



# POLYURETHANE SPRAY FOAM REFILL SYSTEM



## QUICK START GUIDE

# SYSTEM DESCRIPTION

The Touch 'n Seal Refill System is a spray polyurethane foam dispensing system for large volume foam users. The system consists of "A" and "B" chemical tanks, in-line chemical filters, cleanable on/off valves, a high pressure regulator, nitrogen hoses, chemical dispensing hoses, nitrogen pressure control gauge and a foam applicator.

The Touch 'n Seal Refill System is designed for ease-of-use. The following Quick Start Manual instructions are prepared for the experienced "system" user and are not meant to cover all operational, system or trouble shooting details.

Unit Size		17 gal 64.34 L	60 gal 227.12 L	120 gal 454.25 L
Chemical Wt	(lb/kg)	150/68.04	500/226.80	1,125/510.
Empty Tank Wt w/valves	(lb/kg)	65/29.48	172/78.02	314/142.4
Gross Wt – Filled	(lb/kg)	215/97.52	672/304.81	1,439/652.
Cylinder Dimensions in/cm (FOR SHIPPING)	Width	15/38.1	24/60.96	30/76.20
	Depth	15/38.1	24/60.96	30/76.20
	Height	34/86.36	46/116.84	57/144.7

If you have additional questions, please contact your Convenience Products Sales Representative or Technical Support at (800) 325-6180.

# INSTALLATION, SET UP, CALIBRATION AND OPERATION

NOTE: Dry nitrogen is used for pressurizing the refill system and is not supplied. It may be obtained for a nominal rental charge from your local welding supplier. Order standard size (industrial grade) cylinder with CGA 580 nitrogen fitting. Parts are referenced by name and alpha designation A-O on System Diagram.

## SET UP (Steps 1–14)

1. Position the "A" tank to the left and the "B" tank to the right.
2. Place a nitrogen cylinder behind and between the "A" and "B" tanks. Secure the nitrogen cylinder to prevent it from falling (Photo A).
3. Install nitrogen regulator onto nitrogen tank. Hand tighten and snug firmly using an adjustable wrench. Be careful not to strip the brass fitting by over tightening (Photo B).
4. Verify that the pressure control valves are backed out, by turning counterclockwise to eliminate nitrogen flow.
5. Remove the thread protectors on the bottom of the nitrogen regulator and connect the first of two nitrogen hoses to the left fitting on the nitrogen regulator assembly. Snug firmly with an adjustable wrench.
6. Locate the nitrogen intake valve of the "A" tank (photo C). Verify that the valve is closed. The handle should be perpendicular to the valve. Loosen and remove the nitrogen intake cap on the "A" tank (Photo C) and store in the canvas bag on top of the tank.
7. Connect the other end of the nitrogen hose labeled "A" to the nitrogen intake valve of the "A" tank (photo D). Snug firmly with an adjustable wrench.



