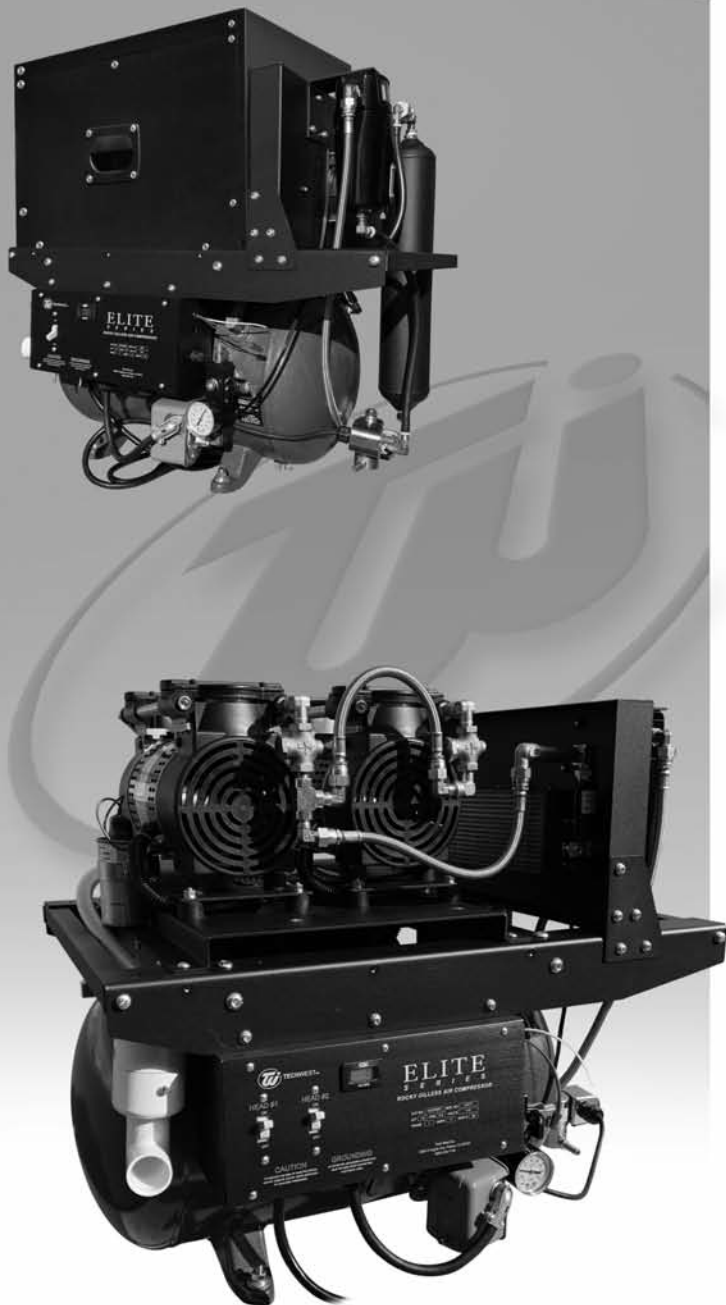


ELITE SERIES ROCKY OILLESS COMPRESSOR

INSTALLATION, USER AND SERVICE MANUAL



 **TECH WEST INC.**

Manufacturers of Dental Vacuum
and Air Systems

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Revised 8-25



ELITE SERIES ROCKY OILLESS COMPRESSOR INSTALLATION, USER AND SERVICE MANUAL

This manual is for the installation and service of Tech West's Rocky Series Oilless Compressors.

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ELITE SERIES ROCKY OILLESS COMPRESSOR

1. ROCKY COMPRESSOR LOCATION REQUIREMENTS

The Elite Series Rocky Compressor location should be level, accessible and well ventilated. **DO NOT INSTALL THE COMPRESSOR IN A CONFINED SPACE, ATOP BUILDINGS, OR IN AREAS WITH MOISTURE. INSTALLATION IS REQUIRED TO BE PERFORMED BY QUALIFIED PERSONNEL.**

Electrical

- (1) Line voltage must be within the limits of Figure 1 below. (Install a “buck-boost transformer” if line voltage is not between these values.) Circuit breaker switches must be 20 amp voltage.
- (2) Adhere to all local safety & building codes when installing equipment.
- (3) See Figure 1 below for breaker size and line voltage.

CAUTION - Voltage must be 208/230 V or motor damage may occur.

CAUTION - Voltage must be 110/120 V or motor damage may occur.

All voltage is based on alternating current ~

Figure 1: Recommended Wire and Breaker Size

Model	Voltage	Amperage	Wire Size (Gauge)	Recommended Breaker Size
Dual Head Compressors				
ACOR2D1	110/120 ~	11	12	20
ACOR2D2	208/230 ~	8	12	20
ACOR2D1Q	110/120 ~	11	12	20
ACOR2D2Q	208/230 ~	8	12	20

NOT INTENDED FOR USE WITH DENTAL MILLING MACHINES OR 3D DENTAL PRINTERS. WILL VOID WARRANTY.

INSTALLATION

This dental compressor should only be installed by qualified personnel. Should any questions arise during the installation, call Tech West Technical Support between the hours of 7:00 a.m. to 4:00 p.m. (Pacific Standard Time).

Place the compressor in a clean, dry, well ventilated area, on a solid, level surface. Consider sound level and insulate as needed. Be sure that adequate ventilation is available as the compressor is air cooled. Ambient temperature in the equipment room should be within the temperature range of 40 degrees Fahrenheit minimum to 104 degrees Fahrenheit maximum.

- 1) Check the shipping carton for damage. This could detect damage to the unit which might otherwise be overlooked. Remove cardboard shipping carton.
- 2) Remove the unit from its shipping skid. Inspect the unit for damage including sharp edges and corners. Oilless Compressors are shipped bolted to a pallet. This pallet is intended for shipping only and should be discarded.
- 3) Remove installation kit attached to pallet. It should contain the following:
 - (4) Isolation Feet
 - (1) Alternate Air Hookup Hose
 - (1) 5' Flexible Air Hose
- 4) Install isolation feet on tank legs.
- 5) Move compressor into place and make sure it is completely level.
- 6) Wiring instructions:
 - a) Have all electrical connections made by qualified personnel only. All connections should be in accordance with local codes.
 - b) Use the chart on page 2 to help determine the proper line and breaker size for the unit that is being installed.
- 7) Install the air line from the compressor tank to the building supply.
- 8) Install the 1" flex alternate air hose from the compressor to a fresh air supply.

Installation of Fuse Instructions:

Press down on Fuse holder cap and twist counter clockwise and lift up. Remove defective fuse from cap and replace with new fuse. Replacement fuse must be 1/4 amp slow blow fuse (TWI Part No. SBF-250).

INSTALLATION



Read & Understand Operators Manual Before Using This Machine. Failure To Follow Operating Instructions Could Result In Death Or Serious Injury.

Operating

Indoor use at altitudes up to 6562 ft (2000m).
Ambient temperatures 41° to 104°F (5° to 40°C).
Supply voltage fluctuation of +/- 10% of nominal voltage.

Storage and Transport:

Temperature, 0° to 150°F (-40° to 65°C)
Relative Humidity, 0 to 90%, non-condensing
Atmosphere pressure range of 50kPA to 106kPA

IEC 60601-1 Classification:

Protection against electric shock (6.2):	Class 1
Applied Parts (5.9.1, 8.3):	There are no Applied Parts.
Protection against harmful ingress of water (6.3):	Ordinary, IPX0
Degree of safety in the presence of flammable anesthetics mixture with air or with oxygen or with nitrous oxide (11.4, 11.5):	Not suitable.
ACOR2D1/2/Q	30% Duty Cycle; Maximum

ATTENTION USERS:



Alerts users to important operating and maintenance instruction. Read carefully to avoid any problems.



Warns users that voltage not insulated within the unit may be of sufficient magnitude to cause electric shock.



Warns users of hot surfaces. There is a danger of burns. Work near these surfaces only after they have cooled down.



