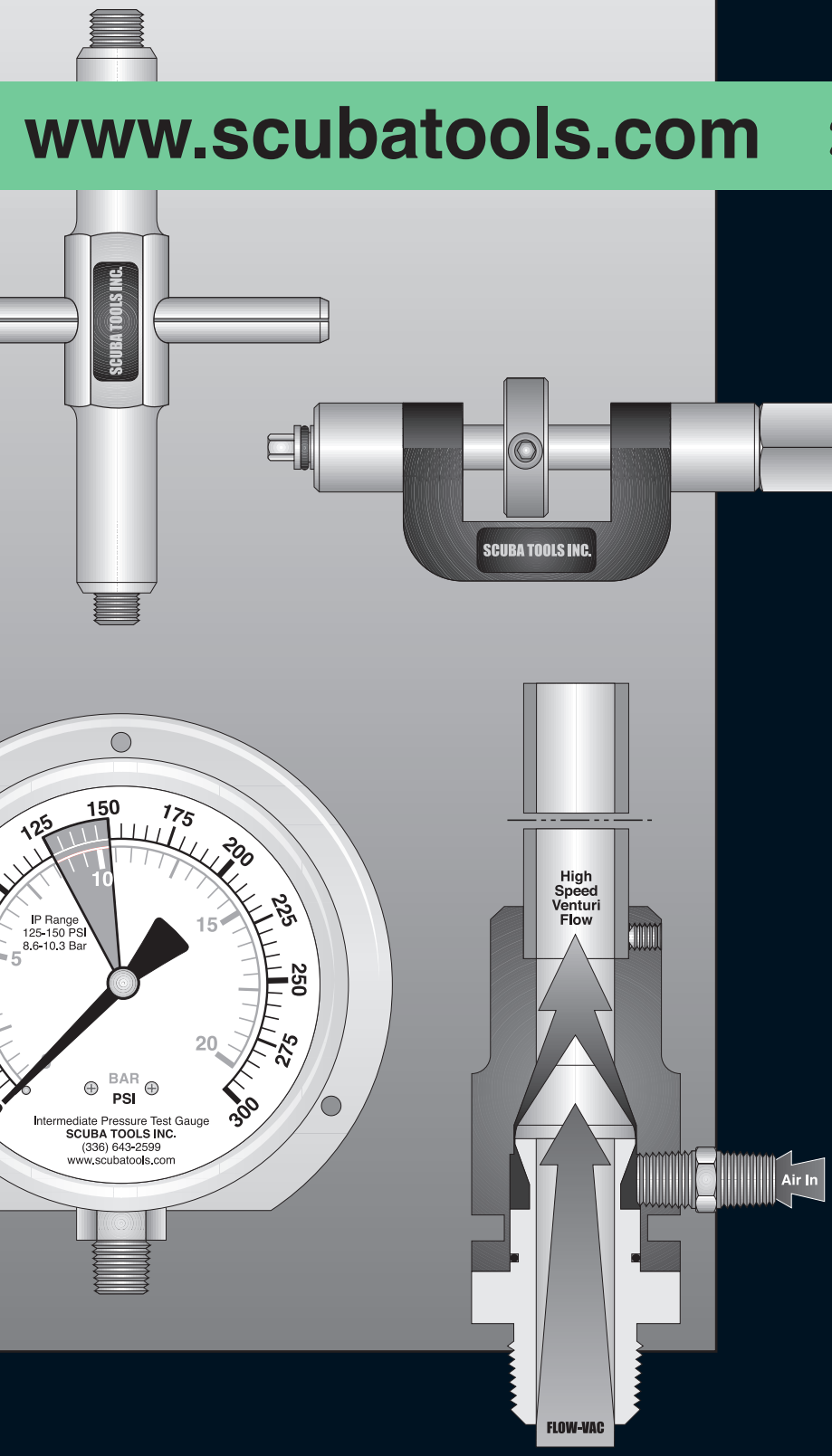
www.scubatools.com 2020



MADE IN THE U.S.A.

HAND TOOLS • FIXTURES • TESTING EQUIPMENT • EDUCATION

For The Professional Diving Repair Center

SCUBA TOOLS™

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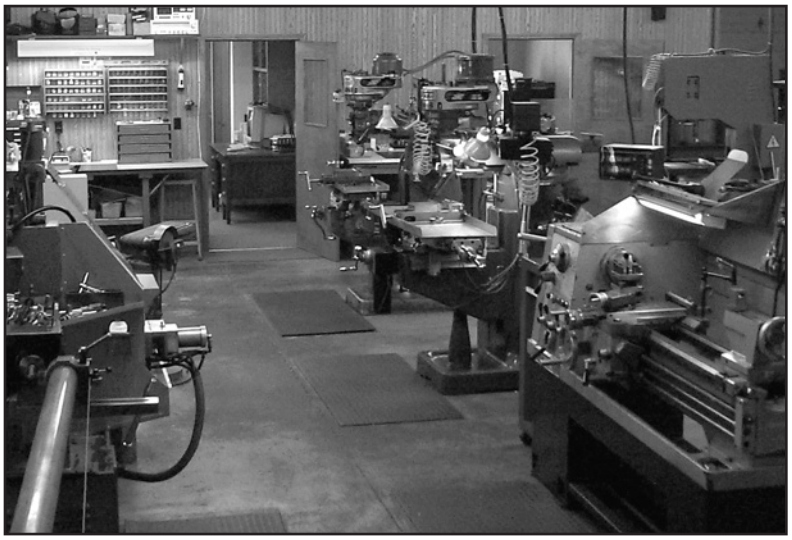
SCUBA TOOLS INC.

Hand Tools, Fixtures,
Testing Instruments, & Education
For the professional diving repair center



The job of servicing and repairing life support equipment is a vital part of the diving industry. This profession requires a commitment to constant education to keep pace with the development of new products.

At Scuba Tools Inc., we are dedicated to producing the highest quality specialized tools and equipment to make the day-to-day work in the service center more efficient and less frustrating. Having the right tool for the job saves time and allows the professional technician to concentrate on doing the job right.

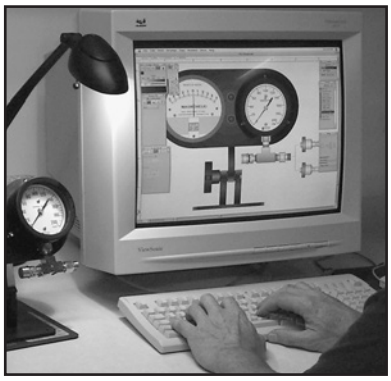
Eighty percent of our tools are designed, manufactured, and assembled in house from raw materials to finished product. The advantage of "full scope manufacturing" is that it gives us complete control over the final product, and helps to justify the added expense of short run production. The results are consistently high quality tools and reasonable prices.

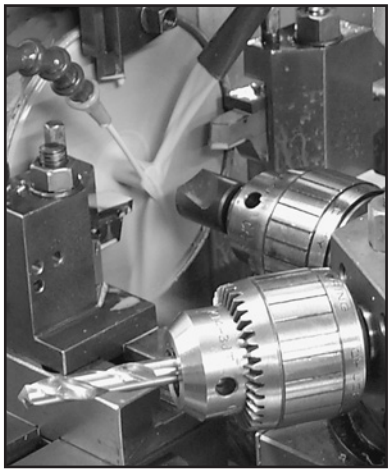
Our customers range from the largest diving equipment manufacturers to individual technicians worldwide.

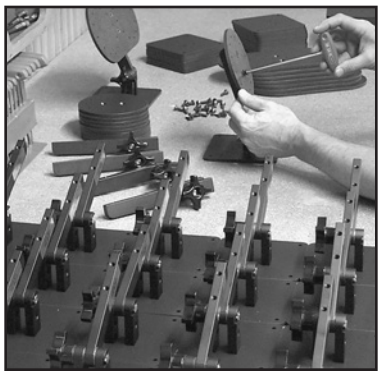
The following pages describe the current Scuba Tools Inc. product line. We will supplement product information on our web site (www.scubatools.com) to keep you abreast of new items as they are developed.

In the meantime, if you have questions regarding our products, please call or e-mail. We try to answer the phones personally during normal business hours (EST), and our fax line and web site are open 24 hours a day, 7 days a week.

Scuba Tools Inc. would like to thank you for your ongoing efforts in making diving a safer recreation through professional service and repair. Keep up the good work.







Prices are subject to change without notice.

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Scuba Regulator Savvy

Regulator Savvy - First Edition

Regulator Savvy is a different kind of regulator repair manual. For many years, I have believed that professional regulator service could be better served by teaching the fundamental functions of the regulator, rather than relying solely upon a procedural approach. This book translates this idea into physical reality.

Regulator Savvy is divided into two complimentary sections that are uniquely linked. The first section gets down to the nuts and bolts of basic regulator function. The second section applies this knowledge to the "art" of adjusting the regulator for optimum performance. Together, they represent a rational connection between the "know how" and the more satisfying "know why". The second section also examines regulator testing on the repair bench. This third element proves the validity of both sections by providing a means of verifying the results. This concept offers a judicious balance between theory and application.