Photo A

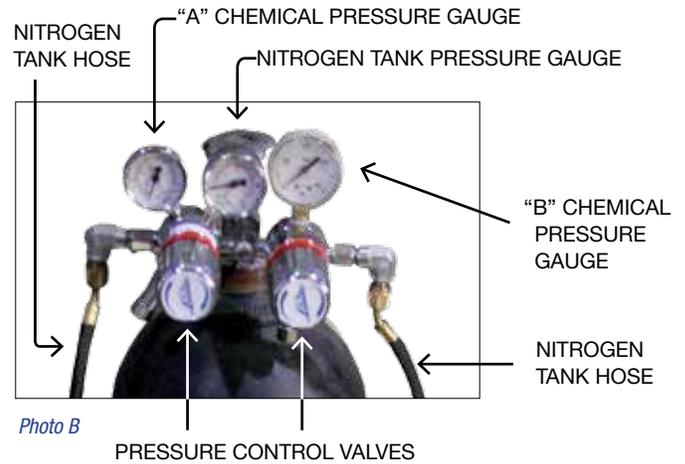


Photo B

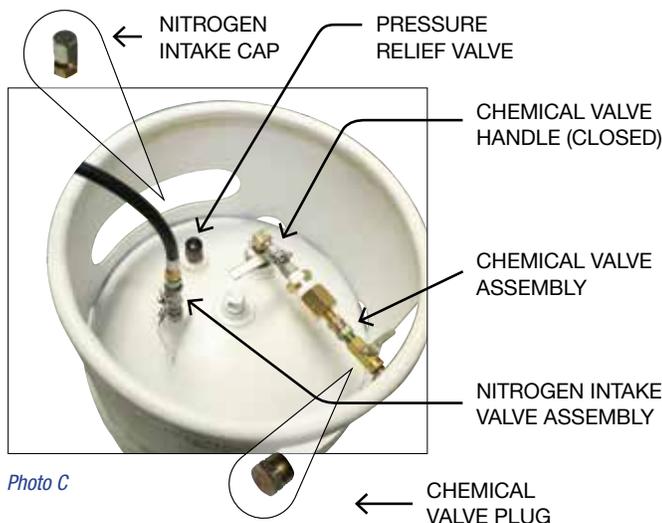


Photo C

8. Connect the second nitrogen hose to the right fitting of the nitrogen regulator (photo B). Snug firmly with an adjustable wrench. Follow steps 6 – 7 to attach the remaining 10' unlabeled black nitrogen hose to the intake valve of the "B" tank.
9. Verify that the chemical tank valves are closed (photo C). The handle should be perpendicular to the valve. Remove the chemical valve plug (photo C) from each of the "A" and "B" tanks and place one plug in each of the canvas bags provided (photo C). Each plug must be lubricated and reinstalled prior to empty tank return.
10. Remove filter assembly from the canvas bag (photo E) attached to the tank. Connect a filter assembly to each chemical tank valve with the filter assembly arrows pointing away from the tanks (photo D). The arrows represent the direction of the chemical flow. Tighten the filter assemblies with the adjustable wrench.
11. Connect the on/off valves tank-to-hose (with the swivel ends) to the filter

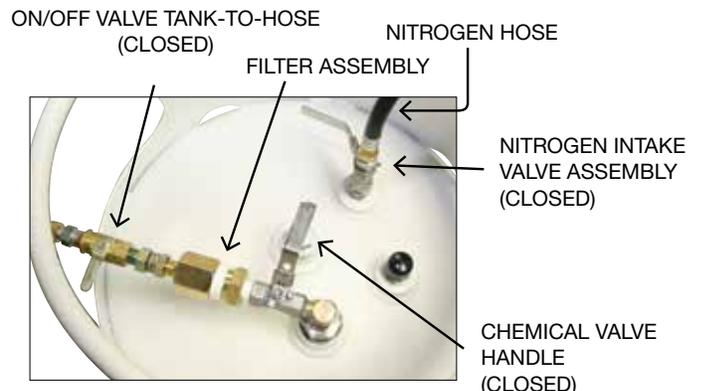


Photo D

assemblies of each tank. Tighten the connections with an adjustable wrench (photo D).

- Uncoil the hose sets. (If desired, you may connect two 30' hose sets together, using the provided connectors, to make a 60' hose set by connecting the "A" hose of one set to the "A" hose of the second set. Follow the same procedure for the connecting the two "B" hoses together.) Connect the A-side chemical hose (the one with the warning label) to the on/off valve tank-to-hose on tank "A" and the other chemical hose to the on/off valve tank-to-hose on tank "B" (photo D). Tighten both connections with an adjustable wrench.

#### FILTER ASSEMBLY

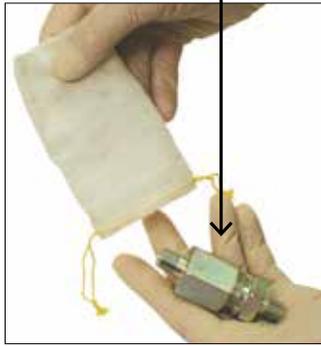


Photo E

- Connect an on/off valve hose-to-applicator to the other end of each chemical hose. Verify that the arrows on each on/off valve hose-to-applicator point away from the "A" and "B" chemical tanks. (Arrow indicates chemical flow.) Tighten each connection with two adjustable wrenches (Photo F).

