



MEEA

MOBILE ENERGY AUSTRALIA

Specialists in vehicle mounted compressor & generator systems

SMARTPACK 75-H

(7235)

Owner & Operator Manual



SERVICE MAINTENANCE AIR COMPRESSOR – HYDRAULIC DRIVEN

Revision: 1.5

Revised date: 07/03/2019

7235-D0001-01

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MEA Product Warranty Registration Form

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

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MEA Product Warranty Registration Form

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: _____

Document No 7235-D0001-01

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MOBILE ENERGY AUSTRALIA CONTACTS

Both the MEA Product Warranty Registration Form (located at the FRONT of this Manual) and the Kohler Engine Warranty Registration Form (located at the back of this manual) are to be returned to MEA.

FAILURE TO RETURN EITHER FORM MAY RESULT IN THE PRODUCT WARRANTY BEING VOID.

1. PRODUCT SAFETY

(COMPRESSOR / COMPRESSED AIR)

MEA DISCLAIMS ALL LIABILITIES FOR DAMAGE OR LOSS OF EQUIPMENT AND PROPERTY, PERSONAL INJURIES (INCLUDING DEATH), AND CONSEQUENTIAL DAMAGES ARISING OUT OF ANY MEA SYSTEM NOT USED IN ACCORDANCE WITH THE OPERATOR'S MANUAL.

ALL UNITS ARE SHIPPED WITH A DETAILED OPERATOR'S MANUAL. THIS MANUAL CONTAINS VITAL INFORMATION FOR THE SAFE USE AND EFFICIENT OPERATION OF THE UNIT. READ THE OPERATOR'S MANUAL BEFORE STARTING THE UNIT. FAILURE TO ADHERE TO THE INSTRUCTIONS COULD RESULT IN SERIOUS BODILY HARM 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 possibilities that can occur due to misuse. The following are suggested as minimum precautions to be used when operating the SMARTPACK Air Compressor. It is important that each work site shall perform a risk analysis and produce a procedure to eliminate or control the hazardous condition to minimise the risk to personnel and equipment. Health and Safety Regulations necessitate that this is a compulsory process to be carried out on each site. These, together with site specific safety procedures will help to minimize the risk to accidents, personnel injury and loss of life. It is the responsibility of the employer to ensure that the work site is safe for all employees and that the safety procedures are followed by all employees.

SAFETY WHEN OPERATING AN AIR COMPRESSOR

- Do not bypass or disable the oil temperature and pressure sensors – unless planning on running to failure (MEA does not recommend the practice).
- 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 (vehicle mounted systems).
- Do not tamper with the pressure relief valve.
- Follow safe work practice, wear the appropriate personal protective equipment (PPE) 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 the skin, it can enter blood stream and cause death.
- Vaporized oil propelled by high pressure is an explosive mixture. To prevent compressor explosion or fire, make sure that the air entering the compressor is free of flammable vapors.
- 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 service operations as set by the authority.
- 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.

PRODUCT SAFETY -continued

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.

2. INTRODUCTION

This MEA vehicle mounted air compressor system utilizes the available hydraulic power for the running of the installed compressor to supply compressed air at the specified flow rate and pressure.

Only those who have been properly trained and delegated to do so, and who have read and understand the operation and installation procedures should install MEA compressor systems.

This Manual contains vital information of the compressor system and its integration into the existing hydraulic system to ensure that it is operated in a safe and efficient manner.

