

IS40™

CARLISLE

IntelliSpray™ Spray Foam Proportioner Installation and Quick Start Guide

READ BEFORE INSTALLATION. REFER TO IS40 USERS MANUAL AND QUICKHEAT HOSE MANUAL FOR COMPLETE INSTALLATION AND USE INSTRUCTIONS.



SPECIFICATIONS	
Maximum Fluid Pressure	2500 PSI (153 bar)
Air Pressure Range	70-130 PSI (4.8 - 9.0 bar)
Max Fluid Temperature	200 F 94 C
Wetted Parts	Stainless Steel, Aluminum, Plated Steel, Chemically Resistant Plastic, Chemically Resistant O-Rings



⚠ WARNING**Read and understand all the warnings in this section and elsewhere in the IS40 User Manual**

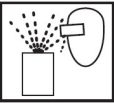
Spray Foam equipment and materials operate under high pressure and temperature and should only be used by trained professionals. The fluids used to create polyurethane foam insulation are hazardous. Unprotected exposure during handling and use may cause lung, ear, and/or skin irritation, shortness of breath, sore throat, fever, and even permanent respiratory and/or skin damage and/or sensitization. Always refer to the material Safety Data Sheets for proper handling, transportation, storage, and disposal.



READ THE MANUAL Before operating this equipment, read and understand all safety, operation and maintenance information provided in the IS40 User Manual.



TIPPING HAZARD Take care when moving and positioning equipment. Secure to floor and wall per installation instructions.



PROJECTILE HAZARD You may be injured by venting liquids that are released under pressure, or flying debris.



NEVER MODIFY THE EQUIPMENT Do not modify the equipment unless the manufacturer provides written approval.



OPERATOR TRAINING All personnel must be trained before operating this equipment.



EQUIPMENT MISUSE HAZARD Equipment misuse can cause the equipment to rupture, malfunction, or start unexpectedly and result in serious injury.



LOCK OUT / TAG-OUT Failure to de-energize, disconnect, lock out and tag-out all power sources before performing equipment maintenance could cause serious injury or death.



AUTOMATIC EQUIPMENT Automatic equipment may start suddenly without warning.



KEEP EQUIPMENT GUARDS IN PLACE Do not operate the equipment if the safety devices have been removed.



KNOW WHERE AND HOW TO SHUT OFF EQUIPMENT IN CASE OF AN EMERGENCY



WEAR SAFETY GLASSES Failure to wear safety glasses with side shields could result in serious eye injury or blindness.



INSPECT EQUIPMENT DAILY Inspect the equipment for worn or broken parts on a daily basis. Do not operate the equipment if you are uncertain about its condition.



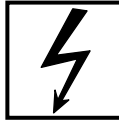
PINCH POINT HAZARD Moving parts can crush and cut. Pinch points are basically any areas where there are moving parts.



NOISE HAZARD You may be injured by loud noises from support equipment (generators, compressors, transfer pumps). Hearing protection should be used.



STATIC DISCHARGE Be sure to ground equipment properly per instructions to avoid static discharge.



ELECTRICAL SHOCK HAZARD Disconnect all power sources before accessing any electrical connections in the Control Module, Fluid Modules, or Hoses. Equipment must be serviced by trained personnel only.



WEAR RESPIRATOR Toxic fumes can cause serious injury or death if inhaled. Wear a respirator as recommended by the fluid and solvent manufacturer's Safety Data Sheet.



TOXIC FLUID & FUMES Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, injected or swallowed. LEARN and KNOW the specific hazards or the fluids you are using.



FIRE AND EXPLOSION HAZARD Improper equipment grounding, poor ventilation, open flame or sparks can cause a hazardous condition and result in fire or explosion and serious injury.



MEDICAL ALERT Any injury caused by high pressure liquid can be serious. If you are injured or even suspect an injury:

- Go to an emergency room immediately.
- Tell the doctor you suspect an injection injury.
- Show the doctor this medical information or the medical alert card provided with your spray equipment.
- Tell the doctor what kind of fluid you were spraying or dispensing.
- Refer to the Material Safety Data Sheet for specific information.



