



MEEA
MOBILE ENERGY AUSTRALIA
Specialists in vehicle mounted compressor & generator systems

SMARTPACK 180-H

Owner's / Operator's Manual



FRAMED HYDRAULIC COMPRESSOR

Revision: 2
Date: 16/01/2023

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MEA Product Registration Form

**THE ATTACHED FORM MUST BE COMPLETED
AND
RETURNED WITHIN 30 DAYS OF INSTALLATION
OR
WARRANTY WILL BE VOID**

**ALTERNATIVELY, PLEASE GO ONLINE AND
COMPLETE WARRANTY FORM**

www.mobileenergyaustralia.com.au/warranty-registration



MEA Product Warranty Registration Form

CUT HERE



This form must be completed and returned to MEA at the time of Installation. Warranty will be void if this form is not received by MEA within 30 days of installation.

MEA Dealer Information

Company Name: _____

City: _____ State: _____ Country : _____

MEA Installer Information

Company Name: _____

City: _____ State: _____ Country : _____

Installation Date: _____/_____/_____
 Day Month Year

Owner Information

Company Name: _____

Address: _____

City: _____ State: _____ Country : _____

Postcode: _____ Phone #: _____

Product Information

MEA Serial Number: _____

Model Number: _____

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MEA Product Warranty Registration form and partner Product Warranty Registrations must be completed and returned to MEA.

1. COMPRESSOR / COMPRESSED AIR SAFETY

MEA DISCLAIMS ANY AND ALL LIABILITIES FOR DAMAGE OR LOSS DUE TO PERSONAL INJURIES, INCLUDING DEATH, AND/OR PROPERTY DAMAGE INCLUDING CONSEQUENTIAL DAMAGES ARISING OUT OF ANY MEA SYSTEM NOT USED IN ACCORDANCE WITH THE OPERATOR INSTRUCTIONS.

ALL UNITS ARE SHIPPED WITH A DETAILED OPERATOR MANUAL. THIS MANUAL CONTAINS VITAL INFORMATION FOR THE SAFE USE AND EFFICIENT OPERATION OF THIS UNIT. CAREFULLY READ THE OPERATORS MANUAL BEFORE STARTING THE UNIT. FAILURE TO ADHERE TO THE INSTRUCTIONS COULD RESULT IN SERIOUS BODILY INJURY OR PROPERTY DAMAGE.

Care is required when working with an air compressor or compressed air. Compressed air is one of the many ways energy can be stored. Releasing the stored energy in an uncontrolled manner can result in catastrophic consequences. Death and permanent disability are all possibilities that can occur. The following are suggested as minimum precautions to be used when operating the SMARTPACK Air Compressor. It is important that each work site engages in a risk analysis of that site and produces procedures in order to minimise injury to their employees. Health and Safety Regulations today require that this is a compulsory process to be carried out on each site. These, with site specific designed safety precautions will help to reduce accidents, personal injury, and loss of life. It is the responsibility of the employer to ensure that the work site is safe for the employees.

SAFETY WHEN OPERATING AN AIR COMPRESSOR

- Do not bypass or disable the oil temperature sensor.
- Do not expose the tank or compressor to extreme heat.
- Do not perform any service or repairs until the system has been completely relieved of air pressure.
- Maintenance and repairs on the system should only be done by qualified personnel.
- Do not operate the compressor while driving.
- Do not tamper with the pressure relief valve.
- Run the system at idle speed and under no load conditions for 2 to 3 minutes before turning the system off to allow system cooling and lubrication to occur.
- Follow safe work practices, wear the appropriate safety equipment when operating air-powered equipment, particularly eye and hearing protection.
- Avoid contact with rotating components, ensure all safety guards are in place.
- Avoid all contact with pressurized air. If it penetrates, your skin, it can enter your blood stream and cause death.
- To prevent compressor explosion or fire, make sure that the air entering the compressor is free of flammable vapors.
- Vaporized oil propelled by high pressure is an explosive mixture.
- Do not breathe the compressor air, vaporized oil is a respiratory hazard.
- Stay clear of all moving parts when the system is operating.
- Follow safety procedures for tyre service operations as set by the authority.

HYDRAULIC SAFETY

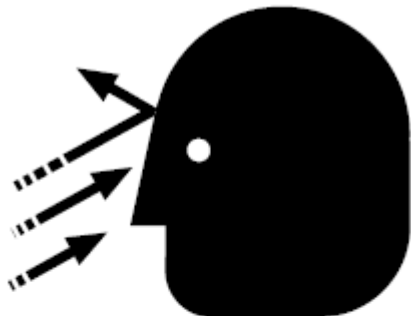
ALL HYDRAULIC EQUIPMENT MUST BE TREATED WITH EXTREME RESPECT AND CARE. AS THE WORKING FLUID IS UNDER EXTREME PRESSURE, UP TO 5000PSI, WITH HIGH FLOW RATES GENERATING HIGH HEAT, ALL APPROPRIATE SAFETY PRECAUTIONS MUST BE TAKEN IN TO ACCOUNT AND SAFETY EQUIPMENT MUST BE WORN IF IN CONTACT WITH THE EQUIPMENT UNDER OPERATION. ALL LEAKS, NO MATTER HOW MINOR, MUST BE RECTIFIED IMMEDIATELY AND ANY WEAR IN THE HOSES MUST BE ADDRESSED AND EQUIPMENT REPLACED. HYDRAULIC INJECTION IS DANGEROUS AND LIFE THREATENING AND EVEN A PINHOLE LEAK WILL BLANKET AN ENTIRE ENCLOSED SPACE VERY QUICKLY WITH HAZARDOUS VAPORISED HYDRAULIC OIL MIST.

⚠ WARNING



Read the operators manual before starting this unit. Failure to adhere to instructions can result in severe personal injury.

⚠ DANGER



**HOT OIL UNDER PRESSURE!
Will cause SEVERE PERSONAL INJURY OR DEATH. Do not remove valves, caps, plugs or piping when compressor is running or pressurized. Shut down compressor and relieve system of all pressure before removing valves, caps, plugs or piping**

300038

⚠ DANGER



Discharge air used for breathing will cause severe injury or death consult filtration specialist for additional filtration and treatment equipment to meet occupational safety and health administration standards

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⚠ WARNING



Do not operate without fan guard in place.

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2. SPECIFICATIONS

Compressor Model: SMARTPACK 180H

Compressor Type: Oil flooded rotary screw compressor

Hydraulic Motor Type: 62cc Gear Motor

Control: 24V/12V Electronic Control

Maximum Air Delivery: 180cfm @ 150psi

Oil Flow Requirements: 138 LPM

Oil Pressure (Nominal): 200 Bar

Drive coupling speed: 2230 rpm

Pressure Regulation: Mechanical Inlet control valve modulates flow in response to demand

Safety Features: 200 PSI relief valve in compressor sump
Temperature safety sensor in compressor
Rapid blow-down valve to discharge system pressure on shutdown

Lubrication: MEA Certified and Approved Oil

3. OPERATING PROCEDURE

WARNING

CAREFULLY READ THE OPERATING INSTRUCTIONS BELOW. FAILURE TO ADHERE TO THE FOLLOWING COMPRESSOR OPERATING INSTRUCTION COULD RESULT IN SERIOUS INJURY.

1. Check Oil Level
2. Check Hoses and fittings for leaks. Make sure the hoses are not loosened nor damaged.
3. Check and make sure hydraulic supply/return (drain if applicable) are installed correctly.
4. Check Air Filter for Blockage.
5. Check the Safety circuit switch operation (Reset Switch).
6. Switch on the vehicle and activate the vehicle flow control (turn PTO on).
7. Turn on the compressor either at the control box or in the cab and ensure it is in the unloaded state (check load/unload switch).
8. Turn on the unload/load switch to load and see if the compressor builds pressure to the regulated setting.
9. Plug an air tool into the air outlet and operate. Ensure that the compressor works as required.
10. When the work is finished, switch the compressor to unload.
11. It is good practice to allow the compressor to run under no load for 2-3 minutes.
12. Switch off at either the control box or in Cab and switch off the vehicle.
13. It is good practice to check for any visible signs of hydraulic fluid leakage and or compressor fluid leakage after each use.

