

NEW WAREHOUSE

39 CERES DRIVE THURGOONA NSW 2640

MECHANICAL SERVICES



CENTRIC
Building Services Engineers

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P1 03.04.2025 100% CLIENT REVIEW

MECHANICAL SERVICES

NEW WAREHOUSE
39 CERES DRIVE
THURGOONA NSW 2640

DRAWING SCHEDULE:	
NUMBER	TITLE
M01	COVERSHEET, LEGENDS, NOTES AND DRAWING LIST
M02	LEVEL G FLOOR PLAN LAYOUT
M03	LEVEL M FLOOR PLAN LAYOUT
M04	EQUIPMENT SCHEDULE

LEGEND

	NEW DUCTWORK
	NEW ACOUSTIC FLEXIBLE DUCTWORK C/W SPIGOT WITH BUTTERFLY DAMPER - SIZE AS PER TABLE
	NEW UN-INSULATED KITCHEN EXHAUST AIR DUCTWORK.
	NEW FLEXIBLE DUCTWORK C/W SPIGOT WITH BUTTERFLY DAMPER - SIZE AS PER TABLE
	TD
	NEW CONTROL POINT - COMPLETE WITH DIGITAL LED DISPLAY, THERMOSTAT, TEMPERATURE SET-POINT ADJUSTMENT, ON/OFF SWITCH, FAN SPEED ADJUSTMENT AND PROGRAMMABLE TIMER
	600x600 ACCESS PANEL - BY BUILDER
	NATURAL VENTILATION
	DOOR UNDERCUT: 25mm BY BUILDER
	DOOR GRILLE- AS PER THE SCHEDULE
	IN-WALL TUNDISH
	200x200 HINGED TYPE EGGRATE CEILING EXHAUST AIR GRILLE C/W CUSHION HEAD AND PANEL FILTRE
	INSULATED (R1.7) REFRIGERANT PIPE WORK.
	TYPICAL- WALL MOUNTED AC UNITS
	TYPICAL- OUTDOOR AC CONDENSING UNIT

ABBREVIATIONS

AC	AIR CONDITIONING UNIT
AP	ACCESS PANEL
CU	CONDENSING UNIT
DG	DOOR GRILLE
EF	EXHAUST FAN
IW	IN-WALL TUNDISH
SAF	SUPPLY AIR FAN
TD	TUNDISH
UD	DOOR UNDERCUT

STANDARDS:

MECHANICAL CONTRACTOR SHALL COMPLY THE REQUIREMENTS OF ALL STATUTORY REGULATIONS, LOCAL GOVERNMENT BY-LAWS AND ALL AUTHORITIES HAVING JURISDICTION OVER THE SITE.

ALL WORK PERFORMED SHALL BE COMPLETE WITH ALL NECESSARY EQUIPMENT FOR ITS SATISFACTORY OPERATION, CONTROL AND MAINTENANCE UNDER ALL NORMAL CONDITIONS OF SERVICE.

ALL WORK WILL BE IN ACCORDANCE WITH CURRENT RELEVANT STANDARDS, CODES AND REGULATIONS WHICH INCLUDE:

- LOCAL GOVERNMENT ACT AND REGULATIONS THEREUNDER
- ALL REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION
- STATE CODES/GUIDELINES FOR CONTROL OF LEGIONNAIRES' DISEASE
- OH&S LAWS
- NATIONAL CONSTRUCTION BUILDING CODE OF AUSTRALIA (BCA)
- WORKPLACE HEALTH AND SAFETY ACT AND REGULATIONS
- AS 1668 THE USE OF VENTILATION AND AIR CONDITIONING IN BUILDINGS
 - PART 1 FIRE AND SMOKE CONTROL IN BUILDINGS
 - PART 2 MECHANICAL VENTILATION IN BUILDINGS
 - PART 4 NATURAL VENTILATION OF BUILDINGS
- AS 1682 FIRE DAMPERS
 - PART 1 SPECIFICATION
 - PART 2 INSTALLATION
- AS 4254 DUCTWORK FOR AIR-HANDLING SYSTEMS IN BUILDINGS
 - PART 1 FLEXIBLE DUCT
 - PART 2 RIGID DUCT
- AS 3666 AIR-HANDLING AND WATER SYSTEMS OF BUILDINGS –MICROBIAL CONTROL
 - PART 1 DESIGN, INSTALLATION AND COMMISSIONING
 - PART 2 OPERATION AND MAINTENANCE
 - PART 3 PERFORMANCE-BASED MAINTENANCE OF COOLING WATER SYSTEMS
- AS/NZS 5149 - REFRIGERATION SAFETY AND ENVIRONMENTAL REQUIREMENT
 - PART 1 REFRIGERATING SYSTEMS AND HEAT PUMPS
 - PART 2 SAFETY AND ENVIRONMENTAL REQUIREMENTS
- AS 1571 COPPER-SEAMLESS TUBES FOR AIR CONDITIONING AND REFRIGERATION
- AS/NZS 2107 ACOUSTICS - RECOMMENDED DESIGN SOUND LEVELS AND REVERBERATION TIMES FOR BUILDING INTERIORS.
- AS 1324 AIR FILTERS FOR USE IN GENERAL VENTILATION AND AIR CONDITIONING
 - PART 1 APPLICATION, PERFORMANCE AND CONSTRUCTION
 - PART 2 METHODS OF TEST
- AS 1432- COPPER TUBES FOR PLUMBING, GAS-FITTING AND DRAINAGE APPLICATIONS
- HB 40.1 THE AUSTRALIAN REFRIGERATION AND AIR-CONDITIONING CODE OF GOOD PRACTICE
 - PART 1 REDUCTION OF EMISSIONS OF FLUOROCARBON REFRIGERANTS IN COMMERCIAL AND INDUSTRIAL REFRIGERATION AND AIR-CONDITIONING APPLICATIONS.
 - PART 2 REDUCTION OF EMISSIONS OF FLUOROCARBONS IN RESIDENTIAL AIR-CONDITIONING APPLICATIONS.
 - PART 3 REDUCTION OF EMISSIONS OF FLUOROCARBONS IN DOMESTIC REFRIGERATION APPLICATIONS.
- AS/NZS 3000 WIRING RULES
- AS/NZS 3008 ELECTRICAL INSTALLATION-SELECTION OF CABLES
 - PART 1.1 CABLES FOR ALTERNATING VOLTAGES UP TO AND INCLUDING 0.6/1 KV-TYPICAL AUSTRALIAN INSTALLATION CONDITIONS.
- AS/NZS 5601 GAS INSTALLATIONS
- AS/NZS 2053 NON-METAL CONDUITS AND FITTINGS
- AS 2053 NON-METAL CONDUITS AND FITTINGS
- AS 1170.4-2007 STRUCTURAL DESIGN ACTIONS- EARTHQUAKE ACTIONS IN AUSTRALIA