GET IMMEDIATE MEDICAL ATTENTION To prevent contact with the fluid, please note the following:

- Never point the gun/valve at anyone or any part of the body.
- Never put hand or fingers over the spray tip.
- Never attempt to stop or deflect fluid leaks with your hand, body, glove or rag.
- Always ensure that the gun trigger safety operates before spraying.
- Always lock the gun trigger safety when you stop spraying.



PROP 65 WARNING WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

INSTALLATION - OVERVIEW



WARNING

Installation of the IS40 exposes installers to high voltages and high fluid pressures. Severe injury or death could result from improper installation or installation techniques.

NOTE

The IS40 requires QuickHeat™ hoses for operation. Do not attempt to substitute any other hose.

Note: IS40 installation requires that a QuickHeat hose is fully assembled and ready for connection to the IS40. See “QuickHeat Hose Manual” for more information.

Installation of the IS40 should only be performed by individuals with prior knowledge of installing and servicing Spray Foam equipment. Installation involves mechanical, electrical and fluid connections. Default out-of-box software settings are usually adequate for initial system use, but can be changed by the installer to meet specific needs. Every IS40 is equipped for remote support and can be accessed by authorized Carlisle service agents to assist in system installation, configuration, and/or service.

The following steps outline installation of the IS40. Additional details for each step are contained in the IS40 Users manual.

1. Unpack unit and remove from shipping pallet.
2. Place unit in desired location.
3. For mobile or seismic environments make mechanical connections to floor and wall of structure.
4. Check to be sure power to the IS40 circuit is off (turn off breaker at distribution or main panel).
5. Make 200-240V 3 Phase electrical and ground wire connection inside IS40 Control Module.
6. Connect fully assembled QuickHeat hose master modem to fluid jumper hoses.
7. Connect fluid supply and recirculation hoses to A and B fluid modules.
8. Set Fluid Module valves to spray position for purging.
9. Close gun manifold material control valves and remove spray gun from hose.
10. Open fluid supply lines and pressurize drum pumps to provide inlet fluid pressure of 150 - 200 psi
 - 2:1 drum pump air pressure of 75 - 100 psi
 - 3:1 drum pump air pressure of 50 - 70 psi
11. Energize IS40 power circuit at distribution or main panel.
12. Turn on IS40 power switch (side of control panel). Startup screen will appear in 30 - 60 seconds..
13. If the Proportioner and Hoses were configured together at the factory skip steps 13a to 13d
 - a. From main menu, open Settings > Hose
 - b. Select hose configuration
 - c. Pair hose modems
 - d. Scan and select a recommended communication frequency
14. Purge A and B fluid sections (and hoses if new or empty) to eliminate any air.
15. Follow Quick Start instructions to begin spraying.

INITIAL SYSTEM BLEED

When the proportioner and/or hoses are installed, an initial system bleed is required to completely replace air with fluid in the supply hoses, proportioner, and distribution hoses. In addition, if air is introduced to the system (e.g. running the drum pump dry) the same procedure must be performed. **If air is not removed from the system properly, the gear pumps, preheaters, and/or hose heaters can be damaged.** Air pockets can also create off-ratio conditions.

In this example the operation is shown for the B side. The same procedure would also be used for the A side.

1. Be sure the system is in **STOP** state.



2. Check that supply lines, recirculation hoses, and distribution hoses are properly connected.
3. Check the analog pressure gage on the fluid module to be bled. Relieve pressure by turning the outlet valve to the recirculation position. Once pressure is relieved, turn the outlet valve back to the gun position.

WARNING

Fluid in hoses and proportioner may be under high pressure. System must be depressurized prior to performing any service function.

4. Set filter valves to open position (turn clockwise to stop) and set the output valve to spray position as shown in the following figure.