4. INSTALLATION

The SMARTPACK 180H is designed as an integrated compressor system for connection to an existing hydraulic system. The following table can be used as a reference when setting up the compressor Hydraulic Oil Flow required.

WARNING When setting up the Compressor unit, ensure there is a safety mechanism in place to prevent any excessive flow or pressure into the compressor hydraulic circuit. MEA will not warrant any damage caused to the compressor and will void warranty due to inadequate safety protection of the existing hydraulic system.

1. Install SMARTPACK 180H into position on the vehicle using 6 x min. M12 x 1.75 Grade 8.8 Fasteners.
2. Install the hydraulic lines “**P**” **pressure line** “**T**” **tank/return line** “**D**” **case drain if required**. This is to ensure compressor rotation is correct.
3. If purchasing the Frameless version only; install the cooler and connect the compressor cooler lines to both the cooler and the compressor.
4. Connect the electrical control box to the vehicle; be sure to place an in-line weatherproof fuse (30A – 12V and 20A – 24V) within 300mm of the vehicle battery. Ensure the control box is compatible with your vehicle’s voltage rating.
5. Connect the pressure gauge line to the SMARTPACK 180H, see circuit diagram.
6. Connect the terminals of the electrical loom as per the circuit diagram relevant to your vehicle to both the vehicle and the SMARTPACK 180H.
7. Check the level of oil in the compressor.
8. Switch on the vehicle, turn on the compressor at the control box and test the hydraulic solenoid for operation.
9. Turn the unload/load switch to load and check the compressor builds pressure to the regulated pressure setting.
10. Plug an air tool into the air outlet and operate checking that the compressor works as required, run for 10mins.
11. Unload the compressor, switch off the control box, switch off the vehicle and check for any visible signs of hydraulic fluid leakage.
12. When cool (safe to touch), and switched off, re-check compressor oil level.

ENSURE THAT A WATER SEPARATOR IS MOUNTED AS FAR FROM THE COMPRESSOR AS POSSIBLE OR THAT IT HAS AT LEAST TWO METRES OF HOISING BETWEEN THE COMPRESSOR DISCHARGE AND SEPARATOR INLET.

5. SCHEDULE MAINTENANCE

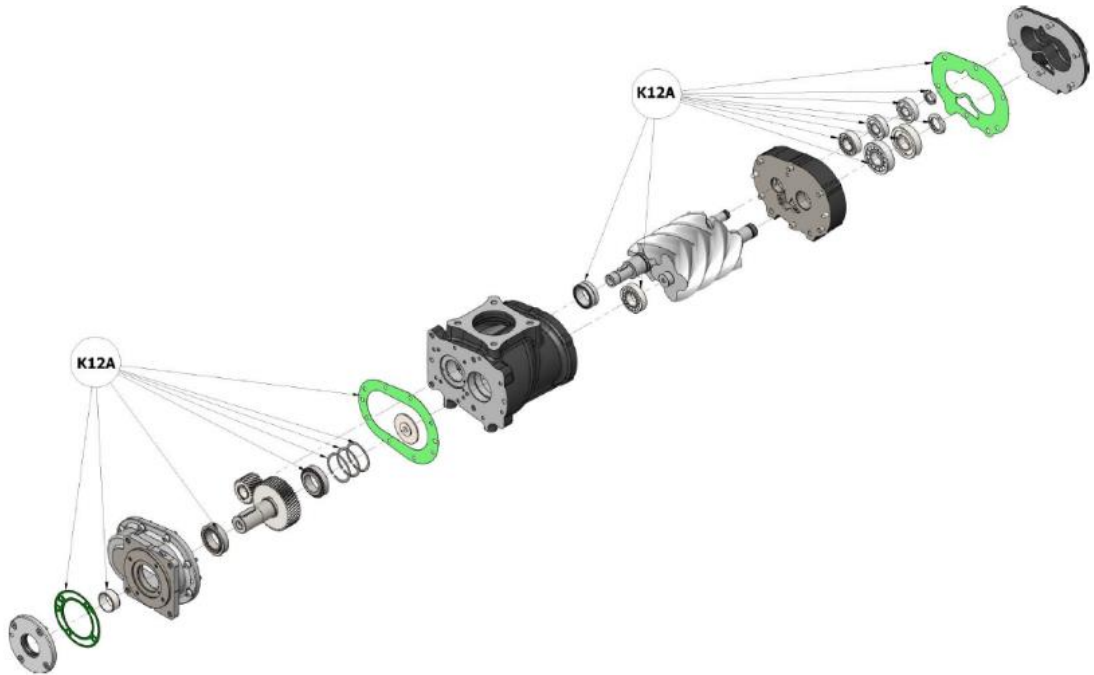
The maintenance intervals recommended are based on standard operating conditions. The intervals for inspection, lubrication and maintenance given herein are maximum intervals and it should be noted to schedule the maintenance accordingly to sites.

When the unit is being operated in a dusty environment, in high ambient temperatures or in other unusual conditions, an assessment needs to be done for shorter service interval. A planned program of periodic inspection and maintenance will help to avoid premature failure and costly repairs. Daily visual inspections should become routine.

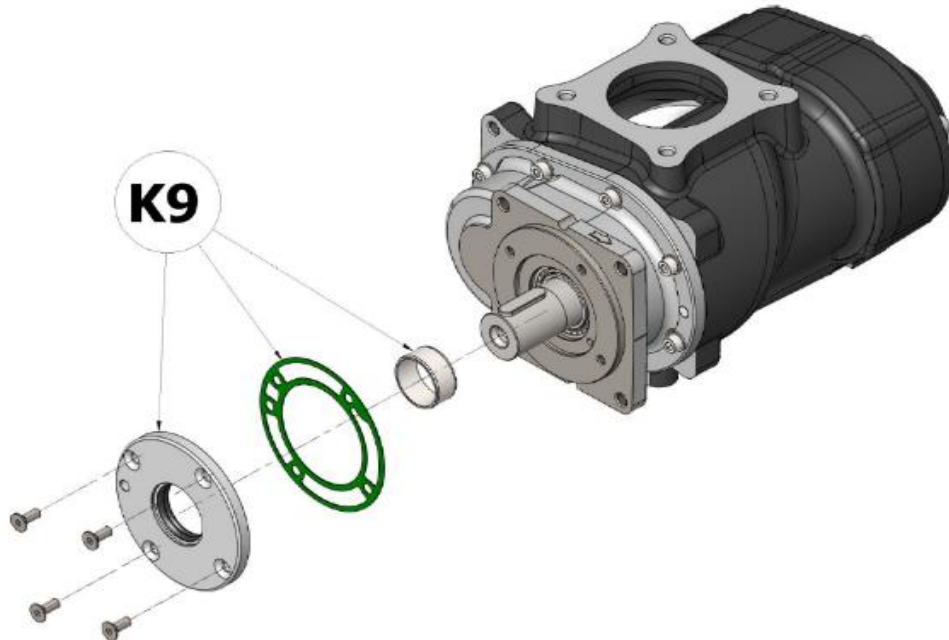
Interval	Compressor
ACTION TO BE TAKEN	
Periodically During Operation	Observe all gauge readings. Note any change from the normal readings and determine the cause. Have the necessary repairs made.
	(Note: "Normal" is the usual gauge reading when operating at similar conditions on a day-to-day basis.)
Periodically or as required	Inspect and replace spin-on coalescing element if necessary.
	Inspect and clean oil cooler fins.
	Check system for oil and/or air leaks.
Every 10 Hours or Daily	Check the compressor oil level.
	Check air filter/s and connecting hose and clamps.
	Check for oil and air system, including hoses, for leaks.
Every 25 Hours or Monthly	Drain water from tank and check Compressor oil level.
After first 50 hours of operation	Check system for oil and/or air leaks.
	Check engine/compressor mounts fastener torque.
	Check belt and pulleys for signs of wear - note that belt normally gives off blue particles until it runs in.
Every 100 Hours	Check compressor oil level.
	Clean air cleaner element.
	Check engine/compressor/generator mounts for excessive wear and fastener torque.
Every 400 Hours of operation or 9 months (See Service Kit List)	Change compressor oil approx. 7L.
	Change compressor oil filter.
	Change compressor air filter.
	Check belt and pulleys for signs of wear.
800 Hours / 18 months	Check valve clearance.
	Change compressor coalescing filter.

