PROJECT 3
architects



Lower Campfield, Manchester

Lower Byrom Street, M3 4FP

FUL Planning Application Conditions

Condition 15

FUL Planning Application Condition 15

15) Prior to the first use of the development, should fume extraction be required, details of a scheme to extract fumes, vapours and odours from that commercial unit shall be submitted for approval in writing by the City Council, as Local Planning Authority. The approved scheme shall then be implemented prior to the first occupation of the commercial units and thereafter retained and maintained in situ.

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Attatched information to satisfy FUL Planning Condition 15

01 *- PDF - Solutions - Ktchen Ventilation Extract*

02 *- PDF - Monarch - Catering Equipment Plans*

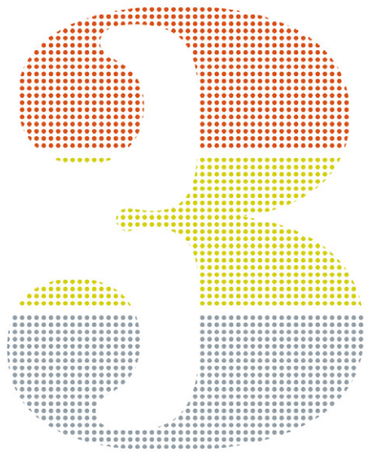
03 *- PDF - Monarch - Catering Equipment Specification*

04 *- PDF - Plasma Cleanair - Commercial Kitchen Ventilation Odour Control Proposal*

05 *- PDF - Plasma Cleanair - Electrostatic Precipitator*

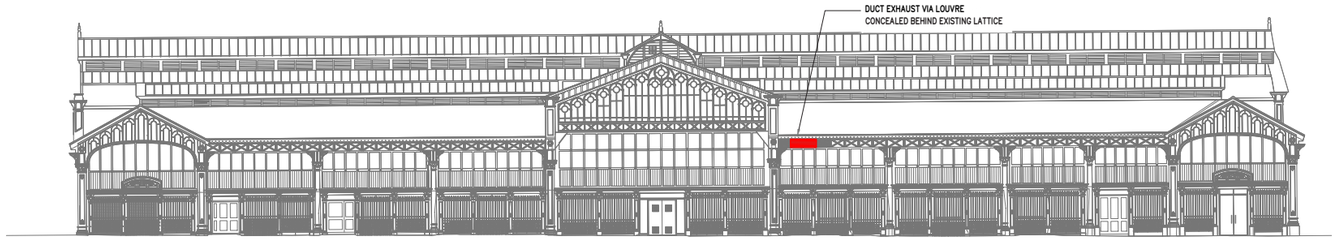
06 *- PDF - Plasma Cleanair - Advanced UVC Control Panel*

07 *- PDF - System Air - MUB/T Insulated Duct Fans*

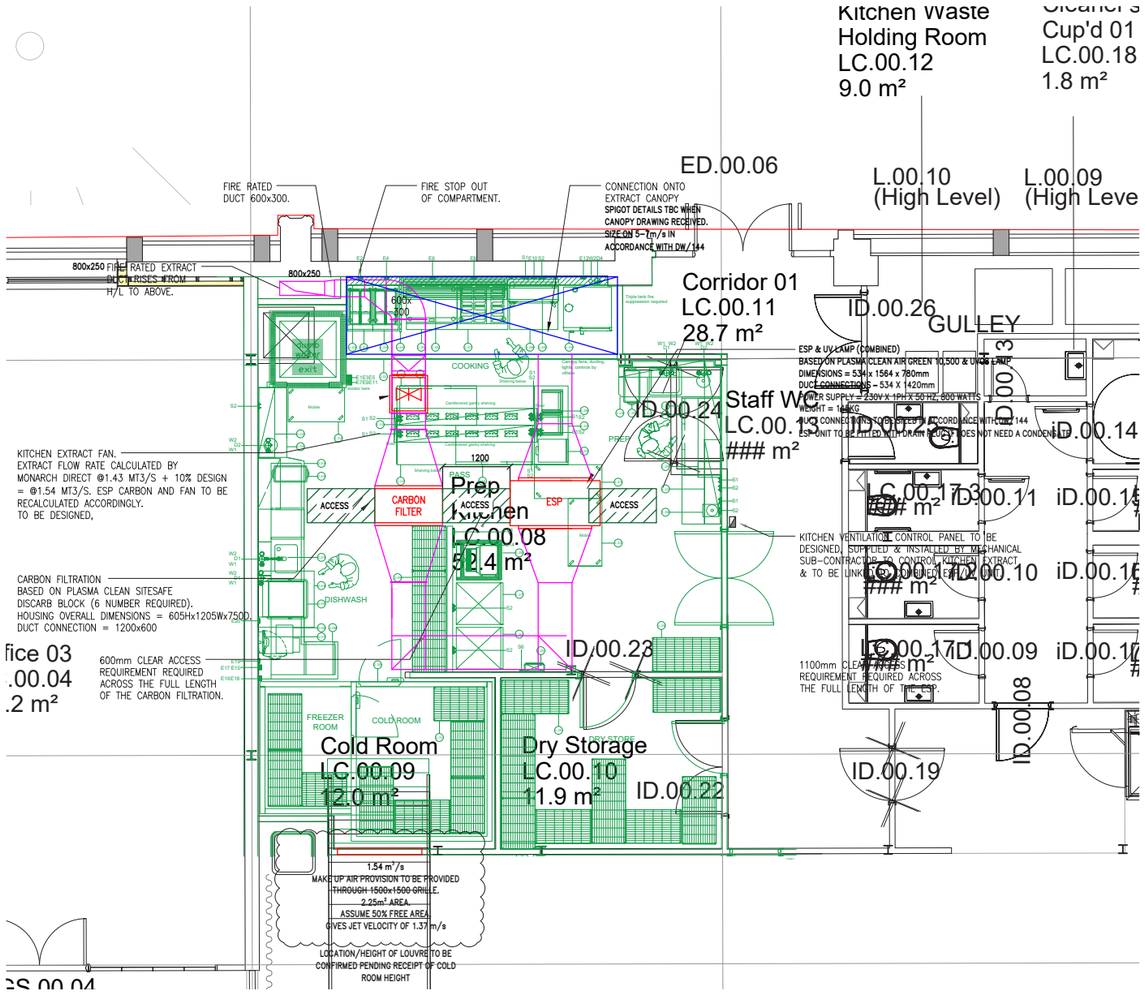


Section 01-03

The following sections contains Solutions Kitchen Ventilation Extract plans.
Along with Monarchs Catering Equipment plans and specification.



NORTH FACING ELEVATION



CONSTRUCTION

C3	UPDATED INLINE WITH COMMENTS RECEIVED	K.H	A.M	13.11.24	construction
C2	UPDATED INLINE WITH COMMENTS RECEIVED	K.H	A.M	28.10.24	construction
C1	UPDATED INLINE WITH COMMENTS RECEIVED AND NEW BUILDING LAYOUT, CONSTRUCTION ISSUE	K.H	A.M	07.10.24	construction
P3	UPDATED INLINE WITH COMMENTS RECEIVED AND NEW BUILDING LAYOUT	K.H	A.M	09.07.24	planning
P2	UPDATED	K.H	A.M	13.06.24	planning
	PRELIMINARY	K.H	A.M	23.04.24	planning

Revision description | Date | Drawn by | Checked by | Reg'd work

Client: Amspec

Project: Lower Campfield

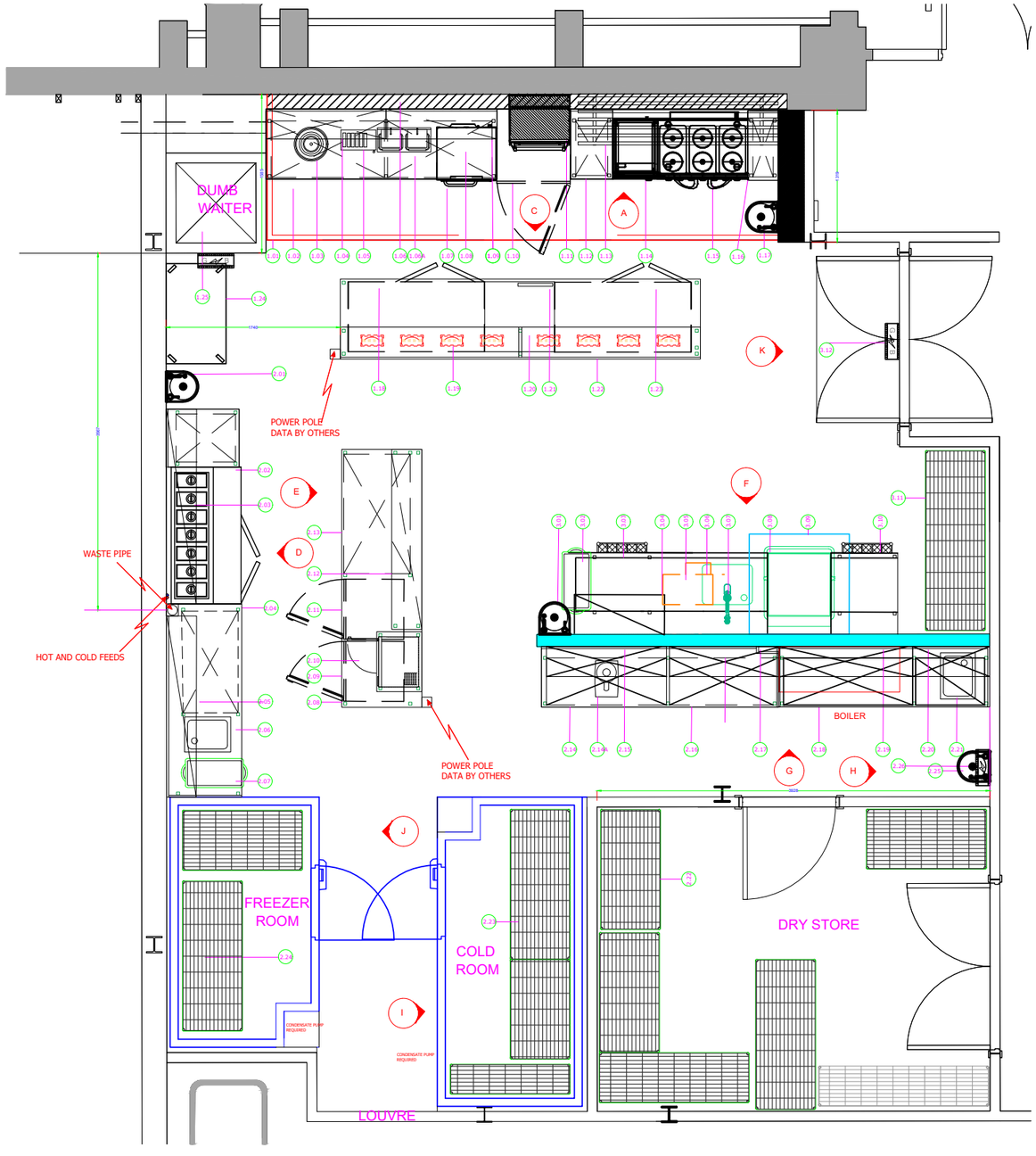
Title: Ventilation Kitchen

Solution environmental services

Pure Office, Brooks Drive,
Cheadle Royal Business Park, Cheadle, SK8 3TD
Tel: 0161 532 9460
www.solution-es.co.uk