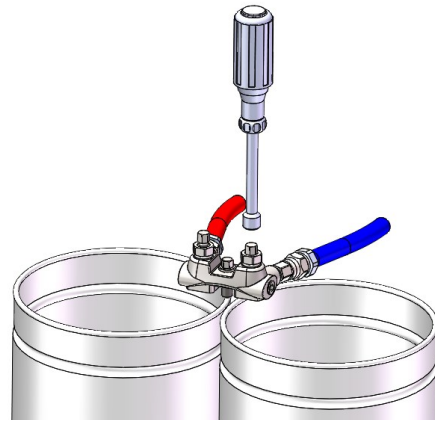


Filter inlet and outlet valves in open position

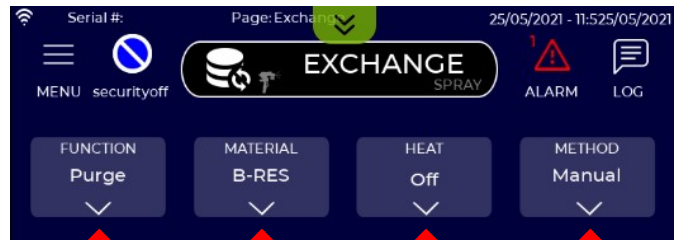
Outlet valve in spray position

5. Activate B-side transfer pump.

6. Remove the spray gun from the hose manifold. Secure or hold the manifold over a waste container and open the B-side material control valve to catch fluid. Fluid may begin flowing out of the manifold this



7. After selecting Exchange Mode from the main menu:
 - Select Purge from the FUNCTION menu.
 - Select B-RES from the MATERIAL menu.
 - Select Off from the HEAT menu.
 - Select Manual from the METHOD menu.

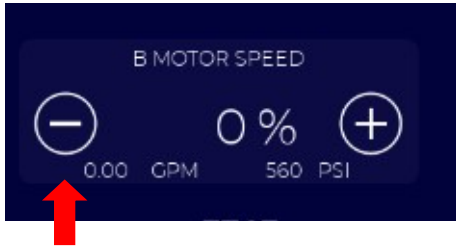


WARNING

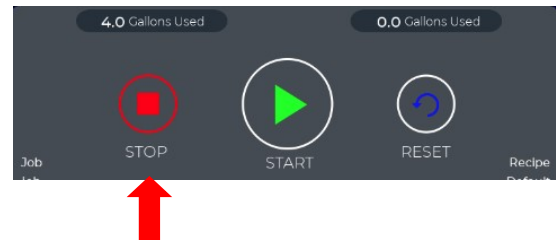
Never activate heating when air or gas is present in the Proportioner or Hoses. This can cause heater elements to fail and may create a fire hazard.

INITIAL SYSTEM BLEED (Continued)

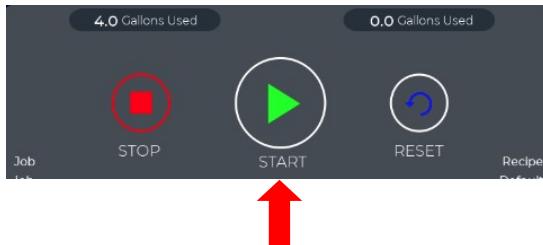
8. Set B motor speed to 0% by pressing the - button in the Motor Speed Widget.



11. Press STOP when a steady stream of fluid flows from the manifold and all air has been replaced with fluid.



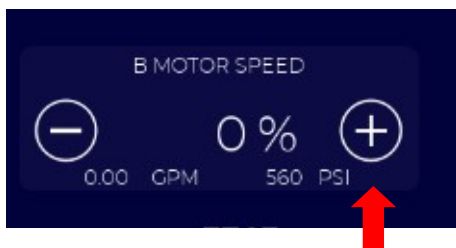
9. Press the START button.



12. Close the B-side material control valve on the gun manifold.

13. Repeat the process for the A-side.

10. Increase B motor speed by pressing the + button in the Motor Speed Widget. Motor speeds should be limited to 5% or less until fluid has filled the Fluid Modules to avoid damage to the pump bearings and internal surfaces. Once pressure starts to build motor speed can be increased but should remain below 50% until distribution hoses are filled.



