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Visit [www.hydro-test.com](http://www.hydro-test.com) for easy on line ordering - industry information - new products - special offers.

**Hydro-Test Products Inc.**  
e-mail: sales@hydro-test.com  
Tel: 800-225-9488 / 978-897-4647  
Fax: 978-897-1942  
www.hydro-test.com  
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TERMS AND CONDITIONS OF SALE

PRICES: ALL PRICES LISTED ARE IN U.S. FUNDS. PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

MINIMUM BILLING: MINIMUM BILLING IS $25.00 (Exclusive of freight charges)

TERMS: • NET 30 DAYS TO PRE-ESTABLISHED ACCOUNTS
       • DISCOUNTS ARE OFFERED FOR PREPAYMENT
       • MASTER CARD - VISA AND AMERICAN EXPRESS ARE ACCEPTED

EXPORT TERMS: PAYMENT IN U.S. DOLLARS WITH CHECK OR DIRECT TRANSFER DRAWN ON A U.S.
BANK, OR IRREVOCABLE LETTER OF CREDIT. C.I.F. PROFORMA QUOTATIONS UPON REQUEST

SHIPPING: ALL SALES ARE F.O.B. STOW, MA., AND BECOME PROPERTY OF THE BUYER UPON SHIPMENT.
ALL SHIPMENTS ARE MADE BY THE MOST ECONOMICAL MEANS AS DETERMINED BY HYDRO-
TEST PRODUCTS. PREMIUM FREIGHT (UPS AIR, FEDERAL EXPRESS, ETC...) SERVICE IS MADE
AVAILABLE TO ESTABLISHED ACCOUNTS, OTHERWISE CARRIER ACCOUNT NUMBER MUST
BE SUPPLIED FOR FREIGHT BILLING. OTHER CHARGES: APPLICABLE TAXES (MA.), SPECIAL
PACKAGING, EXPORT DOCUMENTATION, PREMIUM FREIGHT OR OTHER UNIQUE CHARGES ARE
PAYABLE BY THE BUYER

RETURNS: CONTACT HYDRO-TEST PRIOR TO MAKING ANY RETURNS FOR R.A. #, AND INSTRUCTIONS.
A MINIMUM RE-STOCKING CHARGE OF 15% APPLIES TO ALL SALEABLE GOODS ACCEPTED AS AN
ACCOMMODATION TO THE BUYER. UNAUTHORIZED RETURNS WILL NOT BE ACCEPTED.
RETURNS ARE TO BE MADE TO 85 HUDSON ROAD, STOW, MA. 01775.

WARRANTY: HYDRO-TEST WARRANTS THAT ALL MERCHANDISE IS FREE FROM DEFECTS IN MATERIAL
AND WORKMANSHIP WHEN SHIPPED FOR A PERIOD OF 12 MONTHS ON MAJOR EQUIPMENT,
30 DAYS ON CONSUMABLE REPLACEMENT COMPONENTS (I.E. VALVES, SEALS, HOSES,
QUICK COUPLERS, ADAPTERS, ETC...), AND THOSE COMPONENTS ON MAJOR EQUIPMENT
UNDER NORMAL USAGE. FOR EQUIPMENT OR ITEMS NOT MANUFACTURED BY HYDRO-TEST
PRODUCTS THE ORIGINAL MANUFACTURERS WARRANTY SHALL BE IN EFFECT.

IT IS THE RESPONSIBILITY OF THE BUYER TO INSPECT PRODUCT UPON RECEIPT WITHIN 10
DAYS. IF DAMAGE HAS OCCURRED IN SHIPPING OF PRODUCT IT IS THE BUYERS RESPONSI-
BILITY TO MAKE THE CLAIM WITH FREIGHT COMPANY. ALL WARRANTY WORK IS ON A FOB
STOW, MA. BASIS AND EXCLUDES ANY / ALL FREIGHT SHIPPING COST. THERE ARE NO ADDI-
TIONAL IMPLIED WARRANTIES AND IN NO EVENT WILL HYDRO-TEST PRODUCTS BE LIABLE
FOR INCIDENTAL OR COINCIDENTAL DAMAGES.

ON-LINE ORDERING IS AVAILABLE AT www.hydro-test.com
The requalification (visual inspection and hydrostatic testing) of DOT/TC compressed gas cylinders, ASME coded pressure vessels, fire protection containment cylinders / fire hose and pipe / pressure components, offers a profitably viable business opportunity with minimal initial capital equipment investment. The addition of in-house test capability enhances both the quality and expediency of services provided to your customers.

In evaluating and designing an efficient service facility, one should consider:

1) Your Market
A wide spectrum of industries utilize pressure vessels requiring requalification under similar regulations, many of which can be incorporated into a single hydrostatic test station. There are over 300,000,000 DOT/TC cylinders in service that must be periodically requalified. Industrial gas, carbonic, oxygen therapy, CO₂, beverage, SCUBA dive, SCBA breathing, fire extinguishers, refrigerant, cylinders can be test requalified using a single test station. Some prefer to service only their own customers, while others solicit different markets to maximize utilization of equipment.

2) Your Facility
Blueprints of the proposed floor plan should be developed to maximize utilization of existing, or new, floor space, taking into consideration: efficient (minimum) handling of test subject, location of utilities (water, electric, compressed air) – overhead I-beam to carry a hoist- recessed pit and drain for water jacket, etc.

3) Selection of Equipment
Determination of desired test pressure capability and physical sizes (diameter and height) of the largest cylinders to be tested (ie by the water jacket method) must be specified. Test pressure ranges to 10,000 psi and a range of cylinder holding jackets from 6 to 36 inch diameter x any height, are available as ‘standard’ product. Anticipated production rates (ie. tests per hour / day) will dictate the need for optional enhancements to ensure maximum production with minimum labor requirement.

4) Test Equipment Controls
Fully automated, computer controlled, and manually operated test stations, as well as hybrids, are manufactured by Hydro-Test Products, Inc.

5) Complimentary Service Shop Equipment and Accessories
Hydro-Test Products Inc. offers all accessory product necessary in outfitting a fully equipped service facility. Cylinder handling (vises / valving machines / inverters), dryers (heated air and PLC controlled hot water), hoists and air compressor, visual inspection and record keeping tools, etc, are available, as needed.

6) Training and Service
Training (including Hazmat) on the proper operation and maintenance is included with each test station. Technical assistance is also provided.

Hydro-Test sales and engineering staff is available to assist you in the design of your service facility and to provide a no obligation, detailed quotation covering the equipment needed to meet your test application requirements.

Visit www.hydro-test.com for easy on line ordering - industry information - new products - special offers.
Guidelines For Getting Started In The Cylinder Testing Business

Starting into a new business venture can be overwhelming. As in any new business it is important that you investigate the potential for new business and be sure that you purchase equipment from a reputable supplier. Hydro-Test has been in this industry for 45 years. We have helped new business develop and assisted in the growth of existing companies by supplying the correct equipment at an affordable price.

Step 1: Decide what type of cylinders you want to test
An important first step. If you want to test just portable size cylinders (under 36” tall) you do not need a pit. This may be a concern if you are renting your building.

Step 2: Contact Hydro-Test for a complete detailed quotation
We have ready made quotes on our website or you can email, call or fax us your request and we will get a quotation off to you. Unlike some other companies you may have dealt with, when Hydro-Test offers a quotation, it is a full quote on all of the equipment required to test cylinders. Don’t get fooled into thinking all you need is a hydro machine. Vises, dryers, stamps, record forms, wrenches, training, etc... are required to secure your DOT license.

Step 3: Contact an Independent Inspection Agency (IIA)
A list of inspection agencies is available on our quote(s) or on our website. The inspectors do charge for their services. You will want to get a price from them to complete your cost analysis.

Step 4: Review your final cost
Now that you have all of your equipment cost in place, add in other expenses (labor, possible redesign of floor space, re-occurring cost, utilities required to operate equipment, etc...) and decide if this is a profitable venture.

Step 5: Order up equipment.
During this time period is suggested that you also a) Discuss the training options offered by Hydro-Test in the equipment quotation. Remember, you must be trained. Hydro-Test has many viable options for training. Refer to this catalog or our website. b) Contact the IIA to schedule the inspection.

Step 6: Get DOT facility inspection
Once equipment is operational and training has been received, have the IIA visit your facility for the DOT inspection. Once inspection has been successfully performed, you typically receive your DOT license within 4 weeks.

Step 7: Keep up to date on any regulation changes and information by signing up for our free service at hydro-test.com.

We are here to assist you in the sometime complicated world of DOT approval and training. Let us know when you are ready and we will walk you through the startup and be with you thru the successful completion.
TYPICAL FLOOR PLAN FOR WATER JACKET TEST SYSTEM

IMPORTANT NOTES

The above dimensions are for our standard size water jackets. If your water jacket size is not listed, please call us and we will be pleased to advise you on a floor plan and pit size.

Pit is shown 60" x 60". You may want to go larger for future expansion, or you may want to go smaller in size due to room size constraints.

Pit depths are predicated upon 12' height from floor to underside of I-beam. If I-beam/ceiling are lower than 12', you may need to increase the depth of your pit.

Length of Jacket | Dia of Jacket | Pit Depth | Base Plate Dia. (B")
--- | --- | --- | ---
48" | 14" | N/A Required | 30"
48" | 16" | N/A Required | 32"
48" | 20" | N/A Required | 42"
60" | 14" | 30" | 30"
72" | 14" | 30" | 30"
WATER JACKET TEST METHOD

This method is applicable to all hydrostatic tests where determination of volumetric expansions are required. It consists of enclosing a cylinder filled with water inside a test jacket filled with water. Pressure is then applied internally to the cylinder, causing the cylinder to expand. The total and permanent volumetric expansions of the cylinder are determined by measuring the amount of water displaced by the expansion of the cylinder when under pressure and after the pressure has been released. This is the only testing method that will requalify a cylinder for charging to 10% in excess of the marked service pressure. All retesters shall have a Requalifiers Identification Number (RIN) issued by the D.O.T./OHMS. In Canada test facilities are registered with T.C.

DIRECT EXPANSION TEST METHOD

This method is applicable to hydrostatic tests when volumetric expansion determinations are required. It consists of forcing a measurable volume of water into a cylinder filled with a known weight of water at a known temperature, and measuring the volume of water expelled from the cylinder when the pressure is released. The permanent volumetric expansion of the cylinder is calculated by subtracting the net volume of water expelled from the cylinder from the volume of water forced into the cylinder. The total volumetric expansion of the cylinder is calculated by subtracting from the total volume of water forced into the cylinder (in attaining test pressure), the volume of water due to compressibility and volumetric expansion of the test apparatus. Regulations do not permit this testing method to be used to qualify a cylinder for charging to 10% in excess of marked service pressure. All retesters shall have a Requalifiers Identification Number (RIN) issued by the D.O.T./OHMS. In Canada test facilities are registered with T.C.

PROOF TEST METHOD

This method is permitted where the regulations do not require the determination of total and permanent expansion. It consist of examining a cylinder under pressure for leaks, bulges and any visible defects. Certain specification containers, used exclusively in noncorrosive service, may be retested by this method. All retesters shall have a Requalifiers Identification Number (RIN) issued by the D.O.T./OHMS. In Canada test facilities are registered with T.C.

VISUAL INSPECTION METHOD

This method is permitted where the regulations do not require a hydrostatic test of any kind. An example of a cylinder than is allowed to be visual inspected in place of a hydrostatic test is a propane cylinder. As of May 31, 2004 all whom perform requalification via visual inspection shall have a Requalifiers Identification Number (RIN) issued by the D.O.T./OHMS. In Canada test facilities are registered with T.C.
HYDROSTATIC "WATER JACKET" CYLINDER TEST SYSTEMS

507-HP Series
Computer Controlled Test Operation
High Pressure Testing (2500 psi - 9000psi)

Features:
- Test Range of 2500 – 9000 psi
- Ability to Operate Manually to 10,000 psi
- Air Operated Test Pump
  - Stainless Steel Water Section
  - Soft Seated Check Valves
  - Contaminant Free Design
- Your Choice of 6 Different Water Jacket Sizes
  - Pneumatic or Manual Lid Closures
  - Low Pressure Safety Port
  - High / Low Pressure Bleed Valves
- Calibrated Master Pressure Gauge
  - Class 3A, 1/4% Accuracy - 8.5" Diameter
  - 11,000 psi x 20 psi Increments
  - For Use In Periodic Verification of System
- Digital Expansion Scale
  - 700g Expansion Capacity x 0.1g Increments
- Calibrated Cylinder for Full Test Range
  - Steel Construction
  - Expansion Chart and Adapter Included
- Automated Test Software
  - Computer Hardware Included
    - Laptop - Printer
- Enamel Painted Steel Cabinet
- Removable Plexiglass Front Panel
- Safety Relief
- Set of 7 Test Adapters
- Instructional Manual
- Training Seminar at our Facility
- Calibration Certificates

This style test system is typically used to test high pressure cylinders (CO₂, N₂, SCUBA, SCBA, O₂). This test system is designed for high volume testing shops.

Automated test software calculates total, permanent and elastic expansion. Test is performed at the touch of a button. Test log and calibrated cylinder reports print in a clean - mistake free - professional looking form. Easy to understand load screen and history screen. DOT / TC warnings if verification is not performed properly.

Test can be performed manually for ease in troubleshooting. As with all of our water jacket test systems - free training is included in the purchase price.

DEPENDABLE - EASY TO OPERATE - MEET/EXCEED D.O.T. AND T.C. SPECIFICATIONS

This Fully Automated Cylinder Test System Has Been Designed With The Operator In Mind. A Comfortable Working Height With Easy Access To All Of The Components And Ease Of Operations Makes This The Test System Of Choice.

See Next Page For A Listing Of Available Test Console And Water Jacket Combinations

One of the smartest moves a company can make is to get initial cylinder re qualification training. It is critical that the designated operator knows how to operated the equipment and comply with the rules and regulations prior to the on site inspection. With this in mind, Hydro-Test Products offers the initial required training free of charge (at our facility in Massachusetts) with the purchase of a water jacket hydrostatic cylinder test system. Alternatively, we have on-site training and setup at an additional cost. Please see Page 67 for a complete details on all of our training opportunities.
HYDROSTATIC "WATER JACKET" CYLINDER TEST SYSTEMS

507-HP Series
Computer Controlled Test Operation
High Pressure Testing (2500 psi - 9000psi)

Test System shown with 14" diameter x 66" tall water jacket with optional pneumatic lid closure

Utilities Required to Operate
• Stable and consistent air and water temperatures
• Inlet water supply
• 115V Electrical supply
• 8CFM of 100 psi pre regulated shop air
• Pit for water jacket(s) over 40" tall

Notes:
1) 40” tall water jackets sit on floor - no pit required
2) Other options are available see page13

Complete - With Water Jacket Size Of Your Choice

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<th>Maximum Cylinder Size</th>
<th>Type of Water Jacket Lid Closure</th>
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<td>Dia (&quot;)</td>
<td>Height (&quot;)</td>
<td>Dia (&quot;)</td>
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The electronics on this system require 115V-50/60Hz electrical. If you reside in a country that has 220V, you will need an electrical step down voltage converter.

Model 170-070
Frequency Voltage Converter
• 200 Watts Max Step Down voltage converter
• Converts 220/240 V to 110/120V
• Comes with 2-round pin Euro Plug
• Led indicator light
• Thermal Fuse protection
HYDROSTATIC "WATER JACKET" CYLINDER TEST SYSTEMS

500-HP Series
Manually Operated
High Pressure Testing (2500 psi - 10,000 psi)

This test system is typically used in an industry testing high pressure cylinders (CO₂, N₂, SCUBA, SCBA, O₂).

Features:
Test Range of 2500 – 10,000 psi
Air Operated Test Pump

• Stainless Steel Water Section
• Soft Seated Check Valves
• Contaminant Free Design

Your Choice of 6 Different Water Jacket Sizes

• Low Pressure Safety Port
• High / Low Pressure Bleed Valves
• Choice of Manual or Pneumatic Closure

Calibrated Pressure Gauge

• Class 3A, 1/4% Accuracy - 8.5" Diameter
• 11,000 psi x 20 psi Increments

Pressure Pulsation Dampener

Calibrated Cylinder for Full Test Range

• Steel Construction
• Expansion Chart and Adapter Included

Your Choice of Burette Tubes or Digital Scale for Expansion Reading

• 12.5, 25, 125, 360cc Burette Tubes (standard)
  or substitute
• 350g(cc) Net Scale x 0.1g(cc) (optional)

Enamel Painted Steel Cabinet

Safety Relief

Set of 7 Test Adapters

• For CO₂, N₂, SCUBA, O₂, SCBA

Valves - Tubing - Hoses To Complete System

Video and Written Instructional Manuals

Training Seminar at our Facility

Calibration Certificates

Utilities Required to Operate

• Stable and consistent air and water temperatures
• Inlet water supply
• 8CFM of 100 psi pre regulated shop air
• Pit for water jacket(s) over 40" tall

DEPENDABLE - EASY TO OPERATE - MEET/EXCEED D.O.T. AND T.C. SPECIFICATIONS


See Page 12 For A List Of Options Available

See Next Page For A Listing Of Available Test Console And Water Jacket Combinations

One of the smartest moves a company can make is to get initial cylinder re qualification training. It is critical that the designated operator knows how to operated the equipment and comply with the rules and regulations prior to the on site inspection. With this in mind, Hydro-Test Products offers the initial required training free of charge (at our facility in Massachusetts) with the purchase of a water jacket hydrostatic cylinder test system. Alternatively, we have on-site training and setup at an additional cost. Please see Page 67 for a complete details on all of our training opportunities.
HYDROSTATIC "WATER JACKET" CYLINDER TEST SYSTEMS

500-HP Series
Manually Operated
High Pressure Testing (2500 psi - 10,000 psi)

Test System shown with 14" diameter x 40" tall water jacket and optional digital expansion scale with burette tubes as a backup

Our Experienced Sales and Engineering Staff Are Only a Phone Call or Email Away to Assist You in Choosing The Correct Test Station

Choose Your Test System By Water Jacket Size and Type of Lid Closure Desired.

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<th>Model No.</th>
<th>Water Jacket Size</th>
<th>Maximum Cylinder Size</th>
<th>Type of Water Jacket Lid Closure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dia (&quot;)</td>
<td>Height (&quot;)</td>
<td>Dia (&quot;)</td>
</tr>
<tr>
<td>500-HP-14S-M</td>
<td>14</td>
<td>40</td>
<td>12</td>
</tr>
<tr>
<td>500-HP-14S-P</td>
<td>14</td>
<td>40</td>
<td>12</td>
</tr>
<tr>
<td>500-HP-14-M</td>
<td>14</td>
<td>66</td>
<td>12</td>
</tr>
<tr>
<td>500-HP-14-P</td>
<td>14</td>
<td>66</td>
<td>12</td>
</tr>
<tr>
<td>500-HP-18S-M</td>
<td>18</td>
<td>40</td>
<td>16</td>
</tr>
<tr>
<td>500-HP-18S-P</td>
<td>18</td>
<td>40</td>
<td>16</td>
</tr>
<tr>
<td>500-HP-18-P</td>
<td>18</td>
<td>72</td>
<td>16</td>
</tr>
<tr>
<td>500-HP-24S-P</td>
<td>24</td>
<td>40</td>
<td>22</td>
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<tr>
<td>500-HP-24-M</td>
<td>24</td>
<td>72</td>
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<tr>
<td>500-HP-24-P</td>
<td>24</td>
<td>72</td>
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</tr>
<tr>
<td>500-HP</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1) 40" tall water jackets sit on floor - no pit required
2) Test System is available with either burette tubes and/or digital scale
3) Other options are available see page 12
4) See following pages for low pressure (under 3000 psi) test systems
Features:
♦ Test Range of 200 – 1400 psi
♦ Air Operated Test Pump
  ✓ Stainless Steel Water Section
  ✓ Soft Seated Check Valves
  ✓ Contaminant Free Design
♦ Your Choice of 6 Different Water Jacket Sizes
  ✓ Low Pressure Safety Port
  ✓ High / Low Pressure Bleed Valves
♦ Calibrated Pressure Gauge(s)
  ✓ Class 3A, 1/4% Accuracy - 8.5” Diameter
  ✓ 0-1500 psi x 2 psi Increments
♦ Pressure Pulsation Dampener
♦ Calibrated Cylinder for Full Test Range
  ✓ Expansion Chart and Adapter Included
♦ Your Choice of Burette Tubes or Digital Scale for Expansion Reading
♦ Enamel Painted Steel Cabinet
♦ Safety Relief
♦ Set of 3 Test Adapters
♦ Video and Written Instructional Manuals
♦ Training Seminar at our Facility
♦ Calibration Certificates

Utilities Required to Operate
• Stable and consistent air and water temperatures
• Inlet water supply
• 8CFM of 100 psi pre regulated shop air
• Pit for water jacket(s) over 40” tall

500-LP Series
Manually Operated
Low Pressure Testing (200 psi - 1400 psi)

Test System shown with 14” diameter x 66” tall water jacket and optional digital expansion scale with burette tubes as a backup

This test system is typically used in an industry testing low pressure, DOT specification 4B series cylinders only

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Water Jacket Size</th>
<th>Maximum Cylinder Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dia (”) Height (”)</td>
<td>Dia (”) Height (”) Type of Water Jacket Lid Closure</td>
</tr>
<tr>
<td>500-LP-14S-M</td>
<td>14 40</td>
<td>12 36</td>
</tr>
<tr>
<td>500-LP-14S-P</td>
<td>14 40</td>
<td>12 36</td>
</tr>
<tr>
<td>500-LP-14-M</td>
<td>14 66</td>
<td>12 60</td>
</tr>
<tr>
<td>500-LP-14-P</td>
<td>14 66</td>
<td>12 60</td>
</tr>
<tr>
<td>500-LP-18S-M</td>
<td>18 40</td>
<td>16 36</td>
</tr>
<tr>
<td>500-LP-18S-P</td>
<td>18 40</td>
<td>16 36</td>
</tr>
<tr>
<td>500-LP-18-P</td>
<td>18 72</td>
<td>16 66</td>
</tr>
<tr>
<td>500-LP-24S-P</td>
<td>24 40</td>
<td>22 36</td>
</tr>
<tr>
<td>500-LP-24-M</td>
<td>24 72</td>
<td>22 66</td>
</tr>
<tr>
<td>500-LP-24-P</td>
<td>24 72</td>
<td>22 66</td>
</tr>
<tr>
<td>500-LP</td>
<td>Test Console Only - No Water Jacket, Calibrated Cylinder or Test Adapters</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1) 40” tall water jackets sit on floor - no pit required
2) Test System is available with either burette tubes or digital scale, or is available with both
3) Other options are available see page 12
HYDROSTATIC "WATER JACKET" CYLINDER TEST SYSTEMS

500-LHP Series
Manually Operated
High and Low Pressure Testing (200 psi - 10,000 psi)

Test System shown with 14" diameter x 66" tall water jacket and optional digital expansion scale with burette tubes as a backup

This style test system is typically used in an industry testing low pressure, DOT specification 4B series cylinders and high pressure cylinders (CO₂, N₂, SCUBA, SCBA, O₂)

Floor Line

Complete - With Water Jacket Size Of Your Choice

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Water Jacket Size</th>
<th>Maximum Cylinder Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>500-LHP-14S-M</td>
<td>Dia (&quot;), 14</td>
<td>Dia (&quot;), 12</td>
</tr>
<tr>
<td>500-LHP-14S-P</td>
<td>Dia (&quot;), 14</td>
<td>Dia (&quot;), 12</td>
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<tr>
<td>500-LHP-14-M</td>
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<td>Dia (&quot;), 12</td>
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<tr>
<td>500-LHP-14-P</td>
<td>Dia (&quot;), 14</td>
<td>Dia (&quot;), 12</td>
</tr>
<tr>
<td>500-LHP-18S-M</td>
<td>Dia (&quot;), 18</td>
<td>Dia (&quot;), 16</td>
</tr>
<tr>
<td>500-LHP-18S-P</td>
<td>Dia (&quot;), 18</td>
<td>Dia (&quot;), 16</td>
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<tr>
<td>500-LHP-18-M</td>
<td>Dia (&quot;), 18</td>
<td>Dia (&quot;), 16</td>
</tr>
<tr>
<td>500-LHP-18-P</td>
<td>Dia (&quot;), 18</td>
<td>Dia (&quot;), 16</td>
</tr>
<tr>
<td>500-LHP-24S-M</td>
<td>Dia (&quot;), 24</td>
<td>Dia (&quot;), 22</td>
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<tr>
<td>500-LHP-24S-P</td>
<td>Dia (&quot;), 24</td>
<td>Dia (&quot;), 22</td>
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<tr>
<td>500-LHP-24-M</td>
<td>Dia (&quot;), 24</td>
<td>Dia (&quot;), 22</td>
</tr>
<tr>
<td>500-LHP-24-P</td>
<td>Dia (&quot;), 24</td>
<td>Dia (&quot;), 22</td>
</tr>
<tr>
<td>500-LHP</td>
<td>Test Console Only - No Water Jacket, Calibrated Cylinder or Test Adapters</td>
<td></td>
</tr>
</tbody>
</table>

Utilities Required to Operate
• Stable and consistent air and water temperatures
• Inlet water supply
• 8CFM of 100 psi pre regulated shop air
• Pit for water jacket(s) over 40" tall

Features:
♦ Test Range of 200 – 10,000 psi
♦ Air Operated Test Pump
  √ Stainless Steel Water Section
  √ Soft Seated Check Valves
  √ Contaminant Free Design
♦ Your Choice of 6 Different Water Jacket Sizes
  √ Low Pressure Safety Port
  √ High / Low Pressure Bleed Valves
♦ Calibrated Pressure Gauge(s)
  √ Class 3A, 1/4% Accuracy - 8.5" Diameter
  √ 0-111,000 psi x 20 psi Increments
  √ 0-1500 psi x 2 psi Increments
♦ Pressure Pulsation Dampener
♦ Calibrated Cylinder for Full Test Range
  √ Steel Construction
  √ Expansion Chart and Adapter Included
♦ Your Choice of Burette Tubes or Digital Scale for Expansion Reading
♦ Enamel Painted Steel Cabinet
♦ Safety Relief
♦ Set of 7 Test Adapters
♦ Video and Written Instructional Manuals
♦ Training Seminar at our Facility
♦ Calibration Certificates

Notes:
1) 40" tall water jackets sit on floor - no pit required
2) Test System is available with either burette tubes or digital scale, or is available with both
3) Other options are available see page 12
HYDROSTATIC "DIRECT EXPANSION" CYLINDER TEST SYSTEMS

501 Series
Manually Operated Test Operation
Direct Expansion Low Pressure Testing (200 psi - 1400 psi)

Features:
♦ Test Range of 200 - 1400 psi
♦ Air Operated Test Pump
  √ Stainless Steel Water Section
  √ Soft Seated Check Valves
  √ Contaminant Free Design
♦ Calibrated Pressure Gauge
  √ Class 3A, 1/4% Accuracy - 8.5" Dia.
  √ 0-1500 psi x 2 psi Increments
♦ Calibrated Master Pressure Gauge
  √ Class 3A, 1/4% Accuracy - 8.5" Dia.
  √ 1500 psi x 2 psi Increments
♦ 3000cc x 10cc Reservoir Burette
♦ Enamel Painted Steel Cabinet
♦ Safety Relief
♦ Set of 3 Test Adapters
♦ Instructional Manual
♦ Calibration Certificates

Part No. 501-15
Digital Expansion Readout Optionally Available to Replace Reservoir Burette

This style test system is used in the Chlorine / Refrigeration Industry for testing of 1/2 and 1 ton cylinders. This type of test is limited to these types of vessels.

COMBINATION "DIRECT EXPANSION" AND "WATER JACKET" HYDROSTATIC CYLINDER TEST SYSTEMS

502 Series
Manually Operated Test Operation
Direct Expansion Low Pressure Testing (200 psi - 1400 psi)
and Water Jacket High / Low Pressure Testing

Utilities Required to Operate
• Stable and consistent air and water temperatures
• Inlet water supply
• 8CFM of 100 psi pre regulated shop air
• Pit for water jacket(s) over 40" tall

This style test system is used in the Chlorine / Refrigeration Industry for testing of 1/2 and 1 ton cylinders. This system can also be used to water jacket test cylinders for high or low pressure applications

For this type of testing the customer may need to supply a cylinder that the Independent Inspector will make into a calibrated cylinder. Optionally at the DOT discretion the Master Gauge can be used as a daily verification instrument.

This uniquely manufactured system allows for a variety of different test pressure and water jacket size combinations. Please contact our experienced sales staff for pricing on a system that meets your requirements.

All options on page 12 are available with this test system
MOBILE WATER JACKET TESTING SYSTEM

Hydro-Test has outfitted a number of customer supplied vehicles / trailers with water jacket test systems. This allows you to bring the cylinder re-qualification to your customer. The U.S. Department of Transportation allows mobile cylinder testing, however there are additional license requirements.

