


# Application Data


## Important Safety Information


### Read this page before using any of the infor- mation in this catalog.

This catalog is designed to be used as a guide in selecting the proper hose for the applications listed herein. It contains many cautions, warnings, guidelines, and directions for the safe and proper use of Boston hose. All these directions and footnotes should be read and understood before specifying or using any of these hoses.

Throughout this catalog, potentially harmful situations are highlighted with the following symbols.

 This symbol is used to indicate imminently hazardous situations which, if not avoided, will result in serious injury or death.

 This symbol is used to indicate potentially hazardous situations which, if not avoided, could result in serious injury or death.

 This symbol is used to indicate potentially hazardous situations which, if not avoided, may result in property or equipment damage.


Some of the most common problems in the chemical hose industry result from improper hose and coupling


selection, improper assembly techniques, failure to correctly inspect and test hose assemblies, and improper cleaning practices and hose assembly storage techniques.

In turn, these situations can lead to material leakage, spraying, spattering, end blow-offs, explosions, and other situations that may result in serious personal injury and property damage.

Personal injuries caused by improper hose assembly specification, installation, and usage could include cuts and abrasions, serious burns, irreparable eye damage, or even death.

Therefore, for your safety and the safety of others working around you, Eaton strongly urges you to read and comply with all safety information printed in this publication.

 **WARNING:** Failure to properly follow the manufacturer's recommended procedures for the care, maintenance and storage of a particular hose may result in its failure to perform in the manner intended and may result in serious injury, death, and damage to property.

 **WARNING:** Testing can be dangerous and should be done only by trained personnel using proper tools and procedures. Failure to follow such procedures might result in serious injury, death, or damage to property.

**Consult the coupling manufacturer to make sure you choose the correct coupling and proper assembly for the application, or contact Eaton Technical Support.**

**Before using any hoses in this catalog, consult the safety section in this catalog, and Chemical Compatibility Chart on page 21 or Boston Hose Chemical Resistance Guidelines. If you do not have the most recent copy, contact Eaton Customer Support at 1-888-258-0222.**

### Selection of Hose

Selection of the proper Boston hose for an application is essential to the proper operation and safe use of the hose and related equipment. Inappropriate hose selection may result in hose leakage, bursting, or other failure which may cause serious bodily injury or property damage from spraying

fluids or flying projectiles. To avoid serious bodily injury or property damage resulting from selection of the wrong hose, you should carefully review the information in this catalog. Some of the factors to consider in proper hose selection are:

- hose size
- hose length
- hose ends
- fluid conveyed
- bends
- temperature
- hose pressure
- static head pressure
- installation design

These factors and the supplemental information contained in this catalog should be considered in selecting the proper hose for your application. If you have any questions regarding the proper hose for your application, please contact Eaton at 1-888-258-0222.

# Application Data

## Important Safety Information

### Proper Selection of Hose Ends

Selection of the proper Boston hose end or coupling is essential to the proper operation and safe use of hose assemblies and related equipment. Inadequate attention to the selection of the end fittings may result in hose leakage, bursting, or other failure which may cause serious bodily injury or property damage from spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from selection of an incompatible hose end or coupling, you should carefully review the information in this catalog. Some of the factors which are involved in the selection of the proper hose couplings are:

- fluid compatibility
- temperature
- installation design
- hose size
- corrosion requirements
- fluid conveyed

The given hose and hose end selection factors and the other information contained in this catalog should be considered by you in selecting the proper hose end fitting for your application.

If you have any questions regarding the use of hose/hose ends, please contact Eaton Technical Support at 1-888-258-0222.

### Hose Installation

Proper installation is essential to the proper operation and safe use of the hose assembly and related equipment.

Improper hose assembly installation may result in serious injury or property damage caused by spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from improper hose assembly installation carefully review the information in this catalog. Some of the factors to be considered when installing a hose assembly are:

- hose elongation or contraction
- proper bend radius/hose routing under pressure
- elbows and adapters to relieve strain
- protection from rubbing or abrasion high temperature sources
- protection against excessive movement
- twisting from pressure spikes/surges

These hose assembly installation factors and the other information in this catalog should be considered by you before installing the hose assembly. If you have any questions regarding proper hose installation, please contact Eaton Technical Support at 1-888-258-0222.

### Hose Maintenance

Proper maintenance of the hose is essential to the safe use of the hose and related equipment. Hose should be stored in a dry place. Hose should also be visually inspected. Any hose that has a cut or gouge in the cover that exposes the reinforcement should be retired from service. Hoses should also be inspected for kinking or broken reinforcement. If the outside diameter of the hose is reduced by 20% or more, the hose should be repaired or removed from service. Inadequate attention to hose maintenance may result in hose leakage, bursting, or other failure which may cause serious bodily injury or property damage from spraying fluids, flying projectiles, or other substances.