- Connect the foam applicator hose to the on/off valve hose-to-applicator of each chemical hose; "A" labeled chemical hose to "A" labeled (red striped) foam applicator hose, the unlabeled hose to the unlabeled (unstriped) foam applicator hose. Tighten each connection using two adjustable wrenches (photo F).

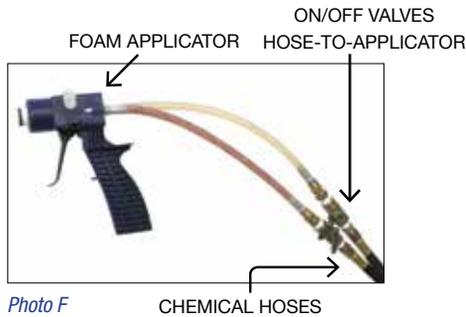


Photo F

## PRESSURIZATION

- Engage the safety on the foam applicator (photo G).
- Verify that the pressure control valves on the regulator are backed out to eliminate nitrogen flow.
- Open the nitrogen bottle valve by turning the knob on top of the cylinder counterclockwise. If a hissing sound occurs, further tighten the nitrogen regulator assembly pressure control valve with an adjustable wrench.
- Verify the nitrogen cylinder pressure using the center gauge of the nitrogen regulator assembly. **Replace nitrogen tank when pressure falls below 500 psi.**
- Slowly turn the left regulator pressure control valve clockwise until the proper pressure setting is obtained (refer to Table A). If a hissing sound occurs, further tighten the nitrogen hose set connection to the nitrogen regulator assembly and/or the nitrogen intake valve connection on the "A" tank using an adjustable wrench. If the left gauge fails to indicate a pressure setting, contact your Convenience Products Sales Representative.
- Slowly turn the right regulator pressure control valve clockwise until the proper pressure setting is obtained (refer to Table A). If a hissing sound occurs, further tighten the nitrogen hose set connection to the nitrogen regulator assembly and/or the nitrogen intake valve connection on the "B" tank using an adjustable wrench. If the right gauge fails to indicate a pressure setting, contact your Convenience Products Sales Representative.

#### BARREL TRIGGER SAFETY



Photo G

TRIGGER

- Slowly open the nitrogen intake valve of each tank until the handles are parallel with the nitrogen hoses.
- Slowly turn on the chemical tank valve of each tank until the handles are parallel to the chemical hoses.
- Slowly turn on the on/off valves tank-to-hose until the handles are parallel to the chemical hoses.
- Slowly turn on the on/off valves hose-to-applicator until the handles are parallel to the chemical hoses.

**Verify that ALL chemical and nitrogen valve connections are tight and that no chemical leaks are present.**

- Verify that the foam applicator safety is engaged.
- IMPORTANT** Refer to Safety Precautions for proper personal protection equipment prior to use.

**REVIEW "CALIBRATION INSTRUCTIONS" before continuing to step 27.**

## NITROGEN PRESSURE CONTROL GAUGE USE INSTRUCTIONS

In the event that either chemical tank pressure exceeds 205 PSI you must reduce the pressure in both chemical tanks to the recommended 170 PSI starting pressure using the Nitrogen Pressure Control Gauge.