The manual is presented in both a three ring binder and spiral bound. It contains 187 pages and over 300 new-to-the-world illustrations. The old adage, "a picture is worth a 1000 words", definitely applies in this case. Reading the text in segments and then verifying this function in the cutaway illustrations produces a visual interface that almost makes the parts move in your mind. This visualization is the key to jump starting rational thought and the learning process.

Regulator Savvy has a broad audience. Even though the context of the manual is directed at service technicians, any diver who wants to know more about how his regulator functions will find the first section especially interesting. Seasoned technicians can obtain a wider perspective on regulators and features that may not routinely cross their bench, and new technicians can become familiar with the basics before attending a manufacturer's service clinic.

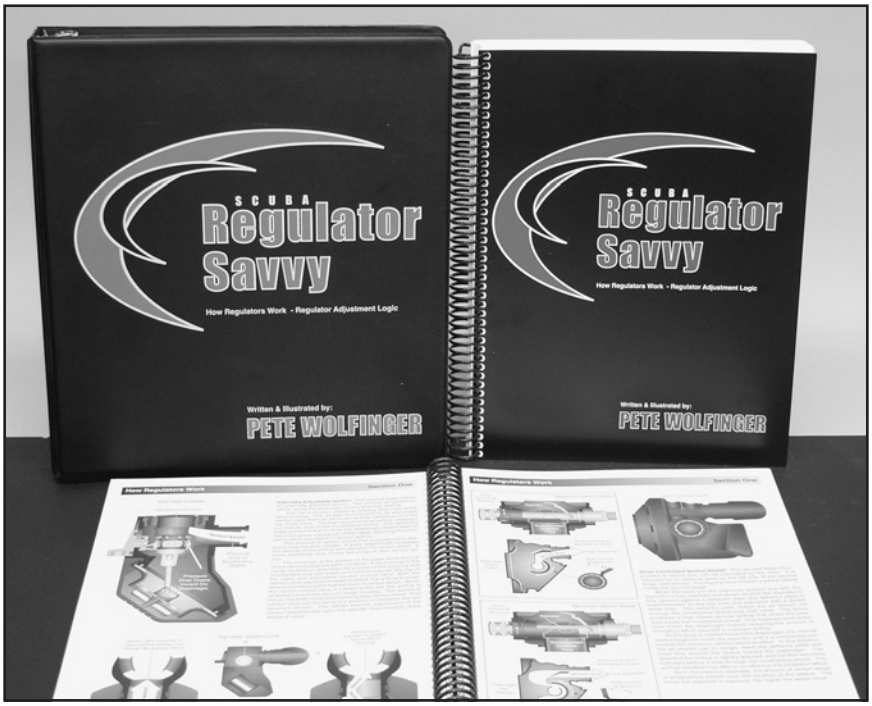
It is important to note that this manual is not a do-it-yourself guide for regulator repair. It does not include sufficient information as a stand alone text. I, personally, do not wish to encourage anyone to experiment with his regulator. The regulator should be considered "life support equipment" and treated with the utmost respect.

It is my sincere hope that Regulator Savvy will extend your knowledge and understanding of regulators, and serve to inspire every technician to strive for his highest potential.

Pete Wolfinger

Description	Number	Price
Regulator Savvy, Three Ring	30-100-000	$64.00
Regulator Savvy, Spiral Bound	30-100-100	$37.75

Plus Shipping & Handling



• Three Ring Binder & Spiral Bound • 187 Pages • 300+ Illustrations

"The most definitive text on modern scuba regulator function ever written."

"A great way to get ready for a manufacturer's repair clinic."

Two uniquely linked sections: • How Regulators work • Regulator Adjustment Logic

Regulator Savvy - Chapter Titles

Section One - How Regulators Work

Chap. 1. First Stage Forces
Chap. 2. Unbalanced First Stages
Chap. 3. Balanced First Stages
Chap. 4. O'Rings & HP Seats
Chap. 5. Special First Stage Features
Chap. 6. Second Stage Forces
Chap. 7. Unbalanced Downstream Valves
Chap. 8. Balanced Downstream Valves
Chap. 9. Venturi Assist & Case Geometry Fault
Chap. 10. Special Second Stage Features

Section Two - Regulator Adjustment Logic

Chap. 11. Regulator Testing & Testing Standards
Chap. 12. First Stage Preventive Trouble Shooting
Chap. 13. IP Gauges & Supply Pressure Control
Chap. 14. Second Stage Preventive Trouble Shooting
Chap. 15. Cracking Effort Forces & Design Vs. Adjustment
Chap. 16. Manufacturers' Second Stage Tests
Chap. 17. Testing Beyond Manufacturers' Requirements
Chap. 18. Understanding Dynamic Flow Testing
Chap. 19. Watertight Integrity & Regulator Test Data Sheet

LP Hose O'ring Bullet

The LP Hose O'ring Bullet is used to Install O'rings on LP Hoses.

Description	Number	Price
LP Hose O'ring Bullet	20-302-400	$8.00

HP Hose O'ring Bullet

The HP Hose O'ring Bullet is used to Install O'rings on HP Hoses.

Description	Number	Price
HP Hose O'ring Bullet	20-304-400	$8.00

Modified Hook Spanner #5

This modified Hook Spanner comes with a .156 dia. pin. It is used to on the Hollis DC3 and DCX.

Description	Number	Price
Modified Hook Spanner #5	20-405-300	$24.00

OTS Dual Drive Inline Adjusting Tool

Description	Number	Price
OTS Dual Drive Inline Adjusting Tool	20-501-200	$77.00

Sherwood Gemini Poppet Preset Tool

Description	Number	Price
Sherwood Gemini Poppet Preset Tool	20-605-200	$25.00

DVT Assembly Tool

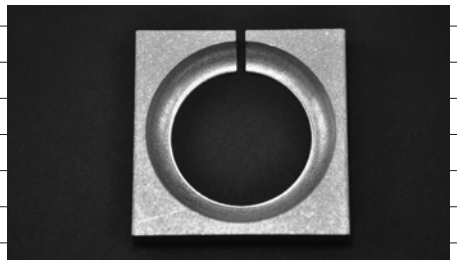
Description	Number	Price
DVT Assembly Tool	20-810-400	$14.00

Oceanic FDXi & Hollis DC7 Tool

Description	Number	Price
Oceanic FDXi & Hollis DC7 Tool	20-830-100	$18.00

Hollis 212, 221, 321 Rim Clamp Cover Tool

Description	Number	Price
Hollis 212, 221, 321 Rim Clamp Cover tool	20-840-200	$24.00



Quick Whip Kit w/ long rod

The Quick Whip ensemble is perfect for cleaning out and polishing your steel and aluminum cylinders. The thread bushing protects your cylinder threads from damage while the aluminum oxide impregnated pad does the work. Protect the base of the cylinder with the included plug or change out to the brush to quickly touch up the bottom inside the cylinder. Comes with long rod, brush, plug, thread bushing, 6 pads, and set screw to hold the plug or brush in place. For use with drill (not included). The pads are replaceable and are available separately (80-331-300). If you need both the long and short rod, order part #80-340-300.

Description	Number	Price
Quick Whip Kit w/long rod	80-330-300	$48.00

Quick Whip Kit w/long and short rod

Description	Number	Price
Quick Whip Kit w/long and short rod	80-340-300	$61.50

Dip Tube Tool

Description	Number	Price
Dip Tube Tool	80-370-100	$40.00

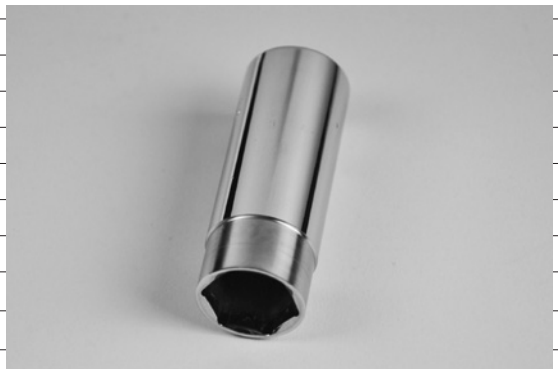
Cylinder Tumbler

Description	Number	Price
Cylinder Tumbler	80-400-200	$690.00

Modified Deep Well Socket

Used on AUP Second Stages

Description	Number	Price
Modified Deep Well Socket	20-151-500	$19.25



A.I.R. Flow Analyzer

Top Of The Line Regulator Evaluation Instrument System

The Scuba Tools Inc. A.I.R. Flow Analyzer is designed to test diving regulators under both static and dynamic conditions. In addition to the standard "static tests" for cracking effort and intermediate pressure, the "dynamic performance" of the complete regulator (first and second stage) can be monitored while the regulator is flowing air at different flow levels. These dynamic tests are very important on modern regulators that utilize venturi assists as part of the overall work of breathing. If the regulator venturi overpowers the mechanical resistance of the demand valve, the crossover flow rate can be determined and adjusted for optimum performance. The following is a brief description of the tests that can be performed with the A.I.R Flow Analyzer:

Static Tests:

- **Precision Cracking Effort:** The cracking effort (minimum opening effort) can be pinpointed on a dual scale Dwyer 5-0-5 inches H_20/12.5-0-12.5 cm Magnehelic gauge by slowly increasing the vacuum on the regulator via the needle valve. Since this vacuum is constant and steady, the exact cracking effort can be maintained providing the most accurate Magnehelic reading.
- **Precision IP:** Static intermediate pressure is measured on a precision IP gauge mounted on the bottom right of the panel. This gauge is accurate to within ±1% of the full swing (±3psi). The gauge can be hooked up to almost any manufacturers' low pressure hose coupling by using one of the four SpinOns included with the panel (see bottom illustration).

