
KNIGHT

IDEX

IDEX CORPORATION



Foam Clean 25-95

Instruction Manual

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CAUTION: Wear protective clothing and eyewear when dispensing chemicals or other materials. Observe safety handling instructions (MSDS) of chemical mfrs.



CAUTION: When installing any equipment, ensure that all national and local safety, electrical, and plumbing codes are met.

INTRODUCTION

Foam cleaning is recognized as an effective method for removing oil and heavy soils from all types of surfaces. It is used for cleaning throughout the food processing, dairy, transportation, industrial and agricultural industry. Due to its characteristics, cleaning with foam is safe and cost effective. Foam can adhere to irregular surfaces and provide better coverage than liquid cleaning chemicals. Foam stays in place longer to actively lift dirt and oil from surfaces until it is rinsed off.

Knight's Foam Clean system dispenses a rich lather of foam up to 65 GPM with a distance of up to 30 feet. With a built-in 4 GPM (15 ltr/min) air operated pump, you'll get consistent foaming quality for clean results. Simply turn a knob and you can adjust the dryness or wetness of the foam for different cleaning applications.

APPLICATIONS

Food Processing Plants: Process Food, Beverage, Dairy, Baking, Poultry, Smoke Houses, Seafood.

Transportation: Trucking, Aviation, Transit, Automotive, Military, Ships, Construction Equipment.

Industrial: General Cleaning, Machinery Degreasing, Paint Manufacturers, Paper Mills.

Agricultural: Dairy, Poultry, Farm Equipment, Hog.

REQUIREMENTS

- Minimum 60 PSI clean, dry air at 5 – 10 CFM during operation of the foamer.
- Chemical requirement: Most foam cleaning dilution rates operate at 3 to 5 oz/gal (24 to 39 ml/ltr) — consult your chemical supplier for the proper foaming product and mixing ratio to use.

SPECIFICATIONS

Foam Output	65 gal/min (246 ltr/min)
Foaming Distance	25—30 feet (7.5—9 meters)
Chemical Compatibility	Santoprene: All acids, corrosives, and petroleum products Viton: Alkalines, soaps, mild acids, sodium hypochlorite
Air Operated Pump Materials	Polypropylene Body w/ Santoprene Seals and Diaphragm Polypropylene Body w/ Viton Seals and Diaphragm
Air Consumption	60-80 psi, 5-10 scfm
Hose	Portable: 25 feet (7.6 meters) reinforced hose, 3/4" ID with wand

SAFETY PRECAUTIONS

- Read and understand the MSDS sheets for the cleaning chemicals that will be used — consult your chemical supplier if you have any questions.
- Always wear safety goggles and protective gloves while operating the foam unit.
- Avoid contact of cleaning agents with skin and eyes. If contact occurs, rinse affected area with water for 15 minutes, and seek medical attention, if needed.
- Drain fluid contents of unit and flush out tank if using different types of chemicals from operation to operation.
- Never point the Discharge Foam Wand at anyone.
- Be sure to flush unit with fresh water when switching from alkaline to acid, or acid to alkaline product.
- Never leave unit unattended while discharge hose is under pressure.
- Never foam directly into an uncovered electrical outlet or electrical panel.
- Stand far enough away from surface being foamed to prevent foam from splashing on you.

AFTER-USE

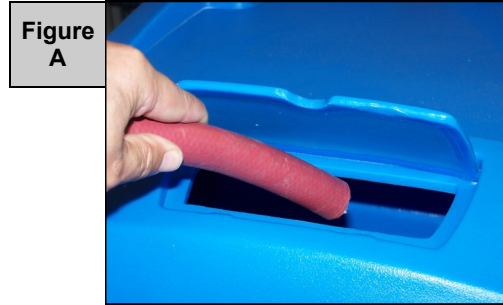
- (1) Fill the tank with fresh water and rinse thoroughly. With discharge valve “open”, allow pump to run until all chemical has been pumped through discharge hose, and air has been purged.
- (2) Close the Air Inlet Valve and relieve all remaining pressure on the unit by opening the valve on the discharge hose and leave in the “open” position.
- (3) Open the drain plug on the bottom of the tank to remove any remaining liquid from the tank. The drain plug is 1” NPT with a 1.375” hex head.

