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HPDMC PACK15-TA

HPDMC PACK15-TA 20HP Rotary Screw Compressor Instruction Manual

Model: PACK15-TA/230V

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your HPDMC PACK15-TA 20HP Rotary Screw Compressor. Please read this manual thoroughly before operating the equipment to ensure proper usage and to prevent injury or damage.

2. SAFETY INFORMATION

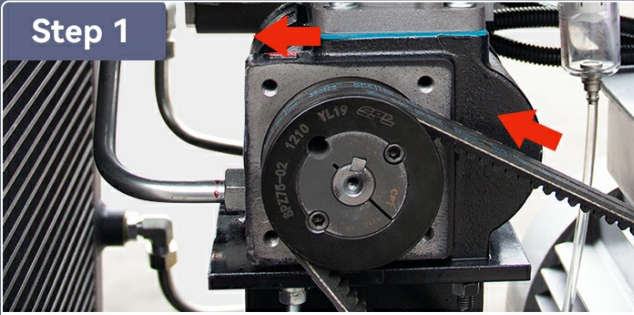
Operating industrial machinery requires strict adherence to safety protocols. Failure to follow these guidelines can result in serious injury or equipment damage.

- **Electrical Safety:** Ensure the compressor is connected to a 208-230V, 3-phase power supply. Do not attempt to convert single-phase power to three-phase power using a converter, as this unit is designed for direct 3-phase input.
- **Pressure Safety:** Never exceed the maximum working pressure of 150 psi. Regularly inspect all air lines and connections for leaks or damage.
- **Moving Parts:** Keep hands, clothing, and tools clear of all moving parts, including belts and fans, during operation.
- **Ventilation:** Operate the compressor in a well-ventilated area to prevent overheating and ensure proper air intake.
- **Weight:** The unit weighs approximately 1200 pounds. Use appropriate lifting equipment and procedures for moving the compressor. The machine chassis is low and cannot be moved directly by a forklift; it must be placed on a pallet for transport.



What to do when there is a phase sequence error alarm:

Step 1

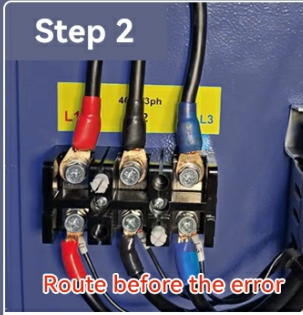


Check if the belt is rotating in the wrong direction.

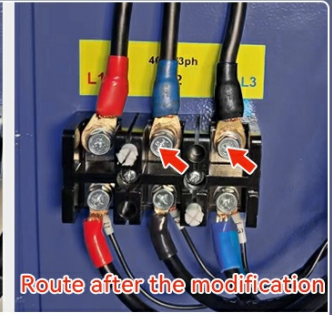


The correct direction aligns with the red arrow.

Step 2



Route before the error



Route after the modification

In case of an error,
adjust the three main power lines on top by swapping the blue and black wires.

Image: Illustration showing that a 3-phase compressor cannot be operated with a single-phase power source via a phase converter.

3. PRODUCT DESCRIPTION AND FEATURES

The HPDMC PACK15-TA is a 20HP rotary screw air compressor system designed for industrial applications. It features an integrated design with an 80-gallon air tank and a refrigerated air dryer, providing a complete compressed air solution.



Image: The HPDMC PACK15-TA 20HP Rotary Screw Compressor, showcasing its integrated design with the air tank and dryer.

Key Features:

- **Rotary Screw Air Compressor:** Designed for stable operation, low noise, and easy maintenance, with auto load and unload functions for high efficiency.
- **Refrigerated Air Dryer:** Efficiently removes moisture from compressed air via cooling and condensation, ensuring dry, clean air for high-quality industrial applications.
- **Line Filter:** High-efficiency, multi-stage filtration system to remove oil, water, and particulates, providing high-purity air.
- **ASME Air Tank:** An 80-gallon air tank, compliant with ASME standards.
- **Intelligent Electronic Controls:** Displays essential parameters and ensures uniform operation and uninterrupted production.
- **Horizontal Oil Tank:** Designed to prevent oil backflow when the unit is stopped.
- **Electric Motor:** Stable and efficient, with an auto-shutdown feature after 600 seconds of no load.
- **Air Intake System:** Ensures internal ventilation, prevents overheating, and protects the machine.
- **Spin-on Oil Separator and Filter:** Protects production tools and the quality of final products by ensuring clean air.
- **Air End with SKF Bearing:** Features a high-performance air end with SKF bearings for durability and efficiency.