GENERAL NOTES:

- THE CONTRACTOR SHALL VISIT SITE, FOR EXISTING BUILDINGS, TO FAMILIARISE THEMSELVES WITH THE SURROUNDING SITE CONDITIONS AND EXISTING BUILDING SERVICES WHERE APPLICABLE.
- ALL RIGID METAL AND FLEXIBLE DUCT SHALL BE CONSTRUCTED TO STANDARDS APPROPRIATE TO THE SERVICE AND AS PER GOOD STANDARD INDUSTRY PRACTICE.
- ANY DISCREPANCIES BETWEEN THE DOCUMENTATION AND THE EXISTING SITE CONDITIONS FOUND DURING THE TENDER STAGE NEED TO BE BROUGHT TO THE ATTENTION TO THE CONSULTING ENGINEER AND ANY COST ALLOWANCES MADE FOR SUCH DISCREPANCIES ASSUMING THE MOST COSTLY OPTION.
- AIR BALANCING AND VOLUME CONTROL DAMPERS SHALL BE PROVIDED AT ALL BRANCHES, INTAKES, SUPPLY/EXHAUST AIR SPIGOT OR ANY OTHER LOCATION REQUIRED TO COMPLETE THE AIR BALANCING OF THE SYSTEMS. LEAKAGE THROUGH DAMPERS IN THE CLOSED POSITION SHALL NOT EXCEED 5% OF THE DESIGN AIR FLOW RATE.
- ALL ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH LOCAL ELECTRICAL ISOLATORS, WEATHERPROOF AS REQUIRED.
- PROVIDE ALL NECESSARY STRUCTURAL SUPPORTS FOR MECHANICAL EQUIPMENT, PIPEWORK, DUCTWORK AND WIRING.
- FANS SHALL BE INSTALLED ON VIBRATION ISOLATORS.
- WHERE AN EXHAUST SYSTEM IS SERVING AN AIR CONDITIONED SPACE AND/OR WHERE MOTORISED OUTSIDE AIR INTAKES ARE LOCATED, SELF-CLOSING DAMPERS SHALL BE PROVIDED TO CLOSE WHEN SYSTEMS ARE INACTIVATED.
- ALL EXPOSED DUCTWORK (INCLUDING CLIPS, SCREW HEADS ETC) ARE TO BE PAINTED/POWDERCOATED IN COLOURS AS NOMINATED BY THE ARCHITECT.
- ALL EXPOSED GRILLES, COVER PLATES, CASSETTE COVERS, DIFFUSERS ETC ARE TO BE PAINTED/POWDERCOATED IN COLOURS AS NOMINATED BY THE ARCHITECT.
- ALL ROOF COWLS, ROOF VENTS ETC ARE TO BE PAINTED/POWDERCOATED IN COLOURS AS NOMINATED BY THE ARCHITECT, GENERALLY IN THE SAME COLOUR AS THE ADJACENT ROOF SHEETING U.N.O.
- CONDENSATE WASTE WATER FROM OUTDOOR AC CONDENSING UNITS SHALL DISCHARGE OVER A TUNDISH WITH CONNECTION TO SEWER PIPEWORK. TUNDISH BY HYD TRADE. VERTICAL DRAINAGE LINE BY MECH SERVICE. MECHANICAL AND HYDRAULIC TRADES SHALL COORDINATE ON SITE.
- ALL LOUVRES SHALL BE FITTED WITH VERMIN PROOF WIRE MESH INSIDE.
- ALL EQUIPMENT SHALL BE TREATED FOR CORROSION RESISTANCE. WHERE THE SITE LOCATION IS WITHIN 5KM OF THE OCEAN, ALL EXPOSED AIR CONDITIONING PLANT ON ROOFS, WALLS OR GROUND LEVEL, SHALL BE TREATED TO PREVENT DAMAGE FROM SALT AIR.
- BALANCE AND COMMISSION ALL SYSTEMS AND SUBMIT BALANCING FIGURES FOR REVIEW. FLOW RATES ASHLL BE BALANCED WITHIN THE FOLLOWING TOLERANCES +10%, -0%
- CERTIFICATION OF INSTALLATION SHALL BE SUBMITTED BY THE MECHANICAL CONTRACTOR STATING COMPLIANCE WITH THE DOCUMENTS AND ALL STATUTORY AUTHORITIES APPLICABLE TO THE WORKS.
- TWELVE MONTHS ROUTINE WARRANTY AND MAINTENANCE CONTRACT SHALL BE PROVIDED WHICH SHALL INCLUDE MONTHLY VISITS TO CHECK ALL PLANT AND CONTROLS AND FILTER CLEANING AS A MINIMUM.
- OPERATING AND MAINTENANCE MANUALS WITH THE COMMISSIONING DATA AND AS-INSTALLED DRAWINGS SHALL BE PREPARED AT THE END OF THE INSTALLATION AND SUBMITTED FOR APPROVAL PRIOR TO PRACTICAL COMPLETION.
- OVER-FLASHING OF EXTERIOR ROOF AND WALL PENETRATIONS TO BE PROVIDED BY THE MECHANICAL CONTRACTOR. UNDERFLASHING BY THE BUILDING CONTRACTOR.
- PAINTING OF MECHANICAL SWITCHBOARDS/PANELS SHALL BE COMPLETED IN THE FACTORY. LABELS SHALL BE BY MECHANICAL TRADE.
- ACOUSTIC ATTENUATION AND VIBRATION ISOLATION SHALL BE PROVIDED IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER AND IN ACCORDANCE WITH THE ACOUSTIC ENGINEER SPECIFICATION.
- CONTRACTOR TO SUPPLY ALL NECESSARY COMPONENTS FOR THE INSTALLATION OF MECHANICAL PLANT, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - MEANS OF ATTACHMENT TO THE STRUCTURE.
 - ANTI-VIBRATION MOUNTING
 - APPROPRIATE FLEXIBLE CONNECTIONS.
 - TRIM AND SEALING AROUND OPENING.
 - ELECTRICAL CONNECTIONS.
 - DRAINAGE CONNECTIONS.
 - FIELD CONNECTION OF REFRIGERANT LINE IN SPLIT SYSTEMS.

