

DUCT COLOUR / SYMBOL

KITCHEN EXHAUST DUCTWORK	
KITCHEN SUPPLY DUCTWORK	
TOILET EXHAUST DUCTWORK	
GENERAL EXHAUST DUCTWORK	
AC - SUPPLY DUCTWORK	
AC - RETURN AIR DUCTWORK	
EXISTING DUCTWORK	
25mm INTERNALLY INSULATED	
50mm INTERNALLY INSULATED	
SILENCER	
FYREWRAP (FR)	
FLEX	
RISER / DROPPER	
FIRE DAMPER (FD)	
VOLUME CONTROL DAMPER (VCD)	
AIRFLOW DIRECTION	

MECHANICAL EQUIPMENT

KEH	KITCHEN EXHAUST HOOD
KEF	KITCHEN EXHAUST FAN
KEG	KITCHEN EXHAUST GRILLE
SAF	SUPPLY UP AIR FAN
SAG	SUPPLY UP AIR GRILLE
VSD	VARIABLE SPEED DRIVE
ESP	ELECTROSTATIC PRECIPITATOR
CB	CARBON BOX UNIT
OZ	OZONE GENERATOR
TEF	TOILET EXHAUST FAN
TEG	TOILET EXHAUST GRILLE
GEF	GENERAL EXHAUST FAN
GEG	GENERAL EXHAUST GRILLE
FD	FIRE DAMPER
VCD	VOLUME CONTROL DAMPER
MVCD	MOTORISED VOLUME CONTROL DAMPER
FCU	FAN COIL UNIT (INDOOR)
CU	CONDENSING UNIT (OUTDOOR)
AHU	AIR HANDLING UNIT
ACG	AC GRILLE
OAF	OUTSIDE AIR FAN
VFD	VARIABLE FREQUENCY DRIVE
DOL	DIRECT ON LINE

ABBREVIATIONS

L/S	LITERS PER SECOND
PA	PASCALS
FFL	FINISHED FLOOR LEVEL
TBC	TO BE CONFIRMED
SM	SITE MEASUREMENT
AP	ACCESS PANEL - INDUCT
CAP	CEILING ACCESS PANEL
FR	FYREWRAP
BB	BASE BUILD
U/S	UNDERSIDE
UNO	UNLESS NOTED OTHERWISE
TYP	TYPICAL



FELON, MANLY WHARF
EAST ESPLANADE, MANLY WHARF, NSW, 2095

SIGNATURE AND DATE

CAVALIER LEGEND

JB 02692

MECH
101

SITE CONTACT NAME
PH# 04

Date 26-07-2024
Drawn by AC
DO NOT SCALE FROM DRAWING Scale @ A3

REV 1

DRAWING NOTES

- 1: ALL DUCTWORK SIZES SHOWN ARE OVERALL DUCTWORK SIZE AND NOT CLEAR AIRWAY SIZE.
- 2: ALL WORK TO BE CARRIED OUT IN A WORKMANSHIP LIKE MANNER AND COMPLIES WITH ALL RELEVANT CODES AND STANDARDS. BCA, AS1668.1:1998/2015, AS1668.2:2012, AS 4254 SECTION J.
- 3: CLEAN OUT / ACCESS PANELS TO BE INSTALLED IN ACCORDANCE WITH AS1668 PART 1. ACCESS PANELS TO BE INSTALLED EVERY 3 METERS OR TURN OF DIRECTION. HORIZONTAL DUCTWORK ONLY. DUCTWORK SHALL BE INSTALLED WITH A RISE IN DIRECTION OF AIRFLOW OF NOT LESS THAN 0.5% IN ACCORDANCE WITH AS1668 PART 1. PROVIDE DRAINS AT ALL LOW POINTS.
- 4: KITCHEN EXHAUST DUCTWORK WITHIN THE FIRE COMPARTMENT OF THE HOODS BEING SERVED SHALL BE INSULATED TO ACHIEVE -J/30 FRL WITH DUCT WRAPPED IN 25mm MINERAL WOOL ATTACHED WITH NON-COMBUSTIBLE FASTENINGS IN ACCORDANCE WITH AS1668.1:2015 SECTION 6.2.3.3 WHERE DUCTWORK IS INSTALLED WITHIN 300MM OF ANY COMBUSTIBLE MATERIAL BY BUILDER.
- 5: ALL FAN UNITS TO BE WIRED TO COMPLY WITH AS3000:2018. OVERLOAD PROTECTION WITH PHASE FAIL, ALSO TO BE WIRED IN COMPLIANCE WITH AS1668.2:2012 BCA AND SECTION J PER CODES.
- 6: SERVICES TO BE RELOCATED BY OTHERS TO SUIT NEW MECHANICAL DESIGN WHERE REQUIRED (BUILDING WORKS).
- 7: COOKING EQUIPMENT SHOWN ON DRAWING ARE FOR VISUAL PURPOSE ONLY. PLEASE REFER TO COOKING SPEC SHEET FOR DATA AND SIZES
- 8: ALL DRAWINGS BELONG TO CAVALIER VENTILATION P/L AND CANNOT BE REPRODUCED PARTLY OR WHOLE WITHOUT THE APPROVAL FROM CAVALIER VENTILATION P/L.
- 9: WHERE THE DIAMETER OF THE FLEXIBLE DUCT EXCEEDS THE DEPTH OF THE RIDGE DUCT IT ORIGINATES FROM, AN OVAL DUCT HAVING A SIMILAR CIRCUMFERENCE TO THE FLEXIBLE DUCT MAY BE USED
- 10: LOCATION OF GRILLES AND DIFFUSERS LOCATED IN CEILING AND DUCTWORK ARE APPROXIMATE AND FINAL POSITION TO BE CONFIRMED ONSITE
- 11: ALL DOORS TO MECHANICALLY VENTILATED AMENITIES AREAS SHALL BE 25mm UNDERCUT OR GRILLE INSTALLED INTO DOOR BY BUILDER (UNLESS NOTED OTHERWISE)
- 12: ACCESS PANELS LOCATED IN PASTEBOARD CEILING SHALL BE POSITION TO SUIT MECHANICAL SYSTEM EQUIPMENT/S AND SHALL BE SUPPLIED AND INSTALLED BY BUILDER
- 13: A SUITABLE SIZE CONDENSATE DRAIN SHALL BE RUN FROM EACH AC UNIT TO A TUNDISH OR FLOOR WASTE BY BUILDER
- 14: FAN COIL UNITS (FCU'S) SHALL BE MOUNTED ON SPRINGS
- 15: ALL PENETRATIONS THROUGH FIRE RATED WALLS AND CONCRETE SLAB BY BUILDER
- 16: NO RCD'S TO BE INSTALLED ONTO MECHANICAL SYSTEMS THAT HAVE A VARIABLE SPEED DRIVE INSTALLED.

KITCHEN HOODS REQUIREMENTS

- 1: THE PURCHASER IS RESPONSIBLE FOR PROVIDING CAVALIER, ACCURATE INFORMATION FROM COOKING EQUIPMENT SUPPLIER/S FOR CONSIDERATION IN HOOD DESIGN.
- 2: THE KITCHEN EXHAUST SYSTEM MUST ACHIEVE THE AIRFLOW AS SPECIFIED IN THIS DOCUMENT, MEASURED AT THE RANGEHOOD FILTERS IN THE CAVALIER KITCHEN EXHAUST HOOD/S.
- 3: THE SPECIFIED EXHAUST STATIC PRESSURE AT THE HOOD'S COLLAR IS NOT THE TOTAL SYSTEM PRESSURE AND DOES NOT INCLUDE THE PRESSURE DROP OF DUCTS INCLUDING TRANSITIONS AND BENDS, INDUCT FILTRATION OR TREATMENT SYSTEMS, ATTENUATORS, DISCHARGE REGISTERS OR ANY OTHERS ITEMS IN THE EXHAUST SYSTEMS.
- 4: IF THE MAKE-UP AIR IS HOTTER THAN 27°C OR LESS THEN 18°C , AIR CONDITIONING OR TEMPERING SHOULD BE CONSIDERED TO PROVIDED COMFORT IN THE KITCHEN ENVIRONMENT. IF AMBIENT TEMPERATURES EXCEED 27°C, ALL AIRFLOW RATES MUST BE INCREASED TO COMPENSATE FOR BODY HEAT AND ODOUR (REF AS1668.2) AND REMOVE CONTAMINANTS FROM THE KITCHEN.
- 5: THE KITCHEN EXHAUST FAN SHOULD HAVE BACKWARDS INCLINED CENTRIFUGAL BLADES TO ALLOW RELEASE OF ANY GREASE DURING OPERATION. THE EXHAUST FAN SHOULD ACHIEVE THE REQUIRED AIRFLOW AT NO MORE THAN 70% OF IT'S DESIGN STATIC CAPACITY.
- 6: CANOPY LIGHTS ARE WIRED TO A 240V AC 10A 3 PIN PLUG WITH ~1m FLEX FOR CONNECTION BY OTHERS TO THE KITCHEN LIGHTING POWER SUPPLY.
- 7: THE MAKE-UP AIR AIRFLOW NOMINATED IN THIS DOCUMENT IS THE AMOUNT OF AIR THAT CAN BE PASSED THROUGH THE FRONT PANEL WITHOUT CREATING TURBULENCE. TO BALANCE THE KITCHEN ADDITIONAL MAKE-UP AIR MAY NEED TO BE SUPPLIED THROUGH CEILING OR WALL REGISTERS BY OTHERS. SUCH REGISTERS MUST NOT BE POSITIONED TO CREATE TURBULENCE OR DRAFT IN THE COOKING ZONE.

AS 1668 - TABLE 3.4 MINIMUM SEPARATION DISTANCES BETWEEN DISCHARGES AND INTAKES, BOUNDARY OR NATURAL VENTILATION DEVICE	
AIRFLOW RATE WITHIN THE MINIMUM DISTANCE L/S	MINIMUM DISTANCE m
<200	1 (SEE NOTE)
<400	2
<600	3
<800	4
<1000	5
≥1000	6

NOTE: FOR AIRFLOW RATES LESS THAN 200L/S, SEPARATION OF DISCHARGE FROM NATURAL VENTILATION OPENING WITHIN THE SAME SOLE OCCUPANCY UNIT DO NOT APPLY

MANUFACTURING AND ORDERING OF ALL COMPONENTS WILL NOT START UNTIL DRAWINGS HAVE BEEN SIGNED OR WRITTEN APPROVAL HAS BEEN RECEIVED AND DEPOSIT PAID (IF APPLICABLE, AS PER TERMS AND CONDITIONS LISTED ON QUOTATION).