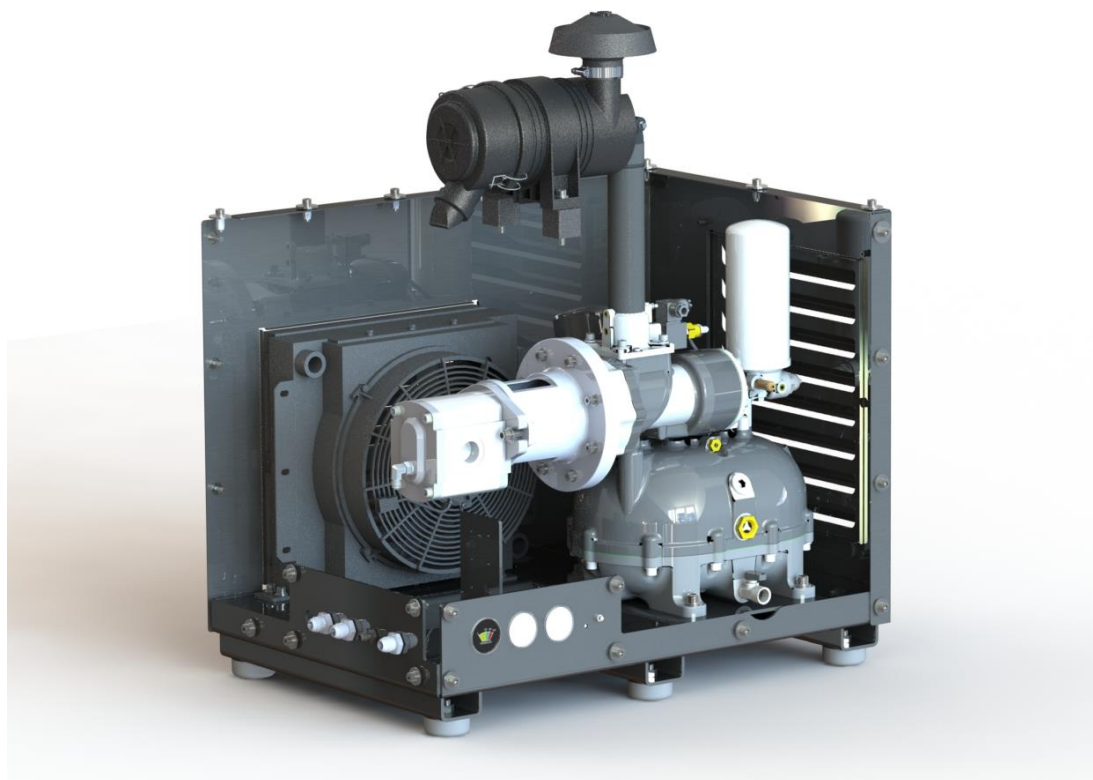
The air is drawn via the intake filter, and then through the intake valve into the compression Chamber. In the compression chamber, the air is compressed, and oil is injected for lubrication and cooling. The oil-air mixture then enters the separating tank in which most of the oil is separated from the air. The air travels to the compressed air outlet via the air-oil separating element and the minimum pressure valve and ready to be utilized.

In the air-oil separating element, the oil is filtered out down to a residual content of < 3 mg/m³ and is then conveyed back into the compressor housing via a nozzle and the non-return valve.

When the compressor module is switched off, the minimum pressure valve with a non-return function prevents backflow of the compressed air out of the system into the compression chamber.

During start up a faster pressure build-up is also ensured, which is required for optimum lubrication and oil separation.

The heat resulting during compression is dissipated via the oil-air mixture. The oil circulation also results from the pressure difference between the outlet and inlet pressure. The optimum operating temperature for the oil is adjusted by the integrated oil thermostat. Depending on the oil temperature, the oil thermostat valve routes the oil flow via the oil cooler or directly to the oil filter. The oil then flows via the oil filter to the various injection points in the compressor block.



3. SPECIFICATIONS

Compressor Model:	PACKSMART76
Compressor Type:	Oil flooded rotary screw compressor
Hydraulic Motor Type:	20cc Gear Motor
Control:	24V/12V Electronic Control, optional unloading valve for hydraulic flow control
Maximum Air Delivery:	75cfm @ 150psi, 2124 LPM@10 Bar
Oil Flow Requirements:	66 LPM
Oil Pressure (Nominal):	180 Bar
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 Synthetic Oil.
Filters:	Paper-type replaceable air filter Spin-on type oil filter Coalescing separator element

4. 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 (refer to page 14)
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. Allow compressor to run on for 2 minutes to ensure fully unloaded
11. Switch off at either the control box or in Cab and switch off the vehicle.
12. It is good practice to check for any visible signs of hydraulic fluid leakage and or compressor fluid leakage after each use.

5. INSTALLATION

The SMARTPACK 75H is designed as an integrated compressor system for connection to an existing hydraulic system. The SMARTPACK 75H only requires connection of a pressure line in, a return line out and a connection of the motor drain line (if applicable) to the tank.

WARNING(!) When setting the compressor unit up, 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 and will void warranty due to inadequate safety protection of the existing hydraulic system.

1. Install SMARTPACK 75H into position on the vehicle using 6 x min. M12 x 1.75 Grade 8.8 Fasteners.
2. Install the hydraulic lines (i.e. pressure in, return out and drain line if applicable). For frameless version, **pressure line (hydraulic oil inlet) will be marked "P" and return line (hydraulic oil outlet) will be marked "T" on the motor.** For units with unloader valve, inlet and outlet ports are marked and easily identifiable on the valve body.
3. In installing a frameless version; install the cooler in place and connect the compressor cooler lines between the cooler and the compressor, see Page 16 for port identification.
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 vehicles voltage rating.
5. Connect the pressure gauge line to the SMARTPACK 75H, see circuit diagram (Page 20).
6. Connect the terminals of the electrical loom as per the circuit diagram (Page 16) relevant to your vehicle to both the vehicle and the SMARTPACK 75H.
7. Check the oil level 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 the compressor has cooled down (safe to touch), re-check the compressor oil level.

