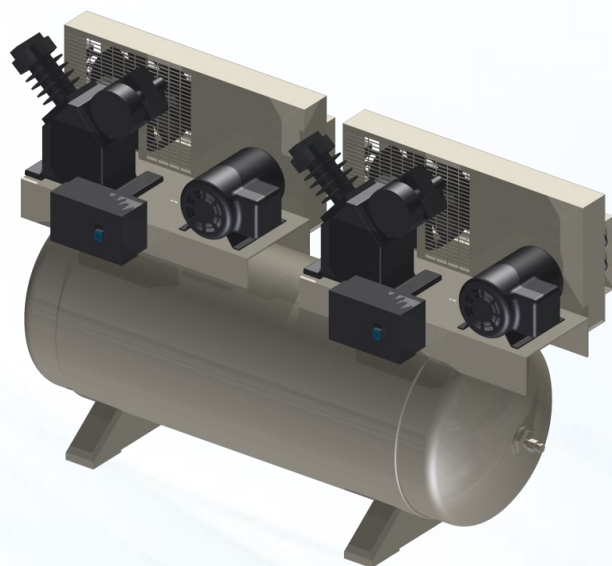




ECS Protector Air Compressor (Duplex)

Specifications



Size	TCMP-40-2:	84.2" (L) x 34.6" (W) x 48.2" (H) (2,140mm(L) x 878mm(W) x 1,224mm(H))
	TCMP-50-2:	84.2" (L) x 34.6" (W) x 48.2" (H) (2,140mm(L) x 878mm(W) x 1,224mm(H))
	TCMP-60-2:	87.5" (L) x 35.8" (W) x 51.5" (H) (2,222mm(L) x 910mm(W) x 1,308mm(H))

Weight	TCMP-40-2:	1,265 lbs (574kg)
	TCMP-50-2:	1,315 lbs (596kg)
	TCMP-60-2:	1,545 lbs (701kg)

Temperature Range: 40°F - 105°F (5°C - 40°C)

Power Supply:

Compressor:	460v/3 phase/60Hz (Standard) 208v/3 phase/60Hz (Optional)
Auto Drain:	120v/1 phase/60Hz (can be connected to the nitrogen generator cabinet power supply)

Air connection: 1" NPT Female

Drain connection: ½" NPT Female

Ordering Information

Stock Number: TCMP-40-2 - 5HP with 120 Gallon Horizontal Receiver Tank
TCMP-50-2 - 7.5HP with 120 Gallon Horizontal Receiver Tank
TCMP-60-2 - 10HP with 120 Gallon Horizontal Receiver Tank

General Description

The ECS Protector Air Compressors are paired with the ECS Protector Nitrogen Generator PGEN-40/50/60 in facilitating the **Dry Pipe Nitrogen Inerting (DPNI)** process in dry and preaction fire sprinkler systems as well as **Wet Pipe Nitrogen Inerting (WPNI)** process in wet pipe sprinkler systems. The ECS Protector air compressors work in conjunction with the PGEN-40/50/60 nitrogen generators in a typical dry or preaction fire sprinkler system or as a plant nitrogen source for wet pipe fire sprinkler systems.

Features

- TCMP-40-2 - 5 HP duplex air compressor with after cooler and 120 gallon air receiver tank
- TCMP-50-2 - 7.5 HP duplex air compressor with after cooler and 120 gallon air receiver tank
- TCMP-60-2 - 10 HP air compressor after cooler and with 120 gallon air receiver tank
- Single point air discharge – 1" NPT Female
- Automatic condensate blow down – ½" NPT Female



Operating Performance

Model	Air Supply SCFM (L/min)	Single System Capacity† @ 40 psig (2.8 bar) Gallons (Liters)	Single System Capacity† @ 20 psig (1.4 bar) Gallons (Liters)
TCMP-40-2	34 (962)	2,880 (10,902)	5,760 (21,804)
TCMP-50-2	48 (1,360)	4,500 (17,034)	4,000 (34,068)
TCMP-60-2	70 (1,984)	6,000 (22,713)	12,000 (45,426)