Drawn by	Checked by	Scale	Sheet Size	Date
K.H	A.M	1:100	A1	13.11.24

Drawing No.: SE4704/AM/M11 | Revision: C3



SERVICE LEGEND 9105-MCE-XX-XX-DR-Y-P05

ITEM	QTY	DESCRIPTION
		MAIN KITCHEN
1.01	1	EXTRACTION VENT
1.02	1	WORK BENCH WITH FIXED SHELVES
1.03	1	SOUP KETTLE
1.04	2	WALL SHELVES
1.05	1	TOASTER
1.06	1	SERVICE VOID
1.06A	1	DOUBLE PANINI MAKER
1.07	1	WORK BENCH WITH FIXED SHELVES
1.08	1	SPEED COOKER
1.09	1	WALL SHELF
1.10	1	COUNTER FRIDGE WITH LIFT UP LID
1.11	1	RISE AND FALL SALAMANDER ON SHELF
1.12	1	WORK BENCH WITH FIXED SHELVES
1.13	1	RODDED PAN SHELF
1.14	1	GRIDDLE ON STAND
1.15	1	6 ZONE ELECTRIC RANGE COOKER
1.16	1	WORK BENCH WITH FIXED SHELVES
1.17	1	WASH HAND BASIN
1.18	1	2 DOOR REFRIDGERATION
1.19	1	SINGLE HEATED PASS
1.20	1	SINGLE HEATED PASS
1.21	1	HOT CUPBOARD
1.22	1	WORK BENCH WITH FIXED SHELVES
1.23	1	2 DOOR REFRIDGERATION
1.24	1	MOBILE BENCH
1.25	1	INSECT CONTROL/GLUE BOARD
		PREP AREA
2.01	1	WASH HAND BASIN
2.02	1	BENCH WITH FIXED SHELVES
2.03	1	WALL SHELF
2.04	1	2 DOOR REFRIDGERATION WITH LIFT UP LID
2.05	1	WALL SHELF
2.06	1	WORK BENCH WITH SINK AND TAP
2.07	1	WASTE BIN
2.08	1	WORK BENCH WITH PART VOID
2.09	1	UNDER COUNTER REFRIDGERATION
2.10	1	MICROWAVE ON STAND
2.11	1	UNDER COUNTER REFRIDGERATION
2.12	1	SINGLE TIER AMBIENT GANTRY
2.13	2	FIXED SHELVES
2.14	1	WORK BENCH WITH SOLID SHELVES
2.14A	1	FOOD PROCESSOR
2.15	2	WALL SHELVES
2.16	1	WORK BENCH WITH SOLID SHELVES
2.17	2	WALL SHELVES
2.18	1	WORK BENCH WITH SOLID SHELVES
2.19	2	WALL SHELVES
2.20	2	WALL SHELVES
2.21	1	SINK AND TAP WITH FIXED SHELF
2.22	1	DRY STORE WITH 4 TIER RACKING
2.23	1	FREEZER ROOM WITH 4 TIER RACKING
2.24	1	COLD ROOM WITH 4 TIER RACKING
2.25	1	WASH HAND BASIN
2.26	1	INSECT CONTROL/GLUE BOARD
		WASH UP AREA
3.01	1	WASH HAND BASIN
3.02	1	WASTE BIN
3.03	1	DIRTIES TABLE WITH ANTI DRIP AND SET OF BASKET RU
3.04	1	DIRTIES/DUMP SHELF
3.05	1	FOG MANAGEMENT SYSTEM/GREASE TRAP
3.06	1	PRE RINSE SINK
3.07	1	PRE RINSE TAP
3.08	1	PASS THROUGH DISHWASHER
3.09	1	CONDENSATE HOOD
3.10	1	CLEANS TABLE WITH SET OF BASKET RUNNERS
3.11	1	4 TIER RACKING
3.12	1	INSECT CONTROL/GLUE BOARD
GP	6	GENERAL PURPOSE SOCKETS (SUGGESTED)

REV	DATE	DETAIL	INITIAL
P06	08-01-25	ALTS TO ELEVATION D PREP LINE AND DRY STORE AFTER SITE VISIT	GC
P05	18-12-24	ALTS TO COLD STORAGE AND COOK LINE	GC
P04	27-11-24	SMALL VE ALTS	GC
P03	30-10-24	ALTS TO KITCHEN LAYOUT	GC
P02	23-10-24	BAR AND ALTS TO KITCHEN LAYOUT	GC

MCE Monarch Catering Equipment
The Mill, Marsh Fold Lane, Bolton, BL1 4HG
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email: info@monarch-direct.co.uk
website: www.monarch-direct.co.uk

SCALE 1:50 A3 DRAW BY. GC
DATE 23/10/24 DRAWING NO. 9105GC

CLIENT
AMSPEC

PROJECT
LOWER CAMPFIELD

DRAWING
9105-MCE-XX-XX-DR-Y-PLAN AND LEGEND

REVISION P06 PRELIMINARY

STATUS S2 SUITABLE FOR INFORMATION

THIS DRAWING IS ISSUED STRICTLY AS DESIGN INTENT PRIOR TO THE APPOINTMENT OF PRINCIPAL CONTRACTOR AND OFFICIAL CDM CO-ORDINATOR

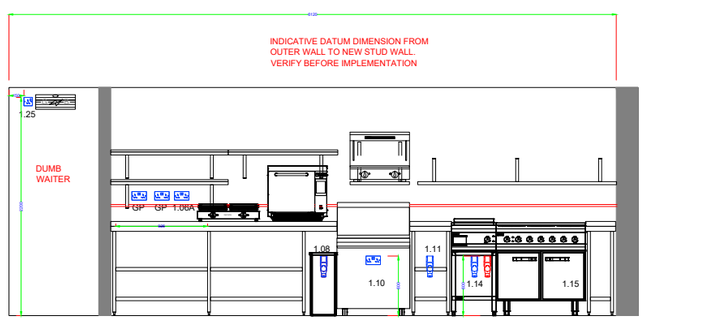
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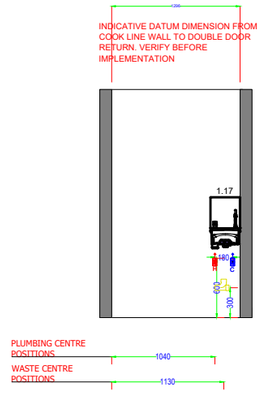
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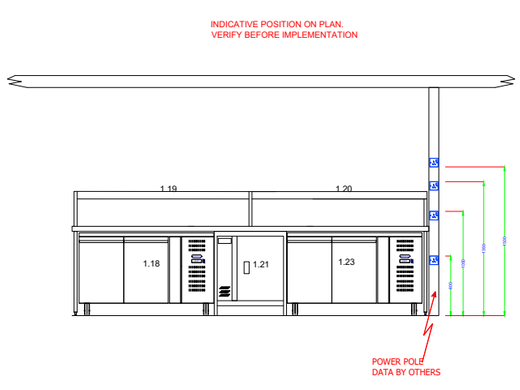
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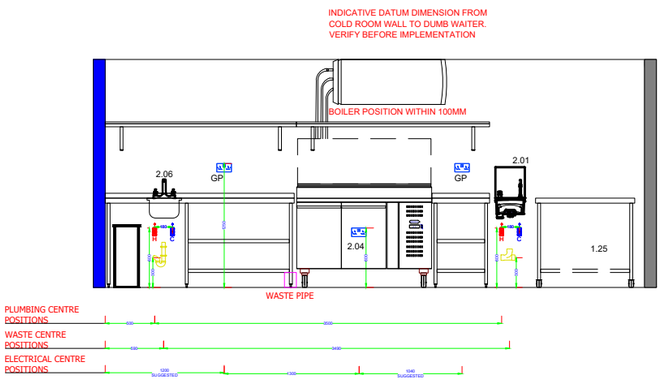
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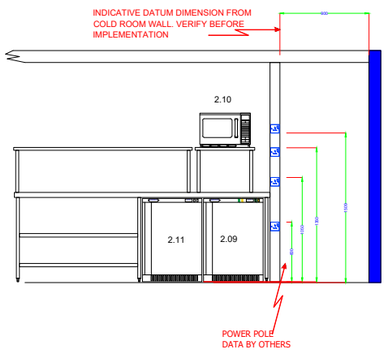
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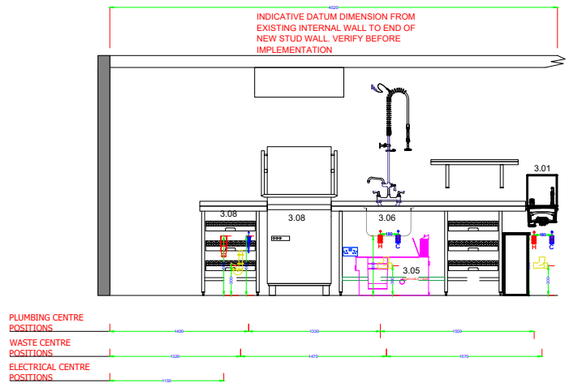


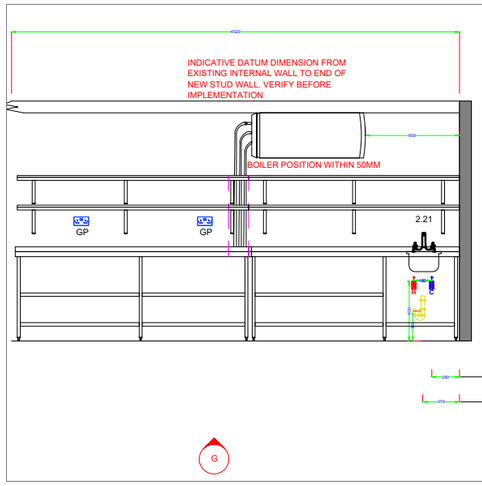


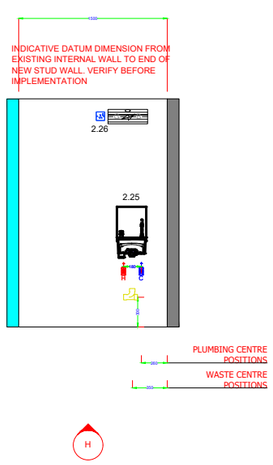


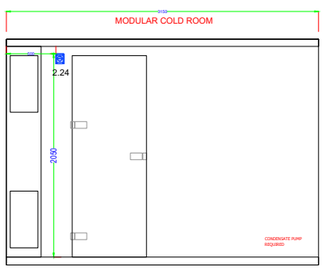


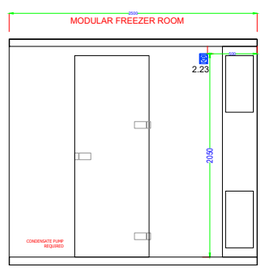


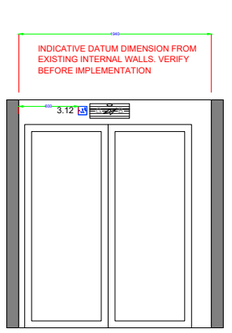












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website: www.monarch-direct.co.uk

SCALE 1:40 A2 DRAWN BY: GC
DATE 23/10/24 DRAWING NO. 9105GC

CLIENT
AMSPEC

PROJECT
LOWER CAMPFIELD

DRAWING
9105-MCE-XX-XX-DR-Y-ELEVATIONS

REVISION P06 PRELIMINARY

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CSCS CONSTRUCTION SKILLS CERTIFICATION SCHEME
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I002 A2