MAINTENANCE

- Periodically check the air pump for leaks or evidence of wear/breakdown.
- Periodically replace filter media in filter/dryer.
- Periodically check the pickup tube for blockage, and flush to clean.

OPERATION

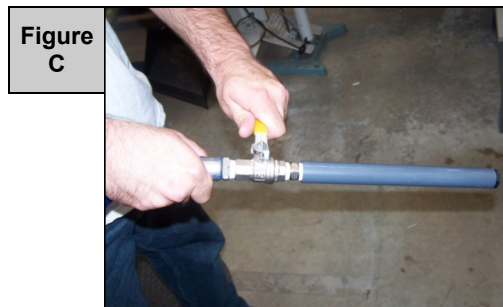
- (1) [Fig. A] Fill the foamer tank with a combination of water and foaming chemical — consult your chemical supplier for proper dilutions. Do not overfill tank.



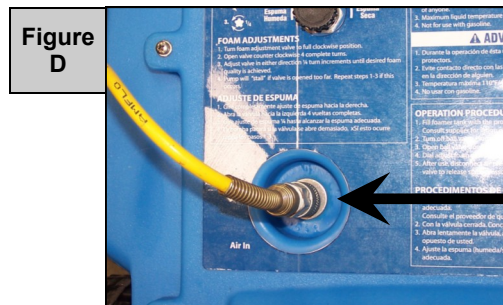
- (2) [Fig. B] Close Wet Foam/Dry Foam Valve completely — turn clockwise until it stops.



- (3) [Fig. C] Make sure the ball valve on the discharge hose is closed!

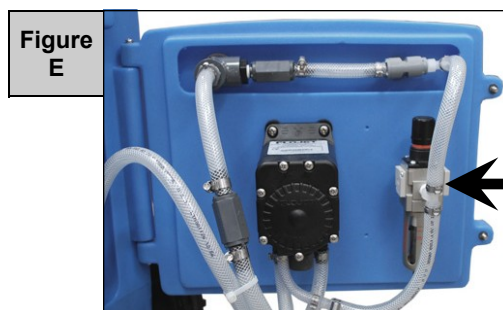


- (4) [Fig. D] Connect a clean, dry, air supply to the 5/16" quick connect fitting on the unit. Note: Unit will operate when air supply is on.



- (5) [Fig. C] Slowly open the ball valve on the discharge hose while holding foam wand away from you. Closing the ball valve will turn pump off.

- (5) [Fig. E] Adjust air pressure regulator to achieve desired pump flow rate (between 60—80 PSI for optimum results).



- (6) [Fig. B] Open Wet Foam/Dry Foam Valve in the counter-clockwise direction four complete turns.
- (7) [Fig. B] Continue to open the Wet Foam-Dry Foam Valve in 1/4 turn increments, allowing a few seconds between adjustments, until the proper consistency (dryness) of foam is achieved.

TROUBLESHOOTING

<u>PROBLEM</u>	<u>SOLUTION</u>
(1) Unit will not operate.	<ul style="list-style-type: none"><input type="checkbox"/> Check for proper air pressure (60 PSI or more into unit). 60 PSI on Air Gauge.<input type="checkbox"/> Check Air Regulator Filter for obstruction such as water, oil, or debris.<input type="checkbox"/> Check for plugged strainer and replace Air Regulator Filter Assembly, if necessary.
(2) Unit will not make foam.	<ul style="list-style-type: none"><input type="checkbox"/> Make sure the correct foaming chemicals and concentrations are being used.<input type="checkbox"/> Checkvalve is installed backwards.<input type="checkbox"/> Packing is contaminated or degraded. See item #8 for details on how to service the packing.
(3) Wet Foam-Dry Foam Valve is opened too far pump will not cycle properly due to lack of air pressure.	<ul style="list-style-type: none"><input type="checkbox"/> If this occurs, close valve and follow the instruction in Steps 5—7 under “Operation” (page 3).
(4) Air passes through the pump without cycling.	<ul style="list-style-type: none"><input type="checkbox"/> Repair or replace the pump.
(5) Foam Solution backs up into the air filter.	<ul style="list-style-type: none"><input type="checkbox"/> Checkvalve needs replacing.
(6) Pump cycles but no liquid is discharged.	<ul style="list-style-type: none"><input type="checkbox"/> Check to see if pump is primed.<input type="checkbox"/> Check footvalve/strainer orientation. Arrow must point toward pump suction port.<input type="checkbox"/> Suction line leak.<input type="checkbox"/> Pump fittings loose or broken.<input type="checkbox"/> Suction line not submerged down into liquid.
If all of the above check out okay.	<ul style="list-style-type: none"><input type="checkbox"/> Repair or replace the pump.