6. SCHEDULE MAINTENANCE

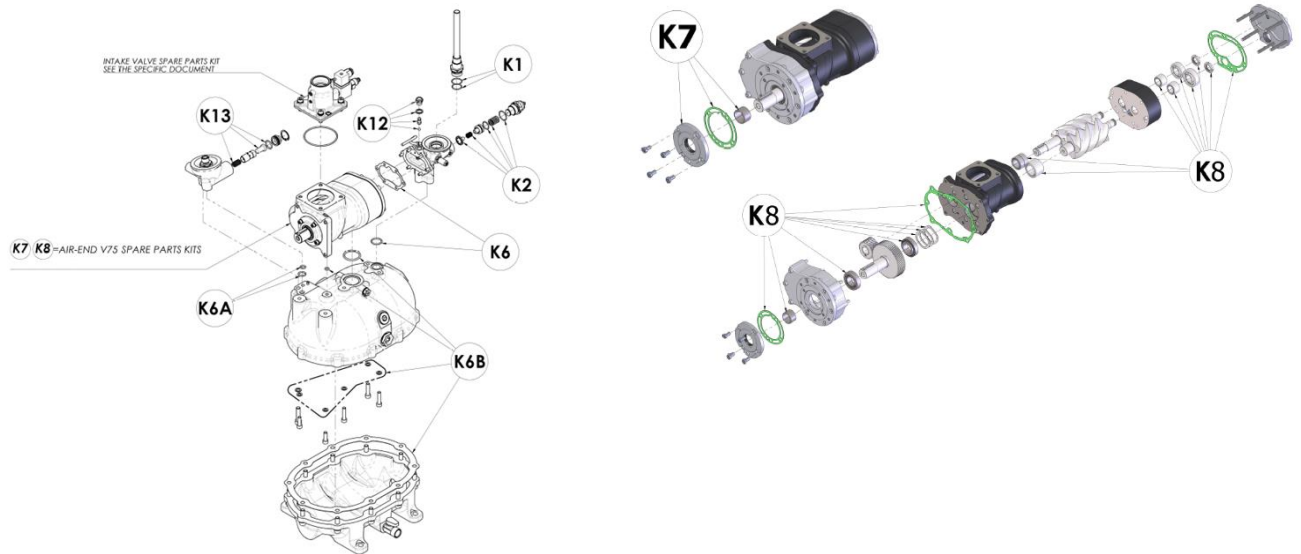
Interval	Compressor
ACTION TO BE TAKEN	
Periodically During Operation	Observe all gauge readings. Note any change from the normal readings and determine the cause. Have the necessary repairs made.
	(Note: "Normal" is the usual gauge reading when operating at similar conditions on a day to day basis.)
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. 4L.
	Change compressor oil filter.
	Change compressor air filter.
	Check belt and pulleys for signs of wear.
	Check valve clearance.
800 Hours / 18 months	Change compressor coalescing filter.

7. TROUBLESHOOTING

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
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. SPARE PARTS

8.1 PACKSMART76



MEA PART NUMBER		DESCRIPTION	SmartPack V76 55°	SmartPack V76 71°	SmartPack V76 83°	WORKING HOURS
K1	270.0590	M22-M24 SEPARATOR NIPPLES SPARE PARTS KIT	•	•	•	Corrective maintenance
K2	220.0010	V.M.P. G10 (1/2-3/4) SPARE PARTS KIT	•	•	•	after 8000 hours
K6	725.0070	VDM SEAL SmartPack V76 SPARE PARTS KIT	•	•	•	Corrective maintenance
K6A	725.0072	VTFT SEAL SmartPack V76 SPARE PARTS KIT	•	•	•	Manutenzione correttiva
K6B	725.5070	TANK SEAL SmartPack V76 SPARE PARTS KIT	•	•	•	Corrective maintenance
K7	940.0249	V75 AIR-END OIL SPLASHGUARD SPARE PARTS KIT	•	•	•	after 10000 hours
K8	940.0148	V75 AIR-END BEARINGS SPARE PARTS KIT	•	•	•	after 20000 hours
K12	725.0090	INTERNAL OIL RECOVERY VIEWER	•	•	•	Corrective maintenance
K13	725.0050	THERMOSTATIC VALVE SPARE PARTS KIT 55°	•			after 8000 hours
	725.0051	THERMOSTATIC VALVE SPARE PARTS KIT 71°		•		
	725.0052	THERMOSTATIC VALVE SPARE PARTS KIT 83°			•	

