



## SOT Flowmeter and Vacuum Regulator Unit

### SPECIFICATION

#### Terminal Unit Connections

Flowmeter's and vacuum suction units shall be supplied with connection probes to BS 5682: 1998.

Other norms are available upon request but shall include: DIN German, NFPA American - DISS, Diamond, Latch and Geometric (P.B), AFNOR French, JIS Japanese, SS Swedish, Uni Italian, ISO European and AGA - other types are available upon request.

Note - where flow meters or suction devices are connected to medical gas terminal units installed within bedhead trunking systems, on occasion there can be problems with clearance and the connection of humidifiers/collection jars. In these instances an extra long probe shall be available. Please consult with the bedhead trunking supplier as BeaconMedæs cannot be held responsible for connectivity problems in these circumstances.

NOTE: Whenever BeaconMedæs Envirom bedhead trunking systems are installed extra long probes must be used if humidifiers/jars are to be connected directly to the devices.



#### Gas Specificity

Flowmeter's and vacuum suction units shall be supplied with gas specific probes and only attach to the corresponding medical gas terminal unit. Gas specific components shall be specifically sized to ensure that a correct gas specific assembly is achieved so that in normal course of dismantling for repair or maintenance, parts from other gases cannot inadvertently be used.

#### Materials

Flowmeter shall be manufactured to EN 13220:1999 and ISO 15002:2008 and constructed from chromium-plated brass body, inner and external tube in polycarbonate and stainless steel ball. Other pieces shall be in brass, polyamide and NBR. Latex free.

High precision dial flowmeter's shall be aluminium body, polycarbonate dial and chromium-plated brass DISS outlet. Other parts shall be made of stainless steel, NBR, silicone and polyamide.

Vacuum suction devices (high and low) shall be ABS and polycarbonate body and a polycarbonate vacuum gauge cover. O-rings shall be NBR and silicone, pneumatic mechanism in POM and TPE. Inlet thread female WGAS 1/4" shall be chrome-plated brass.

High precision continuous/intermittent suction devices shall be manufactured in aluminum (body), polycarbonate (scale), polysulfone (water trap), with remaining internal pieces made out of silicone, viton, POM and TPE.

Water trap and bacterial filter housing shall be in polycarbonate as standard or polysulphone on request.

Oxygen regulators shall be supplied to ISO 10524-1:2006, EN 738-1:1997 and constructed from chrome-plated brass (high pressure stage), chrome-plated aluminium, stainless steel, polycarbonate, NBR, sintered bronze (inlet filter) and TPE (gauge cover).

#### Sterilising Specification

SafetyTrap® and DISS adapter:

Steam sterilization in gravity autoclave:

- SafetyTrap® PC: 121°C, 1,3kg/cm2, for 25 minutes\*

- SafetyTrap® PSU: 134°C, 2,4kg/cm2, for 15 minutes\*

- DISS adapter: 134 °C, 2,4 kg/cm2, for 15 minutes \*

\* Drying time: 30 min

SafetyTrap® PC can be sterilized up to 40 times and SafetyTrap® PSU can be sterilized up to 100 times. The DISS adapter can be sterilized an unlimited number of times. Before each use, verify that the device is not damaged.

Never put the product in direct contact with the autoclave chamber (it could be damaged). It is recommended to use a basket.

Humidifier:

Sterilisation should be conducted in an autoclave on a 25 min cycle at 121 °C, 1,3 kPa (max. 40 times). Before sterilisation remove the tube and diffuser and consequently disposed.

#### Warranty

The flowmeter and vacuum suction unit shall have a **two-year** warranty, subject to the recommended minimum routine maintenance operations being carried out by correctly competent persons.

#### CE Marking

The standard range of BeaconMedæs SOT, flow meter and Vacuum Regulator Unit are 'CE' marked under the Medical Devices Directive 93/42/EEC with approval from notified body no. 0051. Under this directive, the specified products are classified as Class IIa Medical Devices.



**Technical Specification and Ordering**
**Flowmeter**

Product	Standards	Flow (l/min)	Precision (%)	Calibration	Calibration Temperature	Dimensions (mm)	Weight (g)	Inlet Connection	Outlet Connection
Flowmeter - Single	EN 13220 : 1999 ISO 15002:2008	0-15	± 10	4,2 kg/cm <sup>2</sup> - 60 psi - 414 KPa	21°C - 70 °F	145 x 48	160	Whitworth-gas 1/8"	9/16"x18h UNF
Flowmeter - Double	EN 13220 : 1999 ISO 15002:2008	0-15	± 10	4,2 kg/cm <sup>2</sup> - 60 psi - 414 KPa	21°C - 70 °F	145 x 145	570	Whitworth-gas 1/8"	9/16"x18h UNF
Flowmeter - Selector	EN 13220 : 1999 ISO 15002:2008	0-15	± 10	4,2 kg/cm <sup>2</sup> - 60 psi - 414 KPa	21°C - 70 °F	155 x 63	214	Whitworth-gas 1/8"	9/16"x18h UNF

Product	Part No	Part No	Part No
Flowmeter - Single	O2 - 5540985 (BS) AIR - 5540302 (BS)	O2 - 5540006 (DIN)	O2 - 4540930 (No Probe) AIR - 4540300 (No Probe)
Flowmeter - Double	O2 - 5540052 (BS) AIR - 5540352 (BS)	On Request	O2 - 4540932 (No Probe)
Flowmeter - Selector (Single & Double)	O2 Single - 5540602 (BS) O2 Double - 5540622 (BS) AIR Single - 5540652 (BS) AIR Double - 5540642 (BS)	On Request	On Request



4540930



5540622

**High Precision Dial Flowmeter**

Product	Standards	Precision (%)	Dimensions (mm)	Weight (g)	Inlet Connection	Outlet Connection
Flowmeter - Single	EN13220:1999 ISO15002:2008	± 10	56 x 37	98	Whitworth-gas 1/8"	9/16"x 18h UNF

Part No	Flow (l/min)	Stages (l/min)														
		0	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.5	0.6	0.7	0.8	0.9	1	
O2 - 5540986 (BS)	0-1	0	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.5	0.6	0.7	0.8	0.9	1	
O2 - 5540853 (BS)	0-5	0	0.1	0.2	0.3	0.4	0.6	0.8	1	1.5	2	2.5	3	4	5	
O2 - 5540988 (BS) AIR - 5540987 (BS) O2 Double - 5540056 (DIN)	0-15	0	0.2	0.4	0.7	1	1.5	2	3	4	6	8	10	12	15	
O2 - 5540813 (BS) AIR - 5540833 (BS)	0-50	0	2	4	8	12	16	20	24	28	32	36	40	45	50	

\* 0.50 l/min flowmeter is indicated for CPAP



5540986



5540813

**Accessories**

Product	Part No
Universal Rail Clamp	4450061
"EN" Wall Bracket - EN 12218:1998	3382050
Connector for universal hose, DISS plastic	0520101
O2 Face Mask for single patient use - Adult	3210221
O2 Face Mask for single patient use - Child	3210220
O2 Nasal Cannula for single patient use	0930001
Face Mask with Nebuliser for single patient use - Adult	0930005
Face Mask with Nebuliser for single patient use - Child	0930006
1m of PVC tube 8 x 13mm	0940023
1m of PVC tube 9 x 15mm	0940029
Humidifier (sterilisable), bubble style with diffuser, 350 ml	5530005



5530005



4450061



3382050



0520101



Face Mask

**Vacuum Regulating Units**

Product	Range (kPa/mmHg)	Precision (%)	Flow (l/min)(@ supply 80kPa - 120 l/min)	Dimensions (mm)	Weight (g)	Negative Pressure Relief Valve
High Suction	0-100 / 0-750	± 5	100	240 x 86 x 86	310	N
Low Suction	0-20 / 0-150	± 5	90	240 x 86 x 86	360	Y

