

# 3.2.5 MEDICAL GAS TERMINAL UNITS / OUTLETS

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**G. Samaras**  
MEDICAL GAS SOLUTIONS

### 3.3 MEDICAL GAS TERMINAL UNITS / OUTLETS

#### 3.3.1 Medical gas terminal units/outlets

Two-part Outlets for O<sub>2</sub> - N<sub>2</sub>O - Air- Vacuum - Compressed Air according to ISO 7396-1, 2

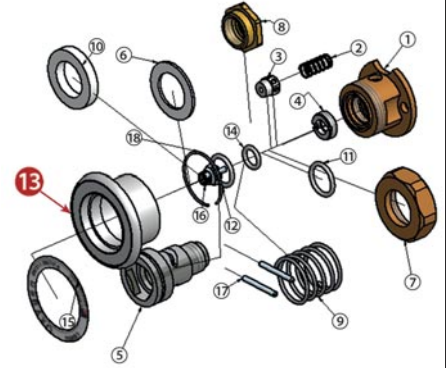
Outlets are installed at the final delivery points in a medical gas pipeline system. They are used by personnel to supply the various gases using special quick-action connection fittings. The two-part outlets are composed of the base part and the finishing part.

The base part, made of chrome-plated brass, consists of:

- Automatic shut-off valve for maintenance to permit replacement of the finishing part without having to interrupt gas delivery to other outlets
- Threaded inlet connection, specific for each type of gas, complete with nut, mouth-piece and copper tube suited for braze-welding to the pipeline system
- Threaded outlet connection, specific for each type of gas, for connection to the finishing part.

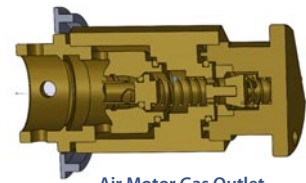
The finishing part made of chrome-plated steel, equipped with:

- Threaded inlet connection, different for each type of gas, complete with OR seal ring
- Automatic spring-operated valve and filter;
- Outlet connection with different connection fitting for each type of gas.
- Outlet's cap **13** is available in **anodised aluminum, plastic or antimicrobial copper**.



Medical compressed gases and vacuum outlets are suitable for external or internal wall mounting, for bed head unit and ceiling pendant installation.

Two-part outlets are composed of the base part and the finishing part according to EN ISO 7396-1 & 2, EN ISO 9170-1 & 2 standards.

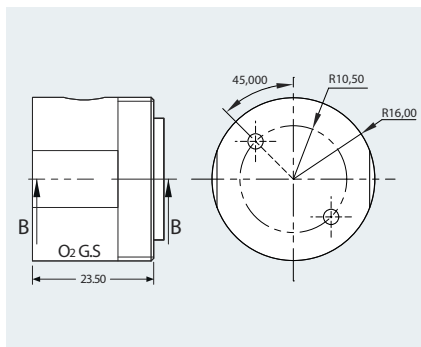


Air Motor Gas Outlet



NORM	T Y P E O F G A S						
	O <sub>2</sub>	N <sub>2</sub> O	AIR/MA4	Vac	Air800/SA7	AGSS	Special
1. ENV 737-6 (European Standard)	•	•	•	•	•		
2. AFNOR NF S 90-116 (French Standard)	•	•	•	•			Nz/CO <sub>2</sub>
3. DIN 13260-2 (German Standard)	•	•	•	•			Nz/CO <sub>2</sub>
4. BS 5682 (British Standard)	•	•	•	•	•		
5. SS 875 24 30 (Svensk Standard)	•	•	•	•	•		CO <sub>2</sub>
6. ISO 9170-2 (International Standard)						•	AirMotor
7. SANS 1409:2008 (South Africa Standard)	•	•	•	•	•		
8. UNI (Italian Standard)	•	•	•	•	•		
9. NIST EN 739 (International Standard)	•	•	•	•	•		
10. JIS T 7101 (Japanese Standard)	•	•	•	•	•		
11. DISS (American Standard, Diameter Index Safety System)	•	•	•	•	•		

The base part for each specific gas is common for all different norms, apart from AFNOR standard.