PACK15-TA

ROTARY SCREW AIR COMPRESSOR

Auto load and unload, high efficiency, stable operation, low noise and easy maintenance.

REFRIGERATED AIR DRYER

Efficiently removes moisture from compressed air via cooling and condensation, ensuring dry, clean air for high-quality industrial applications.

LINE FILTER

High-efficiency filters and multi-stage filtration remove oil, water, and particulates, providing high-purity air for industries with strict air quality needs.



ASME AIR TANK

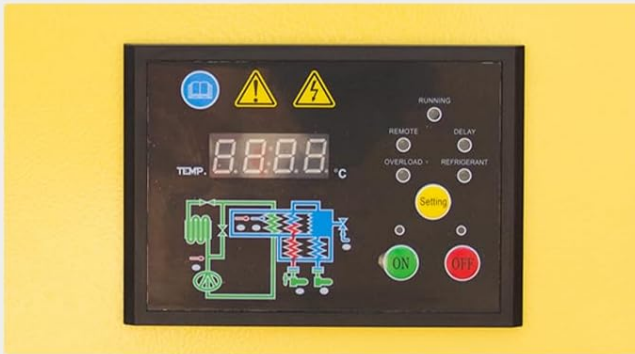
80 Gallon can be accepted by government departments.



Image: Detailed view of the PACK15-TA highlighting the rotary screw air compressor, refrigerated air dryer, line filter, and ASME air tank.

INTELLIGENT ELECTRONIC CONTROLS

Displays essential parameters and ensures uniform operation & uninterrupted production



HORIZONTAL OIL TANK

Oil level during startup
Oil backflow when stopped

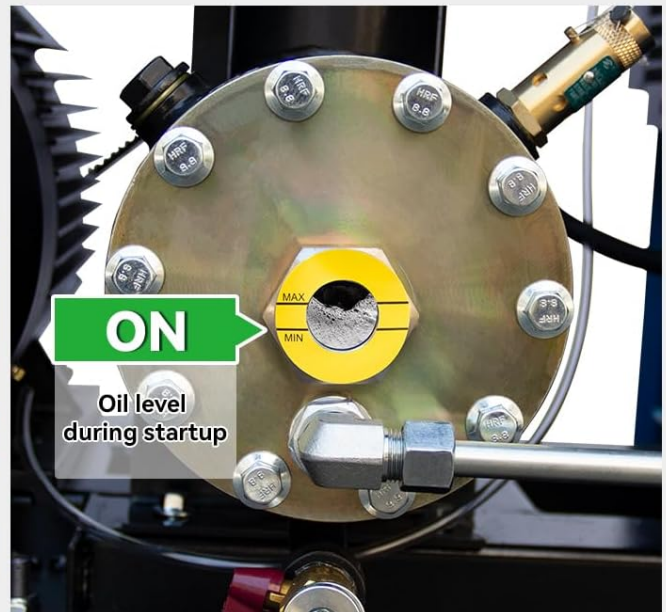
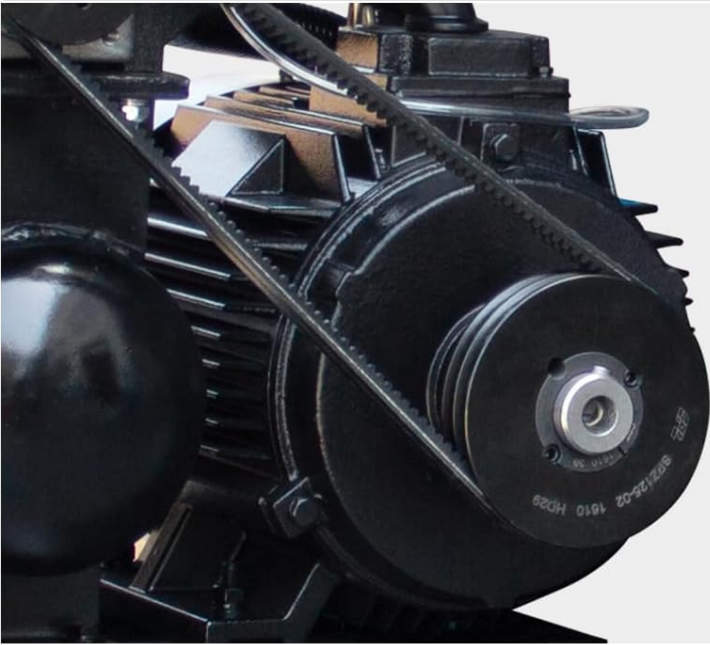


Image: Close-up of the intelligent electronic control panel and the horizontal oil tank with visual indicators for oil level during startup and when stopped.