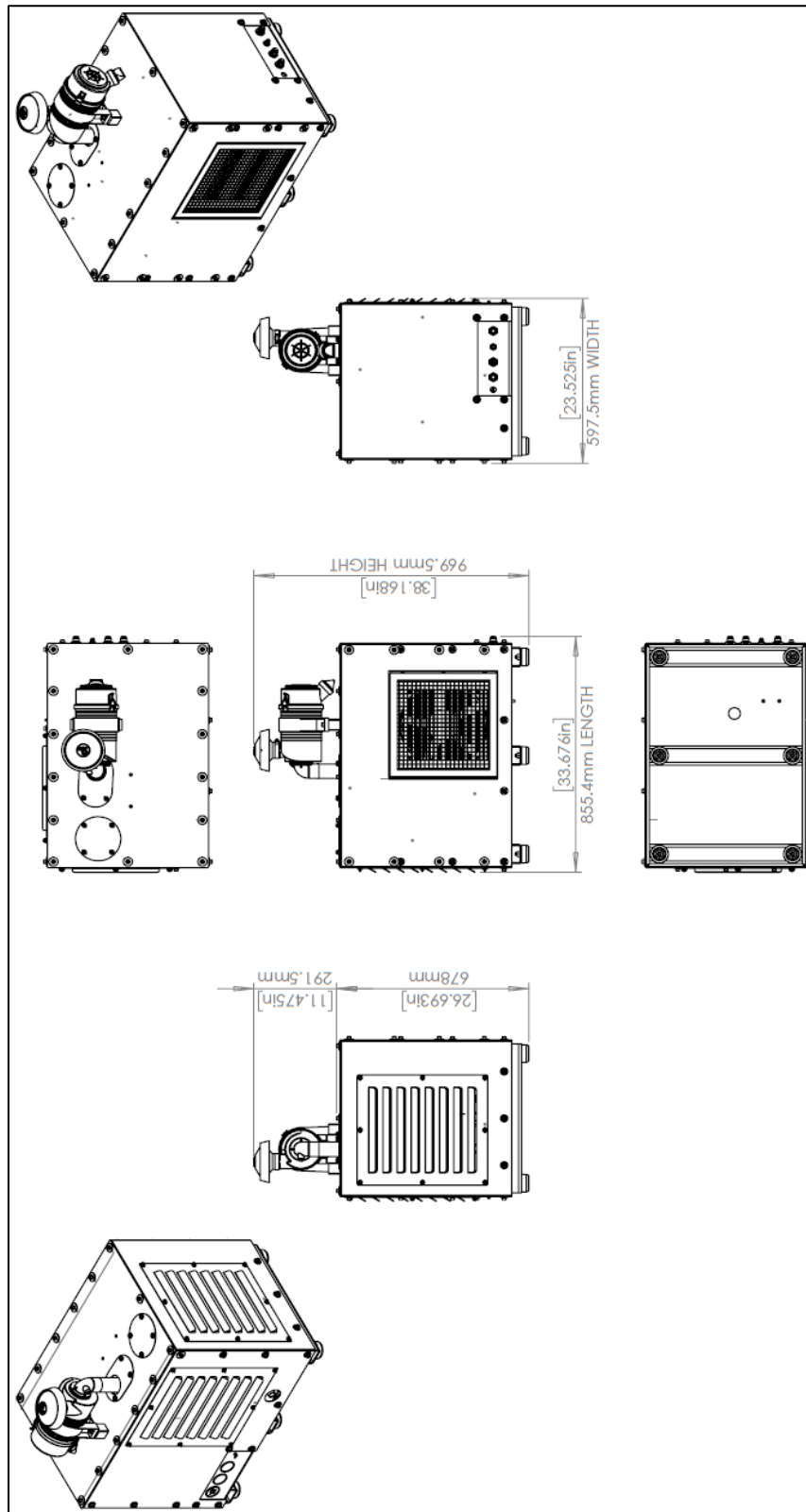
8.2 OTHERS

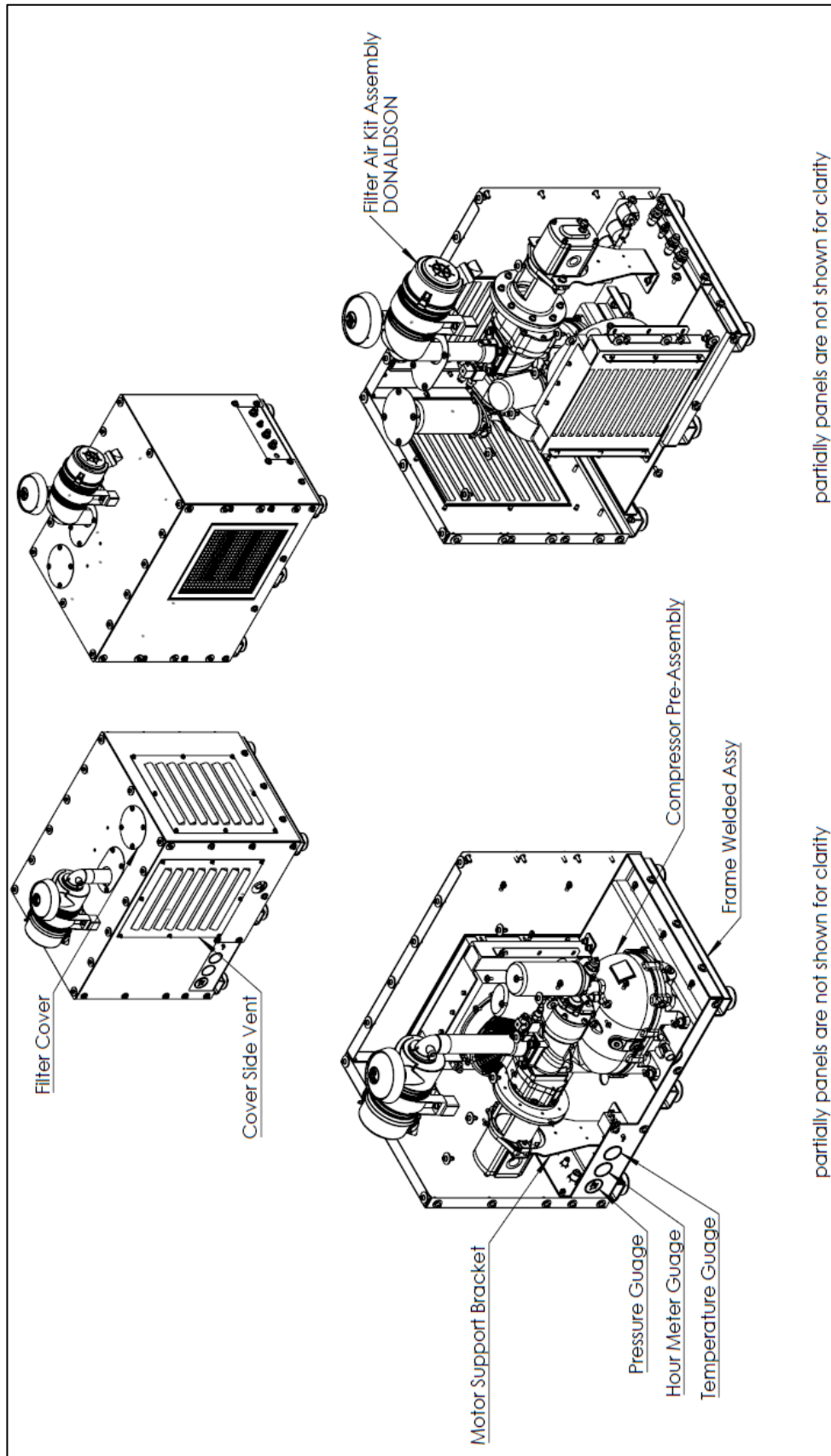
10008-P0024	AIR FILTER
10008-P0045	SPIN-ON COALESCING FILTER
10008-P0041	OIL FILTER
10012-P0083	UNLOADER VALVE – 12V
