



# Anaerobic Workstations Catalog

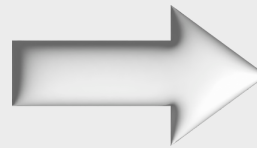
The Munro anaerobic chamber is one of the best solutions for incubating anaerobes, i.e., bacteria that can live in the absence of oxygen. Also known as a laboratory glove box, the anaerobic chamber is designed to improve the culturing and the identification process for drug discovery and infectious diseases. Infections caused by anaerobic bacteria can occur almost anywhere in the human body, including the mouth or lungs, diabetes-related foot infections, infected bites, and gangrene.

Finding the specific bacteria that is causing an infection helps the medical clinician provide the best form of treatment for the patient.



## Advantages of the Munro Anaerobic Workstation

The Munro anaerobic workstation provides the ability to manipulate samples in a sustainable environment where parameters can be altered to create the required conditions. Our workstations are incredibly gas efficient and very economical to run, and will also reduce consumable costs typically experienced with the use of anaerobic jars or bags.



## Flexible and Safe Sample Handling

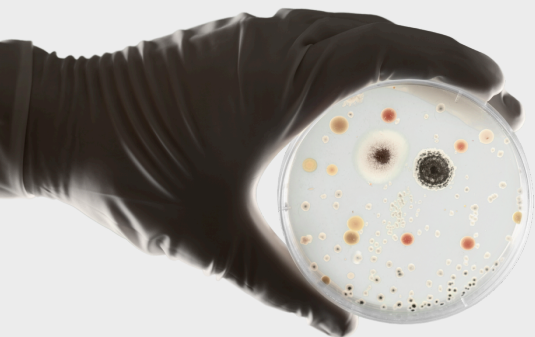
- You can check your plates as often as you like and perform tasks inside the workstation without risk to your samples.

## Versatile Model Options

- The Munro brand offers a variety of models to meet the space demands of various applications and workflows. The chamber accommodates quantities of 90mm Petri dishes whilst retaining a generous working area.

## Enhanced Efficiency with Advanced Features

- Anaerobic chambers from Munro combine glove-free handling of samples with a consistent, oxygen-free environment that promotes faster sample turnaround. Additional options include HEPA filtration, integrated anaerobic conditions with a data download facility, including networking to other PCs.





# Innovative Anaerobic Workstations: Advanced Design and Cost-Effective Solutions

We have years of experience in the design, development, and production of anaerobic workstations. We also offer a bespoke design service tailored to our customers' specific requirements.

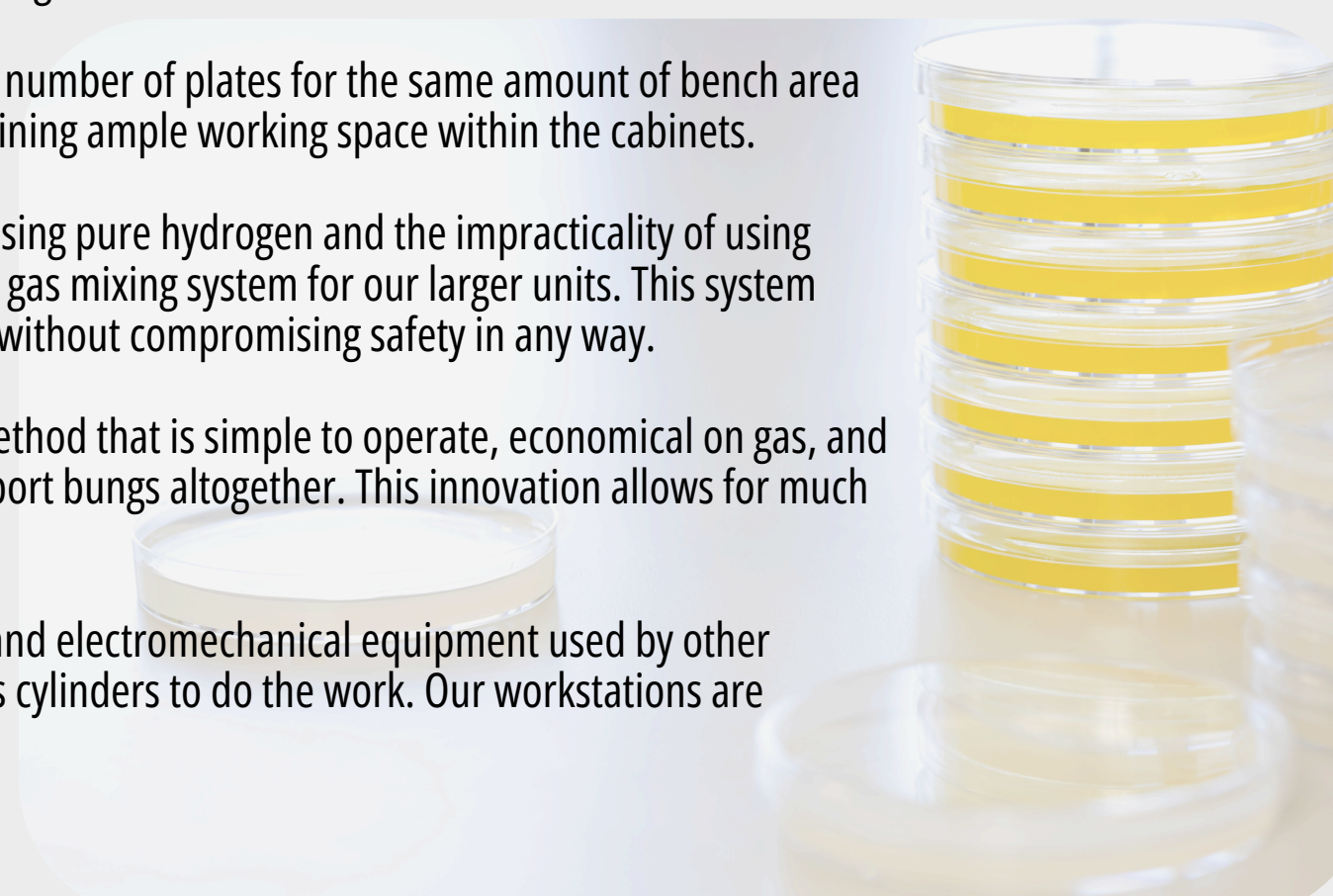
Our cabinets incorporate many advanced features that significantly differ from other cabinets on the market. They are fabricated from high-quality acrylic material, providing excellent thermal insulation and an ergonomic design with an unobstructed viewing area.

Through careful design, we have maximized the number of plates for the same amount of bench area compared to our competitors, while still maintaining ample working space within the cabinets.

Due to the inherent danger of explosion when using pure hydrogen and the impracticality of using flameproof equipment, Munro has developed a gas mixing system for our larger units. This system reduces running costs to an absolute minimum without compromising safety in any way.

We have also developed a unique bare-hand method that is simple to operate, economical on gas, and eliminates the need for footswitches and large port bungs altogether. This innovation allows for much more working room within the incubator.

Our designs eliminate much of the mechanical and electromechanical equipment used by other manufacturers, allowing the power from the gas cylinders to do the work. Our workstations are economical to run, maintain, and service.



# Versatile Anaerobic Workstation: Applications, Features & Advanced Control

## Applications:

This workstation can be used for both anaerobic and microaerobic applications simply by changing the gas supplies. Applications for this workstation include:

- Anaerobic Microbiology Assays
- Anaerobic Tissue Culture Research
- Anaerobic Bacteriology
- Clinical Microbiology
- Dental Research
- Research into the Human Gut Microbiome

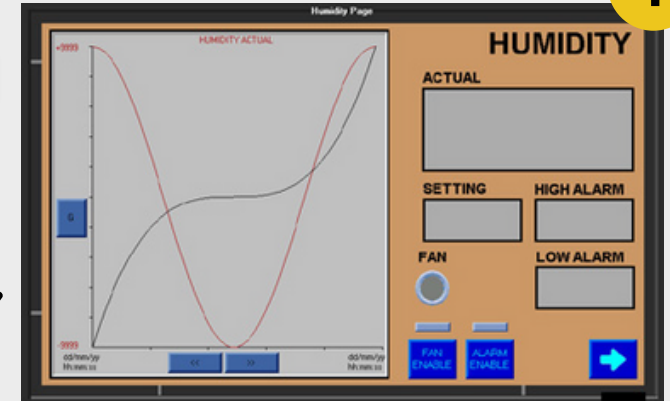
## Features:

- Low Gas Consumption: Runs on one or two gases (anaerobic mixed gas and nitrogen) for economic running costs. It is significantly cheaper to operate a Munro Workstation than to use jars.
- Front Loading Entry System: A one-plate entry system is available, providing a straightforward way to quickly access individual petri dishes into the workstation.
- Internal Electrical Sockets: Equipped with sockets for optional shaker, rotator, or roller.

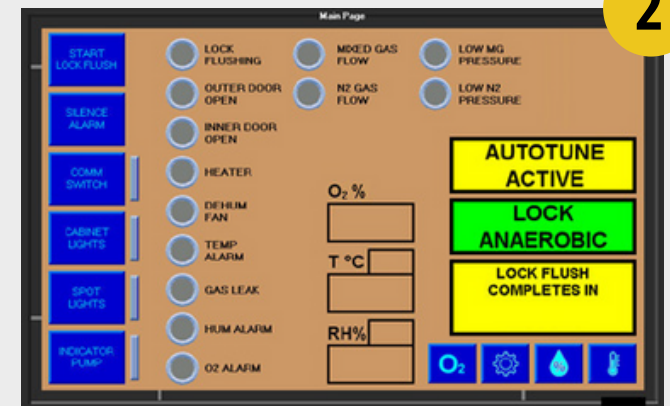
## Controller:

The workstation control is fitted with a touch screen, providing the user with an intuitive interface for easy control and operation. A full-color, touch-screen control panel enhances ease of use and visual display of parameters such as temperature and humidity. It is Ethernet-enabled for remote access to the touchscreen, data logging capability for traceability, and offers the opportunity to monitor anaerobic and catalyst conditions.

Samples of touchscreens  
Controller:



1



2

Regular Controller:



3

# AW200SG : Small & Compact

The **AW200SG** is the smallest of Munro's range of anaerobic workstations. It is ideal for the laboratory where oxygen free conditions are required for the growth and identification of bacteria. Its small bench size makes the AW200SG ideal for the individual research project.

The unit will incubate **220 petri dishes** and has a **10 dish transfer port**. The workstation operates from a single cylinder of anaerobic mixed gas and is very economical on gas usage. The product comes complete with automatic humidity control, oxygen indicator equipment, internal mains socket, spotlight, catalyst, plate holders and gauntlets. It is ready to work once it is plugged into its electricity and gas supplies.

**Glove Free Operation:** This unique bare hand method is very simple to operate.

**Air-tight seals fit around the user's wrists as shown and the anaerobic atmosphere is maintained.**

The design eliminates the use of footswitches & gets rid of large internal arm port bungs, giving more working room inside the incubator.

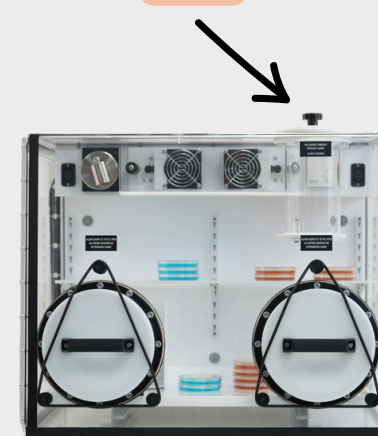
The system is very economic on gas usage and the hands can be inserted in seconds.



220 Plate Capacity



Top Plate Access



**Top Plate Access:** The transfer port is situated on top of the workstation and will hold 10 petri dishes. This will allow rapid transfer of dishes both into & out of the incubator. The positive pressure inside the cabinet and the doors at each end of the lock, together with the fast acting gas inlet switching, ensures that the workstation remains anaerobic at all times.

Top Plate Access





## AW200SG

Incubation Capacity	220 Petri Dishes
Transfer Port Capacity	10 Petri Dishes
Gas Supply	Mixed Gas 10% H <sub>2</sub> + 10% CO <sub>2</sub> + 80% N <sub>2</sub>
Electrical Supply	240V.A.C., 50Hz, 300W
Temperature Range	Ambient + 4°C to 42°C
Temperature Stability	±0.5°C @ 37°C
Overall Dimensions	W650xD700xH610mm
Net. Weight	56Kg
Gross Weight	130Kg

Complies with ESCHLE and other international standards. You will find the AW200SG effective, comfortable to work with and safe. It is economical to run, maintain and service..

**Controls:** The unit works automatically without the use of footswitches or pushbuttons and the controls are not needed for routine operation.

**Admitting Equipment:** Equipment can be placed inside the incubator through the arm ports prior to commissioning.

**Anaerobic Indication:** A small pump together with an oxygen-sensitive liquid indicator is provided with the workstation.

**Bench Area:** The workstation occupies a minimum amount of bench area and is completely self contained.

**Visibility:** The visibility is excellent. Four of the cabinet's surfaces are transparent and this is further enhanced by a narrow angle, low voltage spotlight. There are no folds in the front viewing window to obstruct clear vision.

**Working Position:** Working inside the incubator is very comfortable & all parts can be reached without effort.

**Construction:** The unit is made using high quality acrylic and the seams are welded to ensure leak-free joints.

**Temperature:** The temperature is controlled by an adjustable electronic controller and an internal digital thermometer displays the temperature.

**Humidity:** The R.H. within the incubator is controlled by a humidistat and fan cooled condensation plate situated at the rear. The distillate is collected in a drainable bottle.

**Internal Power Socket:** A mains socket is provided to facilitate the use of electrical equipment inside the chamber.

**Earth Leakage Circuit Breaker:** The workstation is fitted with a safety device to protect the operator against electric shock.

The AW200SG can also be used as a microaerophilic incubator by using an alternate gas supply.

# AW300SG : Small & Compact

## 300 Plate Capacity



One Plate Access



**The AW300SG** anaerobic workstation is ideal for the laboratory where oxygen-free conditions are required for the growth and identification of bacteria. Its small bench size yet large incubation capacity makes it perfect for individual research projects. The unit is very economical to operate and works from a single cylinder of anaerobic mixed gas. The cabinet will incubate **300 Petri dishes** and comes complete with catalyst sachets and plate holders.

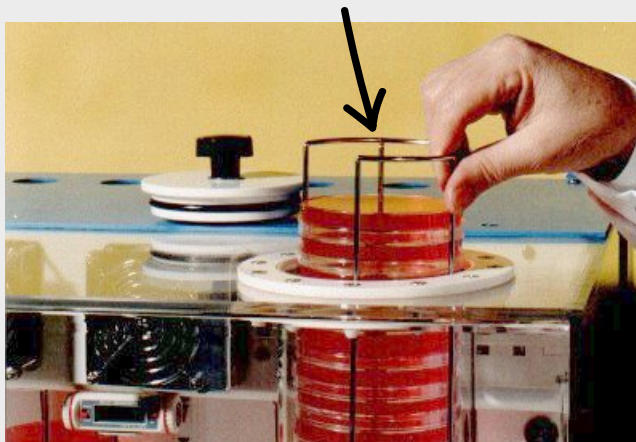
**Top Plate Access:** The interior of the workstation can be accessed in two ways. Single Petri dishes can be admitted through the transfer port situated at the front of the cabinet, while a larger lock is provided on the top of the unit, which will hold ten dishes. The positive pressure inside the incubator and the doors at each end of the locks, together with fast-acting gas inlet switching, ensures that the unit remains anaerobic at all times.

**Glove-Free Operation:** Our unique **bare-hand method** is very simple to operate. Air-tight seals fit around the user's wrists, maintaining the anaerobic atmosphere. This design eliminates the use of footswitches and large internal port bungs, providing much more working room within the incubator. The system is also very economical on gas usage.



# AW300SG : Small & Compact

## Top Plate Access



## 300 Plate Capacity

**Controls:** The unit works automatically without the use of footswitches or pushbuttons and the controls are not needed for routine operation.

**Admitting Equipment:-** Electric shakers and stirrers etc., can be placed inside the incubator through the arm ports prior to commissioning.

**Anaerobic Indication:** A small pump together with an oxygen-sensitive liquid indicator is provided with the workstation.

**Bench Area:** The workstation occupies a minimum amount of bench area, is portable and completely self contained.

**Visibility:** The visibility inside the incubator is excellent. Six of the cabinet's surfaces are transparent and this is further enhanced by a narrow angle, low voltage spotlight. There are no folds in the front viewing window to obstruct clear vision.

**Gas Control:** The internal gas pressure is controlled electronically and a gas leak detector and alarm are built into the circuitry.

**Working Position:** Working inside the incubator is very comfortable & all parts can be reached without effort.

**Construction:** The unit is made using high quality acrylic and the seams are welded to ensure leak-free joints.

**Temperature:** The temperature is controlled by an adjustable electronic controller which incorporates an integral digital thermometer.

**Humidity:** The R.H. within the incubator is controlled by a humidistat and fan cooled condensation plate situated at the rear. The condensation is collected in a removable bottle.

**Internal Power Socket:** A mains socket is provided to facilitate the use of electrical equipment inside the chamber.

**Earth Leakage Circuit Breaker:** The workstation is fitted with a safety device to protect the operator against electric shock.

**The AW300SG can also be used as a microaerophilic incubator by using an alternate gas supply.**

### AW300SG

Incubation Capacity	300 Petri Dishes
Transfer Port Capacity	10 Petri Dishes
Gas Supply	Mixed Gas 10% H <sub>2</sub> + 10% CO <sub>2</sub> +80% N <sub>2</sub>
Electrical Supply	240V.A.C., 50Hz, 300W
Temperature Range	Ambient + 4°C to 42°C
Temperature Stability	±0.5°C @ 37°C
Overall Dimensions	W760xD700xH610mm
Net. Weight	50Kg
Gross Weight	135Kg

Complies with ESCHLE and other international standards. You will find the AW300SG effective, comfortable to work with and safe. It is economical to run, maintain and service..

# AW400SG/ AW400TG

## 400 Plate Capacity

AW400SG/AW400TG	
Incubation Capacity	400 Petri Dishes
Interlock Capacity	60 Petri Dishes Plus Single Petri Dish Entry System
<b>AW400SG</b> Single Gas Supply	Mixed Gas 10% H <sub>2</sub> + 10% CO <sub>2</sub> +80% N <sub>2</sub>
<b>AW400TG</b> Dual Gas Supply	1) Mixed Gas 10% H <sub>2</sub> + 10% CO <sub>2</sub> +80% N <sub>2</sub> (Incubation & lock flushing) 2) N <sub>2</sub> (Lock flushing only)
Electrical Supply	240V.A.C., 50Hz, 500W
Temperature Range	Ambient + 4°C to 42°C
Temperature Stability	±0.5°C @ 37°C
Overall Dimensions	W1300xD700xH700mm
Net. Weight	70Kg
Gross Weight	203Kg

Complies with ESCHLE and other international standards. You will find the AW400TG effective, com- fortable to work with and safe. It is economical to run, maintain and service.

This range of workstations is ideal for the laboratory where oxygen free conditions are required for the growth and identification of bacteria.

The careful configuration gives the units a small bench area yet ample working room within the incubator. The AW400TG is particularly economic to run due to its dual gas design, comes complete with catalyst sachets and plate holders and requires only electricity and gas supplies to be fully functional.

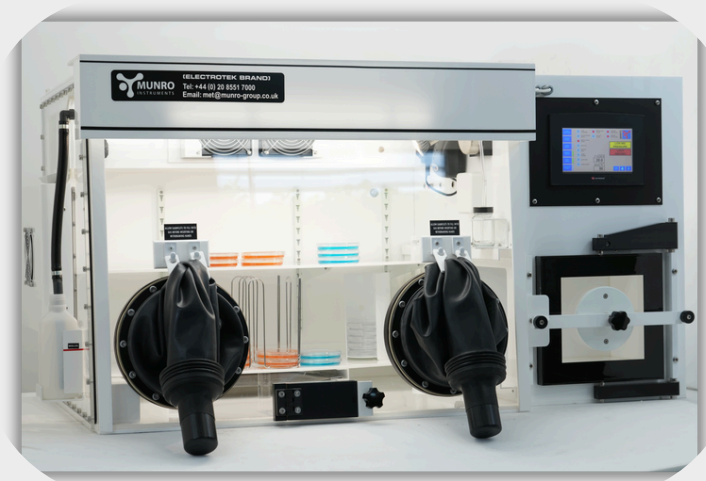
**Glove Free Operation:** Our unique bare hand method is very simple to operate; air tight seals fit around the users wrists as shown and the anaerobic atmosphere is maintained. The design eliminates the use of footswitches & gets rid of the large internal port bungs giving much more working room within the incubator.

This system is also very economic on gas usage.

A large transfer port is fitted to the units which holds 60 Petri dishes. The outer door is hinged to reduce the overall length and the inner door slides to maximize the incubation capacity.

Both doors are fitted with wear compensating seals. The units are also fitted with a single-plate entry system, situated between the arm ports at the front of the incubator.

Individual Petri dishes can be passed quickly into the incubator with minimal gas usage.



### The incubator is supplied with all spares & consumables, including:

- 2 Gauntlets with sealing bungs & 'O' rings
- 2 pairs of spare Wrist cuffs
- 4 Petri dish carriers (10 dishes)
- 2 Petri dish baskets (40 dishes)
- 1 Large & lock catalyst
- 1 Indicator Solutions
- 1 Anaerobic conditioner
- 1 Condensation drain bottle
- 1 Pressure relief water bottle
- 1 O<sub>2</sub> indicator pump



# AW500SG/AW500TG

## 500 Plate Capacity



This range of workstations is ideal for the laboratory where oxygen free conditions are required for the growth and identification of bacteria. The careful configuration gives the units a small bench area yet ample working room within the incubator. The **AW500TG** is particularly economic to run due to its **dual gas** design, comes complete with **catalyst sachets** and **plate holders** and requires only electricity and gas supplies to be fully functional.

### AW500SG/AW500TG

Incubation Capacity	500 Petri Dishes
Interlock Capacity	60 Petri Dishes Plus Single Petri Dish Entry System
<b>AW500SG</b> Single Gas Supply	Mixed Gas 10% H <sub>2</sub> + 10% CO <sub>2</sub> +80% N <sub>2</sub>
<b>AW500TG</b> Dual Gas Supply	1) Mixed Gas 10% H <sub>2</sub> + 10% CO <sub>2</sub> +80% N <sub>2</sub> (Incubation & lock flushing) 2) N <sub>2</sub> (Lock flushing only)
Electrical Supply	240V.A.C., 50Hz, 500W
Temperature Range	Ambient + 4°C to 42°C
Temperature Stability	±0.5°C @ 37°C
Overall Dimensions	W1500xD700xH700mm
Net. Weight	110Kg
Gross Weight	235Kg

Complies with ESCHLE and other international standards. You will find the AW500TG effective, comfortable to work with and safe. It is economical to run, maintain and service.

**Glove Free Operation:** Our unique bare hand method is very simple to operate; air tight seals fit around the users wrists as shown and the anaerobic atmosphere is maintained. The design eliminates the use of footswitches & gets rid of the large internal port bungs giving much more working room within the incubator. This system is also very economic on gas usage.

A large transfer port is fitted to the units which holds 60 Petri dishes. The outer door is hinged to reduce the overall length and the inner door slides to maximize the incubation capacity. Both doors are fitted with wear compensating seals. The units are also fitted with a single-plate entry system, situated between the arm ports at the front of the incubator. Individual Petri dishes can be passed quickly into the incubator with minimal gas usage.

### The incubator is supplied with all spares & consumables, including:

- 2 Gauntlets with sealing bungs & 'O' rings
- 2 pairs of spare Wrist cuffs
- 4 Petri dish carriers (10 dishes)
- 2 Petri dish baskets (40 dishes)
  - 1 Large & lock catalyst
  - 1 Indicator Solutions
  - 1 Anaerobic conditioner
  - 1 Condensation drain bottle
  - 1 Pressure relief water bottle
  - 1 O<sub>2</sub> indicator pump



# AW800TGRF4P Large Anaerobic Workstation

## 800 Plate Capacity

The AW800TGRF4P is the **largest** workstation in the Munro range. One of the main advantages of the unit is that despite its large capacity, it only occupies a modest amount of bench area. The workstation is very economical to run, as **two gas** supplies are used. The **AW800TGRF4P** will comfortably incubate up to **800** Petri dishes and comes complete with **catalyst** and **plate holders**.

**Glove Free Operation:** Our unique bare hand method is very simple to operate; air tight seals fit around the users wrists as shown and the anaerobic atmosphere is maintained. The design eliminates the use of footswitches and gets rid of the large internal port bungs giving much more working room within the incubator.

This system is also very economic on gas usage.

A large transfer port is fitted to the units which holds 60 Petri dishes. This port is automatically pressure pulse flushed & is fitted with a catalyst. The doors of the port are automatically sealed, locked and programmed to prevent loss of anaerobiosis. We also offer the option of an additional ten-plate entry system, in order that a small number of Petri dishes can be passed quickly into the incubator with a minimal gas usage.



### Controls:

The unit works automatically without the use of footswitches or pushbuttons and the controls are not needed for routine operation.

**Admitting Equipment:** Electric shakers and stirrers etc., can be placed inside the incubator through the arm ports prior to commissioning.

**Anaerobic Indication:** A small pump together with an oxygen-sensitive liquid indicator is provided with the workstation.

**Bench Area:** Careful configuration gives the unit a very large capacity, whilst keeping the bench area to a minimum.

**The Control Panel:** The control panel indicates the workstation's operating status and audible alarms register gas leaks, low gas pressure and mains failure. The whole system is under the control of a programmable logic controller.

**Working Position:** Working inside the incubator is very comfortable and all parts can be reached without effort.

**Construction:** The unit is made using high quality acrylic and the seams are welded to ensure leak-free joints.

**Temperature:** The temperature is controlled by an adjustable electronic controller and an internal digital thermometer displays the temperature.

# AW800TGRF4P Large Anaerobic Workstation

## 800 Plate Capacity



AW800TGRF4P	
Incubation Capacity	800 Petri Dishes
Interlock Capacity	100 Petri Dishes
Dual Gas Supply	1) Mixed Gas 10% H <sub>2</sub> + 10% CO <sub>2</sub> + 80% N <sub>2</sub> (Flushing & incubation) 2) N <sub>2</sub> (Flushing only)
Electrical Supply	240V.A.C., 50Hz, 500W
Temperature Range	Ambient + 4°C to 42°C
Temperature Stability	±0.5°C @ 37°C
Overall Dimensions	2440 x 970 x 1250mm
Net. Weight	209Kg
Gross Weight	380Kg

Complies with ESCHLE and other international standards. You will find the AW800TGRF4P effective, comfortable to work with & safe. It is economical to run, maintain and service.

**Humidity:** The R.H. within the incubator is controlled by a humidistat and fan cooled condensation plate situated at the rear. The condensation is collected in a removable bottle.

**Shelving:** The workstation can also be fitted with sliding shelves as an optional extra.

**Visibility:** The visibility into the incubator is excellent. There are no folds in the front panel to obstruct clear vision and this is further enhanced by good lighting.

**Earth Leakage Circuit Breaker:** The workstation is fitted with a safety device to protect the operator against electric shock.

### The incubator is supplied with all spares & consumables, including:

- 2 Gauntlets with sealing bungs & 'O' rings
- 2 pairs of spare Wrist cuffs
- 4 Petri dish carriers (10 dishes)
- 2 Petri dish baskets (40 dishes)
- 1 Large & lock catalyst
- 1 Indicator Solutions
- 1 Anaerobic conditioner
- 1 Condensation drain bottle
- 1 Pressure relief water bottle
- 1 O<sub>2</sub> indicator pump



# Munro - Anaerobic Work Stations

## AW-SERIES



MODEL	AW200SG	AW300SG	AW400SG/AW400TG	AW500SG/ AW500TG	AW800TGRF4P
Incubation Capacity	220 Petri Dishes	300 Petri Dishes	400 Petri Dishes	500 Petri Dishes	800 Petri Dishes
Interlock Capacity	10 Petri Dishes	10 Petri Dishes	60 Petri Dishes Plus Single Petri Dish Entry System	Petri Dishes Plus Single Petri Dish Entry System	100 Petri Dishes
Single Gas Supply	Mixed Gas 10% H2 + 10% CO2 +80% N2	Mixed Gas 10% H2 + 10% CO2 +80% N2	<b>AW400SG</b> Mixed Gas 10% H2 + 10% CO2 +80% N2	<b>AW500SG</b> Mixed Gas 10% H2 + 10% CO2 +80% N2	-
Dual Gas Supply	-	-	<b>AW400TG</b> 1) Mixed Gas 10% H2 + 10% CO2 +80% N2 (Incubation & lock flushing) 2) N2 (Lock flushing only)	<b>AW500TG</b> 1) Mixed Gas 10% H2 + 10% CO2 +80% N2 (Incubation & lock flushing) 2) N2 (Lock flushing only)	1) Mixed Gas 10% H2 + 10% CO2 +80% N2 (Flushing & incubation) 2) N2 (Flushing only)
Electrical Supply	240V.A.C., 50Hz, 300W	240V.A.C., 50Hz, 300W	240V.A.C., 50Hz, 500W	240V.A.C., 50Hz, 500W	240V.A.C., 50Hz, 500W
Temperature Range	Ambient + 4°C to 42°C				
Temperature	±0.5°C @ 37°C				
Stability Overall	W650xD700xH610mm	W760xD700xH610mm	W1300xD700xH700mm	W1500xD700xH700m	2440 x 970 x 1250mm
Dimensions Net.	56Kg	50Kg	70Kg	m 110Kg	209Kg
Weight Gross Weight	130Kg	135Kg	203Kg	235Kg	380Kg



# MUNRO

## INSTRUMENTS

**Electrotek Brand of Quality**

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