ELECTRIC MOTOR

STABLE & EFFICIENT

Auto shutdown
after **600s** of no
load

AIR INTAKE



Ensures internal
ventilation



Prevents
overheating



Protects
the machine.



Image: Details of the electric motor and the air intake system, emphasizing internal ventilation and protection against overheating.



○ **SPIN-ON**

OIL SEPARATOR

OIL FILTER

Protect production tools and the quality of your final products.

AIR END ○

Famous Brand Air End with SKF Bearing 1

The powerful heart decides the high performance of the whole machine.

To Ensure Bigger Air Capacity and Higher Efficiency 2

High-precision process rotor extends the life of the moving parts efficiently.

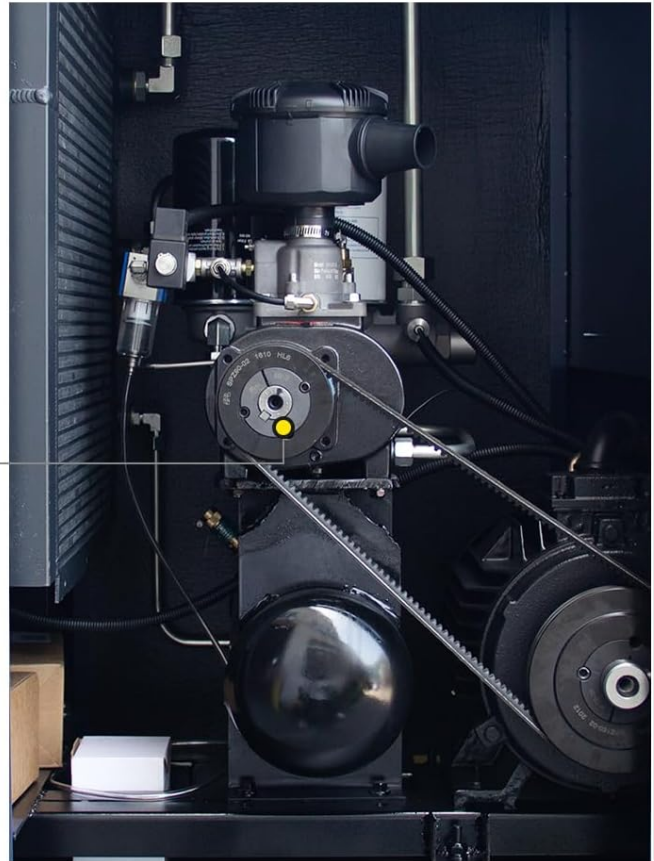


Image: Components including the spin-on oil separator, oil filter, and the air end with SKF bearings, crucial for performance and efficiency.

PACK15-TA Model	208-230V/60Hz Input Voltage (V/Hz)	125 psi Max. Working Pressure
20HP Power	81cfm Air flow	807lbs Package Weight
3ph Electrical (Phase)	G3/4" NPT 3/4" Output Pipe Diameter	Lubricating Oil Oil Type



NOTE:

The machine chassis is low and cannot be moved directly by forklift, so it needs to be placed on a pallet.



Image: Diagram illustrating the internal components of the compressor, including the air end, motor, intake valve, oil separator, oil filter,

safety valve, horizontal oil tank, oil sight window, cooler, and air filter element.