10012-P0084	UNLOADER VALVE – 24V
10019-K0005	COMPRESSOR OIL 5L (INCL. CONTAINER)

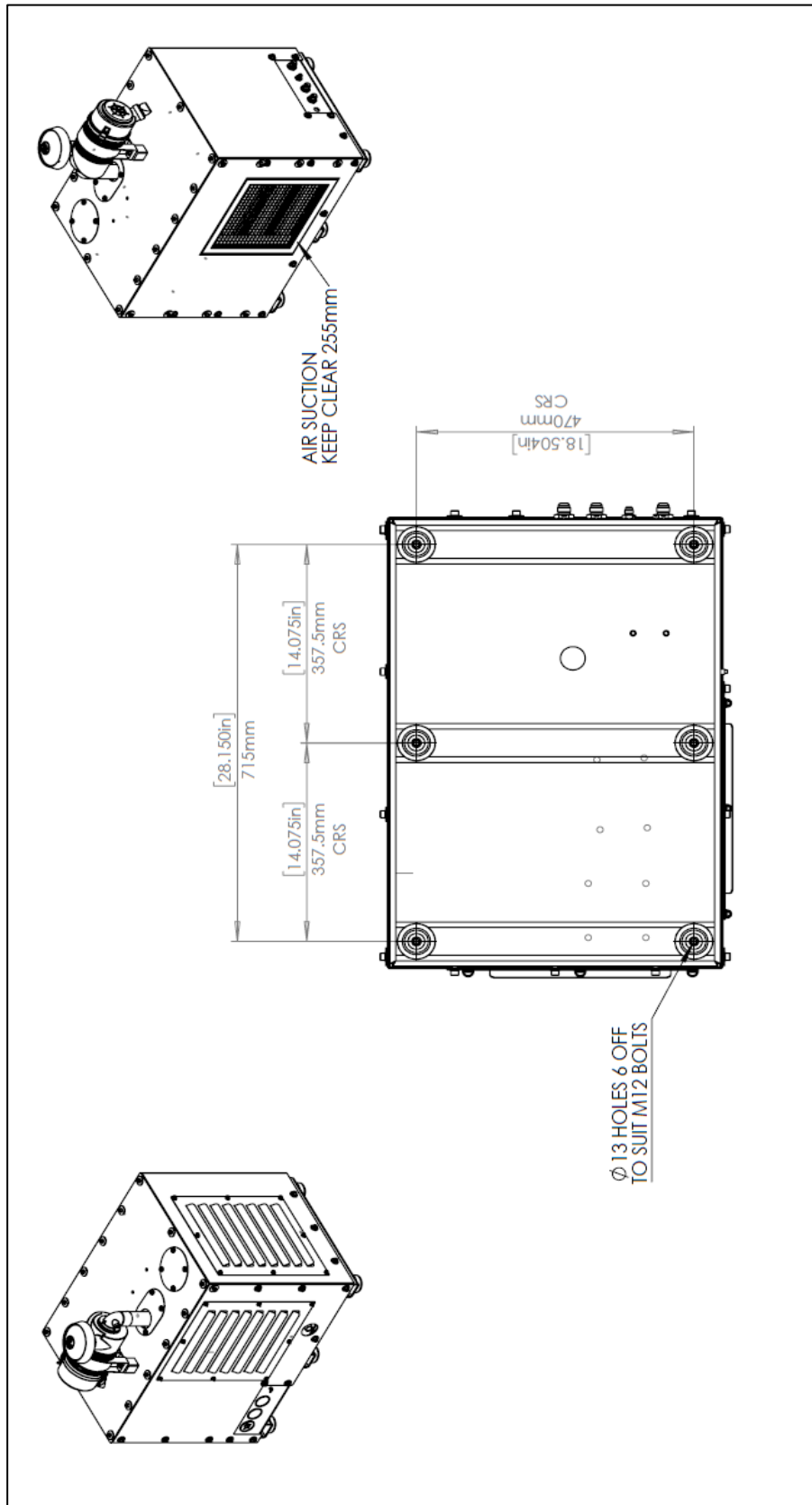
***Contact MEA spare parts sale for information regarding items (such as motor seal and coupling) not covered herein.**

