



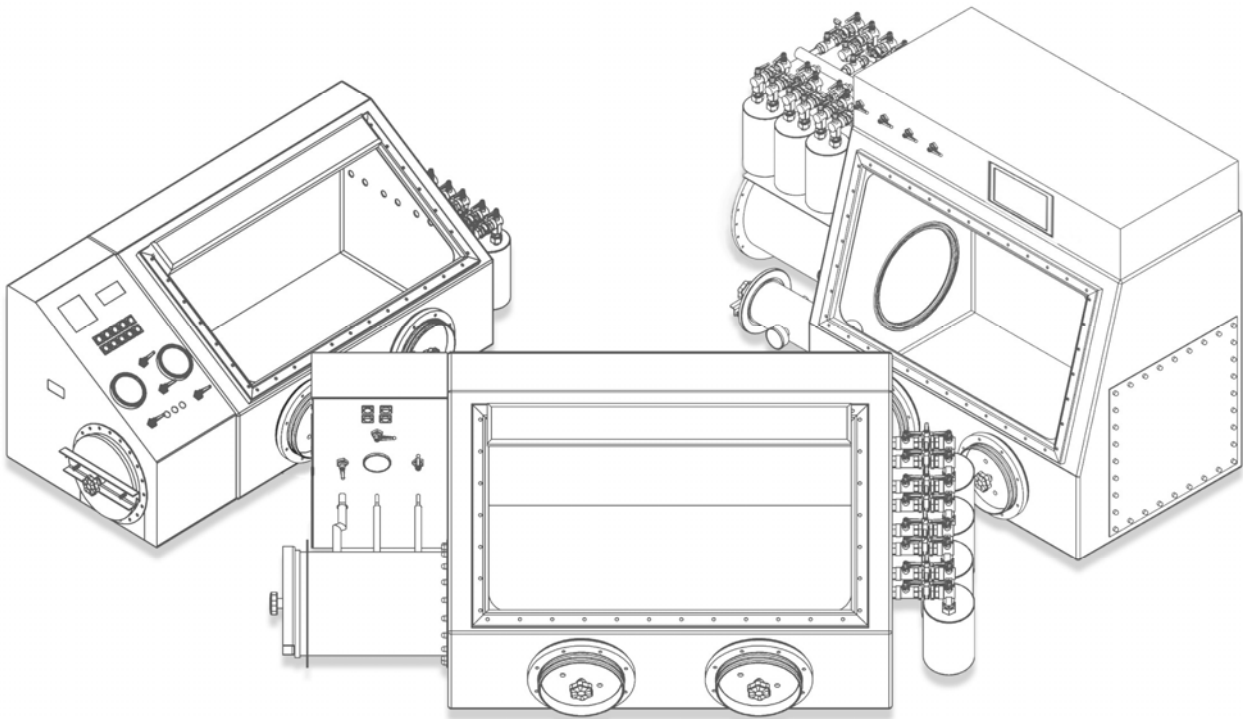
**... at the forefront of glovebox and containment system engineering**

Saffron Scientific Equipment Ltd are specialists in the design, development and manufacture of both standard and custom made gloveboxes and dry anaerobic containment systems for the storage, handling and processing of hazardous and toxic substances.

Drawing on an engineering background, Saffron pride themselves on being the UK premier manufacturer of standard and custom made solutions for both production and laboratory environments within a variety of market sectors - including Nuclear, University and Industrial.

Saffron never compromise on quality and always provide well engineered as well as innovative solutions for both product and operator needs.

Committed to the kind of customer service that results in long term relationships, we at Saffron are confident that we will exceed your expectations.





# Saffron Scientific Equipment Ltd

....at the forefront of glovebox and containment system engineering

**Dry anaerobic gloveboxes and bespoke containment systems for the storage, handling and processing of hazardous and toxic substances**



## **Model: Omega**

Popular low cost, low maintenance dry anaerobic glovebox specially designed for many laboratory applications