Dynamic Tests:

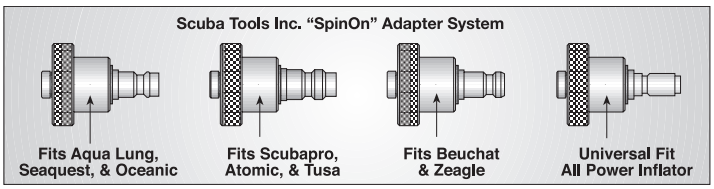
- **Demand Effort vs Flow:** The Magnehelic gauge is connected to the flow meter just above the second stage mouthpiece and senses any vacuum or pressure change that occurs as the flow is increased. This dynamic feature constantly monitors the amount of demand effort required to generate any specific flow rate.
- **Venturi Performance:** The boost provided by the venturi reduces the demand effort in direct relationship to the flow level. As the flow is increased through the flow meter, the venturi performance can be evaluated by monitoring the Magnehelic gauge. This test can spot "venturi crossover" and indicate at what flow level it occurs.
- **Dynamic IP:** Any decrease/increase in intermediate pressure while the regulator is under flow conditions can be read directly from the IP gauge. This test can spot anything from a plugged HP filter to the increased performance of a preferred first stage port.
- **Chatter Free Flow Testing:** The custom Scuba Tools Inc. Flow Vac and Lower Orifice provide a straight line flow path that is chatter free.

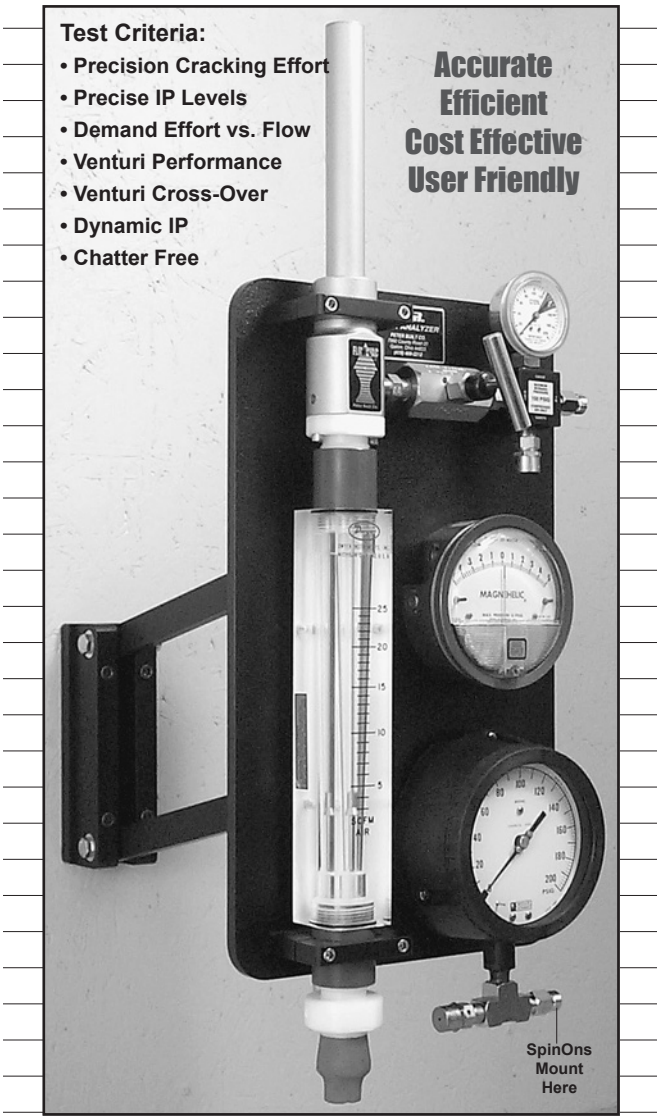
The A.I.R. Flow Analyzer is mounted on a custom floating bracket that can be adjusted to the sight-line of the operator. The floating bracket can be fastened directly to the wall or mounted onto the optional Pedestal Bench Mount.

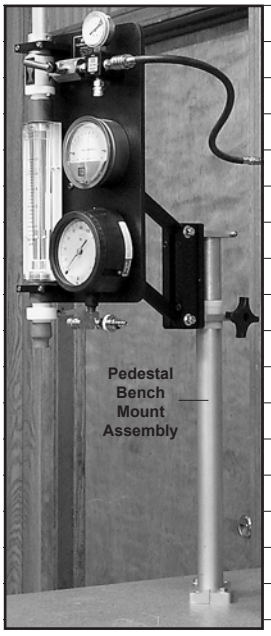
The A.I.R. Flow Analyzer requires a low pressure (100-150 psi) air supply. This low pressure can be generated by a low pressure port on a diving regulator, a pressure reducing regulator (see next page), or a standard low pressure air compressor. Use compressed air only! Not for Oxygen or enriched air.

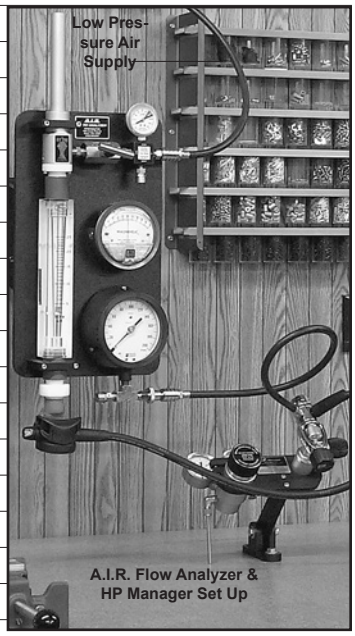
This test instrument is virtually maintenance free and will provide years of accurate, efficient, and economical regulator testing.

Description	Number	Price
A.I.R. Flow Analyzer, Four SpinOns, & Floating Wall Bracket Assy. SCFM	26-200-100	$1,037.00
A.I.R. Flow Analyzer, Four SpinOns, & Floating Wall Bracket Assy. LPM	26-200-100LPM	$1,053.00
Pedestal Bench Mount Assy. Only	26-200-275	$206.00









H.P. Manager

Adjustable Supply Pressure - 300 psi to 3400 psi

The Scuba Tools Inc. H.P. Manager is designed to work with the A.I.R. Flow Analyzer described on the previous page. The primary function of this unit is to control the supply pressure to the regulator first stage. This feature permits testing at both high and low supply pressures to assimilate tank pressure drop during a dive.

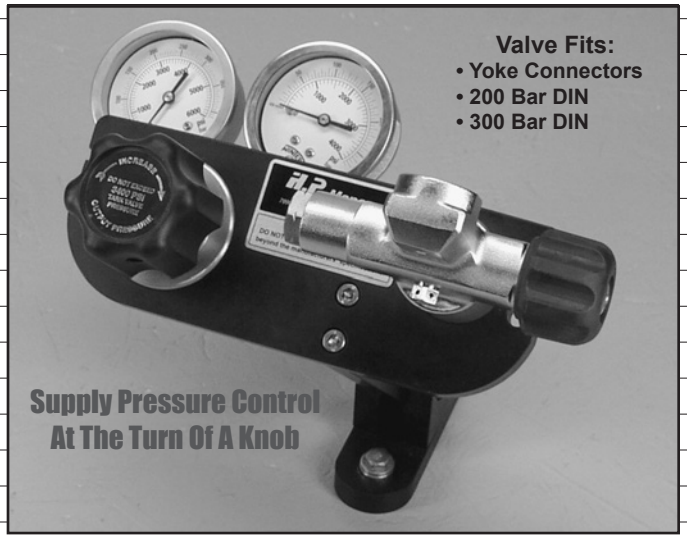
The heart of the H.P. Manager is an Aqua Environment® piston type, reducing regulator. This regulator is rated at 6000 psi input with a variable output from 0-5000 psi. The regulator is self-venting (pressure is relieved internally when the output pressure is decreased). The regulator is equipped with two high pressure gauges for monitoring both input and output pressures. The 1/4" NPTF input port is located on the left side of the regulator and can be connected directly to a high pressure (maximum 6000 psi) supply line.

The valve utilized in the H.P. Manager® is a 232 bar (3400 psi) tank valve. This tank valve can be quickly converted to accept 3000 psi yoke style connections as well as both 200 bar and 300 bar DIN systems.

The tank valve and reducing regulator are mounted in a rugged pedestal bracket. The top plate is machined to form two pinch clamps that retain the regulator and threaded valve standoff. The angle of the top plate can be adjusted and locked into position to suit the sight-line of the operator. This adjustable feature also permits the bracket to be mounted horizontally on the work bench top, or vertically on a wall surface.

The Scuba Tools Inc. H.P. Manager is built for both operator safety and versatility. The H.P. Manager is shipped with complete mounting and operational instructions.

Description	Number	Price
H.P. Manager With Bench/Wall Stand	26-100-100	$621.50
0-5000 psi Reducing Regulator Only	26-155-100	$308.00



Important Installation Information:

- Be sure that all supply connections meet or exceed National Gas Association standards for high pressure plumbing.
- Never pressurize a regulator first stage beyond the manufacturer's specifications.
- Do not exceed 3400 psi (232 bar) to the tank valve included with this unit. Use Compressed air only! Not for oxygen or enriched air.