23. KITCHEN EXHAUST AIR SYSTEM TO BE PROVIDED BY THE BUILDER WITH THE AIR FLOW DISCHARGE RATE OF NOT MORE THAN 150l/s.
NOTE: CONNECTION OF THE KITCHEN EXHAUST AIR FLEXIBLE DUCT TO THE RANGE HOOD BY THE MECHANICAL CONTRACTOR. KITCHEN EXHAUST AIR DUCT TO BE PROVIDED AS PER MANUFACTURER'S GUIDELINE.

24. TOILETS: ALL FANS RUN CONTINUOUSLY DURING NORMAL OCCUPANCY HOURS. PROVIDE A MANUAL AFTER HOUR SWITCH FOR THE OPERATION OF THE TOILET EXHAUST SYSTEM AFTER NORMAL OCCUPANCY HOURS. CLIENT TO ADVISE THE NORMAL OCCUPANCY HOURS. 0-1 HOUR ADJUSTABLE SWITCH OTHERWISE FAN WILL BE LEFT ON.

25. OUTSIDE AIR SYSTEM: ALL FANS TO BE INTERLOCKED WITH THE AC OPERATION C/W 10 MIN RUN ON TIMER DURING NORMAL OCCUPANCY HOURS. PROVIDE A MANUAL AFTER HOUR SWITCH FOR THE OPERATION OF THE OUTSIDE AIR FAN AFTER NORMAL OCCUPANCY HOURS. CLIENT TO ADVISE THE NORMAL OCCUPANCY HOURS.

26. SUPPLY AIR FAN, SAF-02: FAN TO BE INTERLOCKED WITH THE LIGHT SWITCH C/W MINIMUM 10MIN RUN ON TIMER (ADJUSTABLE).

AIR CONDITIONING SPECIFICATION

SUPPLY AND INSTALL NEW HEAT PUMP INVERTER DRIVEN SINGLE SPLIT AC OF DAIKIN LG, SAMSUNG OR APPROVED EQUAL AS SHOWN IN THE MECHANICAL PLANS.

AIR CONDITIONING COOLING AND HEATING CAPACITY TO BE SELECTED FOR THE AMBIENT CONDITIONS: SUMMER - DB 36.9°C, CWB 19.1°C
WINTER DB 0.0°C
ZONE 8.

INTERNAL CONDITION OF 24°CDB AND 21°CWB.

ALL AIR CONDITIONING UNITS TO BE CAPABLE OF OPERATION BETWEEN AMBIENT CONDITIONS OF 45°CDB AND -15°CDB.

PROVIDE INSULATED COPPER REFRIGERANT PIPING (IN ACCORDANCE WITH NCC 2022 SECTION J6) BETWEEN EACH INDOOR UNIT AND THE AIR COOLED CONDENSERS FOR AIR COOLED SPLIT SYSTEMS. INSULATION TO BE PROVIDED TO PROTECT THE PIPE FROM UV DETERIORATION.