Utilities Required to Operate

- Stable and consistent air and water temperatures
- Inlet water supply
- 8CFM of 100 psi pre regulated shop air
- Minimum of 98” ceiling height
- 115Volt-20amp electrical

Features:

- Test range of 2000 - 8000 psi
- Small footprint test cabinet: 64”H x 16” x 16”
- Ability to test at customers site
- 10” diameter x 38” tall water jacket
- Allows testing of cylinders to 8.5” dia x 32” tall
- Air operated test pump
- Digital readout of expansions scale

A great alternative for testing of SCBA cylinders - Reduce the fire departments down time by testing their cylinders at their fire house.

A complete equipment setup includes:

- Water jacket test system
- Vise
- Dryer
- Pamphlets
- Stamps
- Overhead hoist assembly
- Operational and DOT required hazmat training

Complete Equipment Cost

Under $13,500.00
(does not include vehicle)

Purchase the mobile cylinder testing equipment from Hydro-Test, drive your vehicle to us in Stow, Massachusetts and we include the installation of the equipment on your vehicle as well as operational and DOT required hazmat training.

Contact us for a complete and detailed quotation on this unique mobile setup

www.hydro-test.com
Tel: 800-225-9488 / 978-897-4647  Fax: 978-897-1942

Hydro-Test Products Inc.
email: sales@hydro-test.com

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OPTIONS FOR WATER JACKET TEST SYSTEMS

WATER JACKET TEST RECORD SOFTWARE

Allows for correct entries of Hydro Test in a clean professional manner

Supplied on a USB Thumb Drive

Requires Windows 7.0 or greater operating system
Available USB port
Printer
4GB RAM
20MB Available hard drive space

Use this software to replace your handwritten forms
Performs all of the math
Allows DOT / TC warnings to display if not within regulations for verification
Sortable and printable history field
Store records on hard drive or print out

New and improved history screen:
- Allows sorting by any field
- Sorting by date range
- Easy exporting of files to Excel if required
- Print directly from history screen - selected files or all files
- Find any tested cylinder quickly and easily

Test Data Screen
- Type in test results and pass/fail criteria
- Automatically pass/fail based on test criteria
- Performs all math calculations
- Optional DOT / TC warning applied if test is not within verification points required in regulations
- Plus stamping results calculated and recorded
- REE testing input allows pass/fail on REE only

Verification Screen
- Allows unlimited calibrated cylinder templates
- Pick and choose what pressures you want to verify
- Performs all math calculations for system accuracy

DOT / TC warning is displayed if:
1. Pressures verified are not within the regulations
2. Calibrated cylinder does not return to zero expansion

DIGITAL SCALE FOR MEASURING OF EXPANSION

Available as an option for older test systems or can be purchased on a new test system as a replacement for the burette tubes assembly

- 700g Capacity x 0.1g Increments
- Operates on 115V - With battery Backup
- Steel Shelf Plate Bolts to Side of Your Existing Cabinet
- Provides for Easier Reading of Cylinder Expansions
- Easily Retrofitted to Existing Test Systems

New and Improved

Part No. 393-507

See Page 42 for further details

Part No. 500-014

PNEUMATIC OPERATED LID CLOSURES FOR WATER JACKETS

Available as an option for older test systems or can be purchased on a new test system as a replacement for the manual style clamps

- Offer a More Positive Seal Than Manual Clamps
- Tremendous Time and Labor Savor
- Easily Retrofitted to Existing Water Jackets
- Requires 100 psi of Shop Air

MULTI SPUD LIDS FOR WATER JACKETS

- Allows for Loading / Un-loading of a Number of Cylinders at One Time
- Tremendous Time and Labor Savor
- Easily Retrofitted to Existing Water Jackets
- Cylinders are tested Individually
- Full Size Cylinders Require a Support Frame

Hydro-Test Products Inc.
e-mail: sales@hydro-test.com
www.hydro-test.com
Tel: 800-225-9488 / 978-897-4647 Fax: 978-897-1942

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**UPGRADE OPTIONS FOR EXISTING WATER JACKET TEST SYSTEMS**

**HIGHER PRESSURE UPGRADE**

Most Cylinder Test Systems Manufactured prior to 1990 are rated to 5000 or 7500 psi. With Higher Test Pressures Now Being Seen, It May Be Profitable For Your Company To Upgrade Your Existing Test System To 10,000 psi.

**Part No. 500-UP-10**  
*The Upgrade Kit Includes:

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>190-416</td>
<td>Air operated test pump (rated to 16,000psi)</td>
</tr>
<tr>
<td>190-450</td>
<td>Inlet Air pump accessory kit (regulator, filter, lubricator, muffler)</td>
</tr>
<tr>
<td>140-234</td>
<td>Calibrated cylinder to 10,000 psi (9.25&quot;dia. x 33&quot;tall)</td>
</tr>
<tr>
<td>140-001</td>
<td>Pressure gauge, 0-11,000psi</td>
</tr>
<tr>
<td>120-112</td>
<td>Safety relief device</td>
</tr>
<tr>
<td>120-089</td>
<td>High pressure water jacket bleed valve</td>
</tr>
<tr>
<td>200-100</td>
<td>8' Long high pressure outlet hose</td>
</tr>
<tr>
<td>Misc. high pressure fittings</td>
<td></td>
</tr>
<tr>
<td>Installation manual</td>
<td></td>
</tr>
</tbody>
</table>

**LOW PRESSURE UPGRADE**

With The Addition Of A Lower Range Gauge and A Means Of Verifying At Lower Pressures (calibrated cylinder), You Can Expand Your Testing To Encompass Low Pressure Cylinders.

**Part No. 500-004**  
*The Kit Includes:*

This upgrade will allow testing in the 200 - 1400 psi range

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>140-005</td>
<td>0-1500 psi x 2 psi increment pressure gauge</td>
</tr>
<tr>
<td>120-083</td>
<td>Isolation pressure valve</td>
</tr>
<tr>
<td>120-019</td>
<td>Low pressure safety device</td>
</tr>
<tr>
<td>Misc. pressure fittings and tubing</td>
<td></td>
</tr>
<tr>
<td>Installation manual</td>
<td></td>
</tr>
</tbody>
</table>

Note: A calibrated cylinder is required to verify accuracy to 1% within 10% of test pressures. An additional calibrated cylinder may be required if your existing calibrated cylinder is not calibrated in this lower range.

**ADD ADDITIONAL TEST JACKET**


<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Accepts Cyls In Size To: Dia.</th>
<th>Lgth</th>
</tr>
</thead>
<tbody>
<tr>
<td>500-019S</td>
<td>14&quot;Dia x 40&quot;Tall with splash pan</td>
<td>12&quot;</td>
<td>36&quot;</td>
</tr>
<tr>
<td>500-019</td>
<td>14&quot;Dia x 66&quot;Tall</td>
<td>12&quot;</td>
<td>60&quot;</td>
</tr>
<tr>
<td>500-020S</td>
<td>18&quot;Dia x 40&quot;Tall with splash pan</td>
<td>16&quot;</td>
<td>36&quot;</td>
</tr>
<tr>
<td>500-020</td>
<td>18&quot;Dia x 72&quot;Tall</td>
<td>16&quot;</td>
<td>66&quot;</td>
</tr>
<tr>
<td>500-021S</td>
<td>24&quot;Dia x 40&quot;Tall with splash pan</td>
<td>22&quot;</td>
<td>36&quot;</td>
</tr>
<tr>
<td>500-021</td>
<td>24&quot;Dia x 72&quot;Tall</td>
<td>22&quot;</td>
<td>66&quot;</td>
</tr>
</tbody>
</table>

**Stainless Steel Test Jackets Are Available Upon Request**

All Test Jackets Include:
- ♦ Splash Pan on 40" Tall Models
- ♦ Inlet & Outlet Water Connections
- ♦ Manual Lid Closures  
(pneumatics are optionally available- see previous page)

♦ Low Pressure Rupture Port
♦ High and Low Pressure Bleed Valves
♦ Master Spud with Lifting Eye

www.hydro-test.com  
Tel: 800-225-9488 / 978-897-4647  
Fax: 978-897-1942  
Hydro-Test Products Inc.

email: sales@hydro-test.com  
Page 13
AUTOMATED HYDROSTATIC "PROOF" TEST EQUIPMENT

With the influx of UN specification cylinders now being purchased and used in the USA, Hydro-Test is pleased to become the first cylinder test equipment manufacturer to offer an Automated Proof Test System. This easy to use test stand is a must for those that are testing or are going to be testing UN specification cylinders or any other specification cylinders that are allowed a proof test in place of a water jacket volumetric test. Other popular types of cylinders would be dry chemical fire extinguishers and Propane cylinders, both can be re-qualified by the Proof Test Method.

**Features:**

- Available in 2 configurations: Low Pressure and High Pressure
- Master dial gauge meets / exceeds DOT and ISO requirements for accuracy and readability
- Test pressures up to 10,000 psi
- Compact test console
- Windows based software design
- Test, records and prints all with the click of a keyboard mouse
- Pneumatic operated test pump
- Slim design laptop
- Pre-loaded hydrotest software
- Printer
- Easy to remove Plexiglass front
- Ability to operate manually or automated
- Small footprint allows for mobility
- Pressure bleed valve mounted on cabinet
- Training provided free of charge with purchase

**Utilities Required To Operate:**

- 8 CFM @ 100 psi of pre-regulated shop air
- Inlet water connection to back of console
- 115V-1Phase 20Amp electrical

**Speed up Your Proof Testing**
**Keep Accurate Automated Records**
**Meets DOT and ISO Requirements**

Foot Print: 65"H x 26"D x 22"W

Test Record Entry Screen

New Automated Proof Test Equipment

www.hydro-test.com
Tel: 800-225-9488 / 978-897-4647  Fax: 978-897-1942
**Model 504-LP**
Low Pressure Automated Proof Test Machine  
Designed for Testing Dry Chemical Fire Extinguishers  
- System Cylinders & Propane Cylinders

Pneumatic Operated Test Pump  
Test Pressure Range: **200-1400 psi**  
Operates Automated or Manual

Includes:
- Hydrotest software  
- Laptop Computer  
- Windows Operating System  
- Ink Jet Printer  
- Plexiglass Removable Front  
- 0-1500 psi x 2 psi Master Pressure Gauge  
- Compact Cabinet Design  
- Wheels for Easy Mobility  
- 8' Long Outlet Pressure Hose  
- All Valves-Tubing & Hoses to Complete System

Test Pressure Range: **200-1400 psi**  
Foot Print: 65"H x 26"D x 22"W

---

**Model 504-HP**
High Pressure Automated Proof Test Machine  
Designed for Testing UN Specification Cylinders & Special Permit Cylinders Where Proof Test is Allowed

Pneumatic Operated Test Pump  
Test Pressure Range: **2500-10,000 psi**  
Operates Automated or Manual

Includes:
- Hydrotest software  
- Laptop Computer  
- Windows Operating System  
- Ink Jet Printer  
- Plexiglass Removable Front  
- 0-11,000 psi x 20 psi Master Pressure Gauge  
- Compact Cabinet Design  
- Wheels for Easy Mobility  
- 8' Long Outlet Pressure Hose  
- All Valves-Tubing & Hoses to Complete System

Test Pressure Range: **2500-10,000 psi**  
Foot Print: 65"H x 26"D x 22"W

---

For Those That Will Be Testing The UN Specification Cylinders, You Must Have On Hand The DOT Title 49 - Applicable CGA Pamphlets and ISO Specifications as required under CFR Title49 §180.205(c)(1),(2),(3),(4)

**ISO specifications are offered as follows:** See Page 65 for download details

<table>
<thead>
<tr>
<th>Part No.</th>
<th>ISO Specification No.</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>393-6406</td>
<td>ISO 6406</td>
<td>Periodic inspection and testing of seamless steel gas cylinders</td>
</tr>
<tr>
<td>393-10461</td>
<td>ISO 10461</td>
<td>Periodic inspection and testing of aluminum alloy gas cylinders</td>
</tr>
<tr>
<td>393-11623</td>
<td>ISO 11623</td>
<td>Periodic inspection and testing of composite gas cylinders</td>
</tr>
</tbody>
</table>
TEST PUMP ASSEMBLIES

♦ Designed for Larger Volume Vessels
♦ Air Operated on 100 psi
♦ 8’ Long Outlet Hose
♦ Pressure Bleed Off Valve
♦ Inlet Garden Hose Connection
♦ Inlet Air Filter Regulator
♦ Safety Relief Device
♦ 4” Dia. Pressure Gauge
♦ Steel Base Plate

♦ Designed for Small Volume Vessels
♦ Air Operated on 100 psi
♦ 6’ Long Outlet Hose
♦ Pressure Bleed Off Valve
♦ Inlet Garden Hose Connection
♦ Inlet Air Filter Regulator
♦ Safety Relief Device
♦ 1000 psi Pressure Gauge
♦ Steel Base Plate

Item C
♦ Manually Operated
♦ 6’ Long Outlet Hose
♦ Pressure Bleed Off Valve
♦ Inlet Garden Hose Connection
♦ Operating Handle
♦ 1000 psi Pressure Gauge

Does not include gauge, hose or bleed valve. Contact factory if required

Item D
♦ Manually Operated
♦ Operating Handle
♦ Inlet/Outlet Check Valves
♦ Stainless Steel Water Section
♦ Steel base Plate

<table>
<thead>
<tr>
<th>Item</th>
<th>Model No</th>
<th>Type</th>
<th>Rating (psi)</th>
<th>GPM</th>
<th>Gauge Range</th>
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<tbody>
<tr>
<td>A</td>
<td>500-810</td>
<td>Air</td>
<td>1000</td>
<td>2.0</td>
<td>0-1000</td>
</tr>
<tr>
<td>A</td>
<td>500-825</td>
<td>Air</td>
<td>6100</td>
<td>0.9</td>
<td>0-5000</td>
</tr>
<tr>
<td>A</td>
<td>500-845</td>
<td>Air</td>
<td>16,000</td>
<td>0.3</td>
<td>0-10,000</td>
</tr>
<tr>
<td>B (*)</td>
<td>500-801</td>
<td>Air</td>
<td>1500</td>
<td>0.5</td>
<td>0-1000</td>
</tr>
<tr>
<td>C (*)</td>
<td>500-026A</td>
<td>Manual</td>
<td>1000</td>
<td>0.9</td>
<td>0-1000</td>
</tr>
<tr>
<td>D</td>
<td>500-150</td>
<td>Manual</td>
<td>3000</td>
<td>0.53</td>
<td>upon request</td>
</tr>
<tr>
<td>D</td>
<td>500-155</td>
<td>Manual</td>
<td>4300</td>
<td>0.37</td>
<td>upon request</td>
</tr>
<tr>
<td>D</td>
<td>500-160</td>
<td>Manual</td>
<td>6800</td>
<td>0.21</td>
<td>upon request</td>
</tr>
<tr>
<td>D</td>
<td>500-165</td>
<td>Manual</td>
<td>12,000</td>
<td>0.13</td>
<td>upon request</td>
</tr>
</tbody>
</table>

(*) Recommended as Fire Extinguisher Cylinder Testing Pumps

DOT/TC SPECIFICATION PROOF TEST GAUGE ASSEMBLY

When requalifying U.S. Department of Transportation or Transport Canada specification cylinders, the equipment must meet certain requirements as set forth in CFR49 and CGA C-1 pamphlet. A dual gauge assembly must be used to perform accuracy verification of proof test equipment prior to testing. Gauges must have 1% readability and be recalibrated periodically. Equipment must be able to demonstrate 1% overall accuracy to within 10% of pressures being tested to that day. **NFPA #10** also requires the use of a calibrated gauge.

♦ (2) 0-1100 psi x 2 psi Increment Gauges x 6” Diameter
♦ Calibrated to 1/2% Accuracy
♦ Isolation Valve
♦ 4’ Long Outlet Hose to attach to test pump
♦ Mounted on Steel Base Plate
♦ Includes Operational DVD

Part No. 140-415

**Hydro-Test Products Inc.**
e-mail: sales@hydro-test.com

www.hydro-test.com
Tel: 800-225-9488 / 978-897-4647 Fax: 978-897-1942

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LARGE VOLUME HYDROSTATIC "PROOF" TESTING EQUIPMENT

ELECTRIC OPERATED TEST PUMPS
• Ideal For Fire Hose Testing • Portable Design • Outer Steel Case
  ♦ 10 ft Outlet Hose x 1/2"MNPT  ♦ Glycerin Filled Pressure Gauge
  ♦ Safety Relief & By-Pass Valve  ♦ Carrying Handle (115V-1PH-60HZ)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Motor</th>
<th>Pump</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H.P.</td>
<td>Amp.</td>
</tr>
<tr>
<td>500-301</td>
<td>3/4</td>
<td>11.5</td>
</tr>
<tr>
<td>500-302</td>
<td>3/4</td>
<td>11.5</td>
</tr>
<tr>
<td>500-303</td>
<td>1</td>
<td>13.0</td>
</tr>
<tr>
<td>500-304</td>
<td>1 1/2</td>
<td>19.0</td>
</tr>
</tbody>
</table>

GASOLINE ENGINE OPERATED TEST PUMPS
♦ 10 ft Outlet Hose x 1/2"MNPT
♦ Glycerin Filled Pressure Gauge
♦ Safety Relief & By-Pass Valve

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Engine</th>
<th>Pump</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H.P.</td>
<td>Range(psi)</td>
</tr>
<tr>
<td>500-305</td>
<td>4</td>
<td>0-500</td>
</tr>
<tr>
<td>500-306</td>
<td>5</td>
<td>0-400</td>
</tr>
</tbody>
</table>

AIR OPERATED TEST PUMP
♦ Rated to 1000 psi
♦ 2 GPM Output
♦ Stainless Steel Water Pump Section
♦ 10 ft Outlet Hose x 1/4"MNPT
♦ 0-1000 psi Pressure Gauge

Operates on 8CFM @ 100 psi of Pre-Regulated Shop Air

FIRE HOSE TEST ADAPTERS AND FITTINGS
Adapters are precision machined with NST threads. Adapters to convert NST to NPSH are also available. The fire hose nozzle is typically used on the opposite end of the hose as an air bleed and shutoff.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-508</td>
<td>Test Adapter: 1 1/2&quot;(M)NST x 1/2&quot; (F)NPT</td>
</tr>
<tr>
<td>100-512</td>
<td>Test Adapter: 2 1/2&quot;(M)NST x 1/2&quot; (F)NPT</td>
</tr>
<tr>
<td>80-088</td>
<td>Thread Adapter: 1 1/2&quot;(F)NPT x 1 1/2&quot;(M)NPSH</td>
</tr>
<tr>
<td>80-068</td>
<td>Thread Adapter: 2 1/2&quot;(F)NPT x 2 1/2&quot;(M)NPSH</td>
</tr>
<tr>
<td>110-001</td>
<td>Quick Coupler: 1/2&quot; (F)NPT</td>
</tr>
<tr>
<td>110-002</td>
<td>Quick Coupler Nipple: 1/2&quot;(M)NPT</td>
</tr>
</tbody>
</table>

3 STATION HOSE MANIFOLD
Speeds up the testing process - by testing multiple lengths of hose at one time
♦ Easily Attaches To Any Test Pump
♦ Individual Shutoff Valves
♦ All Brass Construction

Part No. 500-330

www.hydro-test.com
Tel: 800-225-9488 / 978-897-4647  Fax: 978-897-1942

Hydro-Test Products Inc.  email: sales@hydro-test.com  Page 17

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ADDITIONAL ITEMS FOR FIRE EXTINGUISHER "PROOF TESTING"

Additional items are required to properly and safely test portable fire extinguisher cylinders. Below is information on these additional items.

### Safety Test Cages

**Part No. 300-050**
12" Square x 32" Tall
- Designed for hand held portable fire extinguishers
- As Required by NFPA 10
- Steel Mesh Construction
- Hinged Door
- 2 Sizes to Choose From
- Top Opening for Test Hose
- Carrying Handles

**Part No. 300-052**
18" Square x 50" Tall
- Designed for extinguisher system cylinders

### Calibrated Pressure Gauges to Meet DOT - TC and NFPA Requirements for Proof Testing

- (2) 0-1100 psi x 2 psi Increment Gauges x 6" Diameter
- Calibrated to 1/2% Accuracy
- Isolation Valve
- 4' Long Outlet Hose to attach to test pump
- Mounted on Steel Base Plate
- Includes Operational DVD

**Part No. 140-415**

### FIRE EXTINGUISHER TEST LABEL

**Part No. 393-025**
- Meets NFPA 10 Specifications
- 3.5" x 2.25" in Size
- Coated for Protection
- Self Destruct Void Feature
- 500 Labels per Roll
- Price Includes 4 Line Imprint
- Fast 3 Week Delivery

### PROOF TEST LABEL FOR DOT SPEC CYLINDERS

**Part No. 393-012**
- Preprinted With "S"
- 2" x 1.25" Die Cut Label
- Coated for Protection
- Self Destruct Void Feature
- 50 Labels per Roll
- As Required By DOT available with RIN number preprinted

### TAG/LABEL PUNCH

**Part No. 230-014**
- 7/8" Reach
- Nickel Plated Body

### NFPA #10 Pamphlet

**Part No. 393-350**

- 8.5" x 11" in Size
- 13 Test per Sheet
- 50 Sheets per Pad
- Verification Recording on Backside
- Required For DOT Testing

See Page 43 For Proof Test Record Software

**MANUALLY KEPT TEST RECORD FORM**

**Part No. 393-003**

- 8.5" x 11" in Size
- 13 Test per Sheet
- 50 Sheets per Pad
- Verification Recording on Backside
- Required For DOT Testing

**Part No. 300-052**
18" Square x 50" Tall
- Designed for extinguisher system cylinders

**Part No. 393-025**
- Meets NFPA 10 Specifications
- 3.5" x 2.25" in Size
- Coated for Protection
- Self Destruct Void Feature
- 500 Labels per Roll
- Price Includes 4 Line Imprint
- Fast 3 Week Delivery

**Part No. 393-003**
- 8.5" x 11" in Size
- 13 Test per Sheet
- 50 Sheets per Pad
- Verification Recording on Backside
- Required For DOT Testing
CYLINDER VISE STATIONS

Pneumatic Operated
♦ Operates on 60 - 80 psi of Shop Air
♦ Rubber Belted to Protect Cylinder Finish
♦ Unique "Center Pull" Design Eliminates Belt Slippage
♦ Removable - Adjustable Shelf Plate
♦ Accepts Cylinder Diameters From 3" to 12"
♦ Includes Small Cylinder Fixture for Cyls Under 5" Diameter
♦ Steel Base Plate (24" square) With Mounting Holes
♦ Shipping Weight: 220 Lbs

Part No. 510-010

Optional Shelf
♦ Great for Holding Stamps, Wrenches, Adapters...
♦ Easily Bolts Onto Hydro-Test Vise
Part No. 510-045

Manually Operated

Part No. 510-061
Bench Vise Only

Part No. 510-060
Vise Stand with Detachable Bench Vise

This vise is designed as a lower cost option to our pneumatic vise for valving and de-valving Aluminum and Steel cylinders in a lower volume operation.

The versatility of being a bench mount or upright vise makes this an excellent choice for SCUBA and SCBA retest facilities

BENCH VISE FOR PORTABLE FIRE EXTINGUISHERS
Designed to Hold O-ring Sealed Valved Portable Fire Extinguisher

Part No. 510-020
Air Operated
♦ Rubber Adjustable Pads
♦ Accepts to 9" Dia.
♦ Great for Service Vehicles
♦ Mounting Holes Provided on Steel Base Plate
♦ Choice of Manual or Air Operated

Part No. 510-019
Manual Operated

www.hydro-test.com
Tel: 800-225-9488 / 978-897-4647  Fax: 978-897-1942

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VALVING / DE-V ALVING MACHINES

For Removal and Insertion of Tapered Threaded Valves Into and Out of Industrial Gas Cylinders Under a Controlled Torque

Designed for those facilities that are valving and de-valving a large number of steel industrial gas cylinders. Allows one operator to easily and efficiently valve and de-valve up to 25 cylinders per hour.

Features:
♦ Adjustable Torque Limit Control With Override
♦ 1000 ft lbs of Hydraulic Powered Torque
♦ Adjustable Wrench Quick Coupled to Telescoping Wrench Arm
♦ Pneumatic Operated Rubber Belted Vise
♦ Accepts Cylinders to 12" Diameter x 58" Tall
♦ Enclosed Operating Control Panel
♦ Heavy Duty Steel Construction
♦ 36" x 48" Steel base Plate With Mounting Holes
♦ Dimensions: 36"W x 48"L x 132"T
♦ **Shipping Weight:** 1200 Lbs

Utilities Required
• 80 psi of shop air
• Electrical (see below)
• 12’ Ceiling Height
• 25 Gallons of Hydraulic Fluid

Model No. | Electrical | HP | Wrench Speed (RPM)
--- | --- | --- | ---
520-001 | 115/230V-1PH-60Hz | 2 | 7
520-002 | 230/460V-3PH-60Hz | 2 | 7
520-009 | 230/460V-3PH-60Hz | 5 | 21

50Hz electrical available upon request

See page 33 for torque wrenches and tools for verifying torque values against psi values of valving / de-valving machine
CYLINDER DRYERS

LIGHT DUTY DESIGN FOR THIN WALL PORTABLE SIZE CYLINDERS

♦ 1/20 HP Electric Motor
♦ Operates on 115V Electrical (draws 12amp)
♦ 1500 Watt Stainless Steel Heating Element
♦ Three or Six Outlets For Portable Size Cylinders
♦ Maximum Temperature of 130º F
♦ Will Dry Thin Wall Steel or Aluminum Cylinders in 30-40 Minutes (depending on environment)

Model No. 530-003

Foot Print: 84"L x 8"D x 28"T

Either Model Accepts Cylinders to 8"dia. x 36"tall

HEAVY DUTY DESIGN FOR PORTABLE SIZE INDUSTRIAL GAS CYLINDERS

♦ 1/2 HP Electric Motor
♦ Operates on 115V or 220v Electrical
♦ 1500 Watt Stainless Steel Heating Element
♦ Six Outlets For Portable Size Cylinders
♦ Maximum Temperature of 130º F
♦ Will Dry Steel or Aluminum Cylinders in 20-30 Minutes (depending on environment)

Model No. 530-020
Model No. 530-021
Model No. 530-019

Models:

Foot Print: 90"L x 14"D x 16"T

accepts up to 6 cylinders to 9"dia. x 36"tall

HEAVY DUTY DESIGN FOR PORTABLE SIZE INDUSTRIAL GAS CYLINDERS (Models: 530-020-Y, 530-021-Y, 530-019-Y)

Foot Print: 55"L x 22"D x 16"T

accepts up to 6 cylinders to 9"dia. x 36"tall

♦ Internal Drying Blow Gun Assembly
  • Assist in getting all water droplets out of cylinder prior to drying
  • Decreases drying time by up to 1/3rd
  • Simple-Effective-Safe
  • Hook up regulated dry air or nitrogen supply to 1/4"FNPT inlet
  • Easy to operate on/off valve
  • 4' flexible hose with blow gun and diffuser tip

Warning: Not intended for use with inlet pressure exceeding 100psi

Part No. 230-015

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Hydro-Test Products Inc.
email: sales@hydro-test.com
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CYLINDER DRYERS

HEAVY DUTY DESIGN FOR FULL SIZE INDUSTRIAL GAS CYLINDERS

accepts up to 6 cylinders to 10" dia. x 66" tall

♦ 1/2 HP Electric Motor
♦ Operates on 115V or 220v Electrical
♦ 1500 Watt Stainless Steel Heating Element
♦ Six Outlets For Full Size Cylinders
♦ Heating Tubes Quick Couple to Frame
♦ Support Legs Provided
♦ Maximum Temperature of 130º F
♦ Will Dry Steel or Aluminum Cylinders in 30-40 Minutes
  (depending on environment)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Electrical</th>
<th>HP</th>
<th>Amp Draw</th>
</tr>
</thead>
<tbody>
<tr>
<td>530-022</td>
<td>115V - 1 Phase - 60Hz</td>
<td>1/2</td>
<td>20</td>
</tr>
<tr>
<td>530-023</td>
<td>230V - 1 Phase - 60Hz</td>
<td>1/2</td>
<td>11</td>
</tr>
<tr>
<td>530-024</td>
<td>230V - 1 Phase - 50Hz</td>
<td>1/2</td>
<td>9</td>
</tr>
</tbody>
</table>

OPTIONAL 2ND HEATING ELEMENT

Additional 1500 Watt heating Element Positioned Between 3rd and 4th Outlet Provides For More Uniform Heat On Last 3 Tubes

Factory Installed At Hydro-Test Only

♦ Available on 1/2 HP Heavy Duty Units Only
♦ Separate On/Off Switch
♦ Thermostatically Controlled

<table>
<thead>
<tr>
<th>Part No.</th>
<th>For Electrical Service of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>530-033</td>
<td>115V</td>
</tr>
<tr>
<td>530-034</td>
<td>230V</td>
</tr>
</tbody>
</table>
CYLINDER HOT WATER DRYING & INVERTING

PLC CONTROLLED CYLINDER VISE - INVERTER - HOT WATER DRYER

♦ Automates the Inversion and Drying Sequence
♦ Accepts Full Size or Portable Industrial Gas Cylinders
♦ PLC Allows for Custom Time Sequences
♦ Completes Dumping of Water and Drying in 4 Minutes
♦ Padded Vise Jaws
♦ Heavy Duty Design

Utilities Required
♦ Hot water supply of 180° F @ 130GPH recovery
♦ 115V-1Phase-60Hz electrical (220V-50Hz available)
♦ 8CFM of 100 psi pre regulated shop air
♦ Regulated nitrogen supply tank
♦ Pit for expelled water

• Accepts cylinders in sizes of: 6-10" dia. x 45-60"H (other sizes upon request)
• Optional support stand available for portable cylinders
• Quick disconnect water tube for easy alignment

If Your Drying Area is a Bottleneck for Your Facility - This Will Speed Up Your Cylinder Drying Time

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
<th>Floor Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>510-025</td>
<td>Single Cylinder Vise-Inverter-Dryer</td>
<td>55&quot;L x 48&quot;W x 42&quot;H</td>
</tr>
<tr>
<td>510-030</td>
<td>Dual Cylinder Vise-Inverter-Dryer</td>
<td>66&quot;L x 48&quot;W x 42&quot;H</td>
</tr>
<tr>
<td>510-035</td>
<td>Single Cylinder Vise-Inverter (no hot water drying)</td>
<td>55&quot;L x 48&quot;W x 42&quot;H</td>
</tr>
<tr>
<td>510-040</td>
<td>Dual Cylinder Vise-Inverter (no hot water drying)</td>
<td>66&quot;L x 48&quot;W x 42&quot;H</td>
</tr>
</tbody>
</table>

HOT WATER HEATER

Designed to be used with our hot water cylinder dryer / inverters

• Industrial Grade Construction
• 15 gallon capacity
• 30 KW
• 240V-3Phase-60hz electrical (220V-50Hz available upon request)
• Stainless steel pressure vessel provides maximum service life
• ASME Section VIII stamped vessel ensures high quality construction
• Heavy duty construction withstands demanding industrial use
• Packaged with all electrical operating controls for efficient installation
• Shipping weight: 120 Lbs
• Foot Print: 30" x 18" x 18"H

Model 230-051
MANUALLY OPERATED CYLINDER INVERSION RACKS

- For use in inverting cylinders to expel test water
- Heavy steel construction
- Enamel paint finish
- Adjustable safety strap
- Two sizes available
- Floor Space: 30"L x 18"W

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
<th>Accepts Cylinders to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>540-003</td>
<td>Manual Inversion Rack for Portable Cyls.</td>
<td>Height: 24-32&quot;</td>
</tr>
</tbody>
</table>

Inversion Rack For CO2 Supply Cylinder

Allows inverting of 50-100LB CO2 Supply Cylinder that does not have a siphon tube. This allows CO2 liquid to valve for easier transfer of liquid CO2.