# DATA SHEET

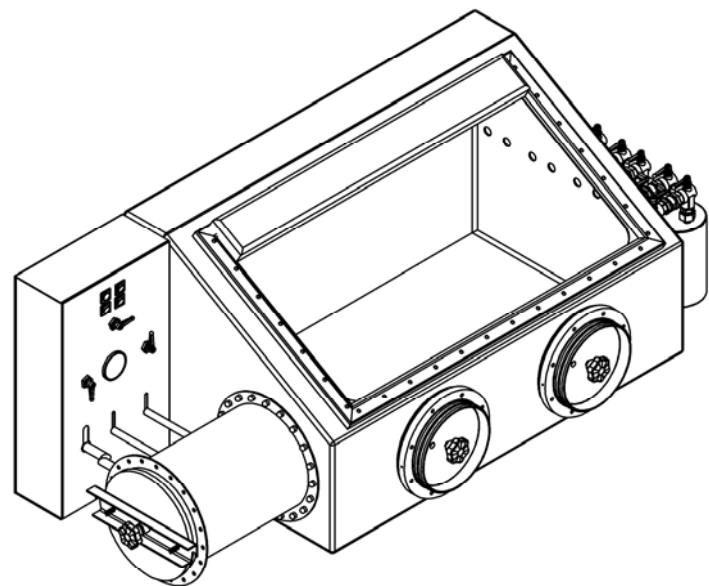
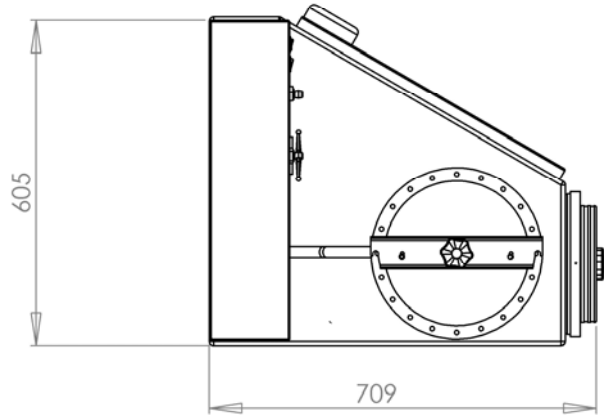
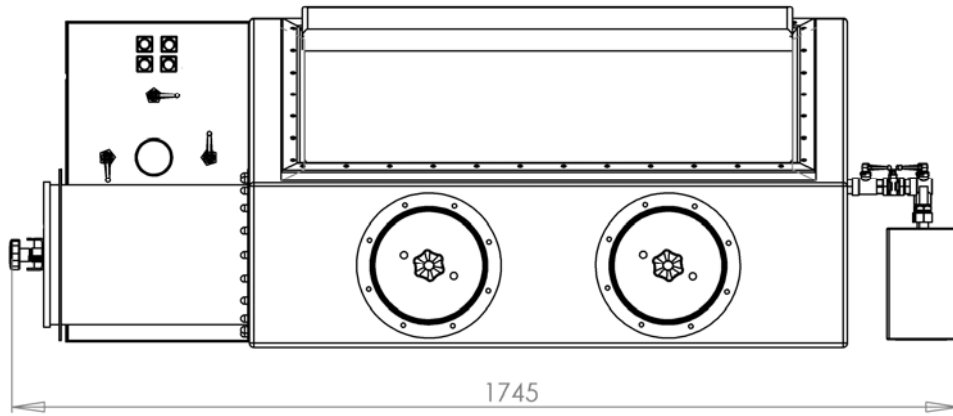
## Omega

<b>External Dimensions:</b>	Length (2 port): Depth: Height:	1745mm 709mm 605mm
<b>Internal Dimensions:</b>	Length (2 port): Depth: Height front: Height rear:	1094mm 649mm 300mm 599mm
<b>Weight:</b>	2 port:	140Kg
<b>Volume:</b>		0.34m <sup>3</sup>
<b>Leak Rate:</b>	0.05% of volume of box per hour @ +/- 4" WG	
<b>Material:</b>	Stainless steel Type 304	
<b>Finish:</b>	Satin non glare	
<b>Electrical:</b> Internal sockets: Lighting:	One twin Fluorescent (external)	
<b>Controls:</b>	Low maintenance Valves and meters	
<b>Lockchambers:</b> Number: Internal dimensions: Construction: Material: Finish: Doors: Door operation: Purging:	Internal External Internal External	One Ø250mm x 400mm long Cylindrical Stainless steel (304), thickness 3mm Satin non glare Satin non glare Anodised aluminium, 12mm thick, one hand operation Vertical lift pivot hinge Lift off Manually operated valves

**Omega Data Sheet cont/**

<p><b>Pressure Control:</b></p>	<p>Full automatic pressure control via pressure switch and gas solenoids</p> <p>Over/under pressure is maintained by a low maintenance gas bubbler -2000 to +500 Pa (-8 to +2 WG)</p>
<p><b>Gas Scrubbing System:</b></p>	<p>Removal of moisture and oxygen using a closed loop re-circulation system</p> <p>Attainable purity: &lt;1ppm moisture &lt;1ppm oxygen</p> <p>Blower: Precision side channel blower Quiet running High flow rate Long life Oil free Internally mounted</p> <p>Regeneration: Off box regeneration system</p>
<p><b>Window:</b></p>	<p>Toughened safety glass 10mm</p>
<p><b>Glove Ports:</b></p>	<p>Anodised aluminium</p>
<p><b>Gloves:</b></p>	<p>8" (204mm diameter) Gas purgeable gloves via umbilicus Glove change independent of external atmosphere</p>
<p><b>Shelves:</b></p>	<p>Two adjustable, stainless steel</p>
<p><b>Options:</b></p> <p>Oxygen meter:</p> <p>Moisture meter:</p> <p>Vacuum pump:</p> <p>Cold wells:</p> <p>Stand:</p> <p>Switchable positive/negative control</p> <p>Polycarbonate window</p> <p>Gas/electrical/signal breakthroughs</p> <p>316 stainless steel construction</p> <p>Polycarbonate/acrylic construction</p>	<p>Digital, integrally fitted, range: % or PPM</p> <p>Digital, integrally fitted, range: % or PPM</p> <p>Edwards (RV5 recommended)</p> <p>To customer's specification</p> <p>Powder coated mild steel (stainless steel option) including fixed feet or castors</p> <p>To customer's specification</p> <p>Custom design model</p>

Omega Data Sheet cont/





# Saffron Scientific Equipment Ltd

....at the forefront of glovebox and containment system engineering

**Dry anaerobic gloveboxes and bespoke containment systems for the storage, handling and processing of hazardous and toxic substances**



## **Model: Alpha**

Mainstream dry anaerobic glovebox with many options available in 2, 3 or 4 glove port versions

# DATA SHEET

## Alpha

<b>External Dimensions:</b>	Length (2 port): Length (3 port): Length (4 port):	1745mm 2145mm 2545mm
	Depth: Height:	709mm 605mm
<b>Internal Dimensions:</b>	Length (2 port): Length (3 port): Length (4 port):	1094mm 1494mm 1894mm
	Depth: Height front: Height rear:	649mm 300mm 599mm
<b>Weight:</b>	2 port: 3 port: 4 port:	150Kg 175Kg 200Kg
<b>Volume:</b>	2 port: 3 port: 4 port:	0.34m <sup>3</sup> 0.46m <sup>3</sup> 0.56m <sup>3</sup>
<b>Leak Rate:</b>	0.05% of volume of box per hour @ +/- 4" WG	
<b>Material:</b>	Stainless steel Type 304	
<b>Finish:</b>	Satin non glare	
<b>Electrical:</b>	Internal sockets: Lighting:	One twin Fluorescent (external)
<b>Controls:</b>	Low maintenance Valves and meters	

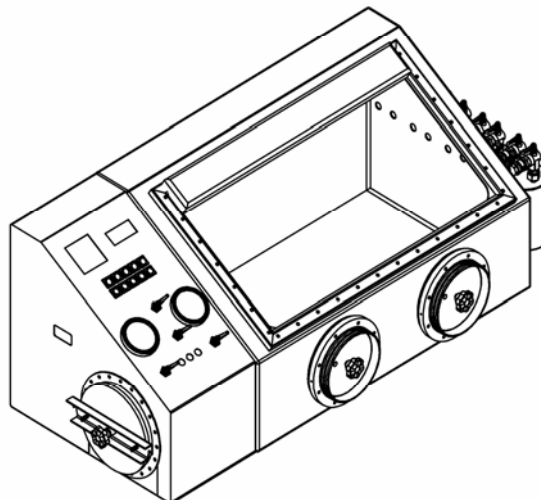
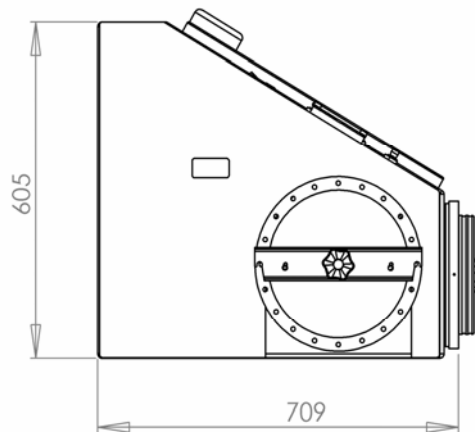
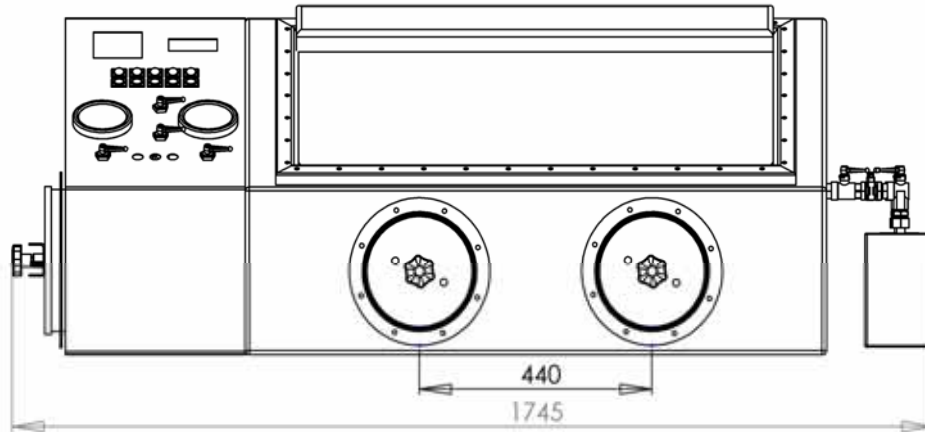
**Alpha Data Sheet cont/**

<p><b>Lockchambers:</b>          Number:          Internal dimensions:          Construction:          Material:          Finish:                   Internal                                            External          Doors:          Door operation:        Internal                                            External          Purging:          Pressure gauge:</p>	<p>One          Ø250mm x 400mm long          Cylindrical          Stainless steel (304), thickness 3mm          Satin non glare          Satin non glare          Anodised aluminium, 12mm thick, one hand operation          Vertical lift pivot hinge          Lift off          Manually operated valves          Analogue</p>
<p><b>Pressure Control:</b></p>	<p>Full automatic pressure control via pressure switch and gas solenoids            Over/under pressure is maintained by a low maintenance gas bubbler -2000 to +500 Pa (-8 to +2 WG)</p>
<p><b>Gas Scrubbing System:</b></p>	<p>Removal of moisture and oxygen using a closed loop re-circulation system            Attainable purity:       &lt;1ppm moisture                                            &lt;1ppm oxygen            Blower:                   Precision side channel blower                                            Quiet running                                            High flow rate                                            Long life                                            Oil free                                            Externally mounted            Regeneration: Off box regeneration system</p>
<p><b>Window:</b></p>	<p>Toughened safety glass 10mm</p>
<p><b>Glove Ports:</b></p>	<p>Anodised aluminium</p>
<p><b>Gloves:</b></p>	<p>8" (204mm diameter)          Individually gas purgeable          Glove change independent of external atmosphere</p>
<p><b>Shelves:</b></p>	<p>Two adjustable, stainless steel</p>

**Alpha Data Sheet cont/**

<b>Options:</b>	
Oxygen meter:	Digital, integrally fitted, range: % or PPM
Moisture meter:	Digital, integrally fitted, range: % or PPM
Vacuum pump:	Edwards (RV5 recommended)
Cold wells:	To customer's specification
Stand:	Powder coated mild steel (stainless steel option) including fixed feet or castors
Switchable positive/negative control	
Polycarbonate window	
Gas/electrical/signal breakthroughs	To customer's specification
316 stainless steel construction	
Polycarbonate/acrylic construction	Custom design model