THE REFRIGERATION SYSTEMS SHALL USE REFRIGERANT R410A OR NATURAL REFRIGERANTS OR EQUIVALENT WITH ZERO OZONE DEPLETION POTENTIAL AND BE COMPLETE WITH ALL JOINTS, BS CONNECTIONS, CONTROLLERS ETC TO ALLOW COMPLETE OPERATION IN ACCORDANCE WITH MANUFACTURE'S REQUIREMENTS. REFRIGERANT PIPING SHALL BE INSULATED WITH EXPANDED RUBBER TO THE REQUIREMENTS OF THE NCC AND WHERE EXPOSED TO VIEW AROUND THE CONDENSERS ON THE ROOF AND EXTERNAL WALLS, ENCLOSED IN SHEETMETAL BOXING PAINTED TO MATCH THE BACKGROUND ROOF OR WALL COLOUR.

EACH SYSTEM SHALL BE PROVIDED WITH PROPRIETARY OUTDOOR COIL DEFROST FACILITY THAT PREVENTS ROOM TEMPERATURE DROPPING MORE THAN 2°C DURING DEFROST.

CONDENSERS SHALL BE MOUNTED ON RUBBER IN SHEAR ANTI-VIBRATION MOUNTINGS. PROVIDE CLEARANCE AROUND ALL CONDENSERS FOR REQUIRED AIR FLOW AND SERVICE SPACE. ENSURE DISCHARGE AIR DOES NOT SHORT CIRCUIT INTO INTAKE. PROVIDE NEW ISOLATING SWITCH TO OUTDOOR CONDENSING

RUN NEW REFRIGERANT PIPE WORK, POWER CABLES AND CONTROL WIRING FROM THE OUTDOOR UNIT TO EACH AC INDOOR UNITS. PENETRATE THE WALL AND CEILING SPACE AND RUN PIPEWORK TO EACH INDOOR UNIT. EXTRUDED ALUMINIUM ENCLOSURES TO BE USED FOR PIPEWORK AND WIRING RUNNING INTERNALLY. COLOURBOND OR PAINTED GALVANISED USED FOR EXPOSED PIPEWORK AND WIRE RUNNING EXTERNALLY.

PROVIDE A P-TRAP FROM EACH AIR CONDITIONING SYSTEM. RUN PIPE FROM EACH FAN COIL UNIT DRAIN TO NEAREST TUNDISH WASTE OUTLET, COORDINATE WITH HYDRAULICS CONTRACTOR.

ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE CONSTRUCTED IN COMPLIANCE WITH NCC AND SMACNA STANDARDS AND AS 4254-2012. DUCTWORK TO BE IN ACCORDANCE WITH NCC 2022 SECTION J6).

ALL FLEXIBLE DUCTWORK SHALL BE COMPLIANT WITH AS 1668 AND AS 4254 PARTS 1 AND 2. FLEXIBLE DUCT LENGTHS SHALL NOT EXCEED 6 METRE. SUPPORT ALL DUCTWORK CLEAR FROM ROOF AND CEILING STRUCTURE TO AVOID WEIGHT ON CEILINGS.

ENSURE ALL PLANT IS INSTALLED WITH EASY ACCESS FOR MAINTENANCE, PROVIDE ACCESS PANELS AS REQUIRED FOR MAINTENANCE AND COMMISSIONING/BALANCING.

PROVIDE MINIMUM SEPARATION OF BETWEEN ALL AIR INLETS AND DISCHARGES IN ACCORDANCE WITH AS 1668.2.

PROVIDE CONTROLS SERVING EACH AC UNIT.

WORK BY ELECTRICAL SERVICES CONTRACTOR:

COMMON AREAS MECHANICAL SERVICES EQUIPMENT POWER SUPPLY:
ELECTRICAL CONTRACTOR SHALL RUN POWER FROM ELECTRICAL SWITCH BOARD TO EACH MECHANICAL EQUIPMENT AND TERMINATE VIA ISOLATING SWITCH. MECHANICAL CONTRACTOR TO CONNECT EACH EQUIPMENT VIA ISOLATING SWITCHES AND PROVIDE CONTROLS FOR EACH SYSTEM. AS REQUIRED.
PROVIDE WEATHERPROOF ISOLATING SWITCHES FOR EACH OUTDOOR CONDENSING UNIT.

WORK BY HYDRAULIC SERVICES CONTRACTOR:

HYDRAULIC CONTRACTOR TO PROVIDE TUNDISHES AND FLOOR WASTES FOR MECHANICAL SERVICES.

SEISMIC RESTRAINT

ALL EQUIPMENT, DUCTWORK, PIPEWORK AND FITTINGS SHALL BE SEISMICALLY RESTRAINED ON ACCORDANCE WITH AS1170.4.

REFER SECTION 8.1.4, PARTS AND COMPONENTS, CLAUSE (b) MECHANICAL AND ELECTRICAL COMPONENTS, ITEM 8.1.4(b)(xvii) DUCTS AND PIPING DISTRIBUTION SYSTEMS.