### Coll-O-Crimp Hose, Hose Ends and Assembly Equipment Compatibility

The Coll-O-Crimp Equipment Package, Coll-O-Crimp Hose Ends and Coll-O-Crimp Hose have been engineered and designed as a complete hose assembly system. Each component of the Coll-O-Crimp hose assembly system is compatible with other Coll-O-Crimp components to which it relates. Component compatibility, along with the use of quality components, insures the production of reliable hose assemblies when assembled properly. The use or intermixing of fittings and hose not specifically engineered and designed for use with each other and Coll-O-Crimp equipment is not recommended and may result in the production of unsafe or unreliable hose assemblies. This can result in hose assembly leakage, hose separation or other failures which can cause serious bodily injury or property damage from spraying fluids, flying projectiles, or other substances.

# Equipment

## Coll-O-Crimp Pumps

### T-402-2 • Air/Hydraulic Pump



(Some models have air port on right side)

For use with T-400-1.

#### Pump Specifications:

**Dimensions:** 5-1/4" high, 12-1/2" long, 5" wide

**Weight:** 18 lbs.

**Operation Pressure:** 4,000-4,200 PSI

**Reservoir Capacity:** 1 pint

**Hydraulic Oil:** Use Enerpac Oil ONLY

**Outlet Port Size:** 3/8" NPT

**Inlet (Air) Port Size:** 1/4" NPT

**Air Pressure:** 60 to 120 PSI

**Filter:** F23A3T02

**Regulator:** R23RGL02

**Lubricator:** L43MPL00

**Note:** It is recommended that a filter, regulator, lubricator and air pressure gauge be installed in the air line as close as possible to the pump. Filter, Regulator and Lubricator units not included.

### T-403-2 • Hand Pump



For use with T-400-1.

#### Pump Specifications:

**Dimensions:** 7 high, 21" long, 4-3/4" wide

**Weight:** 9 lbs.

**Operation Pressure:** 4,000-4,200 PSI

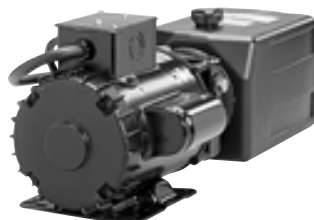
**Reservoir Capacity:** 1 qt.

**Outlet Port Size:** 3/8" NPT

**Hydraulic Oil:** Use Enerpac Oil ONLY

T-400-36 Bracket for mounting T-403-2 Hand Pump to FH-135X cabinet.

### T-411 • Electric Pump (220v) Kit



Replacement pump for T-410-1 C-O-C II Plus Press ONLY.

Kit consists of:

T-421U Electric Pump (220v)

T-410-BB Pump switch for T-410-1 crimping using T-421U pump.

#### Replacement Parts:

CATALOG NUMBER	DESCRIPTION
T-411-B	By-pass module
T-411-G	Release Handle Spring (Models prior to 1982)
T-411-S	Micro-Switch (Models prior to 1982)
T-401-1B	Replacement Gasket between motor and square reservoir
T-421-FP	220v 4 wire Female electrical receptacle. See page 245 for illustration.
T-401-1BC	Breather Cap for Fenner-Stone pumps
T-401-1G	Relief Handle Spring (Models prior to 1982)
T-401-1S	Toggle Switch
T-401-SVF	Fenner Shuttle Valve

For repair and replacement items for the following pumps please contact an Enerpac Distributor at [www.enerpac.com](http://www.enerpac.com): T-402-2, T-403-2, T-460-2, T-462-2, T-480-2, T-480-3, T-481-110 & T-482-2.

## Equipment

### Coll-O-Crimp Pumps

#### T-412 • Mobile Electric Pump



For use with T-400-1 and T-420-1.

##### **Pump Specifications:**

**Dimensions:** 7-1/2" high, 14-1/2" long, 9" wide

**Weight:** 65 lbs.

**Operation Pressure:** 4,000-4,200 PSI

**Reservoir Capacity:** 3 quarts

**Outlet Port Size:** 3/4"-16 straight thread

**Motor:** 12 volt D.C.

**Hydraulic Oil:** SAE 10W hydraulic oil or (ATF) automatic transmission fluid

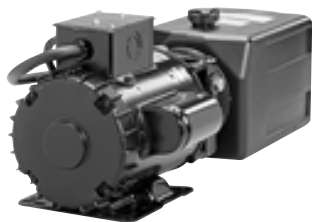
**Flow:** 0.5 GPM

##### **Replacement Parts:**

T-401-1B Replacement Gasket between motor and square reservoir

T-401-1BC Breather Cap for Fenner-Stone pumps

#### T-421U • Electric Pump (220 Volt)



For use with T-400-1 and T-420-1.