Tech West Vacuum, Inc.
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Fresno, CA 93723



MEDICAL ELECTRICAL EQUIPMENT

WITH RESPECT TO ELECTRICAL SHOCK, FIRE, MECHANICAL AND OTHER SPECIFIED HAZARDS ONLY
IN ACCORDANCE WITH ANSI/AAMI ES60601-1: A1:2012, C1:2009/(R)2012 AND A2:2010/(R)2012,
CSA CAN/CSA-C22.2 NO.60601.14



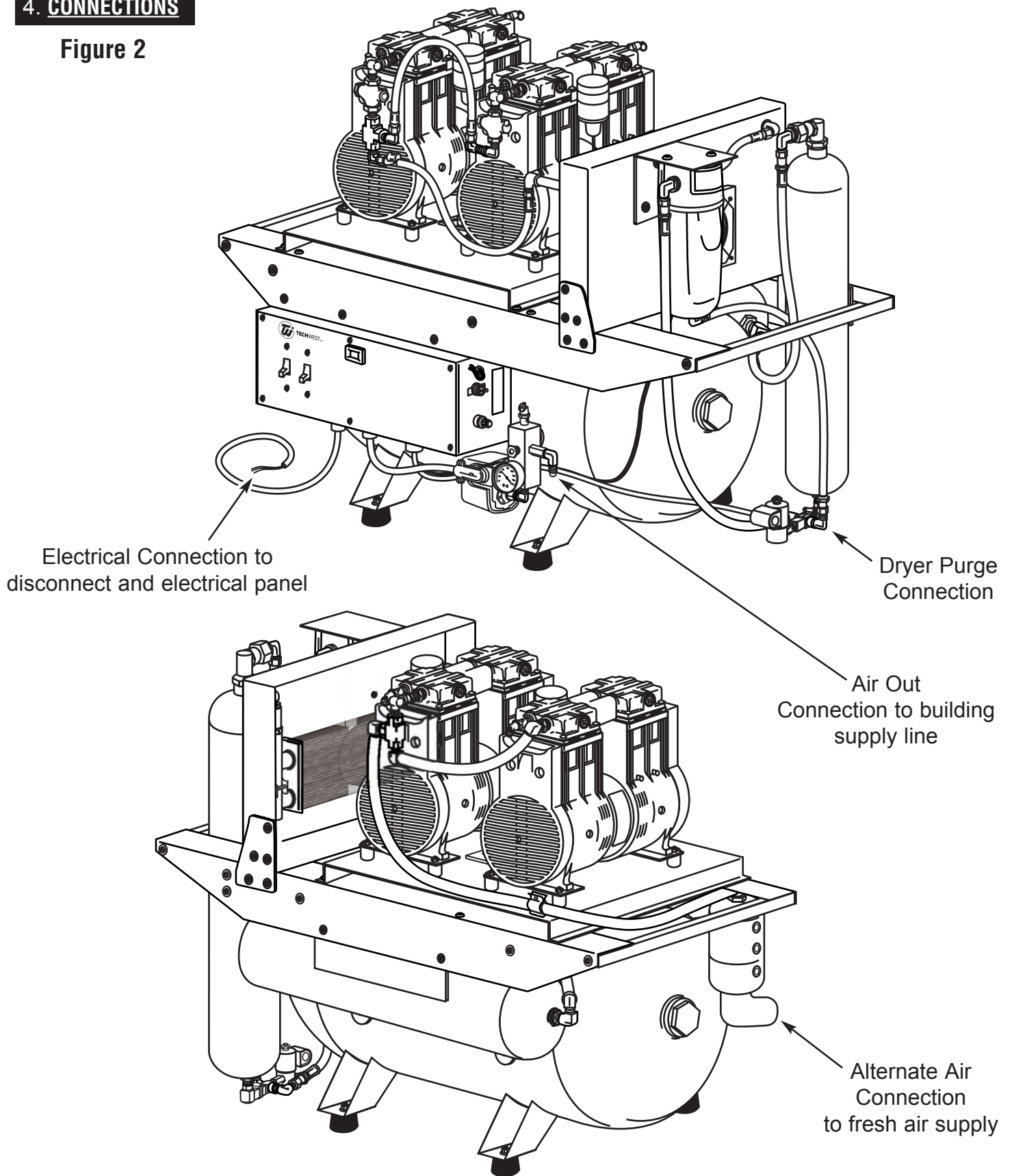
Indicates the ON and OFF position for the Equipment power switch.



Indicates protective Earth Ground for the equipment power switch.

4. CONNECTIONS

Figure 2



5. SAFETY PRECAUTIONS

- Keep fingers, foreign objects and clothing free from rotating parts and do not touch hot surfaces.
- Never attempt to service an operating unit.
- Isolate unit from system pressure and relieve backpressure before servicing.
- Disconnect all power before servicing. The thermal protector in single phase motors automatically starts motor when device resets.

USE OF THIS PRODUCT IN OR NEAR EXPLOSIVE ATMOSPHERES, OR FOR PUMPING MIXTURES OTHER THAN ATMOSPHERIC AIR MAY CAUSE AN EXPLOSION OR FIRE, RESULTING IN PERSONAL INJURY OR DEATH.

6. START-UP STEPS

- 1) Make sure the shut-off valve from the compressor tank is closed.
- 2) Turn the breaker from the panel to the "ON" position.
- 3) Turn power "ON" from the toggle switch on the compressor. Compressor should run quietly and vibration free. The storage tank should start to build pressure.
- 4) The compressor will run until the pressure gauge reads 100 psi. The compressor then will automatically shut off and the dryer will purge with a quick blast of air.
- 5) Using soapy water, check the compressor plumbing hook ups for leaks. Repair leaks if needed.
- 6) Pressure test the entire plumbing system for leaks. Use the storage tank pressure gauge to monitor a pressure drop. After the plumbing system has been pressurized for 30 minutes, re-check the gauge for pressure drop. If there is a drop in pressure, find and repair all leaks in the office plumbing.
- 7) Complete and mail in the warranty card for the compressor within ten days of installation.

AIR LEAKS ARE THE MAIN CAUSE OF COMPRESSOR FAILURES.

7. GENERAL SERVICE INFORMATION

For parts and service on Rocky series products contact the nearest authorized Tech West distributor. To expedite appropriate service, be prepared to provide the unit model number, identification number, and serial number found on the nameplate located on the front of the unit switch plate.

Component life operating at continuous duty & maximum pressure will shorten the life of the rings and skirts. It is difficult to predict due to many conditions which directly influence wear. Some of these conditions may include ambient air temperature, air cleanliness, operating pressure, piston stroke on the particular model being utilized, duty cycle, maintenance of filters, etc.

Because of these various factors it is appropriate to generalize on component wear life and choose some conservative estimates for most standard applications.

8. PERIODIC SERVICING

MONTHLY SERVICING

- 1) Remove the purge bucket and empty as needed
- 2) Crack the drain petcock on the bottom of the storage tank to check for water and drain if needed.
- 3) Check moisture indicator to see that it is still "BLUE". If it is pink, it is time to service the air dryer.
- 4) Check pump-up times of the compressor.
- 5) Check intake air supply filters. Replace filters as needed.

YEARLY SERVICING

- 1) Repeat all of the monthly servicing.
- 2) Replace the alternate air filter. (Part #: TIF-100)
- 3) Check the coalescing filter and change if needed. (Part #: CFEO-375)

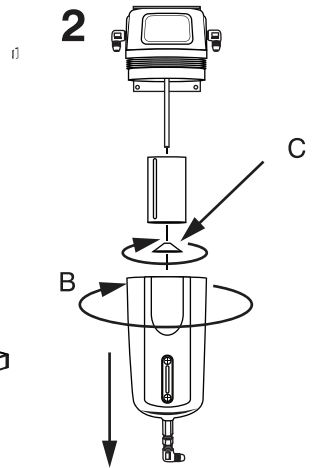
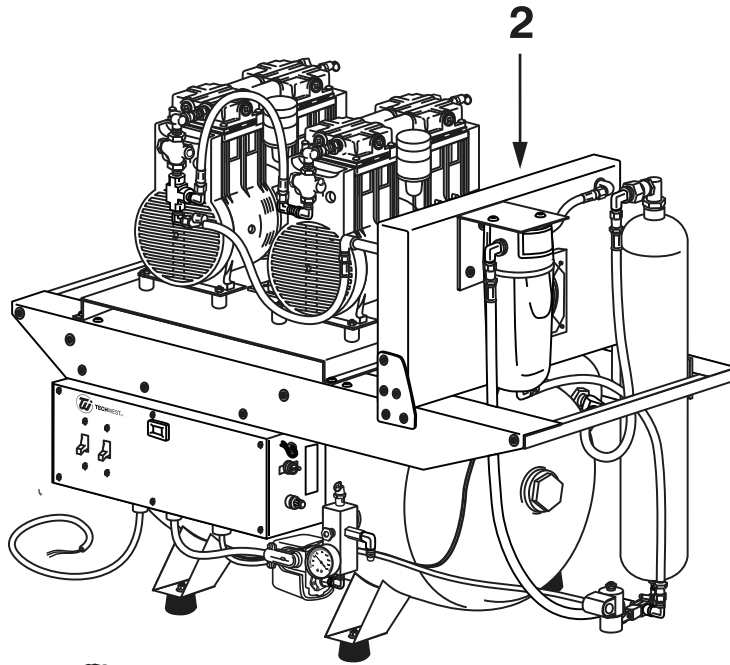
QUICK MAINTENANCE