- Accepts cylinders sizes: 8"-10" diameter x 45"-55" height
- Adjustable retaining chain
- Steel construction

Model 540-010

Inversion Rack For CO2 Filling

Allows inverting of portable size cylinder that is being filled.

- Accepts cylinders sizes: 4"-8" diameter x 20"-34" height
- Steel construction

Model 540-012

Internal Drying Blow Gun Assembly

- Assist in getting all water droplets out of cylinder prior to drying
- Decreases drying time by up to 1/3rd
- Simple-Effective-Safe
- Hook up regulated dry air or nitrogen supply to 1/4"FNPT inlet
- Easy to operate on/off valve
- 4' flexible hose with blow gun and diffuser tip

Warning: Not intended for use with inlet pressure exceeding 100psi

Part No. 230-015

Blast Water Droplets Out of Cylinders Before Drying
Hydro-Test Products is pleased to start distributing a new product for the cylinder re-test industry that is 100% water soluble, and environmentally friendly. A Phosphoric acid cleaner-descaler specifically designed to remove rust and scale from steel and aluminum scuba cylinders, regulators, water jackets and other components. Tumble-Juice will not damage rubber or plastic parts; it penetrates hard to reach areas to dissolve rust and salt corrosion.

**TUMBLE JUICE**

Tumble Juice is a cleaner for Cylinders, Regulators and Water Jackets
Cleaner Concentrate-Non-Toxic-Biodegradable-Non-Flammable

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>63-120</td>
<td>5 Gallon Concentrated 1 part to 4 parts of water</td>
</tr>
<tr>
<td>63-122</td>
<td>1 Gallon Concentrated 1 part to 4 parts of water</td>
</tr>
<tr>
<td>63-124</td>
<td>1/2 Gallon Concentrated 1 part to 4 parts of water</td>
</tr>
<tr>
<td>63-126</td>
<td>1 Quart Concentrated 1 part to 4 parts of water</td>
</tr>
</tbody>
</table>

Use: Concentrate may be mixed 1 part concentrate to 4 to 8 parts water, depending on the need. Safe for Ultrasonic use. Cylinders may be tumbled with a small amount of the product or stand upright and filled to the top with water and about 1 cup of product and left overnight to slowly clean. Rinse cylinders after use. Re-use on similar materials only.

Optional Jug Dispensing Pump
Fits 1/2 gal. and 1 gal. style jugs
Spout rotates 360°.
Polypropylene with flexible 11" intake tube

Part No. 63-130

Non-Toxic-100% Biodegradable-Non-Flammable

Idea For Cylinder Retesters:
Use a small amount of this product in your water jacket to keep the water clean and free of rust build up. We have used it here at Hydro-Test for many years with outstanding results.
CYLINDER ROLLERS / TUMBLERS

Cylinder Rollers and Tumblers Are Offered for Gas Mixing and Interior Cylinder Cleaning. Custom Designed Units Are Available To Meet Your Needs

Features
♦ Non-Marring Rubber Rollers  ♦ Heavy Duty Steel Housing
♦ Cold Rolled Steel Shafts  ♦ Gear Motor Driven
♦ 115V-1phase-60Hz (220V-50Hz on request)  ♦ Adjustable Cylinder Stop

Model No. 540-021
Designed for Two Full Size Cylinders
Minimum Size: 6" Diameter x 24" Tall
Maximum Size: 10" Diameter x 72" Tall

Cylinders can be "pyramided" so that roller will accept a total of 6 cylinders. Be aware when stacking cylinders for tumbling, some scratching of cylinder surfaces will occur.

Model No. 540-020
Designed for Three Portable Size Cylinders(*)
Minimum Size: 4" Diameter x 12" Tall
Maximum Size: 8" Diameter x 30" Tall

(*) Cylinders can be "pyramided" so that roller will accept a total of 6 cylinders. Be aware when stacking cylinders for tumbling, some scratching of cylinder surfaces will occur.

Model No. 540-022
Designed for One Portable Size Cylinders
Minimum Size: 4" Diameter x 14" Tall
Maximum Size: 8" Diameter x 26" Tall

Part No. 230-209
Tumbling Media
♦ 3/16" Diameter
♦ Made of Aluminum Oxide
♦ Random Shaped
♦ Sold in 50 Lb box
♦ Re-Usable
CYLINDER ROLLERS / TUMBLERS

Multiple Cylinder Roller, designed for internal cleaning of cylinders with appropriate abrasive pellets or for gas mixing.

Features:
- 4 or 6 Cylinders models (additional quantities upon request)
- Sizes of cylinders: 8"-10" diameter x 46"-58" tall (unique sized capacities available)
- Pneumatically tilts cylinder from vertical to horizontal position
- Ramp provided for easy rolling on/off of cylinders
- Electric gear motor operation for rotation
- Rotation speed of 85 RPM
- Rubber - non marring rollers
- Floor space: 72"W x 60"D x 66"T
- Shipping weight: 950 Lbs

Utilities required:
- 100psi @ 4CFM of pre-regulated shop air
- 115V electrical

Options:
- Can be custom built to suit your cylinders (send request with smallest and largest cylinder sizes)
- Variable RPM and directional motor and timer
- 220V-50Hz electrical

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Accepts Up To:</th>
</tr>
</thead>
<tbody>
<tr>
<td>540-100</td>
<td>4 Cylinders, 8-10&quot; diameter x 46-58&quot; tall</td>
</tr>
<tr>
<td>540-101</td>
<td>6 Cylinders, 8-10&quot; diameter x 46-58&quot; tall</td>
</tr>
</tbody>
</table>

CYLINDER INTERIOR CLEANING WHIP

An Inexpensive and Easy Procedure For Removing Scaling and Loose Corrosion From Interior of Cylinders. Simply Attach the Wire Whip Rod to a Drill - Start Drill and Move the Wire Whip Up and Down Cylinder Interior Wall.

The More You Use the Whip, the Wire Strands Will Start To Unravel and Cover More Surface Area, Including Bottom of Cylinder, Making the Process Faster.

Features:
- Stainless Steel Wire
- Attaches to 3/8" Drill
- Two Sizes Available

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>230-206</td>
<td>30&quot; Long Cleaning Whip for Portable Cylinders</td>
</tr>
<tr>
<td>230-207</td>
<td>60&quot; Long Cleaning Whip for Full Size Cylinders</td>
</tr>
<tr>
<td>210-109</td>
<td>Replacement S.S. Strand (sold by the foot)</td>
</tr>
<tr>
<td>215-046</td>
<td>Replacement Self Tapping Screws</td>
</tr>
</tbody>
</table>
SHOP AIR COMPRESSORS

Shop Compressed Air Is Used To Operate Hydro Pumps - Powder Fill Equipment - Cylinder Vises And A Wide Range Of Other Shop Items. Be Sure That You Purchase An Air Compressor That Can Handle All Of Your Inlet Air Supply Requirements.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Capacity (lbs)</th>
<th>HP</th>
<th>Tank Size (gal)</th>
<th>CFM@ Max psi</th>
<th>Max psi</th>
<th>Electrical</th>
<th>Outlet Thread</th>
<th>Cylinder</th>
<th>Height</th>
<th>Width</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>230-028</td>
<td>1000</td>
<td>2</td>
<td>13</td>
<td>5.5</td>
<td>135</td>
<td>115V-1PH-60Hz</td>
<td>1/4&quot;Fnpt Single</td>
<td>28.5&quot;</td>
<td>18&quot;</td>
<td>28&quot;</td>
<td></td>
</tr>
<tr>
<td>230-022</td>
<td>2000</td>
<td>3</td>
<td>60</td>
<td>10.3</td>
<td>135</td>
<td>220V-1PH-60Hz</td>
<td>3/8&quot;Fnpt Single</td>
<td>66&quot;</td>
<td>23&quot;</td>
<td>20&quot;</td>
<td></td>
</tr>
<tr>
<td>230-023</td>
<td>1000</td>
<td>5</td>
<td>60</td>
<td>15.5</td>
<td>135</td>
<td>220V-1PH-60Hz</td>
<td>1/4&quot;Fnpt Single</td>
<td>71&quot;</td>
<td>30&quot;</td>
<td>20&quot;</td>
<td></td>
</tr>
</tbody>
</table>

** Other capacities - pressures and voltages available on special order **

HOIST ASSEMBLIES

A Hoist And Trolley Assembly Is Required For Movement Of Cylinder and Water Jacket Lid Prior To And After The Hydrostatic Water Jacket Test. Hydro-Test Offers Pneumatic And Electric Hoist.

Typically a 4" I-Beam Is Used And Can Be Purchased Locally.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity (lbs)</th>
<th>Hoist Trolley</th>
<th>Chain Bucket</th>
</tr>
</thead>
<tbody>
<tr>
<td>230-040</td>
<td>1000</td>
<td>Fits I-Beam: Vertical 4&quot;-10&quot; Horizontal: 2.66&quot;-4.66&quot;</td>
<td>For Use With Above Hoists</td>
</tr>
<tr>
<td>230-041</td>
<td>2000</td>
<td>Fits I-Beam: Vertical 5&quot;-12&quot; Horizontal: 3.0&quot;-5.0&quot;</td>
<td>** Other capacities and styles available on special order **</td>
</tr>
</tbody>
</table>

** Other capacities and styles available on special order **

Hydro-Test Products Inc.
e-mail: sales@hydro-test.com
www.hydro-test.com Tel: 800-225-9488 / 978-897-4647 Fax: 978-897-1942
HYDROSTATIC TEST ADAPTER

TAPERED THREADS FOR WATER JACKET TESTING
For use on Steel Industrial Gas Cylinders, using a tapered thread

√ All threads machined to CGA specifications
√ Heavy duty brass stock
√ Tapped 1/2" FNPT on backside

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Nominal Size(&quot;&quot;)</th>
<th>O.D. to 1/10th</th>
<th>T.P.I.</th>
<th>Common Application(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-000</td>
<td>1/2•3/4•1</td>
<td>.8•1.0•1.3</td>
<td>14•14•11.5</td>
<td>Industrial Gas Steel Cylinders</td>
</tr>
<tr>
<td>100-002</td>
<td>1/2</td>
<td>.8</td>
<td>14</td>
<td>Carbon Dioxide Cylinders</td>
</tr>
<tr>
<td>100-003</td>
<td>3/4</td>
<td>1.0</td>
<td>14</td>
<td>N2, Breathing Air, O2 - Steel Cylinders</td>
</tr>
<tr>
<td>100-004</td>
<td>1</td>
<td>1.3</td>
<td>11.5</td>
<td></td>
</tr>
<tr>
<td>100-009</td>
<td>3/4 #4 Oversize</td>
<td>1.0</td>
<td>14</td>
<td>#4 Oversize for Chlorine cylinders</td>
</tr>
<tr>
<td>100-011</td>
<td>3/4 - 24 Thread Oversize</td>
<td>1.1</td>
<td>14</td>
<td>Taylor Wharton 4500 psi Air Bank Cylinder</td>
</tr>
<tr>
<td>100-012</td>
<td>1/4</td>
<td>.5</td>
<td>18</td>
<td>SSS Stainless Steel stock for Small Medical Cylinders &amp; Special Applications</td>
</tr>
<tr>
<td>100-010</td>
<td>3/8</td>
<td>.7</td>
<td>14</td>
<td>Wentworth Tapered Thread for UN Cyls.</td>
</tr>
<tr>
<td>100-047</td>
<td>Metric W28.8 x 1 1/4</td>
<td>1.1</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

For use on Steel Industrial Gas Cylinders, using a tapered thread
√ All threads machined to CGA specifications
√ Heavy duty stainless steel stock
√ Tapped 1/2" FNPT on backside

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Nominal Size(&quot;&quot;)</th>
<th>O.D. to 1/10th</th>
<th>T.P.I.</th>
<th>Common Application(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-100</td>
<td>1/2•3/4•1</td>
<td>.8•1.0•1.3</td>
<td>14•14•11.5</td>
<td>Industrial Gas Steel Cylinders</td>
</tr>
<tr>
<td>100-102</td>
<td>1/2</td>
<td>.8</td>
<td>14</td>
<td>Carbon Dioxide Cylinders</td>
</tr>
<tr>
<td>100-103</td>
<td>3/4</td>
<td>1.0</td>
<td>14</td>
<td>N2, Breathing Air, O2 - Steel Cylinders</td>
</tr>
<tr>
<td>100-104</td>
<td>1</td>
<td>1.3</td>
<td>11.5</td>
<td></td>
</tr>
<tr>
<td>100-111</td>
<td>3/4 - 24 Thread Oversize</td>
<td>1.1</td>
<td>14</td>
<td>Taylor Wharton 4500 psi Air Bank Cylinder</td>
</tr>
</tbody>
</table>
HYDROSTATIC TEST ADAPTER

"FAST SEAL" TAPERED THREADS FOR WATER JACKET TESTING
For use on Steel Industrial Gas Cylinders, using a tapered thread

√ Self-sealing under test pressure
√ Unique design eliminates need for teflon tape on adapter threads
√ Low torque insert - 1/4 turn beyond hand tight
√ O-ring seal is easily replaced
√ Rated to 4000 psi test pressure

♦ Tremendous Time Saver
♦ No Need To Vise Cylinders For Insertion of Adapter
♦ Eliminates the Need Of Teflon Tape
♦ Longer Life For Test Adapters

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Nominal Size(&quot;&quot;)</th>
<th>O.D. to 1/10th</th>
<th>T.P.I.</th>
<th>Common Application</th>
<th>Replacement Internal Seals</th>
<th>Replacement Face Seal</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-133</td>
<td>1/2</td>
<td>.8</td>
<td>14</td>
<td>Industrial Gas Steel Cylinders</td>
<td>100-135</td>
<td>100-134</td>
</tr>
<tr>
<td>100-136</td>
<td>3/4</td>
<td>1.0</td>
<td>14</td>
<td>Carbon Dioxide Steel Cylinders</td>
<td>100-138</td>
<td>100-137</td>
</tr>
<tr>
<td>100-139</td>
<td>1</td>
<td>1.3</td>
<td>11.5</td>
<td></td>
<td>100-141</td>
<td>100-140</td>
</tr>
</tbody>
</table>

TYPICAL HYDRO-TEST ADAPTER SET UP

Water Jacket Spud
#240-124

1/2" Quick Coupler
#110-001

1/2" Quick Coupler Nipple
#110-002

Test Adapter

THREAD MEASURING TOOLS

Be sure to use the correct adapter. The following tools will assist you in picking out the proper test adapter

Thread Per Inch Gauge
Part No. 69-047

Caliper to Measure Diameter
Part No. 69-046

Visit www.hydro-test.com for easy on line ordering - industry information - new products - special offers.
HYDROSTATIC TEST ADAPTER

O-RING SEALED STRAIGHT THREADS FOR WATER JACKET TESTING

For use on Cylinders, using a o-ring sealed straight thread

- All threads machined to CGA specifications
- Heavy duty brass stock
- Tapped 1/2" FNPT on backside

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Size (&quot;)</th>
<th>O.D. to 1/10th</th>
<th>T.P.I.</th>
<th>Common Application</th>
<th>Replacement Seal No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-046</td>
<td>M30</td>
<td>1.2</td>
<td>13</td>
<td>Metric M30 x 2 for Foreign Luxfer Cylinder</td>
<td>58-066</td>
</tr>
<tr>
<td>100-048</td>
<td>M25</td>
<td>1</td>
<td>13</td>
<td>Metric 25E Thread for Foreign Manufactured Cylinders</td>
<td>58-062</td>
</tr>
<tr>
<td>100-049</td>
<td>M18</td>
<td>.7</td>
<td>16</td>
<td>Metric M18: Drager ReBreather &amp; Luxfer/SCOTT SP15136 - 5500psi SCBA</td>
<td>58-058</td>
</tr>
<tr>
<td>100-050</td>
<td>7/8</td>
<td>.8</td>
<td>14</td>
<td>SCBA Steel</td>
<td>58-060</td>
</tr>
<tr>
<td>100-051</td>
<td>1</td>
<td>1.0</td>
<td>14</td>
<td>SCUBA Steel</td>
<td>58-063</td>
</tr>
<tr>
<td>100-053</td>
<td>1</td>
<td>1.0</td>
<td>14</td>
<td>SCUBA Aluminum</td>
<td>58-131</td>
</tr>
<tr>
<td>100-054</td>
<td>3/4</td>
<td>.7</td>
<td>16</td>
<td>2216 psi SCBA</td>
<td>58-060</td>
</tr>
<tr>
<td>100-055</td>
<td>3/4</td>
<td>.7</td>
<td>16</td>
<td>2216 psi SCBA &amp; Aluminum Oxygen</td>
<td>58-059</td>
</tr>
<tr>
<td>100-056</td>
<td>1 1/8</td>
<td>1.1</td>
<td>12</td>
<td>Aluminum CO2</td>
<td>58-065</td>
</tr>
<tr>
<td>100-057</td>
<td>1 1/4</td>
<td>1.3</td>
<td>12</td>
<td>Aluminum CO2-Amerex Brand prior to 1974</td>
<td>58-067</td>
</tr>
<tr>
<td>100-058</td>
<td>7/8</td>
<td>.9</td>
<td>14</td>
<td>PST Steel SCUBA, 3500psi</td>
<td>58-061</td>
</tr>
<tr>
<td>100-059</td>
<td>7/8</td>
<td>.9</td>
<td>14</td>
<td>Composite SCUBA 4500 psi</td>
<td>58-128</td>
</tr>
<tr>
<td>100-060</td>
<td>1 5/16</td>
<td>1.3</td>
<td>12</td>
<td>Naval SCUBA</td>
<td>58-065</td>
</tr>
<tr>
<td>100-062</td>
<td>1 1/8</td>
<td>Female</td>
<td>12</td>
<td>Kidde &quot;T&quot; Series CO2 - 5 Lb</td>
<td>58-609</td>
</tr>
<tr>
<td>100-063</td>
<td>1 3/8</td>
<td>Female</td>
<td>12</td>
<td>Kidde &quot;T&quot; Series 10-20 Lb</td>
<td>58-059</td>
</tr>
<tr>
<td>100-064</td>
<td>1 1/16</td>
<td>Female</td>
<td>20</td>
<td>CO2 Fire Extinguisher Cartridge (left hand thread)</td>
<td>58-060</td>
</tr>
<tr>
<td>100-065</td>
<td>1 1/16</td>
<td>Female</td>
<td>20</td>
<td>N2 Fire Extinguisher Cartridge (right hand thread)</td>
<td>58-060</td>
</tr>
<tr>
<td>100-070</td>
<td>1 3/8</td>
<td>1.4</td>
<td>12</td>
<td>Aluminum CO2 - Kidde European brand</td>
<td>58-068</td>
</tr>
<tr>
<td>100-079</td>
<td>1/2</td>
<td>.5</td>
<td>20</td>
<td>Paintball Gun Cartridge</td>
<td>58-033</td>
</tr>
<tr>
<td>100-080</td>
<td>5/8</td>
<td>.6</td>
<td>18</td>
<td>Paintball Gun Cartridge</td>
<td>58-033</td>
</tr>
<tr>
<td>100-081</td>
<td>5/8</td>
<td>.6</td>
<td>20</td>
<td>Paintball Gun Cartridge</td>
<td>58-059</td>
</tr>
</tbody>
</table>

Alternative Teflon Seals for 7500 psi Testing: #58-129 for adapter #100-055
#58-133 for adapter #100-056
HYDROSTATIC TEST ADAPTER

For use in "Proof Testing" of Fire Extinguisher Cylinders

√ All threads machined to CGA specifications  √ Heavy duty brass stock  √ Tapped 1/4" FNPT on backside

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Thread Specifications</th>
<th>Used On</th>
<th>Replacement Seal No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-216</td>
<td>7/8&quot;-14</td>
<td>●</td>
<td>Pemall - Fyr-Fyter</td>
</tr>
<tr>
<td>100-232</td>
<td>1&quot;-12</td>
<td>●</td>
<td>Badger-Amerex-Map-Kidde-Sentry</td>
</tr>
<tr>
<td>100-236</td>
<td>1 1/2&quot;-16</td>
<td>●</td>
<td>Amerex - Badger</td>
</tr>
<tr>
<td>100-238</td>
<td>1 3/16&quot;-16</td>
<td>●</td>
<td>Badger - FyrFyter - Norris - General - Flag</td>
</tr>
<tr>
<td>100-239</td>
<td>1 1/2&quot;-12</td>
<td>●</td>
<td>Badger - New Style 10MB series</td>
</tr>
<tr>
<td>100-241</td>
<td>1 1/8&quot;-12</td>
<td>●</td>
<td>Amerex - Sentry Models New Style</td>
</tr>
<tr>
<td>100-244</td>
<td>1 1/4&quot;-12</td>
<td>●</td>
<td>Amerex - Badger - Sentry - Pyrene - Stop Fire</td>
</tr>
<tr>
<td>100-248</td>
<td>1 1/8&quot; - 16</td>
<td>●</td>
<td>Stop Fire</td>
</tr>
<tr>
<td>100-256</td>
<td>1 5/8&quot; - 8</td>
<td>●</td>
<td>General</td>
</tr>
<tr>
<td>100-266</td>
<td>1&quot; - 14</td>
<td>●</td>
<td>Buckeye - PowerPak - Stop Fire - Pemall</td>
</tr>
<tr>
<td>100-268</td>
<td>1 1/8&quot; - 8</td>
<td>●</td>
<td>Kidde</td>
</tr>
<tr>
<td>100-272</td>
<td>1 3/8&quot; - 12</td>
<td>●</td>
<td>Kidde</td>
</tr>
<tr>
<td>100-274</td>
<td>1 5/8&quot; - 12</td>
<td>●</td>
<td>Kidde</td>
</tr>
<tr>
<td>100-280</td>
<td>1 5/16 - 18</td>
<td>●</td>
<td>Kidde</td>
</tr>
<tr>
<td>100-288</td>
<td>1 7/16&quot; - 8</td>
<td>●</td>
<td>Kidde</td>
</tr>
<tr>
<td>100-204</td>
<td>2 1/4&quot; - 12</td>
<td>●</td>
<td>Ansul Cartridge Operated Shell (5Lb)</td>
</tr>
<tr>
<td>100-202</td>
<td>3&quot; - 12</td>
<td>●</td>
<td>Ansul Cartridge Operated Shell (10-30Lb)</td>
</tr>
<tr>
<td>100-203</td>
<td>2&quot; - 8</td>
<td>●</td>
<td>Kidde &amp; PyroChem Dry Powder Systems</td>
</tr>
<tr>
<td>100-205</td>
<td>2&quot; - 12</td>
<td>●</td>
<td>Range Guard Fire Systems</td>
</tr>
<tr>
<td>100-206</td>
<td>1 1/2&quot; - 8</td>
<td>●</td>
<td>PyroChem Wet Chemical Fire System</td>
</tr>
<tr>
<td>100-186</td>
<td></td>
<td></td>
<td>Ansul Cartridge Operated Test Fitting Kit - Includes Test Fittings For 5-30Lb Red Line Models</td>
</tr>
<tr>
<td>230-005</td>
<td></td>
<td></td>
<td>Cartridge Receiver Removal Wrench for Ansul Red Line Cartridge Operated Units</td>
</tr>
<tr>
<td>110-016</td>
<td></td>
<td></td>
<td>Quick Disconnect Nipple for Test Adapters - 1/4&quot; NPT(M)</td>
</tr>
<tr>
<td>110-015</td>
<td></td>
<td></td>
<td>Quick Disconnect Coupler, 1/4&quot;NPT(F) - Mates to #110-106</td>
</tr>
</tbody>
</table>

Part No. 100-298: Set of Test Adapters 100-216 thru 100-288, includes 110-016 and 110-015 (does not included cartridge operated or systems cylinder test adapters)

Cartridge Receiver Removal Wrench for Ansul Red Line
Easily and Safely Removes Receiver Port for Testing Of Shell
TORQUE WRENCHES

Part No. 230-013

Utilizes a heavy duty cam and pawl mechanism, this reversible 1/2” drive click stop torque wrench provides precise torque.
- **Torque range:** 20 - 150 ft.lbs.
- **Accuracy:** +/- 4%
- **Length:** 18"
- **Reversible**

Part No. 230-013-300

- Heavy-duty adjustable torque wrench
- Wrench is shipped pre-calibrated (+/- 4% accuracy)
- **Drive:** 3/4 inch
- **Ratchet:** Cr-V, 24 tooth
- **Length:** 26-1/2 inches
- **Dual Range:** 50-300 ft./lb. / 70-420 N/m
- Includes 50 -300 foot pound range (70-420 Newton-meters) with adjustable ring design that locks in the torque
- Easily switches from forward to reverse and includes a no-slip handle for a firm grip
- Clutch mechanism makes an audible clicking noise and slips when the maximum torque level is reached
- Knurled handle provides a sure, non-slip grip

Part No. 240-013-ADAPTER

3/4"X 1/2" Adapter
For use with below "crowfoot" wrenches when using #230-013-300 Torque Wrench

Part No. 240-170-1 1/2

- Fully polished drop forged alloy steel
- 1-1/2-Inch jumbo crowfoot wrench
- 1/2-Inch drive

For those that require calibration of their valving / de-valving machine:
Use part no.'s 230-013-300, 240-013-ADAPTER and 240-170-1 1/2 to tighten a test adapter into a cylinder. Use the torque wrench value to confirm / verify proper psi setting on torque control of valving / de-valving machine.
VALVE REMOVAL / INSERTION WRENCHES

Adjustable Slip Joint Wrench
Hardened steel adjustable wrench, designed for removing and tightening cylinder valves. Wrench is adjustable from a 1 5/16" to 2" gap. Will work on valves with two opposite flat sides.

Part No. 240-140

Wrench For Air Pak Valves
• Designed to fit snug over most SCBA valves
• 4 pin alignment to insure proper fit
• 3/4" male hex on top
• Fast and easy fitting

Part No. 240-145

Socket Wrench For Medical Post Valve
• Precision machined
• A real time saver
• Protects valve finish
• 1" male hex on top
• Fast and easy fitting
• Replaceable durable delrin insert

Part No. 240-143

3/4" Impact Socket x 1/2" Drive for use with SCBAwrench
• 6pt Black Finish
• Deep Style Socket
• Fits any 1/2" drive tool
• Fits onto Hydro-Test breaker bar and torque wrench

Part No. 240-162

1" Impact Socket x 1/2" Drive for use with socket wrench for post valves
• 6pt Black Finish
• Deep Style Socket
• Fits any 1/2" drive tool
• Fits onto Hydro-Test breaker bar and torque wrench

Part No. 240-161

Replacement Delrin Insert - Part No. 240-142

Torque Wrench
Utilizes a heavy duty cam and pawl mechanism, this reversible 1/2” drive click stop torque wrench provides precise torque.
• Torque range: 20 - 150 ft.lbs.
• Accuracy: +/- 4%
• Length: 18"
• Reversible

Part No. 230-013
**BREAKER BAR TOOL**

Very Useful Tool For Inserting and Taking Off Tapered Thread Test Adapters and Socket Type Valves

**Part No. 240-150**

- 18" Total Length
- 1/2" drive ratchet head swivels 180°
- 376 ft-lbs. maximum Torque
- 3-Way ratcheting Action: Right or Left Handed Thread, or Lock

**Part No. 240-160**

1 1/2" Impact Socket x 1/2" Drive
for inserting and removing hydro adapters - use with above breaker bar

- 6pt Black Finish
- Deep Style Socket
- Fits Hydro-Test Brand Test Adapters

**THREAD CLEANING TOOL**

Designed To Clean - Not Cut New Threads

- Tool hardened construction
- Lightweight aluminum turn handle
- Easy - Fast - Efficient
- Removes thread sealant from cylinder threads
- Extend the life of your test adapters
- Available in a variety of thread sizes (see below)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Thread Specs.</th>
<th>Typically Used On:</th>
</tr>
</thead>
<tbody>
<tr>
<td>240-010</td>
<td>1/2&quot; NGT Taper</td>
<td>• Industrial Gas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• CO2 Carbonic steel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• CO2 Fire Extinguishers, steel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Steel Cylinders with Taper Threads</td>
</tr>
<tr>
<td>240-011</td>
<td>3/4&quot; NGT Taper</td>
<td>• Taylor Wharton (TW) 4500 psi Breathing Air Bank Cylinder</td>
</tr>
<tr>
<td>240-012</td>
<td>1&quot; NGT Taper</td>
<td>Older SCBA Steel Cylinders</td>
</tr>
<tr>
<td>240-017</td>
<td>3/4&quot; NGT - 24 Thread Oversize</td>
<td>Aluminum SCUBA Cylinders</td>
</tr>
<tr>
<td>240-013</td>
<td>3/4&quot;-.14 straight</td>
<td>Aluminum Medical &amp; SCBA Cylinders</td>
</tr>
<tr>
<td>240-014</td>
<td>1&quot;-.14 straight</td>
<td>Paint Ball Gun &amp; Spare Air Cylinders</td>
</tr>
<tr>
<td>240-015</td>
<td>3/4&quot;-.16 straight</td>
<td>4500 psi SCBA &amp; 3500 psi SCUBA</td>
</tr>
<tr>
<td>240-016</td>
<td>7/8&quot;-.14 straight</td>
<td>Paint Ball Gun &amp; Spare Air Cylinders</td>
</tr>
<tr>
<td>240-018</td>
<td>5/8&quot;-.18 straight</td>
<td>Paint Ball Gun &amp; Spare Air Cylinders</td>
</tr>
</tbody>
</table>

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Hydro-Test Products Inc.   email: sales@hydro-test.com

Page 35
External Thread Repair Tool
An inexpensive-easy to use external thread cleaning tool for thread sizes of 11/16" - 1 1/2" (17-38mm)
Works great for compressed gas valves - SCUBA-SCBA-CO2-N2, etc...
Works on tapered or straight threads

Features:
• No Calibration required
• Self adjusting to any pitch and size within range
• Automatically chases good thread sections to clean the damaged threads
• Hardened cleaning blades
• Removes rust-burrs-old Teflon tape

Part No. 240-001

Replacement Blades
• Hardened tool blades
• Easily replaceable
• Set of two blades

Part No. 240-001-B

Cylinder Water Filling Nozzle
♦ Automatic Shutoff
♦ Lightweight Alum. Construction
♦ Plastic Overcoating
♦ 13/16" Nozzle O.D.
♦ 3 Gal per Min. Output
♦ Supplied With Garden Hose Connection
♦ Requires 30psi Inlet Water Pressure

Tremendous time saver for those companies testing 200 cu.ft. and larger cylinders. No more accidental overflow of cylinders - causing a potential employee injury.
Can also work on smaller size cylinders with an opening greater than 13/16"
MISCELLANEOUS CYLINDER REQUALIFICATION TOOLS

Air Hose Reel with 50' of Hose
Retractable air hose reel has a spring located in the middle drum to ensure stability of the entire unit. Adjustable guide arm allows for ceiling, floor or wall mounting.

*Stop tripping over air line hoses - get them off the floor*

![Air Hose Reel with 50' of Hose](image)

**Part No. 200-133**

- Quality made
- 50' length of hose
- Steel reel with plastic guides

Diameter x Length Measuring Tape

- Direct Reading Of Diameter By Wrapping Tape Around Circumference
- 60" Length x 19" Diameter
- Flexible
- Coated For Protection Against Water

**Part No. 69-090**

Anti Fatigue - Anti Slippage Mat

Drain through anti-fatigue safety mat is the perfect mat to put in front of your Hydro-Test machine. Helps prevent slippage and foot pain for the hydro operator. Black mat is 1/2" thick and easy to clean.

**Size: 36" x 60"**

![Anti Fatigue - Anti Slippage Mat](image)

**Part No. 130-300**

*Keep your hydro area safe from slips and falls*
STAMPS FOR MARKING OF CYLINDERS

Hydro-Test offers a variety of different sizes, sets and types of stamps used for properly marking a cylinder after completion of the re-qualification procedure. Stamp sets are typically in stock - individual letters and numbers can take 2 weeks to ship.

Best Grade or Sharp Faced stamps can be used on all DOT specification cylinders (3A, 3AA, 3AL, 4B, ...) except for the specification 3HT and some Special Permits which requires low stress designed stamps.

BEST GRADE HEAVY DUTY GOTHIC

<table>
<thead>
<tr>
<th>Character Size</th>
<th>Shank Size</th>
<th>9 pc Number Set (0-9) Part No.</th>
<th>27 pc Letter Set (A-Z) Part No.</th>
<th>Individual Characters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8&quot;</td>
<td>5/16&quot;</td>
<td>2 1/2&quot;</td>
<td>230-060</td>
<td>230-070_-</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>7/16&quot;</td>
<td>3&quot;</td>
<td>230-062</td>
<td>230-072_-</td>
</tr>
<tr>
<td>5/16&quot;</td>
<td>1/2&quot;</td>
<td>3&quot;</td>
<td>230-064</td>
<td>230-074_-</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>9/16&quot;</td>
<td>3 1/8&quot;</td>
<td>230-066</td>
<td>230-076_-</td>
</tr>
</tbody>
</table>

Low Stress or Round Faced stamps are required to be used on DOT specification 3HT cylinders. Please refer to 49CFR §180.213(c)(2). Some special permits(SP) /Exemption (E) cylinders may also require the use of a low stress stamp.

LOW STRESS HEAVY DUTY GOTHIC

for use on 3HT specification cylinders

<table>
<thead>
<tr>
<th>Character Size</th>
<th>Shank Size</th>
<th>9 pc Number Set (0-9) Part No.</th>
<th>27 pc Letter Set (A-Z) Part No.</th>
<th>Individual Characters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8&quot;</td>
<td>3/8&quot;</td>
<td>2 3/4&quot;</td>
<td>230-061</td>
<td>230-071_-</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>3&quot;</td>
<td>230-063</td>
<td>230-073_-</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>5/8&quot;</td>
<td>3 1/8&quot;</td>
<td>230-067</td>
<td>230-077_-</td>
</tr>
</tbody>
</table>

TOOLS FOR STAMPING OF CYLINDERS

STAMP HOLDER

- Part No. 210-025
  - Keeps Thumb Away From Impact Zone
  - Adjustable For Any Size Stamp
  - Lightweight - Durable Material

STAMP HAMMER

- Part No. 230-002
  - 2 Lb Steel Hammer
  - Fiberglass Shaft
  - Short 8" Shaft
  - Rubberized Grip

STAMP GUN

- Part No. 230-136
  - Air Operated @ 40 psi
  - Accepts 1/2" Shank Stamps Only
  - Easier / Faster Stamping
  - Saves The Life Of The Stamp
  - Operates Similar to a Air Chisel

** See page 90 for replacement parts **

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Tel: 800-225-9488 / 978-897-4647  Fax: 978-897-1942

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SPECIALITY STAMPS

A full line of speciality stamps, commonly used for cylinder re-qualification are available and in stock. 49CFR §180.213 details the appropriate use of these speciality stamps.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Character Size</th>
<th>Shank Size</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>230-131-</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>2 Digit Stamp, <strong>Heavy Duty</strong> Design (<em>please specify digits when ordering</em>)</td>
</tr>
<tr>
<td>230-131-LS-</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>2 Digit Stamp, <strong>Low Stress</strong> Design (<em>please specify digits when ordering</em>)</td>
</tr>
<tr>
<td>230-118</td>
<td>1/8&quot;</td>
<td>1/2&quot;</td>
<td>4 Digit DOT License (RIN), <strong>Heavy Duty</strong> Design (<em>please specify RIN when ordering</em>)</td>
</tr>
<tr>
<td>230-130</td>
<td>1/8&quot;</td>
<td>1/2&quot;</td>
<td>4 Digit DOT License (RIN), <strong>Low Stress</strong> Design (<em>please specify RIN when ordering</em>)</td>
</tr>
<tr>
<td>230-133</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>3 Digit T.C. License Number, <strong>Heavy Duty</strong> Design (<em>please specify 3 digits when ordering</em>)</td>
</tr>
<tr>
<td>230-130-LS</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>3 Digit T.C. License Number, <strong>Low Stress</strong> Design (<em>please specify 3 digits when ordering</em>)</td>
</tr>
<tr>
<td>230-110</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>Plus (+) Stamp Symbol</td>
</tr>
<tr>
<td>230-111</td>
<td>3/8&quot;</td>
<td>1/2&quot;</td>
<td>Plus (+) Stamp Symbol</td>
</tr>
<tr>
<td>230-113</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>5 Point Star Symbol</td>
</tr>
<tr>
<td>230-114</td>
<td>3/8&quot;</td>
<td>1/2&quot;</td>
<td>5 Point Star Symbol</td>
</tr>
<tr>
<td>230-131-UE</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>Double Digit &quot;UE&quot; Stamp for Ultrasonic Testing</td>
</tr>
<tr>
<td>230-131-VE</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>Double Digit &quot;VE&quot; Stamp for Eddy Current Visual Examination on 6351-T6 Cylinders</td>
</tr>
<tr>
<td>230-131-TW</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>Double Digit &quot;TW&quot; Stamp for Stamping of Tare Weight on Cylinder</td>
</tr>
<tr>
<td>230-131-LB</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>Double Digit &quot;LB&quot; Stamp for Stamping of LB on Cylinder</td>
</tr>
<tr>
<td>230-134</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>3 Digit &quot;3AL&quot; Stamp for Stamping Previous Authorized Exemption Cylinders with 3AL</td>
</tr>
<tr>
<td>230-104-X</td>
<td>5/16&quot;</td>
<td>1/2&quot;</td>
<td>X Stamp - Used for condemning a cylinder under CFR49 §180.205(i)(2)(i)</td>
</tr>
</tbody>
</table>
LABELS FOR MARKING OF CYLINDERS

A DOT ruling that went into effect on January 23, 2017 under §180.213(c) of 49CFR allows labels embedded in epoxy to be used for re-qualification markings on cylinders. Prior to this ruling, labels were authorized for use only on fire extinguisher and composite cylinders.

Low Stress Stamps Must Be Used On 3HT Specification Cylinders. See §180.213 for complete ruling

Hydro-Test Offers the Following Labels to Comply

For marking of DOT specification cylinders used as fire extinguishers. RIN# (license no.) must be in a clockwise format. If a proof test is used to requalify the fire extinguisher cylinder than the letter “S” must be placed after the year.

For marking of DOT specification cylinders, in lieu of stamping. Two size labels are offered. This smaller label is ideal for portable sized cylinders.

For marking of cylinders that are permitted to be re-qualified by the external visual inspection method (Propane)

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NFPA 10 LABEL FOR MARKING OF FIRE EXTINGUISHERS

For hydrostatic testing and maintenance of non-DOT specification fire extinguishers a label meeting NFPA #10 requirements is used:

- Meets NFPA 10 Specifications
- 3.5" x 2.25" in Size
- Black Type on Silver Background
- Coated for Protection
- Self Destruct Void Feature
- 500 Labels per Roll
- Price Includes 4 Line Imprint
- Fast 3 Week Delivery

Part No. 393-025

Marking Pens

Part No. 393-300-RPMFB
- Black Retractable Fine Point Marker
- Retractable marker for easy one-handed operation
- No cap to remove or lose
- Safety Seal™ valve design helps prevents dry out
- Permanent on most surfaces
- Quick-drying ink
- AP certified nontoxic formula

Part No. 393-300-PMFB
- Black Fine Point Permanent Marker
- Permanent on most surfaces
- Fade and water resistant
- Quick-drying ink
- AP certified nontoxic formula

Part No. 393-300-RPMFR
- Red Retractable Fine Point Marker
- Retractable marker for easy one-handed operation
- No cap to remove or lose
- Safety Seal™ valve design helps prevents dry out
- Permanent on most surfaces
- Quick-drying ink
- AP certified nontoxic formula

Part No. 393-300-PMFR
- Red Fine Point Permanent Marker
- Permanent on most surfaces
- Fade and water resistant
- Quick-drying ink
- AP certified nontoxic formula

Epoxy Kit

A room temperature curing epoxy is required to seal and protect the label from abuse encountered from rough usage cylinders typically experience between retest periods. **Required When Labels Are Used on DOT Specification Cylinders**

Part No. 393-020

- Epoxy, Hardener and Mixer in Kit
- 1 Kit Will Typically Cover 25 Labels
- Clear Coated So As Not To Interfere With Test Data
- Quick and Easy To Apply • Non Flammable

Not Available For Sale Outside Of Continental USA or By Air Shipment Due To Hazardous Material Regulations.
Our customer spoke and we listened... Hydro-Test is pleased to announce a new version of our water jacket, volumetric expansion test record software. This latest software has been totally re-constructed from installation to printing. Incorporating many of your ideas in making this a more modern and easier input design.

Supplied on a USB Thumb Drive
- Requires Windows 7.0 or greater operating system
- Available USB port
- Printer
- 4GB RAM
- 20MB Available hard drive space

Use this software to replace your hand written forms
- Performs all of the math
- Allows DOT / TC warnings to display if not within regulations for verification
- Sortable and printable history field
- Store records on hard drive or print out

Verification Screen
- Allows unlimited calibrated cylinder templates
- Pick and choose what pressures you want to verify
- Performs all math calculations for system accuracy

DOT / TC warning that is displayed if:
1. Pressures verified at do not meet the regulations
2. Calibrated cylinder does not return to zero expansion

Test Data Screen
- Type in test results and pass/fail criteria
- Automatically pass / fail based on test criteria
- Performs all math calculations
- Optional DOT / TC warning applied if test is not within verification points required in regulations
- Plus stamping results calculated and recorded
- REE testing input allows pass/fail on REE only

Improper record keeping and use of the calibrated cylinder remain the most fined occurrences during a DOT audit.
This test record software will help you in complying with these requirements.
Don't let poor handwriting and math skills cost you!!!
HYDROSTATIC "PROOF" TEST SOFTWARE

Hydro-Test makes available the proof test record software that operates our 504 series automated tester as a standalone product. This allows those companies that are using a manually operated proof test system to keep the required DOT records in a more professional and safer manner. DOT and other Authorities Having Jurisdiction (AHJ) require all test records to be complete - readable and kept for the life of the requalification period of the cylinder. This software allows easy archiving and retrieval of cylinder information in a clean and professional manner.

**Test Record Screen**
- Allows easy input of all the required fields
- Add multiple test and save then test or test as you enter
- Left hand side of screen shows summary
- Box area for notes that pertain to test
- Straight forward easy to understand screen menu

**Verification Screen**
- Allows easy input of all the required fields
- Calculates accuracy percentage and records it
- Allows unlimited amount of verification steps
- Straight forward easy to understand screen menu

**History Screen**
- Great tool for finding test records
- Every field is sortable
- Pick from a range of dates or all data
- Printable
- Easy copy and paste function to other programs as needed

**Options Screen**
- Designed to allow end user to specify required header information that prints out on each test record.
- Input of Company Name - Address and License (RIN) Number

Requires Windows 7.0 or greater operating system

Part No. 393-504

Don’t Get Written Up For Improper Record Keeping Violations By An Enforcement Inspector

DOT / TC warning is displayed if:
Pressures verified at do not meet the regulation for the span of pressures being tested

Imperfect Record Keeping Fines Are As High as $3700.00!!

Supplied on a USB Thumb Drive
- Requires Windows 7.0 or greater operating system
- Available USB port
- Printer
- 4GB RAM
- 20MB Available hard drive space

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REQUALIFICATION AND VERIFICATION FORMS

The U.S. Department of Transportation and Transport Canada require that records of cylinder requalification be kept on file for the length of the requalification period of that cylinder or until that cylinder is again requalified.

HAND WRITTEN FORMS

For Water Jacket Testing
- 11" x 17" Tabloid Size Sheets
- 50 Sheets Per Pad
- 12 Test Per Sheet
- Verification Recording on Back of Each Sheet
- Detailed Instruction Sheet Included

Part No. 393-001

For Proof Testing
- 8.5" x 11" Size Sheets
- 50 Sheets Per Pad
- 13 Test Per Sheet
- Verification Recording on Back of Each Sheet

Part No. 393-003

For Visual Inspection Requalification
- 11" x 14" Legal Size Sheets
- 50 Sheets Per Pad
- 11 Inspections Per Sheet

Part No. 393-002

For use by those that are re qualifying cylinders soley by the visual inspection method (for example: Propane cylinders)
LED Inspection Light For Full Size Cylinders
Hydro-Test has developed a new LED internal cylinder inspection light for “Full Size” industrial gas cylinders.
Allows for complete illumination of cylinder to the CGA C-6 series standards.

**Features:**

- Warm white LED strand of 24” in length
- Bulbs encased in a clear polycarbonate wand
- Low voltage electrical transformer included, 5 VDC
- Includes US and European wall plug
- Total length of 96” - enough cord to use on full size industrial gas cylinders
- 5/8” diameter wand fits into most all cylinders (not recommended for use on small paintball or "spare air" cylinders)
- Will fully illuminate portable or full size cylinder interiors

**PART NO. 69-098**

---

**Dual Ultra-Violet / White LED For Portable Cylinders**

A unique and versatile light designed for companies filling or re-testing Oxygen enriched cylinders.

The #69-099 light wand is actually two wands in one. As the toggle switch is actuated, either the warm white lights are lit or the ultra-violet LEDs.

Visual inspection using ultra-violet light is required as per the Compressed Gas Association regulation CGA G-4.1 on cylinders used for enriched oxygen delivery. Organic particulates such as oil or lint fibers will fluoresce when illuminated by ultra-violet.

- Protected long life light emitting diode (LED) enabling complete illumination of cylinder.
- 13.5” Length of wand optimized for use on all common portable size cylinders.
- Warm white LEDs best simulate incandescent light.
- Has both white and ultra-violet light source in one.
- Ultra-violet light source meets CGA G-4.1
- Low voltage for use in hazardous locations.

**PART NO. 69-099**

---

**THREAD INSPECTION MIRRORS**

To properly visually inspect a cylinder during the requalification process a means of checking the threads for cracks is required. These three size mirrors offer an inexpensive - time proven method of verifying thread integrity.

- Stainless Steel Construction
- 2X Magnification
- 6” Long Handle
- 3 Sizes

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Mirror Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>69-058</td>
<td>.456” (12mm)</td>
</tr>
<tr>
<td>69-059</td>
<td>.550” (14mm)</td>
</tr>
<tr>
<td>69-060</td>
<td>.632” (16mm)</td>
</tr>
</tbody>
</table>

12mm Mirror Allows For Thread Inspection Of Small O₂ - Paintball and Spare Air Cylinders
As Part Of The Re-Qualification Of Cylinders Process, A Complete Internal and External Visual Inspection Must Be Performed Per The Applicable CGA Pamphlets (C-6, C-6.1, C-6.2, C-6.3)

**FIBER OPTICS CYLINDER INSPECTION LIGHT**

- **The Brightest** Internal Inspection Light Available
- Keeps Bulb Away From Cylinder
- High Intensity Light
- Adjustable Light Strength Knob
- 150 Watt Bulb Life of 200 Hours at Full Intensity
- Fiber Optic Light Probes Offered in Two Lengths

*Light Box and Probes Sold Separate.
Both items required for proper operation*

**Light Box**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Intensity</th>
<th>Electrical</th>
</tr>
</thead>
<tbody>
<tr>
<td>69-102</td>
<td>150 Watt</td>
<td>115V-60Hz</td>
</tr>
<tr>
<td>69-103</td>
<td>150 Watt</td>
<td>220V-50Hz</td>
</tr>
</tbody>
</table>

**Light Probes**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Length</th>
<th>Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>69-110</td>
<td>60&quot;</td>
<td>3/16&quot;</td>
</tr>
<tr>
<td>69-111</td>
<td>120&quot;</td>
<td>3/16&quot;</td>
</tr>
<tr>
<td>69-112</td>
<td>60&quot;</td>
<td>5/16&quot;</td>
</tr>
<tr>
<td>69-113</td>
<td>120&quot;</td>
<td>5/16&quot;</td>
</tr>
</tbody>
</table>

**Replacement Bulb for Light Box**

Part No. 69-122

**Replacement Adapter - Probe to Light Box**

Part No. 69-108 for 3/16" diameter probe
Part No. 69-109 for 5/16" diameter probe

**THREAD INSPECTION MIRRORS**

To properly visually inspect a cylinder during the requalification process a means of checking the threads for cracks is required. These three size mirrors offer an inexpensive - time proven method of verifying thread integrity.

- Stainless Steel Construction
- 2X Magnification
- 6" Long Handle
- 3 Sizes

<table>
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</tr>
<tr>
<td>69-060</td>
<td>.632&quot; (16mm)</td>
</tr>
</tbody>
</table>

12mm Mirror Allows For Thread Inspection Of Small O₂ - Paintball and Spare Air Cylinders
Connect this borescope to your computer, tablet or smartphone with attached USB cable to perform a detailed visual inspection of compressed gas cylinders threads, sidewall and dome area. The 180 degree articulating 8.5mm diameter probe offers a panoramic view of the area being inspected. With 0.3M pixels CMOS sensor, and six built-in LED's for illumination, this product allows you to view images, take standard photos, and record videos. This borescope is designed to enhance the safety of the cylinder industry by allowing visual inspection in areas that were previously unattainable. Allows pictures and videos to be sent directly from the device by email or text.

Part No. 69-078

Features

- Articulation bendable angle: 0° to 180° continuously adjustable
- Very easy to operate: just push down the release button by bending the thumb to adjust the articulation angle
- The articulation angle can be locked/unlocked at any degree by opening/closing the lock
- Very small bending radius: 30mm
- Illumination: 6 white LED lights built-in
- High resolution image with CMOS sensor
- Focal Distance: 4cm – 40cm, fixed focus
- Power supply: by USB port of PC, Tablet, Android Smart Phone or standard USB Wall Charger (requires optional USB to WiFi adapter for use with IPhone or IPad products)

Technical Details

- Sensor: high-quality CMOS sensor
- Still Image Resolution: 640x480 pixels
- Format: JPG
- Video Resolution: 640x480 pixels
- Format: AVI
- Frame Rate: 30FPS
- Optical lens view angle: 60°
- Probe diameter: 8.5mm
- Probe length: 42cm (16.5”)
- PC Interface: USB 2.0
- USB Cable Length: 200cm

Product Details

- Dimension: 8.5mm in probe diameter and 42cm (16.5”) in probe length
- Weight: 12oz
- Compatibility: Windows 8/7/Vista/XP with free software Oasis.exe, or Mac OS X (need PhotoBooth or FaceTime software)
- Package Includes: USB borescope (1x), CD (1x, with User’s Manual and software)
- Manufacturer’s Warranty: 1 year

Optional WiFi converter for those using any Apple smart device. Apple does not allow transfer of data from charging port. This WiFi adapter is required if using any Apple smart device

Part No. 69-079

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Inspect and record any surface of the cylinder in extremely clear quality

Rotating light probe details under shoulder view - where most imperfections are found

Close-up of threads

Bottom of cylinder

Part No. 69-079

16.5 in
This Wi-Fi borescope is a portable, hand-held, multifunctional inspection camera system featuring a small size of 8.5mm diameter camera, a high quality digital sensor offering crystal clear output. The powerful wireless module provides continuous and stable Wi-Fi connection. Users can view the videos on iPhone, iPad, Android, Tablet, and PCs, as well as capture images (JPG) and record 720p HD videos (AVI) with the bundled application.

**Part No. 69-076**

**Features**
- WiFi transmission, support iPhone, iPad, Android smartphone, and Tablet
- Support up to 150 Mbps via fast wireless device
- Video recording and photo capture capability
- Waterproof 8.5mm camera with 100cm (3.3ft) flexible cable meet IP67 standard
- Powered by 4x AA batteries with 3-4 hours continuous use
- Flexible cable can be bent into many shapes to fit into unreachable areas
- Include hook, mirror, and magnet for added flexibility
- Built-in 1Watt LED flash light provides extra light source to the surroundings

**Specifications**
- Network Standard: IEEE 802.11 b/g/n
- Antenna: Built-in IPEX antenna
- Operating Frequency: 2.4 GHz
- Image Sensor: 2 Megapixel CMOS
- Video Resolution: 800x600,1024x768,1280x720
- Focal Distance: 4cm – infinite, Fixed focus
- Viewing Angle: 60°
- Illumination: 6 white LED lights with adjustable brightness
- Power Source: 4xAA battery (not included)
- Flexible Cable Length: 1M (3.3ft)

**Product Details**
- Dimension: Flexible cable with handle: 125cm (4.1ft);
- Flexible cable: 100cm (3.3ft); Flexible cable diameter: 7mm (0.28in);
- Camera head outer diameter: 8.5mm (0.33in)
- Weight: 15oz without carrying case
- Compatibility: iPhone/iPad/Android Phone/Tablet/PC

**Package Includes:** Handheld WiFi Borescope, Phone Holder, Attachment Set (Mirror, Magnetic pick-up and Hook), Software mini CD (for PCs), User’s Manual, Carrying Bag

**Manufacturer’s Warranty:** 1 year
**Optical Plus Thread Inspection Tool**

**OPTICALPLUS** has the highest magnification (4X), clarity and lighting capability available - surpassing anything you have used in the past. **OPTICALPLUS** provides full vertical adjustment and 360-degree rotation within the threads. This allows for perfect alignment between the instrument and threads for ease of use and performance during inspection.

**Industry-leading features include:**
Rugged, anodized, aluminum construction.
Adjustable focusing for clearer and brighter viewing.
Adjustable light intensity for differing surface reflectivity.
4X magnification for the closest thread view possible.
Single unit capable of inspecting: SCUBA, Medical, SCBA, AFV, Industrial Specialty Gas and CO2.

**PART NO. 69-074**

**Waterproof Case for Storing and Protecting the Optical Plus**

---

**PART NO. 69-075**

**Optical Plus 4x**

**Normal 2x**
**VISUAL INSPECTION TOOLS**

---

**Pit Reference Plate and Probes**

The damage reference plate is used to assess internal and external damage which an inspector locates on a cylinder. This specific plate is customized with damage depths from .01 to .100 and external probes to examine cylinder exterior damage from .02 to .06. This is a great tool to have by the filling station so filling station operator can do a quick check if any concerns are present. A safety tool at a low price - a necessity for all those dealing with cylinders.

*Part No. 69-084*

Inspect gouges and pits in accordance with DOT and CGA publications C-6, 6.1 and 6.2. An invaluable tool for those that perform cylinder inspections and re-qualifications.

---

**Combination Pit Gauge And Dial Caliper**

- Two tools in one
- Allows measuring of pits on exterior of cylinder
- Machined point on caliper end allows for precise measures
- Also allows measuring of valve / thread diameter
- Includes Protective case

*Part No. 69-050*

---

**The "O-Ringer" O-Ring Gland Resurfacing Tool**

A fast - easy way to restore the o-ring gland surface on Aluminum SCUBA cylinders. Authorized for use by cylinder manufacturers.