PROBLEM

SOLUTION

(7) Foam comes out wet regardless of where the Wet Foam-Dry Foam is set.

- Checkvalve may be plugged and needs replacing.
- Ball valve may not be open all the way on foam wand. This may happen if the operator is standing too close to a wall and closing the ball valve slightly to reduce splash of foam.

(8) Unit foams at reduced pressure.

- Check the air supply into the unit. If air pressure is low, turn unit off until air supply can bring pressure back up.
- If you know the air supply is 60 PSI or higher, check the internal air gauge which should read near 60 PSI or higher. Adjust Pressure Regulator to required minimum 60 PSI.

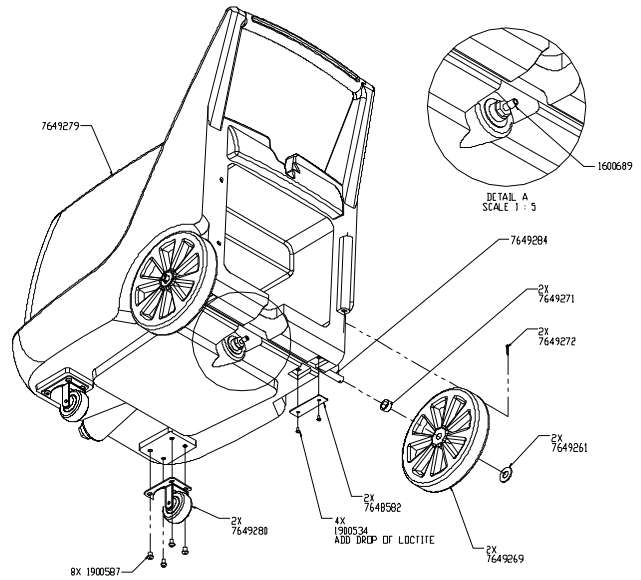
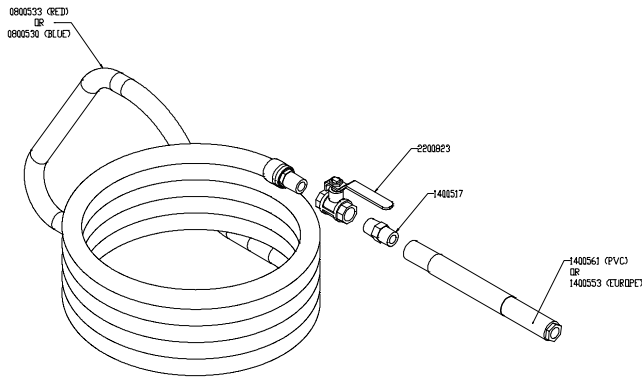
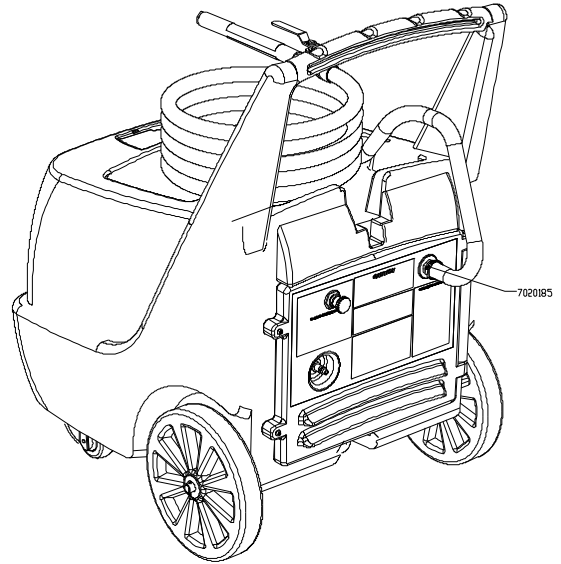
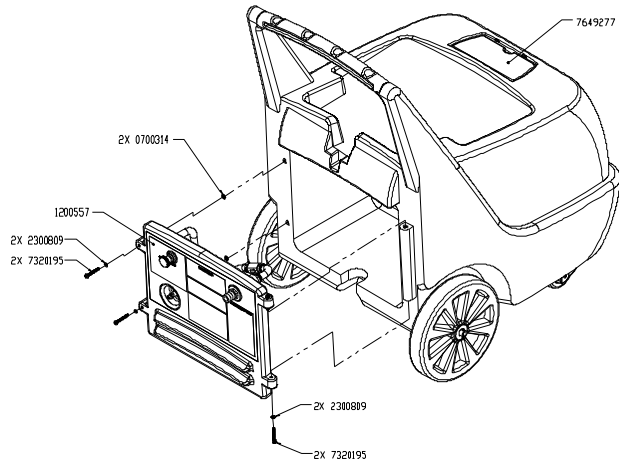
If both of the above check out okay, the S.S. packing could be plugged. Remove and clean it per the instructions to the right:

- (i) Be sure to turn off air to unit and open the cut-off valve on the discharge hose to remove back-pressure on the unit.
- (ii) Remove the hose barb from the Discharge Tee.
- (iii) Remove the screen retainer and packing from inside the tee.
- (iv) Clean any particles from the packing and the screen retainer.
- (v) Replace the packing and screen retainer into the tee and replace the hose barb fitting. Use a pipe thread sealant to prevent leaks.

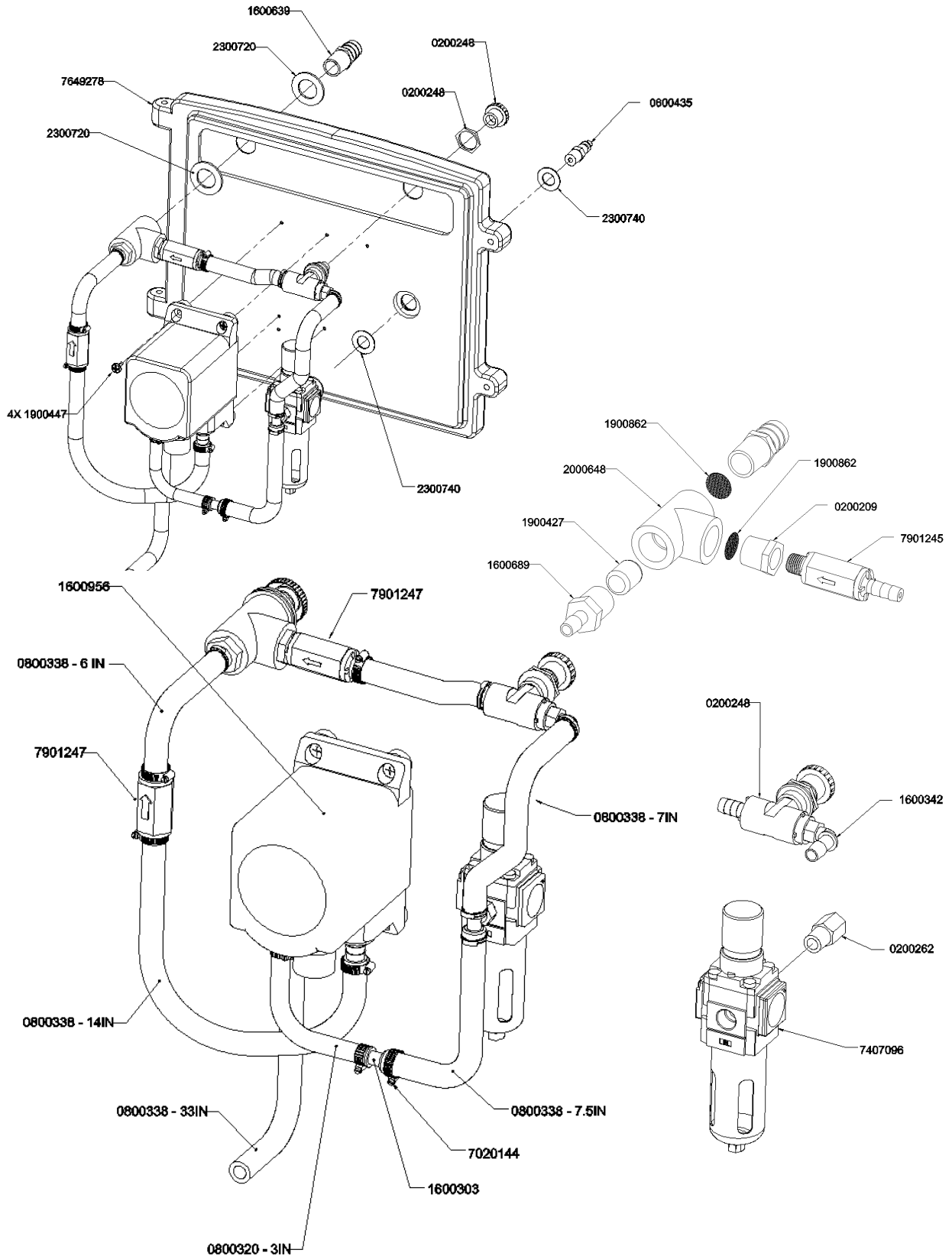
(9) Pump does not stop with ball valve (wand) turned off.