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MONARCH Catering Equipment

Quote

13/12/2024

Project:
Lower Campfield kitchen MCE 9105 P04

From:
Monarch Catering Equipment

Item	Qty	Description	
1.01	1 ea	**CANOPY** Custom Air extract canopy including fitting - ducting, fans, controllers, lighting by others	
	1 ea	Stainless steel wall cladding to the length of the canopy	
1.02	1 ea	**WORK TABLE** Custom STAINLESS STEEL WALL BENCH 1200MM X 700MM C/W 50MM UPSTAND TO REAR AND BASE SHELF 304 GRADE TOP 430 GRADE FRAME & UNDERSHELF	
	1 ea	MID-SHELF	
1.03	1 ea	**SOUP KETTLE** Custom Model No. SOUP KETTLE	<By Other>
1.04	2 ea	**WALL SHELVES** Custom STAINLESS STEEL WALL SHELF 1200MM X 300MM C/W BRACKETS 430 GRADE	
1.05	1 ea	**TOASTER** Custom Model No. TOASTER	<By Other>
1.06	1 ea	**FABRICATION** Custom STAINLESS STEEL SERVICE SHELF - 5100MM	
1.06a	1 ea	**SANDWICH / PANINI GRILL**  Pantheon Catering Equipment Model No. CGS2R Contact Grill, electric, countertop, small double, ribbed cast iron plates, 470 x 230mm grill area, 0 to 300°C temperature range, removable drip tray, (2) 1.8 kw Dimensions 210(h) x 570(w) x 395(d)	
	1 ea	230v/50/1-ph, standard	
	1 ea	Three day delivery, standard	
1.07	1 ea	**WORK TABLE** Custom STAINLESS STEEL WALL BENCH 1200MM X 700MM C/W 50MM UPSTAND TO REAR AND BASE SHELF 304 GRADE TOP 430 GRADE FRAME & UNDERSHELF	

Item	Qty	Description
	1 ea	MID-SHELF
1.08	1 ea	**MICROWAVE CONVECTION OVEN**  Custom Model No. CUSTOM Microwave / Convection Combination Oven, easyTOUCH touch screen controls, USB data transfer of up to 1024 cooking programs, in-built diagnostics, stainless steel construction, includes: (1) oven tray, (1) square tray liner, (1) handle, (1) turntable disk & (1) round tray, 700 watts microwave / 3000 watts convection, 4.7 kW power input, NSF, CE Dimensions 551(h) x 598(w) x 558(d)
	1 ea	Merrychef 230-240v/50/1, standard
1.09	2 ea	**SHELF, WALL-MOUNTED** Custom STAINLESS STEEL WALL SHELF 1200MM X 300MM C/W BRACKETS 430 GRADE
1.10	1 ea	**REFRIGERATED COUNTER, WORK TOP**  Aquilo Refrigeration Equipment Model No. AC29-H-PR Counter Refrigerator, 735mmw, 31L capacity, (1) solid hinged door, (1) shelves, temperature range (+0.5 to +5), auto defrost, stainless steel exterior and Interior, electronic thermostat and digital LED, auto evaporation, insulated pan section, CFC free, R290 refrigerant, 230w, 40v/50hz/1-ph (accept GN containers) Dimensions 1,141(h) x 735(w) x 770(d)
	1 ea	DRAWERS IN LIEU OF DOOR BANK OF 2 DRAWERS IN LIEU OF DOOR
1.11	1 ea	**GRILL, ELECTRIC (SALAMANDER)**  Pantheon Catering Equipment Model No. AS600 Salamander Grill, heavy-duty, 600mm wide, cooking height adjustable to 140mm, fitted on (4) rubber feet, hard-wired, 4.0kw Dimensions 500(h) x 600(w) x 450(d)
	1 ea	Three day delivery, standard
1.12	1 ea	**INFILL BENCH** Custom STAINLESS STEEL INFILL BENCH 400MM X 700MM C/W 50MM UPSTAND TO REAR AND BASE SHELF UNDER 304 GRADE TOP 430 GRADE FRAMES & UNDERSHELF
	1 ea	MID-SHELF
1.13	1 ea	**POT RACK** Custom POT RACK
1.14	1 ea	**GRIDDLE, COUNTER UNIT, ELECTRIC**

Item	Qty	Description
		Lincat Model No. GS4/E Silverlink 600 Griddle, electric, countertop, 450 mm, 12 mm thick machined steel plate, thermostatic control, single heat zone, splashguard, stainless steel construction, CE Dimensions 330(h) x 450(w) x 600(d)
	1 ea	2 Years parts & labour warranty, standard
	1 ea	230v/50/60/1-ph, 16.1 amps, 3.7 kw, standard
	1 ea	SLS4 Silverlink 600 Equipment Stand, 450 mm, open cabinet base, undershelf, stainless steel construction, adjustable legs
	1 ea	2 Years parts & labour warranty, standard
1.15	1 ea	**MEDIUM DUTY RANGE, 900MM, 6 HOT PLATES**
		Lincat Model No. ESLR9C/SPH Silverlink 600 Range, electric, 900 mm, (6) 1.5kW round solid hobs, (2) chrome plated shelves, automatic power reduction, twin fan assisted oven, removable oven base, enamelled interior, stainless steel construction, castors at rear, legs at front, CE Dimensions 923(h) x 900(w) x 670(d)
	1 ea	2 Years parts & labour warranty, standard
	1 ea	230v/50/60/1N~+E, 56.5 amps, 13.0 kw, standard
1.16	1 ea	**INFILL BENCH**
		Custom INFILL BENCH
1.17	1 ea	**HANDS FREE HAND WASH BASIN**
		Mechline Developments Model No. BSX-300-KVS BaSiX Hand Wash Station, 300mm W x 320mm D x 160mm H overall, 260mm x 130mm deep bowl, Push-Front hands-free mechanical operation, fixed spout, M-MX91 manual mixer, water hose, tap hole stopper, includes mounting bracket, 304 austenitic stainless steel bowl and deck, ABS polycarbonate skirt, WRAS Dimensions 160(h) x 300(w) x 320(d)
	1 ea	BSX-SPD BaSiX Soap Dispenser, deck mount, 90mm curved spout, 300ml capacity bottle, hand pump, chrome plated brass (suitable for use with WS1, WS2, WS3, WS4, WS6, BSX-300, BSX-400 and BSX-400i range of basins)
	1 ea	BSX300-SPL BaSiX Splashback, 300mm W x 315mm H, stainless steel, for 300 models only
1.18	1 ea	**REFRIGERATED COUNTER, WORK TOP**
		Aquilo Refrigeration Equipment Model No. CUSTOM Counter Refrigerator, 1360mmW, 314L capacity, (2) solid doors, (2) shelves, ventilated cooling, temperature range (-2°C to 8°), auto defrost, stainless steel exterior and Interior, electronic thermostat and digital LED, self-contained side mounted refrigeration, castors, auto evaporation, CFC free, R290 refrigerant, 230w,40v/50hz/1-ph, MEPS C (accept GN containers) Dimensions 890(h) x 1,360(w) x 700(d)

Item	Qty	Description
1.19	1 ea	**GANTRY/OVERSHELVES, HEATED**
		Custom STAINLESS STEEL SINGLE TIER HEATED GANTRY 1100MM X 300MM
1.20	1 ea	**GANTRY/OVERSHELVES, HEATED**
		Custom STAINLESS STEEL SINGLE TIER HEATED GANTRY 1100MM X 300MM
1.21	1 ea	**CUPBOARD, HOT, ELECTRIC**
		Custom STAINLESS STEEL PLAIN TOP HOTCUPBOARD 700MM X 700MM
1.22	1 ea	**GANTRY/OVERSHELVES, HEATED**
		Custom STAINLESS STEEL SINGLE TIER HEATED GANTRY 1100MM X 300MM
1.23	1 ea	**REFRIGERATED COUNTER, WORK TOP**
		Aquilo Refrigeration Equipment Model No. CUSTOM Counter Refrigerator, 1360mmW, 314L capacity, (2) solid doors, (2) shelves, ventilated cooling, temperature range (-2°C to 8°), auto defrost, stainless steel exterior and Interior, electronic thermostat and digital LED, self-contained side mounted refrigeration, castors, auto evaporation, CFC free, R290 refrigerant, 230w,40v/50hz/1-ph, MEPS C (accept GN containers) Dimensions 890(h) x 1,360(w) x 700(d)
1.24	1 ea	**WORK TABLE**
		Custom STAINLESS STEEL CENTRE BENCH 1000MM X 700MM C/W BASE SHELF 304 GRADE TOP 430 GRADE FRAME & UNDERSHELF
	1 ea	SET OF 4 CASTORS
2.01	1 ea	**HANDS FREE HAND WASH BASIN**
		Mechline Developments Model No. BSX-300-KVS BaSiX Hand Wash Station, 300mm W x 320mm D x 160mm H overall, 260mm x 130mm deep bowl, Push-Front hands-free mechanical operation, fixed spout, M-MX91 manual mixer, water hose, tap hole stopper, includes mounting bracket, 304 austenitic stainless steel bowl and deck, ABS polycarbonate skirt, WRAS Dimensions 160(h) x 300(w) x 320(d)
	1 ea	BSX-SPD BaSiX Soap Dispenser, deck mount, 90mm curved spout, 300ml capacity bottle, hand pump, chrome plated brass (suitable for use with WS1, WS2, WS3, WS4, WS6, BSX-300, BSX-400 and BSX-400i range of basins)
	1 ea	BSX300-SPL BaSiX Splashback, 300mm W x 315mm H, stainless steel, for 300 models only
2.02	1 ea	**WORK TABLE**
		Custom STAINLESS STEEL WALL BENCH 1300MM X 700MM C/W 50MM

Item	Qty	Description
		UPSTAND TO REAR AND BASE SHELF 304 GRADE TOP 430 GRADE FRAME & UNDERSHELF
	1 ea	MID-SHELF
	1 ea	100MM X 100MM CHAMFER
2.03	1 ea	**SHELF, WALL-MOUNTED** Custom STAINLESS STEEL WALL SHELF 2000MM X 300MM C/W BRACKETS 430 GRADE
2.04	1 ea	**REFRIGERATED COUNTER, WORK TOP**  Aquilo Refrigeration Equipment Model No. C2700T-H-PR Counter Refrigerator, 1360mmW, 396L capacity, (2) solid doors, (2) shelves, ventilated cooling, temperature range (+2°C to 8°), auto defrost, stainless steel exterior and Interior, electronic thermostat and digital LED, self-contained side mounted refrigeration, castors, auto evaporation, CFC free, R290 refrigerant, 230w,40v/50hz/1-ph (accept GN containers) Dimensions 1,115(h) x 1,360(w) x 700(d)
	1 ea	Specify below which door you want the doors in lieu of e.g left, middle or right so that these can be fitted in the factory correctly
2.05	1 ea	**SHELF, WALL-MOUNTED** Custom STAINLESS STEEL WALL SHELF 2000MM X 300MM C/W BRACKETS 430 GRADE
2.06	1 ea	**SINK, BESPOKE, SINGLE BOWL** Custom STAINLESS STEEL SINGLE BOWL SINK UNIT 1300MM X 700MM C/W 50MM UPSTAND TO REAR, BASE SHELF, LOCALISED ANTI-DRIP AND 500MM X 400MM BOWL 304 GRADE TOP 430 GRADE FRAME AND UNDERSHELF
	1 ea	PART VOID
	1 ea	Mechline WRCT-500ML3 CaterTap 3" Lever, 1/2" deck mixer, two hole, twin water feed, swivel spout, fitted with quarter-turn valves, chrome finish, WRAS
2.07	1 ea	**WASTE/TRASH CONTAINER**  EAIS Model No. WBSJ60-G Waste Bin, 508mm x 279mm x 632mm H, 60 litre capacity, grey, polymer Dimensions 632(h) x 508(w) x 279(d)
	1 ea	Free standard delivery on all orders over £300 net. Orders less than £300 net require carriage fees of £30 per single bay or £35 for 2 or more bays.

