products



Safety jars
from p. 89



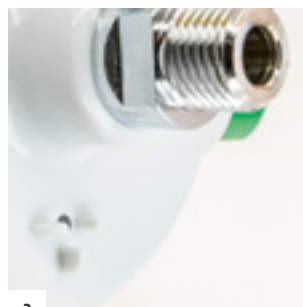
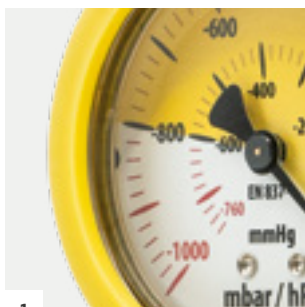
Collection jars
from p. 96



Probes
and Accessories
from p. 103

	EASYVAC® 250	EASYVAC® 600	EASYVAC® 1000
SIZES (LxWxH)	103x92x170 mm		
WEIGHT	0.42 Kg	0.37 Kg	0.37 Kg
MAXIMUM SUCTION RATE	50 L/min. ±5 L/min. at -220 mbar	72 L/min. ±5 L/min. at -550 mbar	105 L/min. ±5 L/min. at -950 mbar
MAXIMUM ADJUSTABLE DEPRESSION	-220 mbar ±20 mbar	-550 mbar ±20 mbar	-950 mbar
VALVE PROTECTING AGAINST EXCESSIVE NEGATIVE PRESSURES	preset with anti-clogging system	preset with anti-clogging system	N/A
MAXIMUM SUPPLY DEPRESSION	-950 mbar		
SUCTION ADJUSTING SYSTEM	with membrane		
STANDARD VACUUM SUPPLY CONNECTION	ISO G. 1/4" M.		
OUTLET CONNECTION	ISO G. 1/2" M. + quick release system for EASYSAFE® or EasySAFE® PLUS safety jar connection		
I/O SWITCH	quick push button type		

- 1 **Vacuum gauge** with colored sectors and double scale (mbar/hPa or mmHg), for easy reading of set vacuum values. Silicone cover and anti shock support.
- 2 **Quick I/O** push switch-button.
- 3 De-pressure excess safety valve (for **EASYVAC® 250** and **EASYVAC® 600** only) with anti-clogging system.
- 4 Vacuum outlet G. 1/2" threaded connection integrated with quick-release connection for **EasySAFE® plus** or **EASYSAFE®** safety jar.





EasyVAC® PLUS DGT digital vacuum regulator with EasySAFE® PLUS safety jar

P. 70, 90





VENTURI SUCTION UNITS AND WATER MANOMETERS

flow-meter™

Comparison - Main information

	p. 80 	p. 82 	p. 84 
	EasyAIR®	AV	VA - VD
TYPE	Venturi suction unit	Venturi suction unit	water manometer
GAUGE AND SCALE	standard control vacuum gauge with double scale	standard control vacuum gauge with double scale	tube with graduated scale VD has also a secondary tube for fine adjustment of values
KNOB	big size adjusting knob with soft grip inserts and Push&Lock system	adjusting knob	adjusting knob
PLUS	quick I/O push switch button		
			

OXYGEN THERAPY
 SUCTION OF FLUIDS
 PRESSURE REGULATORS AND FLOWMETERS
 ALL MEDICAL GASES
 FLOWMETER UNITS
 TERMINAL UNITS
 ACCESSORIES

EasyAIR®

“Venturi system” suction units



Excellence in **INNOVATION**
Breakthrough **TECHNOLOGY**
Intelligent **DESIGN**

The EasyAIR® Venturi vacuum generating system units are particularly suitable in all hospital applications in which it is necessary to get values of vacuum up to -800 mbar and where a central facility of vacuum generation for suction is missing, often for technical choice.

STRUCTURE

Such devices are made essentially of an aluminum body housed inside a techno-polymer shock proof shell to protect the unit. Inside, over the “Venturi effect” generating assembly, the needle valve for vacuum adjustment is driven by a large ergonomic control knob having a Push&Lock system, to keep locked the preset vacuum value, and Soft Grip inserts for easy handling and adjusting. The vacuum gauge is available in two end of scale options depending on model (-250 mbar or -1000 mbar) and it is housed in the structure to prevent damages caused by possible shocks received during transport or use. The EasyAIR® Venturi vacuum generating system units are manufactured with outlet threaded connection for screwing in the usual collection containers for suctioned fluids, or for direct connection to the EasySAFE® PLUS safety jar, through a specific quick release integrated connection. The I/O switch button allows the operator to quickly stop and reactivate the suction, keeping unchanged the previous vacuum preset value. The extreme rationality and simplicity, combined with the sophisticated technical execution, allow both operators and patients to appreciate the safety and reliability of this medical device.

Main information

Air

As it is well known, the physical principle called “Venturi” allows to get depression from a fluid under pressure. This is obtained, in case of these devices, using medical compressed air coming from the centralized distribution plant.



Being the system working with a principle where medical air under pressure goes released to the environment, the equipment has a high efficiency silencer reducing the noise to allow an adequate level of comfort for patients and operators. The system fits a special device expressly designed and realized with an one-way membrane safety valve, to protect the patient against accidental back pressures.

Related products



Safety jars
from p. 89



Collection jars
from p. 96



Probes
and Accessories
from p. 103

	EasyAIR® 250	EasyAIR® 1000
SIZES (LxWxH)	89x123x141 mm	89x123x141 mm
WEIGHT	0.41 Kg	0.42 Kg
MAXIMUM SUCTION FLOW	28 L/min. ±2 L/min. at -220 mbar	40 L/min. +5 L/min. at -800 mbar
VACUUM GAUGE	0 ÷ -250 mbar	0 ÷ -1000 mbar
MAXIMUM ADJUSTABLE DEPRESSION (WITH PLATE PRESSURE ±10%)	-220 mbar ±15 mbar	-800 mbar -25 mbar
SAFETY VALVE AGAINST BACK PRESSURE EXCESS	preset with anti clogging system	N/A
AIR CONSUMPTION AT THE MAXIMUM SUCTION VALUE	25 L/min. ±2 L/min.	60 L/min. ±2 L/min.
NOISE LEVEL	<60 dB	<70 dB
GAS AND SUPPLIED PRESSURE	compressed air 400 kPa (4.0 bar) ±10%	
STANDARD INLET CONNECTIONS	ISO G. 1/4" M. · 1/4" NPT M.	
STANDARD OUTLET CONNECTION	ISO G. 1/2" M. + quick release system for EasySAFE® or EasySAFE® PLUS safety jar connection	

- 1 **Vacuum gauge** with colored sectors and double scale (mbar/hPa or mmHg), for easy reading of set vacuum values.
- 2 **Vacuum adjusting knob** with Push&Lock system and Soft Grip inserts for easy handling.
- 3 **I/O push** switch button.
- 4 Quick release system for **EasySAFE® PLUS** or **EASYSAFE®** safety jar connection.



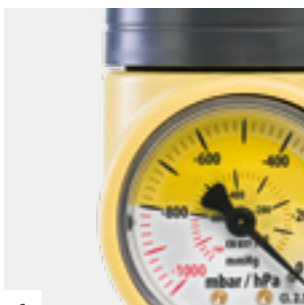
▶ WATCH THE VIDEO



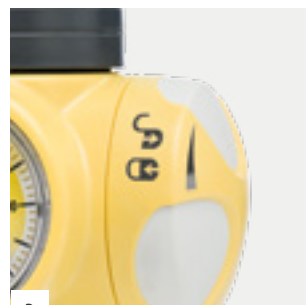
EasyAIR® 250

EasyAIR® 1000
with EasySAFE® PLUS safety jar
(optional)

EasySAFE® PLUS safety jar p. 90



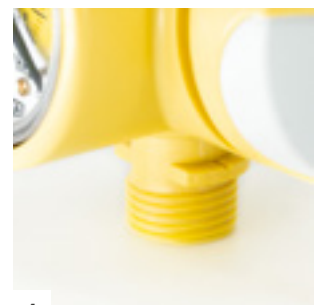
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4

AV

Venturi suction units

The Venturi AV/500 vacuum generating system units are particularly suitable in all hospital applications in which it is necessary to get values of vacuum up to -850 mbar and where a central facility of vacuum generation for suction is missing, often for technical choice.

STRUCTURE

As it is well known, the physical principle called "Venturi" allows to get depression from a fluid under pressure, which is obtained, in case of these devices, using medical compressed air coming from the centralized distribution plant. Such devices are composed essentially of a brass chrome-plated body, a needle valve with vacuum adjustment knob and a vacuum gauge protected by a silicon cover to avoid damages caused by possible impacts during transport or use.

The AV/500 Venturi vacuum generating system units are manufactured with outlet threaded connection for screwing in the usual collection containers for suctioned fluids, or for direct connection to the **EASYSAFE®** and **EasySAFE® PLUS** safety jars, through a specific quick release integrated connection.

Main information



Being the system working with a principle where medical air under pressure goes released to the environment, the equipment has a high efficiency silencer reducing the noise to allow an adequate level of comfort for patients and operators. The system fits a special device expressly designed and realized with an one-way safety valve, to protect the patient against accidental back pressures.

Related products



Safety jars
from p. 89



Collection jars
from p. 96



Probes
and Accessories
from p. 103

SIZES (LxWxH)	92x71x100 mm
WEIGHT	0.29 Kg
MAX. SUCTION RANGE	40 L/min ±5 L/min
VACUUM GAUGE SCALE	0 ÷ -1000 mbar
MAXIMUM ADJUSTABLE DEPRESSION (WITH PLATE PRESSURE ±10%)	-800 mbar/hPa -25 mbar/hPa
GAS AND SUPPLY PRESSURE (STANDARD VERSION)	compressed air 400 kPa (4.0 bar) ±10%
ADJUSTMENT OF SUCTION LEVEL	needle valve
AIR CONSUMPTION AT THE MAX. SUCTION VALUE	74 L/min. ±2 L/min.
NOISE LEVEL	<70 dB
INLET CONNECTION	ISO G. 1/4" M.
OUTLET CONNECTION	ISO G. 1/2" M. + quick release system for EASYSAFE® or EasySAFE® PLUS safety jar connection

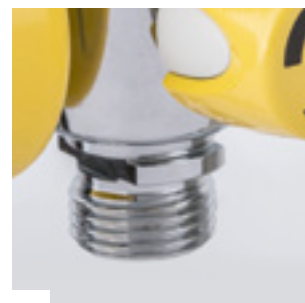
- 1 **Vacuum gauge** with colored sectors scale, for easy reading of set vacuum values.
- 2 The **adjusting knob** allows the suction value setting in a stable and accurate way.
- 3 Quick release system for **EasySAFE® plus** or **EASYSAFE®** safety jar connection.
- 4 **AV/500** with direct connection to **EasySAFE® plus** p. 90



1



2



3

VA - VD

Water manometers

The water manometers VA and VD series are used for accurate adjustment of vacuum values in the suction in interventions of gastric and chest drainage.

STRUCTURE

The devices are made essentially of an anodized aluminium head manufactured in anodized aluminum in which a needle valve acts for suction rate adjustments, and where a primary polycarbonate tube containing the water gets the function of measurement and calibration. Inside the tube, a graduated dipstick having scale up to 40 cm (VA/600 and VD/600) or up to 70 cm (VA/1000 and VD/1000) is used to adjust the hydraulic head necessary for the treatment.

Main information



The VD series has also a secondary tube for fine adjustment of hydraulic head values, and, consequently, of the suction value, up to a maximum value of 5 cm.

Related products



Vacuum regulators
from p. 70



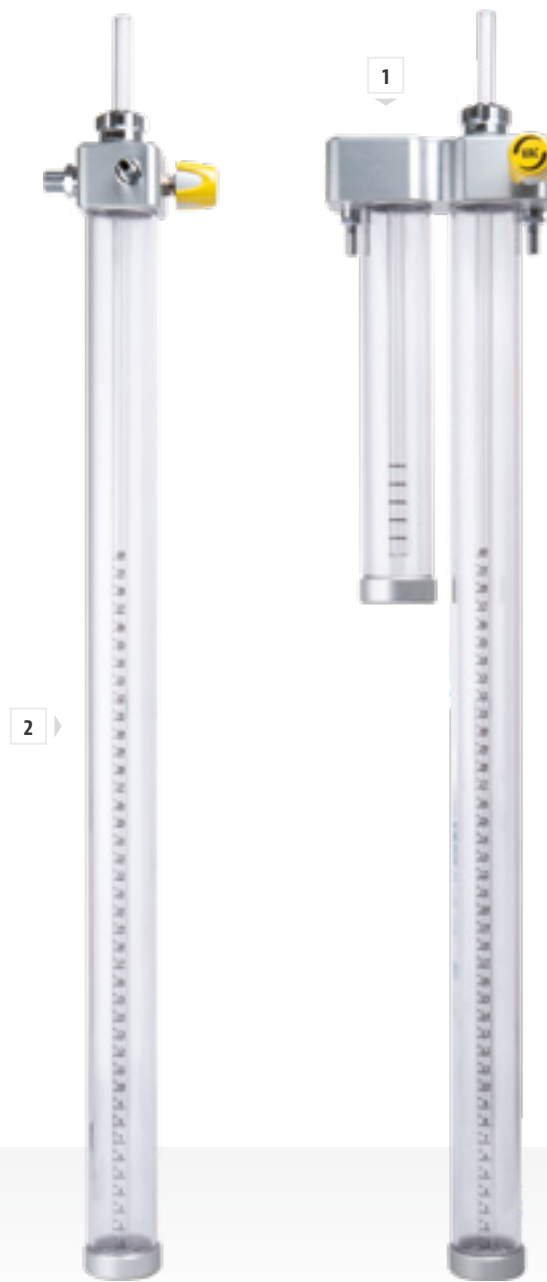
Venturi suction units
from p. 79



Collection jars
p. 96

	VA/600	VA/1000	VD/600	VD/1000
SIZES (LxWxH)	74x97x730 mm	74x97x1130 mm	78x127x730 mm	78x127x1130 mm
WEIGHT	0.58 Kg	0.75 Kg	0.91 Kg	1.10 Kg
ADJUSTMENT RANGE	0 ÷ -40 cm H ₂ O	0 ÷ -70 cm H ₂ O	0 ÷ -40 cm H ₂ O	0 ÷ -70 cm H ₂ O
INLET MAX. DEPRESSION	-950 mbar			
INLET CONNECTION	ISO G. 1/4" M.		hose connector Ø 7.5 mm	
OUTLET CONNECTION	hose connector Ø 7.5 mm			

- 1 Anodized aluminum upper body, with vacuum adjusting knob.
- 2 Graduated scale, detail.



1



2



EasyAIR® “Venturi system” suction unit
with EasySAFE® PLUS
safety jar










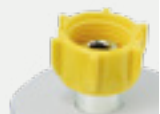



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COLLECTION AND SAFETY JARS

Comparison - Main information

	p. 90 	p. 92	p. 94	p. 96	p. 96	p. 96
						
	EasySAFE® PLUS	EASYSAFE®	MAK/300&500	MAK/1000	MAK/2000	MAK/4000
MATERIAL	polysulfone	polysulfone	polycarbonate	polycarbonate or polysulfone	polycarbonate or polysulfone	polycarbonate or polysulfone
CAPACITY	50 ml	50 ml	MAK/300 300 ml MAK/500 500 ml	1000 ml	2000 ml	4000 ml
OPTION	-	-	Antibacteria version	-	-	-
LID	presence of soft grip inserts to help the handling and quick 1/12 turn to speed up the opening	screw lid	screw lid for Antibacteria version: lid with housing for filter	screw lid	screw or pressure lid	pressure lid
INLET CONNECTION	quick release snap ring 1/2" F.	quick release snap ring 1/2" F.	polycarbonate nut 1/2" F. for vacuum regulator connection	hose connector diam 8.0-9.0 mm or ISO G. 1/2" F.	hose connector diam 8.0-9.0 mm or ISO G. 1/2" F. (for MAK/2000 screw lid only)	hose connector diam 8.0-9.0 mm
OUTLET CONNECTION	hose connector diam 8.0-9.0 mm with 360° rolling position	hose connector diam 8.0-9.0 mm	hose connector diam 8.0-9.0 mm	hose connector diam 8.0-9.0 mm	hose connector diam 8.0-9.0 mm	hose connector diam 8.0-9.0 mm
						

OXYGEN THERAPY
 SUCTION OF FLUIDS
 PRESSURE REGULATORS AND FLOWMETERS
 ALL MEDICAL GASES
 FLOWMETER UNITS
 TERMINAL UNITS
 ACCESSORIES

EasySAFE[®] PLUS

Safety jar

The new EasySAFE[®] PLUS safety jar is a medical device designed and manufactured for applications of "high flow and high vacuum" joint in use with the EasyVAC[®] PLUS vacuum regulators and with EasyAIR[®] "Venturi system" suction units.