- Chemical lines not primed and/or air leaks in the pump tubing.

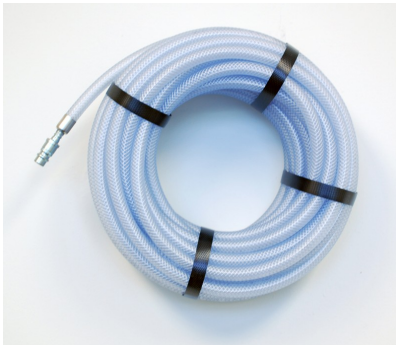
MOBILE CART & DISCHARGE HOSE



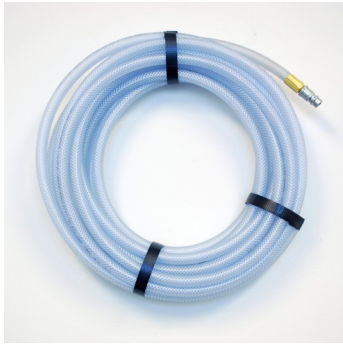
PUMP & PLUMBING



EUROPEAN PARTS



0800537
Air Supply Hose
50 ft (15.2m) European Plug



0800538
Air Supply Hose
25 ft (7.6m) European Plug



0800539
Foam Clean Hose
3/8 ID x 25 ft (7.6m)

0800545
3/8 ID x 40 ft (12m)



7649288-1
Front Wheel Kit
Steel with Brakes



7649288-2
Front Wheel Kit
Stainless Steel with Brakes



PVC Wand Assembly, 1/2" FPT
1400554-1 18in (46cm)
1400554-2 24in (61cm)
1400554-3 36in (91cm)



PVC Wand Assembly, 3/8" NPT
1400556-1 18in (46cm)
1400556-2 24in (61cm)
1400556-3 36in (91cm)



SST Wand Assembly, 3/8" NPT
1400557-1 18in (46cm)
1400557-2 24in (61cm)
1400557-3 36in (91cm)

REPLACEMENT PARTS LIST

Part Number	Description
0800533	Hose, Reinforced Red 3/4 ID X 1 OD X 30 Ft
0800530	Hose Reinforced Blue 3/4 ID X 1 OD X 10 Meters
2200823	Valve, Ball 1/2 FNPT Brass/Nickel
1400517	Nipple, 1/2 NPT Hex Brass/Nickel
1400561	Wand, PVC Foam Clean
1400553	Assembly, Foam Wand Europe
1600342	Fitting, ELL, Kynar 1/4 NPT X 3/8 Barb
0200248	Valve, Needle 1/4 FNPT X 3/8 Barb
0200262	Fitting, Brass/NI 1/4 FNPT X 1/4 MNPT
7407096	Air Regulator, Auto Drain & Filter, 7-125 PSI, 1/4 NPT
7901247	Check Valve, Viton 3/8 Barb X 3/8 Barb
7901245	Check Valve, Viton, Gray PVC 3/8 Barb (in) x 1/4 Mnpt (out)
1600956	Pump, Flojet AOP 3/8 Inch, Santoprene
7649269	Wheel Foam Clean, Mobile
7649269-1	Wheel, Foam Clean, Mobile Rubber, Black, Soft
1600639	Fitting, Brass Ni PI 1/2 NPT X 3/4 Barb
0600435	Air Fitting 1/4 In NPT Male
7649278	Door, Foam Clean 25-95
1600689	Fitting, Kynar 1/2 MNPT X 3/8 Barb
1900427	Packing, S.S. Shaving Foam Clean
2000648	Fitting, Tee, PVC 1/2 T, Sch 80
1900862	S.S. Wire Cloth, .75 Dia 18 X 18 Mesh
0200209	Bushing, Reducer, Poly 1/2 MNPT X 1/4 FNPT
1600303	Fitting Adapter 1/4 Barb X 3/8 Barb
7020144	Clamp, Hose, S.S. , 7/16 X 11/16