Item	Qty	Description
2.08	1 ea	**WORK TABLE** Custom STAINLESS STEEL WALL BENCH 2500MM X 700MM C/W 50MM UPSTAND TO REAR AND BASE SHELF 304 GRADE TOP 430 GRADE FRAME & UNDERSHELF
	1 ea	PART VOID
	2 ea	MID-SHELF
2.09	1 ea	**REFRIGERATOR, UNDERCOUNTER**  Aquilo Refrigeration Equipment Model No. E200-H-SS/S Undercounter Refrigerator, 600mmW, 140L capacity, (2) shelf, (1) solid door, static cooling with fan, temperature range (2°C to 10°C), manual defrost, electronic thermostat and digital LED temperature display, magnetic gasket, stainless steel exterior, ABS thermoplastic Interior, CFC-free refrigerant, 240v/50hz/1-ph, MEPS C (accept GN containers) Dimensions 840(h) x 600(w) x 600(d)
2.10	1 ea	**MICROWAVE OVEN**  Custom Model No. CUSTOM Sharp Microwave Oven - 1900W output - Touch controls with 20 presets - 11 power levels - Express defrost - Double quantity - Extra menu - Twin stirrers - Countercheck - Stackable - 2.9kW Dimensions 335(h) x 510(w) x 470(d)
	1 ea	Sharp (RH Hall) 3 Year on site warranty
	1 ea	STAINLESS STEEL MICROWAVE SHELF 550MM X 550MM
2.11	1 ea	**REFRIGERATOR, UNDERCOUNTER**  Aquilo Refrigeration Equipment Model No. CUSTOM Undercounter Refrigerator, 600mmW, 140L capacity, (2) shelf, (1) solid door, static cooling with fan, temperature range (2°C to 10°C), manual defrost, electronic thermostat and digital LED temperature display, magnetic gasket, stainless steel exterior, ABS thermoplastic Interior, CFC-free refrigerant, 240v/50hz/1-ph, MEPS C (accept GN containers) Dimensions 840(h) x 600(w) x 600(d)
2.12	1 ea	**GANTRY/OVERSHELVES, AMBIENT** Custom STAINLESS STEEL SINGLE TIER AMBIENT GANTRY 1800MM X 300MM
2.14	1 ea	**WORK TABLE** Custom STAINLESS STEEL WALL BENCH 1200MM X 700MM C/W 50MM UPSTAND TO REAR AND BASE SHELF 304 GRADE TOP 430 GRADE FRAME & UNDERSHELF
	1 ea	MID-SHELF

Item	Qty	Description
2.14A	1 ea	**FOOD PROCESSOR, ELECTRIC**  Custom Model No. CUSTOM (R 211 XL ULTRA) Ultra Food Processor, electric, single speed, 2.9 litre stainless steel bowl with handle, pulse function, smooth blade, stainless steel knife, vegetable preparation fitting, includes: (1) 2mm slicer & (1) 2mm grater disc, 230v/50/1-ph, 550 watts, 1500 rpm, CE Dimensions 445(h) x 220(w) x 360(d)
2.15	2 ea	**SHELF, WALL-MOUNTED** Custom STAINLESS STEEL WALL SHELF 1200MM X 300MM C/W BRACKETS 430 GRADE
2.16	1 ea	**WORK TABLE** Custom STAINLESS STEEL WALL BENCH 1200MM X 700MM C/W 50MM UPSTAND TO REAR AND BASE SHELF 304 GRADE TOP 430 GRADE FRAME & UNDERSHELF
	1 ea	MID-SHELF
2.17	2 ea	**SHELF, WALL-MOUNTED** Custom STAINLESS STEEL WALL SHELF 1200MM X 300MM C/W BRACKETS 430 GRADE
2.18	1 ea	**WORK TABLE** Custom STAINLESS STEEL WALL BENCH 1200MM X 700MM C/W 50MM UPSTAND TO REAR AND BASE SHELF 304 GRADE TOP 430 GRADE FRAME & UNDERSHELF
	1 ea	MID-SHELF
2.19	2 ea	**SHELF, WALL-MOUNTED** Custom STAINLESS STEEL WALL SHELF 1200MM X 300MM C/W BRACKETS 430 GRADE
2.20	2 ea	**SHELF, WALL-MOUNTED** Custom STAINLESS STEEL WALL SHELF 700MM X 300MM C/W BRACKETS 430 GRADE
2.21	1 ea	**SINK, BESPOKE, SINGLE BOWL** Custom STAINLESS STEEL SINGLE BOWL SINK UNIT 1300MM X 700MM C/W 50MM UPSTAND TO REAR, BASE SHELF, LOCALISED ANTI-DRIP AND 500MM X 400MM BOWL 304 GRADE TOP 430 GRADE FRAME AND UNDERSHELF

Item	Qty	Description
	1 ea	PART VOID
	1 ea	Mechline WRCT-500ML3 CaterTap 3" Lever, 1/2" deck mixer, two hole, twin water feed, swivel spout, fitted with quarter-turn valves, chrome finish, WRAS
2.22	3 ea	**SHELVING UNIT, WIRE**  EAIS Model No. EZN-4-6X12 EZ Store + Wire Shelving System, 4-tier, 1200mm W x 600mm D x 1800mm H, 300kg weight load capacity per shelf, grey nylon coated shelves & poles Dimensions 1,800(h) x 1,200(w) x 600(d)
	2 ea	EZN-4-5X18 EZ Store + Wire Shelving System, 4-tier, 1800mm W x 500mm D x 1800mm H, 275kg weight load capacity per shelf, grey nylon coated shelves & poles
	1 ea	EZN-4-6X15 EZ Store + Wire Shelving System, 4-tier, 1500mm W x 600mm D x 1800mm H, 275kg weight load capacity per shelf, grey nylon coated shelves & poles
	2 pr	EZ-ACS-SHS EZ Store Shelf Hook, for creating "L" and "U" shape configurations (priced per pair)
2.23	2 ea	**SHELVING UNIT, WIRE**  EAIS Model No. EZN-4-3X12 EZ Store + Wire Shelving System, 4-tier, 1200mm W x 300mm D x 1800mm H, 300kg weight load capacity per shelf, grey nylon coated shelves & poles Dimensions 1,800(h) x 1,200(w) x 300(d)
	2 pr	EZ-ACS-SHS EZ Store Shelf Hook, for creating "L" and "U" shape configurations (priced per pair)
	2 ea	EZN-4-6X10 EZ Store + Wire Shelving System, 4-tier, 1000mm W x 600mm D x 1800mm H, 300kg weight load capacity per shelf, grey nylon coated shelves & poles
2.24	2 ea	**SHELVING UNIT, WIRE**  EAIS Model No. EZN-4-6X15 EZ Store + Wire Shelving System, 4-tier, 1500mm W x 600mm D x 1800mm H, 275kg weight load capacity per shelf, grey nylon coated shelves & poles Dimensions 1,800(h) x 1,500(w) x 600(d)
	1 ea	EZN-4-5X12 EZ Store + Wire Shelving System, 4-tier, 1200mm W x 500mm D x 1800mm H, 300kg weight load capacity per shelf, grey nylon coated shelves & poles
	2 pr	EZ-ACS-SHS EZ Store Shelf Hook, for creating "L" and "U" shape configurations (priced per pair)
2.25	1 ea	**HANDS FREE HAND WASH BASIN**

Item	Qty	Description
		Mechline Developments Model No. BSX-300-KVS BaSiX Hand Wash Station, 300mm W x 320mm D x 160mm H overall, 260mm x 130mm deep bowl, Push-Front hands-free mechanical operation, fixed spout, M-MX91 manual mixer, water hose, tap hole stopper, includes mounting bracket, 304 austenitic stainless steel bowl and deck, ABS polycarbonate skirt, WRAS Dimensions 160(h) x 300(w) x 320(d)
	1 ea	BSX-SPD BaSiX Soap Dispenser, deck mount, 90mm curved spout, 300ml capacity bottle, hand pump, chrome plated brass (suitable for use with WS1, WS2, WS3, WS4, WS6, BSX-300, BSX-400 and BSX-400i range of basins)
	1 ea	BSX300-SPL BaSiX Splashback, 300mm W x 315mm H, stainless steel, for 300 models only
3.01	1 ea	**HANDS FREE HAND WASH BASIN**
		Mechline Developments Model No. BSX-300-KVS BaSiX Hand Wash Station, 300mm W x 320mm D x 160mm H overall, 260mm x 130mm deep bowl, Push-Front hands-free mechanical operation, fixed spout, M-MX91 manual mixer, water hose, tap hole stopper, includes mounting bracket, 304 austenitic stainless steel bowl and deck, ABS polycarbonate skirt, WRAS Dimensions 160(h) x 300(w) x 320(d)
	1 ea	BSX-SPD BaSiX Soap Dispenser, deck mount, 90mm curved spout, 300ml capacity bottle, hand pump, chrome plated brass (suitable for use with WS1, WS2, WS3, WS4, WS6, BSX-300, BSX-400 and BSX-400i range of basins)
	1 ea	BSX300-SPL BaSiX Splashback, 300mm W x 315mm H, stainless steel, for 300 models only
3.02	1 ea	**WASTE/TRASH CONTAINER**
		EAIS Model No. WBSJ60-G Waste Bin, 508mm x 279mm x 632mm H, 60 litre capacity, grey, polymer Dimensions 632(h) x 508(w) x 279(d)
3.03	1 ea	**DISHWASHING TABLE, SOILED / DIRTIES**
		Custom STAINLESS STEEL DISHWASH INLET TABLE 2200MM X 750MM C/W SPLASHBACK TO REAR AND 1 NO. 600MM X 450MM BOWL 304 GRADE TOP AND SPLASHBACK 430 GRADE FRAME
	1 ea	BANK OF 3 BASKET RUNNERS
3.04	1 ea	**A SHELF, WALL-MOUNTED**
		Custom STAINLESS STEEL WALL SHELF 900MM X 500MM C/W BRACKETS 430 GRADE
3.06	1 ea	**SINK IS WITH 3.03**

Item	Qty	Description
		Custom
3.07	1 ea	**PRE-RINSE FAUCET ASSEMBLY, WITH ADD ON FAUCET**
		Mechline Developments Model No. AJPR30-ST-BF2-S AquaJet Pre-Rinse Spray, 1190mm H, 300mm L wall brace, tap hole 2x25mm, (2) pedestal, (2) water feed, standard lever controls, standard rose head gun, deck mounted + plus 12-in bowl-filling faucet, WRAS Dimensions 1,190(h) x 300(w) x 90(d)
	1 ea	E EcO water saving gun head, for AquaJet pre-rinse sprays
	1 ea	AJPR-RS Restraining Device to prevent spray arm from being overstretched or pulled into the sink (Highly Recommended)
3.08	1 ea	**DISHWASHER, HOOD TYPE, PASS-THRU**
		DC Products Model No. SD1000A CP IS D Passthrough dishwasher, LCD display, soft touch controls, (4) fixed cycles & (1) adjustable My Wash cycle, colour status button, audio status indicator, integral chemical dosing adjusted from control panel, selectable stand-by mode & thermo-lock, real time temperature read outs, previous cycle temperature display (for logging), information/fault logs, engineer diagnostic mode, superior peristaltic auto-dosing units (when fitted), heavy duty wash pump, double skinned hood, low water usage, (3) baskets, break tank, drain pump, chemical pumps, integral softener. 32 amps Dimensions 1,500(h) x 655(w) x 745(d)
	1 ea	One year parts only warranty, (where water hardness exceeds 100ppm a water softener is required), standard
	1 ea	One year parts only warranty, (where water hardness exceeds 100ppm a water softener is required), standard
3.09	1 ea	**CONDENSATE HOOD**
		Custom Condensate hood
3.10	1 ea	**DISHWASHING TABLE, CLEAN**
		Custom STAINLESS STEEL DISHWASH OUTLET TABLE 650MM X 750MM 304 GRADE TOP 430 GRADE FRAME
	1 ea	BANK OF 3 BASKET RUNNERS
3.11	1 ea	**SHELVING UNIT, WIRE**
		EAIS Model No. EZN-4-6X18 EZ Store + Wire Shelving System, 4-tier, 1800mm W x 600mm D x 1800mm H, 275kg weight load capacity per shelf, grey nylon coated shelves & poles
IC	3 ea	**FLY KILLER / GLUEBOARD**

Item	Qty	Description
		Mechline Developments Model No. M701 MO-EL Adhesive Paper Insect Killer, aluminium, 150M² coverage, 400mmW x 147mmD x 135mmH, (2) 15watt bulbs, includes (4) "sticky" boards, 220-240v/50/1-ph Dimensions 135(h) x 400(w) x 147(d)
	3 pk	M001888 MO-EL Insect Killer Spare Part, adhesive board, for M701 (pack of 10)
INSTALL	1 ea	**INSTALLATION** Custom Installation of above to suitable isolated services within one metre during normal working hours
MATS	1 ea	**MATERIALS** Custom Materials
FREEZER ROOM	1 ea	**WALK IN FREEZER:-** Custom 2900 X 1450 X 2280mm
COLD ROOM	1 ea	**WALK IN CHILLER:-** Custom 2900 X 2650 X 2280mm
SUP	1 ea	**ANSUL R102 SYSTEM** Custom Model No. FIRE Ansul R102 System Main Kitchen 1 x Double Tank System

Merchandise
Installation

Payment Terms:-
50% With Order
40% Pre Delivery
10% On Completion
Above terms based on a satisfactory credit evaluation
Full Terms and Conditions available on request.