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FELON, MANLY WHARF

EAST ESPLANADE, MANLY WHARF, NSW, 2095

SIGNATURE AND DATE

SITE CONTACT NAME
PH# 04

DRAWING NOTES

Date 26-07-2024
Drawn by AC

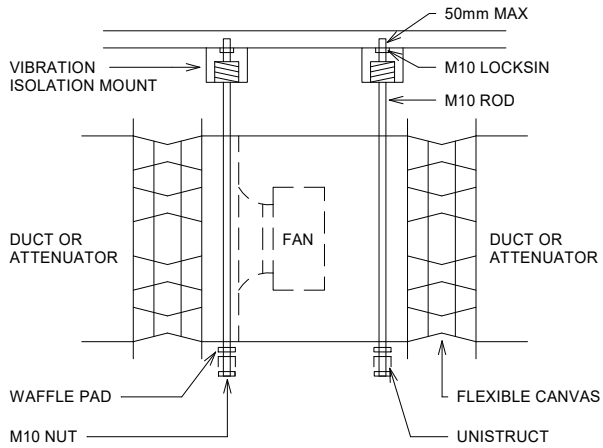
DO NOT SCALE FROM DRAWING Scale @ A3

JB 02692

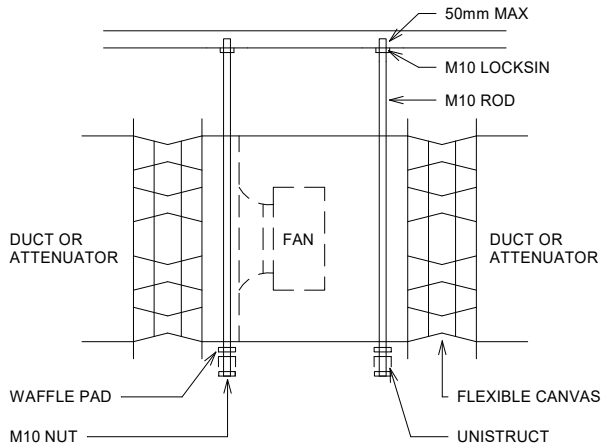
MECH
102

REV 1

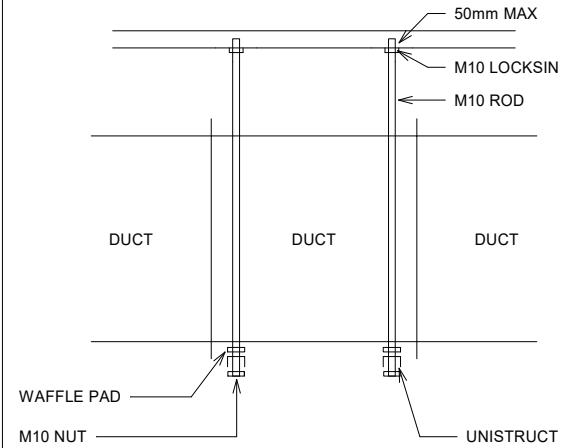
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- RESIDENTIAL ABOVE**



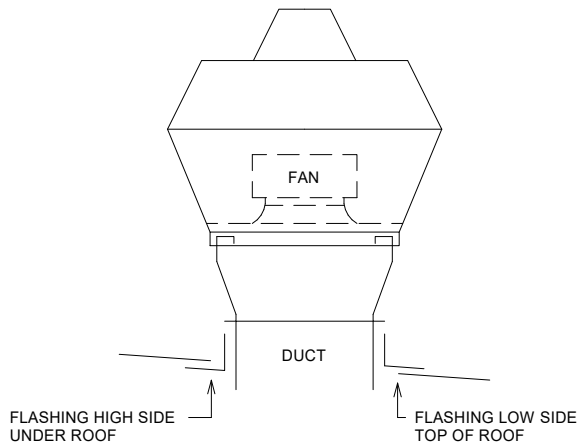
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- NO RESIDENTIAL ABOVE**



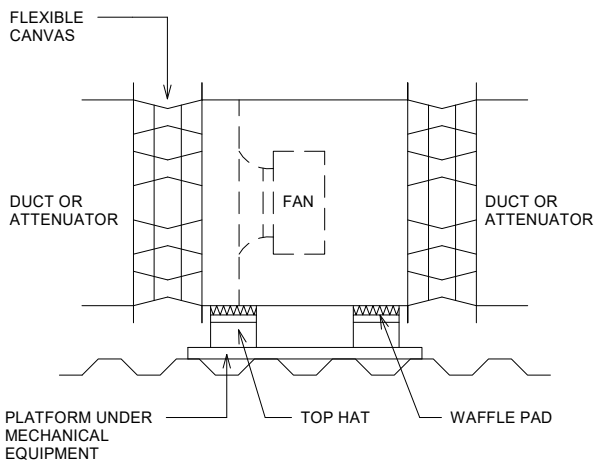
**TYP HANGING DUCTWORK MOUNTING SETOUT
- UNDER 15KG**



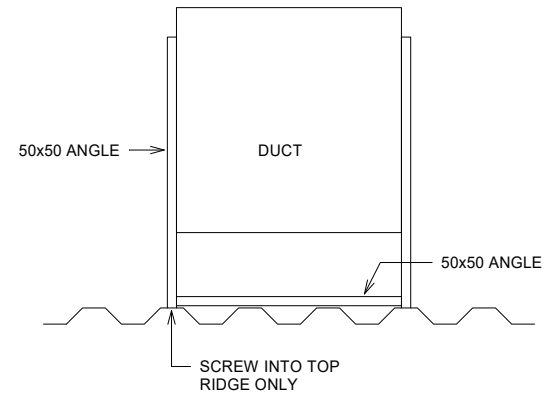
TYP ROOF FLASHING AND FAN SETOUT



TYP INLINE FAN ROOF SETOUT



TYP HORIZONTAL DUCTWORK ROOF STAND



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**TYPICAL DETAIL
DRAWING**

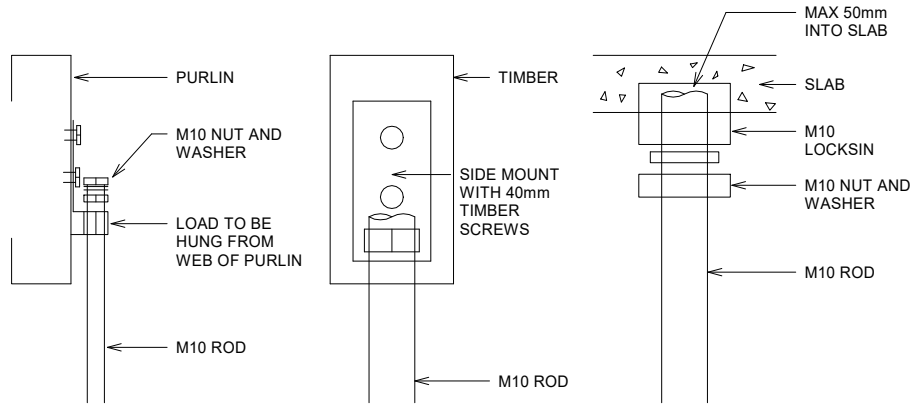
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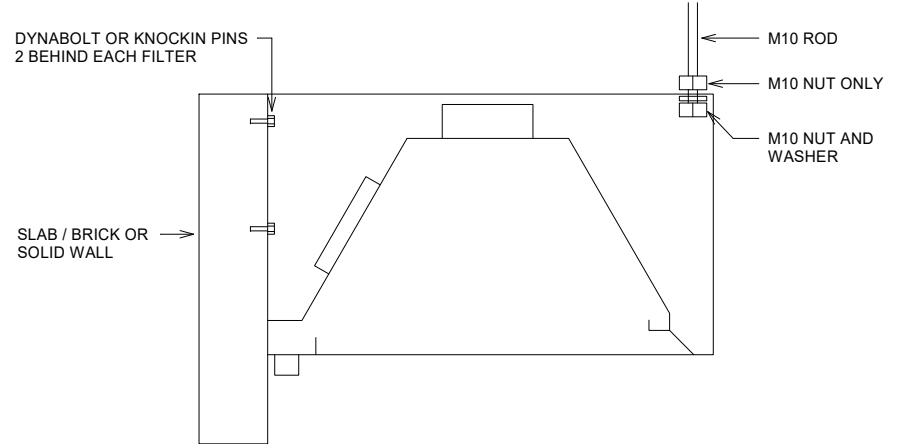
**MECH
103**

REV 1

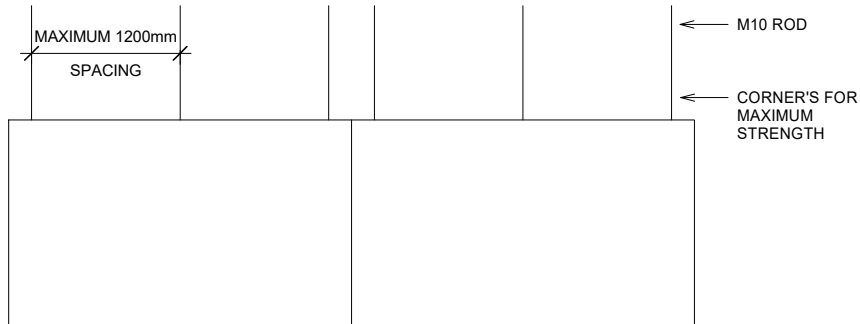
TYP HANGING SUPPORT SETOUT FOR RANGEHOOD



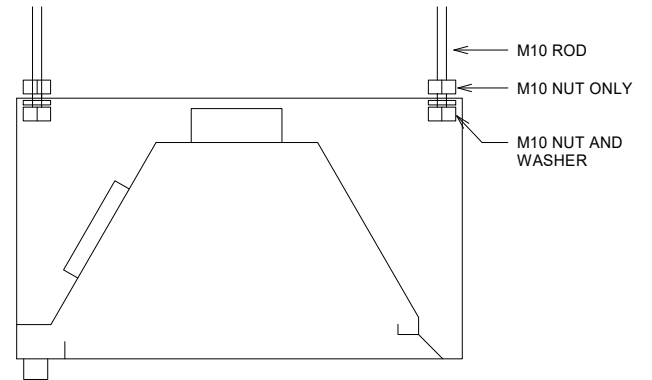
TYP WALL MOUNT RANGEHOOD SETOUT



TYP RANGEHOOD ROD SETOUT



TYP ISLAND MOUNT RANGEHOOD SETOUT



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RANGEHOOD DETAIL
HANGING SETOUT

JB 02692

MECH
104

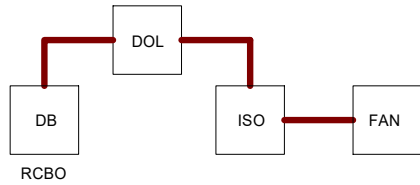
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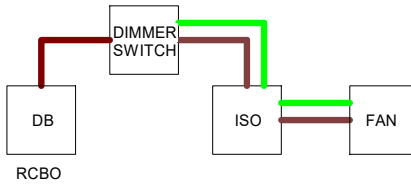
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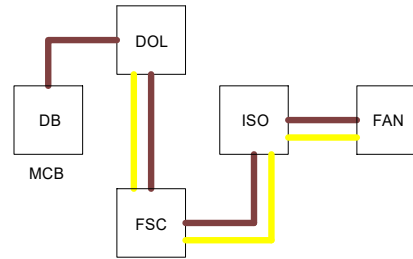
SINGLE PHASE - DOL



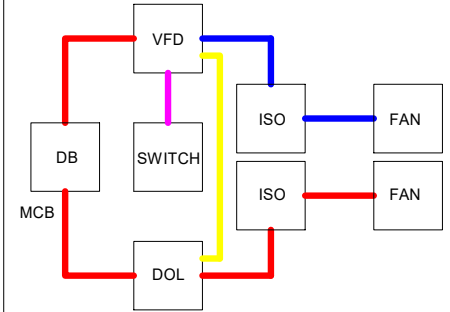
SINGLE PHASE - DIMMER CONTROL
VA 2.0 - VA5.0



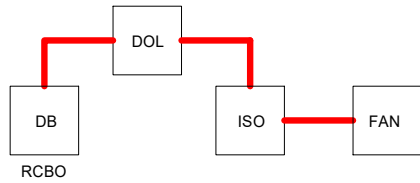
SINGLE PHASE
VA 8.0 - VA 10.0



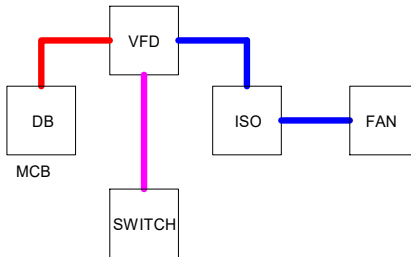
3 PHASE - VFD / DOL - MULTI FANS



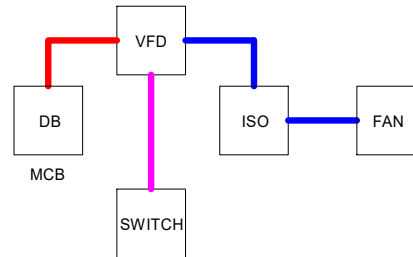
3 PHASE - DOL



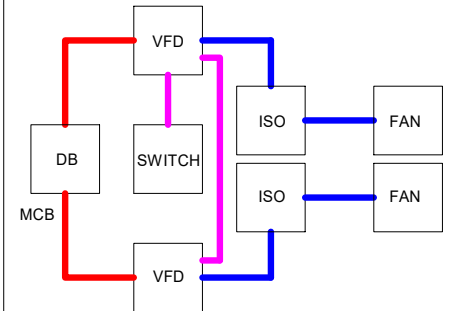
3 PHASE - 2 SPEED VFD



3 PHASE - VFD



3 PHASE - VFD - MULTI FANS



- 3 CORE + EARTH - ORANGE CIRCULAR CABLE, 2.5mm
 - 4 CORE - SCREEN, 2.5mm
 - 4 CORE - SHIELDED CABLE, HI / LOW SPEED
 - TWIN + EARTH - 2.5mm
 - TWIN - 2.5mm
 - SINGLE DOUBLE INSULATED - 2.5mm
 -
- DOL DIRECT ON LINE
DB DISTRIBUTION BOARD
ISO ISOLATION SWITCH
FSC FAN SPEED CONTROLLER
- TYPE C BREAKERS