IMPORTANT: PLEASE CONTACT MOBILE ENERGY AUSTRALIA FOR MORE INFORMATION IF YOU HAVE ANY QUESTIONS REGARDING THE SETUP AND OPERATION OF THE SMAC RANGE OF PRODUCTS.

6. SPARE PARTS AND SERVICE KITS



⚠ Extraordinary maintenance kits and their part numbers with all the instructions needed to carry out an appropriate maintenance are included in the technical specifications of the air-end requested and are available on demand.



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CODE		DESCRIPTION	PACK SMART V110 55°	PACK SMART V110 71°	PACK SMART V110 83°	WORKING TIME
K1	270.0595	SEPARATOR NIPPLE M32-39 SPARE PARTS KIT	•	•	•	after 8000 hours
K9	920.0249	V110 SHAFT SEAL SPARE PARTS KIT	•	•	•	after 8000 hours
K12A	920.0148	V110G BEARINGS SPARE PARTS KIT	•	•	•	after 20000 hours
K14	220.1250	MINIMUM PRESSURE VALVE G35-36 SPARE PARTS KIT	•	•	•	after 20000 hours
K15	220.1800	VRO19 OIL RECOVERY VIEWER	•	•	•	Corrective Maintenance
K16	723.0070	PACK SMART V110 OIL RECOVERY FITTING SPARE PARTS KIT	•	•	•	Corrective Maintenance
K17	270.1390	VT-VTFT25/27-55° SPARE PARTS KIT	•			after 8000 hours
	270.1380	VT-VTFT25/27-71° SPARE PARTS KIT		•		
	270.1385	VT-VTFT25/27-83° SPARE PARTS KIT			•	
K18	723.0090	PACK SMART BASE FLANGE O-RING SPARE PARTS KIT	•	•	•	Corrective Maintenance

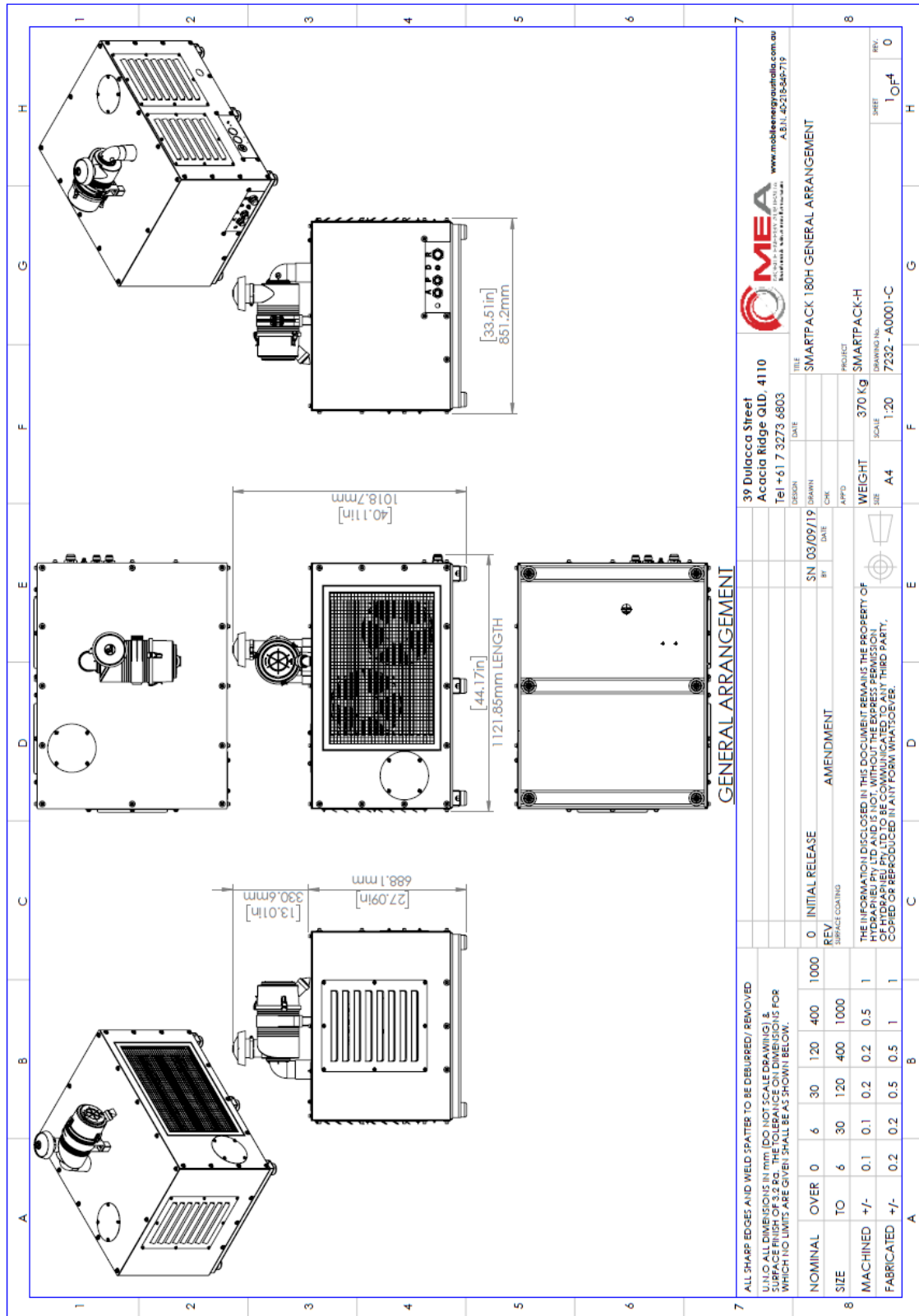
Part Number	Description
10008-P0024	AIR FILTER ELEMENT
10008-P0029	SPIN ON COALESCER
10008-P0078	OIL FILTER
10019-K0005	5 LITRE SEMI SYNTHETIC OIL