TERMS AND CONDITIONS OF SALE

The Company puts forward all Quotations and accepts all Orders subject to the following Standard Terms and Conditions of Sale.

PRICES

All goods will be Invoiced at the price ruling at the date of despatch. Any tax demanded by Government legislation will be added to

the invoice at the rate ruling at that time

PAYMENT

By agreement with the Company. Discount may only be deducted if Invoices are paid within the agreed period.

LEAD TIMES

Lead times on goods both proprietary and bespoke can be highly volatile and in certain cases beyond the expected fulfilment dates. Monarch Catering Equipment ltd can only advise stated expected dates in line with the suppliers once formal orders are in place and will not be held responsible for any failed dates by suppliers. We would make every effort to avoid such situations.

RISK

Risk in the goods passes to the Buyer on Delivery.

OWNERSHIP

Legal title to the goods remains with the Company until full payment for the goods has been received and all cheques have cleared the bank and the Buyer gives the Company the right to enter any of its premises on which the goods are situated to the purpose of repossession.

CLAIMS

No claims for damage will be accepted unless notice is given within three days of delivery. No claims for loss will be accepted unless notice is given in writing within fourteen days of notification of despatch.

CARRIAGE

Delivery, UK Mainland, is free of charge unless otherwise stated.
Additional charges are made where goods are to be:-
Time specific.
Transported beyond the kerb side.
Transported to restricted zones.
Consolidated and coordinated for site specific requirements e.g. Project installations.

Orders under £50.00 nett value will be liable to a small Order charge.

GUARANTEE

The Company accepts no liability in respect of the performance of goods stated by Manufacturers and passed on by us in good faith.

The Company extends to the Customer the benefit of any transferable warranty or guarantee given by the Manufacturer or any of the Company's Sub-Contractors in connection with or arising out of the goods or material supplied or workmanship employed under the Contract, subject to their accounts being in line with their payment terms.

INSTALLATION

The Company will not accept responsibility for the incorrect installation or adjustment of appliances supplied by others.

The main contractor or their sub-contractors will be responsible for the following works which must be completed before our installation commences:

·The building and building finishes including walls, floors ceilings and paintwork
·The provision of the first and second fix electrical installation up to and including suitable agreed connection points provisionally allowed as indicated on the consulting engineer's drawings and in accordance with the catering contractor design

intent requirements.

·The provision of all mechanical services, including but not limited to water and waste services, ventilation ductwork and plant, and waste pipework up to and including suitable terminations in agreed positions provisionally allowed as indicated on the consulting engineer's drawings in accordance with the catering contractor design intent requirements, approximately one metre from the point of connection.

·All terminations for services will be no greater than one metre from the final connection point on the sited equipment.

·All services, except where specified in writing to the contrary, shall be concealed thereby providing a completely flush installation. Exposed water and waste pipe runs shall be eliminated or minimised wherever practical.

.Any services/enclosures installed which result in fabrications not fitting as per design and not agreed prior to quotation / manufacture, with be subject to surcharges for any alterations/ remake.

·All visible services pipework shall be in copper, all visible waste pipework shall be white PVC unless otherwise stated or required for specific applications, for example, high temperatures.

·All builders work/electrical work/earth bonding and plumbing provided by main contractor as required by our installation.

·All installation costs are for normal working hours of 9-5, Monday to Friday. Any hours work outside of this will be charged per operative at time and a half apart from work between the hours of 8PM and 6AM and all Sunday work will be charged at double time.

·Installation costs allow for two operatives. Any additional resources/operatives required will incur extra charges.

.Only equipment supplied by ourselves will be included within the installation costs unless otherwise stated.

.The removal of protective plastic coatings from equipment and fabrications is not included within the general installation and can be quoted as part of a deep clean

.Any pre attendance training/ briefings required will be charged as additional hours at the prevailing rate per operative. Excludes same day inductions up to 30 minutes

PROJECT MANAGEMENT

·Can be quoted subject to specific requirement.

PROJECT MANUALS & TRAINING

.All manuals are supplied with manufacturers equipment and are left on site post installation

.Specific coordinated manuals either soft or hard copy will be quoted subject to specific requirements

.Equipment training is not included unless specified. Training can be quoted on request.

Charges are as follows:

Please contact us for our current charge rates

SPECIAL ORDER ITEMS:

Any bespoke fabricated item cannot be exchanged or restocked

Deposits will be required against any special order items in line with the manufacturers terms

Any Special order item cannot be exchanged or restocked

Any Items found not to be required or exchanged can only be returned or exchanged as per the manufacturers explicit terms which would generally be 25% restocking provided that the items are returned unused and packaged with their original packaging and complete. Any deviations will result in non return or at an additional premium subject to returned status.

Prices are in line with current UK Trading conditions. All taxes, duties, charges, levies, assessments and other fees of any kind imposed on the import or purchase of these goods shall be borne by the customer. Costs will be passed on at the rate charged to the distributor.

Payment Terms:-

50% With Order

40% Pre Delivery

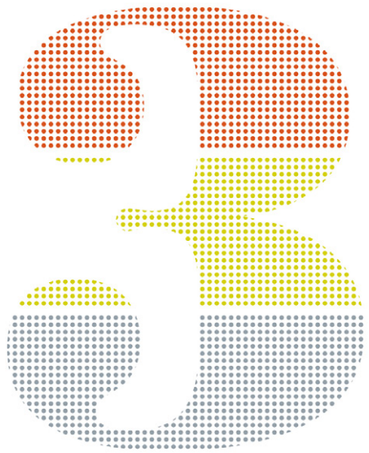
10% On Completion

Above terms based on a satisfactory credit evaluation

Full Terms and Conditions available on request.

Acceptance: _____ Date: _____

Printed Name: _____



Section 04-07

The following sections contains Plasma Cleanair's commerical kithcen ventilation odour control proposal, electrostatic precipitator and advanced UVC control panel. It also includes System Air's MUB/T insulated duct fans specifcation.

Commercial Kitchen Ventilation Odour Control Proposal

Quotation Reference: E-04950

Date: 17TH February 2024

Project: Lower Campfield, Manchester

Prepared For: John Hall

Prepared By: Chris Tattersall

Contents:

1.0 We Clean Air

2.0 Enquiry Details

3.0 Product Selection

4.0 Product Overview

5.0 Price Schedule

6.0 Service & Maintenance

1.0 We Clean Air

Experts in Grease, Smoke and Odour Control

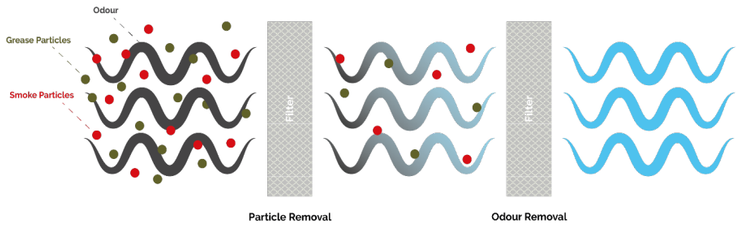
CPD Seminars
Plasma Clean Air regularly host seminars for continuing professional development (CPD). We are experts in kitchen ventilation grease smoke, and odour control, our seminars offer practical advice on improving air quality in a number of settings. The courses are certified by industry body Chartered Institute of Building Services Engineers (CIBSE). **Contact us if you would like to request a free online CPD seminar.**

Our Approach to Commercial Kitchen Odour Control
The recommended equipment shall be compliant with EMAQ+, DEFRA and Building & Engineering Services Association (BESA) DW/172 section 24. **We can supply EMAQ+ odour risk assessments on request** to aid with planning applications and ensure that the most suitable odour control solution is selected.

When incorporating odour control equipment within a kitchen extract system it is important to recognise that there are two phases of contamination:

1. Particulate Phase (Grease & Smoke)
2. Gaseous Phase (Cooking Odours)

Where possible the particulate phase needs to be removed prior to gaseous odour removal.



Key Design Criteria

- Interlock equipment with air flow either through fan control or DPS.
- Ensure that fan has capacity to handle additional pressure drop.
- Check linear velocity through main duct run (5-9m/s) to ensure that there is sufficient dwell time in equipment.

plasma-cleanair.com ask@plasma-cleanair.com 0800 652 3325
Earl Business Centre, Dowry Street, Oldham, OL8 2PF

2.0 Enquiry Details

To select the most suitable odour control solution it is important to establish the site requirements and parameters. Whilst it is not always possible to provide all the information requested below, the more information we have available the more accurate our proposal will be to meet your commercial kitchen exhaust requirements.

- Is this a new installation or retro fit:
  New
- Extract Volume Flow Rate:
  1.54 m3/s
- Distance from Canopy to Discharge point (metres):
  10-15 metres approx.
- Is there a designated plant space for odour control equipment:
  Yes, internal local to kitchen canopy.
- Where does the exhaust duct discharge to atmosphere:
  Exhausting at high level (7m approx. above ground level), still below the roof/rafter level.
- Proximity of receptors from the discharge point:
  <20 metres
- Type of cooking:
  Finishing Kitchen, premises receives prepared foods for reheating, assembling, portioning, and serving.
- Estimated volume of cooking (daily covers):
  TBC

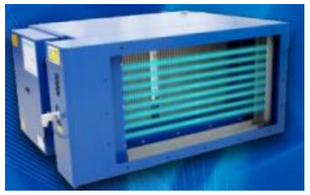
3.0 Product Selection

The following odour control products have been selected:

- Combined Electrostatic precipitator with ultraviolet light in the C-band for grease, smoke and odour control.
- Advanced control panel to ensure Combined Electrostatic precipitator with ultraviolet light is interlocked with airflow. Also provides UV lamp life monitoring and BMS connectivity.
- In-Duct mounted activated carbon to absorb residual ozone and act as a final polish. Positioned after the ESP, but before the extract fan.

4.0 Products Overview

Combined ESP / UV



Our ESP/UV range are specifically designed for the high efficiency removal of grease and smoke particulate as well as cooking odours from commercial kitchen exhaust systems. Our ESP units collects particles as small as 0.01 micron. An innovative extra depth-collector cell helps make our electrostatic filters (ESPs) highly effective at re moving grease and smoke particulates from kitchen extraction systems whilst maintaining a low pressure drop and low power consumption. These units feature high output UVC lamps which produce ozone. Odours from the cooking process are attacked first by UVC light in a process known as photolysis. Ozone then continues to act as the exhaust air moves through the ductwork by a process known as ozonolysis. As a result, cooking odours are removed, which would otherwise be a nuisance to neighbouring properties. By adding the UV section, the overall depth of the unit only increases by 220mm.

