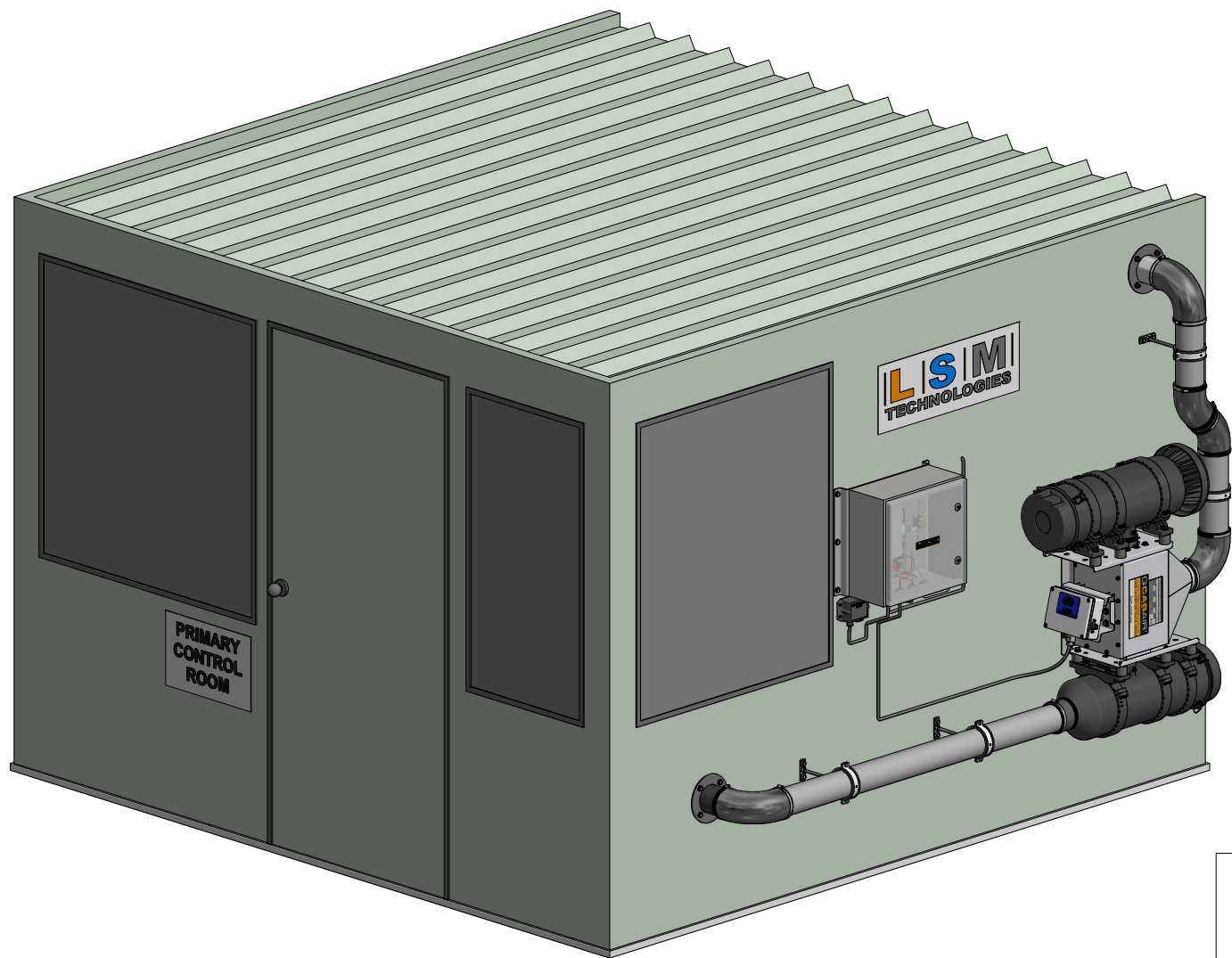




QCABAIR® QUALITY CABIN ENVIRONMENTAL AIR SYSTEM
FIXED PLANT CABIN



The following is the design concept for the **LSM QCABAIR® (pat. pend.)** Cabin Pressuriser/Filtration Core Connection Mixing Module for Mobile and Fixed Plant.