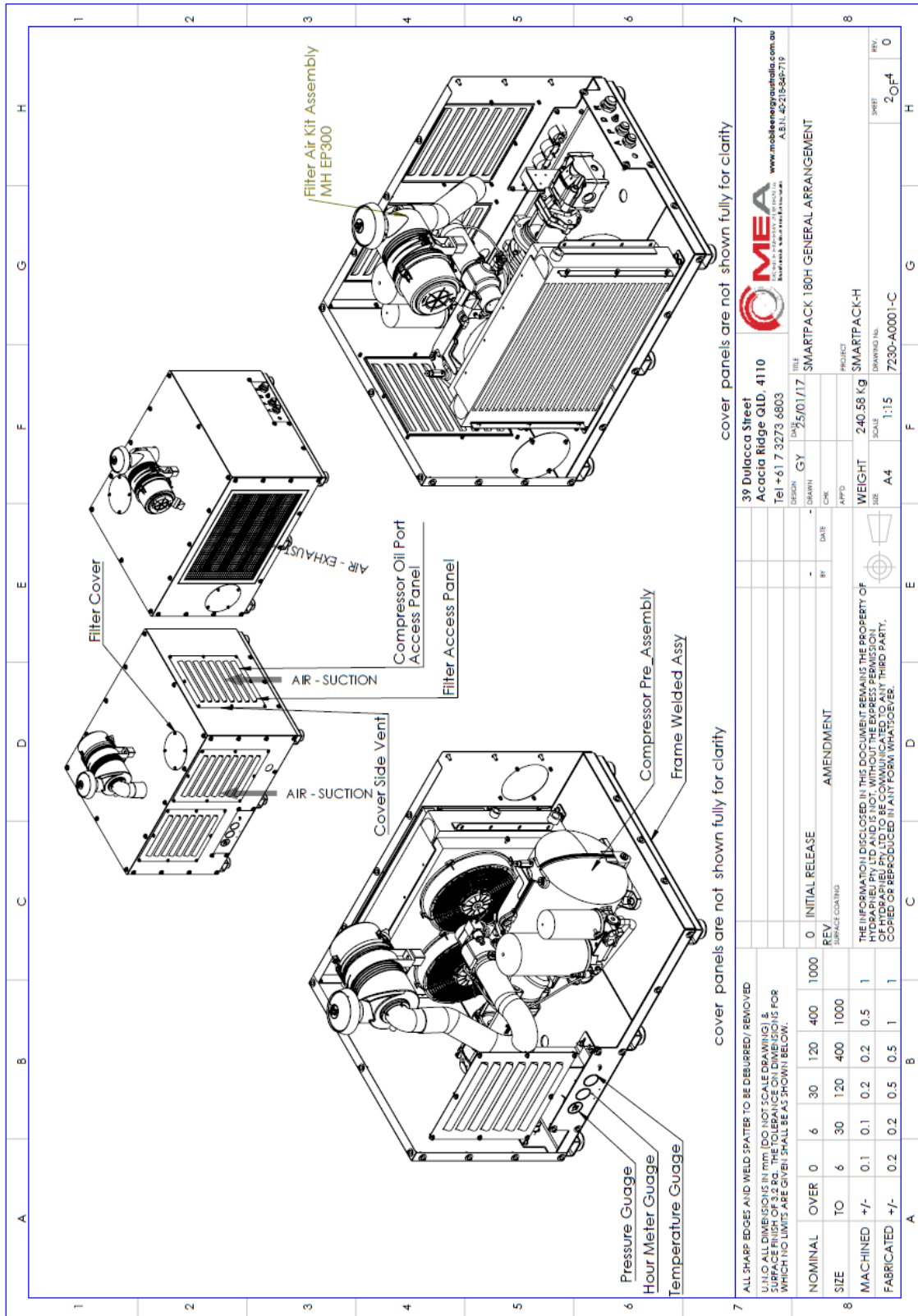
7. TROUBLE SHOOTING

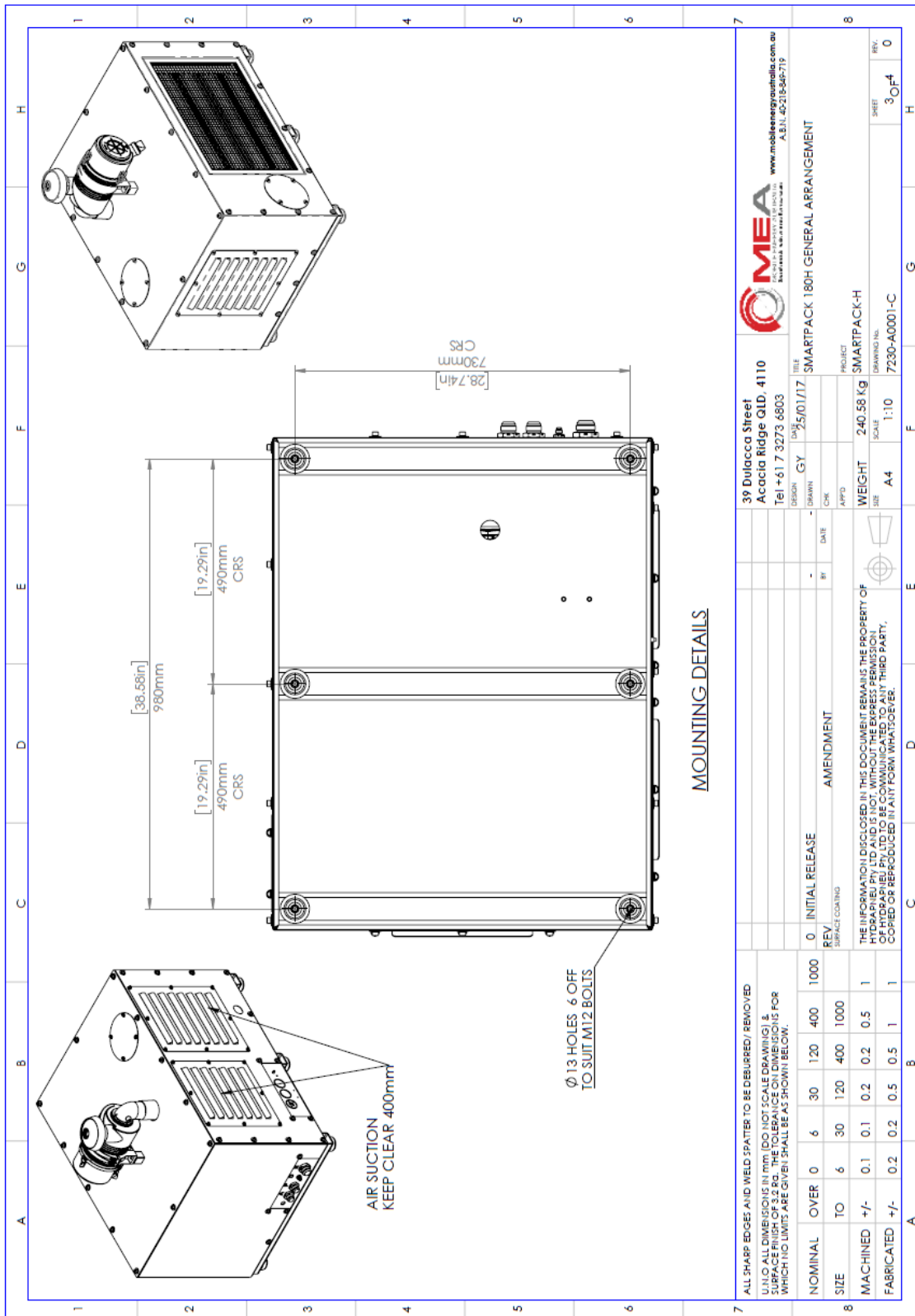
SYMPTOMS	PROBABLE CAUSE	CORRECTIVE ACTION
The compressor does not load.	1-The intake valve remains closed.	1-Check the valve. If necessary, replace the damaged parts with the spare parts kit.
	2-The solenoid valve does not work accurately	2-Check the solenoid valve. If necessary, replace it.
	3-Losses on the pressure line.	3-Check pipes and cables. If necessary, replace them.
During idling phase, the compressor does not discharge pressure from separator tank	1-The solenoid valve does not work accurately.	1-Check the solenoid valve. If necessary, replace it.
	2-The calibrated nozzle is clogged.	2-Remove the calibrated nozzle. Clean or replace it.
Compressor capacity or pressure lower than usual standard.	1-The air filter is clogged.	1-Remove the air filter. Clean or replace it.
	2-The intake valve does not open.	2-Check the valve. If necessary, replace the damaged parts with the spare parts kit.
	3-Air loss from safety valve.	3-Replace the valve.
Compressor keeps on loading over working pressure: safety valve opens	1-The solenoid valve does not work accurately.	1-Check the solenoid valve. If necessary, replace it.
	2-Clogged separator filter.	2-Replace the separator filter.
Compressor overheating.	1-Insufficient cooling.	1-Check the cooling system. Check coolant level on tank.
	2-Dirty oil	2-Replace it with new oil.
	3-Oil level is too low.	3-Check coolant level on tank and if necessary, add oil.
	4-Clogged-up cooler or pipe connection	4-Clean cooler and pipes.
	5-The thermostatic valve does not work correctly.	5-Check the thermostatic valve. If necessary, replace the damaged parts with K13 spare parts kit (Contact MEA for parts required)
	6-Clogged oil filter	6-Remove the oil filter. Clean or replace it.
During unloading phase, pressure increases up to safety valve opening	1-The intake valve remains open.	1-Check the valve. If necessary, replace the damaged parts with spare parts kit.
	2-The calibrated nozzle is clogged.	2-Remove the calibrated nozzle. Clean or replace it.
Oil leakage from intake valve only when the machine is switched off: oil soaked-up air filter	1-The intake valve does not work properly (does not close)	1-Check the valve. If necessary, replace the damaged parts with spare parts kit.
	2-The no-return valve of intake valve does not work correctly.	2-Check it and clean it.
Oil soaked-up air filter during unloading phase	1-Too high level of oil in the tank	1-Check oil level on separator tank.
	2- Clogged separator filter	2- Replace the separator filter.
	3-The recovery oil viewer is dirty or does not work appropriately.	3 -Clean it or if necessary, replace the damaged parts with K11 spare parts kit. If separator filter is clogged up, replace it.
The compressor remains under loading phase.	1-The intake valve does not work properly (does not close)	1-Check the valve. If necessary, replace the damaged parts with spare parts kit.
Rotor seizure	1-Unknown particles inside.	1-Call MEA technical support.
	2-Insufficient lubrication.	2-Call MEA technical support.
Presence of oil in the outlet of minimum pressure valve	1-Separator filter damaged.	1-Replace the separator filter.
	2-Oil recovery viewer obstructed.	2-Clean the oil recovery viewer.
	3-Separator nipple with O-rings damaged.	3-Replace K1 spare parts kit.