(All Rocky Models)

1. Always disconnect power before performing any maintenance.

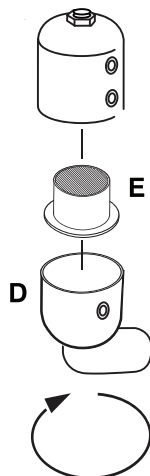
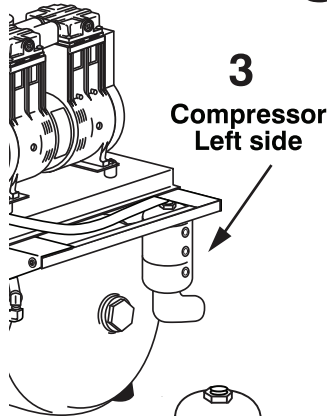
2. Change Coalescing Filter

- Push up on bowl ("A") to Remove Coalescing Filter from the attaching bracket
- Twist cannister to the left ("B") and pull down to expose the filter.
- Remove coned restraining nut ("C") below filter element and remove old filter.
- Slide New filter element (TW part# CFE0-375) into place and replace coned restraining nut.
- Reverse steps a and b to re-attach cannister to the bowl and then replace entire Coalescing Filter assembly back into it's bracket.



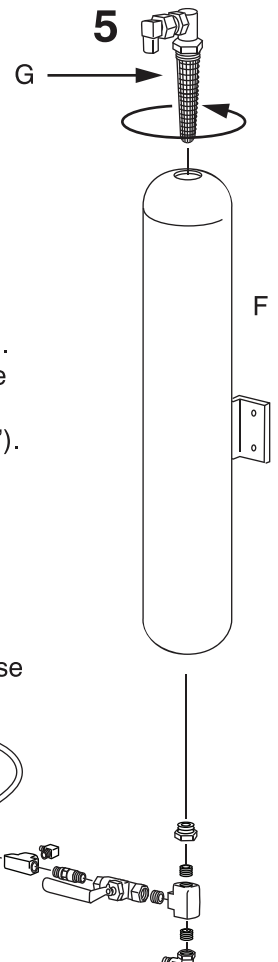
3. Replace Air Intake Filter

- Remove outer casing ("D") by twisting counter clockwise and pulling gently.
- Remove old intake filter and replace with new intake filter ("E"). (TW part # TIF-100)
- Push casing together gently while turning clockwise to lock it in place.

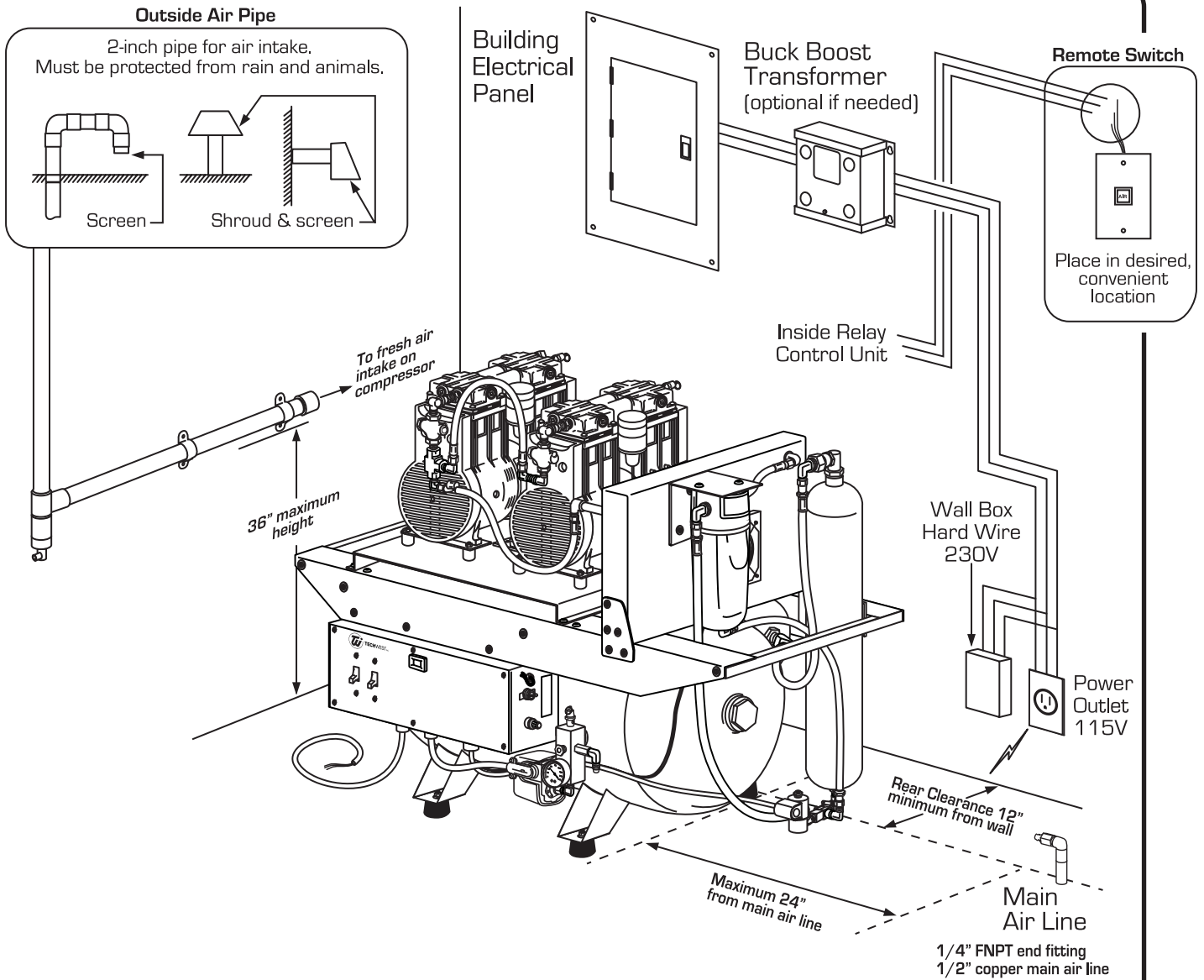


4. Desiccant Dryer Maintenance

- Remove Desiccant Air Dryer Assy. and bracket ("F") from the compressor.
- Remove top filter ("G"). Turn counter-clockwise and lift. Remove hose assy. from bottom ("H").
- Turn Dessicant tank upside down and remove all contents.
- Add new filtering crystals to tank. Reverse steps a-b to complete maintenance of Desiccant Dryer.



Target Room Layout



Important Information

Purge Valve and Drip Leg -

A drip leg with drain valve must be installed at lower end of the remote air intake pipe to collect condensation during operation. Attach a drain tube to the drip leg valve to allow drainage into floor drain.

Electrical Information

All compressors need to have dedicated circuit breakers. For breaker size and electrical connection type please refer to the product specifications / Dimensions chart on last page.

Service Clearances

Allow 12" on all sides for all units

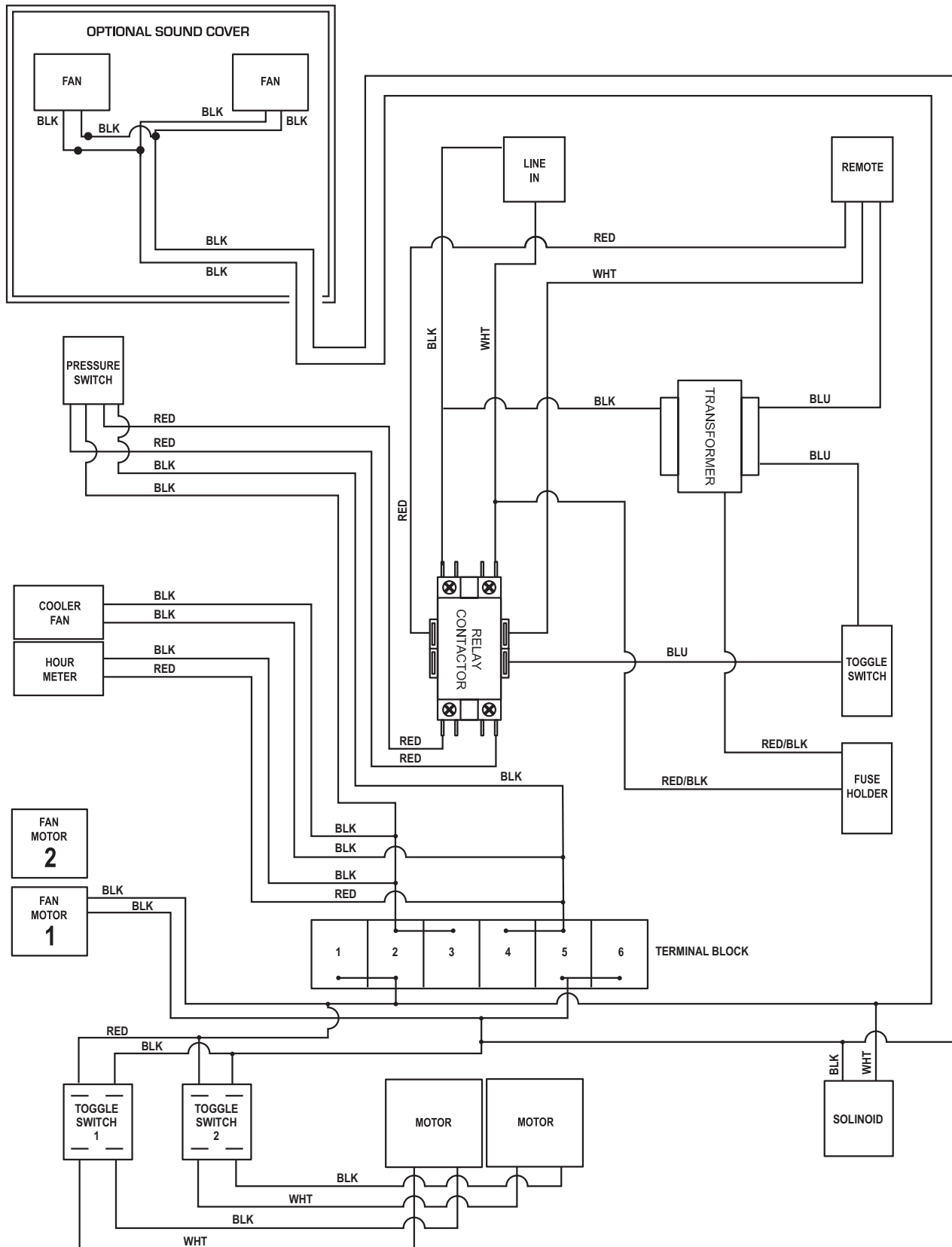
Ambient Temperatures

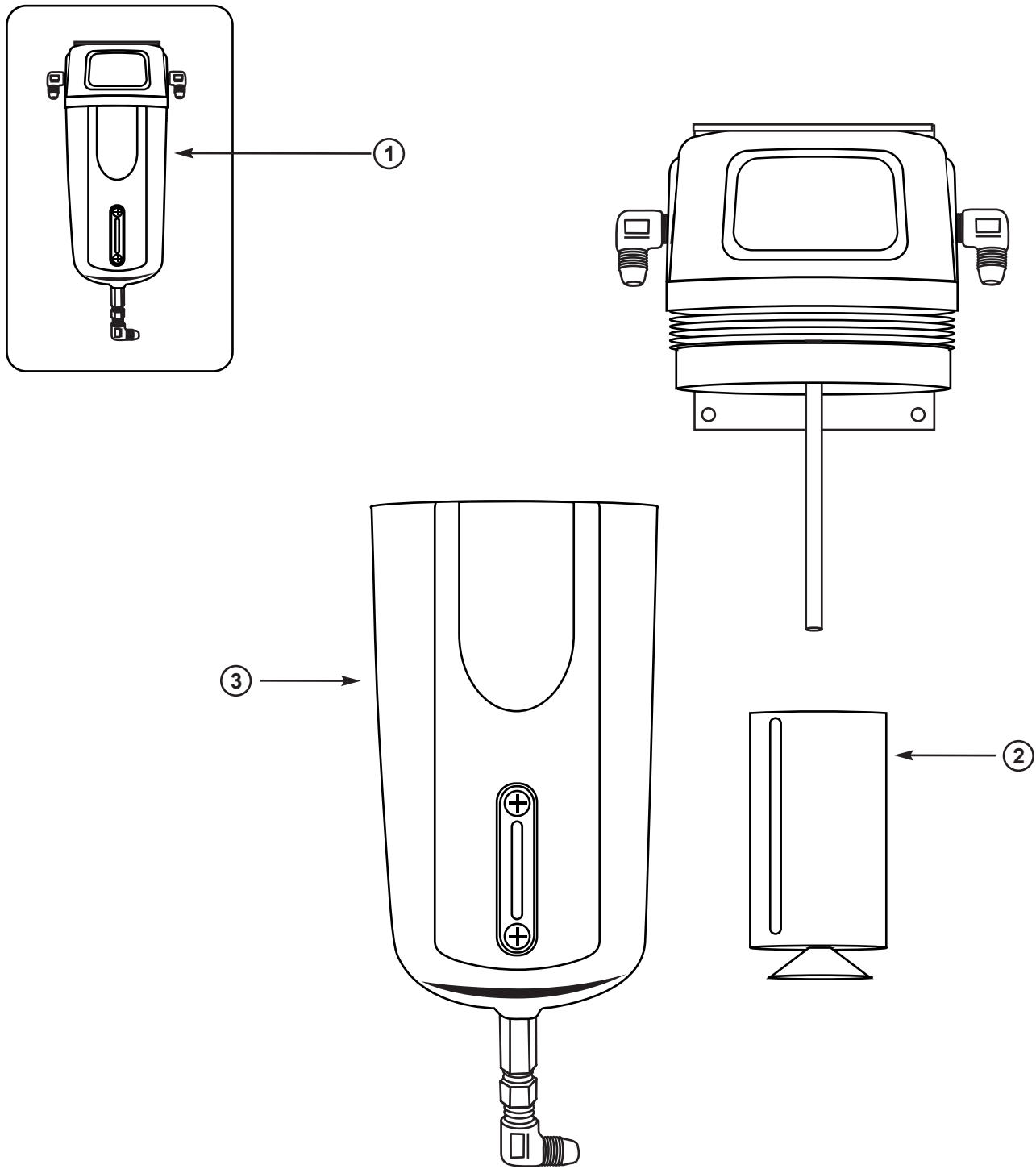
Must not exceed 105°F Must remain above 41°F

Air Line Pipe Diameter

Operatories	Copper
1	1/2"
2	1/2"
3	1/2"
4	1/2"
5	1/2"
6	1/2"
7	3/4"
8	3/4"
9	3/4"
10	3/4"
11	3/4"
12	3/4"

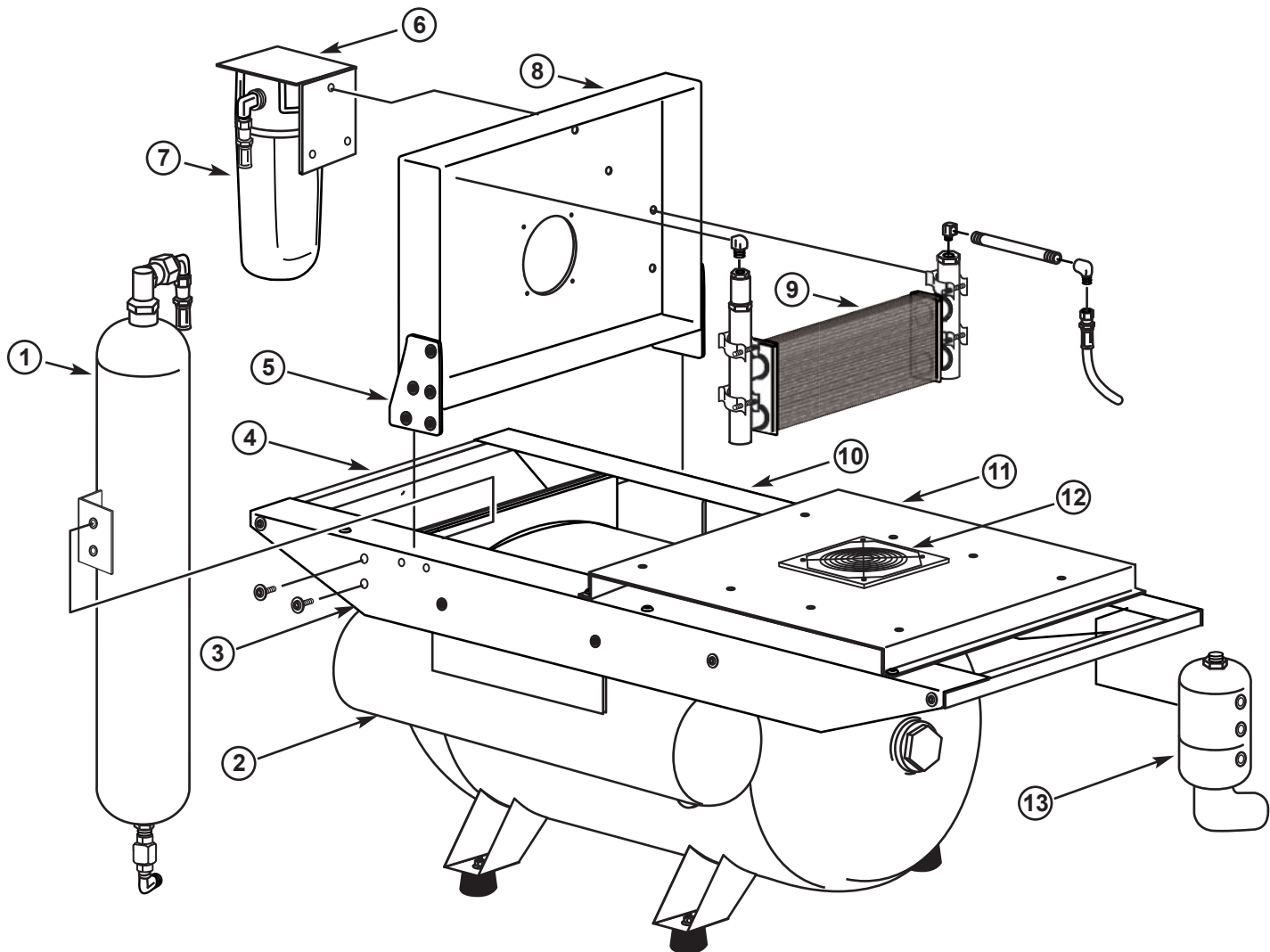
WIRING DIAGRAM





ROCKY COALESCING FILTER ASSEMBLY

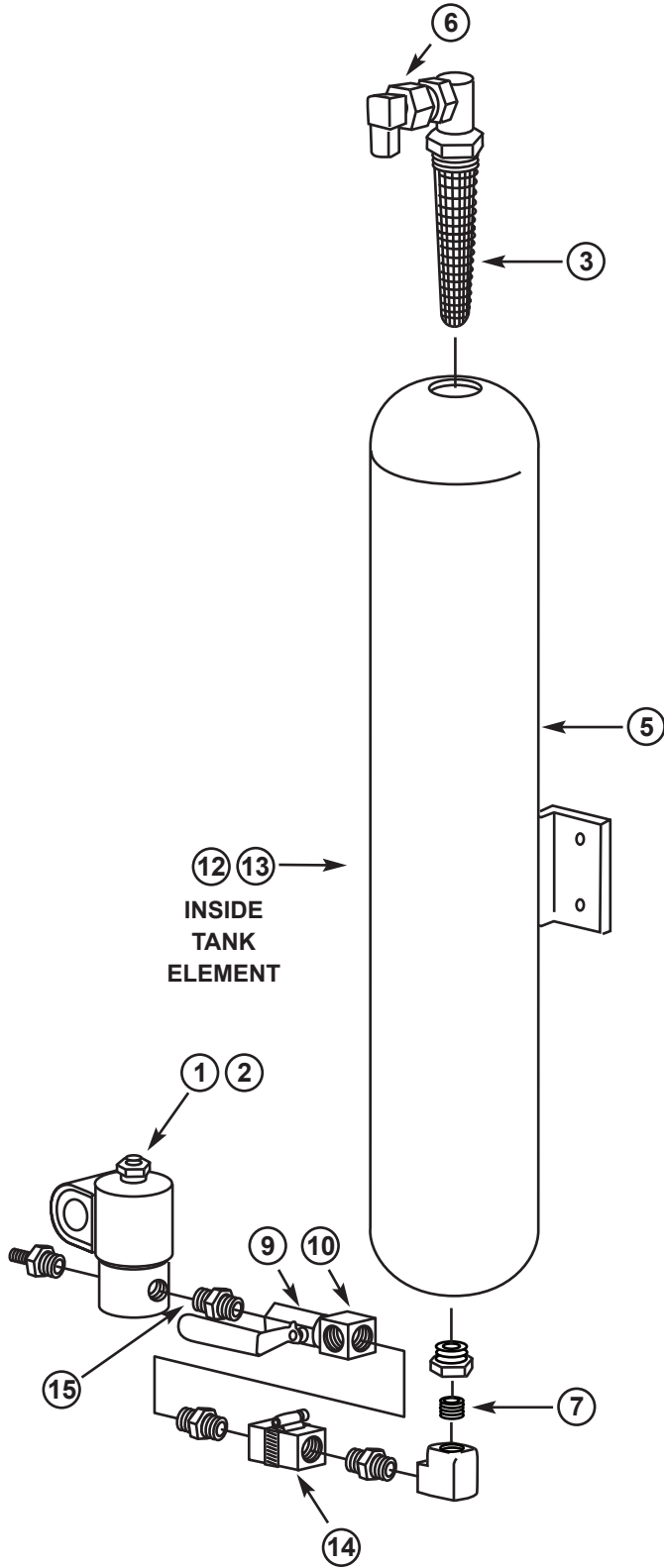
KEY	PART NO.	DESCRIPTION	UNIT
1	CFAO-375	COALESCING FILTER ASSEMBLY 3/8	1
2	CFEO-375	COALESCING FILTER ELEMENT 3/8	1
3	CFBP-375	COALESCING FILTER BOWL	1



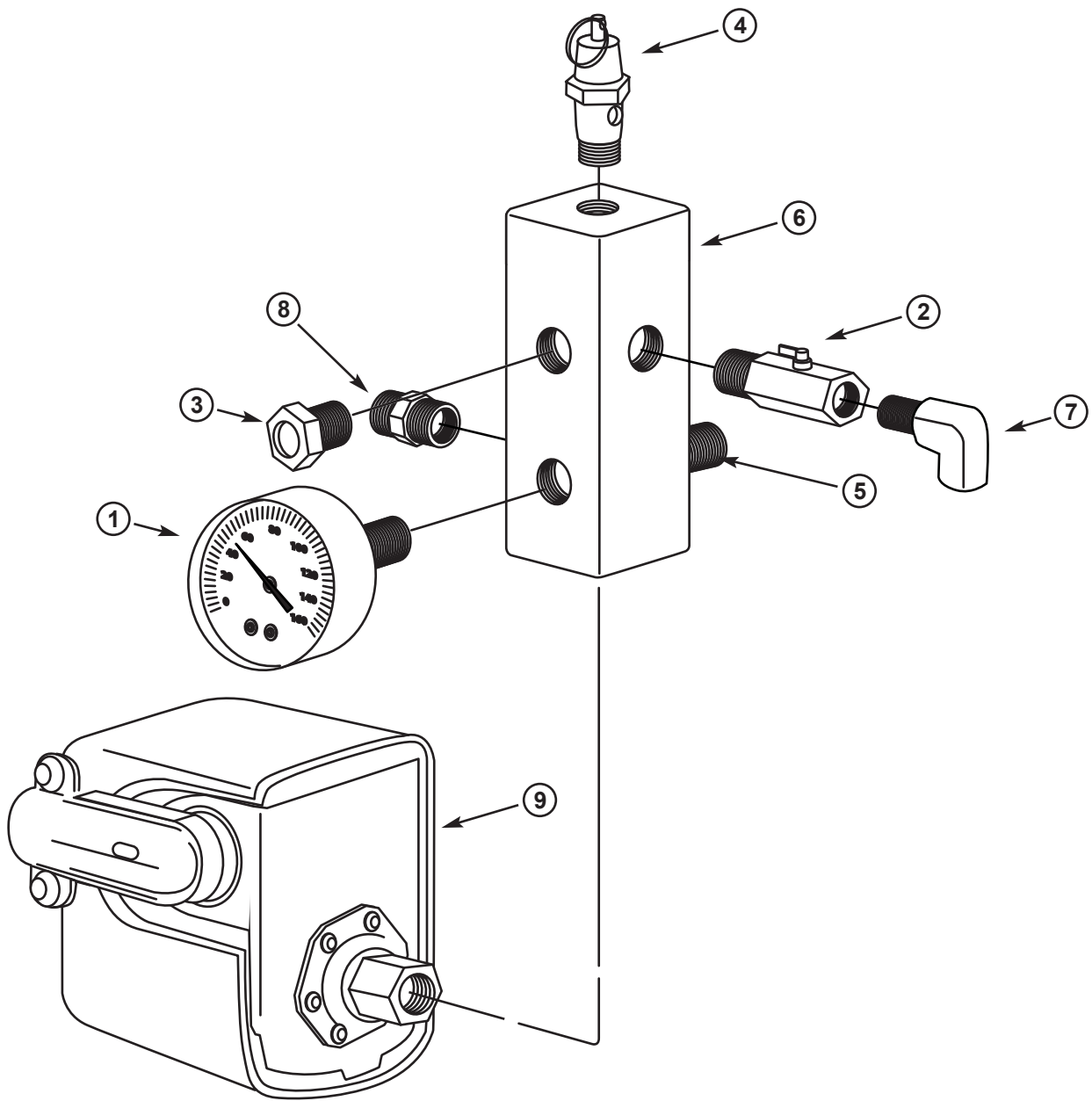
ROCKY REAR VIEW TANK ASSEMBLY AND PARTS LIST

KEY	PART NO.	DESCRIPTION	UNIT
1	EDT-100	REPLACEMENT DESICCANT CARTRIDGE - ELITE	1
2	EPT-100	ELITE PURGE TANK	1
3	ETAR-R	ELITE TANK ANGLE ROCKY - REAR	1
4	ETHR	ELITE TANK HANDLE ROCKY	2
5	EPCB	ELITE PRECOOLER BRACKET	2
6	CFB-P	COALESCING FILTER BRACKET	1
7	CFAO-375	COALESCING FILTER ASSEMBLY	1
8	ERPCM	ELITE ROCKY PRECOOLER MOUNT	1
9	DPC-1E	ELITE PRECOOLER - SINGLE	1
10	ETAR-F	ELITE TANK ANGLE ROCKY - FRONT	1
11	ERMM	ELITE ROCKY MOTOR MOUNT	1
12	CF-115-230E	ELITE COOLING FAN - DUAL VOLTAGE	2
13	EAAR	ELITE ALTERNATE AIR - ROCKY	1

ROCKY DESICCANT AIR DRYER ASSEMBLY



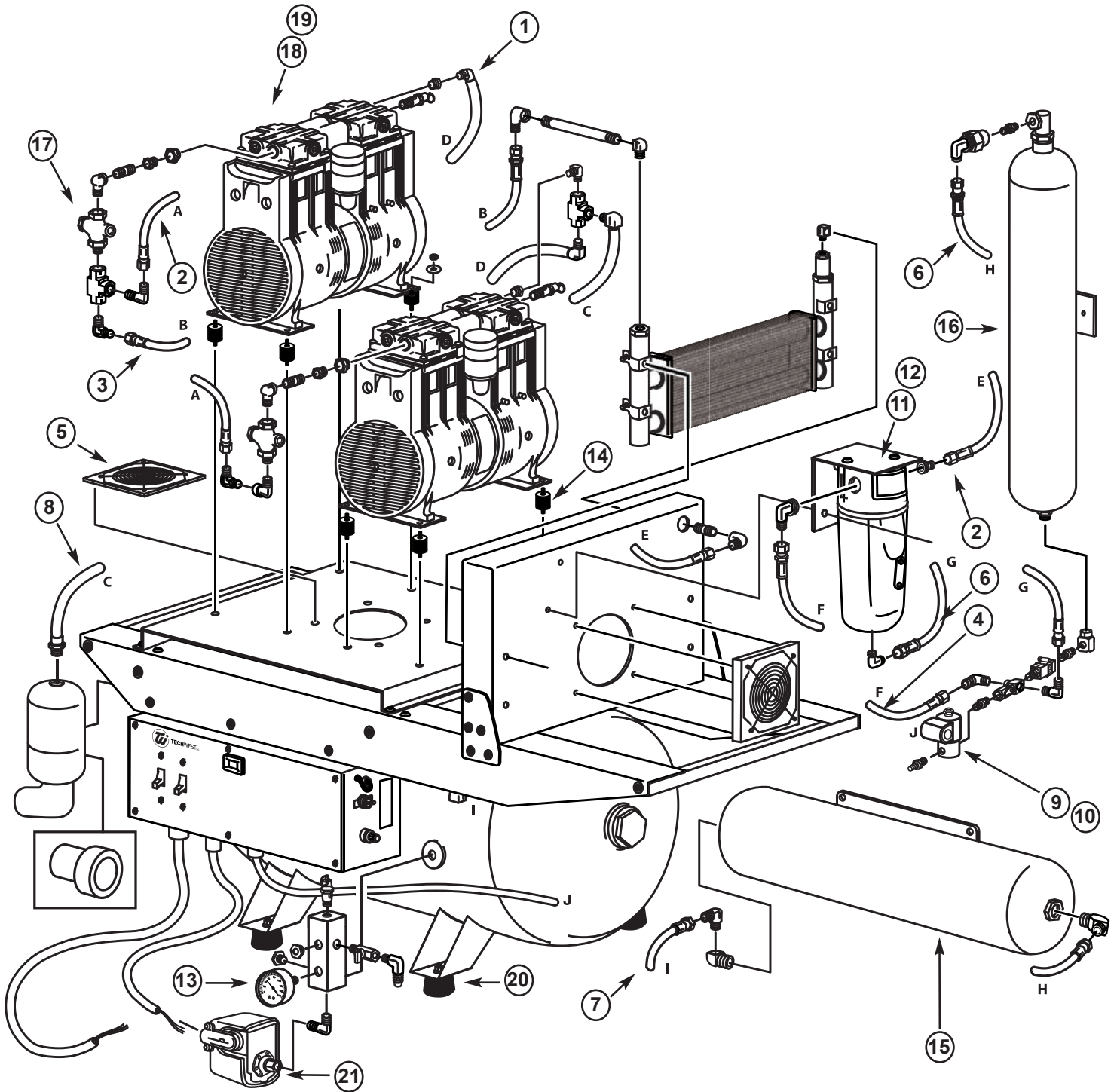
KEY	PART NO.	DESCRIPTION	UNIT
1	DSV-115	115V PURGE SOLENOID VALVE	1
2	DSV-230	230V PURGE SOLENOID VALVE	1
3	AS-500	1/2 FILTER ASSY	1
4	CFSG-100	COALESCING FILTER SITE GLASS	1
5	EDC-100	REPLACEMENT DESICCANT TANK	1
6	MV-250	METERING VALVE	1
7	SN-250-CL	STAINLESS STEEL NIPPLE 1/4	3
8	FE-4-6	FLAIR FITTING 1/4 X 3/8	1
9	BV-250	BALL VALVE 1/4	1
10	BT-250	BRASS TEE 1/4	2
11	FPH-375	CLEAR PURGE HOSE	PER FOOT
12	MSD-100	MOLECULAR-SIEVE 1 LB	2LBS
13	MSD-200	ACTIVATED ALUMINA 1 LB	2LBS
14	CV-250D	1/4 CHECK VALVE	1
15	BN-250-CL	1/4 BRASS NIPPLE - CLOSED	3



ROCKY SERIES GAUGE AND CUT-OFF ASSEMBLY

KEY	PART NO.	DESCRIPTION	UNIT
1	CPG-250	COMPRESSOR GAUGE	1
2	BV-250-FM	1/4" BALL VALVE	1
3	MI-100	MOISTURE INDICATOR	1
4	POVA-100	POP OFF VALVE 125 PSI ASME	1
5	SSN-375-CL	STAINLESS STEEL NIPPLE 3/8" CLOSED	1
6	ATM	ALUMINUM TANK MANIFOLD	1
7	FE-4-4	BRASS FLARE ELBOW 1/4" X 1/4"	1
8	BPP-4	BRASS PIPE PLUG 1/4	1
9	PSC-3	PRESSURE SWITCH	1

ELITE SERIES ROCKY OILLESS COMPRESSOR PART LOCATOR BREAKDOWN



*MODEL PICTURED: ACOR2D2

ELITE SERIES ROCKY OILLESS COMPRESSOR PARTS BREAKDOWN

KEY	PART NO.	DESCRIPTION	UNIT
1	FPH-500R	INTAKE HOSE (REINFORCED 8")	1
2	SBHA-8.5-375	STEEL BRAID HOSE ASSEMBLY	2
3	SBHA-11-375	STEEL BRAID HOSE ASSEMBLY	1
4	SBHA-24-375	STEEL BRAID HOSE ASSEMBLY	1
5	CF-115-230	COLLING FAN 115/230V	1
6	HA-18-250	HOSE ASSEMBLY	2
7	HA-25-250	HOSE ASSEMBLY	1
8	FPH-500R	INTAKE HOSE (REINFORCED) - 25"	1
9	DSV-115	SOLENOID VALVE 115V	1
10	DSV-230	SOLENOID VALVE 230V	1
11	CFAO-375	COALESCING FILTER ASSEMBLY	1
12	CFEO-375	COALESCING FILTER ELEMENT	1
13	CPG-250	PRESSURE GAUGE	1
14	RMF-100	RUBBER MOTOR MOUNTING FEET	8
15	EPT-100	PURGE TANK	1
16	EDT-100	DESICCANT CARTRIDGE	1
17	CV-250	CHECK VALVE	2
18	GOM-075R-115	GAST OILLESS MOTOR-115V	2
19	GOM-075R-230	GAST OILLESS MOTOR-230V	2
20	RFV-100	RUBBER TANK MOUNTING FEET	4
21	PSC-3	PRESSURE SWITCH	1

PRODUCT SPECIFICATIONS / DIMENSIONS

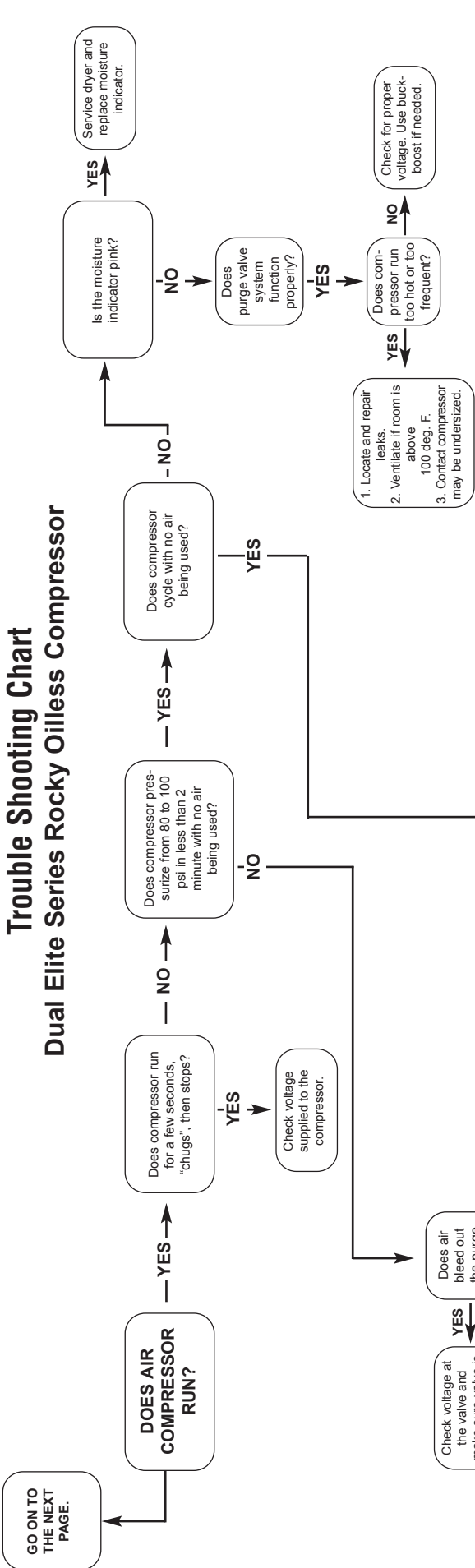
MODEL NUMBER	# OF USERS	AIR DRYER	# OF HEADS	TOTAL H.P.	CFM	VOLTAGE	TOTAL AMPS	BREAKER SIZE	CONNECTION TYPE	WEIGHT (LBS)	HEIGHT (INCHES)	WIDTH (INCHES)	DEPTH (INCHES)
ACOR2D1	2-3	YES	2	1.5	5.2	115V	11	20	115V PLUG	175	28	28	20.5
ACOR2D1Q	2-3	YES	2	1.5	5.2	115V	11	20	115V PLUG	210	31	28	20.5
ACOR2D2	2-3	YES	2	1.5	5.2	208/230V	8	20	230V PLUG	175	28	28	20.5
ACOR2D2Q	2-3	YES	2	1.5	5.2	208/230V	8	20	230V PLUG	210	31	28	20.5

ROCKY COMPRESSOR

MAINTENANCE KIT

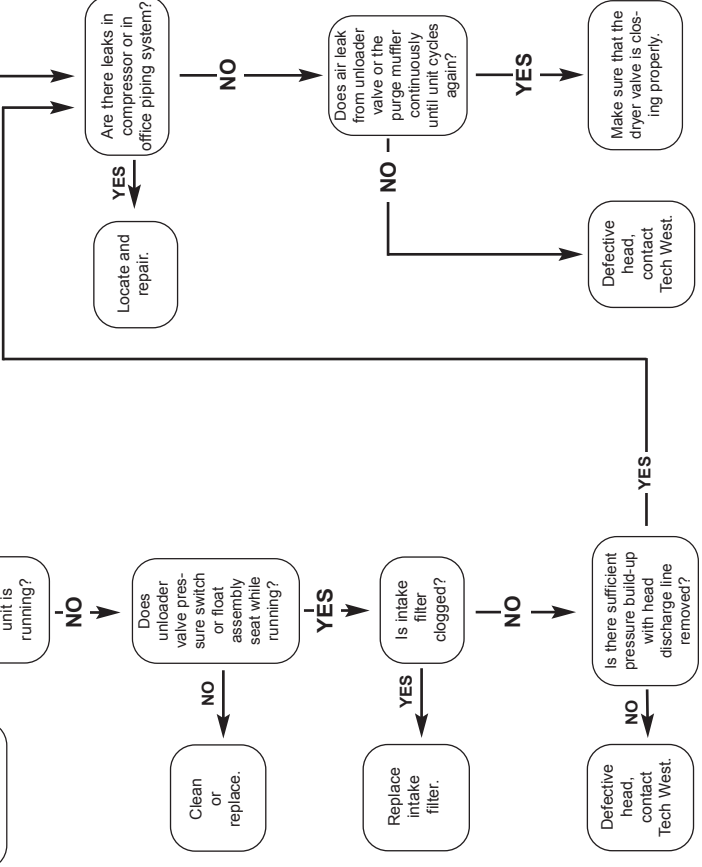
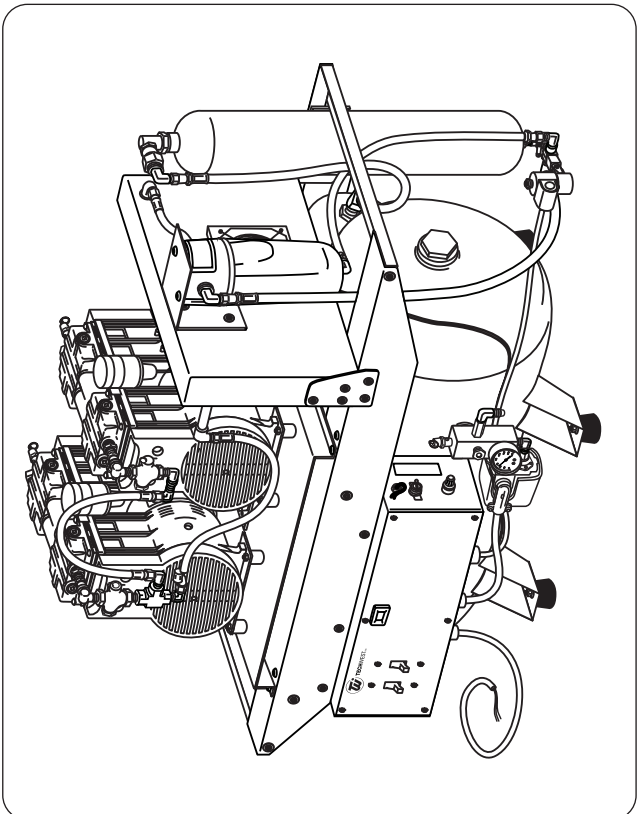
ACOR2D1/Q	ESK-100
ACOR2D2/Q	ESK-100

Trouble Shooting Chart Dual Elite Series Rocky Oilless Compressor



Note: Close shut off valve. Pump up tank to 100 psi. If pressure is maintained for 15-20 min., leak is in office lines.