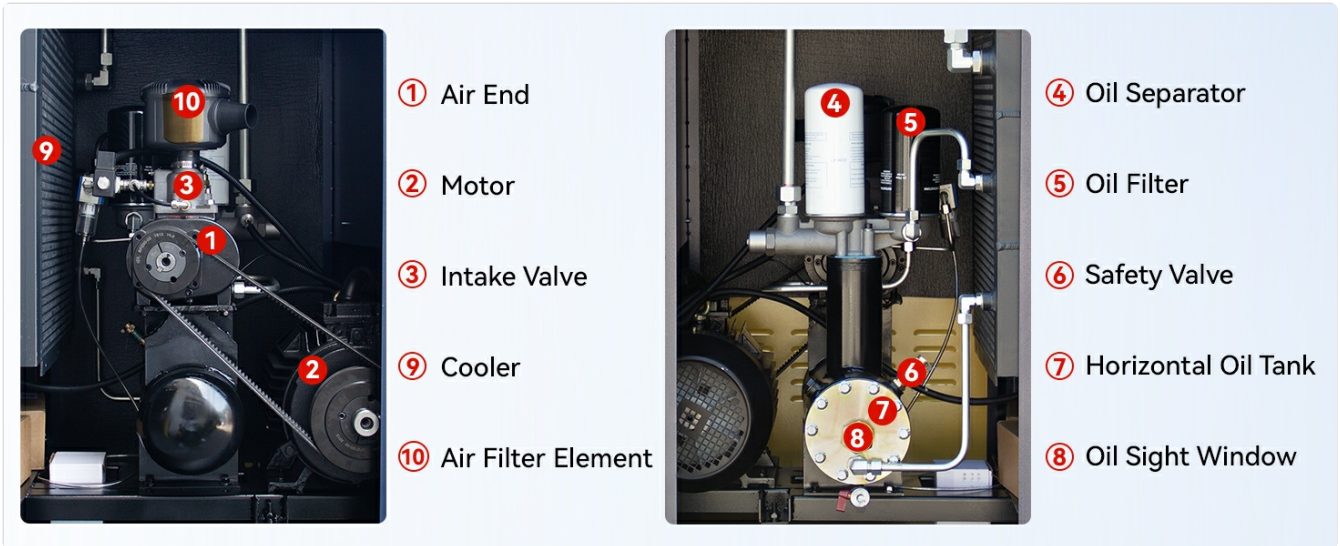


Image: Explanation of the internal circulation ventilation system for preventing overheating and the use of sound-absorbing cotton for noise reduction.

4. SPECIFICATIONS

Detailed technical specifications for the HPDMC PACK15-TA Rotary Screw Compressor.

SPECIFICATIONS



Model:

PACK15-TA

Flow Rate:

81CFM

Max. Air Pressure:

125PSI

Horsepower:

20

Tank Capacity:

80GAL

Noise Level:

Less than 78 dB

Voltage:

208-230V/60Hz/3PH

Image: Visual representation of key specifications for the PACK15-TA model.

Parameter	Value
Model	PACK15-TA
Power	20 HP
Input Voltage	208-230V / 3 Phase / 60Hz
Air Flow Capacity	81 CFM
Maximum Working Pressure	150 psi
Output Pipe Diameter	NPT 1"
Motor Speed	3600 rpm
Tank Capacity	80 Gallons
Noise Level	Less than 78 dB
Item Weight	1200 Pounds
Product Dimensions (L x W x H)	77 x 34 x 77 inches
Material	Cast Iron

Rotary Screw Air Compressor

Stable Operation Low Noise Wide Application

Power: **20HP** Phase: **3ph** Air flow: **81 cfm** Max. Working Pressure: **125 psi**

Image: Comprehensive specifications and physical dimensions of the compressor, with a note regarding the need for a pallet for forklift transport.

5. SETUP AND INSTALLATION

Proper installation is crucial for the performance and longevity of your compressor. Ensure all safety precautions are followed.

5.1 Unpacking and Placement

- Carefully unpack the compressor, inspecting for any shipping damage.
- Due to its weight (1200 lbs) and low chassis, the unit must be placed on a pallet for safe movement with a forklift.
- Place the compressor on a level, stable surface in a well-ventilated area, ensuring adequate clearance for maintenance and airflow.

5.2 Electrical Connection

- The compressor requires a 208-230V, 3-phase electrical supply. Consult a qualified electrician for proper wiring.
- Ensure the electrical circuit is protected by an appropriate circuit breaker.
- **Important:** Do not attempt to operate this 3-phase compressor on a single-phase power supply using a phase converter.

5.3 Air Line Connection

- Connect your air system to the NPT 1" output pipe.
- Use appropriate fittings and sealants to ensure airtight connections.

6. OPERATION

Familiarize yourself with the control panel and operational procedures before starting the compressor.

6.1 Pre-Operation Check

- Verify all electrical and air connections are secure.
- Check the oil level in the horizontal oil tank. Ensure it is within the recommended range (between MIN and MAX indicators).
- Ensure the area around the compressor is clear of obstructions.

6.2 Starting the Compressor

- Turn on the main power switch.
- Use the intelligent electronic control panel to initiate operation. Follow the on-screen prompts or refer to the specific control panel manual for detailed instructions.
- The compressor will automatically load and unload as needed to maintain the desired pressure.

6.3 Stopping the Compressor

- To stop the compressor, use the control panel shutdown procedure.
- The unit features an auto-shutdown function after 600 seconds (10 minutes) of no load.
- For complete power disconnection, turn off the main power switch at the electrical source.