8. DRAWINGS & ILLUSTRATIONS

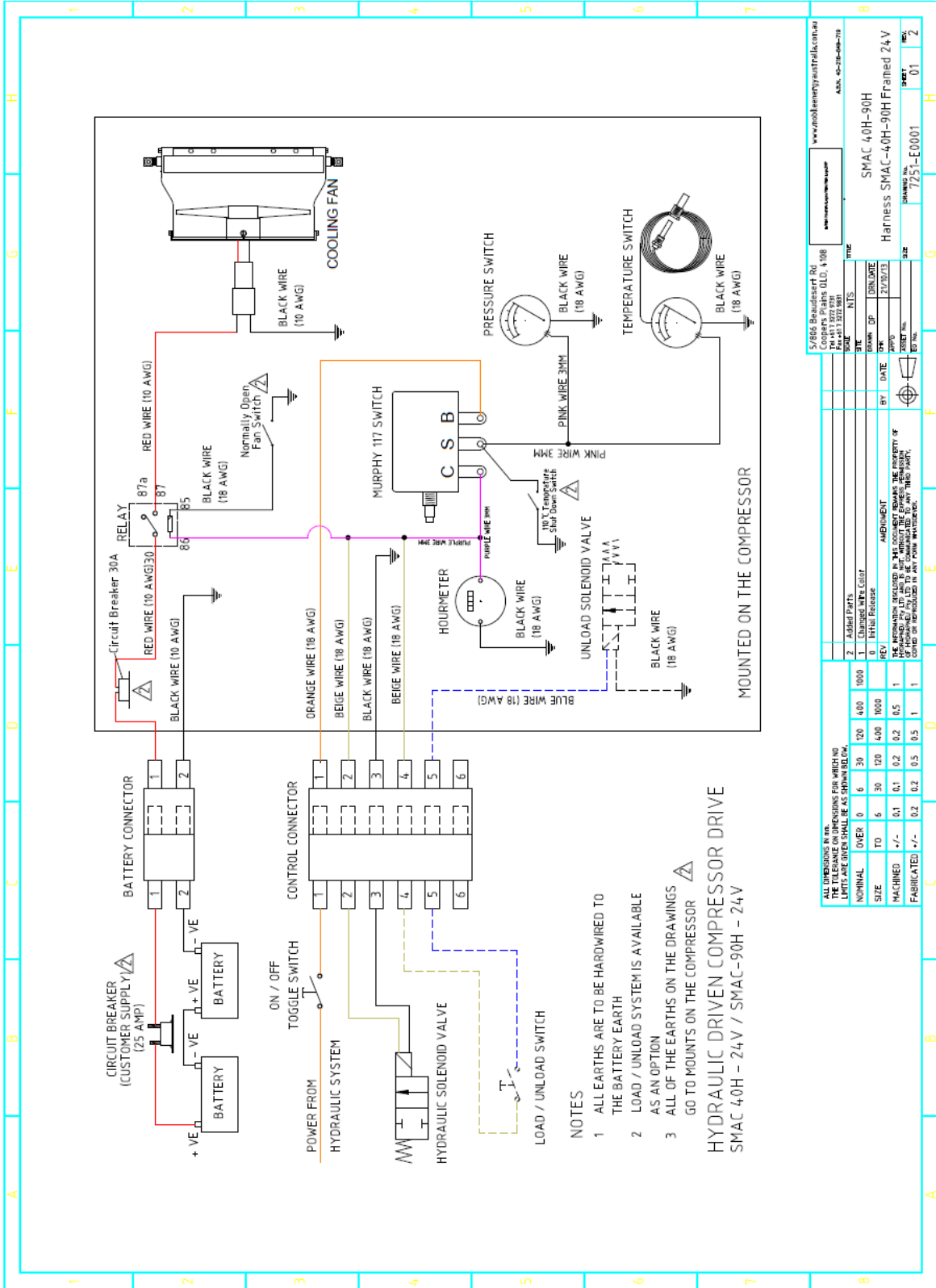
GENERAL ARRANGEMENT DRAWING