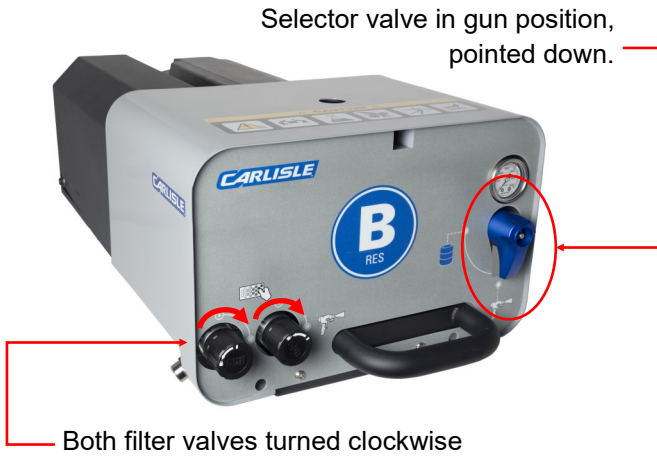
WARNING

Never run gear pumps faster than 5% speed in Exchange Mode when dry, and do not run for more than 10 seconds when dry at this speed. Presence of fluid in the pump is essential to protect bearings and seals.

QUICK-START GUIDE

Due to the IS40's efficient heating systems and simplified startup process, operators will usually be ready to spray within 10-15 minutes from powering on the system. The following are the minimal steps involved in starting up the IS40 with Job Reporting turned off. See the IS40 Users Manual for additional steps required when Job Reporting is turned on.

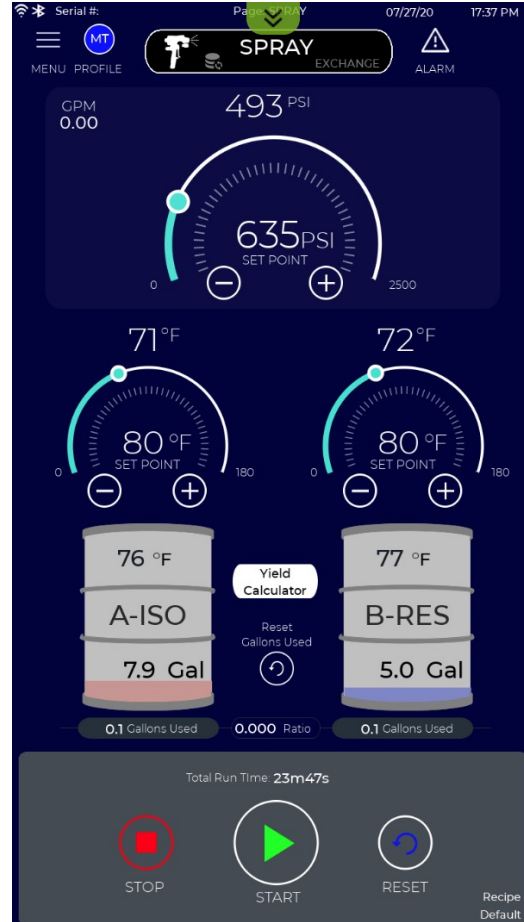
1. Before starting the IS40, remove all hose from the rack and position for spraying. Be sure the drum pumps are on and A and B fluid module valves are in the proper position for spraying.



2. Turn on the IS40 by rotating the power switch on the right side of the control module clockwise to the ON position (indicated by the character "I").



The IS40 will display a startup screen while it performs internal system checks. Once completed, the Spray Mode screen will be displayed. Note that the Exchange Mode screen can be set as the default startup screen if desired (see Systems Settings in the User Manual).



3. Check the A-ISO and B-RES fluid levels using a dipstick and enter the amount by pressing the respective drum icon on the screen.



Press to enter drum level.

QUICK-START GUIDE (Continued)

- Enter the desired pressure and temperature setpoints using the on-screen "+" and "-" buttons.

Pressure setpoint

Press "-" to decrease or "+" to increase pressure.

Press "-" to decrease or "+" to increase A temperature.

Press "-" to decrease or "+" to increase B temperature.

A-side temperature setpoint

B-side temperature setpoint

The center button will change from START to WARMING, and the button boundary will change from solid white to flashing green to indicate the system is warming up.

Indicates system is warming up

When the center button changes from WARMING to READY the pumps will automatically pressurize the system to the desired setpoint.

Indicates system is ready to spray

- Press the START button to begin warming up the system.

- If required, spray out any cold material in the unheated whip, then proceed with spraying.
- If drums are changed, enter the new fluid level and continue spraying. (see step 3).
- If errors occur, correct the issue, press the RESET button, then the START button (see step 5).
- When finished spraying, press the STOP button.
- To power off the unit, rotate the power switch on the right side of the control module to the OFF position (indicated by the character "0").

NOTES: