RTM 3

OXYGEN-THERAPY

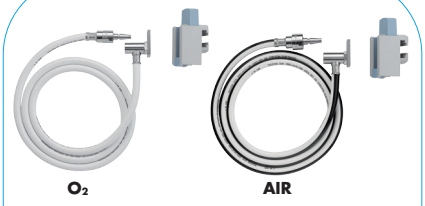
FLOWMETERS WITH
FLOATING BALL

TECHNOLOGIE
MEDICALE

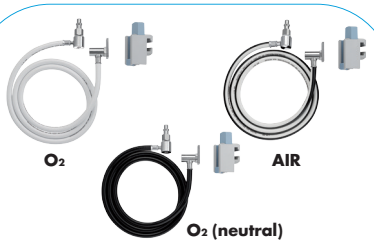
ENGLISH VERSION • 11/2010

RAIL MOUNTING SYSTEMS

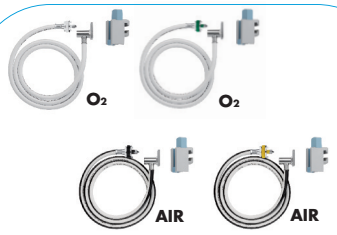
AFNOR rail mounting systems



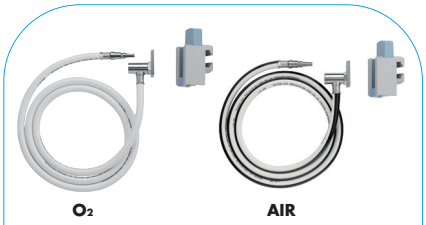
BS rail mounting systems



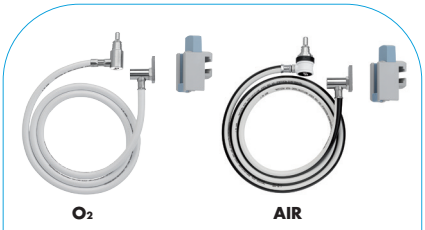
DIN rail mounting systems



OHMEDA rail mounting systems



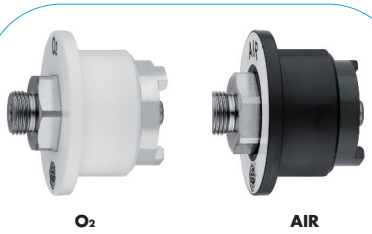
NORDIC rail mounting systems



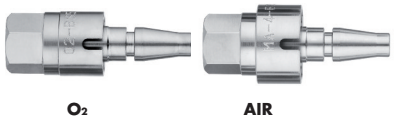
UNI rail mounting systems

Other standards available upon request.

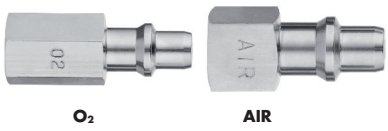
DIRECT PROBES



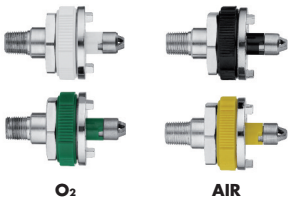
AFNOR direct probes



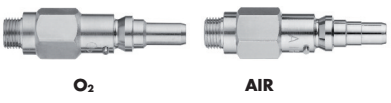
BS direct probes



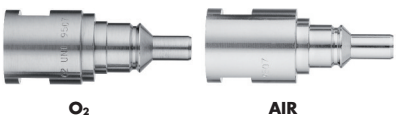
DIN direct probes



OHMEDA direct probes



NORDIC direct probes



UNI direct probes

Other standards available upon request.

RTM 3

The RTM3 flowmeter with floating ball is used to adjust and measure the flow of a gas that is to be delivered to patients through the respiratory tract. The RTM3 should be connected to a source of pressured gas on the wall either using a direct probe or a rail mounting system. It must be fitted at its outlet either with a humidifier/nebulizer or with an outlet tubing nipple.