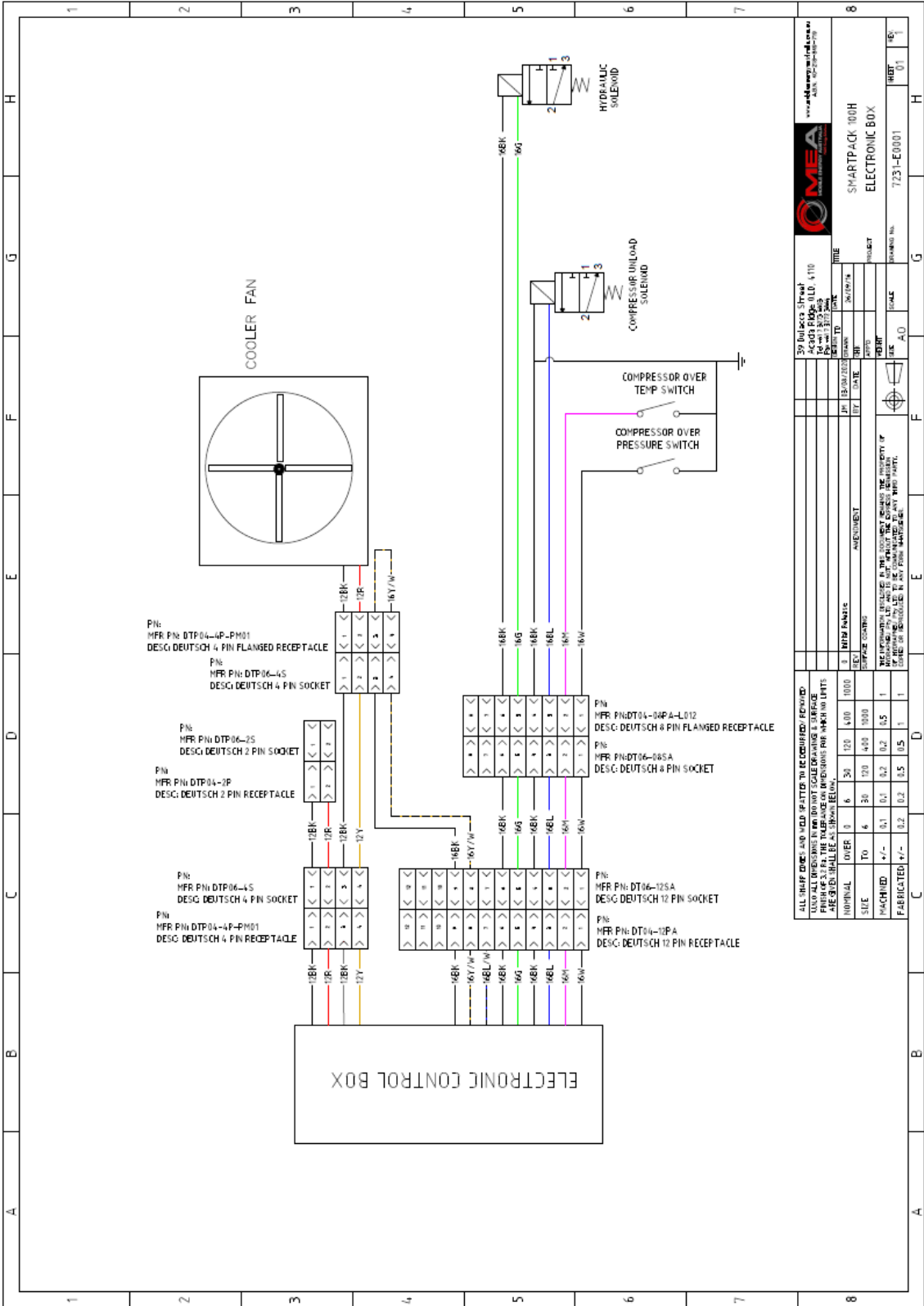




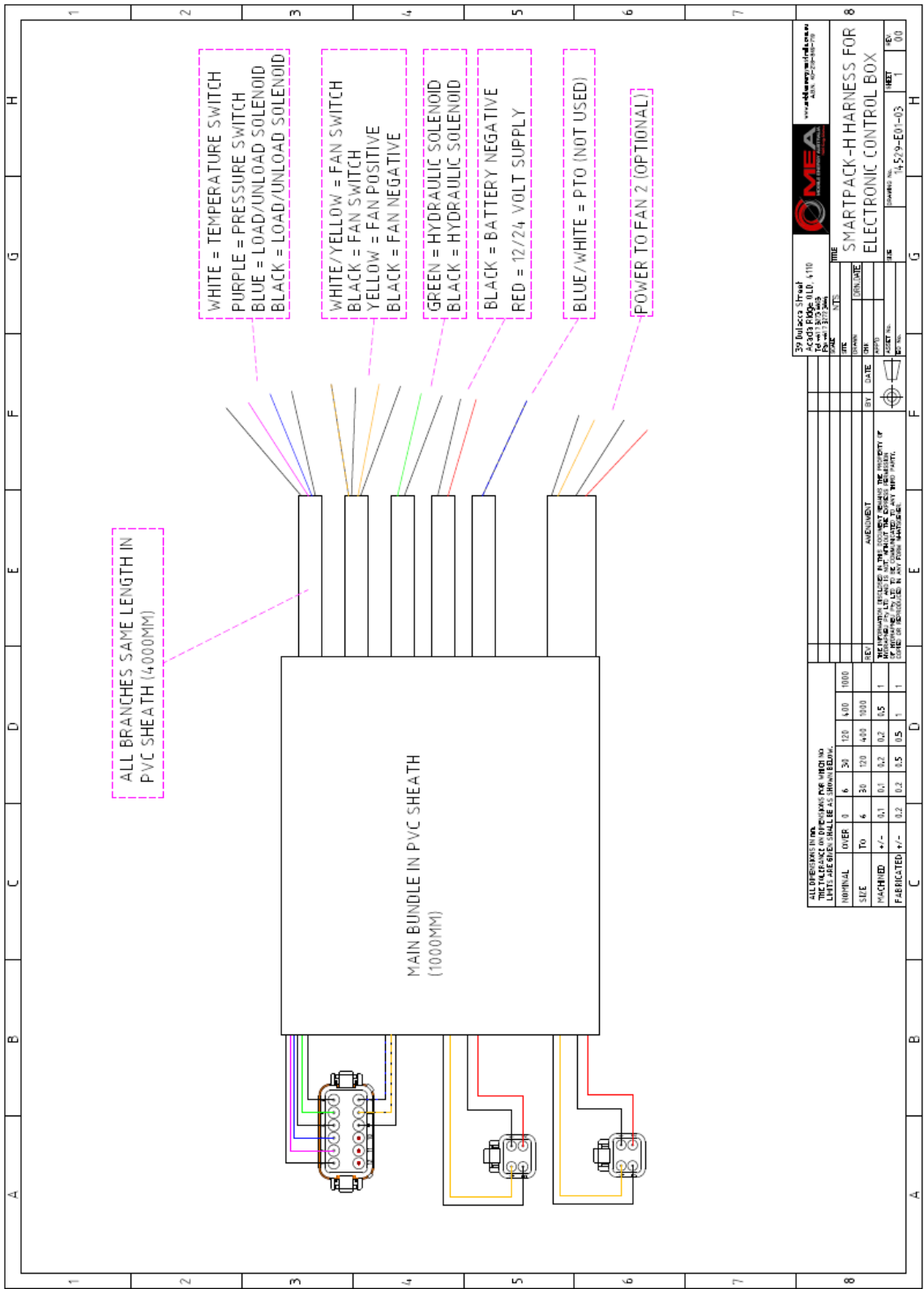
ELECTRICAL DIAGRAM (FRAMED)



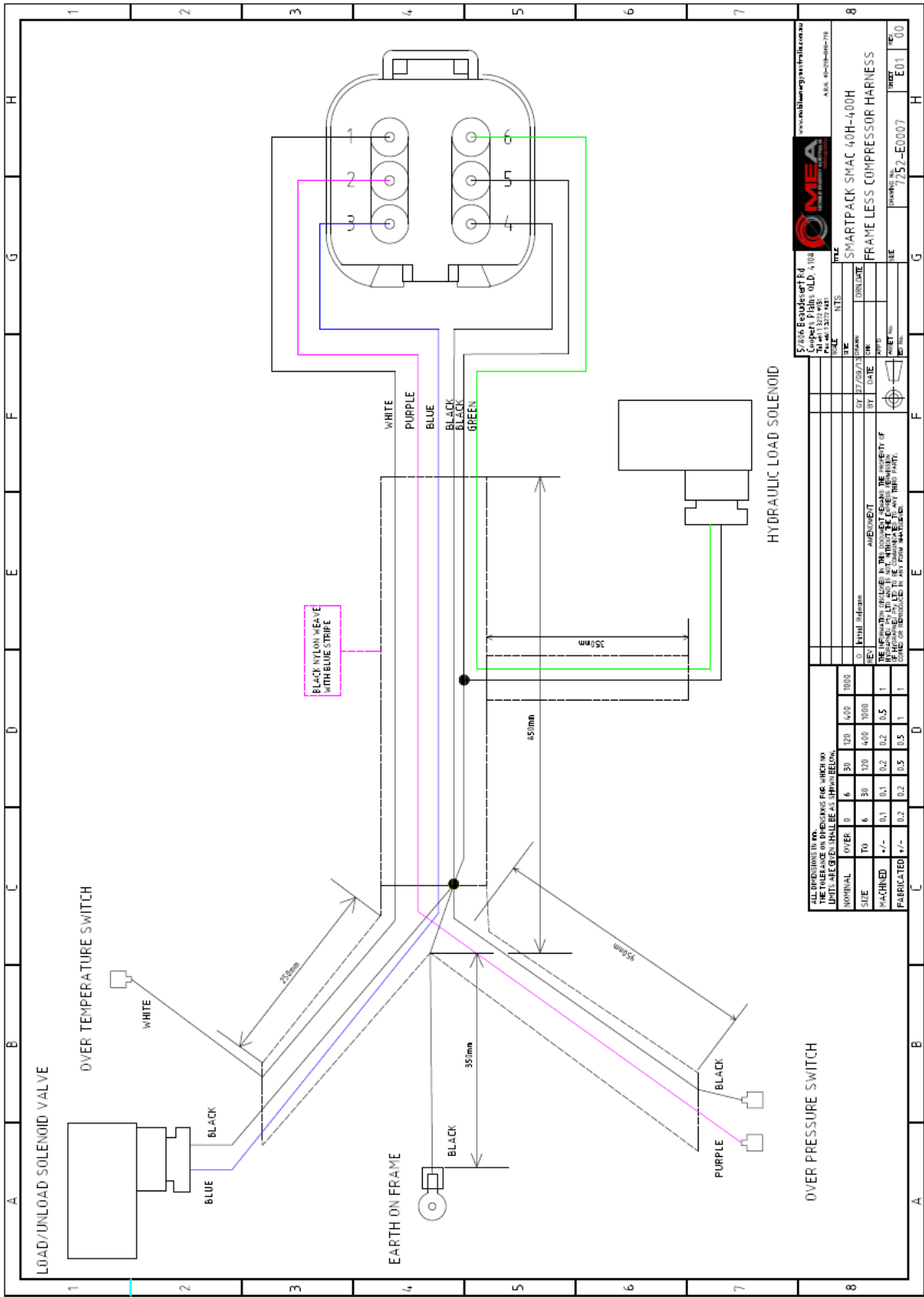
REMOTE ELECTRONIC CONTROL WIRING



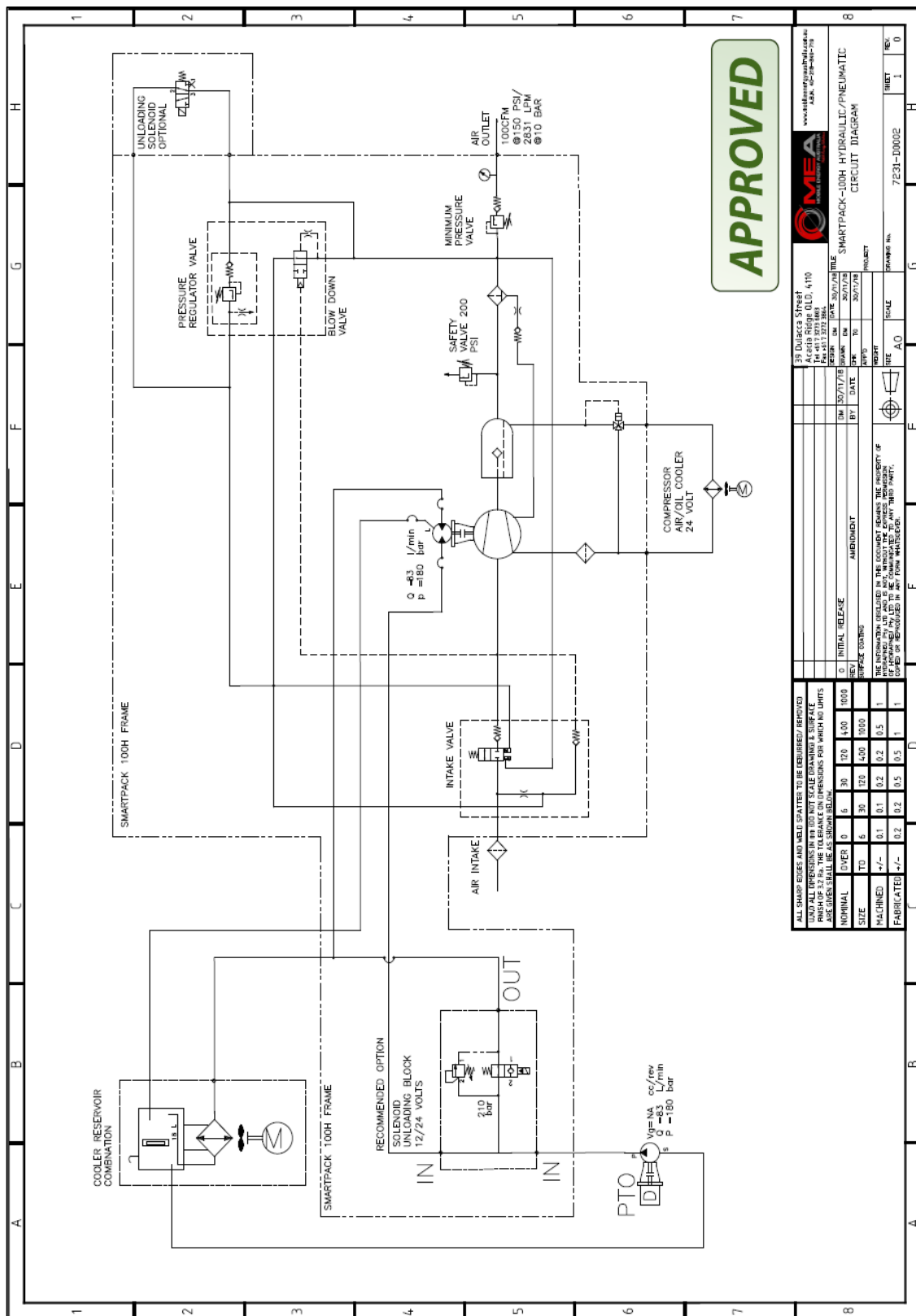
REMOTE ELECTRONIC CONTROL WIRING HARNESS