NOTE THAT EXCEPTIONS TO SEISMIC RESTRAINT ARE PERMISSABLE UNDER SECTION 8.1.4(b)(xviii) WHICH STATES : SUPPORTS FOR DUCTS AND PIPING DISTRIBUTION SYSTEMS, EXCEPT SUPPORTS IN THE FOLLOWING SITUATIONS:

- IN STRUCTURES CLASSIFIED AS BEING EDC 1.
- FOR GAS PIPING LESS THAN 25mm INTERNAL DIAMETER
- FOR PIPING IN BOILER AND MECHANICAL ROOMS LESS THAN 32mm INTERNAL DIAMETER
- FOR ALL OTHER PIPING LESS THAN 64mm INTERNAL DIAMETER.
- FOR ALL ELECTRICAL CONDUIT LESS THAN 64mm DIAMETER
- FOR ALL RECTANGULAR AIR HANDLING DUCTS LESS THAN 0.4 SOM IN CROSS SECTIONAL AREA
- FOR ALL ROUND AIR HANDLING DUCTS LESS THAN 700mm IN DIAMETER
- FOR ALL DUCTS AND PIPING SUSPENDED BY INDIVIDUAL HANGERS 300mm OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE SUPPORT FOR THE HANGER.

DUCTS AND PIPING DISTRIBUTION SYSTEMS SHALL BE PROVIDED WITH RESTRAINT BRACING TO RESIST SEISMIC LOADS EXCEPT WHERE THEY ARE BELOW THE THRESHOLDS SET OUT IN AS1170.4 NOTED ABOVE.

THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SEISMIC RESTRAINT CERTIFICATION OF THE WORKS.

THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENGAGING A SEISMIC CONSULTANT TO PROVIDE DESIGN AND CERTIFICATION OF SEISMIC RESTRAINT FOR ALL MECHANICAL SERVICES.

Project Number:

24071

Drawing Number:

M01

Revision:

P1



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**100%
ISSUE**

MECHANICAL SERVICES

Project North



Client: VINCENT JARVIS
Architect: VINCENT JARVIS
Project Number: 24071
Drawing Number: Mo2
Revision: P1
Drawn by: NS
Designed by: NS
Approved by: SS
Scale: 1:100 @ A1

NEW WAREHOUSE, 39 CERES
DRIVE, THURGOONA, NSW.2640

LEVEL G FLOOR PLAN LAYOUT

NATURAL VENTILATION VIA OPENABLE
ROLLER DOORS IN ACCORDANCE WITH
NCC 2022 CLAUSE F6D6-F6D7 WITH
OPENING AREA NOT LESS THAN 5% OF
THE FLOOR TO BE VENTILATED. OPENING
OF 45.35sqm FOR NATURAL VENTILATION
PROVISION TO BE PROVIDED FOR THE
WAREHOUSE WITH TOTAL FLOOR AREA
OF 907sqm.

ARCHITECT TO SHOW LOADING DOCK TRUCK
LINE WITH DEPTH OF NO MORE THAN 10m FOR
NATURAL VENTILATION. OTHERWISE CARPARK
VENTILATION IS REQUIRED.

NO ALLOWANCE MADE HAS BEEN FOR ANY
INDUSTRIAL PROCESS EXHAUST SYSTEMS WHICH
WILL BE DEPENDANT ON TYPE OF INDUSTRY
OCCUPYING THE BUILDING.

TOTAL SITE AREA 1,723.7 m

G.01
WAREHOUSE
TOTAL FLOOR AREA 928.8 m
TOTAL NET FLOOR AREA 906.2 m
CONCRETE

600x250 OUTDOOR AIR WEATHERPROOF
LOUVRE SIZE (BASED ON 50% FA) C/W
VERMIN PROOF MESH AND PLENUM BOX
BEHIND.

PROVIDE 6000W 3 PHASE ELECTRIC DUCT
HEATER, EDH-01 MOUNTED IN INSULATED
DUCT SECTION C/W ALL SAFETY.
CONTROLS AS PER AS1668 DUCT MOUNT
THERMOSTAT INSIDE DUCT SET AT 20C
TO CONTROL HEATING.

200x200 OUTDOOR AIR WEATHERPROOF
LOUVRE SIZE (BASED ON 50% FA) C/W
VERMIN PROOF MESH, PANEL FILTER AND
PLENUM BOX BEHIND. ACCESS TO FILTER
VIA REMOVABLE CORE.

PROPOSED LOCATION OF THE OUTDOOR-
CONDENSING UNITS INSTALLED AT HIGH
LEVEL OF WALL.

RUN CONDENSATE WATER FROM THE INDOOR
UNIT TO THE IN-WALL TUNDISH. TUNDISH BY
HYDRAULIC.

WALL MOUNTED TYPE INDOOR AC UNIT.
- TYPICAL

AFTER HOUR SWITCH FOR ALL FANS:
EF-01, EF-02.

AIR TRANSFER SYSTEM VIA 2 OFF 300
EGGCRATE GRILLE CONNECTED VIA
FLEXIBLE DUCT.

200x200 HINGED TYPE EGGCRATE AIR
GRILLE C/W PANEL FILTER INSIDE.
- TYPICAL

RUN CONDENSATE WATER FROM THE INDOOR
UNIT TO THE TUNDISH BELOW THE SINK.
TUNDISH BY HYDRAULIC.
- TYPICAL

200x200 EGGCRATE GRILLE.
- TYPICAL

NATURAL VENTILATION OF THE
WAREHOUSE VIA OPENABLE ROLLER
SHUTTER DOOR IN ACCORDANCE WITH
NCC 2022 F6D6-F6D7.