Base part NORM	T Y P E O F G A S							
	O <sub>2</sub>	N <sub>2</sub> O	AIR/MA4	Vac	Air800 /SA7	AGSS Autonomous	AGSS Central	Air Motor
Ø8	•	•	•	•	•			
Ø10	•	•	•	•	•	•		
Ø12			•	•	•		•	•
Ø15				•	•	•	•	•
Ø18					•	•	•	•
3/8"	•	•	•	•	•			
Nipple hose	•	•	•	•				

# Medical Gas Terminal Units / Outlets



A hospital-acquired infection (HAI), also known as a nosocomial infection, is an infection that is acquired in a hospital or other health care facility. Nosocomial infections can cause severe pneumonia and infections of the urinary tract, bloodstream and other parts of the body. As more facilities become aware of the spread of bacteria, the need to improve hygiene levels and demand for antimicrobial is increasing. At G.Samaras we are committed to helping healthcare facilities in the fight against bacterial and mold growth. **Antimicrobial** masterbatch into patient environment products, reducing the risk of cross contamination in these high-risk areas, it is safe and non-toxic.

**A.** Infections, such as MRSA and C. difficile, are caused by microbes that thrive on objects we touch every day. Antimicrobial Copper kills the microbes that cause those infections. Three main characteristics make Antimicrobial Copper the most effective touch surface material:

**Continuously kills microbes**

- Efficacy as an antimicrobial is scientifically proven to be far more effective than silver-containing coatings
- Proven to continuously kill the microbes that cause infections
- The only solid metal touch surface approved by the US Environmental Protection Agency (EPA).

**Never wears out**

- Continuous and ongoing antimicrobial action
- Remains effective even after repeated wet and dry abrasion and re-contamination
- Natural oxidation does not impair efficacy.

**Safe to use**

- Not harmful to people or the environment
- Inherently antimicrobial, no chemicals added
- Completely recyclable.

**B.** This highly active and durable additive is dispersed throughout the material and becomes an integral plastic part of the product finish. Antimicrobial masterbatch reduces bacterial growth. The additive binds to cell walls of bacteria, disrupting growth. The active ingredient, provides maximum antibacterial protection for the lifetime of the product. It is added into product materials during the manufacturing process, ensuring long-term performance, according to ISO 22196:2011.

### 3.3.2 Quick action fittings/probes/adapters

G.SAMARAS S.A. manufactures high quality quick action fittings/adapters/probes ensuring great durability. They are being produced from brass (agss from aluminum) while they bear sticker or engrave of the gas. They meet the following international standards:



NORM	T Y P E O F G A S						
	O <sub>2</sub>	N <sub>2</sub> O	AIR/MA4	Vac	Air800/SA7	AGSS	Special
1. ENV 737-6 (European Standard)	•	•	•	•	•		
2. AFNOR NF S 90-116 (French Standard)	•	•	•	•			
3. DIN 13260-2 (German Standard)	•	•	•	•			N <sub>2</sub> /CO <sub>2</sub>
4. BS 5682 (British Standard)	•	•	•	•	•		
5. SS 875 24 30 (Svensk Standard)	•	•	•	•			
6. ISO 9170-2 (International Standard)						•	AirMotor
7. SANS 1409:2008 (South Africa Standard)	•	•	•	•	•		
8. NIST EN 739 (International Standard)	•	•	•	•	•		

- 90° coupling
- Y connections with gas outlets

**Quick action fittings:**

- direct coupling for antistatic tubes
- direct coupling thread to 1/8"
- direct coupling thread to 1/4"

**Quick fittings:**

- Ø4
- Ø6
- Ø8
- Ø10



# PRODUCT PORTFOLIO

## Medical Gas Terminal Units / Outlets

### 3.3.3 PG profiles

The specific aluminum profile can be considered as a substitute for a bed head unit. It is a simple and cost efficient solution and is indicated in cases of minimum available space. It can be installed either wall mounted (PG-EX) or wall embedded (PG-EM) while it can accommodate basic components of a typical bed head unit such as medical gas outlets, electrical sockets, switches, etc.



External mounted PG-EX aluminium profile in anodized color



Internal mounted PG-EM aluminium profile in white (RAL 9016)



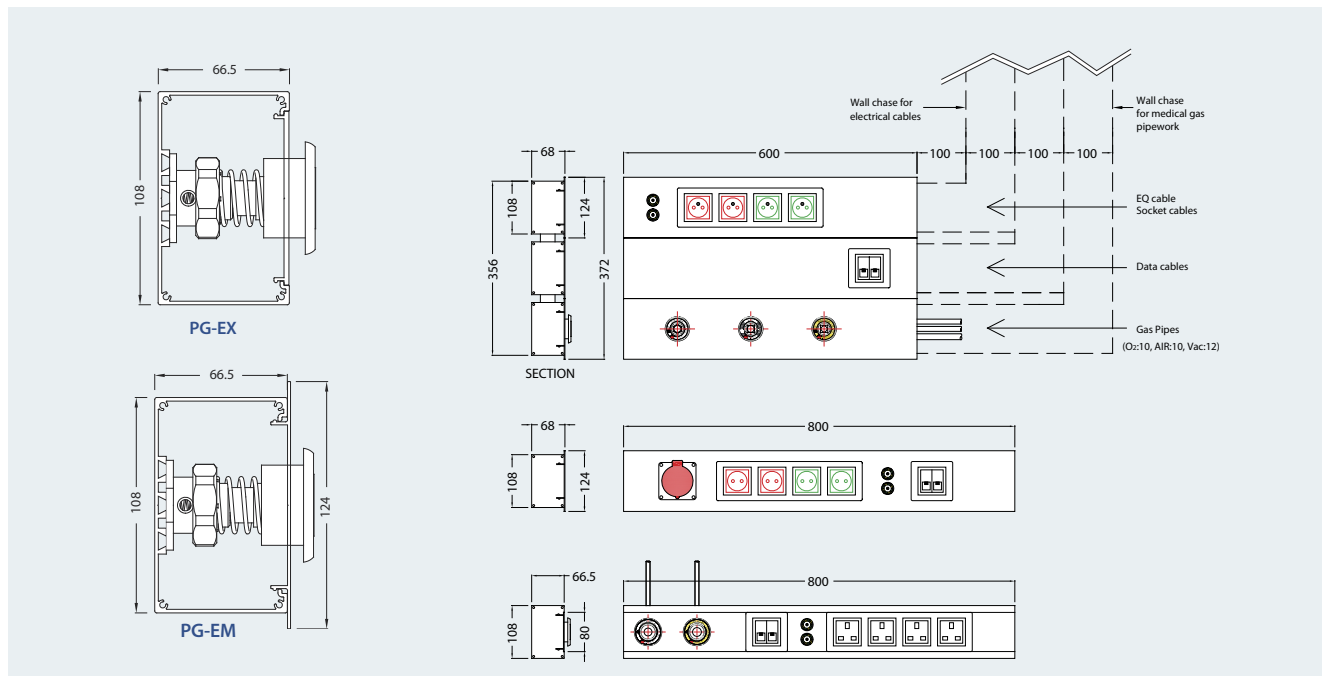
Option for one gas outlet in plastic box



Examples of internal mounted PG-EM aluminium profile with electrical sockets, gas outlets and combination of them in woodstyle color or standard RAL9016.

Number of gas outlets	1	2	3	4	5	6
Recommended length of profile	9cm	18cm	27cm	36cm	45cm	65cm








(with AGSS)



Profile "PG" for gas outlet or electrical equipment for vertical, horizontal, embented (PG-EM) or external mounted (PG-EX). Standard colors RAL9016 or anodized gray.



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