*Part No. 69-080*

---

**Magnet**

- Determines cylinder material
- Small Size
- Horseshoe shape
- Suggested by DOT inspectors

*Part No. 69-091*

---

**Compressed Gas Association (CGA)Visual Inspection Pamphlets**

Those that requalify or visually inspect cylinders must have the CGA guidelines on hand

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>393-306</td>
<td>C-6: Standards for visual inspection of steel cylinders</td>
</tr>
<tr>
<td>393-306-1</td>
<td>C-6.1: Standards for visual inspection of high pressure aluminum compressed gas cylinders</td>
</tr>
<tr>
<td>393-306-2</td>
<td>C-6.2: Guideline for visual inspection and requalification of fiber reinforced high pressure cylinders</td>
</tr>
<tr>
<td>393-306-3</td>
<td>C-6.3: Guidelines for visual inspection and requalification of low pressure aluminum compressed gas cylinders</td>
</tr>
</tbody>
</table>

---

**Hydro-Test Products Inc.**

e-mail: sales@hydro-test.com

Tel: 800-225-9488 / 978-897-4647  Fax: 978-897-1942

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PRESSURE GAUGES

CALIBRATED PRESSURE GAUGES
Designed For Use With Cylinder Testing Equipment. Gauges Include a Certificate of Calibration. These Gauges Exceed Current Department of Transportation and Transport Canada Specifications

Gauges are calibrated to 0.5% accuracy at stated pressures

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Range (psi)</th>
<th>Increments (psi)</th>
<th>Useable Range (psi)</th>
<th>Diameter (inches)</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>140-001</td>
<td>0-11,000</td>
<td>20</td>
<td>1120-10,000</td>
<td>8.5</td>
<td>1/2&quot; Back</td>
</tr>
<tr>
<td>Calibrated</td>
<td>1000,2000,3000,4000,5000,6000,7000,8000,9000,10,000 psi</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>140-003</td>
<td>0-5000</td>
<td>10</td>
<td>550-4500</td>
<td>8.5</td>
<td>1/2&quot; Back</td>
</tr>
<tr>
<td>Calibrated</td>
<td>1000,2000,3000,4000,5000 psi</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>140-005</td>
<td>0-1500</td>
<td>2</td>
<td>111-1350</td>
<td>8.5</td>
<td>1/2&quot; Back</td>
</tr>
<tr>
<td>Calibrated</td>
<td>200,300,350,400,500,600,700,800,900,1000,1200,1400 psi</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>140-018</td>
<td>0-1100</td>
<td>2</td>
<td>111-1000</td>
<td>6</td>
<td>1/4&quot; Bottom</td>
</tr>
<tr>
<td>Calibrated</td>
<td>200,300,350,400,500,600,700,800,900,1000 psi</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other / Additional calibration points can be added at additional cost.

All calibrated gauges can typically be shipped in 2-3 working days

"True Zero" indication on calibration sheet

Zero adjustment screw on gauge face

Hydro-Test recalibration service provides a fast 3 day turnaround on pressure gauges. Once your gauge is sent to us for calibration, we automatically send you a reminder card every 6 months as required by CGA pamphlet C-1.

CALIBRATED MASTER PRESSURE GAUGES
For Hydrostatic Cylinder Testing

A Master Gauge Can Be Used To Recalibrate Your Existing Working Gauge Periodically as Required. It Is Not To Be Used In Everyday Testing. This Type Of Gauge Should Only Be Used By A Technician That Has Been Trained On Gauge Calibration

♦ Gauge mounted on Aluminum frame
♦ 6' long hose with coupler
♦ Certificate of calibration

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Range (psi)</th>
<th>Increments (psi)</th>
<th>Useable Range (psi)</th>
<th>Diameter (inches)</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>140-402</td>
<td>0-11,000</td>
<td>20</td>
<td>1120-10,000</td>
<td>8.5</td>
<td>1/2&quot; Back</td>
</tr>
<tr>
<td>140-403</td>
<td>0-5000</td>
<td>10</td>
<td>550-4500</td>
<td>8.5</td>
<td>1/2&quot; Back</td>
</tr>
<tr>
<td>140-404</td>
<td>0-1500</td>
<td>2</td>
<td>111-1350</td>
<td>8.5</td>
<td>1/2&quot; Back</td>
</tr>
<tr>
<td>140-405</td>
<td>0-1100</td>
<td>2</td>
<td>111-1000</td>
<td>6</td>
<td>1/4&quot; Bottom</td>
</tr>
</tbody>
</table>

COMMERCIAL PRESSURE GAUGES
Below Are Pressure Gauges Which Can Be Used In Many Applications Where Calibration is Not Required

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Range (psi)</th>
<th>Diameter (inches)</th>
<th>Connection</th>
<th>Accuracy %</th>
<th>Liquid Fill</th>
</tr>
</thead>
<tbody>
<tr>
<td>140-049</td>
<td>0-600</td>
<td>2.5&quot;</td>
<td>1/4&quot; Bottom</td>
<td>1.5</td>
<td>Yes</td>
</tr>
<tr>
<td>140-046</td>
<td>0-600</td>
<td>4.0&quot;</td>
<td>1/4&quot; Bottom</td>
<td>1.5</td>
<td>Yes</td>
</tr>
<tr>
<td>140-009</td>
<td>0-1000</td>
<td>2.5&quot;</td>
<td>1/4&quot; Bottom</td>
<td>3.0</td>
<td>No</td>
</tr>
<tr>
<td>140-048</td>
<td>0-1000</td>
<td>2.5&quot;</td>
<td>1/4&quot; Bottom</td>
<td>1.5</td>
<td>Yes</td>
</tr>
<tr>
<td>140-017</td>
<td>0-1000</td>
<td>4&quot;</td>
<td>1/4&quot; Bottom</td>
<td>1.0</td>
<td>No</td>
</tr>
<tr>
<td>140-008</td>
<td>0-1000</td>
<td>4&quot;</td>
<td>1/4&quot; Bottom</td>
<td>1.5</td>
<td>Yes</td>
</tr>
<tr>
<td>140-010</td>
<td>0-3000</td>
<td>2.5&quot;</td>
<td>1/4&quot; Bottom</td>
<td>1.5</td>
<td>No</td>
</tr>
<tr>
<td>140-040</td>
<td>0-5000</td>
<td>2.5&quot;</td>
<td>1/4&quot; Bottom</td>
<td>1.5</td>
<td>Yes</td>
</tr>
<tr>
<td>140-023</td>
<td>0-5000</td>
<td>4&quot;</td>
<td>1/4&quot; Bottom</td>
<td>1.5</td>
<td>No</td>
</tr>
<tr>
<td>140-036</td>
<td>0-10,000</td>
<td>4&quot;</td>
<td>1/4&quot; Bottom</td>
<td>1.5</td>
<td>Yes</td>
</tr>
</tbody>
</table>
CALIBRATED CYLINDERS

A Calibrated Cylinder is Used To Verify The Accuracy Of The Water Jacket Testing Equipment Everyday Prior to Testing. Accuracy Must Be Demonstrated To Within 1% Within 500psi Of Test Pressures Obtained That Day on Pressures at or Above 3000 psi, and To Within 10% of Pressures Being Obtained Under 3000 psi.

Calibrated Cylinders Include Test Adapter and Chart of Expansions

Calibrated cylinders can be made with a combination of low and high pressure expansion readings or additional readings between lowest and highest test range as needed upon request.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>For Test Range (psi)</th>
<th>Height</th>
<th>Dia.</th>
<th>Construction</th>
<th>Typical Expansion per Every 1000 psi</th>
<th>Weight of Cylinder Empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>140-205</td>
<td>200-1100</td>
<td>26”</td>
<td>7.25”</td>
<td>Aluminum</td>
<td>15cc</td>
<td>35 Lbs</td>
</tr>
<tr>
<td>Calibrated</td>
<td>200,300,350,400,500,600,700,800,900,1000,1200,1400 psi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>140-200</td>
<td>2000-5000</td>
<td>26”</td>
<td>7.25”</td>
<td>Aluminum</td>
<td>15cc</td>
<td>35 Lbs</td>
</tr>
<tr>
<td>Calibrated</td>
<td>2000,3000,4000,5000 psi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>140-236</td>
<td>2000-7500</td>
<td>51”</td>
<td>9.25”</td>
<td>Steel</td>
<td>45cc</td>
<td>160 Lbs</td>
</tr>
<tr>
<td>Calibrated</td>
<td>2000,3000,4000,5000,6000,7000,7500 psi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>140-234</td>
<td>2000-10,000</td>
<td>33”</td>
<td>9.25”</td>
<td>Steel</td>
<td>11cc</td>
<td>180 Lbs</td>
</tr>
<tr>
<td>Calibrated</td>
<td>2000,3000,4000,5000,6000,7000,8000,9000,10,000 psi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RECALIBRATION SERVICES

Hydro-Test Products Offers A complete Recalibration Service For The Cylinder Requalification Industry.

Hydro-Test Can Recalibrate:
- Pressure Gauges up to 10,000psi
- Calibrated Cylinders up to 10,000psi (in size up to 15” diameter x 60” tall)

We offer a fast 3 working day maximum turn around. Recalibration certificates are supplied with instrument. Optional “Rush” calibration service is available at an additional charge.

Send Your DOT Gauges To A Company That Knows The DOT Regulations.
We Keep Records of Your Calibration and Send A Reminder Card For Your DOT Pressure Gauge Recalibration

No Need To Call - Just Send In The Instrument With Your Purchase Order, Telephone No. and Shipping Address and Specify How You Want The Instrument Shipped Back To You.

Hydro-Test Products Inc.
e-mail: sales@hydro-test.com

www.hydro-test.com
Tel: 800-225-9488 / 978-897-4647  Fax: 978-897-1942
EXPANSION MEASURING DEVICES

DIGITAL SCALE ASSEMBLY

Available as an option for older test systems or can be purchased on a new test system as a replacement for the burette tubes assembly. Allows for expelled expansion water to be weighed rather than measured.

♦ 700g Net Capacity x 0.1g Increments
♦ Operates on 115V - With battery Backup
♦ Steel Shelf Plate Bolts to Side of Your Existing Cabinet
♦ Provides for Easier Reading of Cylinder Expansions
♦ Easily Retrofitted to Existing Test Systems
♦ Includes Set of Calibration weights for Periodic Calibration

Easily replaces burette tubes on older test system. Just remove flexible tube from barb fitting on existing burette manifold and insert onto barb fitting on scale assembly. **No conversion required: 1 gram = 1 cc**

BURETTE TUBES

Hydro-Test Products burettes, outlined below, are manufactured to Class A accuracy in accordance with limits set forth in ASTM standards. Full range accuracy for burettes listed below fall between 0.08% - 0.16% which exceed the required DOT accuracy requirements of 0.5%.

**Features:**
♦ Pyrex Construction for Strength and Volumetric Stability
♦ Lower End Supplied With 1/4” ID Slip Fit Hose Connection
♦ Numbers and Marks are Etched and Filled With Baked On Permanent Filler

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Full Scale (cc’s)</th>
<th>Marked Divisions (cc’s)</th>
<th>Midpoint Interpolation Divisions (cc’s)</th>
<th>Range of 1% Resolution (Readable Accuracy) (cc’s)</th>
<th>Overall Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>180-001</td>
<td>0-12.5</td>
<td>0.02</td>
<td>0.01</td>
<td>1-12.5</td>
<td>30”</td>
</tr>
<tr>
<td>180-002</td>
<td>0-25</td>
<td>0.05</td>
<td>0.025</td>
<td>2.5-25</td>
<td>30”</td>
</tr>
<tr>
<td>180-003</td>
<td>0-50</td>
<td>0.1</td>
<td>0.05</td>
<td>5-50</td>
<td>30”</td>
</tr>
<tr>
<td>180-004</td>
<td>0-125</td>
<td>0.2</td>
<td>0.1</td>
<td>10-125</td>
<td>30”</td>
</tr>
<tr>
<td>180-005</td>
<td>0-250</td>
<td>1.0</td>
<td>0.5</td>
<td>50-250</td>
<td>30”</td>
</tr>
<tr>
<td>180-006</td>
<td>0-360</td>
<td>1.0</td>
<td>0.5</td>
<td>50-360</td>
<td>30”</td>
</tr>
<tr>
<td>180-009</td>
<td>0-600</td>
<td>1.0</td>
<td>0.5</td>
<td>50-600</td>
<td>30”</td>
</tr>
</tbody>
</table>

Reservoir burettes are scaled up and down

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Full Scale (cc’s)</th>
<th>Marked Divisions (cc’s)</th>
<th>Midpoint Interpolation Divisions (cc’s)</th>
<th>Range of 1% Resolution (Readable Accuracy) (cc’s)</th>
<th>Overall Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>180-008</td>
<td>0-1500</td>
<td>5.0</td>
<td>2.5</td>
<td>250-1500</td>
<td>30”</td>
</tr>
<tr>
<td>180-007</td>
<td>0-3000</td>
<td>10.0</td>
<td>5.0</td>
<td>500-3000</td>
<td>30”</td>
</tr>
<tr>
<td>180-015</td>
<td>0-5000</td>
<td>12.5</td>
<td>6.25</td>
<td>625-5000</td>
<td>30”</td>
</tr>
<tr>
<td>180-012</td>
<td>0-6000</td>
<td>50.0</td>
<td>25.0</td>
<td>2500-6000</td>
<td>30”</td>
</tr>
</tbody>
</table>

**BURETTE BANK**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>180-032</td>
<td>Set of 4 burettes (25,50,125,360cc) with on/off valved manifold - mounted on steel support frame with counter balance weight</td>
</tr>
</tbody>
</table>

**BURETTE TUBE CLEANING KIT**

Includes soap and 3 size brushes

**Part No. 180-045**

www.hydro-test.com
Tel: 800-225-9488 / 978-897-4647 Fax: 978-897-1942
DRY CHEMICAL POWDER HANDLING EQUIPMENT

Model No. 550-200

Features:
- Light Weight Polypropylene Tub
- Standard Capacity to 150 Lbs.
- Compact Design

- Operates on 80 psi of pre-regulated shop air or N2 gas
- Designed for in shop or mobile use
- Transfer rate of 1/4 lb per second
- Refill and Re-claim all in one unit
- No more corrosion - powder tub is made of Polypropylene
- Preformed Poly-P lid cone funnel
- Enamel painted support frame
- Utilizes time proven vacuum venturi air operated system
- Universal fill cone
- Overfill filter bowl
- 60" Long powder transfer hose
- Incoming pressure and vacuum gauges

Footprint: 36"T x 20"W x 20"L

Shippable via UPS

Dial Scale
Part No. 230-189
100 Lb. x 4 oz.
11" square stainless platform

Digital Scale
Part No. 230-150
300 Lb. x 0.05 Lb.
17" x 22" stainless platform

Please see page 58 for our full line of scales

FUNNELS-SCOOPS-PAIL OPENER

Offered for manual filling applications.
Heavy duty mesh screen in funnels helps eliminate clogging of powder.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Height</th>
<th>Dia.</th>
<th>Tip O.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>550-040</td>
<td>Small Funnel</td>
<td>15&quot;</td>
<td>6&quot;</td>
<td>3/4&quot;</td>
</tr>
<tr>
<td>550-041</td>
<td>Large Funnel</td>
<td>13&quot;</td>
<td>10&quot;</td>
<td>1 1/8&quot;</td>
</tr>
<tr>
<td>550-042</td>
<td>X Large Funnel</td>
<td>10&quot;</td>
<td>10&quot;</td>
<td>2 1/4&quot;</td>
</tr>
<tr>
<td>550-038</td>
<td>12 oz Capacity Scoop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>550-039</td>
<td>2 Lb Capacity Scoop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>550-035</td>
<td>Powder Pail Opener</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
POWDER BENCH

**Hydro-Test** Has Redesigned and Improved the Popular Dry Chemical Powder Down Draft Bench.

Maintaining a clean and dust-free shop environment is a challenge in the fire extinguisher filling shop. This Down Draft Table is the perfect solution for eliminating harmful airborne dust and eliminating time consuming clean-ups. Features include large downdraft table, easy access filter bays, (2) 110 V outlet receptacles, accessory hanger, and a rubber grommet table surface for cylinder protection.

**Part No. 550-301**

**Specifications:**
- Table surface area: 37" x 28"
- Motor: 1/2 HP, single-phase, 110V
- Amps: 9.5
- Suction Capacity: 1300 CFM
- Filter size: 16" x 25" x 1" and 2"
- Filter micron: 0.3
- Impeller size: 9" x 7"
- Base: 39-1/2" x 28"
- Overall Height: 40"
- Table Height: 33"
- Shipping weight: 250 lbs.

- Operates on 115V Electrical
- Mounted on Adjustable Padded Levelling Feet
- (2) 110V Receptacles on Bench
- Accessory Hanger - Great for Holding Powder Filling Hose!!
- Enamel Painted Steel Construction
- Easily Replaceable Filters

This Bench Is Not Designed for Recovery of Dry Chemical From a Fully Charged Extinguisher. It is Designed Only for Capturing Residual Powder Typically Found When Servicing Dry Chemical Fire Extinguishers.
DRY CHEMICAL FIRE EXTINGUISHER RECHARGE EQUIPMENT

TYPICAL RECHARGE SET-UP

Part No. 69-002 Nitrogen Regulator
♦ 0-450 psi Outlet Pressure
♦ CGA 580 Inlet
♦ 1/4" NPT Outlet

Part No. 140-085 Calibrated Gauge
♦ Required by NFPA #10
♦ 0-600 psi x 10psi Increments
♦ 2.5" Diameter Stainless Steel Case
♦ Includes Calibration Certs. to 1% Accuracy

Part No. 200-048 Outlet Hose
♦ 10' Long
♦ 1/4" (M)NPT Fittings

Part No. 120-105 3-Way Pressurizing Valve
♦ Positive Seat Ball Valve
♦ 1/4" (F)NPT
♦ Rated to 400 psi

RECHARGE ADAPTERS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Used On:</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-420</td>
<td>Amerex, Badger, General, Kidde, Flag, RC</td>
</tr>
<tr>
<td>100-435</td>
<td>Sentry Coarse Thread</td>
</tr>
<tr>
<td>100-437</td>
<td>Buckeye, Pyronauts, Kidde Pro-Line</td>
</tr>
<tr>
<td>100-421</td>
<td>Amerex, Badger, General, Pemall, Strike, StopFire</td>
</tr>
<tr>
<td>100-414</td>
<td>Old Model Kidde</td>
</tr>
<tr>
<td>100-439</td>
<td>RC Industries - Clip Type</td>
</tr>
<tr>
<td>100-415</td>
<td>Kidde - Nylon Valve With Nozzle</td>
</tr>
<tr>
<td>100-431</td>
<td>FyrFyter, Buffalo, Pyrene, Norris, StopFire</td>
</tr>
<tr>
<td>100-430</td>
<td>Sentry</td>
</tr>
<tr>
<td>100-444</td>
<td>Kidde - Nylon Valve With Hose</td>
</tr>
<tr>
<td>100-416</td>
<td>Kidde Coarse Thread - AS Series</td>
</tr>
<tr>
<td>100-443</td>
<td>Kidde Pro Line, Sentry</td>
</tr>
</tbody>
</table>

Part No. 230-004 Air Gun
♦ 1/4" (F)NPT
♦ Rated to 100 psi

Part No. 200-370 Retractable Air Hose
♦ 1/4" (M)NPT Fittings
♦ Rated to 100 psi
♦ 25' Long

Hydro-Test Products Inc.
e-mail: sales@hydro-test.com

www.hydro-test.com
Tel: 800-225-9488 / 978-897-4647 Fax: 978-897-1942

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**MISCELLANEOUS FIRE EXTINGUISHER SHOP TOOLS**

**BREAK FREE**
- Cleaner-Lubricant-Preservative
- Frees Corroded Parts
- Protects Against Rust and Corrosion
- Slashes Friction and Wear
- Non-Toxic. Non-Corrosive
- Long lasting Water Resistance Film
- For Use In All Climates
- Great For Fire Hose Couplings

*A Must For All Fire Extinguisher Service Shops*

- **Part No. 230-310**
  4oz Aerosol Can
- **Part No. 230-314**
  1 Pint w/Sprayer
- **Part No. 230-312**
  Gallon Re-Fill

**O-RING REMOVAL TOOLS**
- **Part No. 69-052**
  Features chrome vanadium steel shafts with magnetic tips. High visibility PVC handles. Contains curved hook, 90 deg. hook, offset 45 deg. hook, 1/8" slotted screwdriver, #0 Phillips screwdriver, straight pick, T-15 star driver, T-20 star driver.

**O-RING LUBRICANT**
- **Part No. 63-111**
  ♦ General Purpose
  ♦ Temp range -20F to +180F
  ♦ 2 oz Tube
- **Part No. 63-110**
  ♦ Silicone Compound Base
  ♦ Temp range -65F to +400F
  ♦ 2 oz Tube

**CO₂ HOSE CONTINUITY TESTER**
- **Part No. 69-017**
  ♦ Heavy Duty Design
  ♦ Bulb Up Front
  ♦ Complete With Batteries
  ♦ Pocket Size

**VALVE CLEANING BRUSHES**
- **Part No. 230-008**
  ♦ Metal Britles
- **Part No. 230-011**
  ♦ Nylon Bristles

**PARTS BOX**
- **Part No. 230-200**
  24 Compartment
  2"x 2"x2"

**RUBBER MALLET**
- **Part No. 63-113**
  ♦ 16 oz Size
  ♦ Hickory Handle

**CO₂ REGULATOR**
- **Part No. 160-030**
  ♦ Quality Design
  ♦ Dual Gauges
  ♦ CGA 320 Inlet

**POWDER PAIL OPENER**
- **Part No. 550-035**
  ♦ Fits All Manufacturers Pails
  ♦ Lightweight Anodized Aluminum
  ♦ A Real Time Saver

**TEFLON TAPE**
- **Part No. 230-010**
  ♦ 1/2" X 520"
WEIGHING SCALES

Dial Scale
- 100 Lb x 4oz Capacity
- 10.5" Dial Face
- 11.5" Square Platform
- Chrome Plated Steel Platform
- Enamel Dipped Housing
- Overall Size: 10" W x 14.75" D x 14.5"T
- Temperature Compensated

Part No. 230-189

Hanging Scales
for weighing of portable CO₂ cylinders and cartridges

Part No. 230-166
4 Lb x 1 oz

100 Lb x 1 Lb

Digital Scale
- 300 Lb x 0.1 Lb capacity
- Operates on 115V
- 14" W x 16" L platform size
- Stainless Steel Platform
- Large LED Display
- Push Button Tare
- Auto Shutoff Feature

Part No. 230-150

Digital Scale
- 10 Lb x .005Lb Capacity
- Operates on 115VAC
- 6.75" x 5.25" Platform
- Stainless Steel Platform

Part No. 230-145

Digital Floor Scale
- Weighing less than 100 pounds and featuring built-in handles and wheels, this scale is easy to lift and roll to wherever you need it. Whether it's multiple weighing locations at a single facility or the need to take a scale to special job sites, this scale gives you true portability.
- Includes floor ramps for easy rolling on and off of cylinders

Part No. 230-146

Beam Scale
- 1000 Lb x 0.5 Lb
- Study Construction & Compact Design
- Cast-iron Construction
- 18 x 27-inch Platform
- Corrosion Resistant Loops, Bearings and Nose Irons
- Wheels for Easy Mobility

Part No. 230-163

Indicator
- Display: 5 digit, 7 segment, 1" high LCD
- Units Conversion: Keypad selectable
- Enclosure: General purpose, stainless steel
- Power: Six “C” cell or NiCad batteries, standard 12VDC or 115 VAC 60 Hz
- Temperature Range: 14 °F to +104 °F (-10 °C to +40 °C)
FIRE EXTINGUISHER CLEAN AGENT FILLING / RECLAIM SYSTEMS

HALOTRON  Part No. 570-045
- Fills/Recovers Halotron @ 2Lb per Minute
- Particulate Matter Removal To 15 Microns
- 99% Transfer Of Liquid and Vapor
- Operates On 100 PSI Of Compressed Air
- Air Driven Double Acting Piston Pump
- Stainless Steel Check Valves And Springs
- Dual 30” Vacuum and 300psi Pressure Gauge
- Includes 100Lb Recovery Tank and Dual Port Valve
- Includes Set of Adapters for U.S. Portable FX’s
- Heavy Duty Steel Painted Console
- Size: 48”T x 24”D x 24”L

Utilities Required to Operate
• 8 CFM @ 100 psi of Pre-Regulated Shop Air
• Weighing Scale
• Supply of Halotron

FM200  Part No. 570-040
- Fills/Recovers FM200 @ 2Lb per Minute
- Particulate Matter Removal To 15 Microns
- 99% Transfer Of Liquid and Vapor
- Operates On 100 PSI Of Compressed Air
- Air Driven Double Acting Piston Pump
- Stainless Steel Check Valves And Springs
- Dual 30” Vacuum and 300psi Pressure Gauge
- Includes 100Lb Recovery Tank and Dual Port Valve
- Heavy Duty Steel Painted Console
- Size: 48”T x 24”D x 24”L

Utilities Required to Operate
• 8 CFM @ 100 psi of Pre-Regulated Shop Air
• Weighing Scale
• Supply of FM200

FE36  Part No. 570-030
- Fills/Recovers FE36 @ 2Lb per Minute
- Particulate Matter Removal To 15 Microns
- 99% Transfer Of Liquid and Vapor
- Operates On 100 PSI Of Compressed Air
- Air Driven Double Acting Piston Pump
- Stainless Steel Check Valves And Springs
- Dual 30” Vacuum and 300psi Pressure Gauge
- Includes 100Lb Recovery Tank and Dual Port Valve
- Heavy Duty Steel Painted Console
- Size: 48”T x 24”D x 24”L

Utilities Required to Operate
• 8 CFM @ 100 psi of Pre-Regulated Shop Air
• Weighing Scale
• Supply of FE36

HALON 1211  Part No. 570-025
- Fills/Recovers Halon 1211 @ 2Lb per Minute
- Particulate Matter Removal To 15 Microns
- 99% Transfer Of Liquid and Vapor
- Operates On 100 PSI Of Compressed Air
- Air Driven Double Acting Piston Pump
- Stainless Steel Check Valves And Springs
- Dual 30” Vacuum and 300psi Pressure Gauge
- Includes 100Lb Recovery Tank and Dual Port Valve
- Includes Set of Adapters for U.S. Portable FX’s
- Heavy Duty Steel Painted Console
- Size: 48”T x 24”D x 24”L

Utilities Required to Operate
• 8 CFM @ 100 psi of Pre-Regulated Shop Air
• Weighing Scale
• Supply of Halon 1211

HALON 1301  Part No. 570-035
- Fills/Recovers Halon 1301 @ 2Lb per Minute
- Particulate Matter Removal To 15 Microns
- 99% Transfer Of Liquid and Vapor
- Operates On 100 PSI Of Compressed Air
- Air Driven Double Acting Piston Pump
- Stainless Steel Check Valves And Springs
- Dual 30” Vacuum and 300psi Pressure Gauge
- Includes 100Lb Recovery Tank and Dual Port Valve
- Heavy Duty Steel Painted Console
- Size: 48”T x 24”D x 24”L

Utilities Required to Operate
• 8 CFM @ 100 psi of Pre-Regulated Shop Air
• Weighing Scale
• Supply of Halon 1301
CARBON DIOXIDE FILLING EQUIPMENT

ELECTRIC OPERATED CO₂ TRANSFER PUMP

♦ Standard of The Industry
♦ Maximum Inlet Pressure Of 1000 psi
♦ Minimum Inlet Pressure of 300 psi
♦ Internal Spring and Ball By-Pass
♦ External Safety Relief
♦ Transfer Rate of 6-10Lbs per Minute
♦ Supplied With (2) 6' Long Hoses
♦ Outlet Hose Includes Filling Manifold Assy
♦ Includes Spare Parts Seal Kit
♦ 1 HP Motor Available in Various Configurations
♦ 180 Lb Net weight: Shipping weight of 200 Lbs
♦ Footprint: 30"L x 14"W x 24"H

Utilities Required to Operate
• Supply of liquid CO₂ (bulk of cylinder)
• Electrical supply (see chart below)
• Accurate weighing scale (see page 58)

This is a workhorse gear driven pump that has been used in the fire extinguisher and carbonic filling industries for over 70 years. Supplied to the U.S. military for over 50 years this is a Dependable-Low Maintenance-Cost Effective Liquid CO₂ Transfer Pump.

Model SC-5

PNEUMATIC OPERATED CO₂ TRANSFER PUMP

Model No. 560-080A

♦ Designed For Mobile or Shop Application
♦ Allows Pumping From High Pressure Cylinders Only
♦ Internal Soft Seated Check Valves
♦ Transfer Rate of 4-6 Lbs per Minute
♦ Supplied With (2) 6' Long Hoses
♦ Outlet Hose Includes Filling Manifold Assy
♦ Requires 100 psi @ 8CFM of Pre Regulated Shop Air

Utilities Required to Operate
• Supply of liquid CO₂ in high pressure cylinder
• 8CFM @ 100 psi pre-regulated air supply
• Accurate weighing scale (see page 58)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Electrical Service</th>
<th>Allows pumping from:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Voltage</td>
<td>Phase</td>
</tr>
<tr>
<td>560-040A1</td>
<td>115</td>
<td>1</td>
</tr>
<tr>
<td>560-040A2</td>
<td>230</td>
<td>1</td>
</tr>
<tr>
<td>560-040B2</td>
<td>230</td>
<td>3</td>
</tr>
<tr>
<td>560-040B4</td>
<td>460</td>
<td>3</td>
</tr>
<tr>
<td>560-040C2</td>
<td>220</td>
<td>1</td>
</tr>
<tr>
<td>560-040D1</td>
<td>115</td>
<td>1</td>
</tr>
<tr>
<td>560-040D2</td>
<td>230</td>
<td>1</td>
</tr>
<tr>
<td>560-040E2</td>
<td>230</td>
<td>3</td>
</tr>
<tr>
<td>560-040E4</td>
<td>460</td>
<td>3</td>
</tr>
<tr>
<td>560-040F2</td>
<td>220</td>
<td>1</td>
</tr>
</tbody>
</table>

see page 58 for a complete selection of weighing scales
OPTIONAL AUTOMATIC SHUT OFF SCALE ASSEMBLIES

Either System Includes:
• 150 Lb or 500 Lb Capacity Digital Scale
• Tare Weight Adjustment
• Large - Easy to Read LED Display
• Wall Mountable Control Panel
• Model 560-305 System: Automatic Filling of 5-10-20 Lb. Cylinders
• Manual Fill Button for Other Capacity Cylinders
• Designed for Use With Hydro-Test Model SC-5 CO₂ Pump

To Operate You Need
√ SC-5 CO₂ Transfer Pump
√ 115V Electrical (220V is available)
√ CO₂ Supply Cylinder

Model 560-305
Automatic Filling of 5-10-20 Lb. Cylinders

Model 560-310
Automatic Filling of 5-10-15-20-50-100 Lb. Cylinders

Automates the CO₂ Filling Process. Push pre-set weight button and pump will automatically shut-off once selected weight is achieved. A manual control button is also provided for filling of non standard weights/sizes.

