

Dymax Pressure Tank User Guide

Bottle Drop-In Material Reservoir

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



About Dymax

UV/Visible light-curable adhesives. Systems for light curing, fluid dispensing, and fluid packaging.

Dymax manufactures industrial adhesives, light-curable adhesives, epoxy resins, cyanoacrylates, and activator-cured adhesives. We also manufacture a complete line of manual fluid dispensing systems, automatic fluid dispensing systems, and light-curing systems. Light-curing systems include LED light sources, spot, flood, and conveyor systems designed for compatibility and high performance with Dymax adhesives.

Dymax adhesives and light-curing systems optimize the speed of automated assembly, allow for 100% in-line inspection, and increase throughput. System designs enable stand-alone configuration or integration into your existing assembly line.

Please note that most dispensing and curing system applications are unique. Dymax 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 Dymax standard Conditions of Sale. Dymax recommends that any intended application be evaluated and tested by the user to insure that desired performance criteria are satisfied. Dymax is willing to assist users in their performance testing and evaluation. Data sheets are available for valve controllers or pressure pots upon request.

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Introduction

Introduction to the User Guide

This guide describes how to use the Dymax Bottle Drop-In Material Reservoir (PN T17004). Sections in this guide describe how to assemble, use, and maintain the pressure tank safely and efficiently.

Intended Audience

Dymax prepared this user guide for experienced process engineers, technicians, and manufacturing personnel. If you do not understand the instructions, contact Dymax 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.dymax.com
- Dymax 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 Dymax at info@dymax.com. Contact information for additional Dymax locations can be found on the back cover of this user guide.
- Dymax adhesive Product Data Sheets (PDS) on our website
- Material Safety Data Sheets (MSDS) provided with shipments of Dymax adhesives

Safety

Symbols



WARNING! This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.



CAUTION! This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.

Potential Hazards

Equipment Misuse



WARNINGS! This equipment is for professional use only. Serious injury can result from high-pressure fluids. To reduce the risk of injury, read and ensure you understand the information in this user guide before assembling and operating the Dymax pressure tank.



Read all instructions before operating the equipment. Use the equipment for its intended purpose only. If you are uncertain about usage, call Dymax Application Engineering before continuing. Improper use such as modifying or removing parts, using incompatible materials, over pressurizing the equipment, or using worn/damaged/incompatible parts can result in serious bodily injury.

Do not alter or modify this equipment in any way. If worn parts need to be replaced, use only Dymax parts and accessories.

Inspect all equipment components daily. Repair or replace any worn or damaged parts immediately. Do not use the equipment until any worn or damaged parts have been replaced.

Use materials which are compatible with the equipment's wetted parts. Reference the material manufacturer's warnings. If you are unsure about material compatibility, contact Dymax Application Engineering.

Do not exceed the maximum working pressure of the lowest rated system component. This pressure tank has a 60 psi (410 kPa, 0.41 MPa, 4.1 bar) maximum working pressure. Check the rating on all dispensing equipment and accessories to ensure they can withstand the operating pressure of the reservoir.

Never use 1.1.1 – trichloroethane, methylene chloride, or other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Use in pressurized equipment could result in a chemical reaction, with the possibility of explosion. Comply with all applicable fire, electrical, and safety regulations.

Tipping and Dropping



WARNINGS! Place the equipment on a sturdy, level surface. Check that all tubing lengths are long enough to allow for unrestricted movement of the system components. Do not lift pressurized equipment. If the equipment needs to be moved, do not pull on the tubing to move the reservoir.



Do not tip the reservoir or place it on its side. Fluid can enter and damage the pressure regulator and the pressure relief valve leading to an over-pressure condition within the reservoir. Once the pressure regulator and/or pressure relief valve become blocked, they must be replaced with new Dymax parts before the equipment can be operated again.