##### **Pump Specifications:**

**Dimensions:** 7-1/2" high, 22" long, 10" wide

**Weight:** 75 lbs.

**Operation Pressure:** 4,000-4,200 PSI

**Reservoir Capacity:** 6 quarts

**Outlet Port Size:** 3/4"-16 Straight Thread

**Motor:** 1 H.P., 3450 R.P.M., 220 volts, 60 cycle, single phase

At 50 Hertz, RPM = 2,850

At 60 Hertz, RPM = 3,450

**Hydraulic Oil\*:** ISO 32 hydraulic oil or (ATF) automatic transmission fluid

**Flow:** 2.5 GPM @ 750 PSI, 0.5 GPM @ 4000 PSI

##### **Replacement Parts:**

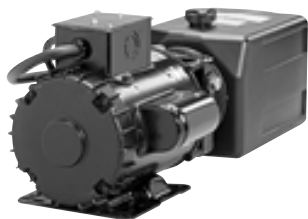
T-421-FP 220v 4 wire

Female electrical receptacle. See page 178 for illustration.

\*For low temperature applications automatic transmission fluid can be substituted.

**Note:** It is recommended that the electric pump be used on a 15 amp. fused circuit. Pump wired for 220 volts, single phase.

#### T-421U-110 • Electric Pump (110 Volt)



For use with T-400-1 and T-420-1.

For dimensional data other than voltage information, refer to T-421U above.

##### **Replacement Parts:**

T-421U-BC Breather Cap

**Note:** It is recommended that the electric pump be used on an individual 30 amp. fused circuit.

Pump wired for 110 volts, single phase.

# Equipment

## Coll-O-Crimp Pumps

### T-433 • Two Stage Piston Pump



For use with T-407 Production Press.

The Boston T-433 two stage piston pump power unit is a high capacity pump especially suited for the T-407 Production crimper. It features a two stage piston pump providing high flow at low pressure for fast ram approach and low flow at high pressure for actual crimping. When used in conjunction with the T-433-2 connector cable, the T-433

can be used as an optional high capacity pump for the T-400-1 or T-420-1 Coll-O-Crimp presses.

#### **Pump Specifications:**

**Dimensions:** 22" high, 12 " long, 15" long

**Weight:** 127 lbs.

**Operation Pressure:** 4,000 PSI

**Reservoir Capacity:** 2 gallons

#### **Outlet Port Size:**

3/8" Pipe Thread

**Motor:** 1-1/2" H.P.,

220 volts 60hz single phase

#### **Hydraulic Oil:**

Use Enerpac Oil ONLY

**Flow:** 2.78 GPM @ 800 PSI,  
0.52 GPM @ 4000 PSI

#### **Replacement Parts:**

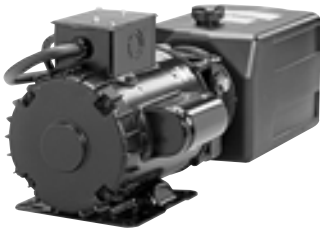
**T-421-FP** 220v 4 wire

Female electrical receptacle.  
See page 178.

**T-433-2** Interlock Cable.

**T-433-1** Foot Switch  
Assembly

### T-441 • Electric Pump (220 V)



For use with T-440-1 ONLY.

The Boston T-441 power unit is designed for use with the latest Coll-O-Crimp II Plus press. (Shown above only). It features a two-stage pump providing high flow at low pressure for fast ram approach and low flow at high pressure for actual crimping.

#### **Pump Specifications:**

**Dimensions:** 7-1/2" high, 22 " long, 10" wide

**Weight:** 75 lbs.

**Operation Pressure:** 5,000 PSI

#### **Reservoir Capacity:**

6 quarts

**Outlet Port Size:** 3/4-16  
Straight Thread O-Ring

**Motor:** 1 H.P., 3450 R.P.M.,  
220 volts, 60 cycle, single  
phase

**Hydraulic Oil:** ISO 32  
hydraulic oil automatic trans-  
mission fluid

**Flow:** 2.5 GPM @ 750 PSI,  
0.5 GPM @ 5000 PSI

#### **Replacement Parts:**

**T-421U-BC** Breather Cap

**T-421-FP** 220v 4 wire  
Female electrical receptacle.

**Note:** T441 pump is to be  
used with T440-1 press  
only. When replacing the  
pump on a standard T-410  
Coll-O-Crimp II Press (with-  
out the black switchbox on  
the side of the press) refer  
to the repair and replace-  
ment items on page 167.)