Typical CO₂ Fill Set-Up Utilizing Inverted CO₂ Supply Cylinder Without Siphon Tube

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Tel: 800-225-9488 / 978-897-4647  Fax: 978-897-1942

Hydro-Test Products Inc.  email: sales@hydro-test.com  Page 61
CARBON DIOXIDE FILLING ADAPTERS AND LINES

FILLING / RECHARGE ADAPTERS FOR CO₂ FIRE EXTINGUISHER & SYSTEMS CYLINDERS

For Portable and Wheeled CO₂ Fire Extinguishers

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Thread Spec.</th>
<th>Used for filling:</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-553</td>
<td>1/8&quot;-27NPT(F) x CGA 320</td>
<td>5 Lb CO2 Fire Extinguisher</td>
</tr>
<tr>
<td>100-554</td>
<td>1/4&quot;-18NPT(F) x CGA 320</td>
<td>10-20 Lb CO2 Fire Extinguisher</td>
</tr>
<tr>
<td>100-555</td>
<td>3/8&quot;-18NPT(F) x CGA 320</td>
<td>10-20 Lb CO2 Fire Extinguisher</td>
</tr>
<tr>
<td>100-556</td>
<td>1/2&quot;-14NPT(F) x CGA 320</td>
<td>50-100 Lb Wheeled CO2 Fire Extinguisher</td>
</tr>
<tr>
<td>100-557</td>
<td>1 5/16&quot;-12NS(F) x CGA 320</td>
<td>AP-7H System Valve</td>
</tr>
<tr>
<td>100-558</td>
<td>3/4&quot;-16UNF(F) x CGA 320</td>
<td>AP-10 System Valve</td>
</tr>
<tr>
<td>100-560</td>
<td>1 1/4-19NS(F) x CGA 320</td>
<td>AP-8 System Valve</td>
</tr>
<tr>
<td>100-561</td>
<td>CGA320(M) x CGA320(M)</td>
<td>PS-2, PS-4 System Valve</td>
</tr>
<tr>
<td>100-563</td>
<td>3/4&quot;-27NS(F) x CGA 320</td>
<td>Pack Raft,C2 Army Raft Cartridge</td>
</tr>
<tr>
<td>100-566</td>
<td>1 1/8&quot;(F) x CGA 320</td>
<td>4706 Kidde System Valve</td>
</tr>
<tr>
<td>100-575</td>
<td>1&quot;-20(F) x CGA 320</td>
<td>Left Hand Thread CO2 Cartridges</td>
</tr>
<tr>
<td>100-577</td>
<td>1&quot;-20(F) x CGA 320</td>
<td>Right Hand Thread N2 Cartridges</td>
</tr>
<tr>
<td>100-580</td>
<td>3 Point Stem for Fire Extinguisher Cartridges #100-575, #100-577</td>
<td></td>
</tr>
<tr>
<td>58-032</td>
<td>Replacement o-ring for #100-580</td>
<td></td>
</tr>
</tbody>
</table>

FILL LINES AND MISC. ITEMS FOR CO₂ FILLING

- 6' Long Stainless Filling Hose 1/4" (F)NPT to mil spec. #210-009
- 6' Long Bronze Filling Hose 1/4" (F)NPT #210-010
- Dual Flip Valve Manifold Assembly #560-014
- Teflon Hose Washer #220-013
- Fiber Hose Washer #58-604
- CGA 320 Swivel Nut #220-004
- Brass Flip Valve 1/4"(F)NPT #560-008
- 2" Tailpiece #220-003
- 2 1/2" Tailpiece #220-012
- CGA 320 Handwheel Swivel Nut #220-009

Extended Length Handwheel Fill Adapter for Beverage Tanks With Carrying Handle

Part No. 220-020

- Allows faster connection between CO2 Valve and Fill Line.
- Easier to connect to carbonic cylinders with carrying handle.
- Large Aluminum hand-wheel for easier-faster connections
- Stainless CGA 320 threaded stem
- O-ring seal connection (3 extra tips and seals are included)

Dimensions:
- Handwheel: 4.75" diameter
- CGA 320 stainless nipple: 4.0"
- Overall length of assembly: 6.25"
If you are re qualifying (testing) cylinders in the USA or Canada, required pamphlets that must be on hand, reviewed and understood. The pamphlets required is determined by what type of cylinders you are re qualifying under your license.

As an example, a company that is re qualifying DOT specification 4B dry chemical stored pressured fire extinguishers, will need: CFR Title49, C-1, C-6 and NFPA #10. Whereas a shop that is re qualifying industrial gas, SCUBA, SCBA, Carbon Fiber, O2 cylinders, will need the CFR Title49, C-1, C-6, C-6.1, C-6.2 pamphlets.

Cited indicates that this pamphlet is written into the U.S. Department of Transportation Code of Federal Regulations. If you are re-qualifying or filling these types of cylinders, you are required to have the cited pamphlets on hand.

### PAMPHLETS FOR CYLINDER RE-QUALIFICATION

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>393-301</td>
<td>CGA C-1 Methods of Hydrostatic Testing</td>
</tr>
<tr>
<td>393-305</td>
<td>CGA C-5 Cylinder Service Life - Seamless Steel Cylinders</td>
</tr>
<tr>
<td>393-306</td>
<td>CGA C-6 Visual Inspection of Steel Compressed Gas Cylinders</td>
</tr>
<tr>
<td>393-306-1</td>
<td>CGA C-6.1 Visual Inspection of High Pressure Aluminum Cylinders</td>
</tr>
<tr>
<td>393-306-2</td>
<td>CGA C-6.2 Visual Inspection and Requalification of Fiber Reinforced Cylinders</td>
</tr>
<tr>
<td>393-306-3</td>
<td>CGA C-6.3 Visual Inspection of Low Pressure Aluminum Cylinders</td>
</tr>
<tr>
<td>393-308</td>
<td>CGA C-8 Requalification of DOT 3HT Seamless Steel Cylinders</td>
</tr>
<tr>
<td>393-295</td>
<td>Set of C-1, C-5, C-6, C-6.1 and C-6.2 (Hydro-Test set of 5)</td>
</tr>
<tr>
<td>393-290</td>
<td>Set of C-1, C-5, C-6, C-6.1, C-6.2, C-6.3 and C-8 (Hydro-Test set of 7)</td>
</tr>
<tr>
<td>393-307</td>
<td>CGA C-7 Labeling and Marking of Compressed Gas Containers</td>
</tr>
<tr>
<td>393-309</td>
<td>CGA C-9 Standard Color Marking of Compressed Gas Containers for Medical Use</td>
</tr>
<tr>
<td>393-310</td>
<td>CGA C-10 Recommended Procedures for Changes of Gas Service</td>
</tr>
<tr>
<td>393-313</td>
<td>CGA C-13 Periodic Visual Inspection and Requalification of Acetylene Cylinders</td>
</tr>
<tr>
<td>393-317</td>
<td>CGA C-17 Methods to Avoid and Detect Internal Gas Cylinder Corrosion</td>
</tr>
<tr>
<td>393-185</td>
<td>DOT Title 49 CFR, Sections 100-185</td>
</tr>
<tr>
<td>393-190</td>
<td>DOT Title 29 CFR, Sections 1901.1-1910.999 and 1910.1000 - End (2 parts)</td>
</tr>
</tbody>
</table>

Hydro-Test Products has availability to all of the CGA pamphlets that are published. The above pamphlets are stocked in the latest editions. Other pamphlets can be specially ordered upon request. Please contact us with your CGA pamphlet needs.
Question from Hydro-Test: Does the HMR allow for a cylinder requalifier to have and use the most current edition of a referenced CGA publication when the referenced CGA publication in section 17.1.7 is an older edition?  
Answer from DOT: Yes. Sections 107.805(f) and 180.215(a)(6) specify that each cylinder requalifier must be trained and have “the information contained in each applicable CGA or ASTM standard incorporated by reference in 171.7 of this subchapter applicable to the requalifier’s activities.” Therefore, the requalifier does not need the actual CGA publication referenced as long as the requalifier has a document that contains the same information as the referenced CGA publication, which may include an updated version.
As outlined in the CFR Title49, section 180.207, these ISO standards are required

A DOT authorized re-qualifier, is allowed to re-qualify DOT, ICC or UN specification cylinders. UN specification cylinders (also commonly called ISO spec cylinders) have been allowed to be used to transport hazardous material in the USA since 2005. If you will be testing these cylinders you must be properly trained, have the cylinder specifications listed on your license and have the corresponding ISO standards.

Sections 178.71 and 180.207 of 49CFR should be reviewed for proper understanding of markings and re-qualification procedures.

Hydro-Test has negotiated a license agreement with ANSI to publicize these ISO publications. They are available as downloads only—hard copies are not available. Go to www.hydro-test.com—search for ISO Pamphlets and you will be able to link to the ANSI website to purchase.

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 6406  Gas Cylinders - Seamless steel gas cylinders - Periodic inspection and testing</td>
</tr>
<tr>
<td>ISO 11623 Transportable gas cylinders - Periodic inspection and testing of composite gas cylinders</td>
</tr>
<tr>
<td>ISO 10461 Gas cylinders - Seamless aluminum-alloy gas cylinders - Periodic inspection and testing</td>
</tr>
</tbody>
</table>

Is Your Company Re-qualifying UN Specification Cylinders? If So Make Sure That...

• You Include UN cylinder re-qualification in your training
• Your license includes UN cylinder specifications
• You Have the correct ISO standards on hand
• Refer to 49CFR §178.71 to familiarize yourself with the cylinder markings
Hydro-Test is pleased to expand our line of available NFPA pamphlets

Most all states and regulatory offices have adopted the NFPA standards as part of their guidelines

<table>
<thead>
<tr>
<th>Part No.</th>
<th>All Publications Are Latest Editions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>393-350</td>
<td>NFPA #10 Standard for Portable Fire Extinguishers</td>
<td></td>
</tr>
<tr>
<td>393-357</td>
<td>NFPA #17 Standard for Dry Chemical Extinguishing Systems</td>
<td></td>
</tr>
<tr>
<td>393-357A</td>
<td>NFPA #17A Standard for Wet Chemical Extinguishing Systems</td>
<td></td>
</tr>
<tr>
<td>393-396</td>
<td>NFPA #96 Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations</td>
<td></td>
</tr>
<tr>
<td>393-361</td>
<td>NFPA #1961 Standard on Fire Hose</td>
<td></td>
</tr>
<tr>
<td>393-362</td>
<td>NFPA #1962 Standard for Inspection, Care, Use of Fire Hose, Couplings, Nozzles and Service Testing of Fire Hose</td>
<td></td>
</tr>
<tr>
<td>393-363</td>
<td>NFPA #1963 Standard for Fire Hose Connections</td>
<td></td>
</tr>
<tr>
<td>393-351</td>
<td>NFPA #101 Life Safety Code</td>
<td></td>
</tr>
<tr>
<td>393-352</td>
<td>NFPA #72 National Fire Alarm Code</td>
<td></td>
</tr>
</tbody>
</table>
Hydro-Test Products has offered training for cylinder retesters for over 40 years. With more regulations being written and DOT enforcement inspections on the rise, we want to be sure that all of our customers are prepared and ready for a DOT audit. One of the more frequent fines that are imposed by DOT enforcement is lack of, or improper training, as required under §172.704 of CFR Title 49.

Hydro-Test Training is offered in a variety of ways:
Training at Hydro-Test Facility in Massachusetts - Training at Your Facility - On-Line Training - Mail Out Training Guide

### Option 1
Part No. 393-400

**Training at Hydro-Test Products in Stow, Mass.**

Come visit us at our manufacturing plant in Stow, Massachusetts for an in depth training seminar. A classroom environment and working manual or automated test systems are used as part of the training class. Contact our training department at training@hydro-test.com to discuss your company’s needs and schedule a training date.

**Benefits:**
- Learn under a controlled atmosphere - no distractions
- Take advantage of the knowledge of an experienced staff
- Provides exact training for your company’s needs
- A more relaxed atmosphere because you are training with your coworkers
- Discuss cylinders and regulations that are unique to your company
- Focus in on only what cylinder specs your company is testing

**What is covered?**
One of the great advantages of one on one company training is we can tailor the training to fit your needs.
Available training components are:

#### Operational training
- Proper testing procedures
- Proper record keeping requirements
- Daily verification operation
- Troubleshooting
- Understanding the theory and reasons for hydrotesting cylinders

#### Required HazMat Training
- General Awareness & Familiarization
- Function Specific (regulations for cylinder re-qualification)
- Safety
- Security Awareness

**What you will receive?**
- Required certificate of Hazmat Training covering above required components
- Backup training material (written training manual, CD and DVD)
- Knowledge and confidence to do your job better

Any questions concerning the training requirements or to receive a quote - please contact us at (800)-225-9488 or by email: training@hydro-test.com.

Give us a call - we will set up a curriculum that meets your needs:
800-225-9488 or email: training@hydro-test.com
Cylinder Re-Qualification Training

Option 2
Part No. 393-450

Training at your facility

The best option available for those companies that have five or more employees that need training or for those companies that have new cylinder testers. Have one of our trainers come to your facility and train your employees on your equipment. Contact our training department at (800) 225-9488 to discuss and schedule your on-site training class.

Benefits:
• Be taught on your equipment
• Training held in a familiar environment
• Provides exact training for your company's needs
• A more relaxed atmosphere because you are training with your coworkers
• Discuss cylinders and regulations that are unique to your company
• Focus in on cylinder specs your company is testing
• If you have Hydro-Test brand equip, our trainers can also review maintenance and fixing common problems
• In most cases, this option is less expensive than sending employees away for training

What is covered?
One of the great advantages of one-on-one company training is we can tailor the training to fit your needs.

Available training components are:

Operational training
• Proper testing procedures
• Proper record keeping requirements
• Daily verification operation
• Troubleshooting
• Understanding the theory and reasons for hydrotesting cylinders

Required HazMat Training
• General Awareness & Familiarization
• Function Specific (regulations for cylinder re-qualification)
• Safety
• Security Awareness

What you will receive?
• Required certificate of Hazmat Training covering above required components
• Backup training material (written training manual, CD, and DVD)
• Knowledge and confidence to do your job better

Cost: In continental U.S., typically $2500 - $3500 depending upon your location.
Cost outside of the continental U.S. will be significantly higher.
Email: training@hydro-test.com with your location and requirements and a formal quotation listing all costs will be generated for your review.

Can your hydrotest technician answer these questions correctly?

Correct answers: 1(a) 2(b) 3(a) 4(c) 5(c)

Hydro-Test Products Inc.
e-mail: sales@hydro-test.com

www.hydro-test.com Tel: 800-225-9488 / 978-897-4647 Fax: 978-897-1942
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ON-LINE TRAINING

Option 3
Part No. 393-460

A very popular and innovative way to meet the requirements of §172.704. This first in the industry on-line training program has successfully trained hundreds of retesters over the past 5 years. Designed and monitored by our knowledgeable training staff - this provides an economical and convenient way to meet the training requirements for cylinder retesters.

Benefits:
- Learn at your own pace
- Log on and start training wherever and whenever you have an internet connection
- Allows the trainee to start, stop and start again as many times as you like within 30 days
- The most economical training available
- Saves the hassle and aggravation of travelling
- Your own personal on-line coach to answer questions that may come up during training
- Meet all of the requirements of §172.704 from your own office or home

What is covered?

Required HazMat Training for Cylinder Retesters
- General Awareness & Familiarization (supplied CD and DVD)
- Function Specific (regulations)
- Safety (supplied DVD)
- Security Awareness Supplied (supplied CD and DVD)

Operational Training
- Supplied via YouTube videos and DVD

How Does it Work?

Once the training is purchased - an email will be sent to you with a link to the training website. Also a Username and Password will be supplied. At that time you will have 30 days to complete the course.

After completion a certificate, written backup material and CD’s and a DVD will be mailed to each trainee.

*Suggested for those that have a understanding of cylinder re-qualification but need to meet the §172.704 requirements.

MAIL OUT TRAINING PROGRAM

Option 4
Part No. 393-440

An inexpensive and easy way to meet the requirements of §172.704. This mail out training program will give you all of the information and materials to put on your own training program at your company. Allows your trainer to use Hydro-Test Products knowledge and design to integrate into your training requirements for cylinder retesters.

Benefits:
- Allows your in-house trainer to provide retester training
- Can be done at anytime that is convenient for your company
- Training material updated yearly
- One of the most economical training aides available
- Saves the hassle and aggravation of travelling
- Have your retesters trained at your location by your trainer with the help of this training material
- Easy to understand detailed cylinder specification explanations

What is covered?

Required HazMat Training for Cylinder Retesters
- General Awareness & Familiarization (supplied CD and DVD)
- Function Specific (regulations)
- Safety (supplied DVD)
- Security Awareness Supplied (supplied CD and DVD)

Operational Training
- Supplied via DVD

How Does it Work?

Once the training is purchased - the training material package consisting of training manual, DVD and CD’s will be sent to you. It is then your responsibility to put on your training program for your retesters.

*This type of training is recommended for those companies that have a person capable of administering a training class for your employees.

*This is not a recommended training option for those companies with little or no experience in retesting cylinders.
Frequently asked questions about pamphlets / books:

(Q) Why am I required to have these pamphlets?  
(A) As a licensed cylinder re-qualifier you must follow the regulations in the CFR Title49. §171.7 of CFR49 dictates what pamphlet must be on hand for cylinder re testers.

(Q) Do I have to have all of them?  
(A) You must have the CFR Title 49, other pamphlets required depend on what type of cylinders you are testing

(Q) Must I have the latest edition(s)  
(A) For the CFR Title49 - Yes. The required CGA pamphlet dates are listed in CFR Title 49 §171.7

<table>
<thead>
<tr>
<th>Subject</th>
<th>Section of 49CFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guidance and Interpretations</td>
<td>105.20</td>
</tr>
<tr>
<td>Requesting a change in the regulations</td>
<td>106.95</td>
</tr>
<tr>
<td>Application for approval for cylinder re qualification</td>
<td>107.805</td>
</tr>
<tr>
<td>Cited pamphlets (CGA, ASTM, ANSI, ASME, ISO, UN, ...)</td>
<td>171.7</td>
</tr>
<tr>
<td>Filling and re-qualifying of foreign cylinders</td>
<td>171.23(a)(4)</td>
</tr>
<tr>
<td>Hazmat Table, Defining hazard class, packaging specs, identification no.'s, etc...</td>
<td>172</td>
</tr>
<tr>
<td>Training requirements</td>
<td>172.704</td>
</tr>
<tr>
<td>Previously authorized packaging including cylinders under previous special permits</td>
<td>173.23</td>
</tr>
<tr>
<td>General requirements for shipping of compressed gasses</td>
<td>173.300</td>
</tr>
<tr>
<td>Plus (+) stamping for 10% overfill</td>
<td>173.302(a)</td>
</tr>
<tr>
<td>Definition of fire extinguisher</td>
<td>173.309</td>
</tr>
<tr>
<td>Cylinder manufacturing specifications</td>
<td>178.35</td>
</tr>
<tr>
<td>UN cylinder manufacturing specifications and markings</td>
<td>178.71</td>
</tr>
<tr>
<td>General requirements for cylinder re-qualifiers</td>
<td>180.1 - 180.3</td>
</tr>
<tr>
<td>General requirements for re-qualification of cylinders</td>
<td>180.205</td>
</tr>
<tr>
<td>Re-qualification table for DOT specification cylinders</td>
<td>180.209 Table 1</td>
</tr>
<tr>
<td>Star stamping (10 year hydrotest) requirements</td>
<td>180.209(b)</td>
</tr>
<tr>
<td>Re-qualification markings and procedure</td>
<td>180.213</td>
</tr>
<tr>
<td>Reporting and record retention requirements</td>
<td>180.215</td>
</tr>
<tr>
<td>Eddy current examination procedure and requirements</td>
<td>Appendix C of 180</td>
</tr>
</tbody>
</table>

MOST FREQUENT VIOLATIONS OF DOT CYLINDER RE-QUALIFIERS

A complete list can be found in the CFR49 section 107.D app.A

<table>
<thead>
<tr>
<th>Violation</th>
<th>Cited Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performing hydrostatic test without confirming accuracy of test system</td>
<td>180.205(g)(3)</td>
</tr>
<tr>
<td>Failure to provide required training every three years</td>
<td>172.704</td>
</tr>
<tr>
<td>Failure to maintain current copy of CFR49 and applicable exemptions/special permits</td>
<td>180.215(a)</td>
</tr>
<tr>
<td>Improper marking of RIN or date on cylinder</td>
<td>180.213(d)</td>
</tr>
<tr>
<td>Failure to keep complete and accurate records of cylinders being tested</td>
<td>180.215(b)</td>
</tr>
<tr>
<td>Failure to report in writing any change in address,ownership, personnel or equipment</td>
<td>171.2(c) &amp; (e)</td>
</tr>
<tr>
<td>Failure to conduct a complete internal and external visual inspection</td>
<td>180.205(f)</td>
</tr>
<tr>
<td>Marking a star or plus on a cylinder that does not meet these requirements</td>
<td>180.209(b) &amp; 173.302(a)</td>
</tr>
<tr>
<td>Failure to properly condemn a cylinder</td>
<td>180.205(i)</td>
</tr>
</tbody>
</table>
COMMON PARTS - QUICK DISCONNECTS

Quick Disconnects and Mating Nipples Are Utilized On A Variety Of Different Equipment Manufactured By Hydro-Test Products, Including But Not Limited To Cylinder Test Systems - Dry Chemical Filling Equipment - Clean Agent Filling Equipment - Proof Test Pumps ...

Old Style Rubber Grommet U-Cup Design

Since 2005 a re-designed seal has been used on Hydro-Test Products quick couplers. The “U-Cup” rubber grommet has been replaced with an o-ring and teflon backup seal. This newer style seal was designed to provide more reliability and less down time. These seals will only fit into the newer style couplers sold since 2005.

The U-Cup design seal is no longer available

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Typically Used On:</th>
<th>Pressure Rating (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>110-001</td>
<td>1/2&quot; Female Quick Disconnect (plated steel)</td>
<td>Underside of water jacket lid</td>
<td>10,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dryer tubes on full size drying racks</td>
<td></td>
</tr>
<tr>
<td>110-041</td>
<td>1/2&quot; Female Quick Disconnect (stainless steel)</td>
<td>Underside of water jacket lid</td>
<td>9000</td>
</tr>
<tr>
<td>110-015</td>
<td>1/4&quot; Female Quick Disconnect (plated steel)</td>
<td>Outlet hose from test console to lid</td>
<td>10,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Outlet hose of test pumps to test adapters</td>
<td></td>
</tr>
<tr>
<td>110-045</td>
<td>1/4&quot; Female Quick Disconnect (stainless steel)</td>
<td>Outlet hose from test console to lid</td>
<td>9000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Outlet hose of test pumps to test adapters</td>
<td></td>
</tr>
<tr>
<td>110-035</td>
<td>1/4&quot; Female Quick Disconnect (plated steel)</td>
<td>Nitrogen hose for charging fire extinguishers</td>
<td>5000</td>
</tr>
<tr>
<td></td>
<td>(closed center)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110-002</td>
<td>1/2&quot; Male quick disconnect nipple (plated steel)</td>
<td>Mates to #110-001/-041</td>
<td>10,000</td>
</tr>
<tr>
<td></td>
<td>Mates to #110-001/-041</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110-042</td>
<td>1/2&quot; Male quick disconnect nipple (stainless steel)</td>
<td>Mates to #110-001/-041</td>
<td>9000</td>
</tr>
<tr>
<td>110-016</td>
<td>1/4&quot; Male quick disconnect nipple (plated steel)</td>
<td>Mates to 110-015/-035/-045</td>
<td>10,000</td>
</tr>
<tr>
<td></td>
<td>Mates to 110-015/-035/-045</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110-046</td>
<td>1/4&quot; Male quick disconnect nipple (stainless steel)</td>
<td>Mates to 110-015/-035/-045</td>
<td>9000</td>
</tr>
<tr>
<td></td>
<td>Mates to 110-015/-035/-045</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110-013</td>
<td>1/8&quot; Male quick disconnect nipple (plated steel)</td>
<td>Mates to 110-015/-035/-045</td>
<td>5000</td>
</tr>
<tr>
<td></td>
<td>Mates to 110-015/-035/-045</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Replacement Seals and Springs for Quick Disconnects

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>110-005-S</td>
<td>Replacement rubber o-ring seal used on 1/2&quot; couplers</td>
</tr>
<tr>
<td>110-005-B</td>
<td>Replacement backup teflon washer used on 1/2&quot; couplers</td>
</tr>
<tr>
<td>110-019-S</td>
<td>Replacement rubber o-ring seal used on 1/4&quot; couplers</td>
</tr>
<tr>
<td>110-019-B</td>
<td>Replacement backup teflon washer used on 1/4&quot; couplers</td>
</tr>
<tr>
<td>110-004</td>
<td>Replacement spring for 1/2&quot; couplers</td>
</tr>
<tr>
<td>110-018</td>
<td>Replacement spring for 1/4&quot; couplers</td>
</tr>
</tbody>
</table>
## COMMON PARTS - VALVES

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Material</th>
<th>Thread Size</th>
<th>Typically Used On</th>
<th>Rating (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>120-100</td>
<td>Pressure bleed off valve</td>
<td>Stainless</td>
<td>1/8” male</td>
<td>Water jacket lid to relieve cylinder pressure</td>
<td>10,000</td>
</tr>
<tr>
<td>120-098</td>
<td>Replacement seals for #120-100 valve</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>120-099</td>
<td>Replacement stem for #120-100 valve</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>120-095</td>
<td>Pressure bleed off valve</td>
<td>Stainless</td>
<td>1/8” male</td>
<td>Water jacket lid to relieve cylinder pressure</td>
<td>10,000</td>
</tr>
<tr>
<td>120-089</td>
<td>Pressure bleed off valve</td>
<td>Plated</td>
<td>1/8” male</td>
<td>Water jacket lid to relieve cylinder pressure</td>
<td>10,000</td>
</tr>
<tr>
<td>120-088</td>
<td>Pressure bleed off valve</td>
<td>Plated</td>
<td>1/8” male</td>
<td>Water jacket lid to relieve cylinder pressure</td>
<td>7350</td>
</tr>
<tr>
<td>120-009</td>
<td>Pressure bleed off valve</td>
<td>Stainless</td>
<td>1/8” male</td>
<td>Water jacket lid to relieve cylinder pressure</td>
<td>6000</td>
</tr>
<tr>
<td>120-033</td>
<td>Replacement seals for #120-009 valve</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>120-032</td>
<td>Replacement stem for #120-009 valve</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>120-034</td>
<td>Pressure bleed off valve</td>
<td>Brass</td>
<td>1/4” male</td>
<td>Proof test pumps to relieve pressure</td>
<td>1000</td>
</tr>
<tr>
<td>120-083</td>
<td>Isolation valve (panel mount)</td>
<td>Plated</td>
<td>1/4” female</td>
<td>Isolates pressure gauges on water jacket testers</td>
<td>10,000</td>
</tr>
<tr>
<td>120-056</td>
<td>Air control valve (panel mount)</td>
<td>Brass</td>
<td>3/8” female</td>
<td>Inlet air control on test pumps</td>
<td>200</td>
</tr>
<tr>
<td>120-053</td>
<td>Replacement plastic handle for #120-056 valve</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>120-102</td>
<td>Water control valve</td>
<td>Brass</td>
<td>1/4” female</td>
<td>Inlet water control on water jacket testers</td>
<td>200</td>
</tr>
<tr>
<td>120-059</td>
<td>Low pressure air bleed valve</td>
<td>Brass</td>
<td>1/8” male</td>
<td>Water jacket lid to bleed air from test jacket</td>
<td>200</td>
</tr>
<tr>
<td>120-080</td>
<td>Automatic air bleed valve</td>
<td>Brass</td>
<td>1/8” male</td>
<td>Water jacket lid to bleed air from test jacket</td>
<td>200</td>
</tr>
<tr>
<td>120-075</td>
<td>Low pressure needle valve</td>
<td>Brass</td>
<td>1/8” male</td>
<td>Burette manifold on volumetric tester (prior 1997)</td>
<td>200</td>
</tr>
<tr>
<td>120-076</td>
<td>Low pressure ball valve</td>
<td>Plated</td>
<td>1/4” male</td>
<td>Burette manifold on volumetric tester (after 1997)</td>
<td>200</td>
</tr>
<tr>
<td>120-105</td>
<td>3-Way ball valve</td>
<td>Brass</td>
<td>1/4” female</td>
<td>N2 Charging hose for dry chemical fire extg’s.</td>
<td>400</td>
</tr>
<tr>
<td>560-008</td>
<td>CO₂ Flip Valve</td>
<td>Brass</td>
<td>1/4” female</td>
<td>CO₂ Charging hose for filling CO₂ cylinders</td>
<td>2700</td>
</tr>
<tr>
<td>120-065</td>
<td>Refrigeration 3/4&quot;NPT Valve</td>
<td>Brass</td>
<td>CGA</td>
<td>Tank valve for clean agent recovery cylinders</td>
<td>600</td>
</tr>
<tr>
<td>120-306</td>
<td>Automated pressure bleed off valve</td>
<td>Stainless</td>
<td>1/4” female</td>
<td>Automated 507-series test system</td>
<td>9000</td>
</tr>
<tr>
<td>120-307</td>
<td>Replacement packing for #120-306 valve</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>120-308</td>
<td>Replacement valve stem for #120-306 valve</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**WATER JACKET REPLACEMENT PARTS**