Do not drop the pressure tank. Dropping a pressure tank from any height can damage the pressure relief valve, pressure regulator, fittings, reservoir body, or cover. A damaged pressure regulator or damaged pressure relief valve may lead to an over-pressure condition within the reservoir while a damaged reservoir body or cover can lead to an explosion. If your reservoir is dropped, it must be thoroughly inspected for any cracks or damage to the pressure regulator and/or pressure relief valve. Any damaged parts must be replaced with Dymax parts before the equipment can be operated again. If you are unsure about the condition of your tank, please contact Dymax.

Tubing



WARNINGS! Pressurized tubing can be very dangerous. Worn, damaged, or misused tubing can develop a leak, spraying the contents of the tank at high pressure. Materials can be sprayed into eyes or onto skin causing serious bodily harm. Fire and other property damage can also occur from unwanted spraying.



Before pressurizing the system, make sure all fluid connections to the tank are secure and route tubing away from traffic areas, sharp edges, moving parts, and hot surfaces.

Inspect all tubing for cuts, leaks, or other damage and replace any damaged tubing immediately.

Check that the material being dispensed is compatible with the tubing material. Contact Dymax Applications Engineering if you are unsure of tubing/material compatibility.

Do not expose tubing to operating temperatures above 50°C (122°F) or below 0°C (32°F).

Pressurized Equipment



WARNINGS! Ruptured components in pressurized systems can spray or splash materials on the skin or in the eyes causing serious injury. Do not try to stop or repel fluid leaks with your hand, body, glove, or rag. In the event of a ruptured component, stop work immediately, disconnect the air supply and depressurize the tank. Any damaged parts must be replaced with Dymax parts before the equipment can be operated again.



Follow the pressure relief procedure whenever you are instructed to relieve the pressure, stop dispensing, clean, check, or service equipment, or install or clean the fluid nozzle.

Tighten all the fluid connections before operating the equipment.

Inspect the fluid line tubing and couplings daily for damage or wear. Replace worn, damaged, or loose parts immediately.

Fire and Explosion (For Spraying Applications)



WARNINGS! Ground all equipment in the work area. Improper grounding, poor ventilation, open flames, or sparks can cause hazardous conditions and result in a fire, explosion, or other serious injury.



If static sparking occurs or an electric shock is felt while using the equipment, stop spraying immediately. Do not use the equipment until you identify and correct the problem.

Always work in a well ventilated area. Some materials give off flammable fumes or vapors. Upon buildup, these fumes can result in a fire or explosion.

Keep the work area free of debris (i.e. solvents, rags, gasoline). Always keep a fire extinguisher compatible with your equipment and processes in the work area in case of fire.

Electrically disconnect all the equipment in the spray area and extinguish all open flames or pilot lights.

Do not smoke in the work area.

Do not turn on or off any light switch in the work area while operating or if fumes are present.

Do not operate a gasoline engine in the work area.

Chemical



WARNINGS! Hazardous chemicals can give off fumes that can cause serious injury or death if inhaled, swallowed, or splashed in the eyes or on the skin. Wear respiratory protection and protective eyewear, gloves, and clothing. Consult the chemical manufacturer for recommended personal protective equipment and hazards specific to the chemical being used.



Fumes may contain both gases (vapors) and dust (smoke given off by a substance as a result of a chemical transformation).

Consult the Material Safety Data Sheet (MSDS) or Safety Data Sheet (SDS) for all chemical products you are using prior to commencing work.

Store hazardous chemicals in approved containers.

Dispose of hazardous chemicals according to all local, state, and federal regulations.

Use only chemicals that are compatible with the system.

Product Overview

Description of the Dymax Bottle Drop-In Pressure Tank

The Dymax bottle drop-in pressure tank is designed to accommodate fluids that are supplied in bottles/containers up to 1 gallon in size. Materials are carried through a disposable fluid path from the bottle to the dispensing valve by constant air pressure. The tank's disposable fluid path is easy to replace, allowing for easier product changeover with less clean up. A variety of different fluid path sizes and materials, including black tubing for UV applications, are compatible with the tank.