STRUCTURE

This special safety jar is used to protect the equipment and the plant upstream, should the overflow valve in the main container not be working properly. The EasySAFE[®] PLUS safety jar is made of Polysulfone and fully autoclavable (134 °C - 18 min.), having an overflow floating valve and a housing designed to fit an antibacterial filter to guarantee the complete suction system protection against any contamination. The inlet connection with a quick release snap ring, the rolling 360° position of the patient outlet hose connector and the quick locking system jar-to-lid by 1/12 turn only make simple and easy the connection and removing of the EasySAFE[®] PLUS safety jar to the EasyVAC[®] PLUS vacuum regulators and EasyAIR[®] "Venturi system" suction units. Everything is made to make simple, fast, safe and easy the use by the hospital staff.

CAPACITY

The collecting jar of this safety device has a deliberately reduced capacity (approx. 50 ml) so that even a small presence of fluid could immediately activate the floating valve to stop the suction.



Excellence in **INNOVATION**
Breakthrough **TECHNOLOGY**
Intelligent **DESIGN**

Main information



The EasySAFE[®] PLUS safety jar is made of polysulfone and fully autoclavable (134 °C - 18 min.).



It's equipped with an overflow floating valve and a housing designed to fit an antibacterial filter to guarantee the complete suction system protection against any contamination.

Related products



Vacuum regulators
from p. 69



Venturi suction units
from p. 79



Collection jars
p. 96

SIZES (LxWxH) 93x76x74 mm

WEIGHT 0.12 Kg

OVERFLOW SYSTEM floating valve

PATIENT CONNECTION hose connector Ø 8.0÷9.0 mm

MAXIMUM APPLICABLE VACUUM VALUE -950 mbar / 5 min.

CAPACITY APPROXIMATELY 50 ml

- 1 Quick release snap ring for **EasyVAC® PLUS** and **EasyAIR®** suction devices connection. Presence of Soft Grip inserts to help the handling.
- 2 **Quick 1/12 turn** to speed up the jar cleaning and the antibacterial filter replacement (if filter present).
- 3 **360° rolling positioning**
hose connector $\varnothing = 8.0\div 9.2$ mm.
- 4 **Housing** for placing an antibacterial filter (optional).
- 5 **EasyVAC® PLUS** and **EasyAIR®** fitted with **EasySAFE® PLUS** (optional).

EasyVAC® PLUS vacuum regulator, p. 72
EasyAIR® "Venturi system" suction unit, p. 80



▶ WATCH THE VIDEO



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EASYSAFE®

Safety jar

The **EASYSAFE®** safety jar is a medical device designed and manufactured for applications of "high flow and high vacuum".

STRUCTURE

Designed for use with the **EASYVAC®** vacuum regulators, **EASYSAFE®** is used to protect the equipment and plant upstream, should the overflow valve in the main container not be working properly. Made of a strong and reliable techno-polymer (polysulphone), the **EASYSAFE®** safety jar is autoclavable (134 °C - 18 min.), has an overflow floating valve and a housing designed to fit an antibacterial filter to guarantee the complete suction system protection against contamination.

CAPACITY

This safety jar has a deliberately reduced capacity (approx. 50 ml) so that even a small presence of fluid can immediately activate the floating valve to stop the suction.

Main information



The vacuum hose connector and the quick release connection nut make the **EASYSAFE®** simple and easy to set up and to remove from the **EASYVAC®** vacuum regulator.



The **EASYSAFE®** safety jar is made of polysulfone and fully autoclavable (134 °C - 18 min.).

Related products



Vacuum regulators
from p. 69



Venturi suction units
from p. 79



Collection jars
p. 96

SIZES (LxWxH)	70x90x74 mm
WEIGHT	0.07 Kg
OVERFLOW SYSTEM	floating valve
PATIENT CONNECTION	hose connector Ø 8.0÷9.0 mm
MAXIMUM APPLICABLE VACUUM VALUE	-950 mbar / 5 min.
CAPACITY APPROXIMATELY	50 ml

- 1 **Quick release** lock-unlock nut system.
- 2 **Housing for antibacterial filter**
Ø 50 mm (optional).
- 3 **EASYVAC® -1000 mbar** fitted
with **EASYSAFE®** (optional).

EASYVAC® vacuum regulator, p. 74



Collection containers for small quantity of fluids

The collection containers for suctioned liquids named **MAK/300** and **MAK/500**, are used for the collection of small volumes of suctioned fluids and have been designed and manufactured for applications of "high flow and high vacuum".

STRUCTURE

The two models have capacities of 300 ml and 500 ml respectively in standard execution, or fitting a special lid for housing an antibacterial filter (Antibacteria version). These devices are generally employed or simply for the collection of suctioned fluids, or like a safety container to protect the equipment and the plant upstream of the suction source, in case the safety overflow valve of the collecting primary container does not work regularly. The jar and the lid are made in polycarbonate, with fittings in brass, with ergonomic screw nut in high-strength polycarbonate. All parts can be sterilized in an autoclave (121 °C - 15 min.).

Main information



Matched with **EASYVAC®** and **EasyVAC® PLUS** vacuum regulators, or with **AV** and **EasyAIR®** Venturi suction units, the collection containers **MAK** series provide simplicity of use and versatility, allowing extreme operating economy.

Related products



Vacuum regulators
from p. 69



Venturi suction units
from p. 79



Collection jars
p. 96

	MAK/300	MAK/300 Antibacteria	MAK/500	MAK/500 Antibacteria
INNER VOLUME	300 ml	300 ml	500 ml	500 ml
SIZES (LxWxH)	70x84x180 mm	70x84x206 mm	70x84x213 mm	70x84x239 mm
WEIGHT	0.20 Kg	0.24 Kg	0.21 Kg	0.25 Kg
SUPPLY DEPRESSION	max -950 mbar - 5 min.			
OVERFLOW VALVE	floating valve			
INLET CONNECTION	ISO G 1/2" F.			
OUTLET CONNECTION	hose connector Ø 8.0 ÷ 9.0 mm			

- 1 **Housing for antibacterial filter** Ø 50 mm
(for Antibacteria version only).
- 2 **Polycarbonate nut**
for vacuum regulator
connection.



Large capacity collection jars

The MAK series large size containers for suctioned liquids are designed and manufactured for “high flow and high vacuum” applications. They have a long history, full of positive praises for their versatility, safety and economy.

STRUCTURE

Jar and lid are made of polycarbonate, and two straight inlet/outlet connectors are integrated into the cover (except in the above mentioned version having direct connection to the vacuum regulator that fits one chrome-plated brass nipple with polycarbonate connecting nut). All containers are equipped with an overflow valve, are supplied with two spare elbow connectors, to set up any possible connection between the jar, the suction line and the patient, and are obviously autoclavable (121 °C - 15 min.). If higher sterilization temperatures are required, a PSU version is also available for the three sizes (134 °C - 18 min.). An external graduated scale gives indications about the level of filling. In conjunction with the various supports and accessories available on request, the **MAK** collection jars grant simplicity in use, versatility and an important operating economy.

Main information



They are available with a capacity of 1000 ml with screw cap, of 2000 ml with screw and pressure lid and 4000 ml with pressure lid. Versions having capacities 1000 ml and 2000 ml can also be supplied, as an option, with a special lid with direct thread connection to the vacuum regulator.

Related products



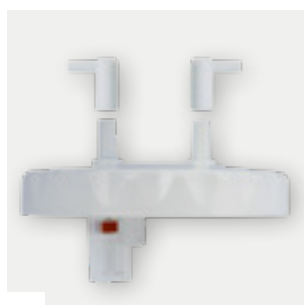
Vacuum regulators
from p. 69



Venturi suction units
and Water manometers
from p. 79

	MAK/1000	MAK/2000 with screw lid	MAK/2000 with pressure lid	MAK/4000
INNER VOLUME	1000 ml	2000 ml	2000 ml	4000 ml
SIZES (LxWxH)	108x108x248 mm	134x134x300 mm	126x126x300 mm	175x175x323 mm
WEIGHT	0.38 Kg	0.49 Kg	0.49 Kg	0.99 Kg
SUPPLY DEPRESSION	max -950 mbar - 5 min			
OVERFLOW VALVE	floating valve			
INLET CONNECTION	hose connector Ø 8.0÷9.0 mm or ISO G 1/2" F. (for MAK/1000 and MAK/2000 screw lid only)			
OUTLET CONNECTION	hose connector Ø 8.0÷9.0 mm			

- 1 **Screw lid** (for MAK/1000 and MAK/2000 only) showing the overflow valve and the removable elbow connectors.
- 2 **Pressure lid** (MAK/2000 and MAK/4000) with overflow valve and removable elbow connectors.
- 3 **Lid version for vacuum regulator** direct fitting and elbow connector.
- 4 **MAK large capacity collection jars** are also available in PSU version.



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FLOVAC®

DISPOSABLE CONTAINERS SYSTEM FOR THE COLLECTION OF SUCTIONED FLUIDS

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.



WHY HYDROPHOBIC FILTER AND HOW DOES IT WORK?

The **FLOVAC® HYDROPHOBIC** filter is made of 3 layers having antibacterial, smoke filtration and hydrophobic functions. The filter stops the suction when wet because the fluid reaches the maximum collection level.

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.

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.

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.



For any additional information, refer to the specific product catalogues.

from
powder



to gel

practicality **safety** *simplicity*

The gelling kit allows to absorb and incorporate all liquids present in the **FLOVAC**[®] container and to prevent, in such a way, dangerous contamination risks for the hospital staff in case of biological fluids accidental leakage.

FLOVAC®

Disposable containers

The FLOVAC® disposable containers are used for the collection of organic fluids in suction and have been designed and manufactured for applications of “high flow and high vacuum” (EN ISO 10079-1 and EN ISO 10079-3).

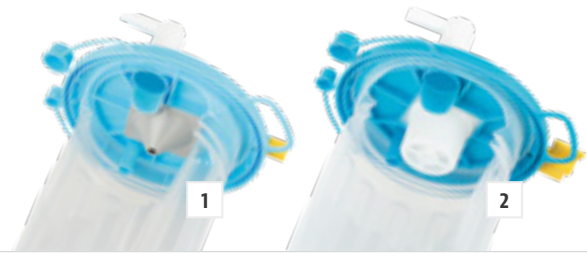
This system mixes simplicity and practicality, guaranteeing great safety from contamination for operators, for the suction plants and for the environment, thanks to the use of the latest manufacturing technologies and of absolutely reliable materials.

THE HYDROPHOBIC FILTER

The FLOVAC® system is the result of twenty years of **flow-meter™** experience in the production of disposable devices for the collection of suctioned fluids and get the most important characteristics in its special hydrophobic filter. This filter protects the vacuum generating devices or the centralized suction plant from contamination, as it performs the function of overflow valve, turning off the suction when wetted by the fluid reaching the maximum level of container filling.

THE MECHANICAL VALVE

To complete the FLOVAC® range **flow-meter™** has designed the configuration with mechanical overflow valve and antibacterial filter, available both for **LINER** and for **CANISTER** versions.



Main information

The containers are made in four sizes, to be used according to the effective requirements about the volumes expected to be suctioned, and they are manufactured in two distinct versions:

LINER VERSION

Soft bag material: LDPE (low density polyethylene), individually packed in blisters.

Available capacities: 1.0 L - 1.5 L - 2.0 L - 3.0 L

CANISTER VERSION

Jar material: High Clarity Polypropylene connection between jar and lid through pressure seal with permanent fastening spring clips.

Available capacities: 0.5 L - 1.0 L - 2.0 L - 3.0 L

Both versions show differentiated connecting ports for connecting the collection container with the suction line, with the patient and, if necessary, with another container to increase the suctioned fluid capacity (**TANDEM** port).



LID MATERIAL	HDPE (High Density Polyethylene)
OVERFLOW VALVE	Hydrophobic filter with antibacterial, antiviral and NO-SMOKE® protection or mechanical overflow valve with antibacterial filter
VACUUM PORT	conic connector, female
PATIENT PORT	Ø 14.0 ÷ 15.5 mm (Ø 8.0 ÷ 9.2 mm with elbow connector)
TANDEM PORT	Ø 8.0 ÷ 9.2 mm
MAXIMUM SUCTION DEPRESSION	-950 mbar/5 min.
MAXIMUM GRADUATION INTERVAL	50 ml
PATIENT HOSE SIZES	inner Ø ≥ 6 mm - L max = 2.5 m
VACUUM HOSE SIZES	inner Ø ≥ 6 mm - L max = 1.8 m
HYDROPHOBIC FILTER WITH ANTIBACTERIAL, ANTIVIRAL AND NO-SMOKE® PROTECTION - MAIN CHARACTERISTICS	
BACTERIAL AND VIRAL FILTRATION EFFICIENCY	>99.99995%
MEMBRANE	100% expanded PTFE
PREFILTER	micro fiberglass HEPA Air Filter

For any additional information, refer to the specific product catalogues.

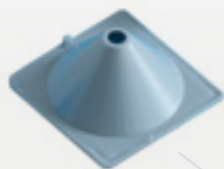
- 1 **Hydrophobic** filter.
- 2 **Mechanical** valve.

THE LID

The lid keeps space for all the connection ports, easily identifiable and not exchangeable each other: the **VACUUM** port, connected to the suction, the **PATIENT** port having a removable elbow connector to get larger port diameter and allowing suction of fluids containing also small parts of organic material, and the **TANDEM** port, for the connection in cascade of two or more identical devices to increase the collection capacity. Two plugs placed on the lid allow the hermetic seal of the **PATIENT** and **TANDEM** ports, while, always integrated in the cover, a handle facilitates the **LINER** removal from the support jar, as well as simplifies the transport of the container. The lid hermetic seal makes the use and disposal particularly hygienic, simple and safe, both for the patient and for the staff involved with the removal and replacement of the **LINERS** and **CANISTERS**. **LINER** system is equipped with 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. The **FLOVAC®** system includes a wide and complete range of accessories.



The **FLOVAC®** HYDROPHOBIC filter system is composed by 3 components:



Anti-splash protection



Microfiberglass HEPA pre-filter



100% expanded PTFE membrane Hydrophobic and Antibacterial



- 1  Pre-filled **LINER FLOVAC®** with gelling powder bag (on request)
- 2  Gelling powder bag to be inserted by operator for **CANISTER FLOVAC®** only (on request)
- 3  Bottles 500 g with funnel/doser to be poured into **LINERS** and **CANISTERS** after use and before disposal



CONNECTIONS AND ACCESSORIES

FOR SUCTION DEVICES

All **flow-meter™** devices used in suction applications, like vacuum regulators, Venturi suction units and water manometers, can be coupled to the terminal units through the special connections designed and made according to the various national and international standards. These connections to the vacuum or medical air (for Venturi units) distribution systems, on which the user operates frequent connections and detachments, must ensure high safety when used by the health professionals. The following pages contain main information regarding the available range of probes with thread connection, for direct coupling on outlets, and hose connection, for mounting on wall rails or floor stands. Here we present also various types of support systems for all our kinds of collection jars and our catheter containers too.

VACUUM PROBES WITH THREAD AND HOSE CONNECTION, VACUUM REGULATOR OUTLET HOSE CONNECTION, RAIL CLAMPING SYSTEMS, WALL BRACKETS, STAINLESS STEEL RAIL, CATHETER CONTAINERS, SUPPORTING DEVICES

Probes with thread connection



AFNOR NF-S 90-116 probe, thread ISO G. 1/4" F.



AFNOR NF-S 90-116 type EASYFIX® probe, thread ISO G. 1/4" F.



UNI 9507 probe, thread ISO G. 1/4" F.



BS 5682 probe, thread ISO G. 1/4" F.



DIN 13260-2 probe, thread ISO G. 1/4" F.



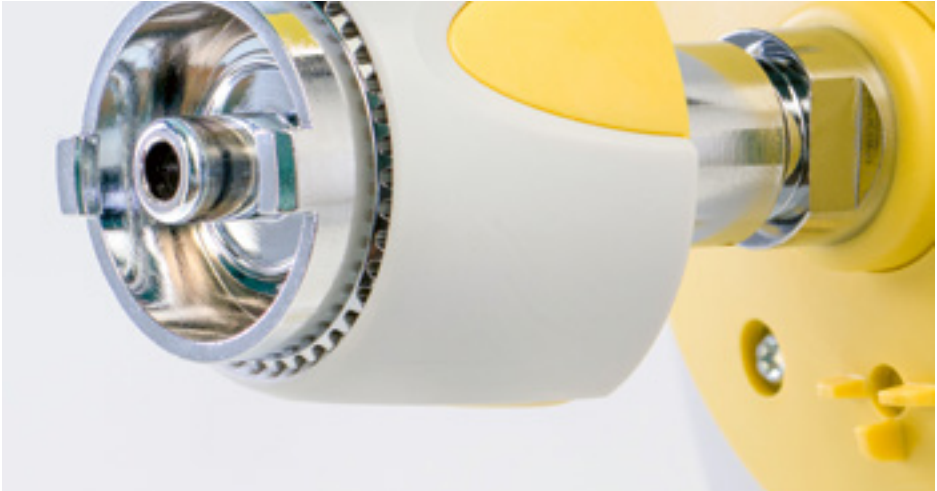
SS 875 24 30 probe, thread ISO G. 1/4" F.