† Capacity based on NFPA 13 30-minute fill requirement of largest single system

Installation Instructions

Installation of the ECS Protector air compressors requires five (5) steps:

1. Mount the air compressor to the floor in the appropriate location within the riser room
2. Bring the two (2) dedicated power supply lines to the NEMA4 power supply box. Recommend two (2) service disconnects be provided adjacent to the duplex air compressor
3. Plumb the air supply line to the nitrogen generator being served
4. Plumb automatic drain line to floor drain or building exterior (optional)
5. Fill air compressors with oil

Step 1: Mounting the Air Compressor

The duplex air compressors are designed to be mounted directly to the floor in the fire sprinkler riser room. The supplied vibration pads must be installed under the feet of the air compressor to ensure warranty of the air compressor. Several factors should be considered in choosing the proper mounting location for the air compressors:

- Access to the power supply (two (2) dedicated circuits as per above)
- Access to the nitrogen generator inlet ½" supply line
- Access to a drain for the condensate discharge line
- Clearance to access the power boxes
- Clearance to access duplex air compressor for servicing

The air compressors come with pre-punched holes in the feet for easy mounting to the floor using standard anchors.

Step 2: Power Supply

The ECS Protector air compressors require two (2) dedicated power supply lines that are terminated in the NEMA4 power supply boxes on the air compressor (see Figure 1). Verify the voltage of the power supply available for the air compressor is compatible with the voltage requirements of the air compressor.

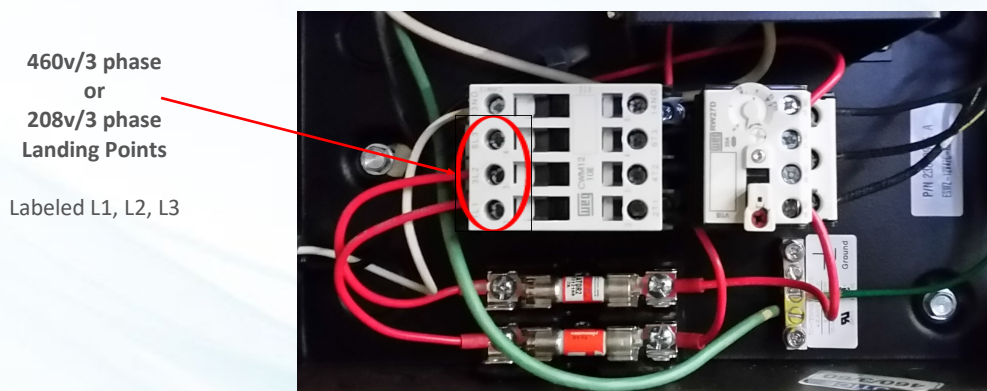
Auto-drain power supply – 120v/1 phase/60Hz un-switched 20 amp receptacle circuit.



Model	Power Requirements 208 VAC/3 Phase	Power Requirements 460 VAC/3 Phase
TCMP-40-2	17.5 Amps	7.6 Amps
TCMP-50-2	25.3 Amps	11 Amps
TCMP-60-2	32.2 Amps	14 Amps

NOTE: Two (2) dedicated power supply circuits are required.

Figure 1 - Air Compressor Power Supply Connections



NOTE

When providing 208v/3 phase to the control box, verify the compressor and the motor starter are configured for operating at 208v/3 phase

Step 3: Plumb the Air Supply Line

The air discharge plumbing from the air compressor is to be connected directly to the inlet of the nitrogen generator using ½" black steel, galvanized steel or copper lines.

Step 4: Plumb the Condensate Drain Line

The air compressor will discharge condensate water from the air receiver tank. It is recommended that the ¼" drain connection be plumbed to a floor drain or building exterior. When plumbing to a drain is not feasible an evaporative collection chamber can be used.

- Ensure the receiver tank auto-drain is connected to an unswitched 120 VAC power source.