How to reduce chemical tank pressure:

- Ensure ALL on/off valves on the chemical tanks and nitrogen supply system are in the off or closed position.
- Using a 9/16 wrench, disconnect the nitrogen supply line from the nitrogen tank regulator. When disconnecting hose, there may be hissing sound for 1–3 seconds as pressure releases. If you hear continued hissing immediately reconnect hose, close the on/off handles and repeat this step.
- Connect and firmly tighten the loose nitrogen hose to the male threaded portion of your Nitrogen Pressure Control Gauge. Do not over tighten.
- With the Nitrogen Pressure Control Gauge in the closed position (handle is perpendicular to gas flow) open the nitrogen valve on your refill chemical tank. If done correctly you should hear no hissing or leaks and the Nitrogen Pressure Control Gauge should indicate the same pressure that your nitrogen regulator was set at previously.
- Slowly open the on/off valve on your Nitrogen Pressure Control Gauge to release pressure for about 3 seconds at a time, checking progress and repeating until the gauge reaches the desired 170 PSI.
- Upon reaching 170 PSI close the nitrogen pressure intake valve on your chemical tank and release the residual pressure in your line by opening your Nitrogen Pressure Control Gauge. If this has been done correctly, the tank in question should be reset to 170 PSI and no leaking sounds should be heard.
- Remove the Nitrogen Pressure Control Gauge and reconnect your nitrogen line back to the corresponding side of your nitrogen tank regulator.
- Repeat steps 1–7 for the other chemical tank so that both the A & B chemical tanks have been reset to the base pressure of 170 PSI.
- Important!** Before turning the nitrogen supply back on, turn regulator adjustment knobs completely counterclockwise (off) so that the nitrogen output pressure will be 0 PSI.
- You can begin the start-up process and "Calibration Procedure" as if it were a new start up.
- Please contact our technical department or your sales representative with any questions or assistance needed. You can also visit our website at [www.touchnseal.com](http://www.touchnseal.com) which has several videos and FAQ's.



Part # 4505100048

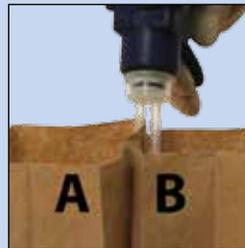
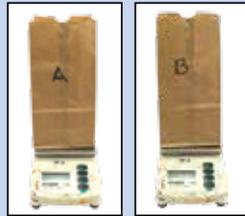
# CALIBRATION INSTRUCTIONS

*Equipment needed: Scale capable of weighing in grams, paper lunch bags, calibration nozzles, calculator.*



Photo H

- i. Ensure chemical temperature in tanks and hoses are 70°– 90°F (21°–32°C) .
- ii. Set nitrogen regulator pressures (refer to Table A).
- iii. Remove nozzle (Photo H) from foam applicator, disengage the foam applicator safety and dispense chemicals in an appropriate waste container to verify proper chemical flow while purging air from the hoses.
- iv. Weigh and record the weight of each empty bag so that its weight may be deducted from the total weight of the filled paper bags.
- v. Engage safety and place calibration nozzle on the foam applicator.
- vi. Holding the two bags together, place the left nozzle tube (side with red striped hose) into the "A" bag, place the other nozzle in the "B" bag and disengage safety. Squeeze trigger for six to eight seconds.
- vii. Engage foam applicator safety.
- viii. Weigh bags separately. Always divide the weight of bag B into the weight of bag A. Refer to Table A for acceptable chemical ratios.



Example

A: 208g (weight) – 8g (bag weight)  
= 200g

B: 190g (weight) – 8g (bag weight)  
= 182g

Ratio:  $200 \div 182 = 1.10$

- ix. After successful calibration, continue to step 27.

*NOTE: If verification of regulator reading is necessary, install pressure gauges in line with the regulator. Verify both sides. To verify corresponding pressures of tanks, install pressure gauges in line with each tank. Perform this task on the nitrogen inlet valve. Maximum pressure should not exceed 250 psi. Should pressure need to be reduced in a tank, slowly bleed off pressure from the nitrogen intake valve. Never bleed any tank below 120 psi.*

- x. If the ratio is too high, increase the pressure of the B tank, and if the ratio is too low increase the pressure of the A tank. **For best results, perform pressure adjustments in 10 psi increments.**

27. Clean any chemical from the front of the foam applicator barrel by wiping with a clean rag (photo I).
28. Place an unused conical or fan nozzle on the barrel of the foam applicator.
29. Disengage the safety on the foam applicator. The Touch 'n Seal Refill System is now ready for operation.
30. If at anytime during dispensing, foam quality is suspect, remove the nozzle and purge the lines to be sure there are two roughly equal streams of pressurized chemical flowing, then replace with a new nozzle. If nozzle replacement does not solve the problem, contact your sales representative.



