

Tridak Model 1200 User Guide

Dual-Component Syringe Filling System with Disposable Fluid Path Technology

- Instructions for Safe Use
- Setup and Operation
- Maintenance
- Ordering Spare Parts and Accessories



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About Tridak – A Dymax Company**Systems for fluid packaging.**

Tridak manufactures fluid packaging systems for a variety of industries including industrial, medical, dental, pharmaceutical, and food preparation. Tridak's filling systems for syringes and cartridges provide significant productivity gains over manual and other more complicated and costly filling methods. The equipment is suited for all industry standard packaging as well as custom molded syringes and cartridges. Tridak possesses the capability to fabricate nozzles and multi-port dispensing manifolds that perfectly match the packages being filled. Single component and dual component materials can be packaged in seconds, one at a time, or in multiples for higher volume throughput. High-pressure filling equipment is available for packaging highly filled materials in tiny syringes or compules.

Please note that most filling system applications are unique. Tridak does not warrant the fitness of the product for the intended application. Any warranty applicable to the product, its application and use is strictly limited to that contained in the Tridak standard Conditions of Sale. Tridak recommends that any intended application be evaluated and tested by the user to insure that desired performance criteria are satisfied. Tridak is willing to assist users in their performance testing and evaluation. Data sheets are available for pressure pots upon request.

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Introduction

Introduction to the User Guide

This guide describes how to use the Tridak Model 1200 Syringe Filling System. Sections in this guide describe how to assemble, use, and maintain the filling system safely and efficiently.

Other Documentation Included

In addition to this guide, the following documentation is included with your filling system:

- User guide for the Model 828 dispensing valve – MAN034
- OEM user guide for the air regulators

Intended Audience

This user guide was prepared for experienced process engineers, technicians, and manufacturing personnel. If you are new to filling systems and do not understand the instructions, contact Tridak Application Engineering to answer your questions before using the equipment.

Where to Get Help

Additional resources are available to ensure a trouble-free experience with our products:

- Detailed product information on www.tridak.com
- Customer Support and Application Engineering teams are available in the United States, Monday through Friday, from 8:00 a.m. to 5:30 p.m. Eastern Standard Time. You can also email us at info@dymax.com. Please see the back cover of this user guide for worldwide contact information.

Safety



WARNING! *If you use this filling system without first reading and understanding the information in this user guide, injury can result. To reduce the risk of injury, read and ensure you understand the information in this user guide before assembling and operating a Tridak filling system.*

General Safety Considerations

All users of Tridak equipment should read and understand this user guide before assembling and using the equipment.

Specific Safety Considerations

Using Safe Operating Pressures

Pressurizing the components in the dispensing system beyond the maximum recommended pressure can result in the rupturing of components and serious personal injury. To minimize the risk of rupturing components and injury, do not exceed the maximum operating pressure of the components in your filling system (See system specifications on page 13).

Preventing Injection Injury

Discharging fluids or compressed air with a dispensing tip against your skin can cause very serious injection injury. To minimize the risk of injection injury, do not place the dispensing tip in contact with your skin.

Personal Protective Equipment

Operators are recommended to wear any personal protective equipment specified by their company's safety policy for the materials used during filling. Personal protective equipment should be in place and used at all times before pressurizing the system and when handling any potentially hazardous materials.

Product Overview

Description of the Model 1200 Syringe Filling System

Note: These machines are customized to accept specific syringes with plungers fully inserted.

The Model 1200 Syringe Filling Machine is designed to fill dual-component syringe cartridges simultaneously. The machine is set up to accept two different materials from pressurized reservoirs, making it an ideal filling station for materials requiring two-component mixing, such as epoxies or composite resins. The system can also be configured to fill small, single-component syringes.

The filling process requires an operator to load the empty syringes onto the fill nozzles and then activate the filling system using the foot switch. The internal PC of the system controls all functions of this system. The adjustable stroke controls the full-stroke volume.