<table>
<thead>
<tr>
<th>Key</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>210-040</td>
<td>Quick acting cam style clamp used on 10” &amp; 14” diameter water jackets</td>
</tr>
<tr>
<td>#2</td>
<td>210-041</td>
<td>Replacement threaded swivel tip adjustment for 210-040 clamp</td>
</tr>
<tr>
<td>#3</td>
<td>210-043</td>
<td>Quick acting cam style clamps (heavy duty design) used on 18” &amp; 24” diameter water jackets</td>
</tr>
<tr>
<td>#4</td>
<td>210-115</td>
<td>Pneumatic operated replacement clamp</td>
</tr>
<tr>
<td>N/S</td>
<td>58-115</td>
<td>Replacement seal kit for pneumatic clamp #210-115</td>
</tr>
<tr>
<td>#5</td>
<td>240-129</td>
<td>Wing nut for Hydro-Test Products manufactured water jackets</td>
</tr>
<tr>
<td>#6</td>
<td>240-131</td>
<td>Swing bolt for Hydro-Test Products manufactured water jackets (3/4”-10 thread x 10” long)</td>
</tr>
</tbody>
</table>

**COMPONENT ITEMS FOR WATER JACKETS**

| #7  | 240-129  | Replacement spud, 1/2”(M)NPT, with threaded ports for valve and nipple |
| #8  | 240-133  | Eyebolt (lifting eye) |
| #9  | 300-055  | Aluminum rupture disc for all Hydro-Test Products manufactured water jackets |
| #10 | 130-015  | Rubber gasket for all Hydro-Test Products manufactured water jackets, 4 bolt hole pattern |
| #11 | 58-200   | O-ring lid seal for 10” diameter water jacket: *Actual size of o-ring 11 5/8” ID x 12 5/8” OD* |
| #11 | 58-201   | O-ring lid seal for 14” diameter water jacket: *Actual size of o-ring 14 7/8” ID x 15 7/8” OD* |
| #11 | 58-202   | O-ring lid seal for 18” diameter water jacket: *Actual size of o-ring 19” ID x 20” OD* |
| #11 | 58-203   | O-ring lid seal for 24” diameter water jacket: *Actual size of o-ring 25” ID x 26” OD* |
| #12 | 130-017  | Non-collapsible rubber tubing, from jacket to expansion device (*sold by the foot*) |

**COMPLETE LID ASSEMBLIES**

<table>
<thead>
<tr>
<th>#13</th>
<th>500-880</th>
<th>Water Jacket Lid Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>Includes:</em></td>
<td>Steel lid cover, Spud &amp; eyebolt, Enamel painted finish</td>
</tr>
<tr>
<td>#13</td>
<td>500-882</td>
<td>For 10” diameter water jacket</td>
</tr>
<tr>
<td>#13</td>
<td>500-884</td>
<td>For 14” diameter water jacket</td>
</tr>
<tr>
<td>#13</td>
<td>500-886</td>
<td>For 18” diameter water jacket</td>
</tr>
<tr>
<td>#13</td>
<td>500-890</td>
<td>For 24” diameter water jacket</td>
</tr>
</tbody>
</table>

**MULTI SPUD LID ASSEMBLIES**

| #14 | 500-889 | 14” Lid assy for 3 cylinders to 4.25” diameter |
| #14 | 500-220 | 18” Lid assy for 3 cylinders to 7.5” diameter |
| #14 | 500-225 | 24” Lid assy for 3 cylinders to 10.0” diameter |
| #14 | 500-230 | 24” Lid assy for 4 cylinders to 8.0” diameter |
| #14 | 500-235 | 24” Lid assy for 5 cylinders to 6.125” diameter |
| #14 | 500-890 | 24” Lid assy for 7 cylinders to 5.0” diameter |
AIR OPERATED FLUID TEST PUMPS

These Style Pumps Are Typically Used In Water Jacket and Direct Expansion Cylinder Test Systems. They Are Also Used In High Volume Proof Test Pumps.

♦ Air operated on 100psi @ 8CFM
♦ Stainless steel water section
♦ Stainless steel soft seated check valves

STYLE "A"

![Image of Style A pump]

Contaminant Free Design
(for use with testing of O₂ cylinders)

Pumps Can Be Operated In Either Vertical or Horizontal Position
Displacement Based On 100psi @ 8CFM Inlet Air Pressure

STYLE "B"

![Image of Style B pump]

See page 75 for parts breakdown on these pumps

INLET AIR ACCESSORIES

KIT FOR ABOVE PUMPS

Includes the following items:
♦ Air Lubricator
♦ Air Filter
♦ Air Regulator with Gauge
♦ Air Control Valve
♦ 8’ of Copper Tubing
♦ Copper Tubing Compression Fittings
♦ Quart of Lubricating Oil

Part No. 190-450

If you are purchasing one of the above Style A or B test pumps - you will need this accessory kit for proper installation and operation.

Inlet Air Accessories Kit for Above Pumps

AIR OPERATED SMALL VOLUME TEST PUMPS

This Style Pump Is Used On Proof Test Hydro Pump Assemblies, Typically Used For Testing Of Smaller Volume Cylinders (dry chemical fire extinguisher cylinders). It Can Also Be Used For Low Volume Water Jacket Cylinder Testing.

Displacement Based On 100psi @ 8CFM Inlet Air Pressure

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Rating (psi)</th>
<th>Displacement per Stroke</th>
<th>Pump Body Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>190-030</td>
<td>6000</td>
<td>0.085 cubic inch</td>
<td>Aluminum</td>
</tr>
<tr>
<td>190-031</td>
<td>10,000</td>
<td>0.053 cubic inch</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

190-129 Rebuilding kit for air operated section of either pump includes o-rings, seals and main spring

190-130 Rebuilding kit for water section of 6000 psi pump (#190-030) includes o-rings, retaining ring, backup rings, gasket, lip seal

190-131 Rebuilding kit for water section of 10,000 psi pump (#190-031) includes o-rings, retaining ring, backup rings, gasket, lip seal
AIR OPERATED TEST PUMP PARTS BREAKDOWN

Pumps utilize the same internal parts, diagrams shown for illustrational purposes only

If parts other than those illustrated are required, it is suggested that the pump assembly be returned to Hydro-Test for repair. Special tools are required for some internal adjustments.

For Pump Rated To: (psi)

<table>
<thead>
<tr>
<th>Key</th>
<th>Part No.</th>
<th>Description</th>
<th>Qty Rqd*</th>
<th>1000</th>
<th>1850</th>
<th>6100</th>
<th>8800</th>
<th>16000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>190-554</td>
<td>Gasket, top cover</td>
<td>1</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>2</td>
<td>190-080</td>
<td>Detent pin</td>
<td>4</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>3</td>
<td>190-079</td>
<td>Detent spring</td>
<td>4</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>4</td>
<td>190-560</td>
<td>Detent o-ring</td>
<td>4</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>5</td>
<td>190-559</td>
<td>Detent bolt</td>
<td>4</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>6</td>
<td>190-417</td>
<td>Spring</td>
<td>1</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>7</td>
<td>190-566</td>
<td>O-ring, housing</td>
<td>1</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>8</td>
<td>190-593</td>
<td>O-ring, piston</td>
<td>1</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>9</td>
<td>190-592</td>
<td>O-ring, piston</td>
<td>1</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>10</td>
<td>190-591</td>
<td>O-ring, piston</td>
<td>1</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>11</td>
<td>190-590</td>
<td>O-ring, piston</td>
<td>1</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>12</td>
<td>190-589</td>
<td>O-ring, piston</td>
<td>1</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>13</td>
<td>190-586</td>
<td>Teflon backup O-ring, piston</td>
<td>2</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>14</td>
<td>190-585</td>
<td>Teflon backup O-ring, piston</td>
<td>2</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>15</td>
<td>190-584</td>
<td>Teflon backup O-ring, piston</td>
<td>2</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>16</td>
<td>190-583</td>
<td>Teflon backup O-ring, piston</td>
<td>2</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>17</td>
<td>190-582</td>
<td>Teflon backup O-ring, piston</td>
<td>2</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>18</td>
<td>190-068</td>
<td>Brass washer for check valve body</td>
<td>2</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>19</td>
<td>210-067</td>
<td>Spring, check valve</td>
<td>2</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>20</td>
<td>240-115</td>
<td>Poppet shuttle, check valve</td>
<td>2</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>21</td>
<td>58-031</td>
<td>O-ring for poppet shuttle</td>
<td>2</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>22</td>
<td>240-114</td>
<td>Check valve body</td>
<td>2</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>23</td>
<td>120-090</td>
<td>Check valve assembly - includes items 10-14</td>
<td>2</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>N/S</td>
<td>120-091</td>
<td>Check valve rebuild kits - includes items 10-13</td>
<td>2</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>N/S</td>
<td>120-094</td>
<td>Check valve seal kit - includes items 10,13</td>
<td>2</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>16</td>
<td>190-081</td>
<td>Body / Piston assembly (1/2&quot; diameter piston)</td>
<td>1</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>17</td>
<td>190-119</td>
<td>Body / Piston assembly (5/8&quot; diameter piston)</td>
<td>1</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>18</td>
<td>190-121</td>
<td>Body / Piston assembly (3/4&quot; diameter piston)</td>
<td>1</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>19</td>
<td>190-123</td>
<td>Body / Piston assembly (7/8&quot; diameter piston)</td>
<td>1</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>20</td>
<td>190-124</td>
<td>Body / Piston assembly (1&quot; diameter piston)</td>
<td>1</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>21</td>
<td>190-484</td>
<td>Rebuild kit-contains common field replaceable parts</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>22</td>
<td>190-483</td>
<td>Rebuild kit-contains common field replaceable parts</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>23</td>
<td>190-482</td>
<td>Rebuild kit-contains common field replaceable parts</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>24</td>
<td>190-481</td>
<td>Rebuild kit-contains common field replaceable parts</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>25</td>
<td>190-480</td>
<td>Rebuild kit-contains common field replaceable parts</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

#17 Rebuild Kit includes:

<table>
<thead>
<tr>
<th>Key #</th>
<th>Qty</th>
<th>Key #</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

www.hydro-test.com
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### INLET AIR ACCESSORIES
(for all air driven test pumps)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>160-064</td>
<td>Outlet muffler, 1/2&quot; Male NPT</td>
</tr>
<tr>
<td>160-060</td>
<td>Incoming air filter, 3/8&quot; Female NPT</td>
</tr>
<tr>
<td>160-010</td>
<td>Incoming air filter and regulator, 1/4&quot; Female NPT</td>
</tr>
<tr>
<td>160-021</td>
<td>Pressure gauge for #160-010, 1.5&quot; diameter, 1/8&quot; Male NPT</td>
</tr>
<tr>
<td>160-011</td>
<td>Incoming air lubricator, 1/4&quot; Female NPT</td>
</tr>
<tr>
<td>160-061</td>
<td>Incoming air lubricator, 3/8&quot; Female NPT</td>
</tr>
<tr>
<td>160-062</td>
<td>Incoming air regulator, 3/8&quot; Female NPT</td>
</tr>
<tr>
<td>230-135</td>
<td>Oil for lubricators, Quart size</td>
</tr>
</tbody>
</table>

### WATER CONTROL & FILTRATION

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>230-350</td>
<td>Cylinder water filling nozzle with automatic shutoff</td>
</tr>
<tr>
<td>160-103</td>
<td>In-Line water filter housing with cartridge, 3/8&quot; Female NPT</td>
</tr>
<tr>
<td>160-104</td>
<td>Replacement water filter cartridge for #160-103</td>
</tr>
<tr>
<td>210-125</td>
<td>Water strainer with screen, 3/8&quot; Female NPT</td>
</tr>
</tbody>
</table>
| 160-102  | Water pressure regulator, Garden hose inlet/outlet  
**Recommended where inlet water pressure to test console is greater than 60 psi** |
| 160-101  | Hot and cold water mixing valve                  
**Recommended when incoming water temperature is dramatically different than ambient air temperature** |
SAFETY RELIEFS - PRESSURE SNUBBERS - CHECK VALVES

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Material</th>
<th>Thread Size</th>
<th>Typically Used On</th>
<th>Rating (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>120-110</td>
<td>Adjustable safety relief</td>
<td>Brass/Stainless</td>
<td>1/4&quot;(M)NPT</td>
<td>High pressure test systems</td>
<td>2000-5000</td>
</tr>
<tr>
<td>120-112</td>
<td>Adjustable safety relief</td>
<td>Brass/Stainless</td>
<td>1/4&quot;(M)NPT</td>
<td>High pressure test systems</td>
<td>5000-10,000</td>
</tr>
<tr>
<td>120-020</td>
<td>Fixed safety relief</td>
<td>Brass</td>
<td>1/4&quot;(M)NPT</td>
<td>Low pressure test systems</td>
<td>500</td>
</tr>
<tr>
<td>120-018</td>
<td>Fixed safety relief</td>
<td>Brass</td>
<td>1/4&quot;(M)NPT</td>
<td>Low pressure test systems</td>
<td>950</td>
</tr>
<tr>
<td>120-019</td>
<td>Fixed safety relief</td>
<td>Brass</td>
<td>1/4&quot;(M)NPT</td>
<td>Low pressure test systems</td>
<td>1450</td>
</tr>
<tr>
<td>140-044</td>
<td>Pulsation dampener (snubber)</td>
<td>Brass</td>
<td>1/4&quot;(M)NPT</td>
<td>Pressure dampening of gauge</td>
<td>2000</td>
</tr>
<tr>
<td>240-076</td>
<td>Pulsation dampener (snubber)</td>
<td>Brass</td>
<td>1/4&quot;(M)NPT</td>
<td>Pressure dampening of gauge</td>
<td>10,000</td>
</tr>
<tr>
<td>120-200</td>
<td>In-Line check valve</td>
<td>Brass</td>
<td>1/4&quot;(M)NPT</td>
<td>Low pressure proof test system</td>
<td>1000</td>
</tr>
<tr>
<td>120-090</td>
<td>Check Valve</td>
<td>Stainless</td>
<td>1&quot;-20 Male</td>
<td>High pressure test pumps</td>
<td>10,000</td>
</tr>
</tbody>
</table>

TEST LINES - HOSES

Offered For A Variety of Different Applications, Where Water Pressure Needs To Be Transferred From A Pump To A Cylinder / Vessel. All Hoses Are 1/4" ID and Rated For Stated Pressures.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Rating (psi)</th>
<th>Length</th>
<th>Threads</th>
<th>Typical Use:</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-100</td>
<td>10,000</td>
<td>8'</td>
<td>1/4&quot; (M)NPT</td>
<td>• Connects test console to water jacket</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Outlet pressure hose on proof test pumps</td>
</tr>
<tr>
<td>200-150</td>
<td>10,000</td>
<td>12'</td>
<td>1/4&quot; (M)NPT</td>
<td>• Same as above but where additional length is needed</td>
</tr>
<tr>
<td>200-150-20</td>
<td>10,000</td>
<td>20'</td>
<td>1/4&quot; (M)NPT</td>
<td>• Same as above but where additional length is needed</td>
</tr>
<tr>
<td>200-130</td>
<td>10,000</td>
<td>4'</td>
<td>1/4&quot; (M)NPT</td>
<td>• Pigtail connection inside multi cylinder support frame</td>
</tr>
<tr>
<td>200-101</td>
<td>5000</td>
<td>8'</td>
<td>1/4&quot; (M)NPT</td>
<td>• Connects test console to water jacket on 5000 psi systems</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Outlet pressure hose on proof test pumps to 5000 psi</td>
</tr>
</tbody>
</table>

2000 and 5000 psi Hose Assemblies Can Be Supplied From Stock, In Any Length Required.

To Order: Specify Hose Part No. And Type Of 1/4" (m)npt Fitting Required (rigid or swivel).

<table>
<thead>
<tr>
<th>Pressure Rating (psi)</th>
<th>Hose Part No. (order by ft)</th>
<th>Fittings 1/4&quot; (M)NPT (order 1 for each end)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>200-111</td>
<td>Rigid: #200-113</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Swivel: #200-112</td>
</tr>
<tr>
<td>5000</td>
<td>200-108</td>
<td>Rigid: #200-110</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Swivel: #200-109</td>
</tr>
</tbody>
</table>
PRESSURE GAUGE PARTS AND ACCESSORIES

Please See Page 51 For Calibrated Pressure Gauges

Key | Part No. | Description |
--- | --- | --- |
1 | 140-045 | Replacement gauge face for 0-11,000 psi, 8.5" diameter gauge |
2 | 140-047 | Same as above with dual bar / PSI markings on gauge face |
3 | 140-019 | Replacement gauge face for 0-1100 psi, 6" diameter gauge |
N/S | 140-030 | Replacement glass front for Hydro-Test manufactured 8.5" diameter gauges |
N/S | 140-020 | Replacement glass front for Hydro-Test manufactured 6" diameter gauges |
4 | 140-014 | Replacement mounting foot for Hydro-Test manufactured 8.5" diameter gauge |
5 | 240-080 | High pressure manifold for water jacket test systems |
6 | 240-076 | Pressure snubber for high pressure (5000 psi+) gauges, 1/4"M x 1/4"F |
7 | 140-044 | Pressure pulsation damper for low pressure (-2000 psi) gauges, 1/4"M x 1/4"F |
8 | 100-224 | Brass gauge block (adapter) 1/2"(F)NPT x 1/4"(F)NPT |
9 | 220-104 | Stainless steel tube fitting, 1/4"(M)NPT - screws into gauge block |
10 | 220-124 | Replacement nut for tube fitting |
11 | 220-125 | Replacement back ferrule for tube fitting |
12 | 220-126 | Replacement front ferrule for tube fitting |
N/S | 290-004 | 1/4" OD Stainless steel tubing (sold by ft)

PRESSURE RECORDERS PARTS AND ACCESSORIES

Time vs Pressure Chart Recorders Were Standard Equipment On Water Jacket and Direct Expansion Manually Operated Cylinder Test Systems manufactured by Hydro-Test from 1970 thru 1990. The Recorder Assembly is No Longer Available, However the Parts Shown Below Are Available for Those That Continue To Use These Recorders.

Key | Part No. | Description |
--- | --- | --- |
1 | 140-140 | Box of 100 charts, 0-10,000 psi, 96 minute - chart #12211 |
1 | 140-141 | Box of 100 charts, 0-1500 psi, 96 minute - chart #5325 |
2 | 140-115 | Cartridge pen, red ink |
2 | 140-121 | Cartridge pen, black ink |
3 | 140-110 | Chart drive motor, 96 minute, 110V electrical |
3 | 140-111 | Chart drive motor, 96 minute, Manual wind-up drive |
3 | 140-112 | Chart drive motor, 15 minute, 110V electrical |
3 | 140-113 | Chart drive motor, 15 minute, Manual wind-up drive |
4 | 170-023 | Electric toggle on/off switch |
5 | 140-114 | Hubb chart holder |

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## Expansion Device Parts and Accessories

### Digital Readout Expansion Scale Parts and Accessories

<table>
<thead>
<tr>
<th>Key</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>500-014</td>
<td>Digital Expansion Readout Assembly (700 gram (cc) net capacity) includes:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>electronic scale - shelf plate - beaker - calibration weights - dip tube</td>
</tr>
<tr>
<td></td>
<td></td>
<td>assembly - calibration certs</td>
</tr>
<tr>
<td>1</td>
<td>501-014</td>
<td>Digital Expansion Readout Assembly (3000 gram (cc) net capacity) includes:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>electronic scale - shelf plate - beaker - calibration weights - dip tube</td>
</tr>
<tr>
<td></td>
<td></td>
<td>assembly - calibration certs</td>
</tr>
<tr>
<td>2</td>
<td>230-501</td>
<td>Replacement digital scale only - 2000 gram (cc) gross - 700 gram (cc)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>net capacity, Does not include calibration weights - this is a scale only</td>
</tr>
<tr>
<td>2</td>
<td>230-501-A</td>
<td>Replacement digital scale package - 2000 gram (cc) gross - 700 gram (cc)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>net capacity, includes calibration weights and RS232 to USB connection. For</td>
</tr>
<tr>
<td></td>
<td></td>
<td>use on Hydro-Test 505 &amp; 307-series automated test systems</td>
</tr>
<tr>
<td>2</td>
<td>230-501-M</td>
<td>Replacement digital scale package - 2000 gram (cc) gross - 700 gram (cc)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>net capacity, includes calibration weights For use on Hydro-Test 500-series</td>
</tr>
<tr>
<td></td>
<td></td>
<td>manual operated test systems</td>
</tr>
<tr>
<td>2</td>
<td>230-405</td>
<td>Replacement digital scale only - 6000 gram (cc) gross - 3000 gram (cc)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>net capacity, Does not include calibration weights - this is a scale only -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>typically used for direct expansion testing</td>
</tr>
<tr>
<td>3</td>
<td>180-062</td>
<td>Plastic beaker for 230-501 scale</td>
</tr>
<tr>
<td>3</td>
<td>180-061</td>
<td>Glass beaker for 230-405 scale</td>
</tr>
<tr>
<td>4</td>
<td>230-404</td>
<td>Calibration weight - 1 gram</td>
</tr>
<tr>
<td>4</td>
<td>230-408</td>
<td>Calibration weight - 5 gram</td>
</tr>
<tr>
<td>4</td>
<td>230-403</td>
<td>Calibration weight - 200 gram</td>
</tr>
<tr>
<td>4</td>
<td>230-407</td>
<td>Calibration weight - 1000 gram</td>
</tr>
<tr>
<td>4</td>
<td>230-404-2000</td>
<td>Calibration weight - 2000 gram</td>
</tr>
<tr>
<td>5</td>
<td>110-015</td>
<td>1/4” quick coupler for dip tube</td>
</tr>
<tr>
<td>6</td>
<td>110-016</td>
<td>1/4” quick disconnect nipple</td>
</tr>
<tr>
<td>7</td>
<td>220-099</td>
<td>1/4” barb fitting for hose hook up from water jacket to dip-tube</td>
</tr>
<tr>
<td>8</td>
<td>210-151</td>
<td>Bulk head fitting, 1/4”</td>
</tr>
</tbody>
</table>

## Burette Parts and Accessories

See Page 53 For Selection Of Burettes

<table>
<thead>
<tr>
<th>Key</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>180-032</td>
<td>Burette Bank Assembly: 25 cc, 50 cc, 125 cc, 360 cc burettes with valved</td>
</tr>
<tr>
<td></td>
<td></td>
<td>manifold-mounted on a steel support frame with balance weight</td>
</tr>
<tr>
<td>2</td>
<td>120-075</td>
<td>Brass needle valve used on manifold. 1/8” (M) NPT (used prior to 1997)</td>
</tr>
<tr>
<td>3</td>
<td>120-076</td>
<td>Plated steel ball valve used on manifold, 1/4” (M) NPT (used on/after 1997)</td>
</tr>
<tr>
<td>4</td>
<td>240-081</td>
<td>Brass burette manifold, (4) 1/4” (F) NPT on top - 1/4” (F) on side - 1/4”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(F) on bottom</td>
</tr>
<tr>
<td>5</td>
<td>130-016</td>
<td>Set of 4 rubber sleeves to connect glass burettes to on/off valves</td>
</tr>
<tr>
<td>6</td>
<td>300-017</td>
<td>Zero reference marker for 4 burette bank assembly</td>
</tr>
<tr>
<td>6</td>
<td>300-016</td>
<td>Zero reference marker for 6 burette bank assembly</td>
</tr>
<tr>
<td>7</td>
<td>130-017</td>
<td>Non collapsible rubber tubing (sold by ft) connects burette to water jacket</td>
</tr>
<tr>
<td></td>
<td></td>
<td>outlet line</td>
</tr>
<tr>
<td>8</td>
<td>220-099</td>
<td>Barb fitting, 1/4” (M) NPT at bottom of manifold</td>
</tr>
<tr>
<td>9</td>
<td>180-045</td>
<td>Burette cleaning kit - 3 brushes and detergent</td>
</tr>
</tbody>
</table>
## REBUILDING KITS FOR 500-SERIES WATER JACKET TEST STATIONS

Rebuilding Kits With The Most Commonly Replaced Consumable Items. Simply Pick The Water Jacket Size That You Have. All Parts Included In The Kits Are Interchangeable With Most All Manually Operated Water Jacket Type Cylinder Test Systems Offered By Hydro-Test Products Over The Past 40+ Years.

<table>
<thead>
<tr>
<th>Part No. of Kit:</th>
<th>500-RBLD-10</th>
<th>500-RBLD-14</th>
<th>500-RBLD-18</th>
<th>500-RBLD-24</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spare Parts Kit For Water Jacket Diameter of:</strong></td>
<td>10&quot;</td>
<td>14&quot;</td>
<td>18&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td><strong>Key</strong></td>
<td><strong>Part No.</strong></td>
<td><strong>Qty/Kit</strong></td>
<td><strong>Description</strong></td>
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<tr>
<td>1</td>
<td>58-200</td>
<td>1</td>
<td>O-ring, water jacket</td>
<td>●</td>
</tr>
<tr>
<td>1</td>
<td>58-201</td>
<td>1</td>
<td>O-ring, water jacket</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>58-202</td>
<td>1</td>
<td>O-ring, water jacket</td>
<td>●</td>
</tr>
<tr>
<td>1</td>
<td>58-203</td>
<td>1</td>
<td>O-ring, water jacket</td>
<td>●</td>
</tr>
<tr>
<td>2</td>
<td>110-001</td>
<td>4</td>
<td>1/2&quot; Quick disconnect coupler</td>
<td>●</td>
</tr>
<tr>
<td>3</td>
<td>110-002</td>
<td>1</td>
<td>1/2&quot; Quick disconnect nipple</td>
<td>●</td>
</tr>
<tr>
<td>4</td>
<td>110-005-S</td>
<td>2</td>
<td>Replacement seal for 1/2&quot; quick coupler</td>
<td>●</td>
</tr>
<tr>
<td>5</td>
<td>110-005-B</td>
<td>2</td>
<td>Replacement teflon seal for 1/2&quot; quick coupler</td>
<td>●</td>
</tr>
<tr>
<td>6</td>
<td>110-004</td>
<td>2</td>
<td>Replacement spring for 1/2&quot; quick coupler</td>
<td>●</td>
</tr>
<tr>
<td>7</td>
<td>110-015</td>
<td>2</td>
<td>1/4&quot; Quick disconnect coupler</td>
<td>●</td>
</tr>
<tr>
<td>8</td>
<td>110-016</td>
<td>1</td>
<td>1/4&quot; Quick disconnect nipple</td>
<td>●</td>
</tr>
<tr>
<td>9</td>
<td>120-094</td>
<td>4</td>
<td>Check valve seal kit for test pump</td>
<td>●</td>
</tr>
<tr>
<td>10</td>
<td>120-056</td>
<td>1</td>
<td>Pump control valve</td>
<td>●</td>
</tr>
<tr>
<td>11</td>
<td>120-059</td>
<td>1</td>
<td>Low pressure jacket air bleed valve</td>
<td>●</td>
</tr>
<tr>
<td>12</td>
<td>120-076</td>
<td>1</td>
<td>Burette control valve, 1/4&quot;(M)NPT</td>
<td>●</td>
</tr>
<tr>
<td>13</td>
<td>120-089</td>
<td>1</td>
<td>High pressure release valve</td>
<td>●</td>
</tr>
<tr>
<td>14</td>
<td>120-102</td>
<td>2</td>
<td>Inlet water control panel mount ball valve</td>
<td>●</td>
</tr>
<tr>
<td>15</td>
<td>210-041</td>
<td>3</td>
<td>Replacement tips for water jacket clamps</td>
<td>●</td>
</tr>
<tr>
<td>16</td>
<td>200-100</td>
<td>1</td>
<td>High pressure outlet hose, 8' long</td>
<td>●</td>
</tr>
<tr>
<td>17</td>
<td>130-015</td>
<td>1</td>
<td>Gasket for burst disc</td>
<td>●</td>
</tr>
<tr>
<td>18</td>
<td>300-055</td>
<td>2</td>
<td>Aluminum burst disc for water jacket</td>
<td>●</td>
</tr>
<tr>
<td>19</td>
<td>130-017</td>
<td>4'</td>
<td>Non collapsible rubber tubing</td>
<td>●</td>
</tr>
<tr>
<td>20</td>
<td>220-069</td>
<td>2</td>
<td>3/8&quot;compression fitting x 3/8&quot;(M)NPT</td>
<td>●</td>
</tr>
<tr>
<td>21</td>
<td>130-016</td>
<td>1</td>
<td>Set of 6 rubber sleeves for burettes</td>
<td>●</td>
</tr>
<tr>
<td>22</td>
<td>180-045</td>
<td>1</td>
<td>Burette cleaning kit</td>
<td>●</td>
</tr>
<tr>
<td>23</td>
<td>393-102</td>
<td>1</td>
<td>Instructional DVD and written manual</td>
<td>●</td>
</tr>
</tbody>
</table>

---

**Hydro-Test Products Inc.**  
Tel: 800-225-9488 / 978-897-4647  
Fax: 978-897-1942  
[www.hydro-test.com](http://www.hydro-test.com)  
e-mail: sales@hydro-test.com  
Page 80  
Printed in the U.S.A. © Hydro-Test Products Inc. 2018
### REBUILDING KITS FOR 507-SERIES WATER JACKET TEST STATIONS

Rebuilding Kits With The Most Commonly Replaced Consumable Items. Simply Pick The Water Jacket Size That You Have. All Parts Included In The Kits Are Interchangeable With Most All Automated Operated Water Jacket Type Cylinder Test Systems Offered By Hydro-Test Products Over The Past 20+ Years.