DISCLAIMER

Knight LLC does not accept responsibility for the mishandling, misuse, or non-performance of the described items when used for purposes other than those specified in the instructions. For hazardous materials information consult label, MSDS, or Knight LLC. Knight products are not for use in potentially explosive environments. Any use of our equipment in such an environment is at the risk of the user, Knight does not accept any liability in such circumstances.

WARRANTY

All Knight controls and pump systems are warranted against defects in material and workmanship for a period of ONE year. All electronic control boards have a TWO year warranty. Foam Clean 25-95 Air Pump warranty is two years for defects in material and workmanship. Warranty applies only to the replacement or repair of such parts when returned to factory with a Knight Return Authorization (KRA) number, freight prepaid, and found to be defective upon factory authorized inspection. Bearings and pump seals or rubber and synthetic rubber parts such as "O" rings, diaphragms, squeeze tubing, and gaskets are considered expendable and are not covered under warranty. Warranty does not cover liability resulting from performance of this equipment nor the labor to replace this equipment. Product abuse or misuse voids warranty.

FOOTNOTE

The information and specifications included in this publication were in effect at the time of approval for printing. Knight LLC reserves the right, however, to discontinue or change specifications or design at any time without notice and without incurring any obligation whatsoever.

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FOAMCLEAN 25-95

95 Liters Mobile Foamer



Knight is proud to announce the release of our new air powered 95 liter (25 gallon) mobile foaming system. This new higher capacity foamer includes our dependable Polypropylene air operated double diaphragm pump that dispenses a rich lather of foam at 190 liter of foam/min (50 gal/min) with a projection distance of up to 9 m (30 ft).



INDUSTRIAL SYSTEMS

- FoamClean 25-95 is designed to be the most innovative and user friendly mobile foamer made today.
- The FoamClean 25-95 incorporates our Polypropylene pump with the choices of Viton, Santoprene, or Teflon seals which allows for the flexibility to adapt to the different types of chemicals such as corrosive chlorinated / alkaline cleaners and acids used today.
- FoamClean 25-95 has the option to be powered by a 15 LPM (4 GPM) or 18.9 LPM (5 GPM) reliable, double diaphragm pump
- Our re-engineered "foam mixer" delivers a much wider range of wet-dry foam to accommodate the range of products and dilutions you need!
- The pump compartment on this foamer has a hinged door that allows for easy access with only two "captive" screws.
- Tool tray on top for storing scrub brushes, gloves, goggles and other cleaning accessories along with integrated spray bottle hangers on the handle.
- Custom colors and proprietary name embossing are also available.

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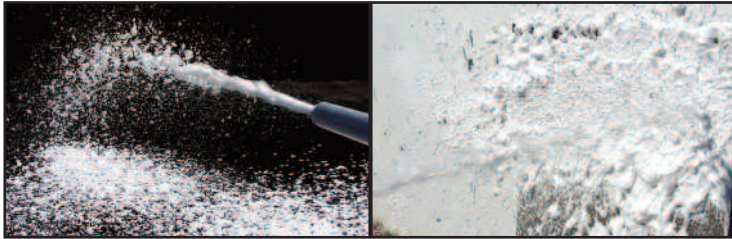
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Engineered Advantages

The new FoamClean 25-95 is no ordinary mobile foamer. We focused our design efforts on building a mobile foamer that is more intuitive for operators, easier to work on, and more versatile for the range of cleaning tasks and chemistries found in the food and beverage and dairy farm markets of today.