### T-460-2 • Hand Pump



For use with T-450-1, T-460  
and T-465.

#### **Pump Specifications:**

**Dimensions:** 5-5/8" High,  
13-1/4" long, 3-3/4" wide

**Weight:** 4-1/2 lbs.

**Operation Pressure:** 0-10,000 PSI

#### **Reservoir Capacity:**

20 cu in.

#### **Relief Valve Setting:**

10,000 PSI

#### **Hydraulic Oil:**

Use Enerpac Oil ONLY

For repair and replacement items for the following pumps please contact an Enerpac Distributor at [www.enerpac.com](http://www.enerpac.com): T-402-2, T-403-2, T-460-2, T-462-2, T-480-2, T-480-3, T-481-110 & T-482-2.

# Equipment

## Coll-O-Crimp Pumps

### T-462-2 • Air/Hydraulic Pump



For use with T-462.

The Boston T-462-2 power unit is a air/hydraulic pump designed for use with the T-462 portable Coll-O-Crimp system. Ideal if you have the availability of compressed air in your shop or in the field via a portable compressor.

#### Pump Specifications:

**Dimensions:** 4" high, 13" long

**Weight:** 8 lbs.

**Operation Pressure:** 0-10,000 PSI

**Reservoir Capacity:** 10 cu in.

**Relief Valve Setting:** 10,000 PSI

**Hydraulic Oil:** Use Enerpac Oil ONLY  
Regulator to be set for 100-120 PSI

**Replacement Part:** T-462-V Regulator

### T-480-2 • Two-Stage Hand Pump



For use with T-480-1.

#### Pump Specifications:

**Dimensions:** 7" high x 21" long x 4-3/4" wide

**Weight:** 9 lbs.

**Operation Pressure:** 0-10,000 PSI

**Hydraulic Oil:** Use Enerpac Oil ONLY

### T-480-3 • Turbo Air/Hydraulic Pump



For use with T-480-1.

#### Pump Specifications:

**Dimensions:** 8-1/4" High x 12-3/8" long x 8" wide

**Weight:** 16-1/2 lbs.


**Operation Pressure:** 0-10,000 PSI

**Hydraulic Oil:** Use Enerpac Oil ONLY

For repair and replacement items for the following pumps please contact an Enerpac Distributor at [www.enerpac.com](http://www.enerpac.com): T-402-2, T-403-2, T-460-2, T-462-2, T-480-2, T-480-3, T-481-110 & T-482-2.

# Equipment

## Coll-O-Crimp Pumps

 Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on pages 3-4.

### T-481-110 • 110v Pump



For use with T-480-1.

**Pump Specifications:**

**Dimensions:** 14-14"High x 9-5/8" long x 9-5/8" wide

**Weight:** 32 lbs.

**Operation Pressure:** 0-10,000 PSI

**Hydraulic Oil:** Use Enerpac Oil ONLY

### T-482-2 • Air/Hydraulic Pump



For use with T-480-1.

**Pump Specifications:**

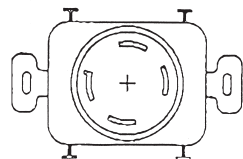
**Dimensions:** 5-1/2"High, 14-5/8" long, 5-5/8" wide

**Weight:** 12 lbs.

**Operation Pressure:** 0-10,000 PSI

**Hydraulic Oil:** Use Enerpac Oil ONLY

### T-421-FP • 4 Prong Female Electrical Outlet



All Boston 220v Coll-O-Crimp power pumps are equipped with a four prong electrical outlet as illustrated. To obtain corresponding female wall receptacle order T-421-FP. For use with T-421U, T-441 & T-433 pumps.

### Repair and Replacement Items for Discontinued T-401-1 Pump

CATALOG NUMBER	DESCRIPTION
T-401-1B	Replacement Gasket between motor and square reservoir
T-401-1BC	Breather Cap for Fenner-Stone pumps
T-401-1G	Relief Handle Spring (Models prior to 1982)
T-401-1S	Toggle Switch
T-401-SVF	Shuttle Valve for Fenner-Stone pump

For repair and replacement items for the following pumps please contact an Enerpac Distributor at [www.enerpac.com](http://www.enerpac.com): T-402-2, T-403-2, T-460-2, T-462-2, T-480-2, T-480-3, T-481-110 & T-482-2.