0-400 PSI Pressure Reducing Regulator

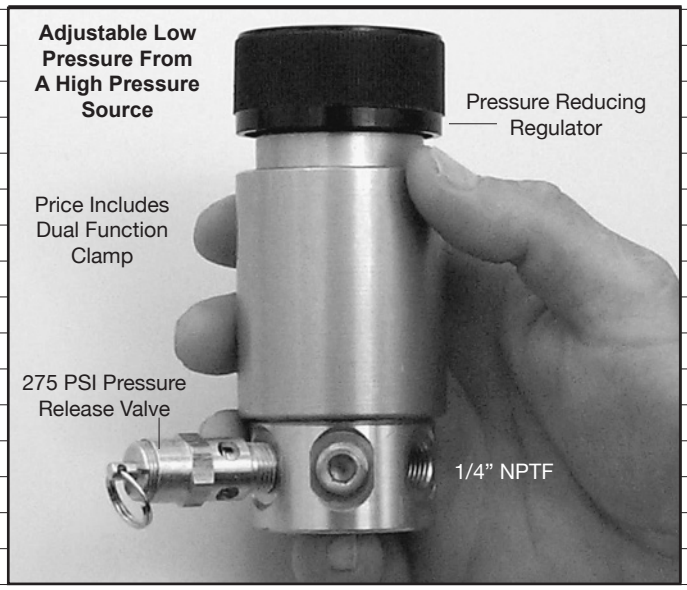
The Aqua Environment® pressure reducing regulator is the ideal way to generate a "low pressure air supply" for the repair bench. The input side of the regulator will accept up to 6000 psi and can be connected directly to a high pressure cascade or bank system. The output side of the regulator can be adjusted from 0-400 psi. The regulator is equipped with a pressure release valve preset at 275 psi. This fixes the upper limit of the regulator output within the pressure range of standard low pressure air hoses or air coils.

The regulator is designed to "internally vent" descending pressures. This means when the knob is retracted (screwed out), the output pressure will drop automatically without releasing the pressure externally.

The output pressure range of this unit is also perfect for the A.I.R. Flow Analyzer Flow Vac.

Input/output ports are 1/4" NPTF, and maintenance on this regulator is greatly simplified by the use of a factory sealed service cartridge that is replaced as a unit. Dual function mounting clamp included.

Description	Number	Price
0-400 psi Reducing Regulator	26-150-100	$331.75



Pro Flow Meter

Run A.I.R. Flow Tests With Your Magnehelic

The Pro Flow Meter is a modular free standing flow meter system that can be easily linked to an existing Magnehelic gauge. The combination of the Magnehelic gauge and flow meter extends the regulator testing capacity to include dynamic air flow evaluations. The following is a brief description of these additional tests:

Dynamic Tests:

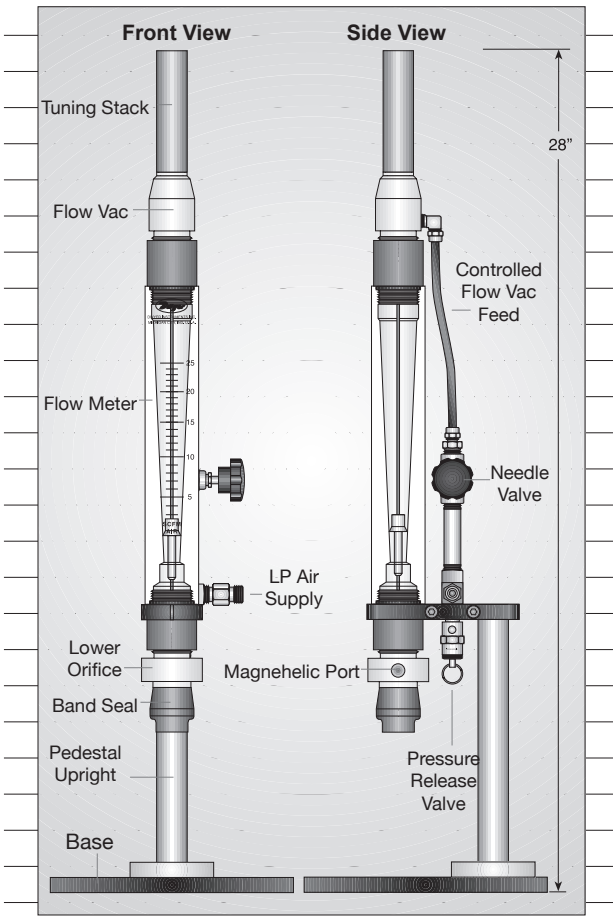
- **Demand Effort vs Flow:** The Magnehelic gauge is connected to the flow meter just above the second stage mouthpiece and senses any vacuum or pressure change that occurs as the flow is increased. This dynamic feature constantly monitors the amount of demand effort required to generate any specific flow rate.
- **Venturi Performance:** The boost provided by the venturi reduces the demand effort in direct relationship to the flow level. As the flow is increased through the flow meter, the venturi performance can be evaluated by monitoring the magnehelic gauge. This test can spot “venturi crossover” and indicate at what flow level it occurs.
- **Chatter Free Flow Testing:** The custom Scuba Tools Inc. Flow Vac and Lower Orifice provide a straight line flow path that is chatter free.

The test data produced by this instrument is directly comparable to the Scuba Tools A.I.R. Flow Analyzer. All testing procedures are identical when the Pro Flow Meter is configured in the prescribed manner.

The Pro Flow Meter requires a low pressure (100-150 psi) air supply. This low pressure can be generated by a low pressure port on a diving regulator (see LP Hose Kit on the bottom of page 7), a pressure reducing regulator (see page 5), or a standard low pressure air compressor. Use compressed air only! Not for Oxygen or enriched air.

This test instrument is virtually maintenance free and will provide years of accurate, efficient, and economical regulator testing.

Description	Number	Price
Pro Flow Meter SCFM	26-250-025	$489.00
Pro Flow Meter LPM	26-250-025LPM	$502.00



First Stage Flow Meter

Check First Stage Flow Independently

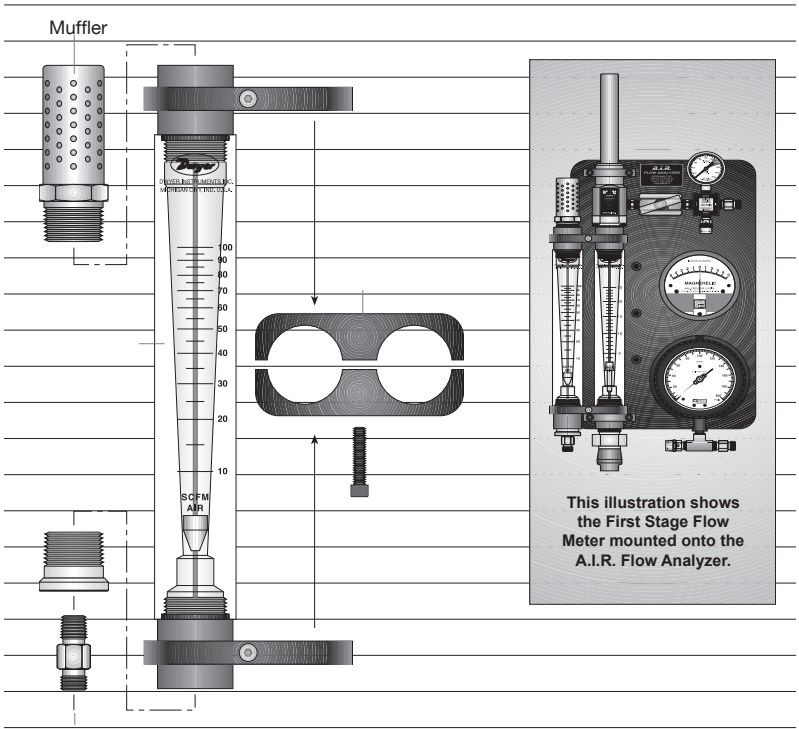
The First Stage Flow Meter is designed as an add on assembly to the Scuba Tools Inc. A.I.R. Flow Analyzer and Pro Flow Meter. A 10-100 SCFM flow meter can be mounted to the existing flow meter on both units with two custom split clamps. This positions the two flow meters parallel to one another.

The bottom (inlet) of the First Stage Flow Meter is fitted with a special reducing adapter. This fitting will accept all standard LP swivel hose ends and allows the first stage to be connected directly to the inlet end of the flow meter via the LP hose. A muffler has been installed to the top (outlet) of the flow meter to reduce the noise of the discharged air.

This assembly mounts in a matter of minutes and provides a variety of first stage testing options:

- **First Stage Flow vs. Supply Pressure:** A flow performance profile can be evaluated by checking the first stage flow across the tank pressure spectrum.
- **Dynamic IP:** The ability of the first stage to maintain intermediate pressure under flow variations.
- **Extra Long Hose Restriction:** This instrument can be used to check the flow restriction characteristics of extra long low pressure hoses.
- **Quick Disconnect Coupler Flow:** The flow through diving industry quick disconnect couplers and Schrader valve connectors can be easily evaluated with the First Stage Flow Meter.
- **Preferred Port Flow:** The flow characteristics of "preferred ports" can be compared with the flow through standard ports.

Description	Number	Price
First Stage Flow Meter Assy. SCFM	26-225-100	$253.00
First Stage Flow Meter Assy. LPM	26-225-100LPM	$272.00



Lower Flow Meter Adapter & Hose Fitting

Pro Check

Water Leak Analyzer • Precision Cracking Effort

The Scuba Tools Inc. Pro Check is the first twin manometer style instrument specifically designed to measure second stage "watertight integrity" and "cracking effort". The accuracy and reliability of the manometer have long been the preferred choice of the scientific community for measuring extremely low pressure differentials.

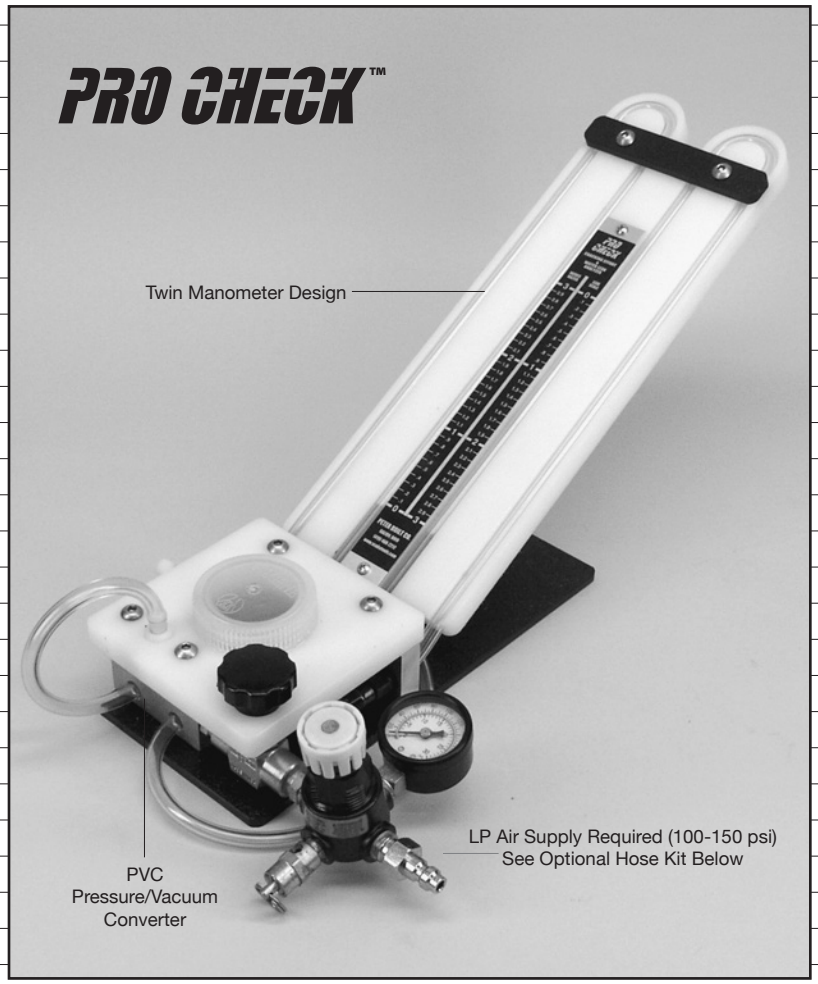
Watertight Integrity: The Pro Check can detect and measure any flaw in the second stage that may allow water to enter during the breathing cycle. The method of analyzing the magnitude of the leak incorporates an air logic circuit that delays the vacuum flow between two identical manometers. The delay is calibrated by a laser pierced ruby orifice and causes the manometer on the delayed side of the circuit to read lower than the one exposed directly to the vacuum. The larger the leak, the lower the reading. The difference between the two manometers' readings can be used to predict the exact size of a leak and determine approximately how much water will flow through the flaw on each inhalation cycle. This ability to detect and measure second stage leaks has never been available to the regulator technician until now.
The Pro Check will not measure dynamic water leaks such as "exhaust tee cross flow" or "exhaust valve inversion". Dynamic water leaks are engineering defects and are the responsibility of the manufacturer.

Precision Cracking Effort: The Pro Check utilizes a PVC (Pressure/Vacuum Converter) to generate operational vacuums. This unit produces an adjustable sustained vacuum that is perfectly suited for measuring cracking effort. A special mouthpiece adapter (not shown) is used to connect the PVC to the second stage. By slowly increasing the vacuum, the precise cracking effort can be pinpointed. This procedure requires an IPG (Intermediate Pressure Gauge). This gauge is not supplied with the Pro Check.

To assist you in understanding this instrument, we have included both the operational manual and a research paper on our web site **www.scubatools.com**. This downloadable data is located on the Pro Check web page below the price box.

Description	Number	Price
Pro Check	26-600-100	$343.00

The above price includes: Pro Check™, cracking effort hose assembly, manometer fluid, calibration orifice, calibration plug, input hose fitting, and a complete instruction manual.



The Pro Check™ is loaded with exclusive features:
*• **Self Contained Pressure/Vacuum Converter (PVC):** This unit converts low pressure air into a constant vacuum flow. The PVC consists of a pressure reducing regulator assembly, needle valve, and vacuum transducer.*
*• **Exclusive Twin Manometer Design:** The Pro Check twin manometer is an integrated system that can be used as a standard single column manometer, or a twin air logic system for measuring leaks through extremely small holes.*
*• **Adjustable Reservoir:** The height of the reservoir can be quickly and easily adjusted to "zero out" the manometer prior to use.*
*• **Calibration Test Orifice:** A calibration orifice is supplied with the Pro Check to allow the accuracy of the unit to be evaluated at any time.*

Optional Low Pressure Hose Kit

The A.I.R. Flow Analyzer, Pro Flow Meter, and Pro Check units require a low pressure (100-150 psi) air supply source. This air source "must be protected with a pressure relief valve".

If you do not have low pressure established on your repair bench, we have assembled an optional hose kit that includes everything you need. The 10' Parker hose assembly threads directly into any first stage low pressure port (3/8"-24 TPI) and includes a pressure relief valve. The output end of the hose is fitted with an industrial interchange QDC (Quick Disconnect Coupler). Three male ends and two padded hose clamps are also included.

Description	Number	Price
Optional LP Hose Kit	26-160-100	$61.00

Quick Set™

Poppet & Seat Break-In Fixture

The Scuba Tools Inc. Quick Set™ fixture is designed to quickly and efficiently "break-in" new poppets and HP seats.

When a new poppet or HP seat is installed in a regulator, it may not perform correctly until a mating groove has been set in the soft side of the seat. This initial groove is established by cycling (breathing) the regulator. This action causes the hard side of the seat to penetrate the softer seating material forming a groove or "mating set" between the two surfaces. This process may take as many as 250 cycles to achieve an 80% set between the mating surfaces. Final regulator adjustments can not be accurately completed until both the first stage HP seat and second stage poppet have "taken a set".

Up until now, the only methods for breaking-in new seats were to cycle the regulator by actually breathing from the second stage, or pushing the purge button.

Repeatedly purging the regulator will reduce the internal temperature of the first stage. If the seat is conditioned at very low temperatures, the set in the seat may not form correctly due to contraction of the seat material. In preliminary tests, we were able to lower the temperature at the first stage seat to -11^0 F with four normal purges. The Quick Set™ only reduced the temperature to 41^0 to 44^0 F after a five minute run time. This temperature level should provide a normal seating effect.

The Scuba Tools Inc. Quick Set™ will break-in one first stage and two second stages at a rate of approximately 45 (44-46) cycles per minute. If two second stages are cycled simultaneously, the first stage cycle rate is doubled (88-92 CPM).

Quick Set™ is powered by a fan cooled, gear head motor that operates on standard 115 VAC, 60 HZ and draws less than 1/2 amp under normal load. This motor should only be connected to a 3 wire grounded outlet.

The output shaft is fitted with a cam dog that drives two small piston pumps. The pumps will generate a vacuum of 8-20" H2O on the inhalation stroke with a volume displacement of .004 cubic ft. At a rate of 45 CPM, it will take 5 minutes to use 1 cubic foot of air per second stage.

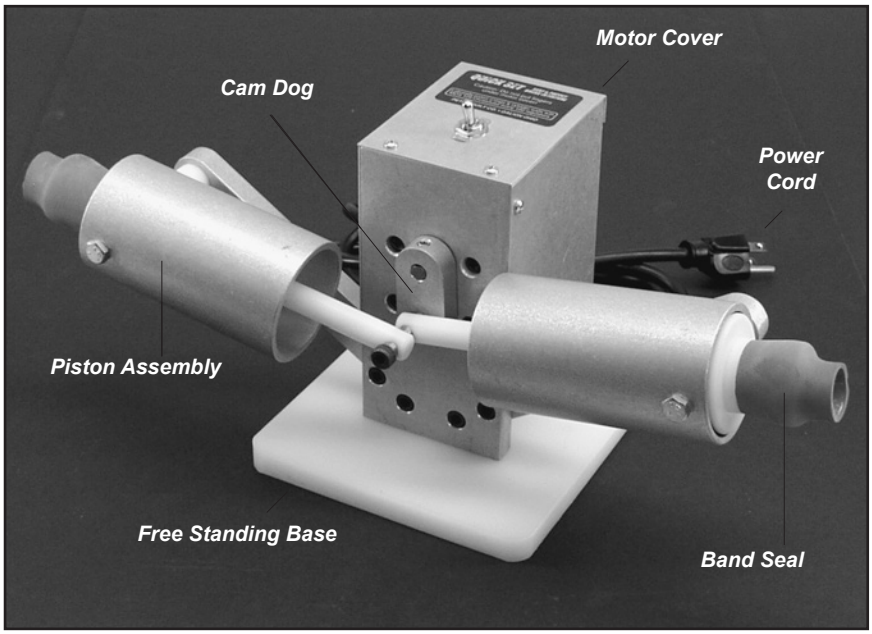
If you are tired of attempting to break-in new seats by other means, or you want to eliminate the problem of readjusting regulators after the first dive, Quick Set™ is in stock and ready for immediate delivery.

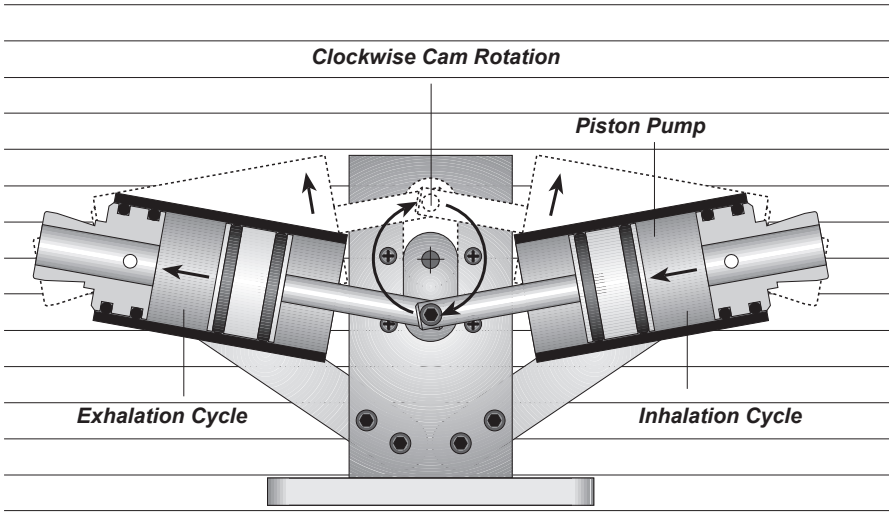
Quick Set™ should only be operated with a compressed air supply. Do not use Quick Set with pure oxygen or enriched air.

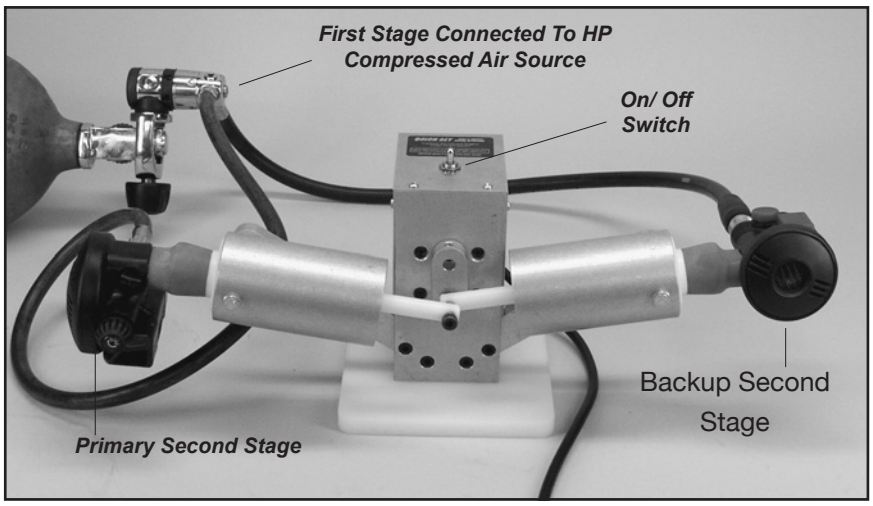
Description	Part Number	Price
Quick Set	26-550-200	$348.00

For additional Information on Quick Set, Pro Check, A.I.R Flow Analyzer and other Scuba Tools Inc. products, consult our web site.

www.scubatools.com







Pro Stands With Gauges

Pro Stands are free standing instrument assemblies.

Dual Pro Stand With Dual Scale Magnehelic Gauge & IP Gauge

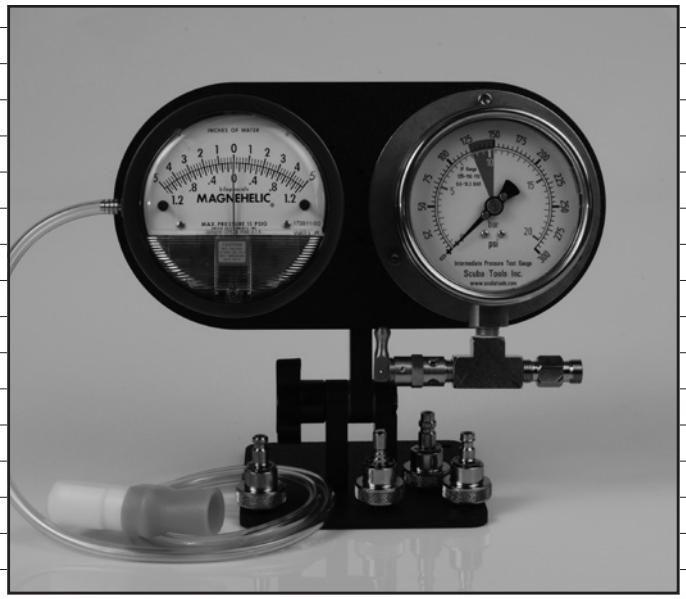
The Scuba Tools Inc. Dual Pro Stand instrument package provides a side by side display of the Magnehelic and IP gauge in a versatile mounting base. This system is the next best thing to the A.I.R. Flow Analyzer and will test all critical static regulator functions.

The Dwyer Magnehelic gauge is available in either a dual scale 5-0-5 inches of H_2O/ or dual scale 0-3 inches of H_2O/ calibration and the 4" Scuba Tools Inc. 0-300 psi IP gauge rated at ±1% accuracy for the full swing. The IP gauge is protected by a pressure relief valve, and the input port will fit all standard low pressure regulator hoses.

The unit is shipped fully assembled and includes The Scuba Tools Inc. mouthpiece adapter and all four custom SpinOns.

The Pro Stand can be used free standing or fastened to any horizontal flat surface.

Description	Number	Price
Dual Pro Stand, 0-3" W.E./0-7.62 cm W.C. IP Gauge, & Four SpinOn Adapters	26-360-303	$378.00
Dual Pro Stand, 5-0-5" W.E./12.5-0-12.5 cm W.C. IP Gauge, & Four SpinOn Adapters	26-360-355	$386.00



Single Pro Stand With IP Gauge

The Scuba Tools Inc. Single Pro Stand with IP gauge is designed for the technician who prefers separate instrument systems.

The IP Gauge is a 4", 0-300 psi, Scuba Tools Inc. pressure gauge rated at ±1% accuracy for the full swing. The gauge is protected by a pressure relief valve, and the input port will fit all standard low pressure regulator hoses. The unit is shipped fully assembled and includes all four Scuba Tools Inc. custom SpinOns.

The Pro Stand can be used free standing or fastened to any horizontal flat surface.

Description	Number	Price
Single Pro Stand, 300 psi/20 bar IP Gauge, & Four SpinOn Adapters	26-335-300	$236.00

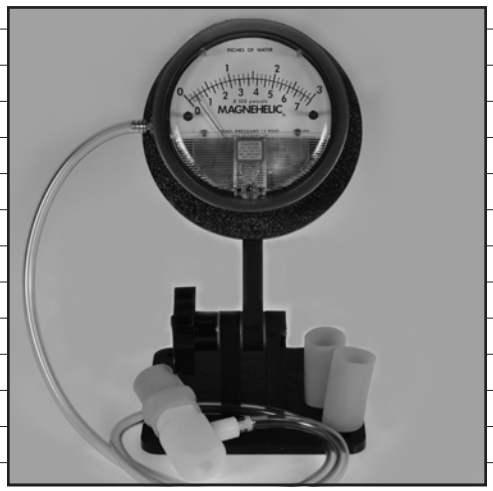
Single Pro Stand With Magnehelic Gauge

The Single Pro Stand with Magnehelic gauge is the industry standard for orally checking regulator cracking effort. It serves as a stand alone instrument, or is an ideal companion to the A.I.R. Flow Analyzer for prechecking cracking effort prior to conducting complete flow tests.

This unit is available with either a dual scale 5-0-5" W.E./12.5-0-12.5 cm W.C. or 0-3 inches" W.C/0-7.62 cm W.C. Magnehelic gauge. The unit is shipped fully assembled and includes the Scuba Tools Inc. band seal mouthpiece adapter assembly.

The Pro Stand can be used free standing or fastened to any horizontal flat surface.

Description	Number	Price
Single Pro Stand, 0-3" W.C/0-7.62 cm W.C. Magnehelic, & Mouthpiece Adapter Assembly	26-325-003	$172.00
Single Pro Stand, 5-0-5" W.C./12.5-0-12.5 cm W.C. Magnehelic, & Mouthpiece Adapter Assembly	26-325-505	$180.00



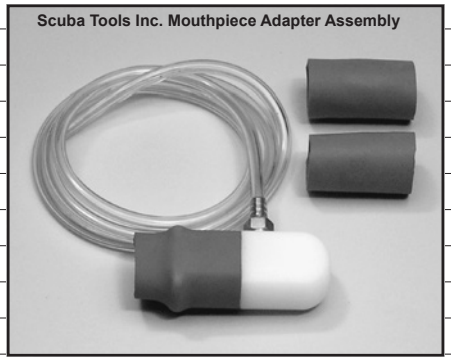
Bare Pro Stands, Gauges, & Accessories

Mouthpiece Adapter & Band Seals

Mouthpiece Adapter: The Scuba Tools Inc. Mouthpiece Adapter utilizes our exclusive latex band seal. This is the only adapter of its kind that provides an "airtight" seal on all diving industry second stages. This assembly is shipped with 3' of vinyl hose, and two spare band seals.

Band Seals: New Band Seals. Higher Quality, Easier To Install, Longer Lasting. Made from a super-soft latex, these new band seals are far superior to the band seals we have offered in the past. The new Band Seals are "amber" in color Ten pack.

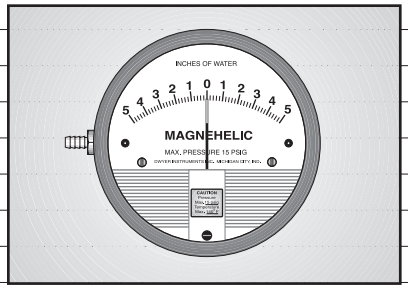
Description	Number	Price
Mouthpiece Adapter Assy.	26-300-400	$22.00
Band Seals, Ten Pack	26-300-450	$13.75

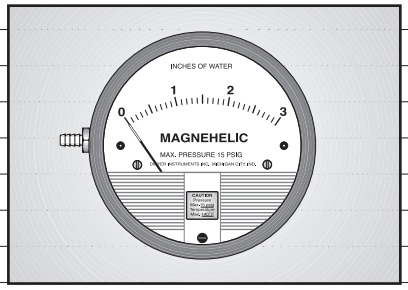

Scuba Tools Inc. Mouthpiece Adapter Assembly


Fresh Band Seals • Amber • Ten Pack

Magnehelic Gauges (Dual Scale) & Mouthpiece Adapter Assy.

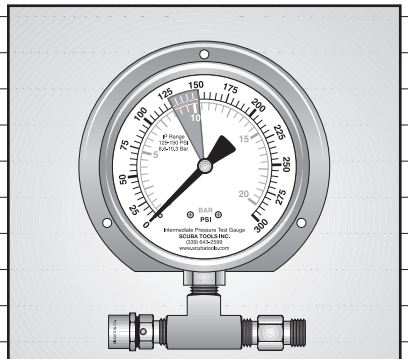
Description	Number	Price
5-0-5" W.C./12.5-0-12.5cm W.C. Magnehelic Gauge & Mouthpiece Adapt. Assy.	79-400-505	$143.00
0-3" W.C/0-7.62 cm W.C. Gauge & Mouthpiece Adapt. Assy.	79-400-003	$135.00





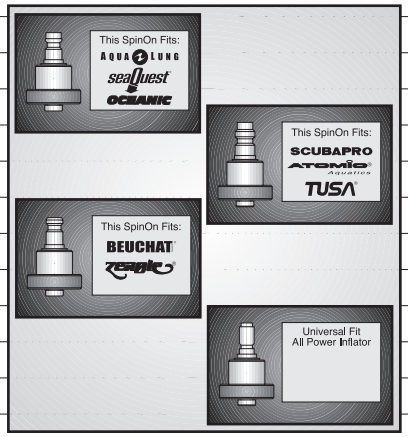
Intermediate Pressure Gauge Assemblies

Description	Number	Price
Scuba Tools Inc. 4" SS Gauge 300psi/20bar Dual Scale ±1% Full Swing, PRV, Tee,& Hose Fitting	79-210-300	$146.00



Individual SpinOns

Description/SpinOn Fits	Number	Price
Aqua Lung,SeaQuest,Oceanic	20-163-102	$16.25
Scubapro, Atomic Aquatics, Tusa	20-163-100	$16.25
Zeagle, Beuchat	20-163-103	$16.25
Power Inflators Universal	20-163-101	$16.25



Dual Drive Inline Adjusting Tool & Adapter

Dual Drive Inline Adjusting tool

The Scuba Tools Inc. Dual Drive™ Adjusting Tool is "light years" ahead of other inline adjusting tools on the market. It is loaded with exclusive features and will fit nearly every second stage that utilizes an adjustable orifice, both new and old. Check out and compare these features:

• **Dual Drive:** The Dual Drive Adjusting Tool is designed to fit "both slotted and hex broached orifices".

The slotted drive bit is machined to index with all slotted orifices. This includes Oceanic® and older orifices that utilize a narrow drive slot (.034").

The hex drive bit will fit all 3/16"-5mm (.188-.197) broached orifices. The bit is machined with a slight taper to accommodate this size range.

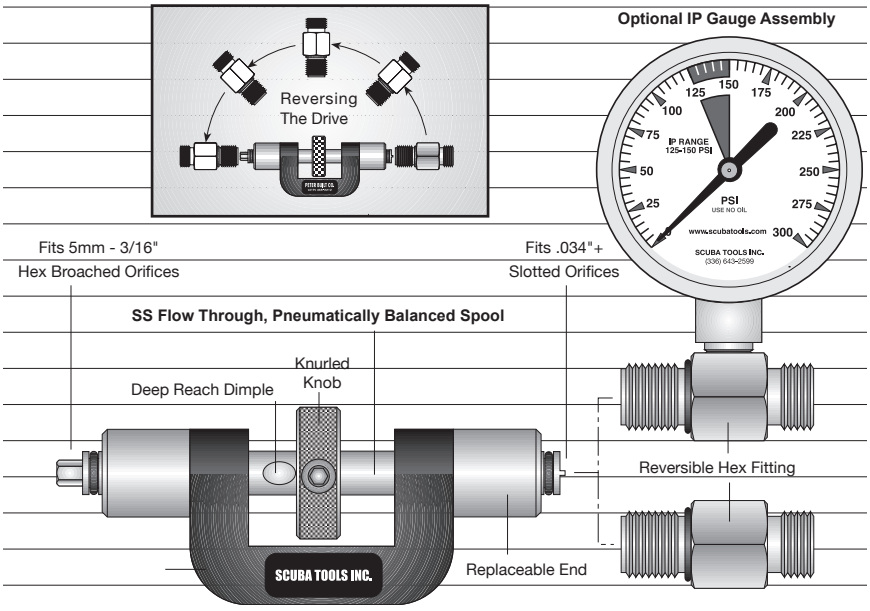
To change the tool from slotted to hex drive, simply reverse the fitting on the end of the tool. Since this fitting seals internally, it is installed "hand tight" and no tools are required to make the conversion (see illustration).

• **Pneumatically Balanced:** The Dual Drive Adjusting Tool utilizes a "flow through" spool. The flow through design balances the air pressure between the hose and the second stage. By equalizing the forces acting on the spool, it can be easily moved in either direction and will remain stationary under pressure. This feature means that when the spool is moved inward, to index the drive bit with the orifice, it will "stay put" without any hand pressure. Eliminating the need to push inward adds a tremendous level of sensitivity and touch when orifice adjustments are made.

Optional IP Gauge: A special IP gauge assembly is available for the Dual Drive Adjusting Tool. This assembly replaces the standard reversing fitting. When the tool is converted from slotted drive to hex drive, the gauge moves with the fitting so that it is always positioned on the end of the tool away from the second stage.

• **Deep Reach Feature:** The knurled knob can be moved off center to allow the "slotted drive end" of the tool to reach deeper orifices. This knob position is seldom required and is used only for second stages such as Aqua Lung Arctic, Genesis Sidekick, and Oceanic Inline Slimline.

Description	Number	Price
Dual Drive Adjusting Tool	20-500-200	$77.00
Optional Gauge Assembly with Dual Scale PSI/Bar	20-510-100	$28.50

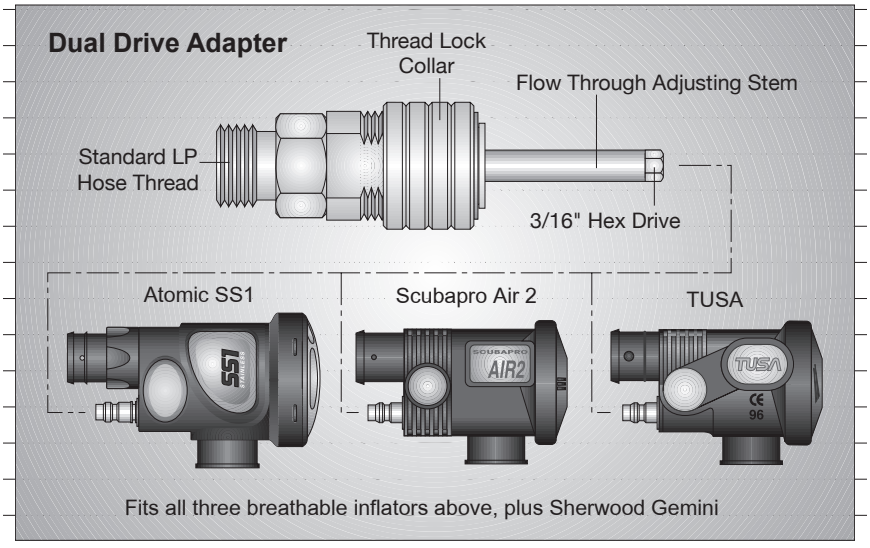


Dual Drive Adapters: SS2, Air 2, Duo Air, Gemini

The Dual Drive Adapter is designed to be used in conjunction with the Dual Drive Adjusting Tool to make final orifice adjustments on three diving industry breathable inflators. The adapter fits the Atomic Aquatic's SS1, Scubapro's Air 2, Tusa's Duo Air, and Sherwood's Gemini.