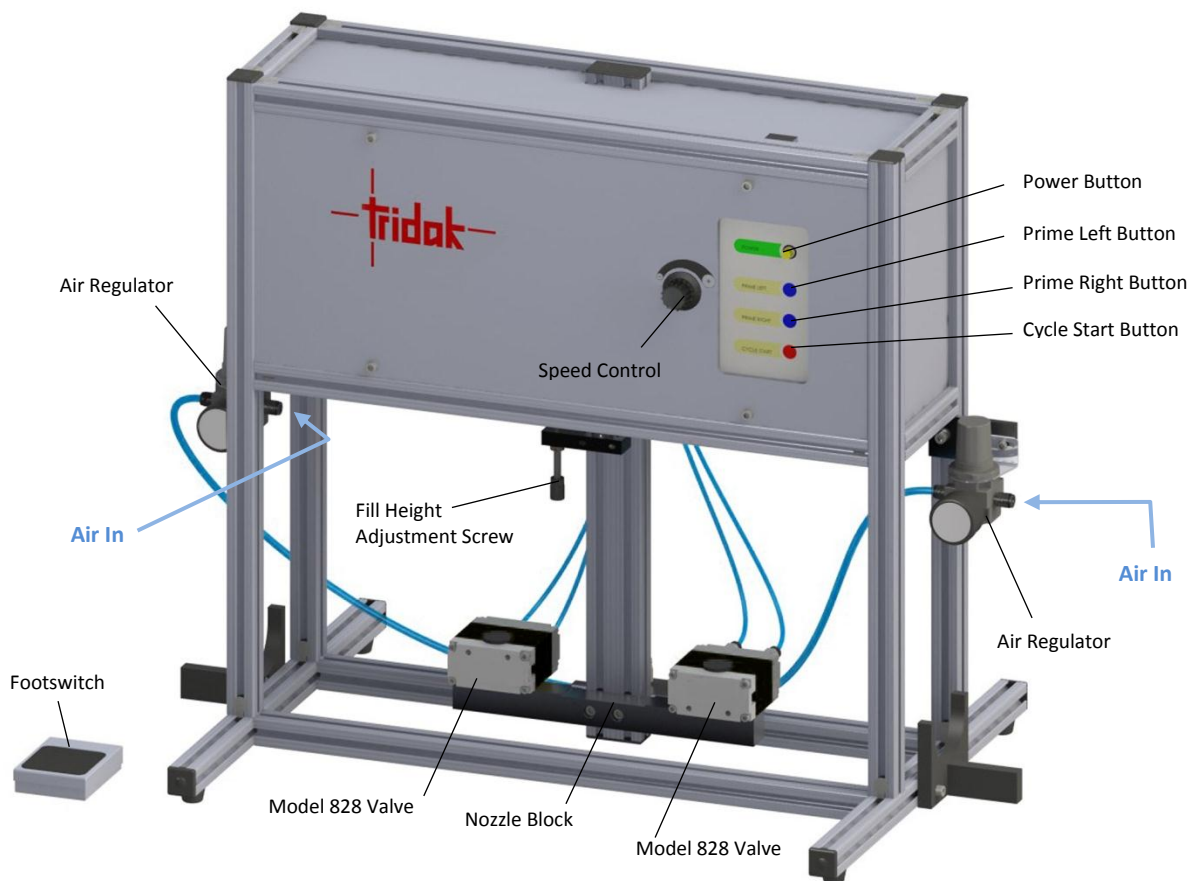
Special Features and Benefits of the Model 1200 Syringe Filler

The Model 1200 syringe filling system is engineered for precise performance and long service life. Key features include:

- Utilizes disposable fluid path valve technology which eliminates cross-contamination and minimizes clean-up and downtime during product changeover
- Fills two-component syringes simultaneously with the same or separate materials
- Fill times from 2-6 seconds
- Adjustable fill level, electronically controlled
- Nozzle-end filling process with pre-inserted plunger minimizes air entrapment
- System Dimensions: 29.125 in x 24.125 in x 18.25 in [73.98 cm x 61.28 cm x 46.36 cm] (W x H x D)

Description of Main Components

Figure 1. Main Components of a Model 1200 Syringe Filling System



Assembly and Setup

Unpacking and Inspecting Your Shipment

When your syringe filling system arrives, inspect the boxes for damage and notify the shipper of box damage immediately.

Open each box and check for equipment damage. If parts are damaged, notify the shipper and submit a claim for the damaged parts. Contact Tridak so that new parts can be shipped to you immediately.

Check that the parts included in your order match those listed below. If parts are missing, contact your local Tridak representative or Tridak Customer Support to resolve the problem.