450x300 EXHAUST AIR WEATHERPROOF
LOUVRE SIZE (BASED ON 50% FA) C/W
VERMIN PROOF MESH AND PLENUM BOX
BEHIND.

400x300 EXHAUST AIR WEATHERPROOF
LOUVRE SIZE (BASED ON 50% FA) C/W
VERMIN PROOF MESH AND PLENUM BOX
BEHIND. RANGE HOOD TO BE SELECTED
BY THE BUILDER FOR AN AIR FLOW RATE
OF LESS THAN 150/s. CONNECTION TO
THE RANGE HOOD BY THE MECHANICAL
CONTRACTOR.





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100%
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MECHANICAL
SERVICES

Project North



Client:
Architect: VINCENT JARVIS
Project Number: 24071
Drawing Number: M03
Revision: P1
Drawn by: NS
Designed by: NS
Approved by: SS
Scale: 1:100 @ A1

NEW WAREHOUSE, 39 CERES
DRIVE, THURGOONA, NSW,2640

LEVEL M FLOOR PLAN LAYOUT



Sydney: (02) 9052 6460
Newcastle: (02) 9052 6461

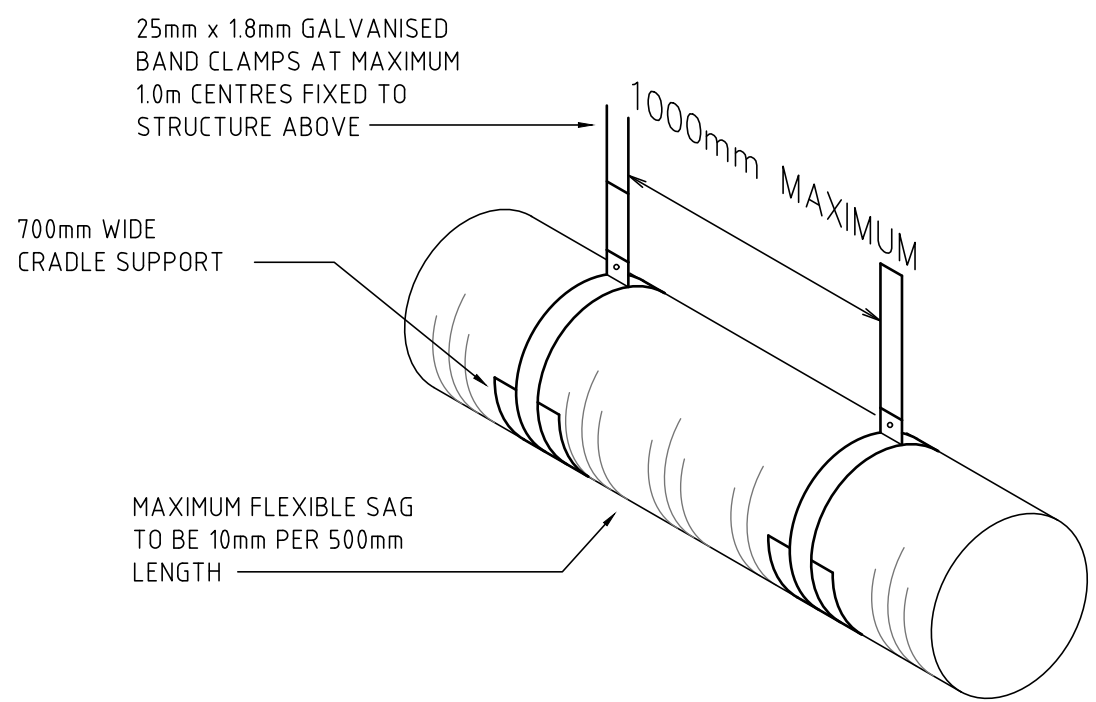


Sydney: Suite 1, 401 Pacific Hwy
Artarmon, NSW 2064
Newcastle: Suite 4, 102 Glebe Road
The Junction, NSW 2291