Installation

- Ductwork transitions to and from the ESP units to support laminar air flow in accordance with DW/144 (22.5-30 degrees maximum).
- ESP units installed no less than 1 metre away from a bend.
- ESP units to be interlocked with airflow.
- ESP units are IPX4 rated.
- For applications where high levels of smoke are produced, double pass ESP arrangement recommended.
- A minimum 1 second dwell time is required in the extract duct from the UV lamps to the discharge point for effective odour removal.

Technical Specification and Data

	ESP 10,500 / UV-C8
Max recommended airflow	2.1 m3/s
Weight	115 kg
Input Voltage	230 Volts / 1 Phase / 50 Hz
Power	Up to 800 watts
Efficiency	To 95% based on ASHRAE 52.2 To 99% for double pass (Calculated)
Recommended minimum dwell time	1 Second
Construction	Welded galvanized steel 1.2mm (18 gauge) top/bottom, 1.5mm (16 gauge) columns
Finish	Blue epoxy powder coating (RAL 5017)

Safety when working with Ozone

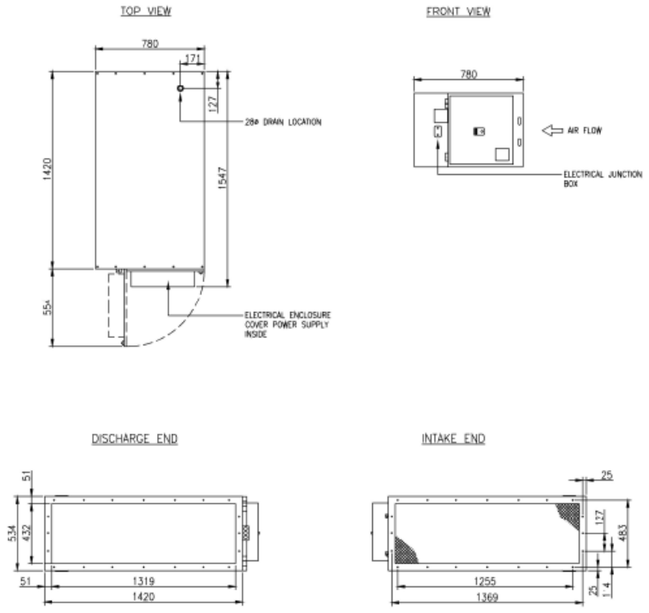
If the extract duct discharges at low level or there are receptors within a 5-metre radius of the discharge point activated carbon (minimum 0.1 second dwell/residence time) is required to absorb residual ozone before reaching atmosphere.

Maintenance

Minimum 600mm side access required at the ESP door to allow the door to open fully to safely remove filters and collector cells. Service and cleaning frequency depends on the type and volume of cooking, speak with a Plasma Clean representative to find out more, The UV lamps have a normal operating life of 10,000hrs after which time they should be replaced. Minimum 1100mm side access required to safely remove UV lamp rack.

ESP / UV Drawings

ESP 10,500 / UV-C8



Control Panels
Our control panel range is used to switch equipment on when air flow is detected in the kitchen extract canopy or ductwork When the extraction system is activated the equipment is automatically turned on. The equipment is automatically turned off when the system is shut down. This prevents accidental exposure to UVC light and ozone. It also ensures energy efficiency for the system. It employs a differential pressure switch and relay capable of switching up to 8 amps. Additional channels can be added to run multiple devices up to 8 amps each.

The standard Air Flow Interlock unit switches the odour control equipment on. It has a green LED to indicate air flow in the duct.

The dimensions of the control panel shall be 187mm high x 122mm x wide x 90mm deep. Total weight is 0.4kg. Options to upgrade the control panel include the following which will increase the overall dimensions and weight of the control panel.

Lamp Life Indicator – A flashing LED will indicate 1 month before UV lamp change is required.

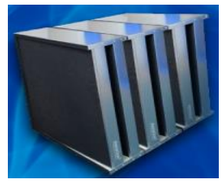
Service Alarm – An audible alarm is factory programmed to indicate UVC lamp service requirement at 9,000 hours. A flashing LED will indicate lamp change required in 1 month. Audible alarm can be silenced for 24 hours at a time.
Separate emergency knock off.

Fault relay / BMS interlock – Panels can indicate there is a fault with the UV lamps. Panel can be interlocked to BMS controls via a volt free signal.

Features & Benefits	Air Flow Interlock	Lamp Life Monitoring	BMS Connectivity
Air Flow Interlock (CP-AFI-1)	✓		
AFI with Lamp Life Indicator (CP-AFI-1-LLI)	✓	✓	
AFI with Fault Relay (CP-AFI-1-CM)	✓		✓
Advanced UV Control Panel (CP-AFI-LLI-CM)	✓	✓	✓

* Single Channel as standard, up to 8A per channel
* Double channel options for all options available

Activated Carbon Discarb Filters



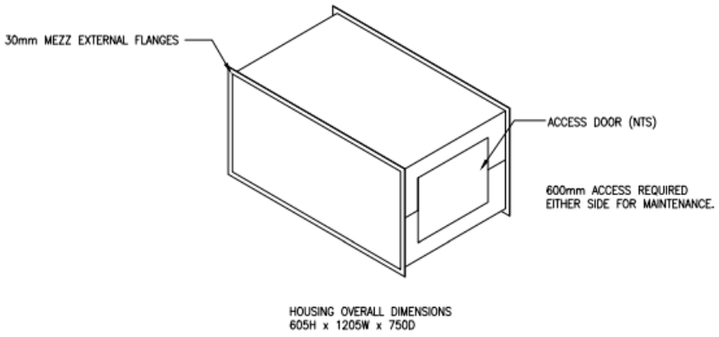
Activated Carbon Discarb Filters are traditionally used in Kitchen Extract systems to absorb gaseous odours from the air before discharging to atmosphere. Metal cased carbon discarbs hold multiple bonded panels in a "block" which can then be easily installed into the duct.

At Plasma Clean we also recommend that activated carbon is installed to supplement ozone injection and UV systems in the airstream. Our activated-carbon filters remove residual ozone before extraction and act as a final polish, further oxidising any residual odour molecules that become trapped on the activated carbon surface. That's vital when the extraction point is particularly sensitive, or there are receptors within a 5-metre radius of the discharge point.

Technical Specification and Data

Technical Specification and Data:	
Size (H x W x D)	594 x 196 x 597mm
Gross Weight	17.95 kg
Carbon Weight	16.6 kg
Rated Airflow	1,266 m3/hr
Pressure Drop	120 Pa @ design air volume
Recommended Dwell Times	Ozone Control - 0.1 – 0.2 Second Low-Medium Odour Control – 0.1 Second High Odour Control: 0.2 – 0.4 Second Very High Odour Control: 0.4 – 0.8 Second

Accessories
Custom in-duct mounted filter housing, manufactured from galvanized steel complete with 30mm mezz flanges.



Maintenance
Minimum 600mm side access required at the filter housing door to allow the door to open fully to safely remove carbon filters and install new ones. Carbon filters cannot be cleaned, and need to be replaced with new when they are no longer effective. For applications where activated carbon is used in conjunction with ozone injection or UV systems in the airstream, we advise discarb filters are replaced every 9 – 12 months.

5.0 Price Schedule:

Products	Qty	Unit Price	Total Price
Combined ESP 10,500/UV-C8	1	£4,710.08	£4,710.08
Sitesafe Discarb Cells 594mm H x 196mm W x 597mm D	6	£150.00	£1,200.00
Sitesafe Discarb Housing 605mm H x 1200mm W x 750mm D c/w 30mm mezz flanges	1	£325.00	£325.00
Advanced UV Control Panel Linked to ESP/UV unit	1	£705.46	£705.46
Commissioning	1		No Charge
		Sub Total	**£6,965.54**
		Shipping & Handling	**£250.00**
		Net Total	**£7,215.54**
		VAT	**£1,393.11**

Validity:
This quotation is open for acceptance for a period of 60 days from the quotation date.

Lead Time:
Current equipment delivery lead time would be approx. 2-3 working weeks from receipt of Purchase Order.

Exclusions:
This proposal includes supply of equipment only. For the purposes of this quotation, the following exclusions apply.

- Consumable and maintenance costs
- Offloading
- Installation
- Fan Supply
- Any roof support systems
- Any electrical wiring
- Any power supply
- Transformation pieces
- Fan modifications
- Weather proofing

Approvals:
Plasma Clean Air products comply with current CE requirements and EMC standards. Certificates are available on request.

Plasma Clean Terms and Conditions:
https://plasma-clean.com/terms-and-conditions/

Credit Accounts are subject to the terms contained within our Terms and Conditions (T&Cs) of Sale. Any credit terms are subject to acceptance and satisfactory credit check. Credit Account Form is available upon request.

6.0 Service & Maintenance

Maintenance must be carried out to ensure EMAQ+/DEFRA conformance for the selected equipment. Plasma Clean Air warranties are valid based on planned preventative maintenance of the equipment.

The recommended maintenance schedule will be confirmed post commissioning when the warranty is enabled, or we can supply earlier if required.

If the maintenance schedule is not adhered to, or parties other than Plasma Clean maintain the equipment, warranty will be void subject to terms and conditions**.**

A Service and Maintenance quotation will follow within 7 days of purchase of equipment, or we can supply earlier at your request.

Plasma Clean Air is committed to providing excellence at every level. Our grease, smoke and odour control solutions are designed and manufactured to the highest standards and maintained by our own qualified service engineers. It is not only odour control equipment we can maintain, but we also offer a full range of commercial kitchen services to ensure maintain a compliant operation.

Additional Maintenance Services Available

- **TR19 Canopy & Extract Cleaning -** As an approved member of BESCA, we carry out canopy and extract cleaning services to TR19 specification and provide a full report and certificate on completion.
- **Commercial Kitchen Cleaning** - Regular deep cleaning of a commercial kitchen is essential for food hygiene and safety reasons. Build-up of food, grease, debris, and dust in your kitchen can create a hazardous environment and attract unwanted vermin.
- **Fire Damper Testing -** Our team of approved fire damper inspection engineers can carry out a survey, inspection, and full damper testing to ensure you remain compliant. Fire damper testing is legally required to be carried out annually in accordance with BS9999:2017 and BESA VH001.

We trust the foregoing is to your satisfaction, however, should you have any queries, please contact the writer at your earliest convenience.

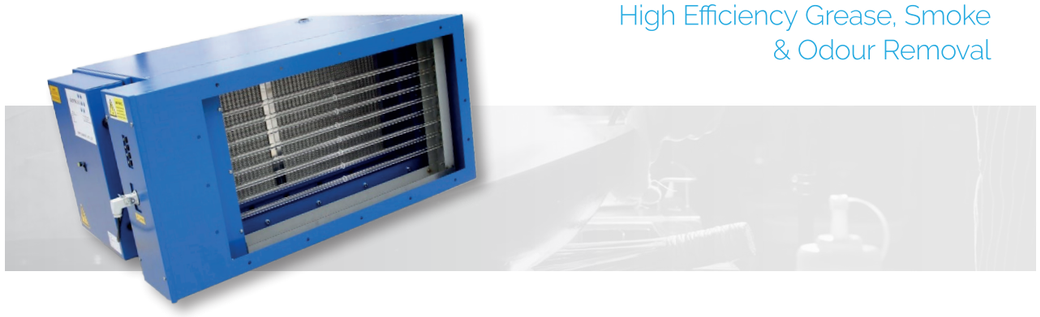
Yours sincerely
For Plasma Clean Air Ltd.

Chris Tattersall
E-Mail – chris@plasma-cleanair.com
Mobile – 07926 699010
Technical Sales Representative

Electrostatic Precipitator ESP AG UV

Grease, Smoke & Odour Control

plasma-cleanair
AIR, ODOUR & GREASE CONTROL



High Efficiency Grease, Smoke & Odour Removal

Our Combined ESP/UV system is specifically designed for the high efficiency removal of grease and smoke particulate as well as gaseous odours from commercial kitchen exhaust systems. With improving quality of life and living standards, people are conscious of the effects of environmental pollution and have a strong preference for a healthy environment. Therefore, having a robust kitchen purifying system that meets national standards is a social responsibility and a necessity for long-term business gains.

Benefits

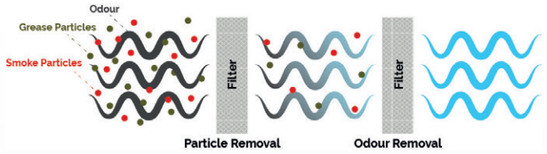
- **Compliant** - with EMAQ+, DEFRA and Building & Engineering Services Association (BESA) DW/172 section 24.
- **High Purification Efficiency** – Utilizes a PWM solid-state power supply, which ensures a highly efficient, stable, and continuous supply.
- **Staggered Spiked Ionization** – The ionizer uses stainless steel staggered zigzag multi-point ionization and is not easily stained by oil and grease.
- **Safe and Reliable** – Equipped with a safety switch and a power switch, giving double the protection.
- **Energy Efficient** - Highly effective at removing grease and smoke particulates from kitchen extraction systems whilst maintaining a low pressure drop and low power consumption.
- **Modular Design** – The modular design enables horizontal parallel assembly or vertical stacking to meet various on-site requirements.
- **Packaged System** – One power supply and no need for duct transition between ESP and UV section. By incorporating UV light the depth of the system only increases by 220mm.

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Scan the QR code for installation information

Electrostatic Precipitator ESP AG UV
Grease, Smoke & Odour Control
plasma-cleanair
AIR, ODOUR & GREASE CONTROL

How a Combined ESP-UV system works



Stage 1 - Pre Filter
Dirty kitchen extract air goes through an aluminium mesh filter where large grease particulate in the air is intercepted.

Stage 2 – Ionization
The smaller grease and smoke particles that escape through the primary filter enter the ionization zone where particles as small as 0.01 micron are effectively ionized and carry a positive charge to continue to the collector cell area.

Stage 3 – Collector Cells
Charged grease and smoke particles are then captured via collector cells which are composed of many parallel plates. Grease and oil are collected in the base sump of the ESP and clean air leaves the ESP outlet.

Stage 4 – UV
High energy UVC lamps are used to break down odours and traces of grease in the extract air by the mechanism of photolysis and ozonolysis – combining high intensity UVC light with ozone technology.

Technical Details

	ESP AG 7,000/UVC	ESP 10,500/UVC
Max. recommended Airflow	1.4 m3/s	2.1 m3/s
Weight	82kg	115kg
Dimensions	534x 1103 x 780mm	534 x 1564 x 780mm
Input Voltage	230 Volts / 1 Phase / 50 Hz	
Power	600 watts	800 watts
Efficiency	To 95% based on ASHRAE 52.2 To 99% for double pass (calculated) Reduce duty to 80% and use multiple pass configurations for high grease and smoke applications especially in sensitive areas.	
Min. recommended dwell time from UV to discharge	1 Second	
Max. Temperature	40 Deg. C	
Static Pressure	115 Pa per pass (clean)	
IP Rating	IPX4 "Weatherproof cover available on request"	
Construction	Welded galvanized steel 1.2mm (18 gauge) top/bottom, 1.5mm (16 gauge) columns	
Finish	Blue epoxy powder coating (RAL 5017)	

Installation Requirements

- Ductwork transitions to and from the ESP units to support laminar air flow in accordance with DW/144 (22.5-30 degrees maximum).
- ESP units installed no less than 1 metre away from a bend.
- ESP units to be interlocked with airflow.
- ESP unit to be installed on the negative side of the extract fan.
- According to the type and volume of cooking, single pass, double pass or triple pass ESP filtration can be selected, to ensure effective purification.
- Use Type D MCB with leakage protection.

Safety when working with Ozone

If the extract duct discharges at low level or there are receptors within a 5-metre radius of the discharge point activated carbon (minimum 0.1 second dwell/residence time) is required to absorb residual ozone before reaching atmosphere.

Maintenance

Minimum 600mm side access required at the ESP door to allow the door to open fully to safely remove filters and collector cells. Service and cleaning frequency depends on the type and volume of cooking. EMAQ+ Guidance recommends an ESP service clean every 1-3 months for a system employing ESP filtration. The UV lamps have a normal operating life of 10,000hrs after which time they should be replaced. Minimum 1100mm side access required to safely remove UV lamp rack Speak with a Plasma Clean Air representative to find out more.

Warranty

1 Year following compliant installation.
3 Years with compliant installation and Plasma Clean Air Service and Maintenance Contract.

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Advanced UVC Control Panel [CP-AFI-1-LLI-CM] Technical Specification

This unit combines an Air Flow Interlock, Lamp Life Indicator and Fault Relay. This ensures that the equipment is switched on only when there is air flow, and there is an audible and visual alarm which signals when the UVC lamps require changing. If there is a UVC lamp fault, there is a visual and audible alarm and a volt-free signal is generated which can be picked up by the Building Management System.

It employs a differential pressure switch and is capable of switching up to 8A per channel. A green LED indicates air flow. The Lamp Life Indicator LED and audible alarm is factory programmed to indicate UVC lamp service requirement at 9,000 hours.

The lamp life indicator LED and audible alarm is factory programmed to indicate UVC lamp service requirement. At 8,000 hours the lamp life indicator will flash indicating a service is due, then the flash rate will increase to at 8,380 hours and finally at 8,780 hours the LED will be on permanently and the alarm will sound indicating the service is now overdue. The alarm may be silenced for a period of 24 hours by pressing the silence alarm button on the front of the panel.

Dimensions (H x W xD mm): 240H x 191W x 107D mm

Weight (kg): 1.32

Maximum Current: 8A

Kit Contents:
1 x Control box – Air Flow Interlock with Lamp Life Indicator & Fault Relay
1 x Adjustable differential air pressure switch (DPS) with mounting kit
1 x 2m clear tubing
1 x plastic static pressure tip
1 x 2.5m two core cable connecting control box to pressure switch using the N/O terminals

Not supplied:
Mains cable to control panel (by others)

Optional extra:
EMERGENCY OFF switch

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Installation:
Please also refer to the relevant O&M Manual for the Plasma Clean equipment being used in conjunction with the control panel.

Installation is to be carried out by a technically competent mechanical and electrical person.

Electrical Installation
Referring to the wiring diagram below, the control panel is powered by a 230V electrical supply. The output from the control panel supplies the electrical equipment being served.

The DPS Normally Open (N/O) terminals are connected to the control panel as shown in the wiring diagram by 2.5m of two core cable.

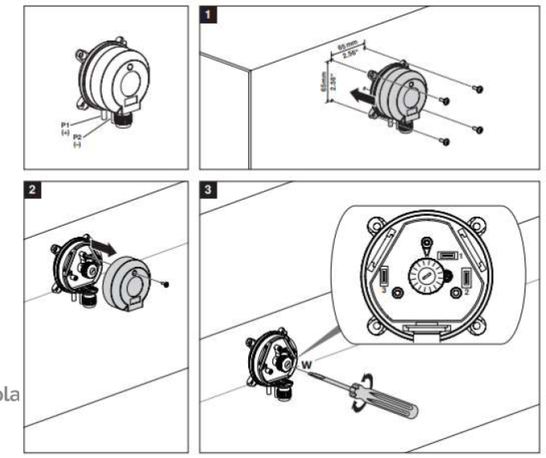
The Lamp Fault output (Q4) on the PLC connects to the BMS (cable not supplied).

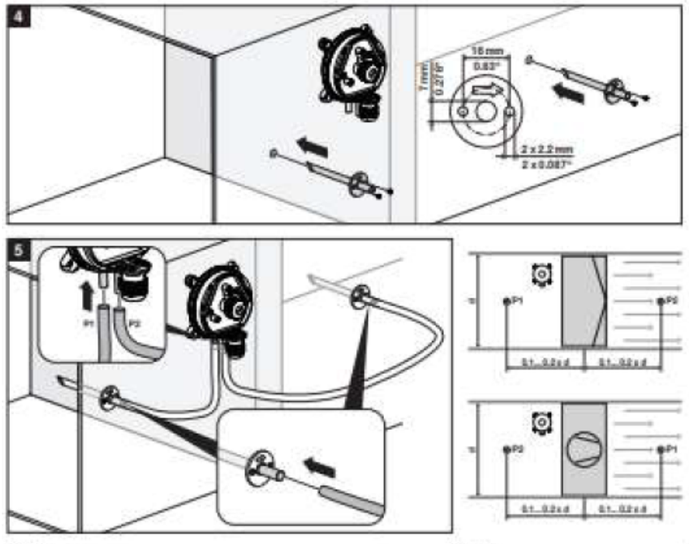
Mechanical installation
Referring to the installation instructions below, the DPS is to be mounted close to the extraction canopy or ductwork and connected to the tubing and injector using the low pressure detector (P2). P1 is left open to atmosphere.

The injector is inserted into the extraction system avoiding any dead-ends in the extraction system (points where there is little differential pressure compared to atmosphere).

The differential air pressure switch can be adjusted using the 20-300Pa dial.

Differential air pressure switch installation images:





Lamp Life Indicator Re-set

The control unit activates power to the UV lamps and enables the counter when air flow is detected.

When no air flow is detected the UV lamps get turned off and the counter is paused.

The lamp life indicator flashes according to the parameters set below

At 8000hrs – 1 sec ON 5 sec OFF
With the alarm sounding at a rate of 1 sec ON 5 sec OFF

At 8380hrs – 1 sec ON 1 sec OFF
With the alarm sounding at a rate of 1 sec ON 5 sec OFF

At 8780hrs – ON permanent
With the alarm sounding at a rate of 1 sec ON 5 sec OFF

The alarm may be silenced for a period of 24 hrs by pressing and holding the alarm silence button for more than 1 sec.

In order to reset the counter and the alarm perform the following on the internal PLC

1 Press ALT
2 Press Z1
3 Press ALT

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Fault Relay:
The lamp fail LED is enabled when lamp failure is detected with the beeper pulsing twice every 10 sec. The fault relay is set to trigger when 2 lamps have gone down. The lamp fail indication takes priority over the lamp life indication.

Refer to Fault Relay Adjustment image, below.

Fault Relay Adjustment



The current monitoring relay is factory set to activate after the failure of two UVC lamps.

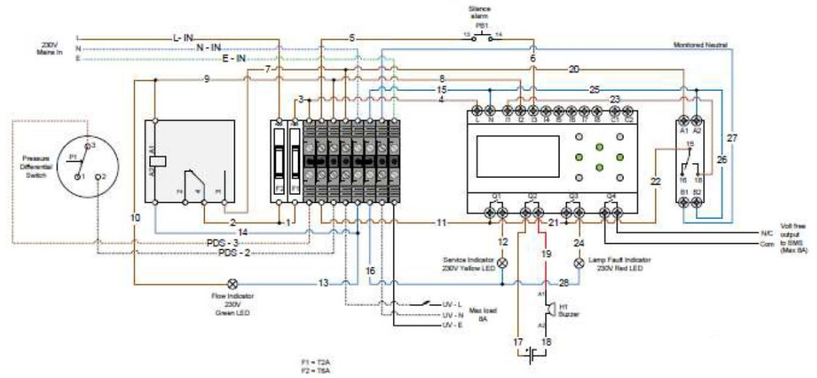
As there may be differences in site voltages it is advised that the fault relay is re-adjusted as part of the commissioning process to ensure it alarms at the correct level.