Alpha Data Sheet cont/





# Saffron Scientific Equipment Ltd

....at the forefront of glovebox and containment system engineering

**Dry anaerobic gloveboxes and bespoke containment systems for the storage, handling and processing of hazardous and toxic substances**



## **Model: Beta**

Fully equipped range of dry anaerobic gloveboxes with PLC controls and manually operated regeneration system

# DATA SHEET

## Beta

<b>External Dimensions:</b>	Length (2 port):	1820mm
	Length (3 port):	2220mm
	Length (4 port):	2620mm
	Depth:	750mm
	Height:	1080mm
<b>Internal Dimensions:</b>	Length (2 port):	1094mm
	Length (3 port):	1494mm
	Length (4 port):	1894mm
	Depth:	669mm
	Height front:	300mm
	Height rear:	894mm
<b>Weight:</b>	2 port:	240Kg
	3 port:	265Kg
	4 port:	290Kg
<b>Volume:</b>	2 port:	0.59m <sup>3</sup>
	3 port:	0.81m <sup>3</sup>
	4 port:	1.03m <sup>3</sup>
<b>Leak Rate:</b>	0.05% of volume of box per hour @ +/- 4" WG	
<b>Material:</b>	Stainless steel Type 304	
<b>Finish:</b>	Satin non glare	
<b>Electrical:</b>		
Internal sockets:	One twin	
Lighting:	Fluorescent (external)	
<b>Controls:</b>	PLC	

**Beta Data Sheet cont/**

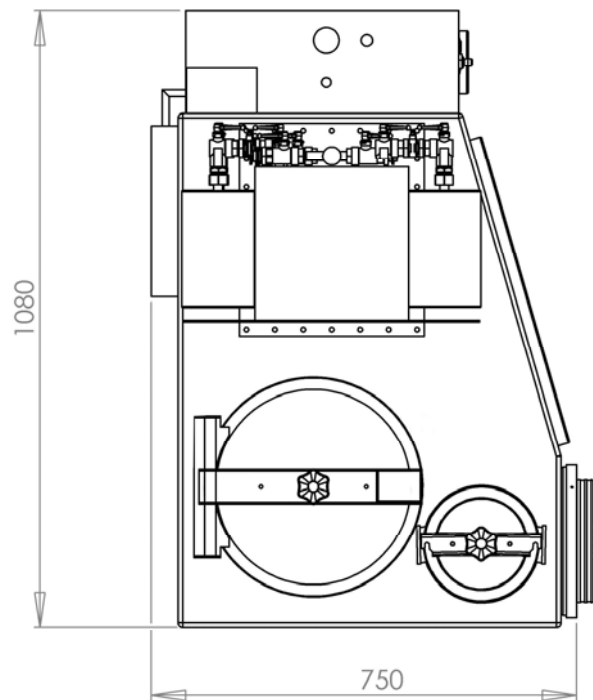
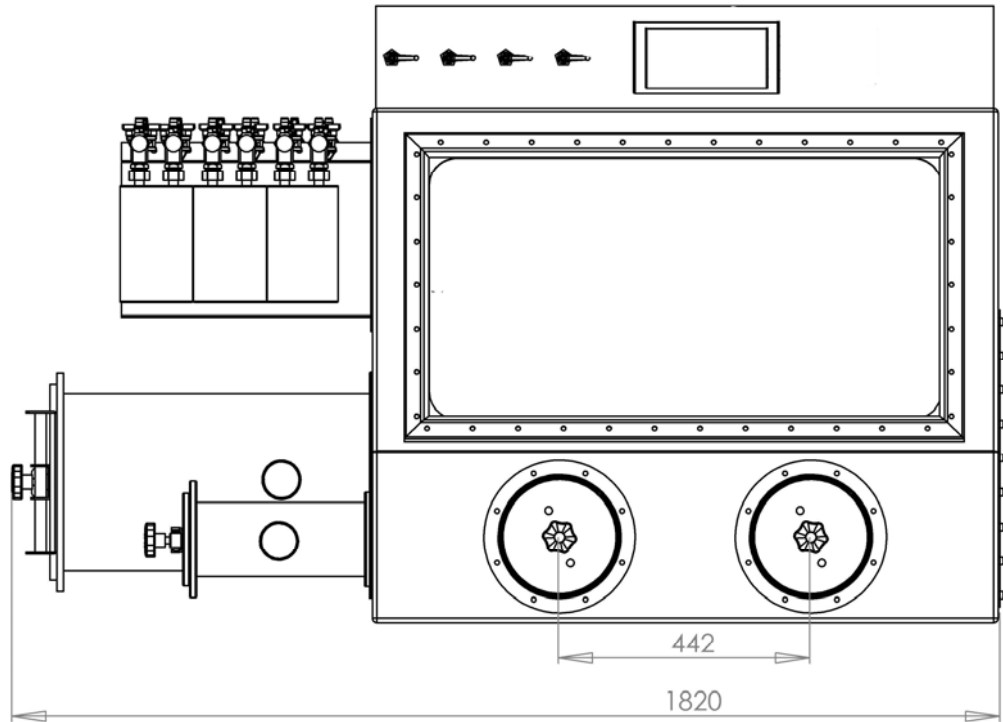
<p><b>Lockchambers:</b>          Number:          Large internal dimensions:          Small internal dimensions:          Construction:          Material:          Finish:                   Internal                                            External          Doors:          Door operation:        Internal                                            External          Purging:          Pressure gauge:</p>	<p>Two          Ø300mm x 550mm long          Ø125mm x 300mm long          Cylindrical          Stainless steel (304), thickness 3mm          Satin non glare          Satin non glare          Anodised aluminium, 12mm thick, one hand operation          Large: Counterbalanced Vertical lift pivot hinge          Small: Lift off          Large: Hinged          Small: Lift off          Manually operated valves          Analogue</p>
<p><b>Pressure Control:</b></p>	<p>Full automatic pressure control via PLC controller          Over/under pressure is maintained by a low maintenance gas bubbler -2000 to +500 Pa (-8 to +2 WG)</p>
<p><b>Gas Scrubbing System:</b></p>	<p>Removal of moisture and oxygen using a closed loop re-circulation system          Attainable purity:       &lt;1ppm moisture                                            &lt;1ppm oxygen          Blower:                   Precision side channel blower                                            Quiet running                                            High flow rate                                            Long life                                            Oil free                                            Internally mounted          Regeneration:   On box manually controlled</p>
<p><b>Window:</b></p>	<p>Toughened safety glass 10mm</p>
<p><b>Glove Ports:</b></p>	<p>Anodised aluminium</p>
<p><b>Gloves:</b></p>	<p>8" (204mm diameter)          Individually gas purgeable          Glove change independent of external atmosphere</p>
<p><b>Shelves:</b></p>	<p>Two adjustable, stainless steel</p>



**Beta Data Sheet cont/**

<b>Options:</b>	
Oxygen meter:	Digital, integrally fitted, range: % or PPM
Moisture meter:	Digital, integrally fitted, range: % or PPM
Vacuum pump:	Edwards (RV5 recommended)
Cold wells:	To customer's specification
Stand:	Powder coated mild steel (stainless steel option) including fixed feet or castors
Switchable positive/negative control	
Polycarbonate window	
Gas/electrical/signal breakthroughs	
Fully radiused corners for nuclear work	To customer's specification
316 stainless steel construction	
Polycarbonate/acrylic construction	Custom design model

Beta Data Sheet cont/





# Saffron Scientific Equipment Ltd

....at the forefront of glovebox and containment system engineering

**Dry anaerobic gloveboxes and bespoke containment systems for the storage, handling and processing of hazardous and toxic substances**



## **Model: Gamma**

Ready to use dry anaerobic glovebox featuring automatic regeneration, PLC controls plus a full range of options and accessories

# DATA SHEET

## Gamma

<b>External Dimensions:</b>	Length (2 port):	1820mm
	Length (3 port):	2220mm
	Length (4 port):	2620mm
	Depth:	750mm
	Height:	1080mm
<b>Internal Dimensions:</b>	Length (2 port):	1094mm
	Length (3 port):	1494mm
	Length (4 port):	1894mm
	Depth:	669mm
	Height front:	300mm
	Height rear:	894mm
<b>Weight:</b>	2 port:	240Kg
	3 port:	265Kg
	4 port:	290Kg
<b>Volume:</b>	2 port:	0.59m <sup>3</sup>
	3 port:	0.81m <sup>3</sup>
	4 port:	1.03m <sup>3</sup>
<b>Leak Rate:</b>	0.05% of volume of box per hour @ +/- 4" WG	
<b>Material:</b>	Stainless steel Type 304	
<b>Finish:</b>	Satin non glare	
<b>Electrical:</b>		
Internal sockets:	One twin	
Lighting:	Fluorescent (external)	
<b>Controls:</b>	Intuitive touch screen control	
<b>Meters:</b>		
	Oxygen meter:	Digital, PLC controlled, range: % or PPM
Moisture meter:	Digital, PLC controlled, range: % or PPM	