Photo I

*NOTE: If spraying has stopped more than 30 seconds, foam in the nozzle will begin to cure and clog. System performance will be compromised. Replace the used nozzle with an unused nozzle. Higher temperatures speed curing, while lower temperatures slow curing.*

## Nozzle Replacement

1. To replace the used nozzle, engage the safety on the foam applicator.
2. Grasp the foam applicator in one hand and the used nozzle in the other. Twist the nozzle and pull it off the barrel.
3. Place an unused nozzle on the barrel of the foam applicator by pushing and twisting the nozzle until firmly locked into place. The Touch 'N Seal Refill System is ready for operation.

## FOAM APPLICATOR OPERATION

The foam applicator provides greater flow control and minimizes waste when used properly. The following operating instructions ensure maximum efficiency and performance of the foam applicator.

1. **IMPORTANT** Refer to Safety Precautions for proper personal protection equipment prior to use.
2. **VERIFY THAT THE SAFETY IS ENGAGED WHEN THE FOAM APPLICATOR IS NOT IN USE.**
3. Attach an unused nozzle and disengage the safety on the foam applicator.
4. To meter the foam applicator, engage the trigger one-third to one-half.
5. After spraying, engage the safety on the foam applicator.

Never spray foam more than one inch thick in a single application. Allow foam to cool between applications to avoid spontaneous combustion and to obtain maximum expansion.

## SYSTEM SHUTDOWN PROCEDURE

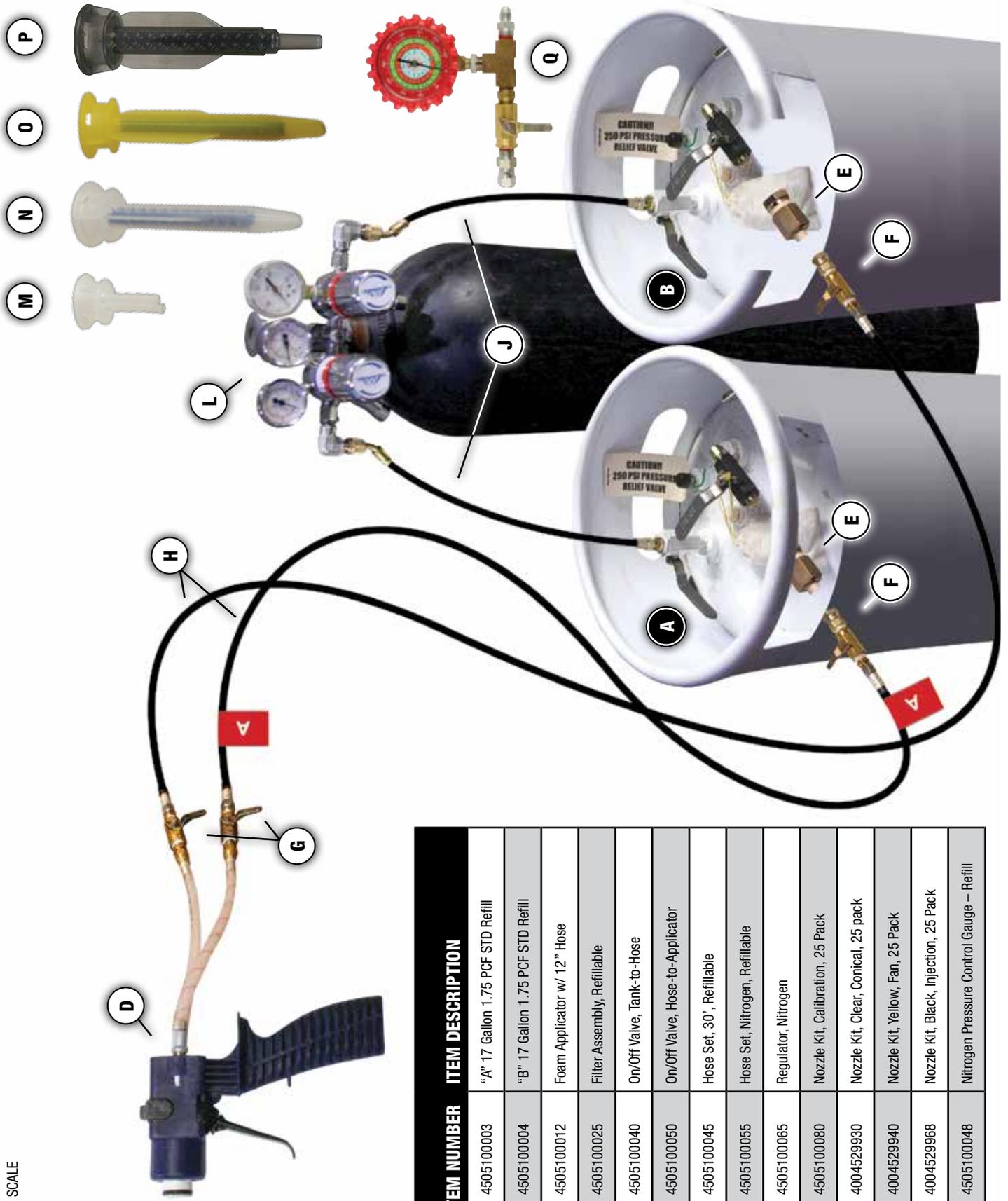
*(For end of day, replacing nitrogen tank or returning to Convenience Products)*