Main technical features:

Active medical device of class IIa.

In compliance with the EN ISO 15002: 2008 standard *(former EN 13220: 1998)*.

Inlet pressure: in compliance with the EN ISO 7396-1: 2007 Standard *(former EN 737-3)* – 4 bar $^{+1}/_{-0}$

- **Flowmeter with compensated pressure** ensuring perfect flowrate stability and accuracy. The scale working pressure is the same as the pressure of the network so that the scale is not affected by any counter-pressure.
- **New type of "cartridge" knob,** extremely reliable, easy-to-clean and ensuring an optimized adjustment. Perfect tightness of the knob thanks to its polyamide seat.

  The knob was tested under pressurized working conditions during more than 10,000 cycles (which corresponds to 5 openings / closings every day during more than 5 years) without showing any leakage after closing. ***This allows us to guarantee the closing of the knob during 5 years without any leakage.***
- **Monoblock scale cover made of polycarbonate** for a higher sturdiness and a greater safety. The inopportune unscrewing of the monoblock scale cover is not possible. Patients have no access to the scale.
- **Expanded scale** providing higher reading accuracy for low flowrates (only for 05 l/min and 15 l/min RTM3 flowmeters).
- **Filter at the scale inlet** protecting the device against any gas network impurities and thus ensuring the protection of both the patient and the flowmeter.
- Body made of nickel-plated brass, very strong.
- Flowmeter MRI compatible.
- Normative information (gas name, CE marking, signs related to the use of the device) are mentioned on a self-adhesive ring for a better reading and an immediate identification of a TM device. The identification ring is protected against tarnishing and wear & tear thanks to the monoblock cover.
- **A unit serial number is engraved on the body of each flowmeter** ensuring its identification and traceability. 8 digits and 1 letter number indicating the manufacturing year and month as well as the unit serial number of the device.

Many versions available:

- Available gases: OXYGEN – MEDICAL AIR.
- Available flowrates: 1.5 l/min - 05 l/min - 15 l/min - 30 l/min.
- Inlets: 12 x 100 F - 1/4G M -1/8NPT F - 3/8"BSP F.
- Outlets: 12 x 125 M - 9/16" M - 1/2"BS F - 1/4G M.
- Available configurations: Single, Twin and DUO.
- Available connections to the wall outlet: Direct probe or Rail mounting system.
- Standards: AFNOR (French Standard) - BS (British Standard) DIN (German Standard) - US OHMEDA DIAMOND (American Standard) - NORDIC (Scandinavian Standard) UNI (Italian Standard).
- Weight (with direct probe): 320 g.
- Dimensions (with direct probe):
  Height 145 mm x width 35 mm x depth 100 mm.

Use, cleaning and maintenance:

The RTM3 flowmeter must be connected vertically. Then just open the knob and adjust the position of the floating ball according to the required flowrate (reading in the middle of the ball).

Clean the exterior of the device with water and soap. Rinse and dry. If using disinfecting products please check their compatibility with plastics. Do not lay under water.

Device to be serviced every 1 to 3 years according to intensive use, if any.

Accessories:

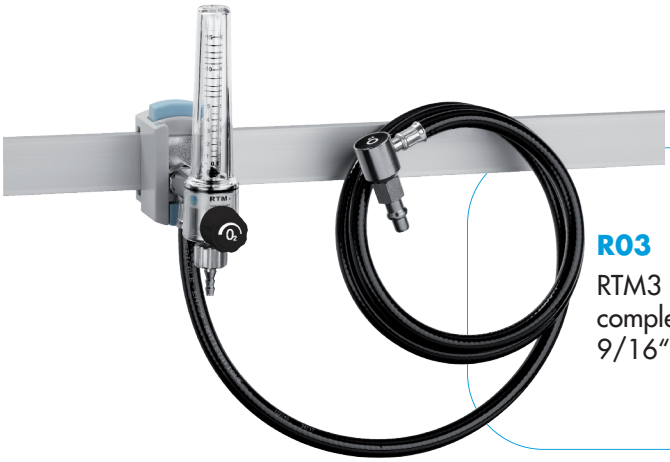
- Tubing nipple (1 part) or tubing nipple (2 parts) ❶
- Switch or Flow-Switch ❷
- Humidifier: CCO model (250 ml) or TMS model (500 ml) ❸

R01

RTM3 O_2 15 l/min mounted with BS direct probe and 9/16" outlet tubing nipple.

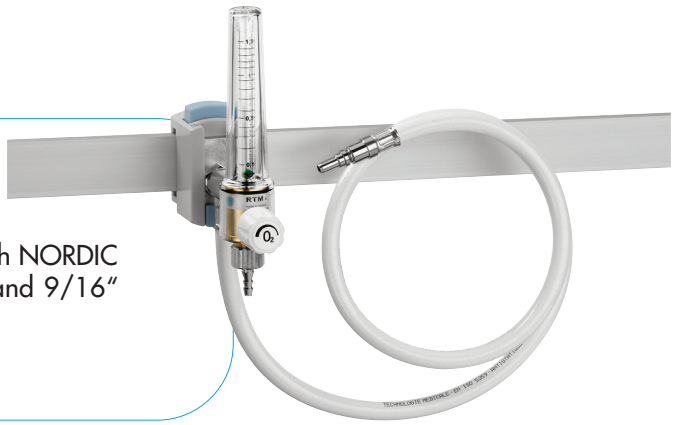
R02

RTM3 O_2 05 l/min mounted with DIN direct probe and 250 ml CCO humidifier.



R03

RTM3 O_2 15 l/min mounted with DIN complete rail mounting system (neutral) and 9/16" outlet tubing nipple.



R04

RTM3 O_2 1.5 l/min mounted with NORDIC complete rail mounting system and 9/16" outlet tubing nipple.

R05

RTM3 O_2 15 l/min mounted with UNI direct probe and 500 ml TMS humidifier.

R06

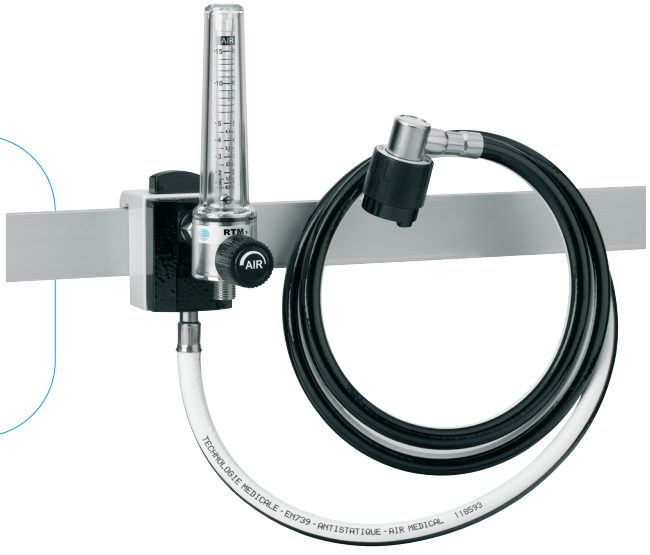
Twin RTM3 O_2 15-30 l/min mounted with AFNOR direct probe and 12x125 outlet tubing nipples.

R07

RTM3 AIR 05 l/min mounted with BS direct probe and 1/2" BS outlet tubing nipple.

R08

RTM3 AIR 15 l/min mounted with AFNOR complete rail mounting system (with metal clamp).



RTM3 DUO FLOWMETER
Patented model

Double outlet integrated in the body of the flowmeter:

- One horizontal outlet tubing nipple;
- One vertical central threaded outlet to connect a humidifier (outlet thread 12x125 M and 9/16" M available).