![Image of parts](image)

<table>
<thead>
<tr>
<th>Part No. of Kit:</th>
<th>507-RBLD-10</th>
<th>507-RBLD-14</th>
<th>507-RBLD-18</th>
<th>507-RBLD-24</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part No.</strong></td>
<td><strong>Qty/Kit</strong></td>
<td><strong>Description</strong></td>
<td><strong>10”</strong></td>
<td><strong>14”</strong></td>
</tr>
<tr>
<td>1</td>
<td>58-200</td>
<td>1</td>
<td>O-ring, water jacket</td>
<td>●</td>
</tr>
<tr>
<td>1</td>
<td>58-201</td>
<td>1</td>
<td>O-ring, water jacket</td>
<td>●</td>
</tr>
<tr>
<td>1</td>
<td>58-202</td>
<td>1</td>
<td>O-ring, water jacket</td>
<td>●</td>
</tr>
<tr>
<td>1</td>
<td>58-203</td>
<td>1</td>
<td>O-ring, water jacket</td>
<td>●</td>
</tr>
<tr>
<td>2</td>
<td>110-001</td>
<td>4</td>
<td>1/2” Quick disconnect coupler</td>
<td>●</td>
</tr>
<tr>
<td>3</td>
<td>110-002</td>
<td>1</td>
<td>1/2” Quick disconnect nipple</td>
<td>●</td>
</tr>
<tr>
<td>4</td>
<td>110-005-S</td>
<td>2</td>
<td>Replacement seal for 1/2” quick coupler</td>
<td>●</td>
</tr>
<tr>
<td>5</td>
<td>110-005-B</td>
<td>2</td>
<td>Replacement teflon seal for 1/2” quick coupler</td>
<td>●</td>
</tr>
<tr>
<td>6</td>
<td>110-004</td>
<td>2</td>
<td>Replacement spring for 1/2” quick coupler</td>
<td>●</td>
</tr>
<tr>
<td>7</td>
<td>110-015</td>
<td>2</td>
<td>1/4” Quick disconnect coupler</td>
<td>●</td>
</tr>
<tr>
<td>8</td>
<td>110-016</td>
<td>1</td>
<td>1/4” Quick disconnect nipple</td>
<td>●</td>
</tr>
<tr>
<td>9</td>
<td>120-094</td>
<td>4</td>
<td>Check valve seal kit for test pump</td>
<td>●</td>
</tr>
<tr>
<td>10</td>
<td>120-056</td>
<td>1</td>
<td>Pump control valve</td>
<td>●</td>
</tr>
<tr>
<td>11</td>
<td>120-080</td>
<td>1</td>
<td>Low pressure jacket air automatic bleed valve</td>
<td>●</td>
</tr>
<tr>
<td>12</td>
<td>120-097</td>
<td>1</td>
<td>High pressure isolation valve</td>
<td>●</td>
</tr>
<tr>
<td>13</td>
<td>120-307</td>
<td>1</td>
<td>Replacement seal for #120-097 valve</td>
<td>●</td>
</tr>
<tr>
<td>14</td>
<td>120-308</td>
<td>1</td>
<td>Replacement valve stem for #120-097 valve</td>
<td>●</td>
</tr>
<tr>
<td>15</td>
<td>200-100</td>
<td>1</td>
<td>High pressure outlet hose, 8’ long</td>
<td>●</td>
</tr>
<tr>
<td>16</td>
<td>130-015</td>
<td>1</td>
<td>Gasket for burst disc</td>
<td>●</td>
</tr>
<tr>
<td>17</td>
<td>300-055</td>
<td>1</td>
<td>Aluminum burst disc for water jacket</td>
<td>●</td>
</tr>
<tr>
<td>18</td>
<td>120-300-24</td>
<td>1</td>
<td>2 - way Solenoid Valve</td>
<td>●</td>
</tr>
<tr>
<td>19</td>
<td>120-301-24</td>
<td>1</td>
<td>3 - way Solenoid Valve</td>
<td>●</td>
</tr>
</tbody>
</table>
PARTS FOR MANUAL OPERATED TEST PUMPS

See Page 16 For Complete Manual Pump Assemblies

<table>
<thead>
<tr>
<th>Key</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>190-024</td>
<td>Replacement pump only</td>
</tr>
<tr>
<td>2</td>
<td>220-018</td>
<td>Inlet water garden hose fitting, 3/8&quot; (M)NPT</td>
</tr>
<tr>
<td>3</td>
<td>120-004</td>
<td>Inlet water control ball valve, 3/8&quot; (F)NPT</td>
</tr>
<tr>
<td>4</td>
<td>140-009</td>
<td>Pressure gauge, 1000 psi, 2&quot; diameter</td>
</tr>
<tr>
<td>5</td>
<td>120-200</td>
<td>Outlet in-line check valve, 1/4&quot;(M)NPT</td>
</tr>
<tr>
<td>6</td>
<td>120-034</td>
<td>Pressure bleed off valve</td>
</tr>
<tr>
<td>7</td>
<td>200-102</td>
<td>Outlet pressure hose, 1/4&quot;(M)NPT fittings x 6' long</td>
</tr>
<tr>
<td>8</td>
<td>58-039</td>
<td>Main piston o-ring seal</td>
</tr>
</tbody>
</table>

PARTS FOR HIGH PRESSURE MANUAL OPERATED TEST PUMPS

See Page 16 For Complete Manual Pump Assemblies

For Pump Rated To: (psi)

<table>
<thead>
<tr>
<th>Pressure Rating (psi):</th>
<th>3020</th>
<th>4350</th>
<th>6800</th>
<th>12,000</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Key</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>190-063</td>
<td>Replacement handle</td>
</tr>
<tr>
<td>2</td>
<td>190-056</td>
<td>Cast housing fixture</td>
</tr>
<tr>
<td>3</td>
<td>190-594</td>
<td>O-ring, piston</td>
</tr>
<tr>
<td>3</td>
<td>190-593</td>
<td>O-ring, piston</td>
</tr>
<tr>
<td>3</td>
<td>190-592</td>
<td>O-ring, piston</td>
</tr>
<tr>
<td>3</td>
<td>190-591</td>
<td>O-ring, piston</td>
</tr>
<tr>
<td>4</td>
<td>190-587</td>
<td>Teflon backup o-ring, piston</td>
</tr>
<tr>
<td>4</td>
<td>190-586</td>
<td>Teflon backup o-ring, piston</td>
</tr>
<tr>
<td>4</td>
<td>190-585</td>
<td>Teflon backup o-ring, piston</td>
</tr>
<tr>
<td>4</td>
<td>190-584</td>
<td>Teflon backup o-ring, piston</td>
</tr>
<tr>
<td>5</td>
<td>190-068</td>
<td>Brass washer for check valve body</td>
</tr>
<tr>
<td>6</td>
<td>210-067</td>
<td>Spring, check valve</td>
</tr>
<tr>
<td>7</td>
<td>240-115</td>
<td>Poppet shuttle, check valve</td>
</tr>
<tr>
<td>8</td>
<td>58-031</td>
<td>O-ring for poppet shuttle</td>
</tr>
<tr>
<td>9</td>
<td>240-114</td>
<td>Check valve body</td>
</tr>
<tr>
<td>N/S</td>
<td>120-091</td>
<td>Check valve rebuild kits - includes items 10-13</td>
</tr>
<tr>
<td>N/S</td>
<td>120-094</td>
<td>Check valve seal kit - includes items 10,13</td>
</tr>
<tr>
<td>10</td>
<td>120-090</td>
<td>Check valve assembly - includes items 10-14</td>
</tr>
<tr>
<td>16</td>
<td>190-120</td>
<td>Body / Piston assembly</td>
</tr>
<tr>
<td>16</td>
<td>190-081</td>
<td>Body / Piston assembly</td>
</tr>
<tr>
<td>16</td>
<td>190-119</td>
<td>Body / Piston assembly</td>
</tr>
<tr>
<td>16</td>
<td>190-121</td>
<td>Body / Piston assembly</td>
</tr>
</tbody>
</table>

Hydro-Test Products Inc.
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www.hydro-test.com
Tel: 800-225-9488 / 978-897-4647 Fax: 978-897-1942

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# Parts for Electric Operated Test Pumps

See Page 17 For Electric and Air Operated Test Pumps

<table>
<thead>
<tr>
<th>Key</th>
<th>Part No.</th>
<th>Description</th>
<th>250</th>
<th>350</th>
<th>500</th>
<th>750</th>
<th>1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>190-904</td>
<td>Replacement Pump</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>190-905</td>
<td>Replacement Pump</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>190-906</td>
<td>Replacement Pump</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>190-907</td>
<td>Replacement Pump</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>190-908</td>
<td>Electric Motor (115V)</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>190-909</td>
<td>Electric Motor (115V)</td>
<td></td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>190-910</td>
<td>Electric Motor (115V)</td>
<td></td>
<td></td>
<td>●</td>
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<td></td>
</tr>
<tr>
<td>2</td>
<td>190-911</td>
<td>Electric Motor (115V)</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>190-913</td>
<td>Handle Grip</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>4</td>
<td>190-912</td>
<td>Toggle On/Off switch</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>5</td>
<td>190-914</td>
<td>By-Pass Hose</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>6</td>
<td>190-929</td>
<td>Brass Fitting</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>7</td>
<td>190-915</td>
<td>Relief Valve</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>190-916</td>
<td>Relief Valve</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
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<tr>
<td>7</td>
<td>190-917</td>
<td>Relief Valve</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
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</tr>
<tr>
<td>7</td>
<td>190-918</td>
<td>Relief Valve</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>190-927</td>
<td>Stainless Steel Nipple</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>9</td>
<td>190-928</td>
<td>Stainless Steel Nipple</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>10</td>
<td>190-919</td>
<td>Check Valve</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>11</td>
<td>140-049</td>
<td>Gauge, 600 psi</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>140-048</td>
<td>Gauge, 1000 psi</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>190-930</td>
<td>Fitting</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>13</td>
<td>190-922</td>
<td>Outlet Hose</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>190-923</td>
<td>Outlet Hose</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>190-931</td>
<td>Outlet Fitting</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>
## PARTS FOR CYLINDER VISE STATIONS

See Page 19 For Complete Vise Station Assemblies

### VISE NO. 510-010

<table>
<thead>
<tr>
<th>Key</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>120-025</td>
<td>Air inlet toggle valve</td>
</tr>
<tr>
<td>2</td>
<td>210-030</td>
<td>Pull Pin</td>
</tr>
<tr>
<td>3</td>
<td>210-058</td>
<td>Nylon cable for belt, attaches lacing to pull bar, 18” length</td>
</tr>
<tr>
<td>4</td>
<td>210-028</td>
<td>Internal air bladder</td>
</tr>
<tr>
<td>5</td>
<td>210-106</td>
<td>Pull Bar (attaches to belt)</td>
</tr>
<tr>
<td>6</td>
<td>210-230</td>
<td>Pull arm assembly (requires welding of guide)</td>
</tr>
</tbody>
</table>

### VISE NO. 510-019

<table>
<thead>
<tr>
<th>Key</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>130-020</td>
<td>Rubber back pad (sold by foot)</td>
</tr>
<tr>
<td>2</td>
<td>210-331</td>
<td>Push / Pull rod</td>
</tr>
<tr>
<td>3</td>
<td>210-330</td>
<td>Mechanical screw seal</td>
</tr>
<tr>
<td>4</td>
<td>120-025</td>
<td>Air inlet supply toggle valve</td>
</tr>
<tr>
<td>5</td>
<td>210-162</td>
<td>Air cylinder</td>
</tr>
<tr>
<td>6</td>
<td>215-256</td>
<td>Pull pin</td>
</tr>
</tbody>
</table>

### VISE NO. 510-020

<table>
<thead>
<tr>
<th>Key</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>120-025</td>
<td>Air inlet toggle valve</td>
</tr>
<tr>
<td>2</td>
<td>210-030</td>
<td>Pull Pin</td>
</tr>
<tr>
<td>3</td>
<td>210-058</td>
<td>Nylon cable for belt, attaches lacing to pull bar, 18” length</td>
</tr>
<tr>
<td>4</td>
<td>210-028</td>
<td>Internal air bladder</td>
</tr>
<tr>
<td>5</td>
<td>210-106</td>
<td>Pull Bar (attaches to belt)</td>
</tr>
<tr>
<td>6</td>
<td>210-230</td>
<td>Pull arm assembly (requires welding of guide)</td>
</tr>
</tbody>
</table>

---

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Fax: 978-897-1942  
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## PARTS FOR CYLINDER HOT AIR DRYERS

See Page 21 For Complete Hot Air Dryer Assemblies

### Style A
Models: 530-013 530-003

### Style B
Models: 530-019 / 530-019-Y 530-020 / 530-020-Y 530-021 / 530-021-Y

### Style C
Models: 530-022 530-023 530-024

### Key | Part No. | Description | A | B | C
--- | --- | --- | --- | --- | ---
1 | 210-097 | Motor and Blower Assembly | 110V | | |
2 | 210-096 | Blower Assembly | 110V | | |
3 | 170-013 | Electric Motor, 1/2 HP | 110V | | |
4 | 170-026 | Electrical Switch | 110V | | |
5 | 170-044 | Thermal Unit for Electrical Switch | 110V | | |
6 | 170-052 | Thermal Unit for Electrical Switch | 110V | | |
7 | 210-093 | Fan Guard | 110V | | |
8 | 170-130 | Heating Element | 110V | | |
9 | 170-131 | Heating Element | 110V | | |
10 | 210-250 | Drying Tube, 18" Long | 110V | | |
11 | 210-251 | Drying Tube, 60" Long | 110V | | |

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Page 85
### PARTS FOR VALVING / DE-VALVING MACHINES

**Key** | **Part No.** | **Description**
--- | --- | ---
1 | 120-007 | Torque control valve
2 | 120-022 | Hydraulic control valve assembly
3 | 140-022 | Torque control gauge
4 | 210-035 | Spline for wrench
5 | 520-025 | Complete adjustable wrench assembly (includes spline)
6 | 210-044 | Pulley for counter balance weight (4 per unit)
7 | 130-030 | Replacement vise pad (used on vise angle iron)
8 | 210-054 | Replacement retaining belt for vise
9 | 210-028 | Air bladder for vise station
10 | 120-024 | Vise control air valve
11 | 210-106 | Pull bar for vise belt (2 required)
12 | 210-030 | Pull pin for vise
13 | 120-021 | Pivot point fixture for hydraulic valve assembly
14 | 210-046 | Safety cable for counter balance weight and vise belt (sold by ft)
15 | 210-047 | U-Type clamp for safety cable
16 | 510-012 | Small cylinder vise fixture
17 | 210-058 | Nylon cable for belt, attaches lacing to pull bar, 18" length

*Other major components are available, ie: hydraulic motor, hydraulic pump, gear motor, etc ... please contact our sales office for details*

*See Page 20 For Complete Valving / De-Valving Machine Specifications*
Common replacement parts for Hydro-Test manufactured cylinder rollers are shown. Other parts not listed are available.

<table>
<thead>
<tr>
<th>Key</th>
<th>Part No.</th>
<th>Description</th>
<th>540-022</th>
<th>540-020</th>
<th>540-021</th>
<th>540-100</th>
<th>540-101</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>330-007</td>
<td>1&quot; Steel rod (sold by the ft)</td>
<td>-</td>
<td>8'</td>
<td>8'</td>
<td>25'</td>
<td>40'</td>
</tr>
<tr>
<td>2</td>
<td>210-170</td>
<td>Roller drive wheels</td>
<td>2</td>
<td>6</td>
<td>6</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>210-214</td>
<td>Free spinning wheel</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>170-015</td>
<td>Gear drive motor (115V)</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>210-210</td>
<td>Gear drive motor</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>210-182</td>
<td>Chain (sold by the ft)</td>
<td>-</td>
<td>2'</td>
<td>2'</td>
<td>4'</td>
<td>8'</td>
</tr>
<tr>
<td>7</td>
<td>210-183</td>
<td>Master link for chain</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>210-180</td>
<td>Bushing for sprocket</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>210-185-50</td>
<td>Sprocket</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
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<tr>
<td>10</td>
<td>210-179</td>
<td>Sprocket</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>6</td>
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<tr>
<td>11</td>
<td>210-177</td>
<td>Mounted ball bearing pillow block</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>210-212</td>
<td>Coupling</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>13</td>
<td>210-211</td>
<td>Coupling (attaches to motor drive shaft)</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14</td>
<td>210-213</td>
<td>Spider insert for coupling</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>15</td>
<td>210-175</td>
<td>Roller ball caster</td>
<td>1</td>
<td>6</td>
<td>-</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>16</td>
<td>170-023</td>
<td>Toggle on/off electrical switch</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>17</td>
<td>170-026</td>
<td>Electrical switch</td>
<td>-</td>
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<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>18</td>
<td>210-184</td>
<td>Collar with set screw for shaft</td>
<td>-</td>
<td>8</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>19</td>
<td>210-173</td>
<td>Levelling foot pad for roller frame</td>
<td>-</td>
<td>4</td>
<td>4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>20</td>
<td>210-135</td>
<td>Directional control valve</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>21</td>
<td>190-621</td>
<td>Brass on/off toggle air valve</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>22</td>
<td>120-106</td>
<td>Replacement button for valve</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

See Page 26,27 For Complete Cylinder Roller / Tumbler Assemblies
### Common replacement parts for Hydro-Test manufactured clean agent recovery systems are shown. Other parts not listed are available.

#### Used on Model No:

<table>
<thead>
<tr>
<th>Key</th>
<th>Part No.</th>
<th>Description</th>
<th>570-025 Halon 1211</th>
<th>570-030 FE36</th>
<th>570-035 Halon 1301</th>
<th>570-040 FM200</th>
<th>570-045 Halotron</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>190-476</td>
<td>Replacement air driven transfer pump</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>2</td>
<td>120-056</td>
<td>Air control to pump valve</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>3</td>
<td>210-102</td>
<td>Liquid / Vapor control valve</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>4</td>
<td>140-042</td>
<td>Dual pressure / vacuum gauge 300 psi x 30&quot; vacuum</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>5</td>
<td>140-041</td>
<td>Pressure gauge, 1000 psi</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>6</td>
<td>210-103</td>
<td>Moisture sight gauge</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>7</td>
<td>210-105</td>
<td>Replacement filter element</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>8</td>
<td>210-104</td>
<td>Filter canister housing</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>9</td>
<td>210-111</td>
<td>In-Line strainer</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>10</td>
<td>120-200</td>
<td>In-Line check valve</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>11</td>
<td>120-065</td>
<td>Recovery tank valve, 3/4&quot;(M)NPT</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

See Page 59 For Complete Clean Agent Recovery Systems

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PARTS FOR DRY CHEMICAL FIRE EXTINGUISHER FILL SYSTEM

See Page 54 For Powder Filling Equipment

Key | Part No.  | Description
--- | -------- | ------------
A | 110-015 | Quick Disconnect
B | 100-402 | Discharge Adapter Set
C | 110-013 | Quick Disconnect Nipple
D | 200-120 | Discharge Hose, 3' Long
E | 160-023 | Discharge Screen (Cloth)
F | 130-003 | Rubber Fill Cone
G | 210-555 | Manifold with Tubes and Rubber Cone
H | 150-004 | Clear Vacuum Hose with Fittings - 5'
I | 150-005 | Clear Powder Hose with Fittings - 7'
J | 160-016 | Overflow Powder Bowl
K | 160-017 | Filter Assy Inside Powder Bowl
L | 160-042 | Muffler
M | 120-003 | Ball Valve
N | 140-012 | Vacuum Gauge
O | 140-011 | Inlet Air Pressure gauge
P | 160-008 | Inlet Air Moisture Trap
Q | 220-034 | Sleeve for Powder Hose
R | 220-035 | Sleeve for Vacuum Hose
R | 220-036 | Insert for Powder Hose
R | 220-037 | Insert for Vacuum Hose
S | 190-001 | Venturi Manifold
T | 160-024 | Steel Strap for Discharge Cloth Filter Screen

See Page 56 For Discharge / Recharge Adapters

Improved design changes over the years have been made to enhance the Hydro-Test brand fire extinguisher powder filling and discharging equipment. The basic concept has remained the same. The first powder system manufactured by Hydro-Test in 1973 utilize many of the same parts as today's model.

Dry chemical fire extinguisher powder by nature is manufactured to flow in a fashion similar to water. However, when moisture is present the powder will become "caked" and not flow easily. It is imperative that the powder be stored closed in a cool dry area. The most common operational problem with powder handling equipment is that the powder will not transfer because moisture has been present at or near the powder. Hydro-Test introduced the aerating principle to help with this problem.

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PARTS FOR CYLINDER INSPECTION LIGHTS

See Pages 45-49 For A Complete Line of Current Model Cylinder Inspection Lights

See Page 45 for Latest Style Inspection Lights

Fiber Optic
50 Watt

Model #69-029
Drop Light
discontinued 2010

Older Style
Drop Light
discontinued 2010

Older Style
Fiber Optic Lights
discontinued 08/2013

Fiber Optic
150 Watt

PARTS FOR CYLINDER STAMPING GUN

Stamping Gun Part No. 230-136

#230-141 Inlet Fitting

#230-138 Retainer

#230-139 Die Holder

Stamp Set (0-9) To Fit Gun (1/2" shank)
#230-064: 5/16" Character Heavy Duty
#230-063: 1/4" Character Size Low Stress

See Page 38,39 For A Full Line Of Stamps with 1/2" Shank to Fit This Stamping Gun

Key |
---|
1 |
2 |
3 |
4 |
5 |
6 |
7 |
8 |
9 |
10 |

Description |
---|
Replacement Bulb |
Replacement Probe |
Protective Dome for Bulb |
Power Supply |
Dimmer Switch |
Circuit Breaker |
Fuse Holder |
Lamp (bulb) Holder |
Slide Switch |
Lamp Socket |

50 Watt Fiber Optic |
150 Watt Fiber Optic |
#69-029 Drop Light |
#69-028 Drop Light |

Part No. |
69-120 |
69-122 |
69-033 |
69-049 |
69-110: 60"
69-111: 120"
69-110: 60"
69-111: 120"
Discontinued
69-130
69-131
69-133
69-129
69-132
69-128

--- |
--- |
69-032 |
--- |
--- |
Discontinued |
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PARTS FOR MODEL SC-5 CO₂ RECHARGE PUMP

See Page 60 For Complete CO₂ Pump Assemblies

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<td>240-037</td>
<td>Rod</td>
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<td>28</td>
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MOST COMMON PARTS AND TOOLS FOR SC-5 PUMP

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<td>Washer, Safety Disc</td>
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<td>6</td>
<td>240-047</td>
<td>Piston Packing Wrench</td>
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<td>Fibre Hose Washer</td>
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<td>Piston Rod Lubricant (4 oz.)</td>
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<td>1-8</td>
<td>560-025</td>
<td>Spare Parts for Cold Section (1 of each)</td>
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<tr>
<td>9</td>
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<td>Spanner Wrench for Packing Nut</td>
</tr>
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</table>
### Parts for Model SC-5 C0 Recharge Pump

#### Key
- 1: Belt Guard
- 2: Screw
- 3: Belt
- 4: Pump Assembly
- 5: Bolt
- 6: Lockwasher
- 7: Crosshead Guide & Crank Assembly
- 8: Nut
- 9: Bolt
- 10: Lockwasher
- 11: Pulley, Motor (3" Dia.)
- 12: Key
- 13: Motor
- 14: Bolt
- 15: Lockwasher
- 16: Nipple
- 17: Bolt
- 18: Bracket
- 19: Switch
- 20/21: Locknut
- 22: Cord W/Plug, 115V, 12' Long
- 23: Pin
- 24: Crosshead
- 25: Cap
- 26: Connecting Rod Assembly

<table>
<thead>
<tr>
<th>Key</th>
<th>Part No.</th>
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<tbody>
<tr>
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<td>Motor (230/460V-3PH-60Hz)</td>
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<td>26</td>
<td>170-100</td>
<td>Connector</td>
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</tbody>
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**Key**
- 18: Plug Assembly
- 19: Dipstick Assembly
- 20: Pin
- 21: Crosshead
- 22: Pin
- 23: Nut
- 24: Bolt
- 25: Cap
- 26: Shim
- 27: Connecting Rod Assembly
- n/s: Bushing (for #27)

<table>
<thead>
<tr>
<th>Key</th>
<th>Part No.</th>
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### MISCELLANEOUS THREADED FITTINGS

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An Independent Inspection Agency (IIA) must visit your facility and make recommendations to the Approvals Branch for your RIN number. The inspector will review the equipment for 1% accuracy and make sure that all of the operators listed on the facility license are capable of performing the re-qualification procedure properly and that they have been trained and tested to §172.704 requirements.

<table>
<thead>
<tr>
<th>Inspection Company</th>
<th>E-mail</th>
<th>Telephone</th>
<th>Fax</th>
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<tbody>
<tr>
<td>Steigerwalt Associates</td>
<td><a href="mailto:ees2@ptd.net">ees2@ptd.net</a></td>
<td>610-437-1704</td>
<td>610-437-4545</td>
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<tr>
<td>Authorized Testing, Inc</td>
<td><a href="mailto:fjensen@authorizedtesting.com">fjensen@authorizedtesting.com</a></td>
<td>951-682-4110</td>
<td>951-682-6090</td>
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<tr>
<td>Cylinder Services, Inc.</td>
<td><a href="mailto:cylserv@msn.com">cylserv@msn.com</a></td>
<td>414-479-0500</td>
<td>414-328-0500</td>
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<tr>
<td>Arrowhead Industrial Services</td>
<td><a href="mailto:rgwilson@arrowheadindustrial.com">rgwilson@arrowheadindustrial.com</a></td>
<td>336-578-2777</td>
<td>336-578-2929</td>
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<td>941-924-0109</td>
<td>941-924-6626</td>
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<tr>
<td>Professional Services, Inc.</td>
<td><a href="mailto:paul.medwig@psiusa.com">paul.medwig@psiusa.com</a></td>
<td>412-922-4000</td>
<td>412-922-4043</td>
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<td>T.H. Cochrane Laboratories, Ltd</td>
<td><a href="mailto:john@cochranelabs.com">john@cochranelabs.com</a></td>
<td>414-476-2500</td>
<td>414-464-1870</td>
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- **There is a cost involved with this inspection. Pricing depends on many circumstances and should be negotiated directly with the Independent Inspection Agency providing the service.**

- **It is suggested that you contact all of the above for the best price / value for the inspection.**

- **It is recommended that you secure an IIA that will assist you with any DOT questions or regulations that may occur during your 5 year license period.**

**What will the Independent Inspection Agency (IIA) be looking for?**

- Test machine accuracy of 1%
- Certificates of calibration for pressure gauge(s) and calibrated cylinder
- All equipment to re-qualify cylinders (dryers, test adapters, vise, visual inspection parts, etc...)
- Proper record keeping of verification and retest.
- Compliance with requirements for hazmat training
- Proper operational training and understanding of test system operation
- Certificate of training and training material for all cylinder re-testers
- Understanding of the regulations of section 180
- Proper CGA pamphlets cited under §171.7
- Current title 49 CFR

**Most IIA's will provide a check off list prior to the inspection.**

If the IIA does not offer a check off list - ask for one - you want to make sure that you are properly prepared for the inspection that you are paying for.
Sign up at Hydro-Test.com for important Regulation Changes - Industry News - Sales Specials

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