1. Engage the safety on the foam applicator.
2. Clean any chemical from the front of the foam applicator barrel by wiping with a clean rag (Photo I).
3. Reattach the used nozzle. This provides an airtight seal during storage.
4. Turn off all valves.
  - 2 on/off valves hose-to-applicator
  - 2 on/off valves tank-to-hose
  - 2 nitrogen intake valves
  - 2 chemical tank valves
5. Turn off the nitrogen cylinder by turning the valve in a clockwise direction.
6. Rewind foam applicator and chemical hose assembly without draining. Store off ground.

**TABLE A**

FORMULA	PROPER INITIAL PRESSURE SETTING	ACCEPTABLE CHEMICAL RATIOS
Touch 'n Seal 1.75 pcf FR ICC	175 psi	1.08 – 1.16
Touch 'n Seal 1.75 pcf Standard	175 psi	1.08 – 1.16
Touch 'n Seal 2.0 pcf FR	175 psi	1.15 – 1.25
Touch 'n Seal 1.75 pcf Slow Rise	175 psi	1.08 – 1.16

# REFILL SYSTEM CONFIGURATION



\*DIAGRAM NOT TO SCALE

ALPHA ID	ITEM NUMBER	ITEM DESCRIPTION
A	4505100003	"A" 17 Gallon 1.75 PCF STD Refill
B	4505100004	"B" 17 Gallon 1.75 PCF STD Refill
D	4505100012	Foam Applicator w/ 12" Hose
E	4505100025	Filter Assembly, Refillable
F	4505100040	On/Off Valve, Tank-to-Hose
G	4505100050	On/Off Valve, Hose-to-Applicator
H	4505100045	Hose Set, 30', Refillable
J	4505100055	Hose Set, Nitrogen, Refillable
L	4505100065	Regulator, Nitrogen
M	4505100080	Nozzle Kit, Calibration, 25 Pack
N	4004529930	Nozzle Kit, Clear, Conical, 25 pack
O	4004529940	Nozzle Kit, Yellow, Fan, 25 Pack
P	4004529968	Nozzle Kit, Black, Injection, 25 Pack
Q	4505100048	Nitrogen Pressure Control Gauge – Refill

## STORAGE

Store in a dry area between 60°–90°F (16°–32°C). DO NOT store at temperatures above 120°F (49°C), near steam, open flames, sparks, hot water pipes, chimneys or heat vents.