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Creating a cleaner, safer environment

1. Power the UVC equipment and allow to run for 5 minutes to allow the UVC lamps to stabilise
2. Witness that the alarm LED is not illuminated.
3. Remove one of the ballast fuses on the lamp frame
4. Witness that the alarm LED is illuminated (there is a 5 second delay on the fault lamp). If the alarm LED does not illuminate slowly lower the Trip Limit Adjustment until the LED illuminates.
5. Refit ballast fuse and witness that the alarm LED is not illuminated.
6. Adjustment complete.

Wiring diagram:

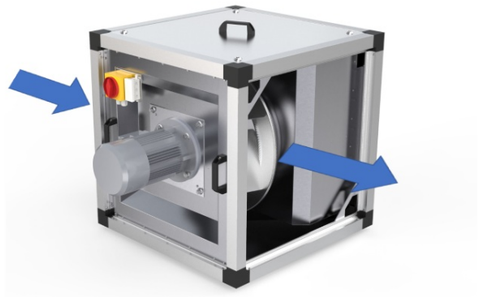
Control Panel - Wiring Diagram



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systemair **MUB/T-S 062 560EC**

Item Number: **#454833**



MUB/T Insulated duct fans

Powerful and efficient exhaust fans for medium temperatures up to 120°C

- For kitchen and industrial environments
- Up to 120°C medium temperature, continuous operation
- Drip pan and drain plug included
- Acoustic and thermal insulation 30 mm
- Flexible airflow direction
- Indoor and outdoor installation
- Modular system of accessories
- Available with AC and EC motors for 50 and 60Hz

Find more details in our online catalogue

Application

The MUB/T fans are specially designed to **extract** air from **kitchen environments** or **industrial applications**, where **motor** must be placed **outside of air stream**. **Drip pan** with **drain plug** on bottom (except MUB/T 100 630D4-K2-L) are constructed for **collecting** a draining **dust, oil, water**.
By MUB/T and MUB/T-S fans an easy **maintenance** is provided through **service door** with handle.

Flexibility

Depending on the type, MUB/T fans are designed for **straight through** or **90°** airflow. The **air direction** can be easily **changed** on site. The construction of the casing and thermal insulation permits **outdoor** and **indoor** use.

Performance

High-performance aluminium impeller together with **highly efficient** motors are designed to ensure high-level performance to **minimise power consumption** and **maximise efficiency**.

Modularity

Thanks to variety types of **accessories** as flexible connections, dampers, roof, base frame, etc. it is easy to design any ventilation system according to your demand.
By using special **modular systems**, where some accessories as **heaters, coolers, silencers, filters** or **carbon filters** are built-in in **the same type of casing**, you can even design a simple supply or exhaust **air handing unit.**

systemair **MUB/T-S 062 560EC**

Item Number: **#454833**

Features

Construction

The casing consists of a corrosion-resistant **aluminium frame** with **fibreglass reinforced plastic corners of PA6**; highly shock-resistant. **Panels** made of **double skin galvanised** sheet steel with **30 mm acoustic** and **thermal** rockwool **insulation**.
The **MUB/T** and **MUB/T-ECO** fans are designed for **90° airflow**.
The **MUB/T-S** fans are designed for **straight through airflow**.
Air direction can be easily **rebuilt** on site by **changing** with **service doors (MUB/T).**
Revision switch is **included** and **prewired for MUB/T** and **MUB/T-S.**
The **MUB/T-ECO** is **without revision switch** and **service door.**
Aluminium drip with **drain plug is** placed on **bottom** of casing (except MUB/T 100 630D4-K2-L).

Impeller

The MUB/T fans use **radial** impeller with **backward curved blades**. These are made out of aluminium, dynamically **balanced** and paired with corresponding **IEC motor** with efficiency **IE3 or EC motor**.

Motor

Depending on the type, MUB/T fans are equipped with **AC** or **EC** external rotor motors. Motors are suitable for **50Hz** and **60Hz.**

Motor protection

Depending on the type, **AC** motors have an **integrated** thermal protection with manual (electrical) reset, pre-wired integral **thermocontact TK** or **thermistor PTC** with leads to a **motor protection device**. Fans with **EC** motors have an **integrated** electronic **thermal protection** including **locked-rotor protection** and **soft-start**.

Control

EC motors with **built-in potentiometer** to adjust working point can be also controlled by external **signal 0-10V.**
EC motors, depending on the type are also equipped with **ModBus** communication **or alarm signal.**
AC motors can be controlled by **5-step, stepless** speed regulator, **D/Y** switch or **frequency converter.**

Installation

For correct drainage the MUB/T fans must be installed in position with drip pan down. Fans can be installed in any position **indoor** and together **with weather protection roof** also **outdoor**. With mounted **base frame** the MUB/T fans can stand **on floor**. For **preventing vibration** to the duct it is recommended to use **flexible connections.**

Article name: MUB/T-S 062 560EC | Product link: https://shop.systemair.com/en-GB/productPermalink?p=1429862 | Item Number: 454833 | Document type: Product card | Created at: 11.12.2024 | Generated by: Systemair Online Catalogue | Language: English

Technical parameters

Nominal data		
Voltage (nominal)	400	V
Frequency	50; 60	Hz
Phases	3~	
Input power	2,803	W
Input power kW	2.803	kW
Input current	4.2	A
Impeller speed	1,410	rpm
Air flow	max 3.4558	m³/s
Temperature of transported air	max 120	°C
Max temperature of transported air, when speed controlled	120	°C

Protection/Classification	
Enclosure class, motor	IP55
Insulation class	H

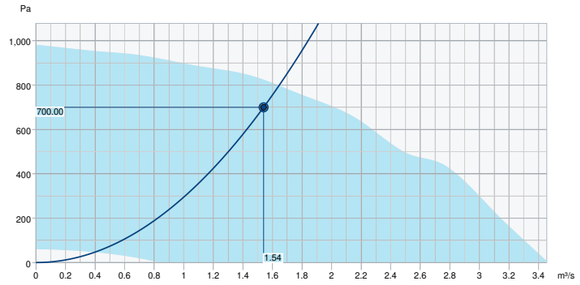
Data according to ErP	
ErP ready	Not ErP relevant

Dimensions and weights		
Weight	152.5	kg

Others	
Duct connection type	Square
Motor type	EC

Performance

Performance curve

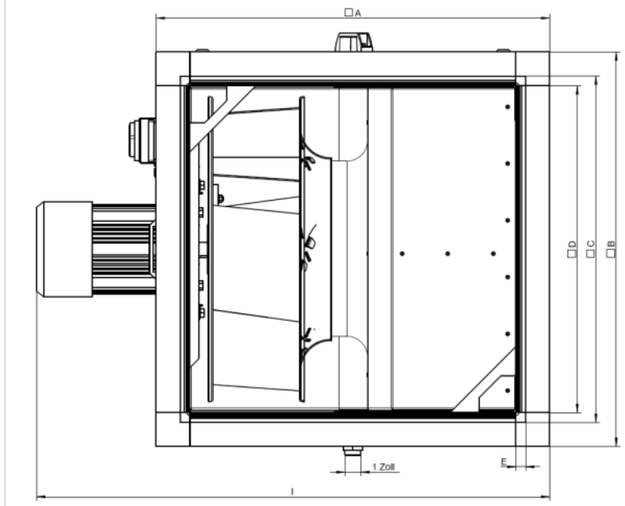


Hydraulic data	
Required air flow	1.54 m³/s
Required static pressure	700 Pa
Working air flow	1.54 m³/s
Working static pressure	700 Pa
Air density	1.204 kg/m³
Power	2,088.0 W
Fan control - RPM	1,310 rpm
Current	3.16 A
SFP	1.356 kW/m³/s
Control voltage	9.3 V
Supply voltage	400 V

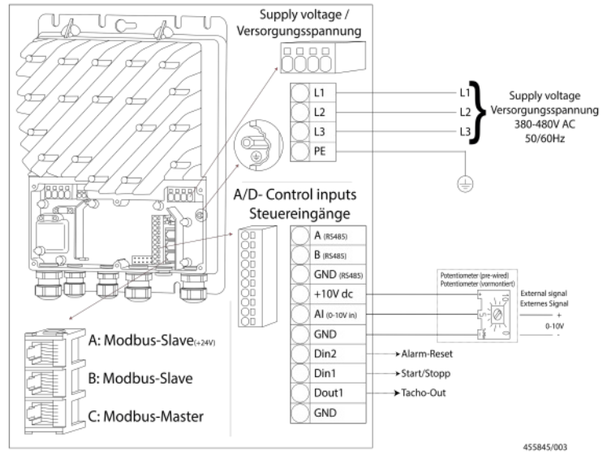
Sound power level		63	125	250	500	1k	2k	4k	8k	Total
Inlet	dB(A)	57	77	76	79	78	76	71	66	85
Outlet	dB(A)	59	78	78	80	79	77	72	67	86
Surrounding	dB(A)	41	65	62	51	51	51	44	34	67
Sound pressure level at 3m (20m² Sabine)	dB(A)	-	-	-	-	-	-	-	-	60
Sound pressure level at 3m free field	dB(A)	-	-	-	-	-	-	-	-	46

Dimension

MUB/T-S 062	□A	□B	□C	□D	E	I
560EC	820	820	720	678	21	1050



Wiring



Accessories

- CXE/AVC Modbus (37256)
- EC-Basic-H humidity (24807)
- EC-Basic-U universal 0-10V (24806)
- EC-Vent Room Unit (3018)
- MTP 10, 10K, Speed control (32731)
- Potentiometer MTP 20, 0-10V (310220)
- Step switch S-5EC, 0-10V (76738)
- TUNE-AHU-DE008-062-718x718-M0 (79882)
- UGS 062/630 adapter flex 120°C (38371)
- WSD 062 (860x860x70) complete (31482)
- WSG 062 MUB/T complete (36067)
- HR1 Room Humidistat (215150)
- RT 0-30 Room Thermostat (5151)
- CCM outlet MUB062 d630 (311681)
- CCMI outlet 062 d630 KIT 30mm (239096)
- KKF 30 062-filter-section (93312)
- KKF-CAR 062-filter-section (277347)
- KKF-KITCHEN 062-filter-section (277364)
- KKS 062 silencer-section (276852)
- EC-Basic-CO2 and temperature (24808)
- EC-Basic-T temperature (24805)
- EC-Vent control board (3115)
- FGV 062/716-716 flex. conn. (4198)
- MTV-1/010 Controller 0..10V+ (30650)
- SD-MUB Vibration pad set (37324)
- Step switch S-5EC-2, 0-10V (449084)
- UGS 062/500 adapter flex 120°C (38370)
- UGS 062/630 adapter flex. (4358)
- WSD MUB/T-S large (37496)
- FGV 062/716-716 flex. 120°C (38362)
- Presence detector/IR24-P (6995)
- CCM outlet MUB062 d560 (311684)
- CCMI outlet 062 d560 KIT 30mm (239095)
- GRU 062-820/100 (276662)
- KKF-ALU 062-filter-section (376816)
- KKF-CAR 100-filter-section (277348)
- KKF-KITCHEN 100-filter-section (277367)
- SDM Service Door MUB 062 30mm (273935)

Documents

- Installation, Operation and Maintenance instruction_001
- COMMISSIONING REPORT_FANS_160628_EN_001.PDF