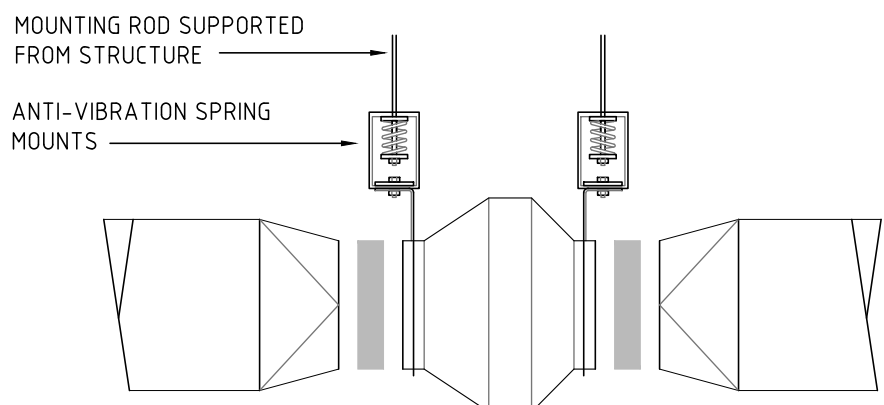


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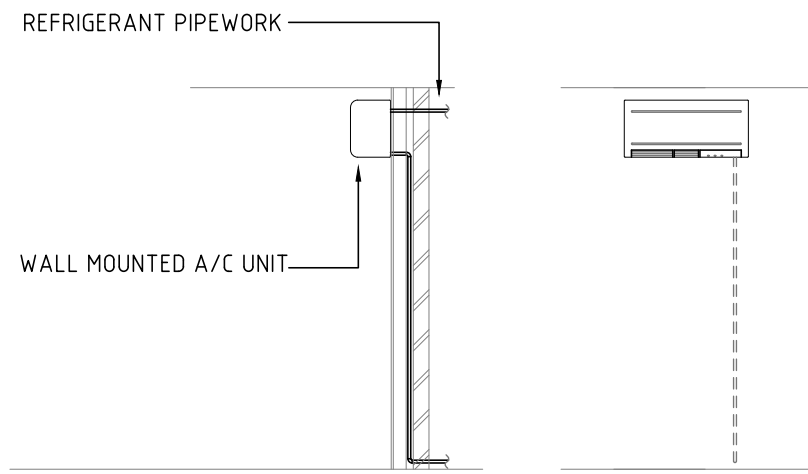