Product	Part No	Product	Part No
Low Vacuum Regulator with Safety Trap PC and BS probe	5359204	High Vacuum Regulator with Collection Jar (1L) and BS probe	5351100
High Vacuum Regulator with Safety Trap PC and BS probe	5359003	High Vacuum Regulator with Collection Jar (4L), wall bracket, connection tubes and BS probe	5351400
High Vacuum Regulator with Safety Trap PC without probe	5351000	High Vacuum Regulator with Collection Jar (1.7L), wall bracket, 2 PVC connection tubes and BS probe	5351200
Low Vacuum Regulator with Bacterial Filter and BS probe	5352600	High Vacuum Regulator with Safety Trap PC - rail clamp and BS remote probe c/w connection tube	5351020
High Vacuum Regulator with Bacterial Filter and BS probe	5351600	High Vacuum Regulator with Collection Jar (1L) - rail clamp and BS remote probe c/w connection tube	5351120



5359204



5351600



5351400



5351200



5351120

Product	Part No	Product	Part No
Suction Trolley c/w High Vacuum Regulator with Collection Jar (4 L) - with BS remote probe c/w connection tube	5351800	Thoracic Drainage Assy, 0-30 cmH2O - rail mounted	5430270
Suction Trolley c/w High Vacuum Regulator with Collection Jar (4 L x 2) - with BS remote probe c/w connection tube	5351801	Suction Trolley for Thoracic drainage, Low Vacuum Regulator with Collection Jar (4 L) and water manometer regulator	5352800
Water Manometer Regulator, 0-30 cmH2O for micro suction (pleural and gastric drainage)	4383500		



5351801



5341000



5342000

**High Precision Continuous/Intermittent Vacuum Regulating Units**

Product	Part No	Range (kPa/mmHg)	Precision (%)	Flow (l/min)	Dimensions (mm)	Weight (g)	Safety Pressure Relief Valve
Continuous/Intermittent - Child	5341000	0-26 / 0-200	± 5	60 (INT 9)	160 x 114 x 105	710	*
Continuous/Intermittent - Adult	5342000	0-20 / 0-150	± 5	50 (INT 9)	160 x 114 x 105	710	*

\* Powered from vacuum source

**Venturi Vacuum Regulating Units (International only)**

Product	Range (kPa/mmHg)	Max Suction Pressure @ 5 bar (kPa/mmHg/mbar)	Max Suction Flow (l/min)	Max Consumption (l/min)	Delivery Pressure (bar)	Dimensions (mm)	Weight (g)
Venturi Suction	0-100 / 0-750	70 ± 5 / 525 ± 37 / 700 ± 50	26 ± 2 (STP 21.1°C)	42 +/- 4	3-8	210 x 45 x 85	450

Product	Part No
Venturi Suction Unit with Safety Trap PC and BS probe	5300003
Venturi Suction Unit with Safety Trap PC - rail clamp and BS probe and connection tube	5430503
Venturi Suction Unit with Collection Jar (1 L) - rail clamp and BS remote probe c/w connection tube	4430021
Suction Trolley c/w Venturi Suction Unit with Collection Jar (4 L) - with BS remote probe c/w connection tube	5310310



5300003



5430503



5540986



5310310

**Accessories**

Product	Part No	Volume (L)	Scale Up To (L)	Autoclave Limits - Polycarbonate (PC) (°C / °F)	Autoclave Limits - Polysulphone (PS) (°C / °F)	Dimensions (cm)	Anti Overflowing System
Collection Jar	4383105	1	0.75	121 / 250	135 / 275	Ø 10.5 x 16.5	Y
Collection Jar	4383106	1.75	1.3	121 / 250	135 / 275	Ø 14 x 14.5	Y
Collection Jar	4383107	4	3.5	121 / 250	135 / 275	Ø 14 x 35	Y
Humidifier (bubble type)	5530005	350 cm	0.3	121 / 250	135 / 275	17 x 7.5 x 8.5	-
Wall Mounted collection set c/w Collection Jar (1.7 L), 2 x PVC connection tubes (6x8mm) and "EN" Wall Bracket	4381000						
Rail coupling system with "EN" piece for jars	4450061						
EN Wall Bracket for Collection Jars	3382050						



4383105



4383107



5530005



5530005



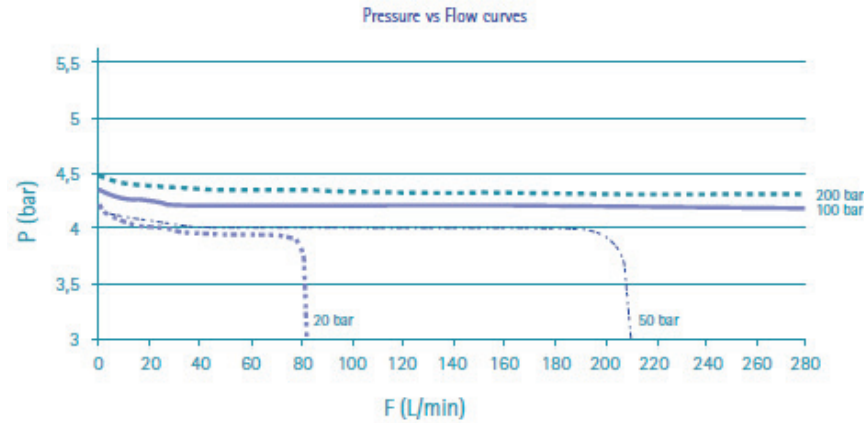
3382050

**Oxygen Regulators**

Product	Part No	Supply Pressure (bar)	Outlet Pressure (bar)	Outlet Flow (l/min)
Oxygen Regulator	5503221	300 - 10	4.5 ±0.5	0 - 250



\* Other gas types available include N2O, Air and CO2.



CYLINDER FITTING			CYLINDER FITTING		
Short Fitting Cylinder Ø<14 cm Vanne courte Bouteille Ø<14 cm	Long Fitting Cylinder Ø>14 cm Vanne longue Bouteille Ø>14 cm		Short Fitting Cylinder Ø<14 cm Vanne courte Bouteille Ø<14 cm	Long Fitting Cylinder Ø>14 cm Vanne longue Bouteille Ø>14 cm	
NFS	NF E29 650	NFL	DNS	DIN 477-1 nr.9	DNL
BSS	BS-341 nr.3	BSL	UNS	UNI 4406	UNL
CGS	CGA V-1 nr.540	CGL	ISS	ISO 5145 nr.7	ISL
			PIN PIN INDEX EN-850		

**Portable Electrical Suction Units**

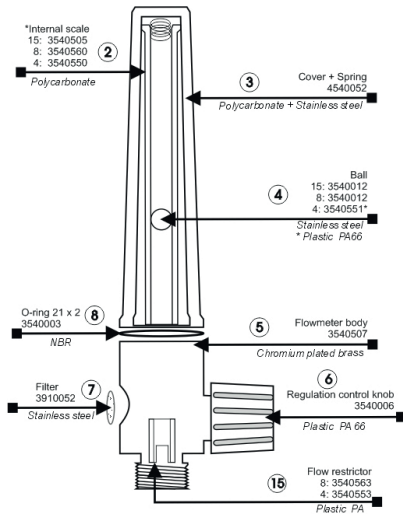
	V7 m	V7 mx	V7 plus b emerg.	V7 plus b	V7 plus dc	V7 dc	V7 plus ac	V7 ac
Range			High Vacuum - High Flow			High Vacuum - Low Flow	High Vacuum - High Flow	High Vacuum - Low Flow
Supply	110 - 220 Vac - 12/24 Vdc - Battery	100- 240 Vac - 12 Vdc - Battery	12 Vdc - Battery	12 Vdc		110 Vac 60 Hz or 220 Vac 50 Hz		
Vacuum	84 kPa 630 mmHg				75 kPa 562mmHg	84 kPa 630 mmHg	80 kPa 600 mmHg	
Flow	30 L/min				14 L/min	30 L/min	20 L/min	
Power	130 W(AC) 84 W (DC)	160 W (AC) 84 W (DC)	85 W	85 W	85 W	18 W	120 W	250 W
Battery	12 V 4,5 Ah. Ac-Pb				n/a			
Autonomy (battery)	65 min				n/a			
Battery charger	Internal (integrated in the unit)		External (optional accessory)		n/a			
Weight	5.2 kg	4.5 kg	4.2 kg	2.5 kg	2.2 kg	3.5 kg	3 kg	
Dimensions (packaged)	460 x 210 x 290							
Noise level	49 ± 1,5dB (AS) / 1 m							
Part No (with 1L PC jar)	5320231	5320236	5320281	5320261	5320251	5320211	5320241 (220 V) 5321241 (110V)	5320201 (220 V) 5321201 (110 V)



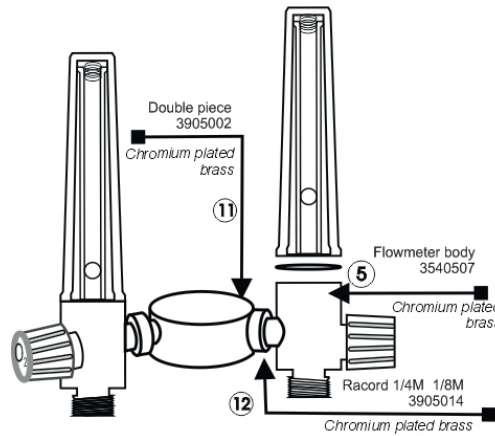


## Flowmeter

**Caudalímetro de bola** Ref: 15 L/min  
**Débitmètre à bille** O<sub>2</sub>: 4540000  
**Ball Flowmeter** Air: 4540300

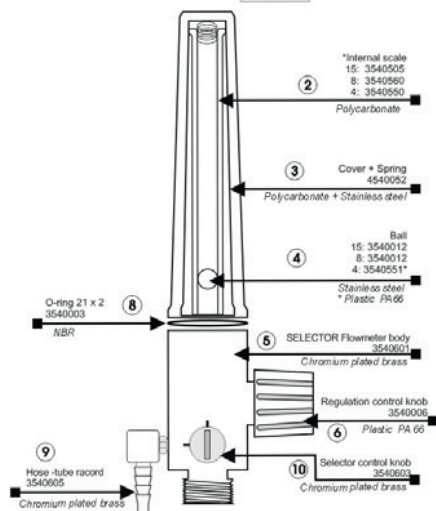


**Caudalímetro Doble** Ref: 15 L/min  
**Débitmètre Double** O<sub>2</sub>: 4540005  
**Double Flowmeter** Air: 4540305

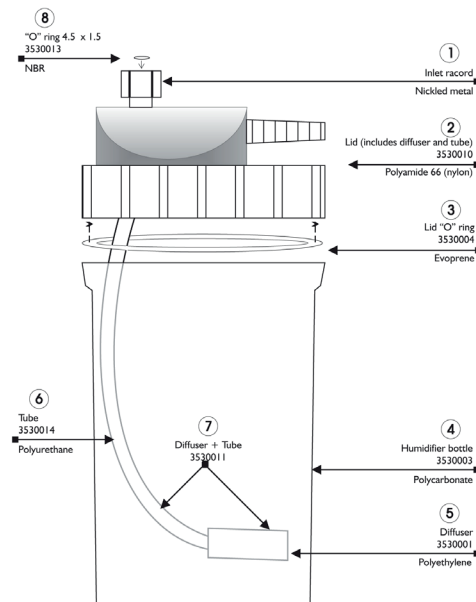


## Flowmeter Selector

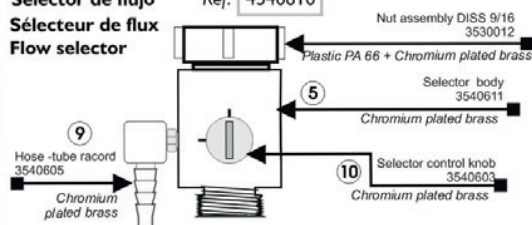
**Caudalímetro Selector** Ref: 15 L/min  
**Débitmètre Sélecteur** O<sub>2</sub>: 4540600  
**Selector Flowmeter** Air: 4540605