Utilities Required

Air: 60-80 psi (0.41-0.55 MPa), 50 micron filtered, non-lubricated; dry air is required

Electric: 120 VAC, 50/60 Hz

Parts Included in Model 1200 Syringe Filling System

- Model 1200 Syringe Filling System
- Air Line Kits
- Fluid Line Kits (3/8" OD Black Polyethylene tubing)
- Footswitch
- Power Cord
- Printed User Manual

Preparing the System for Use



WARNINGS & PRECAUTIONS!

Supply air MUST be connected before connecting air to reservoir!

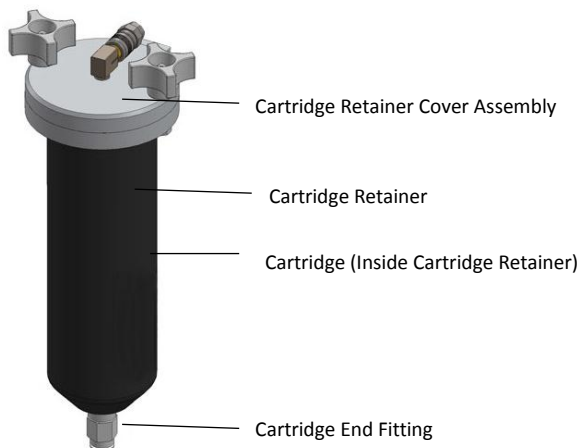
Disconnect air to reservoirs BEFORE supply air is disconnected!

Don't start without a syringe in place!

Cartridge Retainer Preparation

1. Install Cartridge End Fitting onto a Cartridge Retainer.
2. Place a filled Cartridge into the Cartridge Retainer.
3. Install and securely tighten the Cartridge Retainer Cover Assembly onto the Cartridge Retainer.