9. DRAWINGS & ILLUSTRATIONS

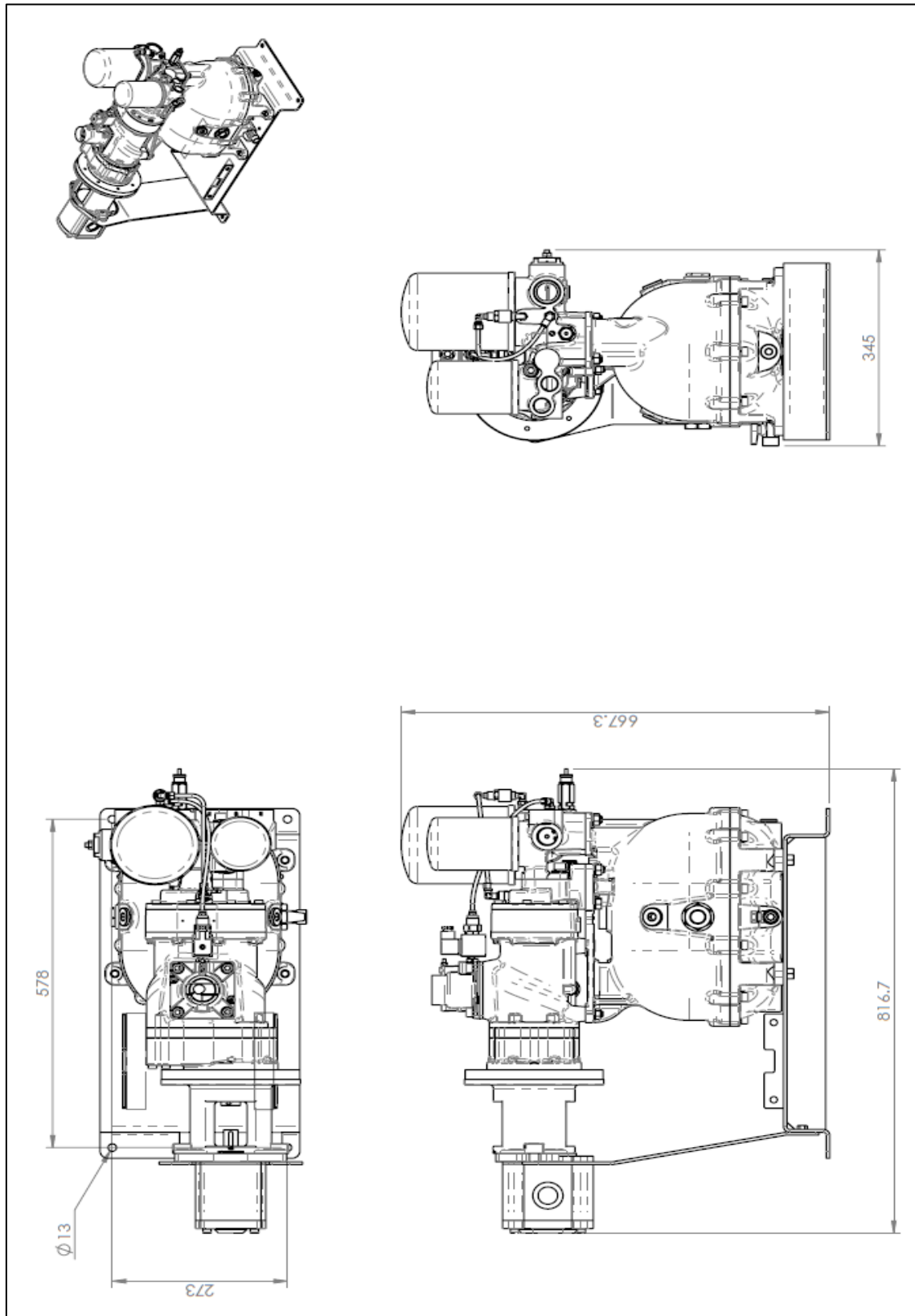
GENERAL ARRANGEMENT DRAWING (FRAMED)