## Humidifier

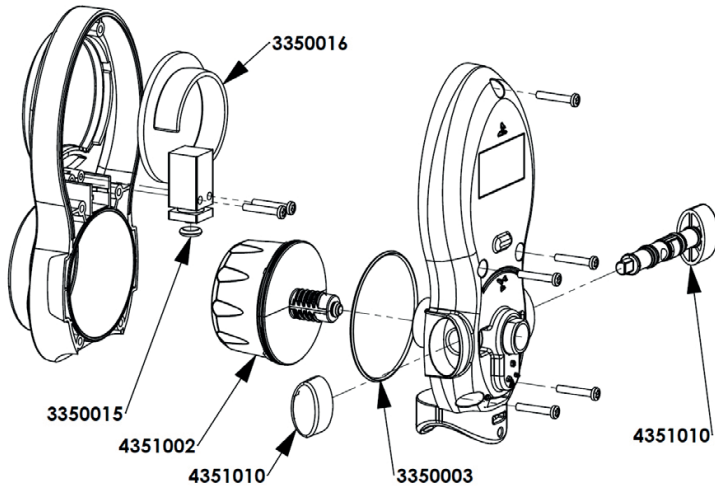


**Selector de flujo** Ref: 4540610  
**Sélecteur de flux**  
**Flow selector**

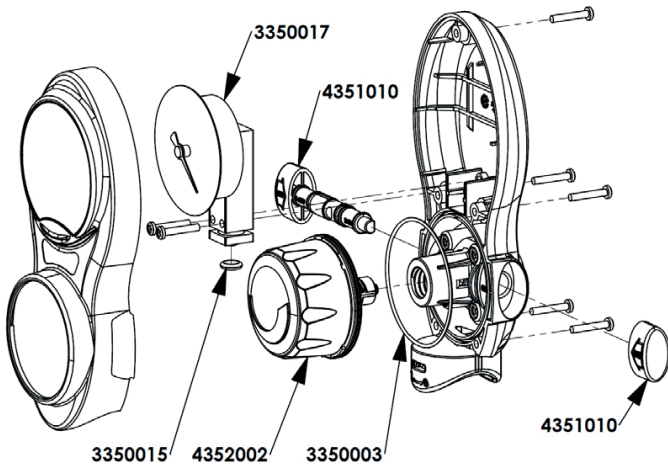




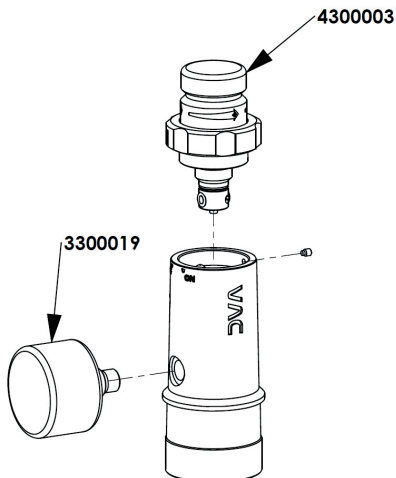
### High Vacuum Suction



### Low Vacuum Suction



### Venturi Suction



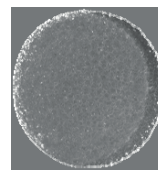
Part No	Description
<b>Flowmeter</b>	
4540550	Repair kit for flowmeter 0-15 l/min o-rings, external tube, ball, internal scale and spring
4540520	Flowmeter control knob, complete
<b>Vacuum Suction Devices</b>	
4350300	DISS adapter for vacuum suction regulators
4350100	SafetyTrap (PC) for vacuum suction regulators
4350200	SafetyTrap (PS) for vacuum suction regulators
4330105	Pack of 100 high efficiency particle filters for SafetyTrap
4350106	Pack of 10 hydrophobic antibacterial and antiviral filters - OD 15mm/9mm
4350110	Adapter and bacterial filter
4383007	Suction jar lid (1L)
4383010	Suction jar lid (1.7 & 4L)



4350300



4350100



4330105



4350110



4350106