The concept arrangement consists of:

- a) External Air Pressuriser/Filtration Unit for Pre-cleaning, Filtration and Pressurisation of the Cabin. This unit Pre-cleans the External Air (>96% of debris is returned to the external environment), provides Filtered "Fresh Air" and Air Flow to pressurise the Cabin.
- b) Recirculation Air Filtration Unit extracts air from the Cabin, Filters and returns the clean air back to the Cabin. The primary function of this unit is to remove debris that may have become entrapped in the Cabin due to ingress through open and closing of Doors / Windows or via Operators Clothing / Boots, etc.
- c) IC Sensor (In-Cabin Sensor) is to monitor the Cabin Pressure/CO2 (optional) and Alarm if the Cabin Pressure drops below, or CO2 increases beyond the set-point thresholds. Audible and visual alarms are provided to indicate that the Cabin sealing has been compromised but primarily to indicate that the External Air Pressuriser Filter Element has become loaded, air flow has diminished and so the Filter Element requires replacement.

Operation of the **LSM QCABAIR®** Cabin Pressuriser / Filtration Core Connection Mixing Module is that the Recirculation Air Unit draws air from the Cabin, Filters and then combines this air with "fresh" filtered air from the External Air Unit through a common Plenum to the Cabin. The Objective of the technology is to provide:

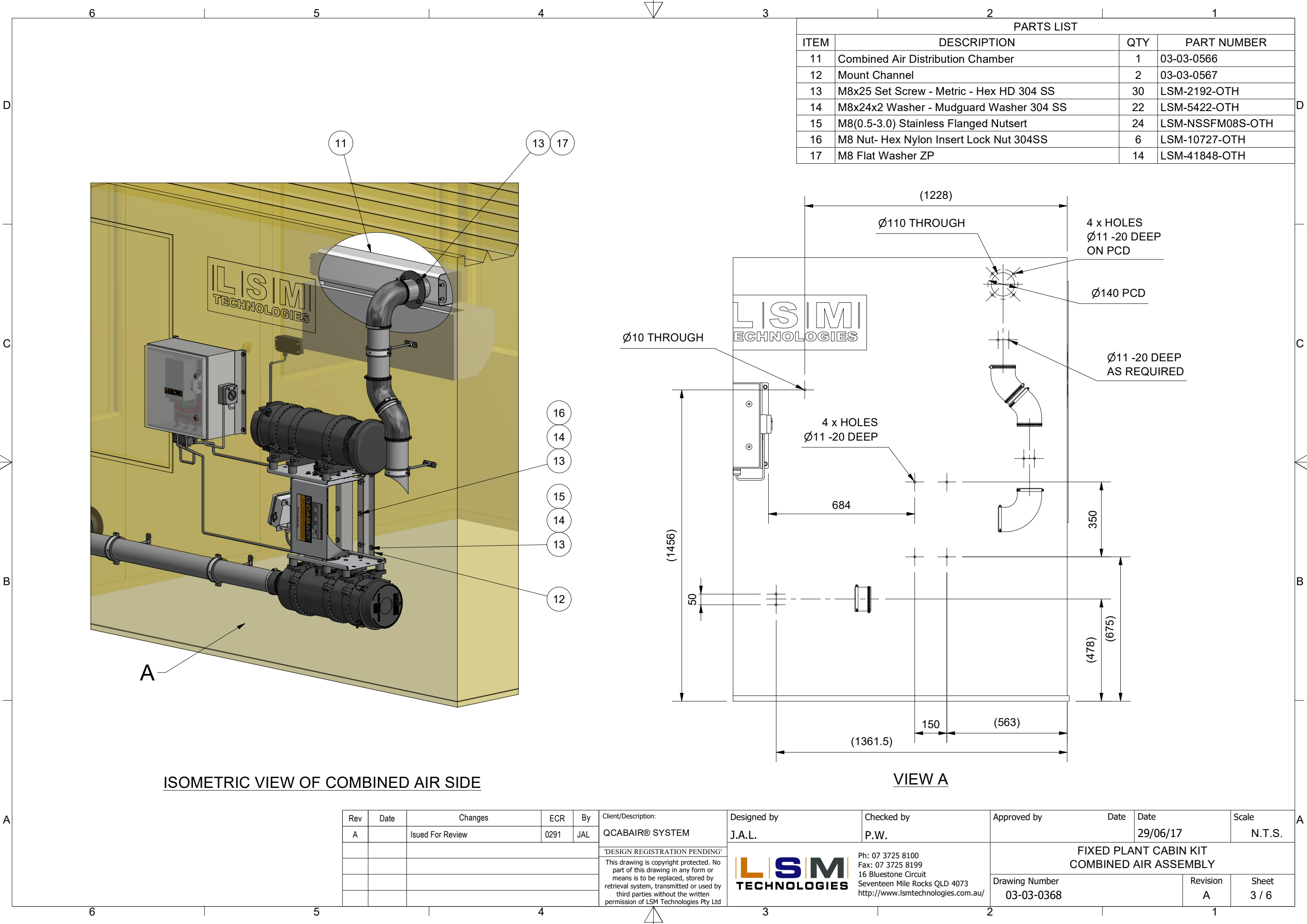
- **Highest protection of Operators Health to OEL Legislation Compliance for Airborne Particulate / Fibre Exposure.**
- **Increase Safety- avoids Co2 concentration in the Cabin that can cause fatigue risk, micro- sleeps, drowsiness, and acidosis.**
- **Filter Element service life up to 1,000 hours.**
- **Protection and extension of HVAC Service Life and functionality.**
- **DOP certified to EN1822 and ISO29463.**
- **Exceeds ISO13875 Compliance**
- **>H13 HEPA Filtration EN1822**
- **External Air Flow approx. 100-150 Cfm / 50-70 l/sec.**
- **Cabin pressures (max 200pa)**
- **Stainless Steel powder coated Core Plenum**