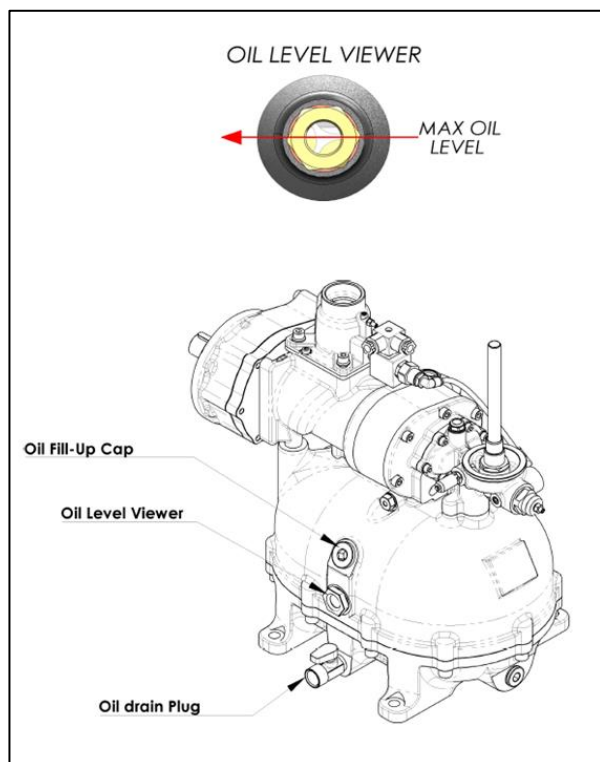
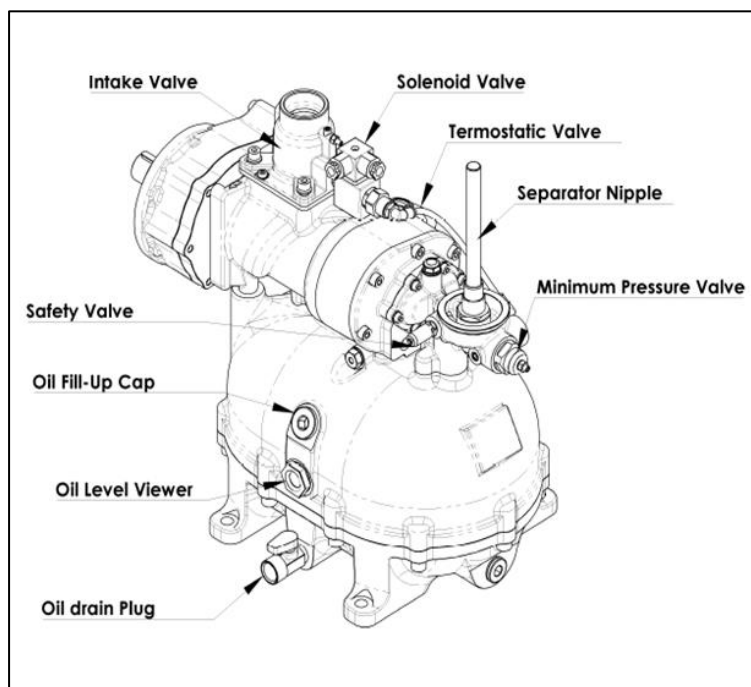
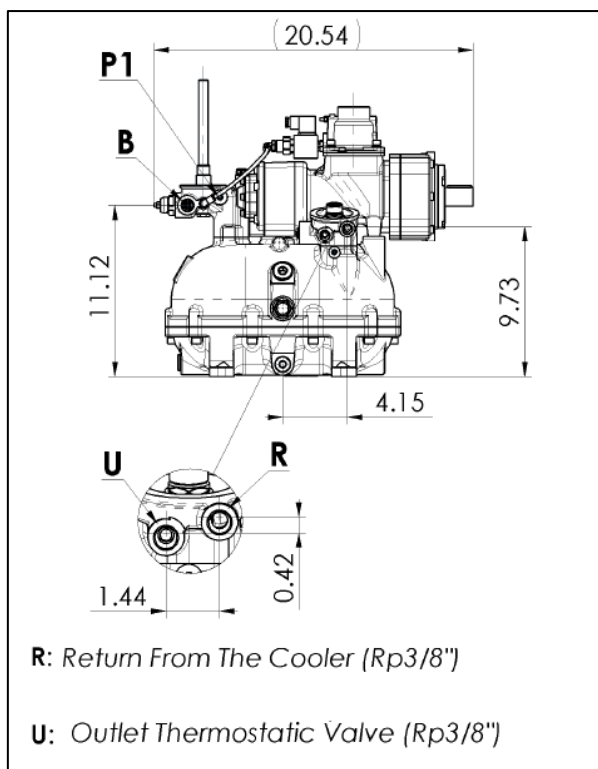