**Gamma Data Sheet cont/**

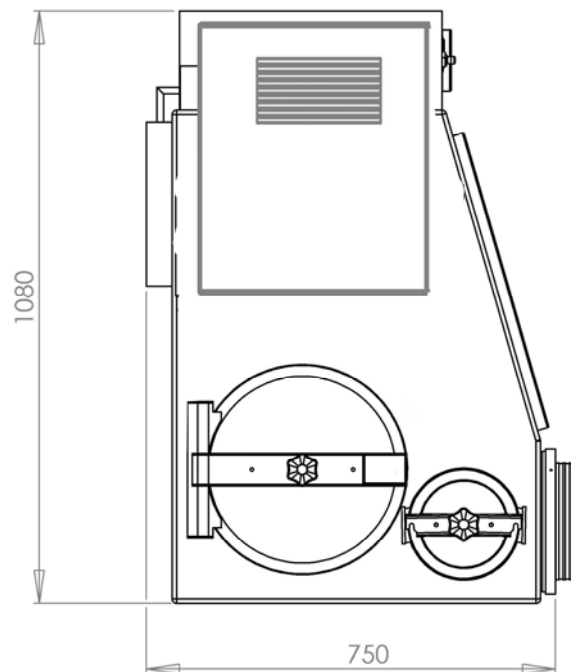
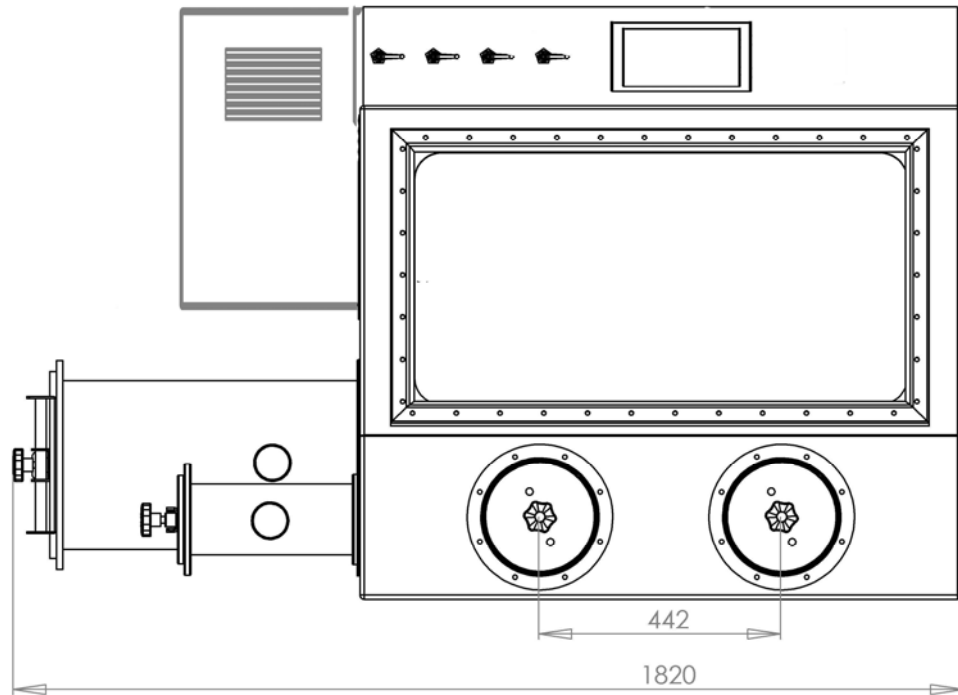
<p><b>Lockchambers:</b></p> <p>Number: Two</p> <p>Large internal dimensions: Ø300mm x 550mm long</p> <p>Small internal dimensions: Ø125mm x 300mm long</p> <p>Construction: Cylindrical</p> <p>Material: Stainless steel (304), thickness 3mm</p> <p>Finish: Internal Satin non glare External Satin non glare</p> <p>Doors: Anodised aluminium, 12mm thick, one hand operation</p> <p>Door operation: Internal Small: Lift off External Lift off Internal Large: Counterbalanced upward lift External Hinged</p> <p>Purging: Manually operated valves</p> <p>Pressure gauge: Analogue</p>	
<p><b>Pressure Control:</b></p>	<p>Full automatic pressure control via PLC controller</p> <p>Over/under pressure is maintained by a low maintenance gas bubbler -2000 to +500 Pa (-8 to +2 WG)</p>
<p><b>Gas Scrubbing System:</b></p>	<p>Closed loop re-circulation system Automatic via PLC controller</p> <p>Attainable Purity: &lt; 1ppm moisture &lt; 1ppm oxygen</p> <p>Blower: Precision side channel blower Quiet running High flow rate Long life Oil free Internally mounted</p> <p>Regeneration: On box PLC controlled sequence</p>
<p><b>Window:</b></p>	<p>Toughened safety glass 10mm</p>
<p><b>Glove Ports:</b></p>	<p>Anodised aluminium</p>
<p><b>Gloves:</b></p>	<p>8" (204mm diameter) Individually gas purgeable Glove change independent of external atmosphere</p>
<p><b>Shelves:</b></p>	<p>Two adjustable, stainless steel</p>



## Gamma Data Sheet cont/

<b>Options:</b>	
Vacuum pump:	Edwards (RV5 recommended)
Cold wells:	To customer's specification
Stand:	Powder coated mild steel (stainless steel option) including fixed feet or castors
Switchable positive/negative control	
Polycarbonate window	
Gas/electrical/signal breakthroughs	
Fully radiused corners for nuclear work	To customer's specification
316 stainless steel construction	
Polycarbonate/acrylic construction	Custom design model