The tank is constructed of aluminum and Amalgon® with an anodized black finish and is compatible with all Dymax pneumatic dispensing valves. The cover features an air-tight seal, eliminating leaking points or air entrapment problems. A cover-mounted precision air filter regulator comes standard with the tank.

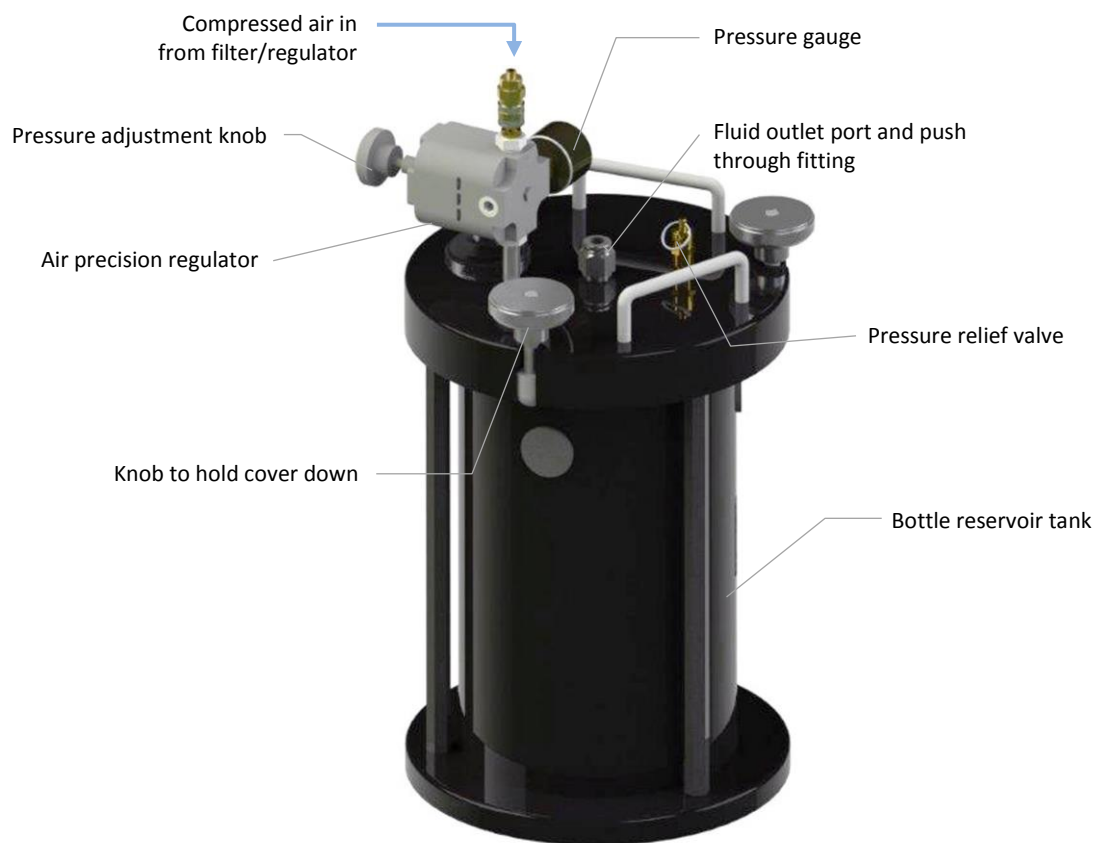
Special Features and Benefits

Features and benefits of the bottle drop-in pressure tank include:

- Compatible with bottle/container sizes up to 1 gallon
- Utilizes a disposable fluid path, allowing for easier product changeover with less clean up
- Includes a safety air relief valve to prevent over pressurization
- Easy to remove air-tight cover
- Cover-mounted air filter regulator for precise fluid control

Description of Main Components

Figure 1. Pressure Tank Components



Installation

Unpacking and Inspecting Your Shipment

When your Bottle Drop-In Material Reservoir arrives, inspect the box for damage and notify the shipper of box damage immediately.

Open the box and check for equipment damage. If parts are damaged, notify the shipper and submit a claim for the damaged parts. Contact Dymax 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 Dymax representative or Dymax Customer Support to resolve the problem.