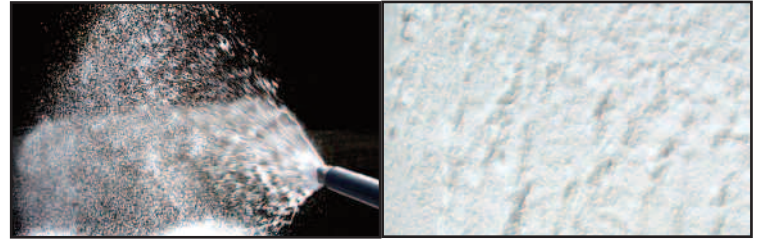


Foam Applicators



Straight Bore Nozzle

The foam wand is designed to throw a rich lather of foam at distances up to 9 meter (30 ft) and reach those high ceilings, hard to reach crevices, and pockets where biofilm can form inside food processing machinery.



V Jet Fan Spray

The foam wand is designed for up close work and to cover a larger work area with fewer strokes of the wand. Foam bubbles break down into smaller sizes and provide an even distribution of foam over the cleaning surface.

ORDERING INFORMATION

FOAMCLEAN 25-95

Foam Clean 25-95 is a fully configurable foamer offering an extensive range of pump and foam hose options. Select the base foamer (7649440), the type of hose and nozzle attachment you prefer and the pump required for your chemistry.

PART # DESCRIPTION

7649440 Foam Clean 25-95 Base Foamer w/o pump, w/o Hose/Foam Wand

Hose Options

0800532 7.6 m (25 ft) High Pressure Foam Hose (Red Reinforced Rubber) with w/ Wand and Shut Off Valve
 0800535 7.6 m (25 ft) High Pressure Foam Hose (Reinforced Rubber w/ Blue PVC Liner) with w/ Wand and Shut Off Valve
 0800531 7.6 m (25 ft) High Pressure Foam Hose (Reinforced Rubber w/ Blue PVC Liner) with w/ Wand and Shut Off Valve w/ V-Jet Nozzle

Air Operated Pump Options

1600826-2 15 ltr/min (4 GPM) Air Operated Pump w/ Santoprene Seals/Diaphragm
 1600827-2 15 ltr/min (4 GPM) Air Operated Pump w/ Teflon Seals/Diaphragm
 1600828-2 15 ltr/min (4 GPM) Air Operated Pump w/ Viton Seals/Diaphragm
 1600956-2 18.9 ltr/min (5 GPM) Air Operated Pump w/ Polypropylene Body and Santoprene Seals/Diaphragm
 1600957-2 18.9 ltr/min (5 GPM) Air Operated Pump w/ Polypropylene Body and Viton Seals/Diaphragm

SPECIFICATIONS

Foam Output	190 liters/minute (50 gallons/minute)
Foaming Distance	9 Meters (30 Feet)
Chemical Compatibility	Santoprene: Acids, Chlorinated Cleaners, Alkalines, Soaps Viton: Acids, Chlorinated Cleaners, Solvents, D-Limonene, Hydrocarbons Teflon: All Acids, Chlorinated Cleaners, Alkalines, Caustics
Hose	5.2 m (25 feet) reinforced hose, 3/4" ID with wand
Dimensions	W 59.1 cm x H 88.9 cm x D 76.6 cm W 23.3" x H 35.0" x D 30.2"

KNIGHT LIMITED WARRANTY

Knights controls and pump systems are warranted against defects in material and workmanship for a period of ONE YEAR. All Electronic Control Boards have a TWO YEAR warranty. Warranty applies only to the replacement or repair of such parts when returned to the factory with a KRA number, freight prepaid and found to be defective upon factory inspection. Rubber and synthetic rubber parts such as "O" rings, diaphragms, squeeze tubing and gaskets are considered expendable and are not covered under warranty. Warranty does not cover liability resulting from performance of this equipment nor the labor to replace this equipment. Product abuse or misuse voids warranty. Knight products are not for use in potentially explosive environments. Any use of our equipment in such an environment is at the risk of the user. Knight does not accept any liability in such circumstances.

KNIGHT DISCLAIMER

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