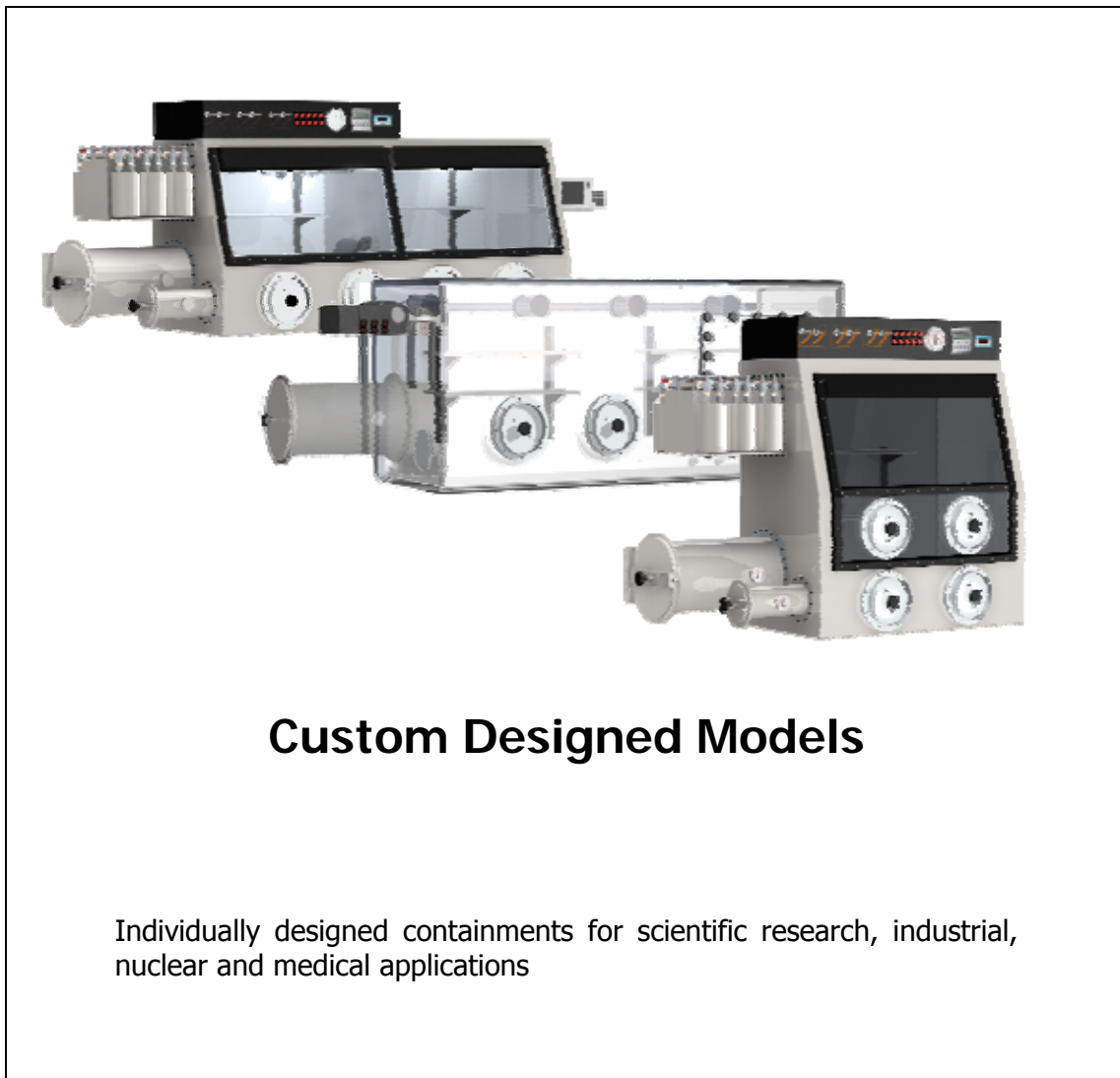
Gamma Data Sheet cont/



# Saffron Scientific Equipment Ltd

....at the forefront of glovebox and containment system engineering

**Dry anaerobic gloveboxes and bespoke containment systems for the storage, handling and processing of hazardous and toxic substances**



## Custom Designed Models

Individually designed containments for scientific research, industrial, nuclear and medical applications



...at the forefront of glovebox and containment system engineering

# DATA SHEET

## Custom Design

Saffron Scientific Equipment Ltd has extensive experience in the design and manufacture of custom made glovebox, containment systems and associated equipment – in particular for the Nuclear and Process industries

Options include:

<b>Materials:</b>	Stainless steel Acrylic Polycarbonate
<b>Dimensions:</b>	To customer specifications
<b>Lockchambers:</b>	Both cylindrical and rectangular
<b>Gloveports:</b>	To customer specifications
<b>Finish:</b>	Stainless steel, satin non glare or painted
<b>Pressure Control:</b>	Bubbler or electronic
<b>Gas Scrubbing System:</b>	To customer specification O <sub>2</sub> /H <sub>2</sub> O/solvents
<b>Meters:</b>	O <sub>2</sub> /H <sub>2</sub> O – ranges to suit applications
<b>Regeneration Ovens:</b>	Separate or integrated, manual or automatic
<b>Cold Wells:</b>	To customer specification
<b>Vacuum Pumps:</b>	Standard Edwards or oil free available
<b>Radiused Corners:</b>	Essential for the nuclear industry
<b>Microscopes:</b>	To suit all applications
<b>Positive/Negative Control:</b>	Simple or complex control systems available
<b>Humidification:</b>	Saffron has extensive experience in humidification, technology and control

## Saffron Product Matrix New Range

	Omega	Alpha	Beta	Gamma
<b>External Dimensions</b>				
2 port	L 1754 x D 709 x H 605	L 1745 x D 709 x H 605	L 1820 x D 750 x H 1080	L 1820 x D 750 x H 1080
3 port		L 2145 x D 709x H 605	L 2220 x D 709 x H 1080	L 2220 x D 709 x H 1080
4 port		L 2545 x D 709x H 605	L 2620 x D 709 x H 1080	L 2620 x D 709 x H 1080
<b>Internal Dimensions</b>				
2 port	L 1094 x D 649 x H 599	L 1094 x D 649 x H 599	L 1094 x D 669 x H 894	L 1094 x D 669 x H 894
3 port		L 1494 x D 649 x H 599	L 1494 x D 669 x H 894	L 1494 x D 669 x H 894
4 port		L 1894 x D 649 x H599	L 1894 x D 669 x H 894	L 1894 x D 669 x H 894
<b>Weight Kg</b>				
2 port	140	150	240	240
3 port		175	265	265
4 port		200	290	290
<b>Volume m<sup>3</sup></b>				
2 port	0.34	0.34	0.59	0.59
3 port		0.46	0.81	0.81
4 port		0.56	1.03	1.03
<b>Leak Rate (Maximum)</b>	0.05% of volume of box @ +/- 4" WG	0.05% of volume of box @ +/- 4" WG	0.05% of volume of box @ +/- 4" WG	0.05% of volume of box @ +/- 4" WG
<b>Material</b>	Stainless steel Type 304	Stainless steel Type 304	Stainless steel Type 304	Stainless steel Type 304
<b>Finish</b>	Satin non glare	Satin non glare	Satin non glare	Satin non glare
<b>Electrical</b>				
Internal Sockets	One twin	One twin	One twin	One twin
Lighting	Fluorescent (external)	Fluorescent (external)	Fluorescent (external)	Fluorescent (external)
Controls	Valves and meters	Valves and meters	PLC	PLC (innovative touch screen)