Parts Included in the Bottle Drop-In Material Reservoir

- Bottle Drop-In Material Reservoir with Air Regulator Assembly

Operation

1. Fill the pressure tank by removing the top cover assembly from the tank. Before removing the top from the pressure tank, verify that all pressure is removed from the tank. To depressurize the tank, turn off the air supply to the pressure tank, vent the tank through the pressure relief valve, and disconnect the air supply.
2. Unscrew the three knobs mounted on the tank cover and move them into the down position.
3. Lift off the lid.
4. Uncap the material bottle and place it in the center of the pressure tank.
5. Run the material line through the Fluid Outlet Port and into the material bottle.

NOTE: It is very important that the end of the tube in the material bottle is cut at an angle to insure proper material flow.

6. Place the lid back on the tank. Make sure that the material line is inside the material bottle.
7. Once the lid is in place, move the knobs to the upright position and retighten all three knobs evenly. Firmly tighten the knobs to prevent air leakage.
8. Connect the material line to the fluid delivery system.
9. Pressurize the tank to the required pressure and operate the fluid delivery system.

Maintenance

Reservoir Cleaning

This bottle drop-in reservoir can be used to dispense a variety of different materials. Each material has its own unique set of cleaning instructions. Please refer to the Material Safety Data Sheet (MSDS) of your material for instructions on how to properly clean the material.

Reservoir Maintenance & Inspection

Dymax pressure tanks are designed to require little maintenance. Still, as with all equipment, the system should be routinely inspected for wear and maintained.

Inspect all equipment components daily. Repair or replace any worn or damaged parts immediately. Do not use the equipment until all worn or damaged parts have been replaced.

Inspect all tubing for cuts, leaks, or other damage and replace any damaged tubing immediately.

If your reservoir is dropped, it must be thoroughly inspected for cracks or damage to the pressure regulator and/or pressure relief valve. Any damaged parts must be replaced with Dymax parts before the equipment can be operated again. If you are unsure about the condition of the tank, please call Dymax.

Troubleshooting

Table 1. Troubleshooting Chart for Dymax Bottle Drop-In Pressure Tanks

Problem	Possible Cause	Corrective Action
Tank does not maintain pressure	Bent Air Supply Line	Inspect the Air Supply Line. Straighten and remove any kinks in the Air Supply Line.
	Damaged Air Regulator	Install a new Air Regulator.
	Damaged Cover U-Cup Seal	Replace the damaged U-Cup Seal.
	Cover not secured	Tighten all knobs on the cover to secure.
	Damaged Air Relief Valve	Replace the Air Relief Valve.

Spare Parts and Accessories

Options/Accessories

Item	Part Number
Tubing	
Reservoir Air Line Kit	T16789
6 Ft. (1.8 m) of Fluid Line Kit – Black 3/8" (9.5 mm) OD PE	T16787

Spare Parts

Item	Part Number
Fittings	
Air Relief Valve	T15565
3/8" Material Fitting	T16278
1/8" Air Inlet Fitting	T11694
Regulators	
Air Pressure Regulator	T13970
Miscellaneous	
U-Cup Seal, Cover	T17330
Knob, Cover	T16726

Specifications

Property	Specification
Part Number	T17004
Capacity	1 Gallon
Maximum Operating Pressure	60 psi (410 kPa, 0.41 Mpa, 4.1 bar)
Maximum Operating Temperature	0°C (32°F) to 50°C (122°F)
Safety Relief Valve Size	1/4 inch (6.3 mm)
Air Inlet Size	1/4 inch (6.3 mm) Fitting
Fluid Outlet Size	3/8 inch (9.5 mm) Fitting
Dimensions (H x Diameter)	16"x 10" (40.6 cm x 25.4 cm)
Weight	20 lbs. (9 kg)
Unit Warranty	One year from purchase

Warranty

From date of purchase, Dymax Corporation 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 Dymax Corporation will void any effective warranties and may result in damage to the equipment.

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

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