If a partially used system remains inactive for a period of time, the system should be pressurized and purged every two weeks by dispensing product until chemicals flow forcefully. This will prevent crystallization of the chemical and clear “old” product from the hoses.

Follow instructions in SYSTEM SHUT-DOWN PROCEDURES and STORAGE.

Unopened chemical tanks have a shelf life of approximately one year.

## CAUTION

### Building Codes

In many areas, building codes may restrict the use of cellular plastics or polyurethane foam as exposed, finished material applications. Under certain application codes, the use of these materials may be prohibited. The foam produced by this product is organic and may constitute a fire hazard if improperly applied. Consult local building codes.

### Surface Temperatures

Polyurethane foam should not be used in direct contact with chimneys, heat vents, steam pipes, or other surface areas that exceed 240°F (116°C). The cured foam should not be left exposed or inadequately protected when used as an interior and exterior finishing material. In all applications, it is strongly recommended that the foam be protected by approved facings and coatings.

### Open Flame

Do not operate the system while smoking or in close proximity to an open flame. Welding on or near cured polyurethane foam requires special precautions.

### Excessive Foam

Do not apply in layers exceeding one inch at a time, as this may result in spontaneous combustion. For a cured foam thickness greater than one inch, dispense foam in multiple layers allowing each foam layer to dissipate the heat between sprayings.

## SAFETY PRECAUTIONS

**WARNING: These instructions are designed to protect users who follow the safety precautions and wear recommended protective equipment. However, accidents may result from misuse, carelessness, or disregard of cautions and warnings contained within this manual.**

Use only in a well ventilated area or with proper respiratory protection.

Refer to *Safe Use, Storage and Handling* document for additional safety precautions.

Always engage FOAM APPLICATOR safety when not in use. For more specific information about the chemical components “A” and “B”, refer to the appropriate Material Safety Data Sheet (MSDS). KEEP OUT OF REACH OF CHILDREN.

### Limited Warranty

Please carefully read and strictly adhere to the directions, warnings and cautions contained in or affixed to this product. The user assumes all risk as to the use of the product. Failure to follow all instructions, directions, warnings, and cautions shall release Convenience Products from any and all liability. Representatives, distributors and dealers of this product may make no claims or warranties not herein expressed.

## RETURN PROCEDURE

1. Follow shutdown procedures.
2. Wear personal protection equipment.
3. Remove nitrogen hose set from cylinders.
4. Disconnect chemical hoses from filter assembly on chemical tanks.  
Note: A small amount of chemical may drain from the ball valve and/or filter.
5. Unscrew the filter assembly from the ball valve and discard the filter assembly. Coat the plug threads stored in the canvas bags on top of the chemical tanks, with the lubricant provided in the bag. Reinsert the plugs into their original chemical pipe location. Reinstall the nitrogen intake caps.
6. Place empty chemical tanks onto a sturdy pallet and secure for return. See photo J for proper securing method.
7. Call (800) 357-9199 for return.



Photo J

### CORRECT

First, secure canisters together with banding or stretch wrap.

Then, use banding to secure the canisters to the skid.

**ROUTE BANDING THRU TOP OF CANISTERS AND AROUND SKID STRINGERS.**



Photo K

### INCORRECT

Canisters not properly secured and top skid boards pulled loose.

**DO NOT ROUTE BANDING THRU OR UNDER TOP SKID BOARDS.**

### Emergency Telephone Number

Chem Tel, Inc., 1305 North Florida Avenue, Tampa, FL USA 33602-2902  
Toll-Free: 888-255-3924  
International: 813-248-0573  
Website: [www.chemtelinc.com](http://www.chemtelinc.com)

### Caution

The contents of tanks A and B are under pressure. The 'A' tank contains polymeric isocyanates, the 'B' tank contains polyols with amines and both tanks contain hydrofluorocarbons (HFC).



Convenience Products

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