FELON, MANLY WHARF
EAST ESPLANADE, MANLY WHARF, NSW, 2095

SIGNATURE AND DATE

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ELECTRICAL WIRING
DETAIL

Date 26-07-2024 **DO NOT SCALE FROM DRAWING** Scale @ A3
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MECH
105
REV 1



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SIGNATURE AND DATE

SITE PLAN

JB 02692

MECH
201

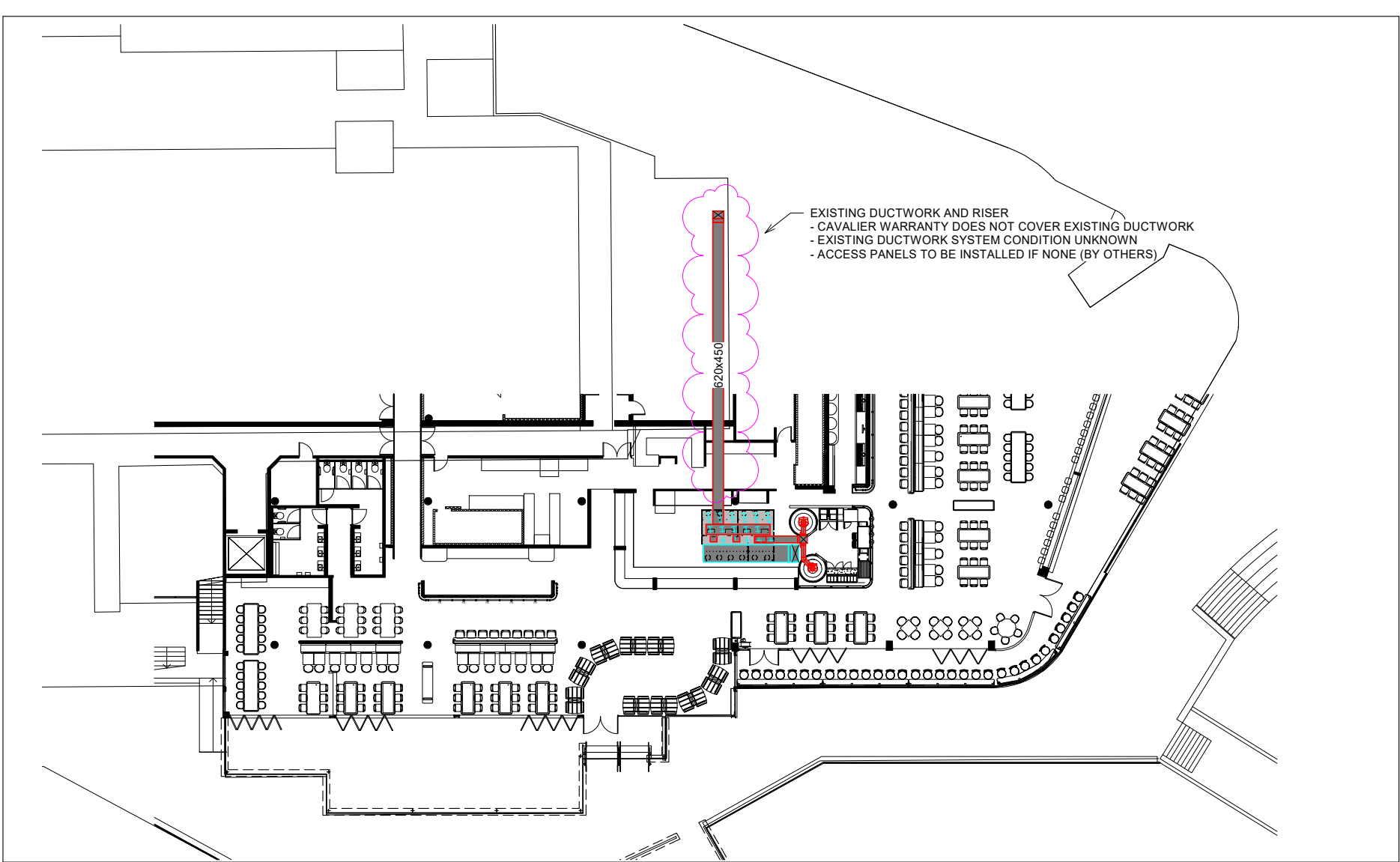
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 PH# 04

Date 26-07-2024
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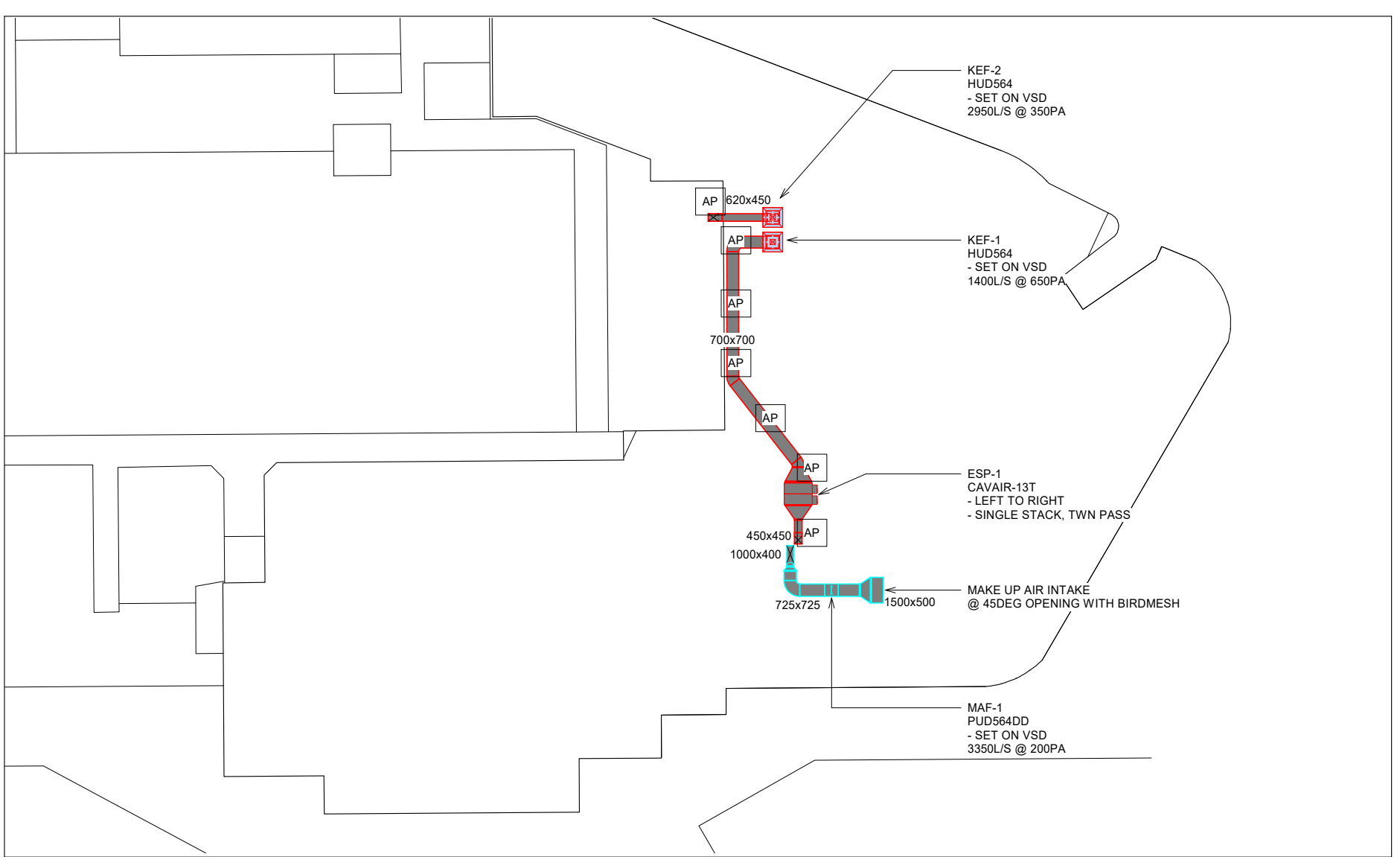
**DO NOT SCALE
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Scale @ A3
 1 : 200

REV 1



EXISTING DUCTWORK AND RISER
 - CAVALIER WARRANTY DOES NOT COVER EXISTING DUCTWORK
 - EXISTING DUCTWORK SYSTEM CONDITION UNKNOWN
 - ACCESS PANELS TO BE INSTALLED IF NONE (BY OTHERS)



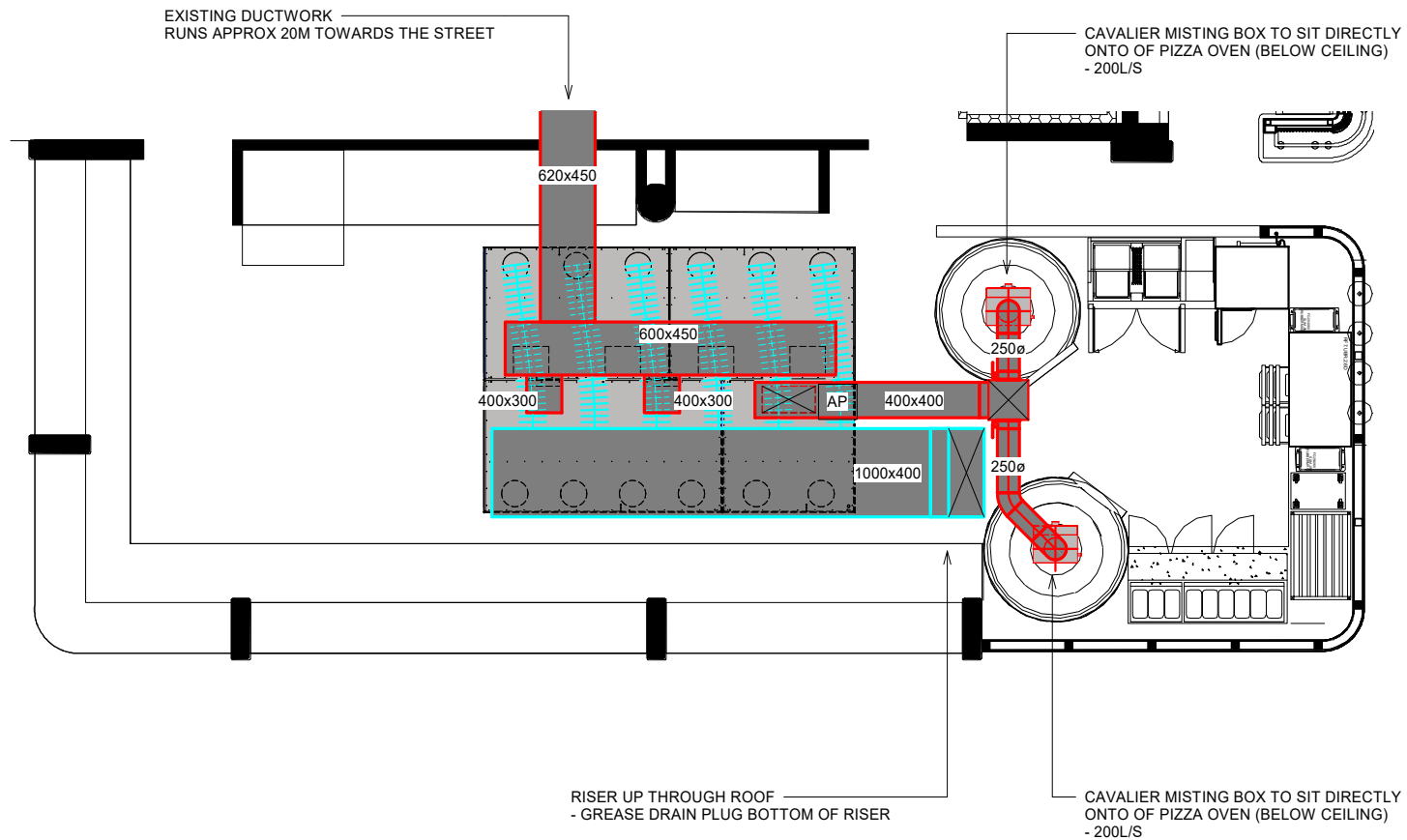
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ROOF PLAN
 Date 26-07-2024
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MECH 202
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SIGNATURE AND DATE