Note:

The Repsa System has been designed for a cabin inclosure of maximum 3m x 2m.
For larger Cabins/Rooms please consult with LSM Technologies.

PRELIMINARY
03/08/21

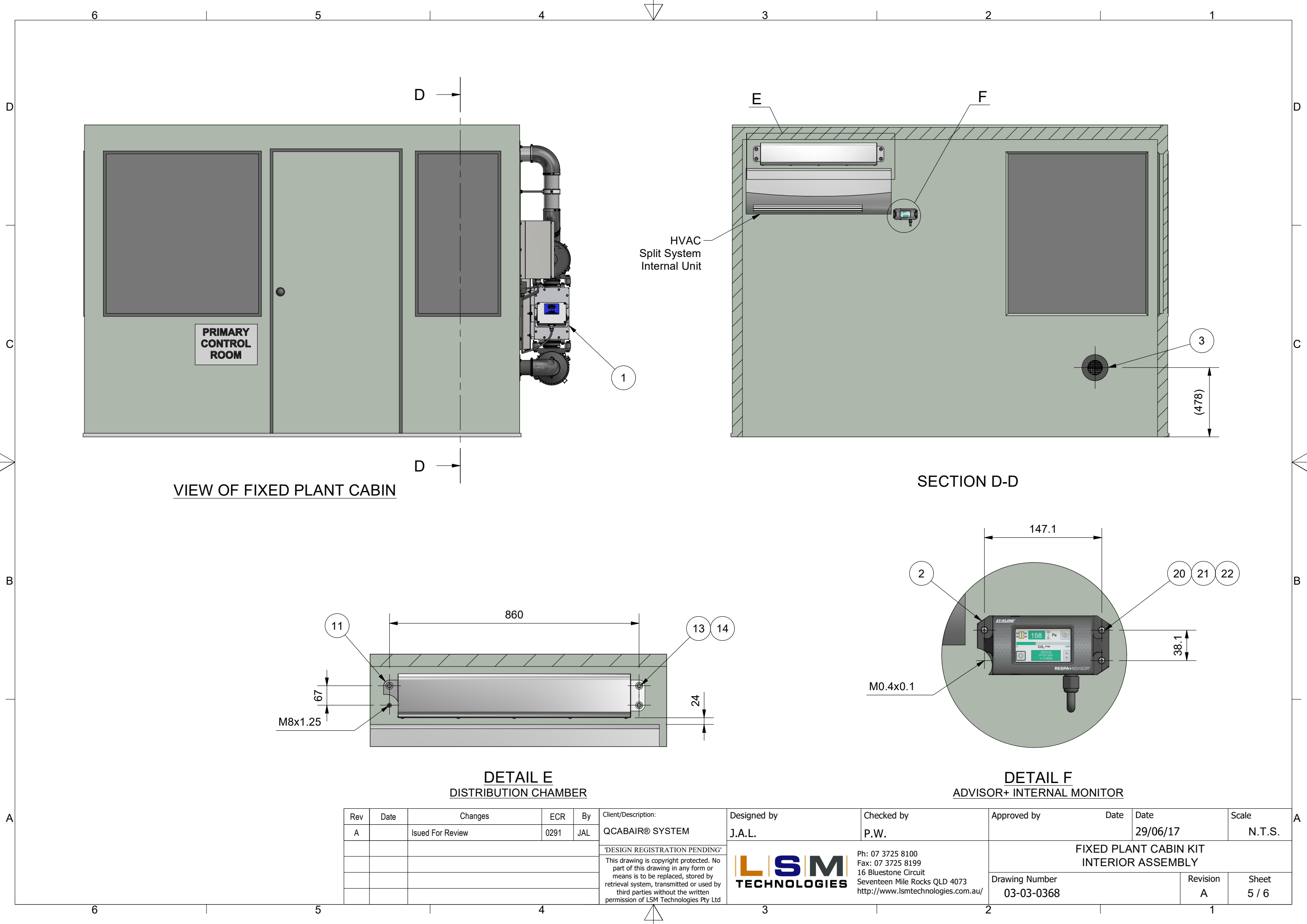
Rev	Date	Changes	ECR	By	Client/Description:	Designed by	Checked by	Approved by	Date	Date	Scale
A		Issued For Review	0291	JAL	QCABAIR® SYSTEM	J.A.L.	P.W.			29/06/17	N.T.S.
					'DESIGN REGISTRATION PENDING'			FIXED PLANT CABIN KIT TITLE PAGE			
					This drawing is copyright protected. No part of this drawing in any form or means is to be replaced, stored by retrieval system, transmitted or used by third parties without the written permission of LSM Technologies Pty Ltd						
						Ph: 07 3725 8100 Fax: 07 3725 8199 16 Bluestone Circuit Seventeen Mile Rocks QLD 4073 http://www.lsmtechnologies.com.au/		Drawing Number		Revision	Sheet
								03-03-0368		A	1 / 6



ISOMETRIC VIEW OF COMBINED AIR SIDE

VIEW A

Rev	Date	Changes	ECR	By	Client/Description:	Designed by	Checked by	Approved by	Date	Date	Scale
A		Issued For Review	0291	JAL	QCABAIR® SYSTEM	J.A.L.	P.W.			29/06/17	N.T.S.
					'DESIGN REGISTRATION PENDING' This drawing is copyright protected. No part of this drawing in any form or means is to be replaced, stored by retrieval system, transmitted or used by third parties without the written permission of LSM Technologies Pty Ltd		Ph: 07 3725 8100 Fax: 07 3725 8199 16 Bluestone Circuit Seventeen Mile Rocks QLD 4073 http://www.lsmtechnologies.com.au/	FIXED PLANT CABIN KIT COMBINED AIR ASSEMBLY			
								Drawing Number 03-03-0368		Revision A	Sheet 3 / 6



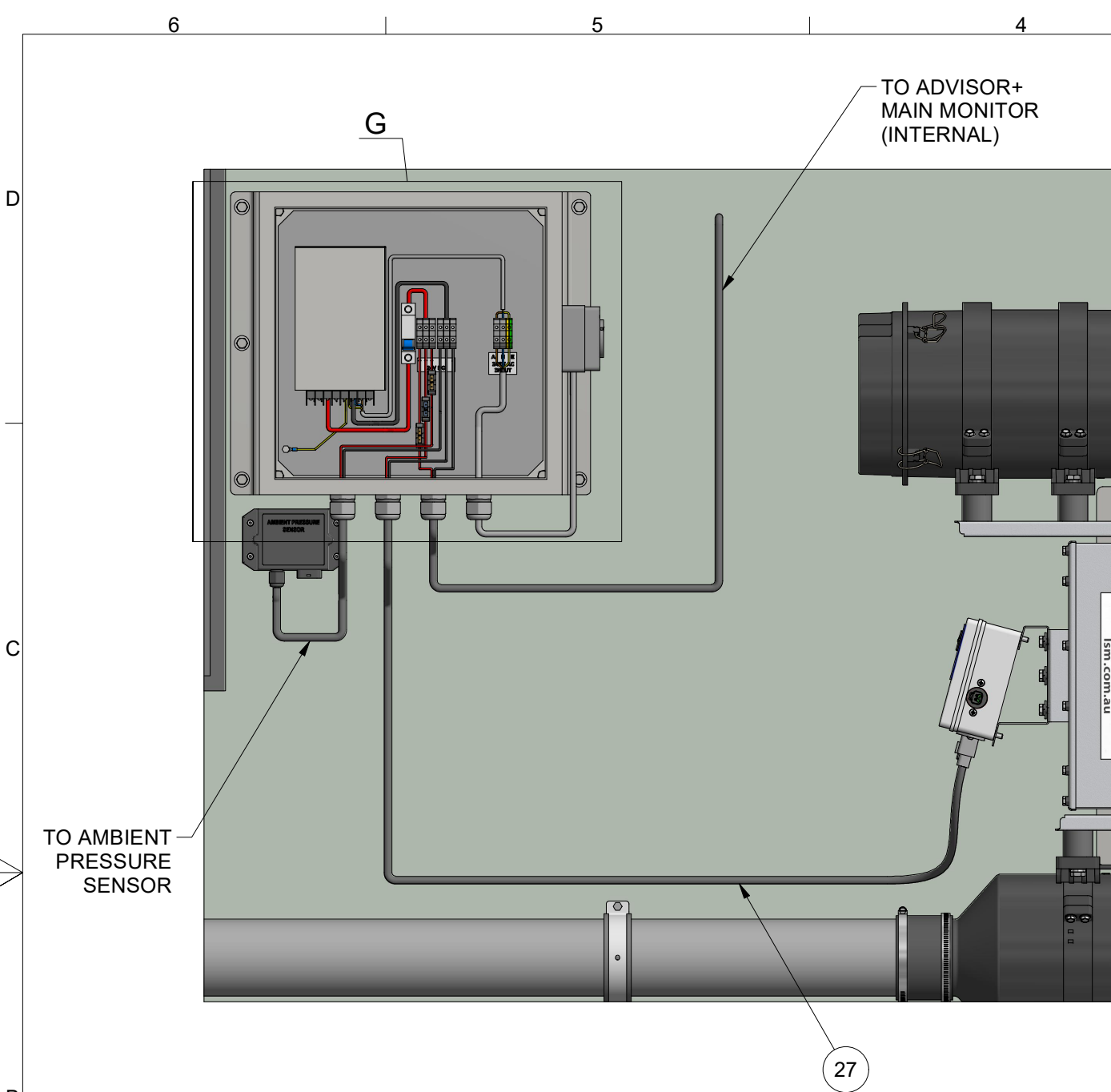
VIEW OF FIXED PLANT CABIN

SECTION D-D

DETAIL E
DISTRIBUTION CHAMBER

DETAIL F
ADVISOR+ INTERNAL MONITOR

Rev	Date	Changes	ECR	By	Client/Description:	Designed by	Checked by	Approved by	Date	Date	Scale
A		Issued For Review	0291	JAL	QCABAIR® SYSTEM	J.A.L.	P.W.			29/06/17	N.T.S.
					'DESIGN REGISTRATION PENDING'	 <div>Ph: 07 3725 8100 Fax: 07 3725 8199 16 Bluestone Circuit Seventeen Mile Rocks QLD 4073 http://www.lsmtechnologies.com.au/</div>	FIXED PLANT CABIN KIT INTERIOR ASSEMBLY				
					This drawing is copyright protected. No part of this drawing in any form or means is to be replaced, stored by retrieval system, transmitted or used by third parties without the written permission of LSM Technologies Pty Ltd		Drawing Number 03-03-0368	Revision A	Sheet 5 / 6		