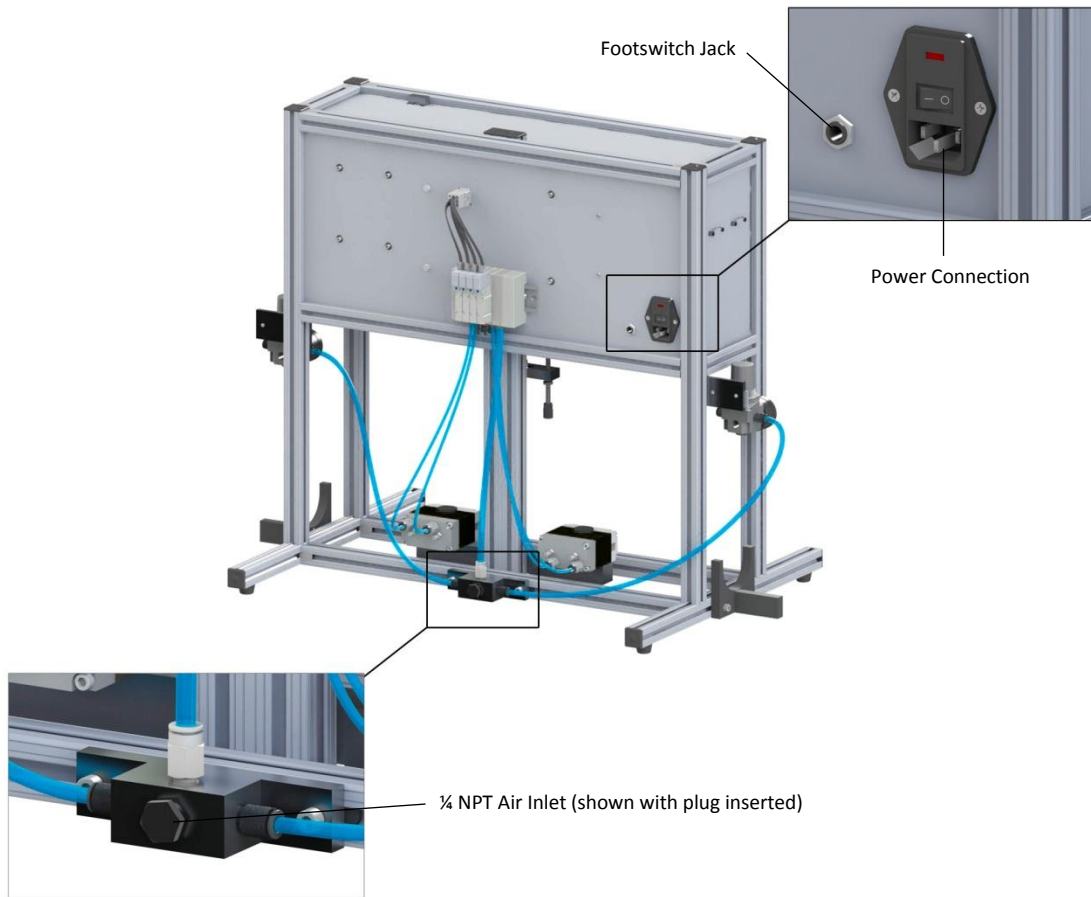
Figure 2. 20 oz. Cartridge Retainer



System Interconnect

1. Plug the Power Plug into the Power Connection (Figure 3) on the machine's back panel.
2. Connect the Footswitch to the Footswitch Jack (Figure 3) on the machine's back panel.
3. Connect the supply air to the 1/4 NPT Air Inlet on the rear of the unit (Figure 3). Set the pressure to 65 psi (0.44 MPa).

Figure 3. Connections (Rear Panel)



Installing Fill Tubing

Connecting Fill Tubing to the Dispensing Valves

1. Remove the Tubing Retainer Plate from the dispensing valve.
2. Cut two pieces of 3/8" OD x 1/16" tubing to a length of 6 inches.

Note: 3/8" OD black polyethylene tubing is included with shipment. Bulk tubing of other material compositions is available from Tridak.

3. Push the tubing through the Tubing Retainer (Figure 4, C) and into the Nozzle Block Fitting (Figure 4, A), making sure it is bottomed out.
4. Reinstall the Tubing Retainer Plate (Figure 4, B) onto the dispensing valve, being careful to tighten the four screws evenly.
5. Repeat steps 3-5 for the second dispensing valve.

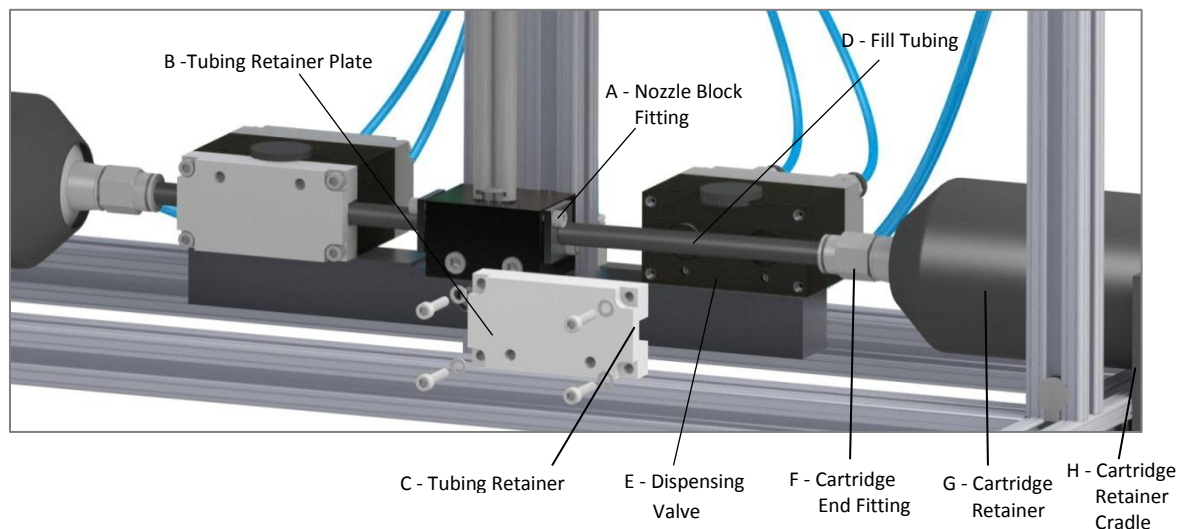
Note: Make sure the material cartridge on the right containing “Part A” is attached to the tubing coming from the right-side valve. Make sure the material cartridge on the left containing the “Part B” is attached to the tubing coming from the left-side valve.

Installing Cartridge Retainers to Fill Tubing

1. Connect the Cartridge Retainer (Figure 4, G) to the Fill Tubing (Figure 4, D) by sliding the Cartridge End Fitting (Figure 4, F) onto the Fill Tubing (Figure 4, D).
2. Place the Cartridge Retainer (Figure 4, G) into the Cartridge Retainer Cradle (Figure 4, H).