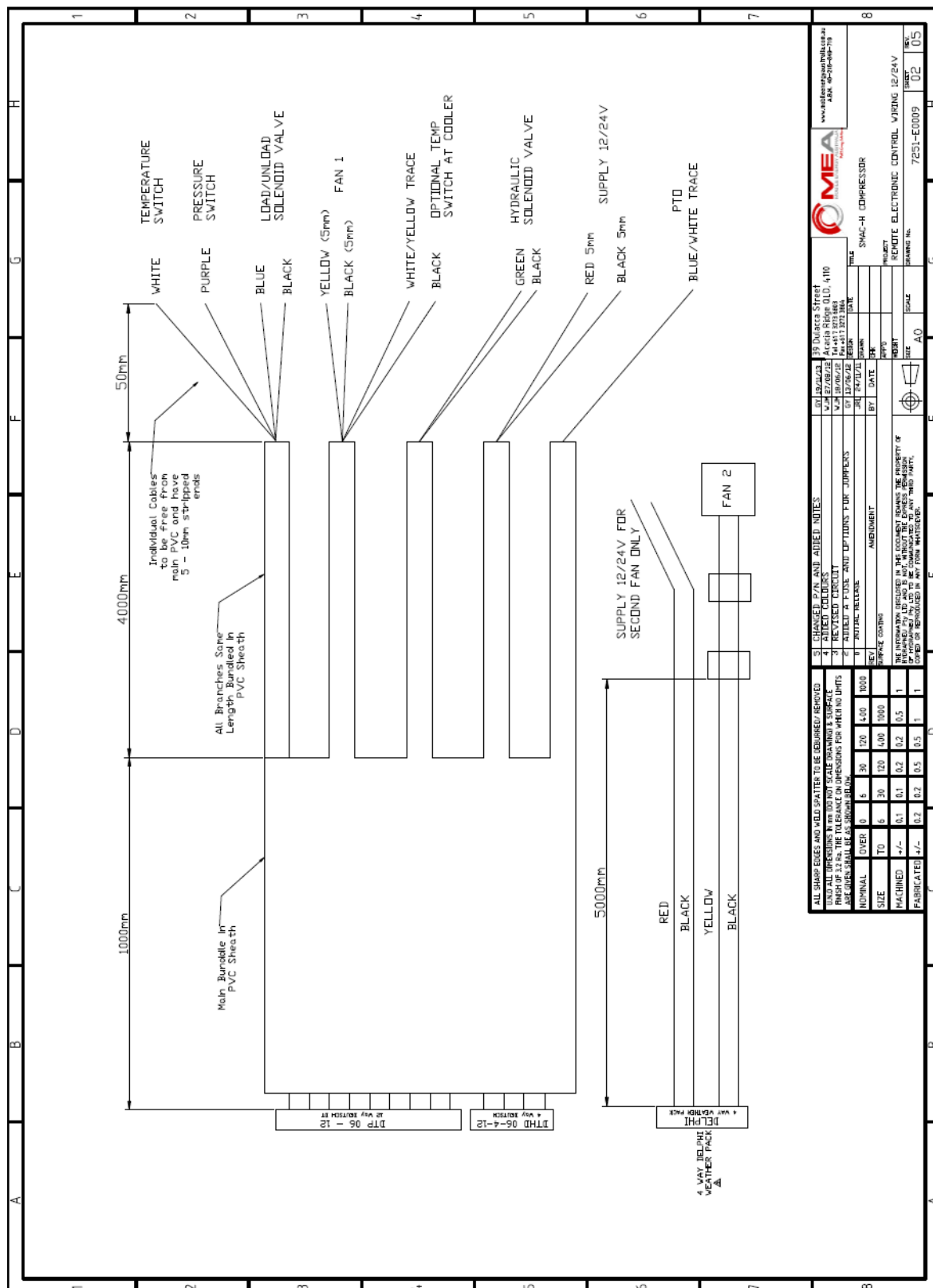
GENERAL ARRANGEMENT DRAWING (FRAMELESS)



GENERAL ARRANGEMENT (PACKSMART76)



REMOTE ELECTRONIC CONTROL WIRING - *continued*



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 WARRANTIES 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.

WARRANTY (continued)

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) in order 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 labour costs claimed in excess of MEA's set rate and/or times are not provided by this warranty. If applicable, any labour costs in excess of MEA rate schedules caused by, but not limited to, location or inaccessibility of the equipment, travel time or labour 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 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.

MOBILE ENERGY AUSTRALIA - CONTACTS

Management

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