Thanks to this DUO system there is no need to screw and unscrew the outlet tubing nipple or the humidifier.

The saving of time is really appreciated compared to a standard flowmeter and the risk of losing the nipple is avoided.

The user can choose between 3 positions and can switch from one position to another without removing the nipple or the humidifier:

- 1st position: the gas flow is delivered through the nipple.
- 2nd position: the gas flow is cut off. Parking position.
- 3rd position: the gas flow goes through the vertical central outlet to which you can connect either a CCO humidifier (250 ml) or a TMS humidifier (500 ml) or any other model (single-use humidifier, nebulizer).

Also available with a complete rail mounting system.

R08
RTM3 DUO O_2 15 l/min with AFNOR direct probe.

To convert the standard RTM3 flowmeters into DUO flowmeters the solution is:

TM FLOW-SWITCH OR SWITCH

- Flow-Switch: model with ring (R09)
- Switch: model with knob (R10)

Both Flow-Switch and Switch can be screwed onto any standard flowmeter. They enable you to deliver a gas flow either through the outlet tubing nipple or through a humidifier.

Available with 12x125 or 9/16" threaded inlet and outlet.

R09

R10

AFNOR French Standard — RTM3 FLOWMETERS WITH FLOATING BALL

OXYGEN (O_2) / MEDICAL AIR	Flowrates l/min	Single 1.5	Single 05	Single 15	Single 30	Twin 15-15	DUO 15
Inlet thread: 12x100 F	Outlet thread: 12x125 M	17579	14801	14803	14805	14811	14815
		X	14696	14683	14685	14691	14693
	Outlet thread: 9/16" M	17587	14851	14855	14859	14866	14873
		X	14709	14713	14717	14724	–
Inlet thread: 1/4G M	Outlet thread: 12x125 M	17610	14800	14802	14804	14810	14814
		X	14680	14682	14684	14690	–
	Outlet thread: 9/16" M	17591	14849	14853	14857	14865	14871
		X	14707	14711	14715	14723	–
Mounted with AFNOR direct probe 	Outlet thread: 12x125 M	17581	14030	14038	14046	14071	14078
		X	13883	13891	13899	13924	13928
	With nipple*: 12x125	17583	14032	14040	14048	14073	X
		X	13885	13893	13901	13926	X
	Outlet thread: 9/16" M	17588	14130	14134	14138	14150	14155
		X	13968	13972	13976	13988	–
	With nipple*: 9/16"	17589	14131	14135	14139	14151	X
		X	13969	13973	13977	13989	X
Mounted with AFNOR complete rail mounting system (polycarbonate clamp) 	Outlet thread: 12x125 M	17612	14026	14034	14042	14068	–
		X	13879	13887	13895	13921	–
	With nipple*: 12x125	17614	14028	14036	14044	14070	X
		X	13881	13889	13897	13923	X
	Outlet thread: 9/16" M	17592	14128	14132	14136	14148	–
		X	13966	13970	13974	13986	–
	With nipple*: 9/16"	17593	14129	14133	14137	14149	X
		X	13967	13971	13975	13987	X

BS British Standard — RTM3 FLOWMETERS WITH FLOATING BALL

OXYGEN (O_2) / MEDICAL AIR	Flowrates l/min	Single 1.5	Single 05	Single 15	Single 30	Twin 15-15	DUO 15
Inlet thread: 1/4G M	Outlet thread: 9/16" M	17591	14849	14853	14857	14865	14871
		X	14707	14711	14715	14723	–
	Outlet thread: 1/2"BS F	17574	14752	14754	14756	14760	X
		X	14659	14661	14663	14667	X
Mounted with BS direct probe 	Outlet thread: 9/16" M	17594	14398	14404	14410	14424	14430
		X	14278	14284	14290	14304	–
	With nipple*: 9/16"	17595	14399	14405	14411	14425	X
		X	14279	14285	14291	14305	X
Mounted with BS complete rail mounting system (polycarbonate clamp) 	Outlet thread: 9/16" M	17596	14400	14406	14412	14426	14431
		X	14280	14286	14292	14306	–
	With nipple*: 9/16"	17597	14401	14407	14413	14427	X
		X	14281	14287	14293	14307	X

* Outlet tubing nipple in 2 parts, metal.
– Available upon request only.
X Not available.
Please contact us for other flowmeter configurations.

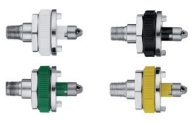
DIN German Standard — RTM3 FLOWMETERS WITH FLOATING BALL

OXYGEN (O_2) / **MEDICAL AIR**

		Flowrates l/min	Single 1.5	Single 05	Single 15	Single 30	Twin 15-15	DUO 15
Inlet thread: 1/4G M	DIN ISO	Outlet thread: 9/16" M	17591	14849	14853	14857	14865	14871
			X	14707	14711	14715	14723	–
	DIN NEUTRAL		–	–	17156	–	–	–
Mounted with DIN direct probe 	DIN ISO	Outlet thread: 9/16" M	17598	14566	14570	14574	14586	14592
			X	14494	14498	14502	14514	–
		With nipple*: 9/16"	17599	14567	14571	14575	14587	X
			X	14495	14499	14503	14515	X
	DIN NEUTRAL	Outlet thread: 9/16" M	–	18014	17154	–	17330	–
Mounted with DIN complete rail mounting system (polycarbonate clamp) 	DIN ISO	Outlet thread: 9/16" M	17600	14568	14572	14576	14588	14593
			X	14496	14500	14504	14516	–
		With nipple*: 9/16"	17601	14569	14573	14577	14589	X
			X	14497	14501	14505	14517	X
	DIN NEUTRAL	Outlet thread: 9/16" M	–	18013	18012	–	–	–
			X	–	–	–	–	–

US OHMEDA American Standard — RTM3 FLOWMETERS WITH FLOATING BALL

OXYGEN (O_2) / ISO / **OXYGEN (O_2) / US** / **MEDICAL AIR / ISO** / **MEDICAL AIR / US**

	Flowrates l/min	Single 1.5	Single 05	Single 15	Single 30	Twin 15-15	DUO 15
Inlet thread: 1/4G M	Outlet thread: 9/16"	17591	14849	14853	14857	14865	14871
		X	14707	14711	14715	14723	–
Inlet thread: 1/8NPT F	Outlet thread: 9/16"	17607	14850	14854	14858	17080	14872
		X	14726	14730	14734	–	–
Mounted with US OHMEDA direct probe 	Outlet thread: 9/16" M	–	14917	14921	14925	–	–
		–	17997	17999	–	–	–
		X	14893	14897	14901	–	–
		X	18001	18003	–	–	–
	With nipple*: 9/16"	–	14918	14922	14926	–	X
		X	14894	14898	14902	–	X
Mounted with US OHMEDA complete rail mounting system (polycarbonate clamp) 	Outlet thread: 9/16"	–	14915	14919	14923	–	–
		–	17996	17998	–	–	–
		X	14891	14895	14899	–	–
		X	18000	18002	–	–	–
	With nipple*: 9/16"	–	14916	14920	14924	–	X
		X	14892	14896	14900	–	X

* Outlet tubing nipple in 2 parts, metal.
– Available upon request only.
X Not available.
Please contact us for other flowmeter configurations.

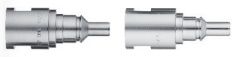
NORDIC Scandinavian Standard

RTM3 FLOWMETERS WITH FLOATING BALL

OXYGEN (O_2) / MEDICAL AIR	Flowrates l/min	Single	Single	Single	Single	Twin	DUO
		1.5	05	15	30	15-15	15
Inlet thread: 1/4G M	Outlet thread: 9/16"	17591	14849	14853	14857	14865	14871
		X	14707	14711	14715	14723	–
Inlet thread: 1/8NPT F	Outlet thread: 9/16"	17607	14850	14854	14858	17080	14872
		X	14726	14730	14734	–	–
Mounted with NORDIC direct probe 	Outlet thread: 9/16"	X	14638	14643	14648	–	–
		X	14611	14616	14621	–	–
	With nipple*: 9/16"	17609	14639	14644	14649	–	X
		X	14612	14617	14622	–	X
Mounted with NORDIC complete rail mounting system(polycarbonate clamp) 	Outlet thread: 9/16"	17602	14635	14640	14645	–	–
		X	14608	14613	14618	–	–
	With nipple*: 9/16"	17603	14637	14642	14647	–	X
		X	14610	14615	14620	–	X

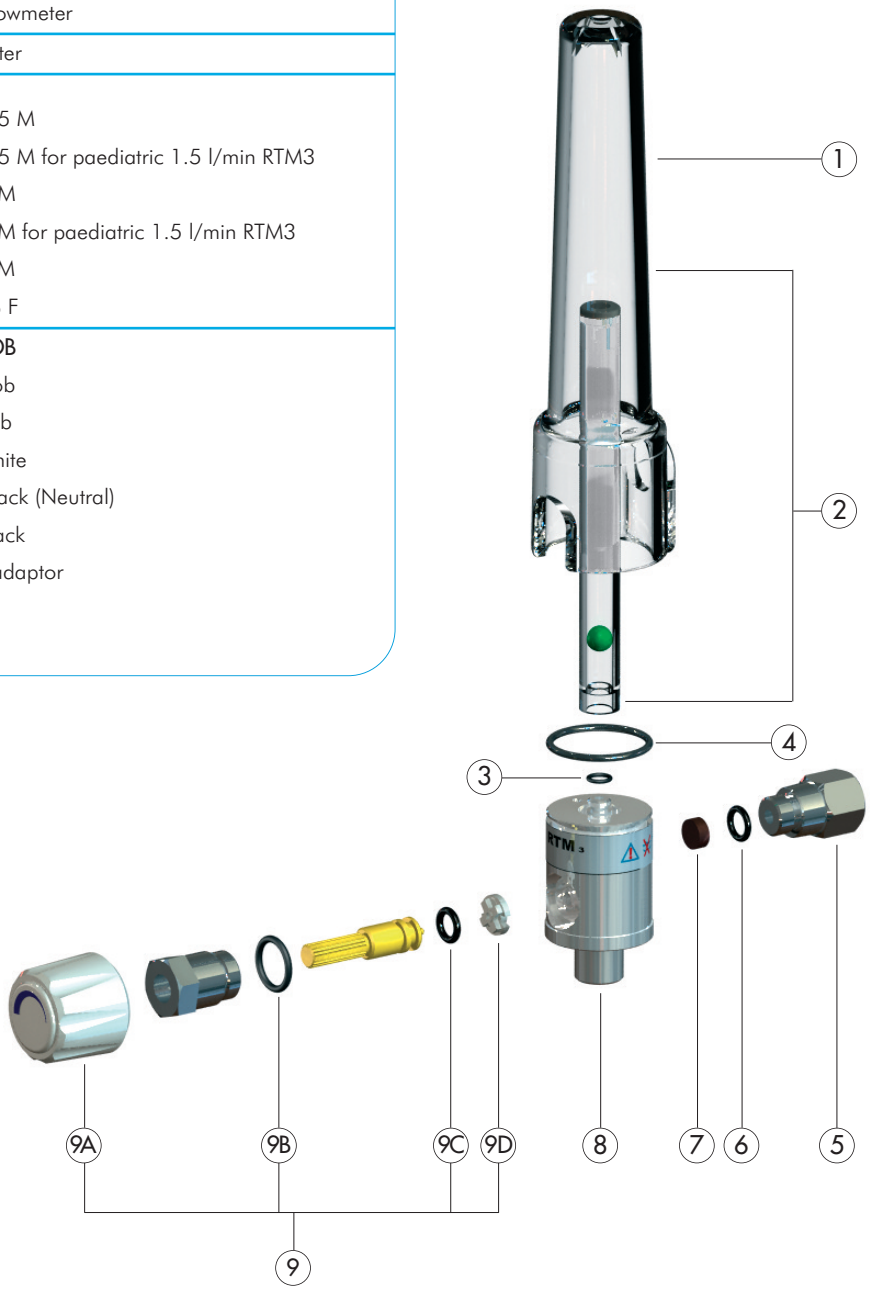
UNI Italian Standard

RTM3 FLOWMETERS WITH FLOATING BALL

OXYGEN (O_2) / MEDICAL AIR	Flowrates l/min	Single	Single	Single	Single	Twin	DUO
		1.5	05	15	30	15-15	15
Inlet thread: 1/4G M	Outlet thread: 1/4G M	X	14770	14772	14774	14778	–
		X	14668	14670	14672	–	–
	Outlet thread: 9/16" M	17591	14849	14853	14857	14865	14871
		X	14707	14711	14715	14723	–
Mounted with UNI direct probe 	Outlet thread: 1/4G M	X	14945	14949	14953	17428	17431
		X	14933	14937	14941	–	17432
	With nipple*: 1/4G	X	14946	14950	14954	–	–
		X	14934	14938	14942	–	–
	Outlet thread: 9/16" M	18005	18004	18006	18007	18008	18009
		X	–	–	–	–	–
Mounted with UNI complete rail mounting system (polycarbonate clamp) 	Outlet thread: 1/4G M	X	14947	14951	14955	–	–