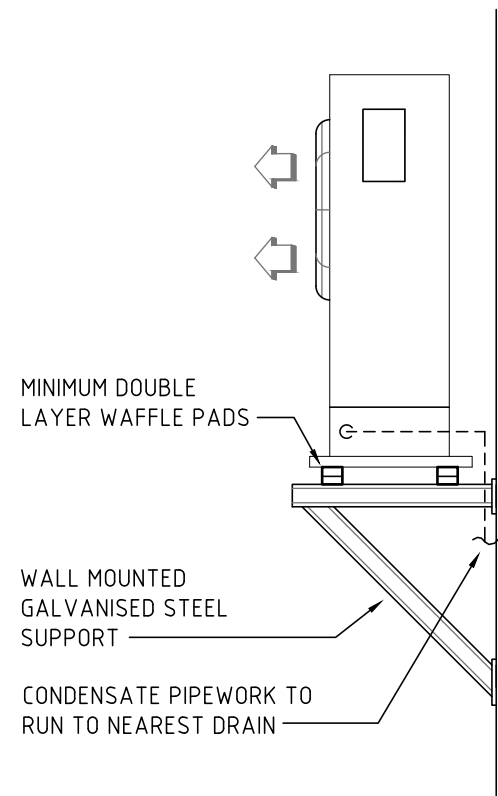
FLEXIBLE DUCT SUPPORT



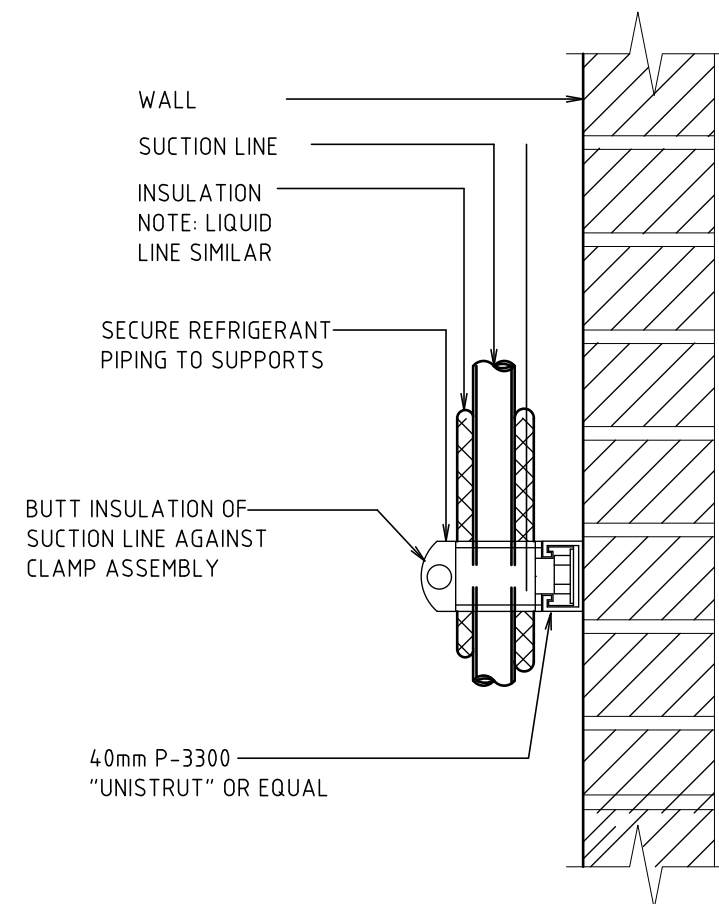
IN-LINE-CENTRIFUGAL FAN MOUNTING DETAIL



WALL MOUNTED A/C UNIT



CONDENSING UNIT - WALL MOUNTED



REFRIGERANT PIPE SUPPORT AT WALL

FAN SCHEDULE														
REF No.	QTY	TYPE	AIR FLOW L/s	EXTERNAL RESISTANCE Pa	MOTOR kW	FLA Amps	PHASE	MAX NOISE LEVEL dBA @3m	SPEED RPM	IMPELLER DIA mm	SWITCH BOARD	CONTROLS	FIRE MODE	MAKE
SAF-01	1	IN-LINE FAN	200	100	0.29	1.45	1	43	1180	280	EDB	FAN INTERLOCKED WITH AC OPERATION	N/A	FANTECH MODEL OR APPROVED EQUAL
SAF-02	1	HEADER BOX	50	100	0.06	0.27	1	38	950	150	EDB	FAN INTERLOCKED WITH LIGHT SWITCH	N/A	FANTECH MODEL OR APPROVED EQUAL
EF-01	1	IN-LINE FAN	90	100	0.11	0.80	1	37	1560	200	EDB	FAN TO RUN CONTINUOUSLY DURING NORMAL OCCUPANCY HOURS	N/A	FANTECH MODEL OR APPROVED EQUAL
EF-02	1	IN-LINE FAN	70	100	0.06	0.50	1	37	1860	150	EDB	FAN TO RUN CONTINUOUSLY DURING NORMAL OCCUPANCY HOURS	N/A	FANTECH MODEL OR APPROVED EQUAL

IMPORTANT NOTE: FAN DATA ARE PROVIDED AS A GUIDE. FINAL SELECTIONS TO BE PROVIDED BY CONTRACTOR.
IMPORTANT NOTE: FINAL SELECTION OF THE MECHANICAL EQUIPMENT BY THE MANUFACTURER.

AIR COOLED REVERSE CYCLE SPLIT AC UNIT SCHEDULE																	
REF No.	QTY	AIR FLOW l/s		COOLING CAPACITY kW		HEATING CAPACITY kW		COOLING COIL		ESP Pa	BOARD	CU REF No.	No. OF PHASES	POWER INPUT KW	RLA A	CU WEIGHT (kg)	REMARKS
		SUPPLY	OUTSIDE	TOTAL	SENSIBLE	TOTAL	SENSIBLE	AIR ON DB°C	AIR ON WB°C								
AC-01	1	340	-	5.0	-	6.0	-	27	19	-	EDB	CU-01	1	1.23	3.8	54	DAIKIN, LG, SAMSUNG EQUIVALENT OR APPROVED EQUAL
AC-02	1	340	-	5.0	-	6.0	-	27	19	-	EDB	CU-02	1	1.23	3.8	54	DAIKIN, LG, SAMSUNG EQUIVALENT OR APPROVED EQUAL
AC-03	1	250	-	4.6	-	4.7	-	27	19	-	EDB	CU-03	1	1.17	4.2	51	DAIKIN, LG, SAMSUNG EQUIVALENT OR APPROVED EQUAL
AC-04	1	250	-	4.6	-	4.7	-	27	19	-	EDB	CU-04	1	1.17	4.2	51	DAIKIN, LG, SAMSUNG EQUIVALENT OR APPROVED EQUAL
AC-05	1	220	-	2.2	-	2.7	-	27	19	-	EDB	CU-05	1	0.50	1.3	28	DAIKIN, LG, SAMSUNG EQUIVALENT OR APPROVED EQUAL
AC-06	1	220	-	2.2	-	2.7	-	27	19	-	EDB	CU-06	1	0.50	1.3	28	DAIKIN, LG, SAMSUNG EQUIVALENT OR APPROVED EQUAL
AC-07	1	220	-	2.2	-	2.7	-	27	19	-	EDB	CU-07	1	0.50	1.3	28	DAIKIN, LG, SAMSUNG EQUIVALENT OR APPROVED EQUAL

NOTE: CONTRACTOR IS RESPONSIBLE TO RUN REFRIGERANT PIPEWORK WITHIN MAXIMUM MANUFACTURER PIPE LENGTH REQUIREMENT.
NOTE: FINAL SELECTION OF THE MECHANICAL EQUIPMENT TO BE PROVIDED BY THE MANUFACTURER.
NOTE: APPROX. WEIGHT OF THE OUTDOOR CONDENSING UNIT PROVIDED FOR STRUCTURAL ENGINEERS REVIEW

FLEXIBLE DUCTWORK		
AIR FLOW RATE - L/s	FLEX SIZE - PREFERRED	FLEX SIZE - OPTION
0 - 47	1 x 150	1 x 150
48 - 100	1 x 200	2 x 150
101 - 175	1 x 250	2 x 200
176 - 260	1 x 300	2 x 200
261 - 350	1 x 350	2 x 250
351 - 475	1 x 400	2 x 300
476 - 600	1 x 450	2 x 350
601 - 750	1 x 500	2 x 400
751 - 950	2 x 400	3 x 350
951 - 1200	2 x 450	3 x 400
1201 - 1500	2 x 500	3 x 450

DOOR GRILLES		
TYPE	AIR FLOW	SIZE
DG	0-80	600x150
	81-200	600x200
	201-300	600x300
	301-400	600x400



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P1 03.04.2025 100% CLIENT REVIEW

**100%
ISSUE**

**MECHANICAL
SERVICES**

Project North



Client: Architect: VINCENT JARVIS

Project Number: 24071
Drawing Number: Mo4
Revision: P1

Drawn by: NS
Designed by: NS
Approved by: SS
Scale: NTS @ A1

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