Note: to prevent air pockets when reloading, push down on the cartridge piston until material is at the cartridge fitting end and then install the cartridge retainer.

Figure 4. Connecting Fill Tubing to the Dispensing Valves

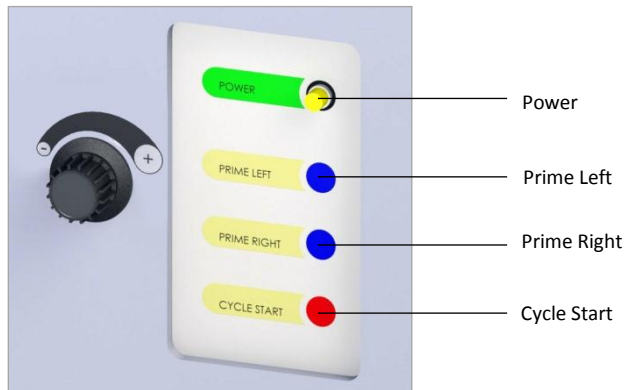


Priming the System

1. Press the Power Button on the system's Control Panel (Figure 5) to turn the system on. The light to the right of the Power Button will turn green.
2. Remove the plunger from a syringe and install the nozzle end of the syringe into the Nozzle Block.
3. Press the Prime Left Button (Figure 5) to start filling the syringe. Continue to push the Prime Left Button until all the air in the system has been expelled.

4. Press the Prime Right Button (Figure 5) to start filling the syringe. Continue to push the Prime Right Button until all the air in the system has been expelled.

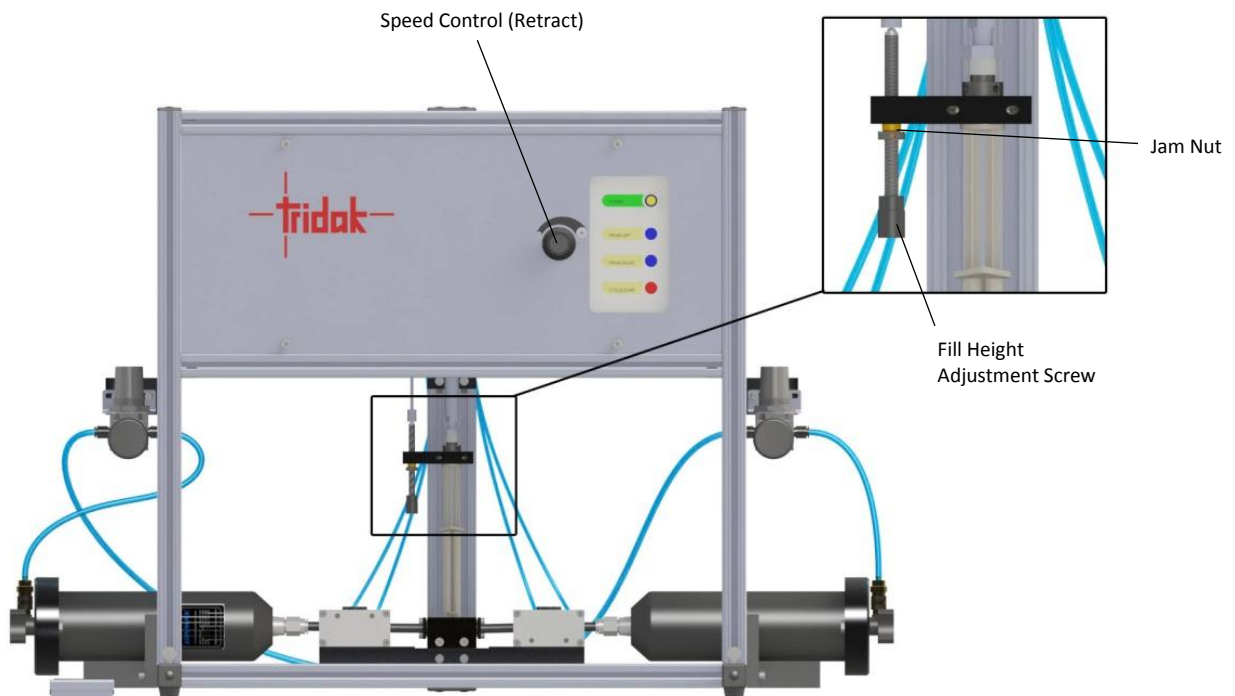
Figure 5. Control Panel



Setting the Fill Height

To adjust the fill height, loosen the Jam Nut and turn the Fill Height Adjustment Screw accordingly.