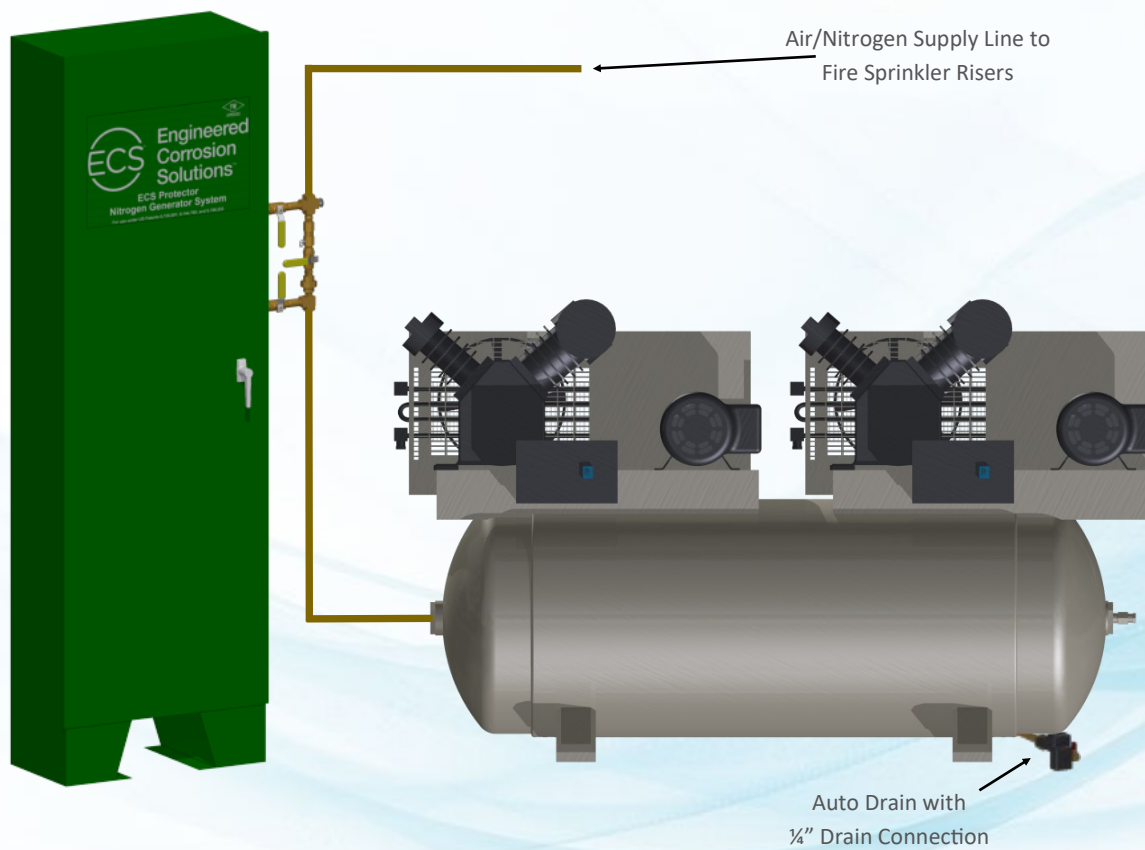
Step 5: Fill Compressor Crankcase

The air compressor requires oil in the crankcase. Unscrew and remove the oil fill plug, fill crankcase with oil (full level when oil is at the bottom of the plug threads), and replace the oil fill plug - Hand Tight Only

NOTE: The Low Oil Level Sensor on the air compressor automatically shuts down air compressor until the proper oil level has been restored.



ECS Protector Nitrogen Generator and Air Compressor Connections (Typical Installation Schematic)



Air Compressor Start-Up Kits (one required per air compressor)

CSK-IR40-2 Start-up kit for TCMP-40-2 air compressor which includes Oil, Filters, Vibration Pads and Flex Hose.

CSK-IR50-2 Start-up kit for TCMP-50-2 air compressor which includes Oil, Filters, Vibration Pads and Flex Hose.

CSK-IR60-2 Start-up kit for TCMP-60-2 air compressor which includes Oil, Filters, Vibration Pads and Flex Hose.

NOTE: Ingersoll Rand oil must be installed in air compressor and vibration pads must be installed under air compressor to ensure air compressor warranty by Ingersoll Rand

Air Compressor Maintenance

Refer to Manufacturer's recommended maintenance in Ingersoll Rand owner's manual