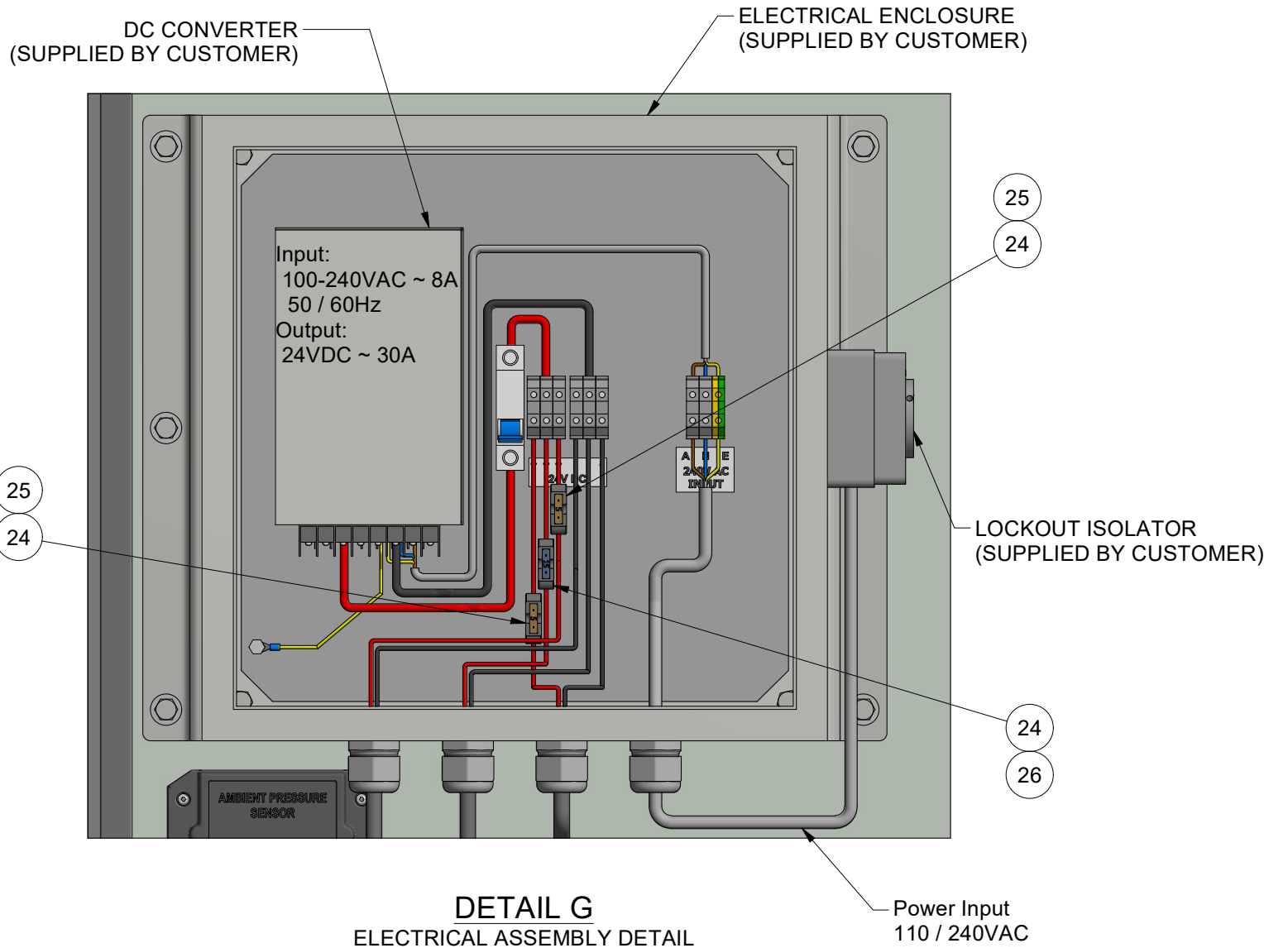
ELECTRICAL ASSEMBLY AREA - EXTERIOR WALL

Note:

1. Isolator Switch to be supplied by customer according to site requirements.
2. Isolator pictured on side of Power Supply Cabinet but can be located remotely according to customer requirements.
3. Isolator Switch should have lockout tagging function.
4. Qualified Electrician required to connect mains power supply to main isolation point and to transformer 100-240VAC to 24VDC

QCABAIR® POWER REQUIREMENTS			
Voltage	Start (Amps)	Run (Amps)	Fuse Rating (Amps)
12 VDC	40A	24A	30A

PARTS LIST			
ITEM	DESCRIPTION	QTY	PART NUMBER
24	BFH Inline Fuse Holder	3	LSM-106-0000-OTH
25	Fuse- 5 Amp Blade Type	2	BIL-AF5-A
26	Fuse- 15Amp Blade Type	1	LSM-AF15-OTH
27	Power Extension Harness	1	03-03-0554



**DETAIL G
ELECTRICAL ASSEMBLY DETAIL**

Rev	Date	Changes	ECR	By	Client/Description:	Designed by	Checked by	Approved by	Date	Date	Scale
A		Issued For Review	0291	JAL	QCABAI® SYSTEM	J.A.L.	P.W.			29/06/17	N.T.S.
					'DESIGN REGISTRATION PENDING'	 <div>Ph: 07 3725 8100 Fax: 07 3725 8199 16 Bluestone Circuit Seventeen Mile Rocks QLD 4073 http://www.lsmtechnologies.com.au/</div>	FIXED PLANT CABIN KIT ELECTRICAL ASSEMBLY				
					This drawing is copyright protected. No part of this drawing in any form or means is to be replaced, stored by retrieval system, transmitted or used by third parties without the written permission of LSM Technologies Pty Ltd		Drawing Number 03-03-0368			Revision A	Sheet 6 / 6