JIS T 7101 probe, thread ISO G. 1/8" M.



SANS 1409 probe, thread ISO G. 1/4" F.



OHMEDA probe, thread ISO G. 1/4" F.

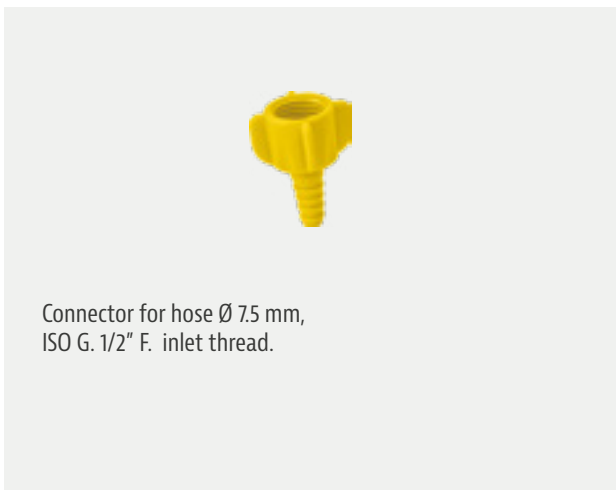
Probes with hose connection

Vacuum regulator outlet hose connection · Stainless steel rail

Probes with hose connection



Vacuum regulator outlet hose connection



Stainless steel rail



Rail clamping systems

Wall brackets · Catheter containers

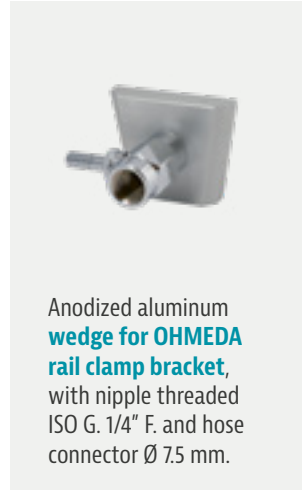
Rail clamping systems



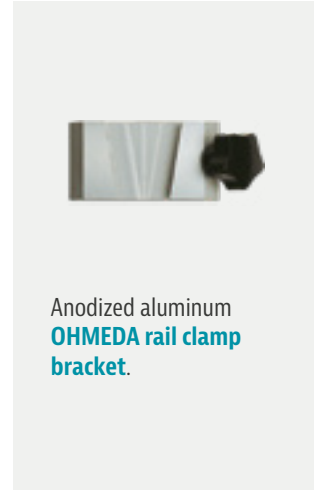
ABS clamp bracket for rail 30x10 mm and 50x10 mm, with nipple threaded ISO G. 1/4" F. and hose connector Ø 7.5 mm.



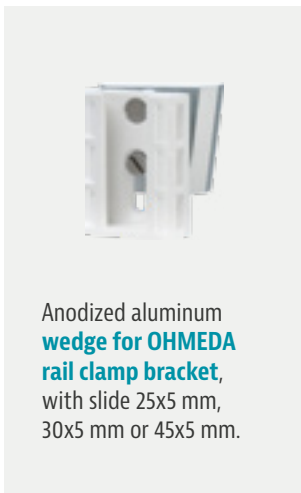
ABS clamp bracket for rail 30x10 mm and 50x10 mm, with slide 25x5 mm, 30x5 mm, 45x5 mm.



Anodized aluminum wedge for OHMEDA rail clamp bracket, with nipple threaded ISO G. 1/4" F. and hose connector Ø 7.5 mm.

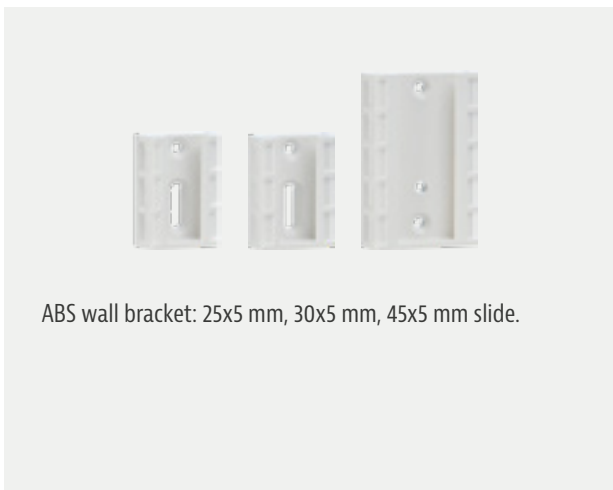


Anodized aluminum OHMEDA rail clamp bracket.



Anodized aluminum wedge for OHMEDA rail clamp bracket, with slide 25x5 mm, 30x5 mm or 45x5 mm.

Wall brackets



ABS wall bracket: 25x5 mm, 30x5 mm, 45x5 mm slide.

Catheter containers

flow-meter™ catheter containers are accessories allowing the operators to put down in a hygienic way the suction hose during their activity. They are made with tube of polycarbonate Ø 54 mm by 400 mm length, and they are fully autoclavable (121 °C - 15 min.).