Figure 6. Fill Adjustment Controls



Operating the System

Speed Control Adjustments

The fill rate must exceed the plunger rise rate or you will not completely fill the syringe. To correct that condition you can decrease the plunger rise rate with the Speed Control.

Adjustments to the Dispensing Valve

Model 828 dispensing valves are preset before shipment. If adjustment is needed, please refer to the Model 828 Dispensing Valve User Guide. This manual is included in your shipment.

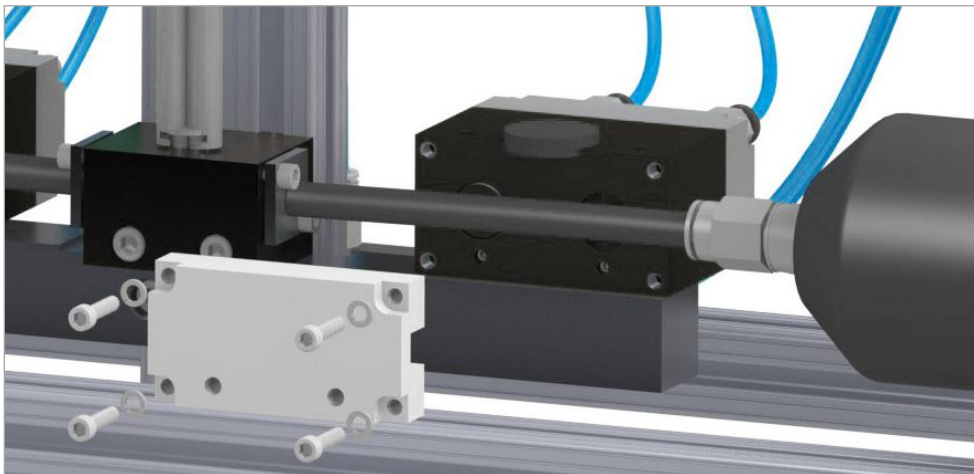
Reloading System Material

1. Remove the Air Line from the Cartridge Retainer.
2. Using a wrench, remove the Fill Tubing from the Cartridge End Fitting.
3. Install a filled Cartridge Retainer.

Replacing the Fill Tubing

1. Remove the Tubing Retainer Cover. This can be done by removing the Allen cap screws that hold it in place (Figure 7).
2. Pull out the Fill Tubing and install new tubing.

Figure 7. Replace the Fill Tubing



Spare Parts and Accessories

Replacement Parts

Item	Part Number
Air Regulator	
Precision Air Regulator	T14051
Dispensing Valve	
Model 828 Dispensing Valve	T17057
Material Reservoirs	
Cartridge Reservoir, 20 oz (500 mL)	T16763
Cartridge Reservoir, 32 oz (900 mL)	T17035
Tubing	
Fluid Line Kit, 3/8" OD Black Polyethylene	T16787
Air Line Kit	T16789
Miscellaneous	
Footswitch	T14999
Power Cord, 110 VAC, 7 ft	T17021