7. MAINTENANCE

Regular maintenance ensures optimal performance and extends the lifespan of your compressor. All components are easily accessible for maintenance.

7.1 Daily Checks

- Monitor the oil level and replenish if necessary.
- Check for any unusual noises or vibrations.
- Inspect for air or oil leaks.

7.2 Scheduled Maintenance

- **Spin-on Air Oil Separator:** This integrated separator is designed for easy and quick replacement. Refer to the maintenance schedule for replacement intervals.
- **Oil Filter:** Replace the oil filter according to the maintenance schedule to ensure clean oil circulation.
- **Air Filter Element:** Regularly inspect and replace the air filter element to maintain optimal air intake quality and prevent contamination.
- **Belt Inspection:** Check the drive belts for wear, tension, and alignment. Adjust or replace as needed.

- **Refrigerated Air Dryer:** Perform routine checks and maintenance as specified for the dryer component to ensure efficient moisture removal.

8. TROUBLESHOOTING

This section provides guidance for common issues. For complex problems, contact technical support.

8.1 Phase Sequence Error Alarm

If a phase sequence error alarm occurs, it indicates incorrect wiring of the three main power lines.

- **Step 1:** Check the belt rotation direction. The belt should rotate in the direction indicated by the red arrow on the compressor. If it's rotating in the wrong direction, proceed to Step 2.
- **Step 2:** Adjust the three main power lines on top by swapping two of the wires (e.g., blue and black wires) to correct the phase sequence.

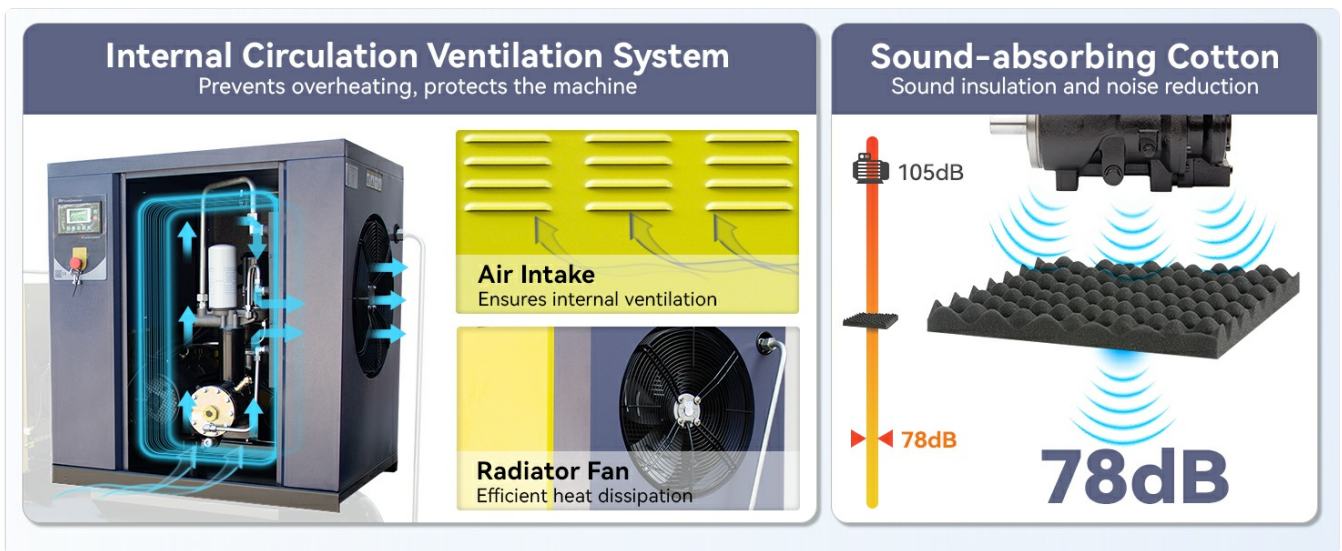


Image: Visual guide for troubleshooting a phase sequence error, demonstrating how to check belt rotation and correct wiring by swapping two power lines.

9. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation provided at the time of purchase. HPDMC offers comprehensive support for its products.

- **Service Centers:** Access to authorized service centers for repairs and maintenance.
- **Technical Support:** Dedicated technical assistance for operational questions and troubleshooting guidance.
- **Local Pickup Service:** Availability of local pickup services for parts or repairs in select regions.



SERVICE CENTERS



TECHNICAL SUPPORT



LOCAL PICKUP SERVICE



Image: Icons and descriptions for available support services: Service Centers, Technical Support, and Local Pickup Service.