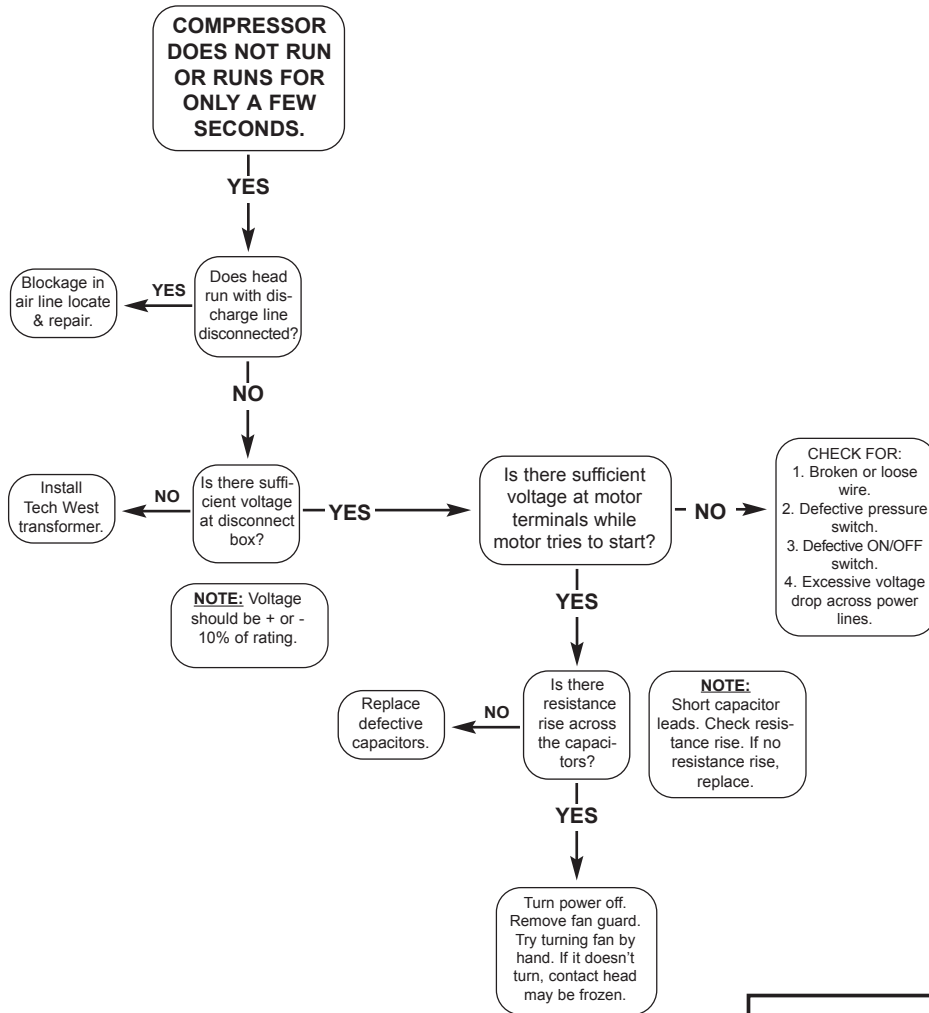
Dual Rocky Series Oilless Compressor



GO ON TO THE NEXT PAGE.

Trouble Shooting Chart

Dual Elite Series Rocky Oilless Compressor



AIR LINE SIZING CHART	
NUMBER OF OPERATORIES SEE NOTE	AIR LINE PIPE DIAMETER
	COPPER TYPE "M"
1	1/2"
2	1/2"
3	1/2"
4	1/2"
5	1/2"
6	3/4"
7	3/4"
8	3/4"
9	3/4"
10	1"
11	1"
12	1"

IMPORTANT SAFETY INFORMATION & WARNINGS

Installation Warnings

- Manufacturer recommends installation to be performed by qualified service personnel.
- See page 15 for a breakdown of gross weight by model.
- All units are equipped with several pressure relief components. These include: one (1) Purge Valve set to release pressure at 125PSI and two (2) Pressure Relief Valves set to release pressure at 165PSI.

FAILURE TO USE PROPER EQUIPMENT TO MOVE AND INSTALL UNIT(S) COULD RESULT IN INJURY.

Potential Hazards

- Only components meeting IEC safety standards are used to assemble unit(s).
- Manufacturer recommends using appropriate signage to warn of potential hazards.
- Power cord should be routed along the wall and away from walkway to avoid tripping.
- All components are selected and engineered to prevent overloading of any kind to the unit(s) and are within the acceptable industry standard temperature limits.
- Design of the unit(s) ensures that enclosures and other components meet the requirements as mentioned in IEC 60601-1.
- See page 4 of this manual for information related to Environmental Operating Conditions.
- Humidity testing has been performed as per IEC 60601-1.
- All components are mounted securely and protected by suitable means such as screws, nuts/bolts, UL approved sheaths, crimping, etc. per the assembly instructions.
- Adhere to all manufacturer warning and safety labels located on unit(s).

Pressure Relief Safety Information

- Safety Valves and Pressure gauges are calibrated.
- Pressure switches are verified to work in the range of 80-100PSI during assembly.
- All units are equipped with several pressure relief components. These include: two (2) Purge Valves set to release pressure at 125PSI and one (1) Pressure Relief Valve set to release pressure at 165PSI.
- Pressure valves are designed with two (2) horizontal facing ports for pressure evacuation. The design is intended to divert any direct pressure from individual(s) within the vicinity of the unit.

Maintenance

- Manufacturer recommends maintenance to be performed by qualified service personnel.
- Disconnect power to unit(s) from main power source prior to performing any service or maintenance.
- All detachable parts including accessories require the use of tools and are labeled with the make, model number and dimensions on the packaging.

Electrical Safety Information

- Electrical safety testing has been performed per IEC 60601-1.
- Disconnect power to unit(s) from main power source prior to performing any service or maintenance.
- All critical components are approved with minimum flammability rating of V2.
- Motors are provided with Class B insulation, Thermal overload protection, and Current protection.
- Transformer is provided with Class A insulation and is protected with a slow blow 0.25A fuse.
- Temperature test have been performed and found to be in the acceptable range per IEC 60601-1 standards.
- Design tolerates single fault failure and fails in safe mode.
- All terminals are pre-wired to meet electrical specifications at manufacturers' warehouse and will not need to be accessed during installation.
- Units are tested to ensure proper connection and grounding before being shipped.
- System is fused to shut off power to unit in the event of excess current draw from a short circuit caused by liquid spill.

FAILURE TO ADHERE TO THE WARNINGS LISTED ABOVE COULD RESULT IN INJURY

WARRANTY INFORMATION

Standard Warranty Period

- The Elite Series Rocky Oilless Compressors come with a standard 5 year or 3500 hour warranty that covers the motors.
- The standard warranty period on all other parts for the Elite Series Rocky Oilless Compressor is 2 years.

Warranty Claims Process

- If you believe the unit is in need of repair, please call your preferred dental dealer and speak with a qualified technician.

Warranty Disclosures

- The Elite Series Rocky Compressor is not intended for use with Dental Milling Machines or 3D Dental Printers. Doing so will void all manufacturer warranties.
- Improper installation without adequate ventilation will void all manufacturer warranties.
- Improper installation in spaces where temperatures will exceed manufacturers' recommendations will void all warranties.
- Improper installation without adequate voltage and electrical connections will void all warranties.
- Failure to adhere to manufacturers recommendations for installation and service will void all warranties.

Units purchased in error are subject to a 15% restocking fee plus applicable freight charges.

Return Policy

- No returns are authorized without first acquiring a Returned Merchandise Authorization (R.M.A.).
- All returns are subject to a 15% restocking fee.
- No returns are authorized after 60 from the date of shipping.



TW **TECH WEST INC.**

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and Air Systems

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