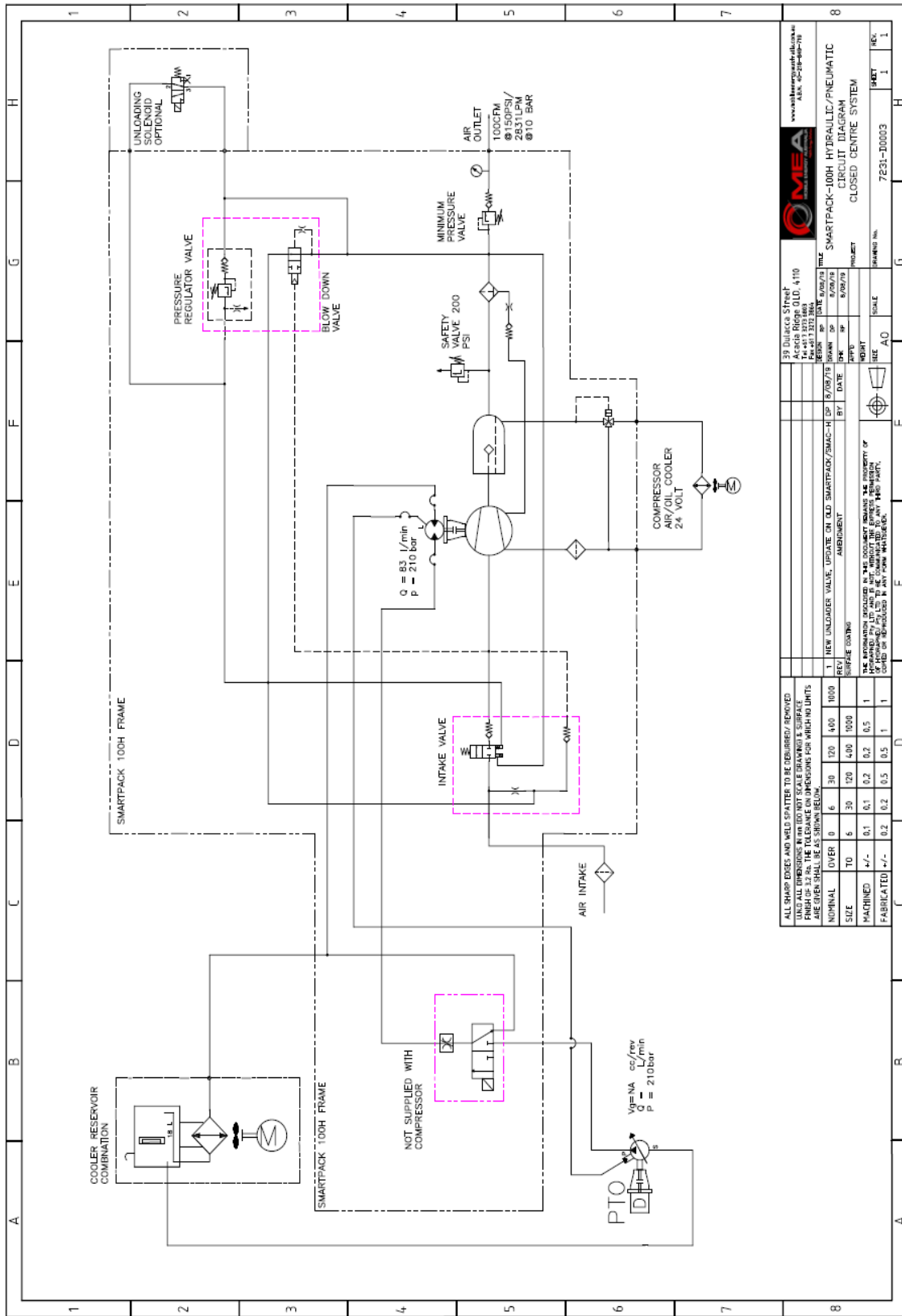
REMOTE ELECTRONIC CONTROL WIRING COMPRESSOR HARNESS



HYDRAULIC CIRCUIT OPEN CENTRE SYSTEM



HYDRAULIC CIRCUIT CLOSED CENTRE SYSTEM



9. WARRANTY

1 GENERAL PROVISIONS AND LIMITATIONS

- 1.1 Mobile Energy Australia (hereafter “MEA”) warrants to each original retail purchaser (hereafter “Buyer”) that such product(s) are, at the time of delivery to the buyer, free of manufacture ring defects in material and workmanship.

2 NO WARRANTY IS MADE WITH RESPECT TO

- 2.1 Any product(s) which in the judgment of MEA has been subject to negligence, accident, improper storage, improper installation, improper application, improper operation, or maintenance or has been repaired or altered by others without the written authority of MEA.
- 2.2 Components or accessories manufactured, warranted, and serviced by others.
- 2.3 Damages caused by the lack of normal maintenance, service, and repairs such as the replacement and service of filters and seals.
- 2.4 Damages caused by the lack of normal minimum action, such as adjustments and inspections, replacement of items, such as service filters, seals, and service kits.
- 2.5 Consequential damages caused by product(s) failure.
- 2.6 Any product(s) if other than MEA’s genuine components are used in the product(s).
- 2.7 Normal wear and tear of product(s).

3 WARRANTY PERIOD

- 3.1 The warranty period will commence upon installation of the product(s). The returned registration form marks the date of installation. If the registration form is not received, the warranty period will be deemed to commence 30 days from date of shipment from MEA.
- 3.2 The Product(s) is warranted against manufacturer defects in materials and workmanship for a period of 12 months.
- 3.3 The compressor air end is warranted to be free from defects in material and workmanship for a period of two (2) years from the date of installation.
- 3.4 Components supplied under warranty shall be warranted for the remainder of the original warranty period.
- 3.5 MEA factory rebuilt components shall be warranted for a period of 6 months from date of shipment.

4 MEA OBLIGATIONS

- 4.1 The obligation of MEA is limited to repairing or replacing parts, during normal business hours, at an authorized service facility, any component, that in the judgment of MEA are defective.
- 4.2 The obligation of MEA is limited to replacement of faulty parts. No liability is accepted for any freight costs, consequential damages, injuries, or expenses directly or indirectly related to the Product(s) failure.

5 BUYER OBLIGATIONS

- 5.1 Buyer shall notify MEA of the alleged defect within 10 days of initial discovery and return the allegedly defective component(s) within 30 days of initial discovery.
- 5.2 The Buyer must prepay all costs associated with the warranty.
- 5.3 The Buyer must return components claimed under this warranty to a facility designated by MEA for evaluation, to establish a claim under this warranty.
- 5.4 Buyer shall maintain and service MEA Product(s) in accordance with the MEA Product(s) Owner's

6 WARRANTY REGISTRATION VALIDATION

- 6.1 A registration form is provided to the Buyer with the product(s). The form must be fully completed by the Buyer and returned to MEA upon completion of the installation of the product(s) to validate the warranty. No warranty claims will be processed unless MEA has received a fully completed warranty registration form.

7 DISCLAIMER AND WARRANTY SERVICE

- 7.1 Any labor costs claimed more than MEA's set rate and/or times are not provided by this warranty. If applicable, any labor costs more than MEA rate schedules caused by, but not limited to, location or inaccessibility of the equipment, travel time or labor provided by unauthorized service personnel are not provided by this warranty.
- 7.2 This warranty is in lieu of all other warranties or obligations expressed or implied. MEA expressly disclaims all implied warranties of merchantability or fitness for a particular purpose.
- 7.3 Warranty claims must be pre-authorized by MEA, and the components returned via prepaid freight using the designated "Returned Merchandise Authorization" number and form.

PLEASE NOTE:

Both the MEA Product Registration Form and the Kubota Engine Warranty Registration Form MUST be returned to MEA in the stamped, self-addressed envelope.

WARNING!!!

Failure to return PRODUCT WARRANTY REGISTRATION FORMS detailed above may result in the delayed processing of warranty claims.

10. MOBILE ENERGY AUSTRALIA - CONTACTS

Sales

Office: 07 3273 6803

Email: sales@mobileenergyaustralia.com.au

Spare Parts

Office: 07 3273 6803

Email: spareparts@mobileenergyaustralia.com.au

Service

Office: 07 3273 6803

Email: workshop@mobileenergyaustralia.com.au

11. APPENDIX A – PRODUCT DESIGN REGISTRATION



www.mobileenergyaustralia.com.au

TRHC Pty Ltd ATF for the ThoroughClean Trust
ABN 98 674 578 946

12 January 2023

To whom it may concern

Smartpack 180H Design Registration

The Smartpack 180H design has been assessed against the requirements of the Work Health & Safety Act 2011 and Australian Standard 4343:2014. The Smartpack 180H has been found to comply with the requirements of AS4343:2014 Hazard Level E and as such does not require design registration.

Regards



Nicholas Groothoff
Engineering Manager
Mobile Energy Australia

39 Dulacca St, Acacia Ridge QLD 4110

Ph: +61 7 3273 6803

www.mobileenergyaustralia.com.au

12. APPENDIX B – FLUIDS & MATERIAL SAFETY DATA SHEETS

FLUID TYPE	DESCRIPTION	PART NUMBER
Compressor Oil	Semi Synthetic Compressor Oil 68	10019-P0002

Please use QR code to link you to relevant MSDS