		X	14935	14939	14943	–	–
	With nipple*: 1/4G	X	14948	14952	14956	–	–
		X	14936	14940	14944	–	–
	Outlet thread: 9/16" M	X	–	18010	–	–	–
		X	–	–	–	–	–

* Outlet tubing nipple in 2 parts, metal.
– Available upon request only.
X Not available.
Please contact us for other flowmeter configurations.

	Reference		Description
1		11086	Monobloc scale cover in polycarbonate
2			COMPLETE SCALE
	O_2	17570	Complete scale 1.5 l/min (paediatric)
	O_2	16968	Complete scale 05 l/min 4.5 bar
	O_2	16969	Complete scale 15 l/min 4.5 bar
	O_2	16970	Complete scale 30 l/min 4.5 bar
	AIR	16965	Complete scale 05 l/min 4.5 bar
	AIR	16966	Complete scale 15 l/min 4.5 bar
	AIR	16967	Complete scale 30 l/min 4.5 bar
3		11131	Gasket for scale bottom
4		11408	Gasket for scale cover
5		11174	Inlet adaptor 12x100 F
		11178	Inlet adaptor 1/4G M
		11176	Inlet adaptor 1/8NPT F
		16922	Inlet adaptor 3/8G BSP F
6		11578	Inlet gasket for flowmeter
7		11029	Inlet flowmeter filter
8			BODY ONLY
		11201	Body only 12x125 M
		17569	Body only 12x125 M for paediatric 1.5 l/min RTM3
		11205	Body only 9/16" M
		17568	Body only 9/16" M for paediatric 1.5 l/min RTM3
		11211	Body only 1/4G M
		11216	Body only 1/2"BS F
9			COMPLETE KNOB
		16954	O_2 complete knob
		16955	Air complete knob
9A		11198	O_2 knob only, white
		17086	O_2 knob only, black (Neutral)
		11189	Air knob only, black
9B		11684	Gasket for inlet adaptor
9C		11234	Knob axis gasket
9D		11184	Knob seat



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TECHNOLOGIE MEDICALE

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