Moreover these containers can be placed in a specific support ring for rail or trolley, in a single or twin construction.



Single and twin construction

Supporting devices for collection jars

The range of jars supporting devices includes trolleys, metallic support basket and ABS support rings for all containers sizes and models. Baskets and rings are manufactured with a strong and stiff hook matching with main slide sizes.



ABS support ring for **MAK/1000** jar, slides 25x5, 30x5, 41x4, 45x5 mm hook



ABS support ring for **MAK/2000** jars, slides 25x5, 30x5, 41x4, 45x5 mm hook



ABS support ring for **FLOVAC®** jars, slides 25x5, 30x5, 41x4, 45x5 mm hook



Metallic support basket for **MAK/4000** jar, slide 25x5 mm



Clip fixing 25x5 mm rings for trolleys, brackets and wall plates





5 wheels trolley up to 4 different jars (**MAK** and **FLOVAC**®) with vacuum gauge and 4 ON-OFF taps



5 wheels trolley up to 4 different jars (**MAK** and **FLOVAC**®) with handle



5 wheels trolley up to 4 different jars (**MAK** and **FLOVAC**®) with vacuum regulator and 4 ON-OFF taps

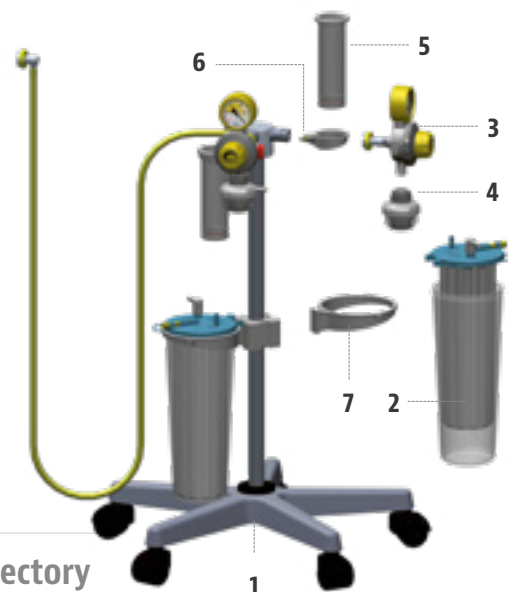


5 wheels trolley up to 4 different jars (**MAK**) and up to 12 jars (**FLOVAC**®) with vacuum regulator and safety jar **EASYSAFE**® and 4 ON-OFF taps

Suction trolley units

The flow-meter™ suction trolley units allow to perform suction interventions in a rational and effective manner, as they include in one suction system all the necessary devices for a broad range of surgical and medical procedures, providing the operators with the most suitable solution of use in a hospital environment.

This suction unit system allows to connect to the terminal units fitted on the trolley head one or two **EASYVAC®** vacuum regulators, preferably completed with the relative **EASYSAFE®** safety jar. The slide bracket system on the stand allows to accommodate up to 4 supports for the collection containers of suctioned fluids, disposable or not. The trolley head fits also the catheter container support rings, one for each suction circuit. This to allow the operator to safely store the patient tube after use. The trolley unit fits five antistatic rotating castors, two of which with locking pedal, this to get always an easy, safe and rational positioning. Please refer to the individual product data sheets to see the characteristics of the various devices associated with the trolley.



Directory

- 1 Universal trolley complete with stand, supply hose and probe
- 2 **Collection container**
 - Collection jar **MAK/1000** - **MAK/2000** - **MAK/4000**
 - Canister **FLOVAC®** 0.5 L - 1.0 L - 2.0 L - 3.0 L
 - Liner **FLOVAC®** 1.0 L - 1.5 L - 2.0 L - 3.0 L
 - PC reusable jar for Liner **FLOVAC®** 1.0 L - 1.5 L - 2.0 L - 3.0 L
- 3 **Vacuum regulator**
 - Vacuum regulator **EasyVAC® PLUS** or **EASYVAC®/250** with probe according to the different standards
 - Vacuum regulator **EasyVAC® PLUS** or **EASYVAC®/600** with probe according to the different standards
 - Vacuum regulator **EasyVAC® PLUS** or **EASYVAC®/1000** with probe according to the different standards
- 4 **Safety jar**
 - Safety jar **EasySAFE® PLUS** or **EASYSAFE®** for vacuum regulator **EASYVAC®** or **EasyVAC® PLUS**
- 5 **Catheter container**
 - Catheter container Ø 50 mm - L=200 mm
- 6 **Ring for catheter container**
- 7 **Support ring** for collection container
 - Support ring with slide 25x5 mm
 - for collection canisters **FLOVAC®**
 - for collection jars **MAK/1000**
 - for collection jars **MAK/2000**
 - Support basket with slide 25x5 mm for collection jars **MAK/4000**

DIMENSIONS (LxWxH)	580x580x870 mm
WEIGHT	5.0 Kg (vacuum regulators, collection jars and accessories excluded)
TERMINAL UNITS FOR VACUUM REGULATORS CONNECTION	2 AFNOR NF-S 90-116 / UNI 9507 / DIN 13260-2 / BS 5682 / SS 875 24 30 outlets
VACUUM SUPPLY HOSE	EN ISO 5359 yellow; length 3 m
PROBE FOR UNIT CONNECTION TO VACUUM PLANT	AFNOR NF-S 90-116 / UNI 9507 / DIN 13260-2 / BS 5682 / SS 875 24 30
BRACKET SYSTEM FOR COLLECTION JAR SUPPORTS	4 slides with dimensions 25x5 mm

- 1 Probe with hose connector
(different standards available).
- 2 Outlets (different standards available).
- 3 Support stand with 4 slides.
- 4 Vacuum anti-squeezing hose.
- 5 Anti-static wheels.



Assembly example.