	Omega	Alpha	Beta	Gamma
<b>Lockchambers</b>				
Number	1	1	1 large, 1 small	1 large, 1 small
Internal Dimensions mm	Diam 250 x L 400	Diam 250 x L 400	Large Diam 300mm x L 550mm  Small Diam 125mm x L 300mm	Large Diam 300mm x L 550mm  Small Diam 125mm x L 300mm
Construction	Cylindrical	Cylindrical	Cylindrical	Cylindrical
Material	3mm 304 S/S	3mm 304 S/S	3mm 304 S/S	3mm 304 S/S
Int Finish	Satin non glare	Satin non glare	Satin non glare	Satin non glare
Ext Finish	Satin non glare	Satin non glare	Satin non glare	Satin non glare
Doors	12mm anodised aluminium One hand operation	12mm anodised aluminium One hand operation	12mm anodised aluminium One hand operation	12mm anodised aluminium One hand operation
Door Operation	Int: Hinged Ext: Lift off	Int: Hinged Ext: Lift off	Lrg Int: Counterbalanced Upward Lift Ext: Hinged  Sml Int: Lift off Ext: Lift off	Lrg Int: Counterbalanced Upward lift Ext: Hinged  Sml Int: Lift off Ext: Lift off
Purging	Manual valves	Manual valves	Manual valves	Manual valves
<b>Pressure Gauge (Glovebox)</b>		Analogue	Digital	Digital (PLC)
<b>Pressure Control</b>	Auto via pressure switches and gas solenoids Over/under pressure is maintained by low pressure gas bubbler-2000 to + 500Pa (-8 to +12 WG)	Auto via pressure switches and gas solenoids Over/under pressure is maintained by low pressure gas bubbler-2000 to + 500Pa (-8 to +12 WG)	Auto via PLC Over/under pressure is maintained by low pressure gas bubbler-2000 to + 500Pa (-8 to +12 WG)	Auto via PLC Over/under pressure is maintained by low pressure gas bubbler-2000 to + 500Pa (-8 to +12 WG)
<b>Gas Scrubbing System</b>	Closed loop re-circ system	Closed loop re-circ system	Closed loop re-circ system	Closed loop re-circ system
Attn Purity	<1ppm moisture <1ppm oxygen	<1ppm moisture <1ppm oxygen	<1ppm moisture <1ppm oxygen	<1ppm moisture <1ppm oxygen
Blower	Precision side channel blower Int mounted	Precision side channel blower Int mounted	Precision side channel blower Int mounted	Precision side channel blower Int mounted
Flow Rate	40m <sup>3</sup> /h	40m <sup>3</sup> /h	40m <sup>3</sup> /h	40m <sup>3</sup> /h
Regeneration	Off box regeneration system	Off box regeneration system	On box manual regeneration system	On box PLC controlled sequence system
<b>Window</b>	Toughened safety glass	Toughened safety glass	Toughened safety glass	Toughened safety glass





	<b>Omega</b>	<b>Alpha</b>	<b>Beta</b>	<b>Gamma</b>
<b>Glove Ports</b>	Anodised aluminium Gas purgeable via umbilicus Glove change independent of external atmosphere 204mm diameter	Anodised aluminium Individually gas purgeable Glove change independent of external atmosphere 204mm diameter	Anodised aluminium Individually gas purgeable Glove change independent of external atmosphere 204mm diameter	Anodised aluminium Individually gas purgeable Glove change independent of external atmosphere 204mm diameter
<b>Gloves</b>	8" diameter 810mm length Neoprene	8" diameter 810mm length Neoprene	8" diameter 810mm Length Neoprene	8" diameter 810mm Length Neoprene
<b>Shelves</b>	Two adjustable S/S	Two adjustable S/S	Two adjustable S/S	Two adjustable S/S
<b>Accessories</b>				
Oxygen Meter	Hand held	Yes	Yes	Incorporated in PLC as standard
Moisture Meter	Hand held	Yes	Yes	Incorporated in PLC as standard
Microscope	Yes	Yes	Yes	Yes
Vacuum Pump Edwards RV5 Recommended	Yes	Yes	Yes	Yes
Cold Wells	No	Yes	Yes	Yes
Stand	Yes	Yes	Yes	Yes
Freezer	Yes	Yes	Yes	Yes
<b>Options</b>				
Switchable Positive / Negative Control	No	Yes	Yes	Yes
Polycarbonate Window	Yes	Yes	Yes	Yes
Fully Radiused Corners for Nuclear Work	No	No	Yes	Yes
Gas, Electrical, Signal Breakthroughs	Yes	Yes	Yes	Yes
316 Stainless Steel Construct	No	Yes	Yes	Yes
Polycarbonate/ Acrylic Construct	Yes	Yes	Yes	Yes

# Saffron Scientific Equipment Ltd




....at the forefront of glovebox and containment system engineering

## Accessories

**Dry anaerobic gloveboxes and bespoke containment systems for the storage, handling and processing of hazardous and toxic substances**

<p><b>Oxygen/moisture meters</b> For confirmation of atmospheric quality Ranges: from ppm to % Can be retro fit to other gloveboxes</p>	
<p><b>Freezers</b> For low temperature chemistry From 0 to -40°C</p>	
<p><b>Solvent Systems</b> For organic chemistry applications Can be added to existing systems</p>	
<p><b>Regeneration Oven</b> To recover column effectiveness Can be used for more than one Saffron glovebox</p>	

**Accessories cont/**

<p><b>Stand</b></p>	
<p><b>Microscopes</b> Various microscope options available Standard stereomicroscopes, polarizing options</p>	
<p><b>Full gas scrubbing systems</b> Gas blower and all necessary columns for upgrading other gloveboxes to Saffron's high air quality standards</p>	
<p><b>Furnace/Cold Well</b> For small high/low temperature applications</p>	