Specifications

System Specifications

Materials of Construction—Wetted Parts

Dispensing valve = See Model 828 dispensing valve user guide

Fluid tubing = light-blocking, black, polyethylene

Fluid tubing fittings = acetal

Operating Specifications

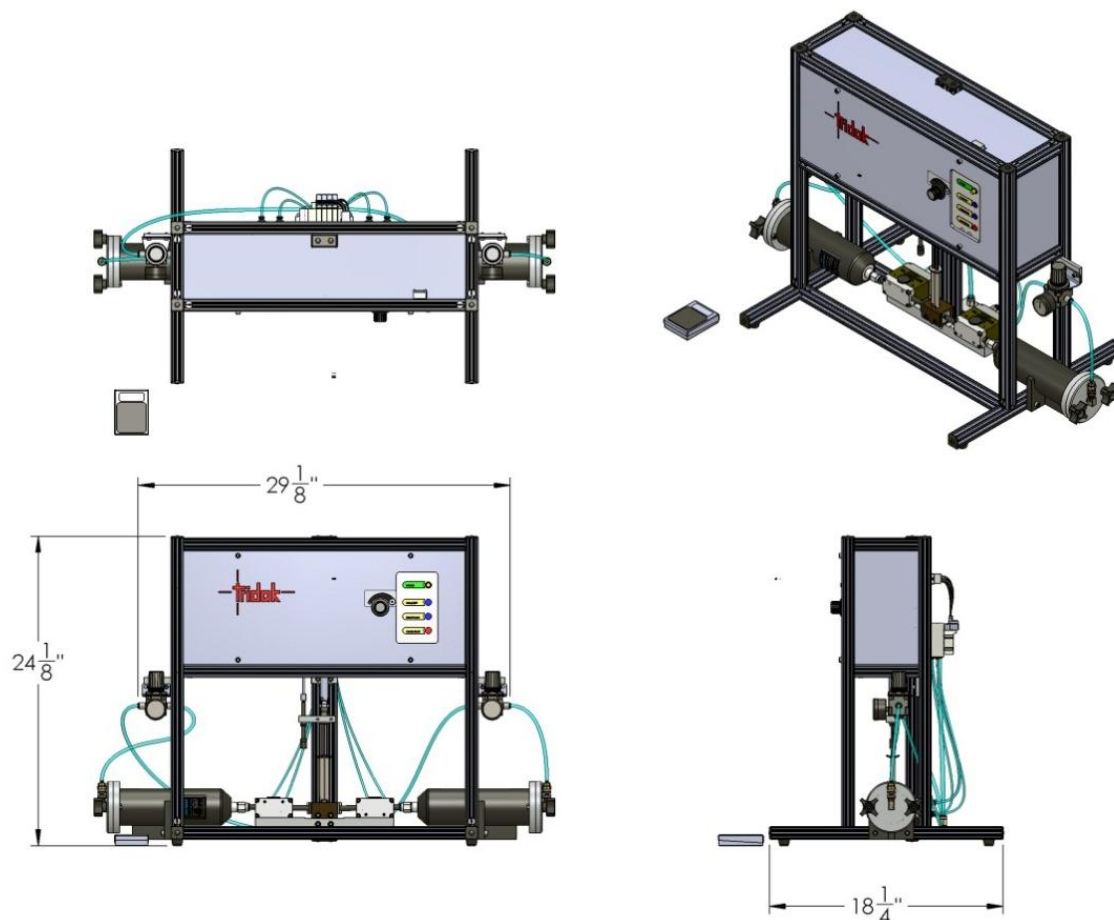
Required air pressure = 60-80 psi (0.41-0.55 MPa), 50 micron filtered, non-lubricated; dry air

Required Electrical Power = 120 VAC, 50/60 Hz

Dimensions

System Dimensions: 29.125 in x 24.125 in x 18.25 in [73.98 cm x 61.28 cm x 46.36 cm] (W x H x D)

Figure 8. Model 1200 Dimensional Diagram



Warranty

From date of purchase, Tridak offers a one-year warranty against defects in material and workmanship on all system components with proof of purchase and purchase date. Unauthorized repair, modification, or improper use of equipment may void your warranty benefits. The use of aftermarket replacement parts not supplied or approved by Tridak, will void any effective warranties and may result in damage to the equipment.

IMPORTANT NOTE: TRIDAK RESERVES THE RIGHT TO INVALIDATE ANY WARRANTIES, EXPRESSED OR IMPLIED, DUE TO ANY REPAIRS PERFORMED OR ATTEMPTED ON TRIDAK EQUIPMENT WITHOUT WRITTEN AUTHORIZATION FROM TRIDAK. THOSE CORRECTIVE ACTIONS LISTED ABOVE ARE LIMITED TO THIS AUTHORIZATION.

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Dymax Corporation
860.482.1010
info@dymax.com
www.dymax.com
www.tridak.com

Dymax Oligomers & Coatings
860.626.7006
oligomers&coatings@dymax.com
www.dymax-oc.com

Dymax Europe GmbH
+49 (0) 611.962.7900
info_de@dymax.com
www.dymax.de

Dymax UV Adhesives & Equipment (Shenzhen) Co Ltd
+86.755.83485759
dymaxasia@dymax.com
www.dymax.com.cn

Dymax UV Adhesives & Equipment (Shanghai) Co Ltd
+86.21.37285759
dymaxasia@dymax.com
www.dymax.com.cn

Dymax Asia (H.K.) Limited
+852.2460.7038
dymaxasia@dymax.com
www.dymax.com.cn

Dymax Korea LLC
82.2.784.3434
info@dymax.kr
www.dymax.co.kr