SITE CONTACT NAME
 PH# 04

KITCHEN PLAN VIEW

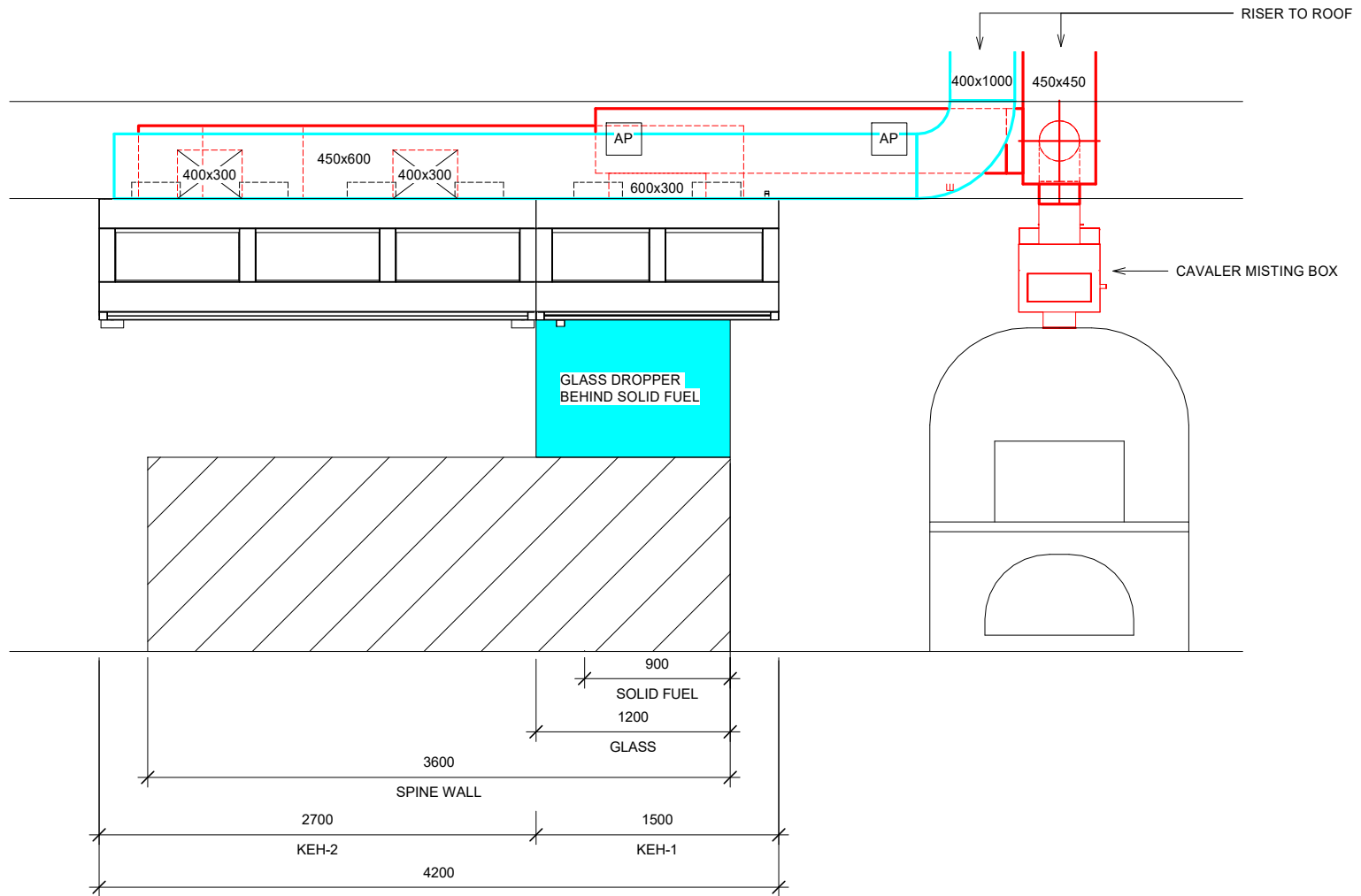
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MECH
 203

REV 1

26/07/2024 1:40:17 PM



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PH# 04

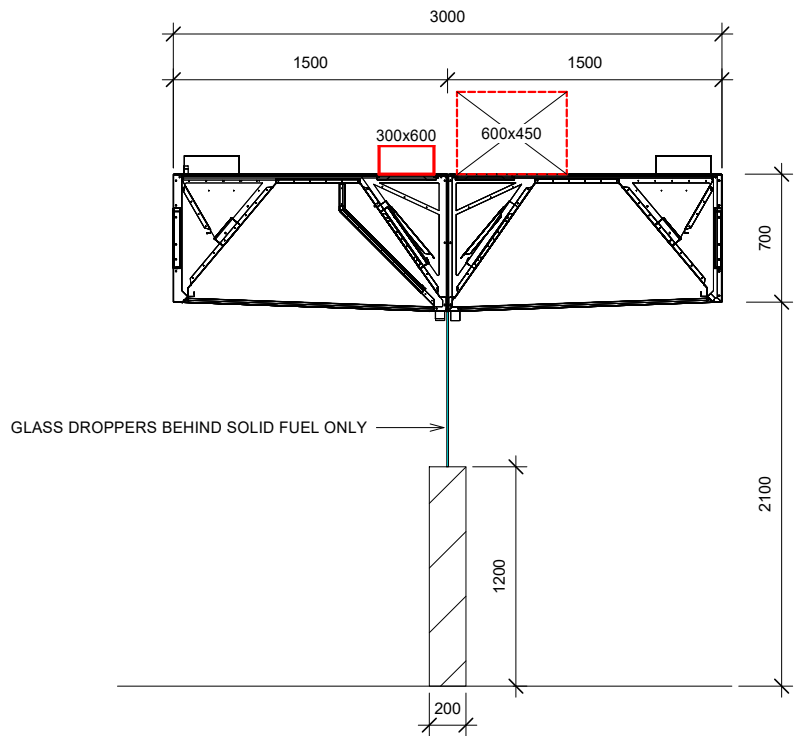
ELEVATION VIEW

Date 26-07-2024
Drawn by AC
DO NOT SCALE FROM DRAWING Scale @ A3 1 : 25

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MECH
204

REV 1



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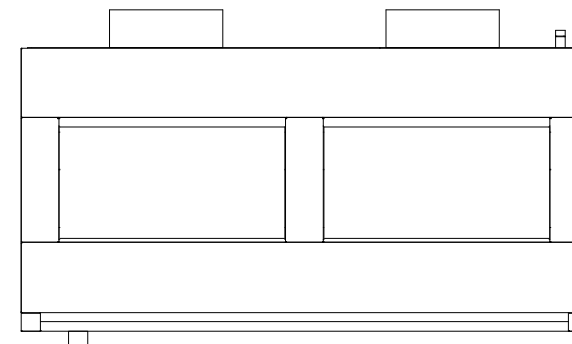
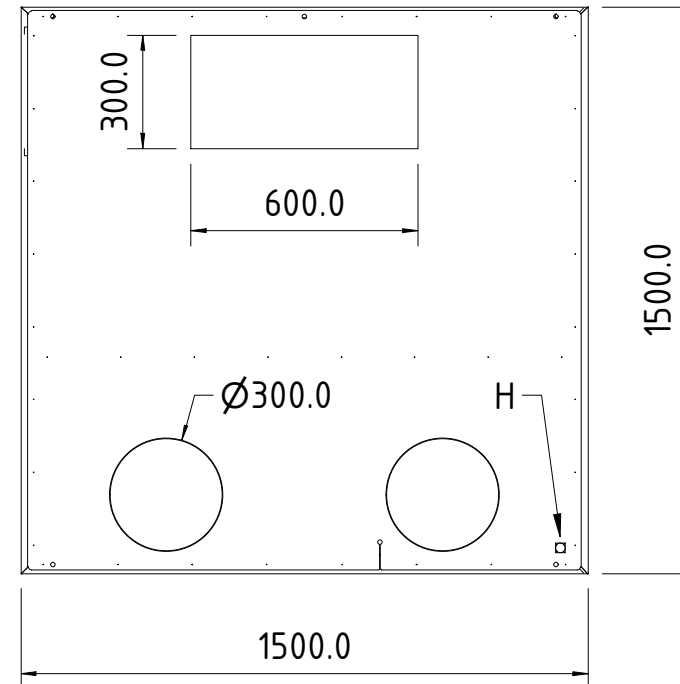
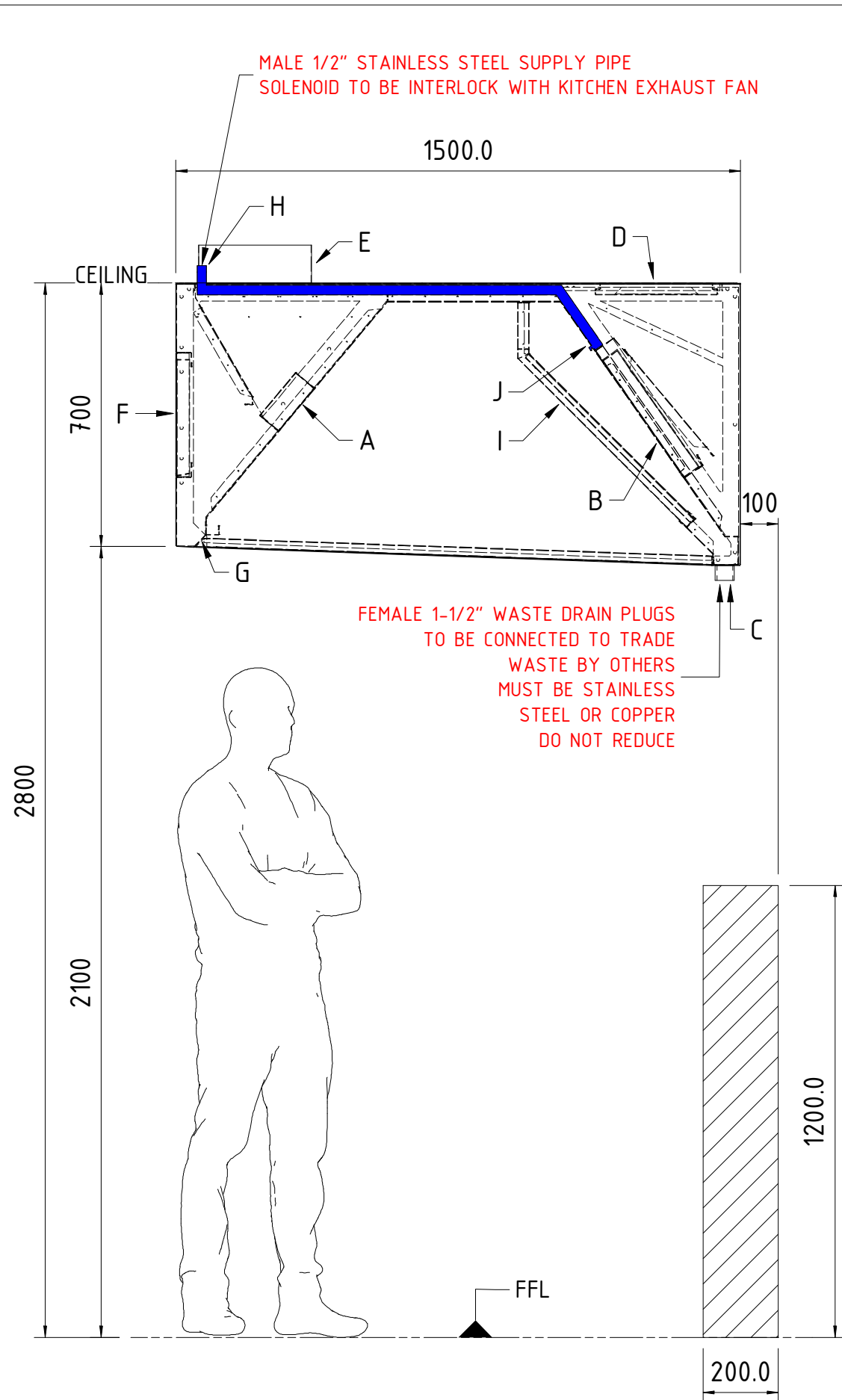
RANGEHOOD
 ELEVATION END VIEW

Date 26-07-2024
 Drawn by AC
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 Scale @ A3 1 : 25

JB 02692

MECH
 205

REV 1

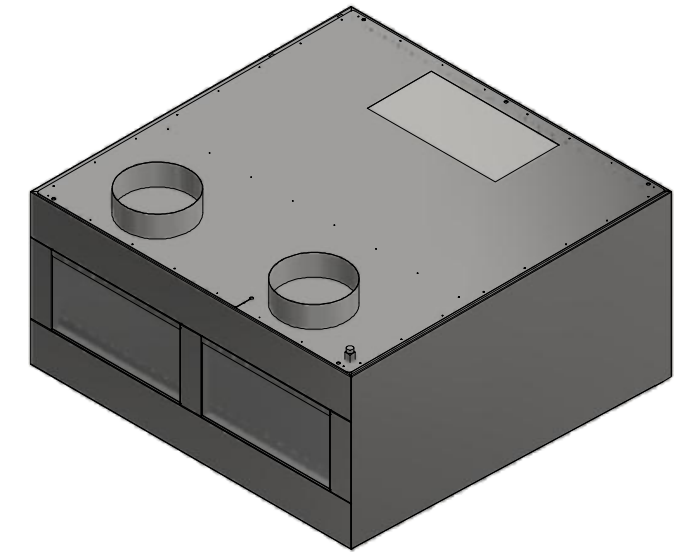


SPIGOTS TO BE COORDINATED ONSITE

INTERNAL SLIDE DAMPER INSTALLED IN HOOD FOR BALANCING

10 AMP MALE PLUG LEAD ON TOP OF RANGEHOOD
CENTER OF EACH SECTION APPROX 300mm LONG LEAD

REMOVAL OF PLASTIC ON RANGEHOOD TO BE DONE BY CLEANER
UPON COMPLETION OF PROJECT



KEH-1
MIST HE 1500/1500/700-750

EXHAUST 1000L/S @ 200PA

SUPPLY
VIA RANGEHOOD 500L/S @ 60PA
VIA CEILING GRILLES 350L/S

CAVALIER RANGEHOOD
- STAINLESS STEEL

- A LED DOWNLIGHTS - QTY 2
- B STAINLESS STEEL BAFFLE FILTERS - QTY 3 (457x381)
- C WASTE DRAIN PLUG - QTY 1
- D BALANCING SLIDE DAMPER
- E SUPPLY SPIGOT - 300 ϕ
- F STAINLESS STEEL PERFORATED MESH
- G AIR INJECTION SLOTS
- H MISTING SUPPLY PIPE AND SOLENOID
- I MISTING GUARD
- J MISTING SPRAY NIPPLES

COOKING EQUIPMENT UNDER HOOD

SOLID FUEL GRILL



ALL DIMENSIONS IN mm
DO NOT SCALE - IF IN DOUBT ASK

AS1100
3RD ANGLE
PROJECTION

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SCALE: 1/20

DATE: 3/08/2023

DRAWN: CONFIG 4.6

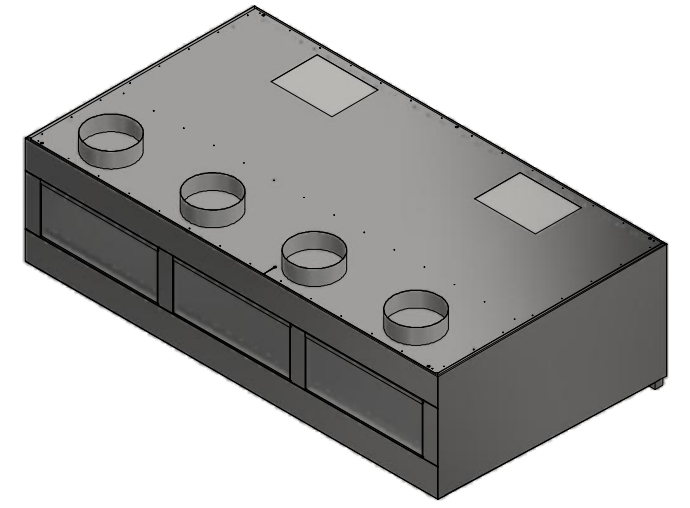
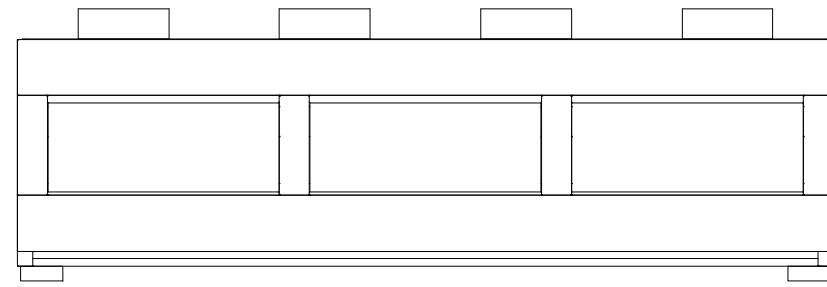
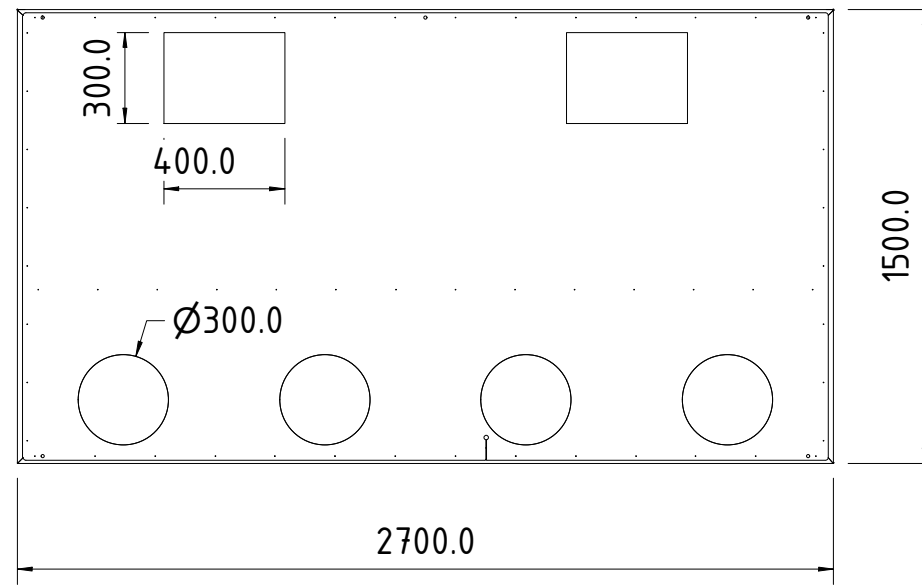
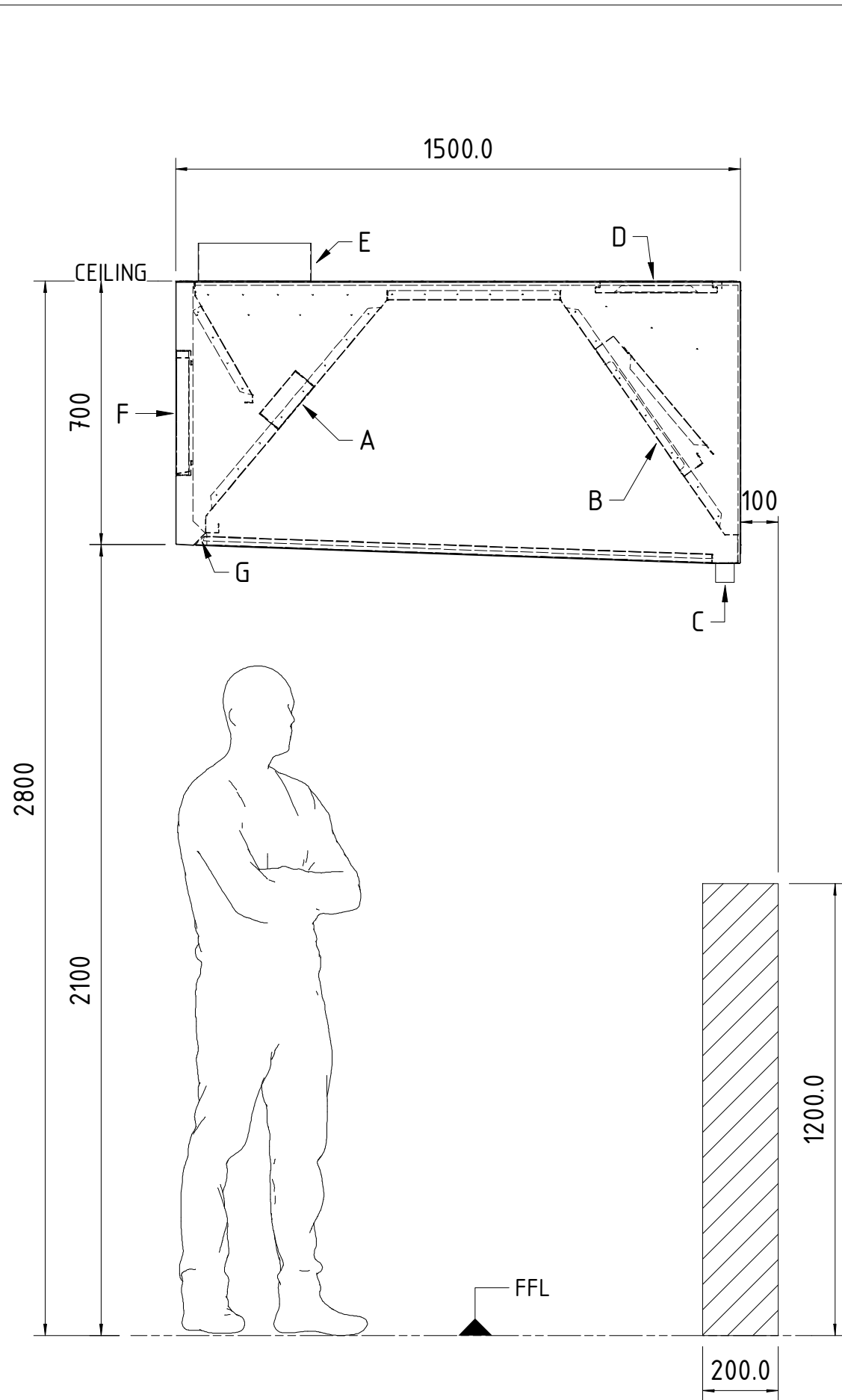
REVISION: 1

JOB No.: JB02692-1

CLIENT: FELONS, MANLY WHARF

DESCRIPTION: EXTRACTION HOOD ASSEMBLY

PART No.: EHA-JB02692-1



SPIGOTS TO BE COORDINATED ONSITE
 INTERNAL SLIDE DAMPER INSTALLED IN HOOD FOR BALANCING
 10 AMP MALE PLUG LEAD ON TOP OF RANGEHOOD
 CENTER OF EACH SECTION APPROX 300mm LONG LEAD
 REMOVAL OF PLASTIC ON RANGEHOOD TO BE DONE BY CLEANER
 UPON COMPLETION OF PROJECT

KEH-2
HE 2700/1500/700-750

EXHAUST 1250L/S @ 110PA

SUPPLY 1050L/S @ 60PA

CAVALIER RANGEHOOD
- STAINLESS STEEL

- A LED DOWNLIGHTS - QTY 3
- B STAINLESS STEEL BAFFLE FILTERS - QTY 5 (457x381)
- C WASTE DRAIN POT - QTY 2
- D BALANCING SLIDE DAMPER
- E SUPPLY SPIGOT - 300 ϕ
- F STAINLESS STEEL PERFORATED MESH
- G AIR INJECTION SLOTS

COOKING EQUIPMENT UNDER HOOD
EXISTING GAS COOKING EQUIPMENT



ALL DIMENSIONS IN mm
DO NOT SCALE - IF IN DOUBT ASK

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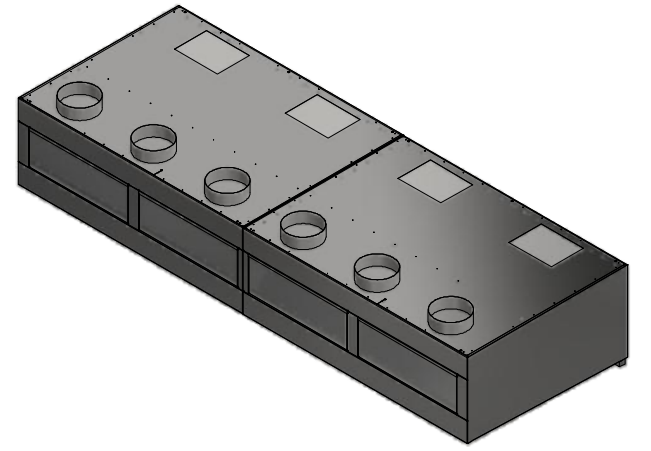
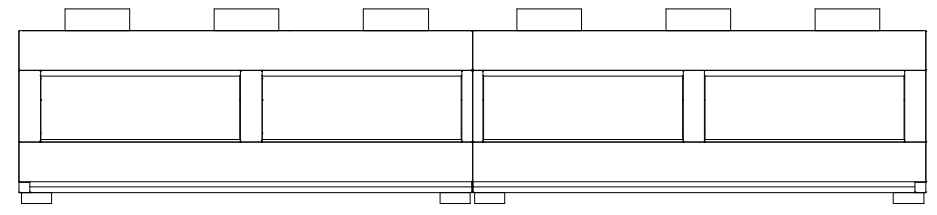
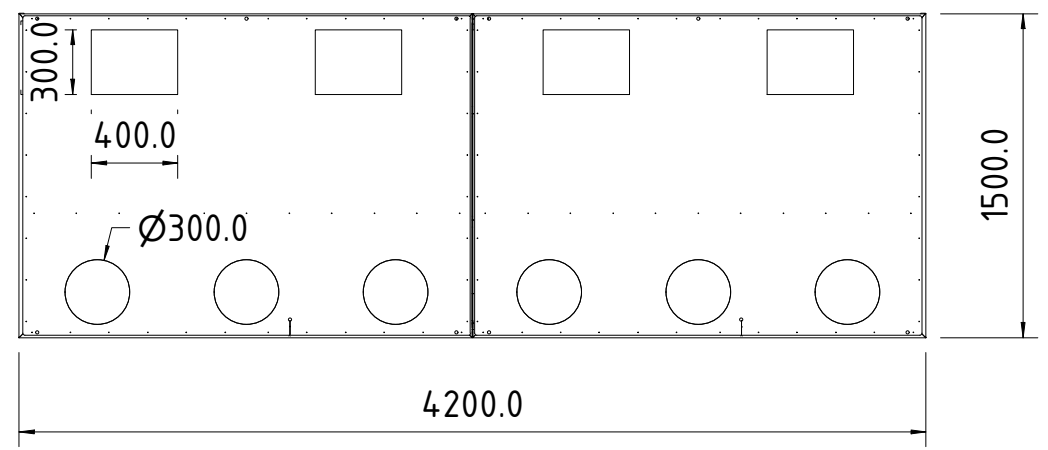
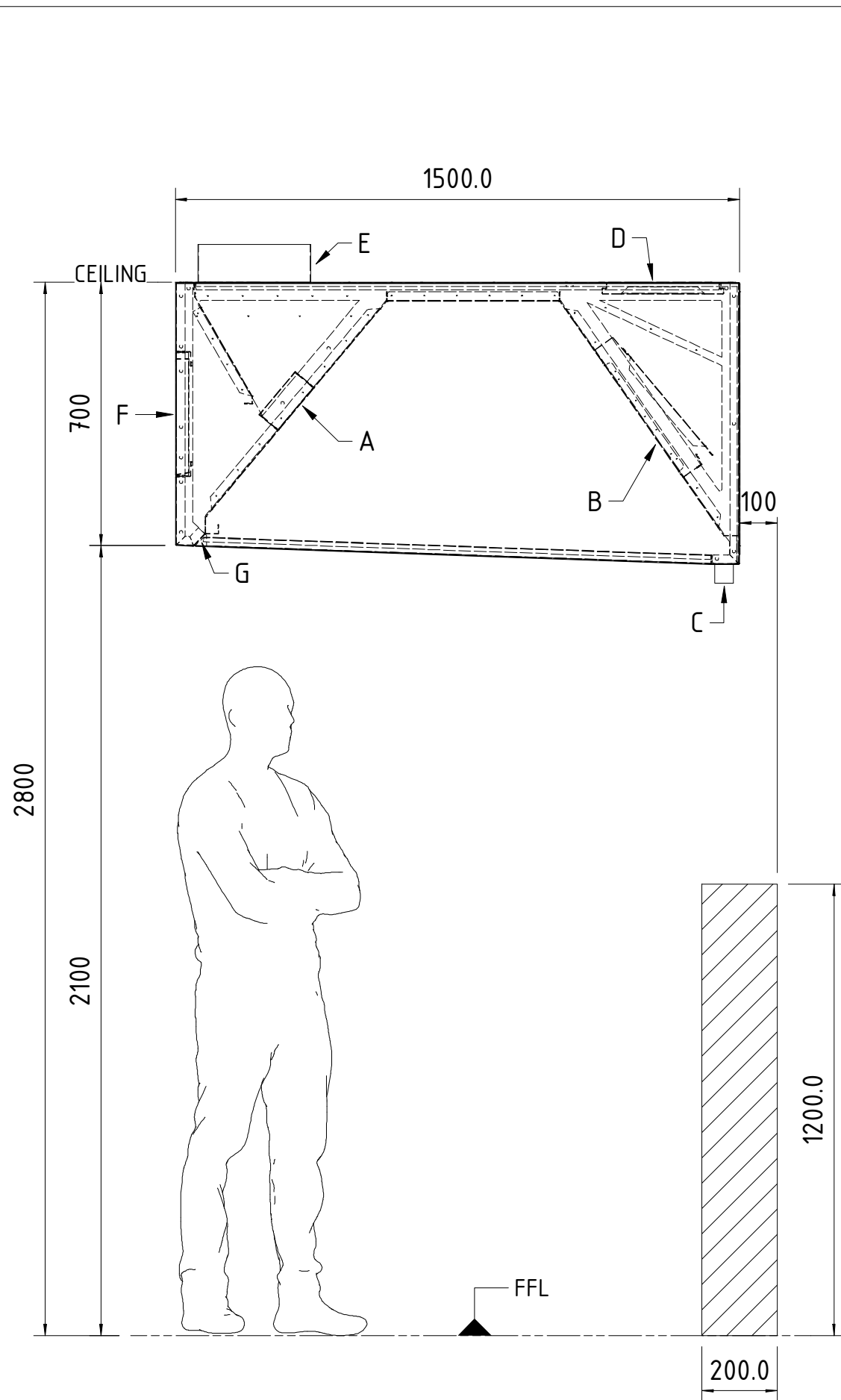
SCALE: 1/25

DATE: 3/08/2023

DRAWN: CONFIG 4.6

REVISION: 1

JOB No.:	JB02692-2
CLIENT:	FELONS, MANLY WHARF
DESCRIPTION:	EXTRACTION HOOD ASSEMBLY
PART No.:	EHA-JB02692-2



KEH-3
 HE 4200/1500/700-750
 EXHAUST 1700L/S @ 110PA
 SUPPLY 1450L/S @ 60PA

CAVALIER RANGEHOOD
 - STAINLESS STEEL

- A LED DOWNLIGHTS - QTY 4
- B STAINLESS STEEL BAFFLE FILTERS - QTY 8 (457x381)
- C WASTE DRAIN POT - QTY 4
- D BALANCING SLIDE DAMPER
- E SUPPLY SPIGOT - 300 ϕ
- F STAINLESS STEEL PERFORATED MESH
- G AIR INJECTION SLOTS

COOKING EQUIPMENT UNDER HOOD
 EXISTING GAS COOKING EQUIPMENT

SPIGOTS TO BE COORDINATED ONSITE
INTERNAL SLIDE DAMPER INSTALLED IN HOOD FOR BALANCING
10 AMP MALE PLUG LEAD ON TOP OF RANGEHOOD
CENTER OF EACH SECTION APPROX 300mm LONG LEAD
REMOVAL OF PLASTIC ON RANGEHOOD TO BE DONE BY CLEANER
UPON COMPLETION OF PROJECT



ALL DIMENSIONS IN mm DO NOT SCALE - IF IN DOUBT ASK	SCALE: 1/35	JOB No.: JB02692-3
AS1100 3RD ANGLE PROJECTION	DATE: 3/08/2023	CLIENT: FELONS, MANLY WHARF
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	REVISION: 1	PART No.: EHA-JB02692-3



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Fantech Pty. Ltd.
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 Facsimile: +61 (02) 9831 3676
 E-mail: ftnew@fantech.com.au
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Technical Data - Fan Model HUD564

Location:

Designation:

Warning: Static Pressure above 90% of Maximum Pressure;
Care should be taken if you choose this selection.

Performance - Required

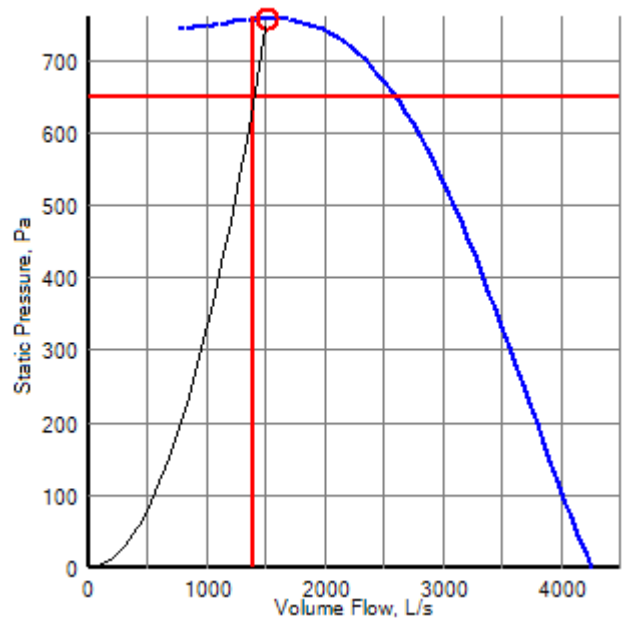
Air Flow : 1400 L/s
 Static Pressure : 650 Pa
 Selection Pressure: 650 Pa
 Installation Type: n/a
 Air Density: 1.204 kg/m³
 - Atmos. Temp: 20 °C
 - Altitude: 0 m
 - Humidity: 0.0 %

Actual

Air Flow: 1512 L/s
 Static Pressure: 758 Pa
 Total Pressure: 768 Pa

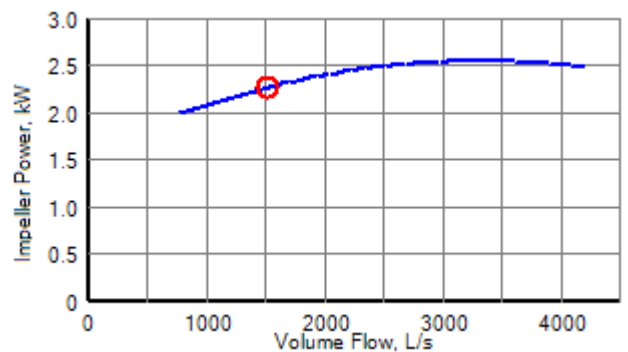
Fan Data

Catalogue Code:	HUD564		
Description:	Heritage Ultra Series		
Diameter:	560 mm		
Impeller Type:	Mixed Flow		
Blade Material:	-		
Speed:	25 r/s @50 Hz		
Power, Abs:	2.27 kW		
Input Power:	2.60 kW	Peak:	2.55 kW
Efficiency Total:	51.1%		
Fan Weight:	97.0 kg	Static:	50.4%



Motor Data (at STP)

Motor Type:
 Electrical Supply: 415V 3ph 50Hz
 Motor Frame: D100L
 Motor Power: 3.00kW
 FLC/Start: 6.25A / 40.63A
 Motor Speed: 4 pole
 Motor Efficiency: 87.6%



Energy Efficiency, NCC/BCA Vol. 1, Section J compliant

+ 2019 - 2022

Energy Efficiency, H1/VM3 2021 compliant

+ H1/VM3 2021

Sound Data

Spectrum (Hz):	63	125	250	500	1K	2K	4K	8K	dBW	dB(A) @ 3m
Inlet (dB):	78	83	81	79	77	71	66	67	87	61
Outlet (dB):	81	88	86	86	85	77	72	70	93	68

Sound levels are quoted as free-field values. dB(A) values are average spherical free-field for comparative use only.

Energy Sustainability Data

Hours Per Day:	10	Annual Electricity Cost (\$):	1246.3
DaysPerYear:	300	Annual GH Gas (Tonnes):	11.4
CO2 per kWh (kg):	1.467	Annual Carbon Usage (Tonnes):	3.1
Cost per kWh (\$):	0.16		

As part of our continuous improvement processes, Fantech reserves the right to make changes in design or specification to products without notice.

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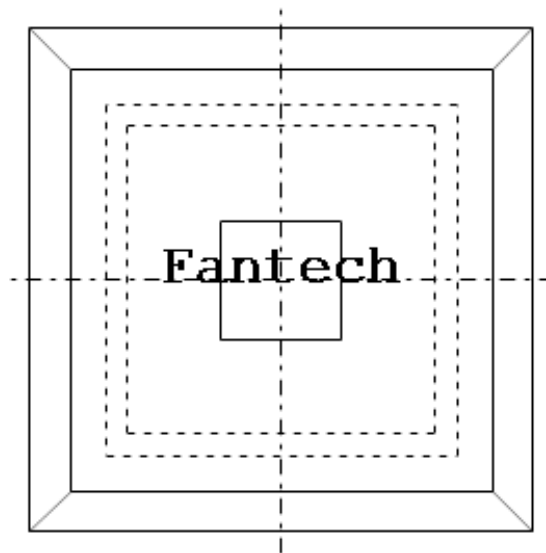
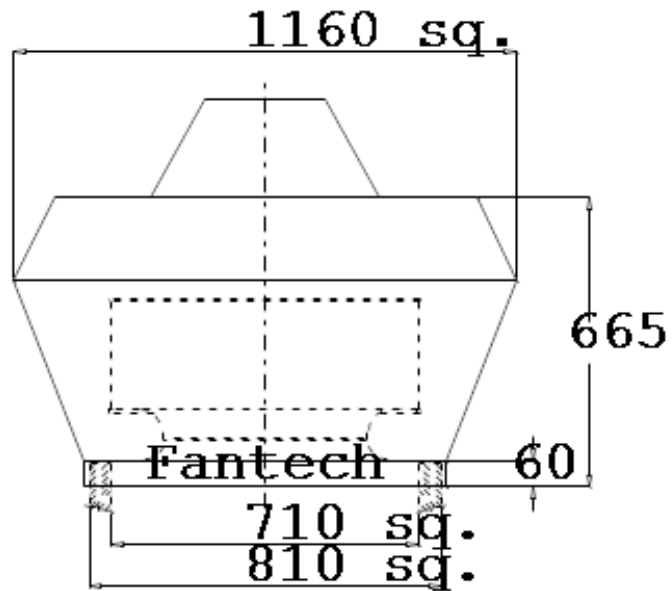


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Drawing for Fan Model HUD564

Location:

Designation:





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Technical Data - Fan Model HUD564

Location:

Designation:

Performance - Required

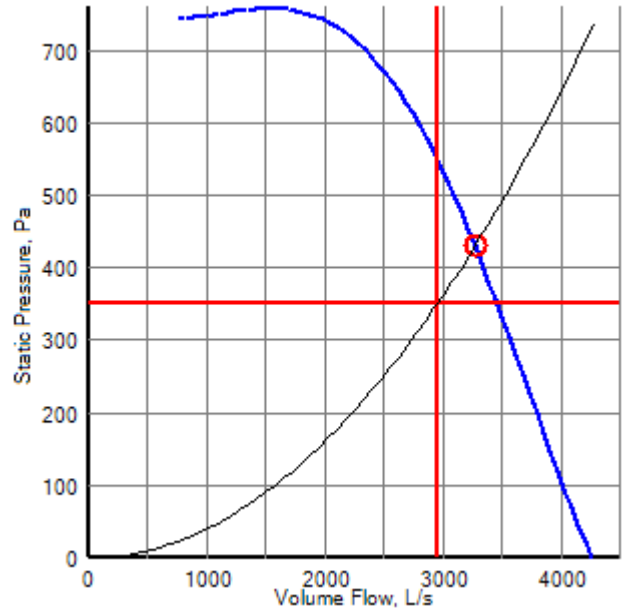
Air Flow : 2950 L/s
 Static Pressure : 350 Pa
 Selection Pressure: 350 Pa
 Installation Type: n/a
 Air Density: 1.204 kg/m³
 - Atmos. Temp: 20 °C
 - Altitude: 0 m
 - Humidity: 0.0 %

Actual

Air Flow: 3271 L/s
 Static Pressure: 431 Pa
 Total Pressure: 480 Pa

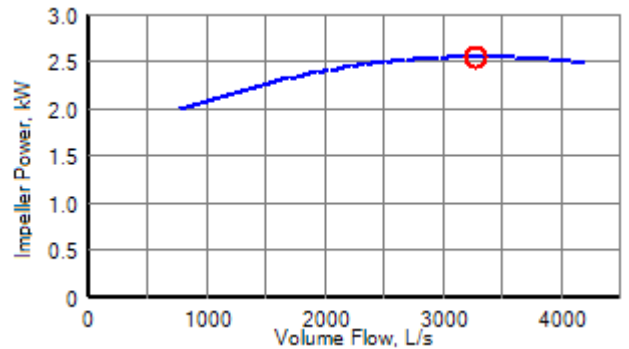
Fan Data

Catalogue Code:	HUD564		
Description:	Heritage Ultra Series		
Diameter:	560 mm		
Impeller Type:	Mixed Flow		
Blade Material:	-		
Speed:	25 r/s @50 Hz		
Power, Abs:	2.55 kW	Peak:	2.55 kW
Input Power:	2.92 kW	Static:	55.2%
Efficiency Total:	61.5%		
Fan Weight:	97.0 kg		



Motor Data (at STP)

Motor Type:
 Electrical Supply: 415V 3ph 50Hz
 Motor Frame: D100L
 Motor Power: 3.00kW
 FLC/Start: 6.25A / 40.63A
 Motor Speed: 4 pole
 Motor Efficiency: 87.3%



Energy Efficiency, NCC/BCA Vol. 1, Section J compliant

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Energy Efficiency, H1/VM3 2021 compliant

+ H1/VM3 2021

Sound Data

Spectrum (Hz):	63	125	250	500	1K	2K	4K	8K	dBW	dB(A) @ 3m
Inlet (dB):	78	83	81	79	77	71	66	67	87	61
Outlet (dB):	81	88	86	86	85	77	72	70	93	68

Sound levels are quoted as free-field values. dB(A) values are average spherical free-field for comparative use only.

Energy Sustainability Data

Hours Per Day:	10	Annual Electricity Cost (\$):	1402.1
DaysPerYear:	300	Annual GH Gas (Tonnes):	12.9
CO2 per kWh (kg):	1.467	Annual Carbon Usage (Tonnes):	3.5
Cost per kWh (\$):	0.16		

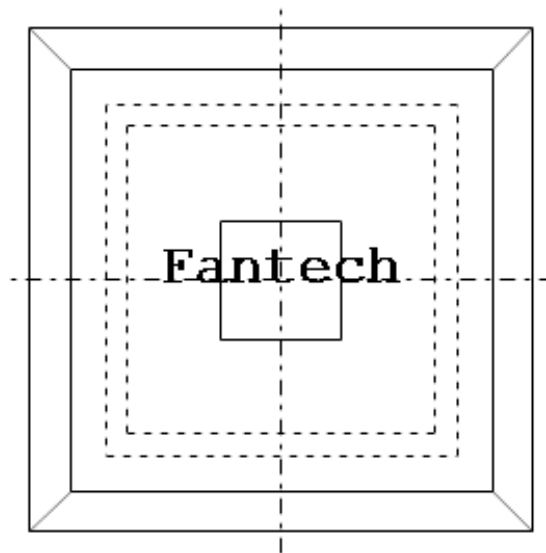
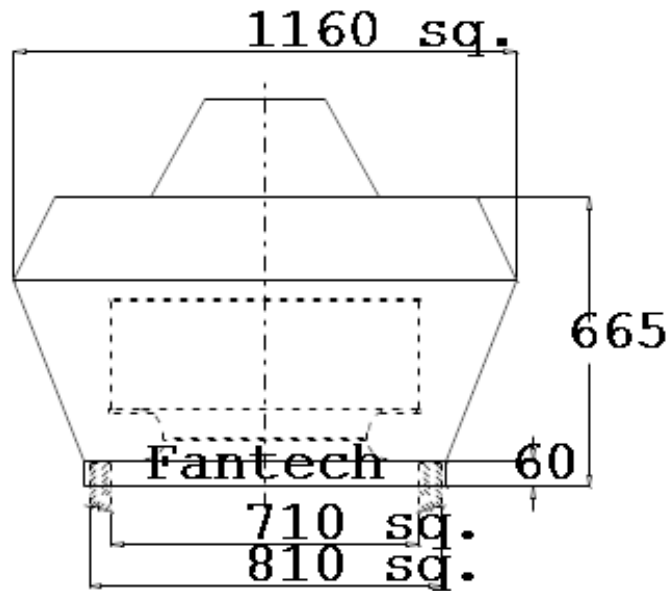


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Drawing for Fan Model HUD564

Location:

Designation:





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Technical Data - Fan Model PUD564DD

Location:

Designation:

Performance - Required

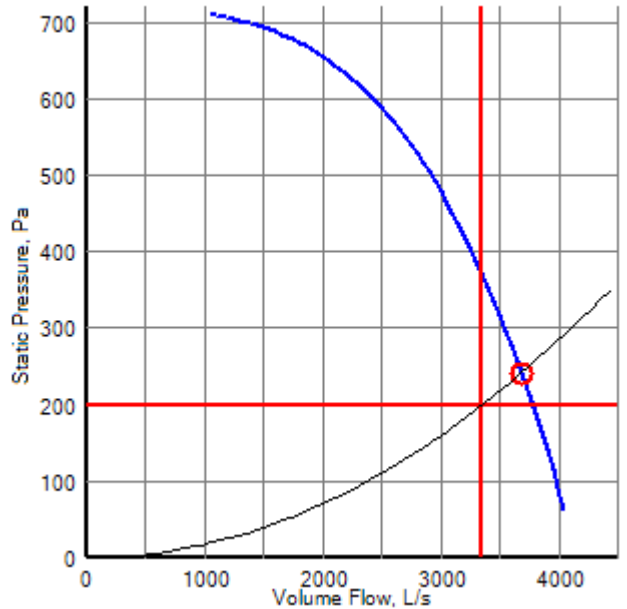
Air Flow : 3350 L/s
 Static Pressure : 200 Pa
 Selection Pressure: 200 Pa
 Installation Type: n/a
 Air Density: 1.204 kg/m³
 - Atmos. Temp: 20 °C
 - Altitude: 0 m
 - Humidity: 0.0 %

Actual

Air Flow: 3681 L/s
 Static Pressure: 242 Pa
 Total Pressure: 271 Pa

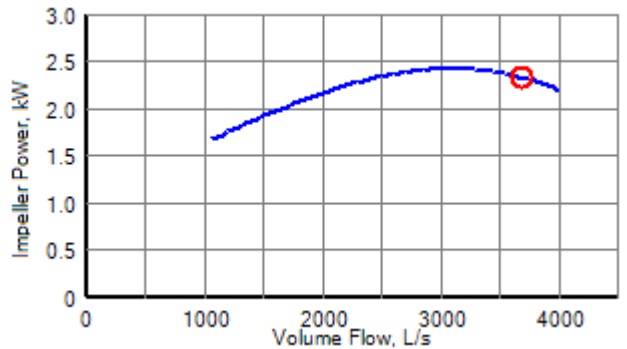
Fan Data

Catalogue Code:	PUD564DD		
Description:	PowerLine Ultra Series		
Diameter:	560 mm		
Impeller Type:	Mixed Flow		
Blade Material:	-		
Speed:	24 r/s @50 Hz		
Power, Abs:	2.33 kW	Peak:	2.43 kW
Input Power:	2.67 kW	Static:	38.1%
Efficiency Total:	42.7%		
Fan Weight:	101.0 kg		



Motor Data (at STP)

Motor Type:
 Electrical Supply: 415V 3ph 50Hz
 Motor Frame: D100L
 Motor Power: 3.00kW
 FLC/Start: 6.25A / 40.63A
 Motor Speed: 4 pole
 Motor Efficiency: 87.6%



Energy Efficiency, NCC/BCA Vol. 1, Section J compliant

+ 2019 - 2022

Energy Efficiency, H1/VM3 2021 compliant

+ H1/VM3 2021

Sound Data

Spectrum (Hz):	63	125	250	500	1K	2K	4K	8K	dBW	dB(A) @ 3m
Inlet (dB):	80	83	79	74	73	73	71	66	87	59
Outlet (dB):	83	86	82	81	80	79	77	71	91	65

Sound levels are quoted as in-duct values. dB(A) values are average spherical free-field for comparative use only.

Energy Sustainability Data

Hours Per Day:	10	Annual Electricity Cost (\$):	1280.1
DaysPerYear:	300	Annual GH Gas (Tonnes):	11.7
CO2 per kWh (kg):	1.467	Annual Carbon Usage (Tonnes):	3.2
Cost per kWh (\$):	0.16		

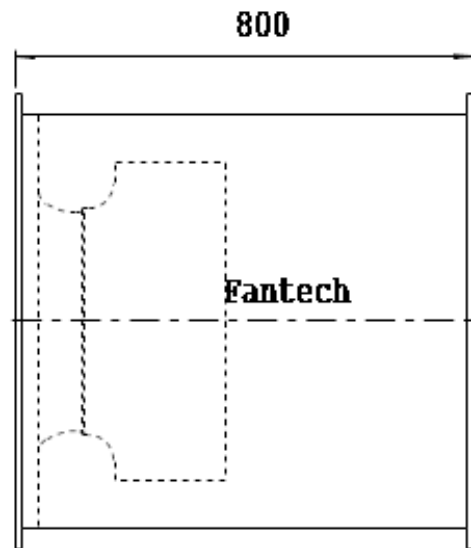
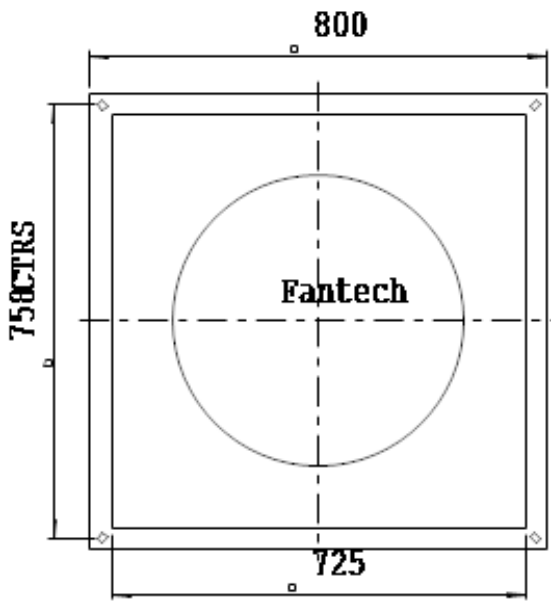


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Drawing for Fan Model PUD564DD

Location:

Designation:



Electrostatic Precipitator (ESP) Data Sheet



CAVAIR-11S

CAVAIR-12S

CAVAIR-13S

CAVAIR-14S

Product Overview

Electrostatic precipitators (ESP) are applied for air filtering cooking fume from commercial kitchens. There are various specific features to suit this kitchen cooking fume control and industrial application. In case of industrial application, please contact manufacturer for written permission. Or warranty is not covered the damage or injury from non-intended use.

Features:

1. Kitchen odor, smoke, oil control efficiently
2. High fume removal efficiency rate: 90-93% or >98% (efficiency stacking units)
3. Flexible/customized modular design:
 - (1) Easy installation, maintenance and cleaning.
 - (2) Modular units are allowed to vertical/horizontal stacking combination as per different air flow or removal efficiency rate request.
 - (3) Collector cell, mesh filter and oil sump are easy to remove and clean.
4. Intelligent electrostatic power control system.
5. Electric intensity auto-control function ensures the unit maintains a high removal efficiency rate after a long-time service.
6. Safety and Stability: Door-open power-off protection; over-current, voltage, temperature protection; regular discharge protection & electric arc protection; high voltage open circuit and short circuit protection.
7. Powder coated carbon steel cabinet.
8. The unit can be installed in outdoor without shelter housing.
9. Photolysis and odor removal (DGRH-K-U models only):
10. High power UV tube will remove food odor more efficiently.
11. When unit is running, ozone will be produced to eliminate odour.
12. Cost effective & eco-friendly: Long life-span, minimum maintenance, energy saving and small in size.

Operating Principles

Fume control is composed of two parts:

(1) Cooking oil, fume and grease particle's part:

- The dirty air passes through a mesh filter. Most of big size of oil, fume and grease particles are removed.
- The air passes into the high voltage Ionizer section where charges even microscopic contaminants (Small to 0.01mm size) to a positive potential.
- The positive ionized air then passes through low voltage aluminum collector plates. The

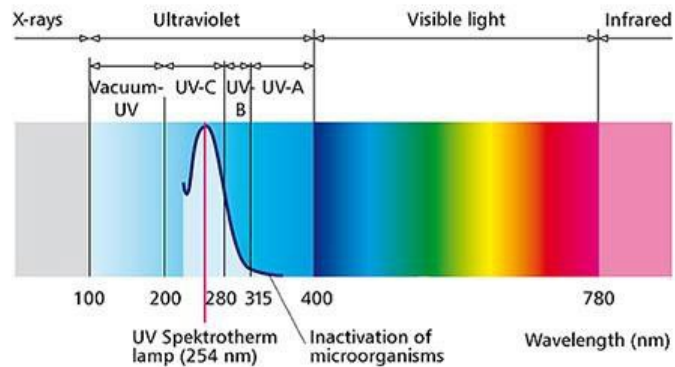
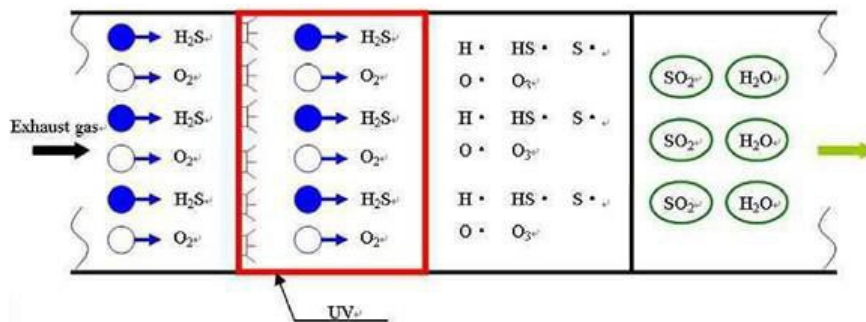
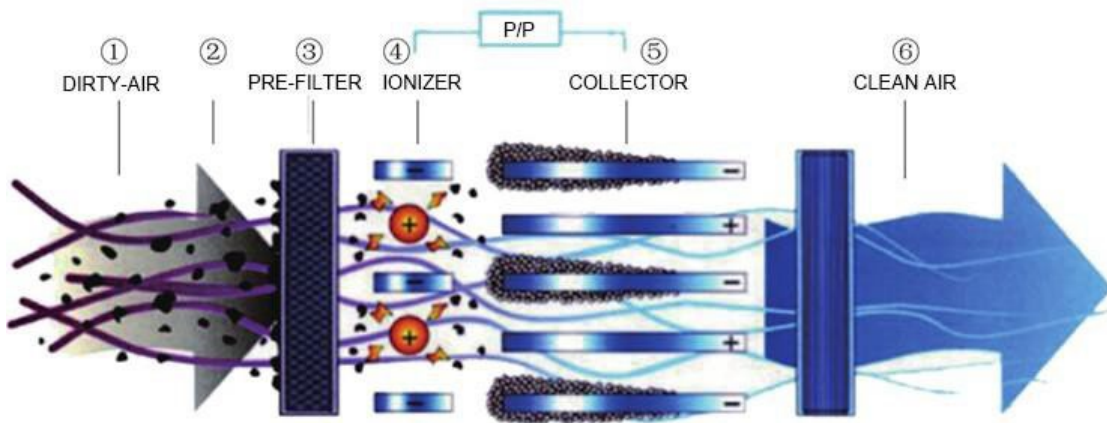
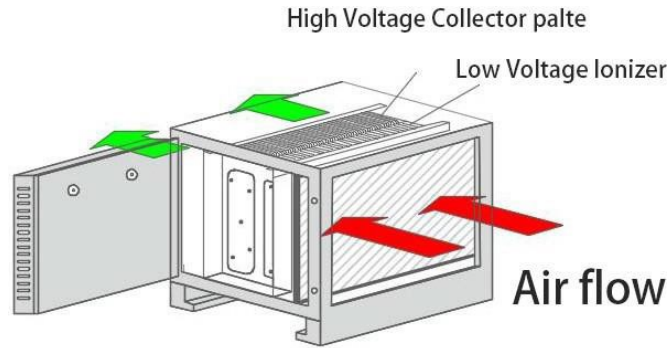
plates will capture them magnetically from air stream and stick them.

- The particulates will drain down into oil sump.
- Clean air exits through the unit.

(2) UV Photolysis Odour Removal part:

Ozone is produced in the collector cell. Besides, UV-C ultraviolet tube (wave 254nm) also produces OZONE and undergoes chemical processes such as photolysis and ozonolysis that breaks down grease and odour containing compounds produced during cooking. And then it releases CO₂, SO₂, H₂O and small amount of powder.

Note: High efficient Activated Carbon Odor Extractor unit are also available to extend odour control performance.

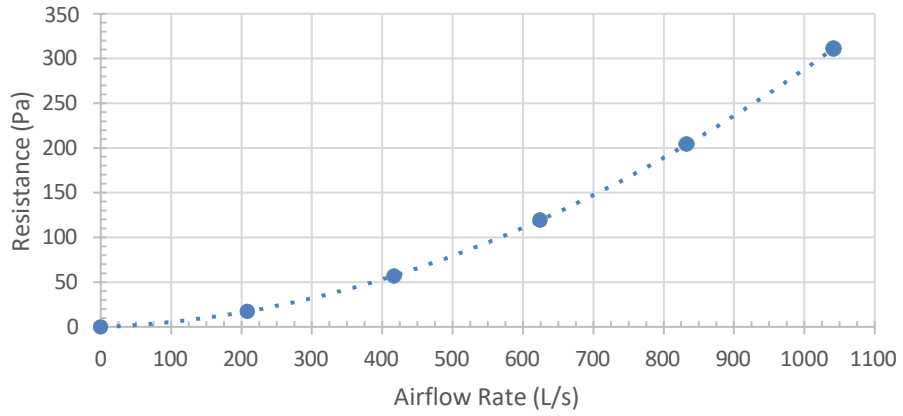


Technical Parameter*

MODEL	PASS	AIRFLOW (l/s)	PRESSURE DROP (pa)	CABINET DIM LxWxH (mm)	FLANGE DIM WxH (mm)	POWER (W)	WEIGHT (kg)	NUMBER OF CELLS (qty)	AVERAGE EFFICIENCY (%)
CAVAIR-11S	SINGLE	1000	100	640x765x690	485x530	110	50	1	94.6
CAVAIR-12S	SINGLE	2000	100	640x1300x690	1020x530	220	80	2	94.6
CAVAIR-13S	SINGLE	3000	100	640x1835x690	1560x530	330	110	3	94.6
CAVAIR-14S	SINGLE	4000	100	640x2370x690	2090x530	440	140	4	94.6
CAVAIR-11T	TWIN	1000	150	1280x765x690	485x530	220	100	2	99.7
CAVAIR-12T	TWIN	2000	150	1100x1300x690	1020x530	440	160	4	99.7
CAVAIR-13T	TWIN	3000	150	1100x1835x690	1560x530	660	220	6	99.7
CAVAIR-14T	TWIN	4000	150	1100x2370x690	2090x530	880	280	8	99.7
CAVAIR-11S-3	TRIPLE	1000	175	1920x765x690	485x530	330	150	3	99.9
CAVAIR-12S-3	TRIPLE	2000	175	1920x1300x690	1020x530	660	240	6	99.9
CAVAIR-13S-3	TRIPLE	3000	175	1920x1835x690	1560x530	990	330	9	99.9
CAVAIR-14S-3	TRIPLE	4000	175	1920x2370x690	2090x530	1320	420	12	99.9

*Chosen airflow values filters will significantly affect final filtration efficiencies. When choosing airflows, factors such as the type of cooking and the requirements of the discharge point need to be considered.

Air Flow vs Resistance
 Clean Device (Single Cell)



Particle Size Removal Efficiency (Single Cell)