The Dual Drive Adapter features a deep reach flow through stem that is inserted through the hole in the male connector and indexed with the hex socket in the orifice. The hex drive will fit both 3/16" and 5mm hex configurations. The opposite end of the stem is slotted to fit the drive bit on the Dual Drive Adjusting Tool. The adapter is secured to the male connector with a special thread lock collar to prevent accidental disconnection during adjustment operations. It is important to note that the air must be turned "off" before unlocking the collar and removing the adapter. Not approved for Oxygen use.

Description	Number	Price
Gemini, SS2, Air 2, Duo Air	20-520-100	$46.50
Swivel 180, Gyro	20-860-100	$46.50
Air XS, Air Link	20-850-100	$46.50



Intermediate Pressure Gauges - Hand Held

Pro Technician IP Gauge

The Pro Technician IPG is a heavy duty instrument designed for the rigors of daily use on the repair bench. It is fully pressure protected for testing newly rebuilt first stages.

A special center body is designed to accept the Scuba Tools Inc. IP gauge in the top port, a Kingston pressure release valve in the left port, and a standard LP hose on the right port.

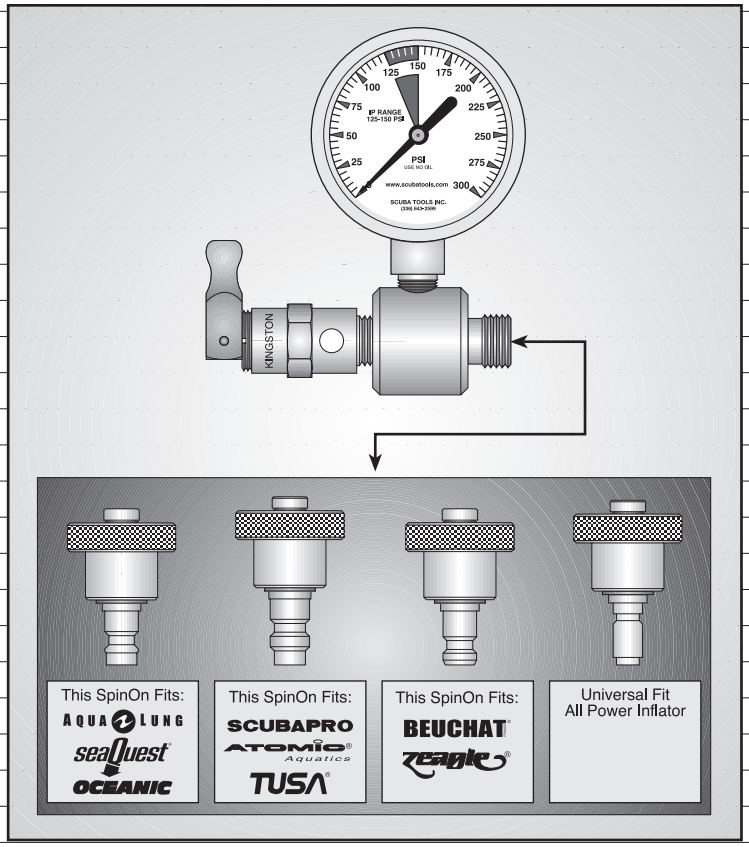
The Kingston valve is rated at 215 scfm flow at 275 psi and incorporates a toggle style line dump to relieve static pressure. The Kingston release valve is factory preset at the above levels, and should not be altered more than ± 10 psi. The valve is fitted with a viton seat to insure a bubble tight seal.

The Pro Technician IPG includes four Scuba Tools Inc. SpinOn adapters that fit virtually every diving industry quick disconnect coupling (see illustration).

The body and SpinOns are custom machined by Scuba Tools Inc. from solid brass and finished with nickel chrome. The Pro Technician IPG and SpinOns can be purchased separately (see below).

Description	Number	Price
Pro Technician IP Gauge With Four SpinOn Adapters	20-165-130	$104.00
Pro Technician IPG Only	20-165-135	$52.50

SpinOn Only, Fits	Number	Price
Aqua Lung, SeaQuest, Oceanic	20-163-102	$16.25
Scubapro, Atomic Aquatics,Tusa, Sherwood	20-163-100	$16.25
Zeagle, Beuchat	20-163-103	$16.25
Universal Power Inflator	20-163-101	$16.25



Dive Master IP Gauge

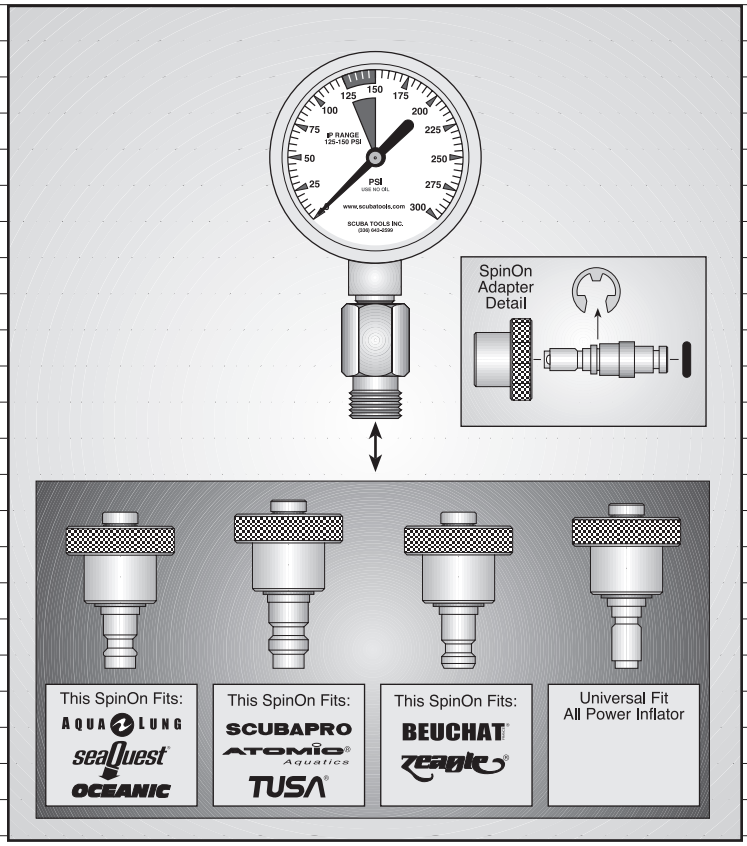
The Dive Master IPG is designed for the dive master or instructor who is in charge of a group of divers and requires multiple connection options.

The Dive Master IPG includes the Scuba Tools Inc. custom gauge with a LP hose adapter installed and four SpinOn adapters. This system allows the IPG to be converted to virtually any primary or secondary low pressure hose connection. The hose adapter and SpinOns are custom machined from solid brass and then nickel chrome plated. The Dive Master IPG and SpinOns can be purchased separately (see below).

Important Note: *The Dive Master IPG is designed to be used only when a second stage is in the air circuit. The second stage serves as an overpressurization valve that will protect low pressure hoses in the event of a major first stage failure. DO NOT attach this gauge to any first stage that is not protected in this manner.*

Description	Number	Price
Dive Master IP Gauge With Four SpinOn Adapters	20-165-120	$83.00
Dive Master IPG Only	20-165-112	$31.50

SpinOn Only, Fits	Number	Price
Aqua Lung, SeaQuest, Oceanic	20-163-102	$16.25
Scubapro, Atomic Aquatics,Tusa	20-163-100	$16.25
Zeagle, Beuchat	20-163-103	$16.25
Universal Power Inflator	20-163-101	$16.25



Intermediate Pressure Gauges - Hand Held

Tech Diver IP Gauges
Not for Oxygen Use

The Tech Diver IPG is designed for the individual diver who monitors the output performance of his own personal regulator. This scenario requires only one connection option selected to match the auxiliary BC hose connection on his regulator.

The Tech Diver IPG is available in five models. The only difference is the adapter installed on the gauge. These variations are illustrated to the right.

Model 20-165-113 fits the Aqua Lung Air Mic, SeaQuest Air Source, and Oceanic XS2 quick disconnect couplers.

Model 20-165-110 fits the Scubapro Air 2, Atomic Aquatics SS1, and the Tusa Duo-Air quick disconnect couplers.

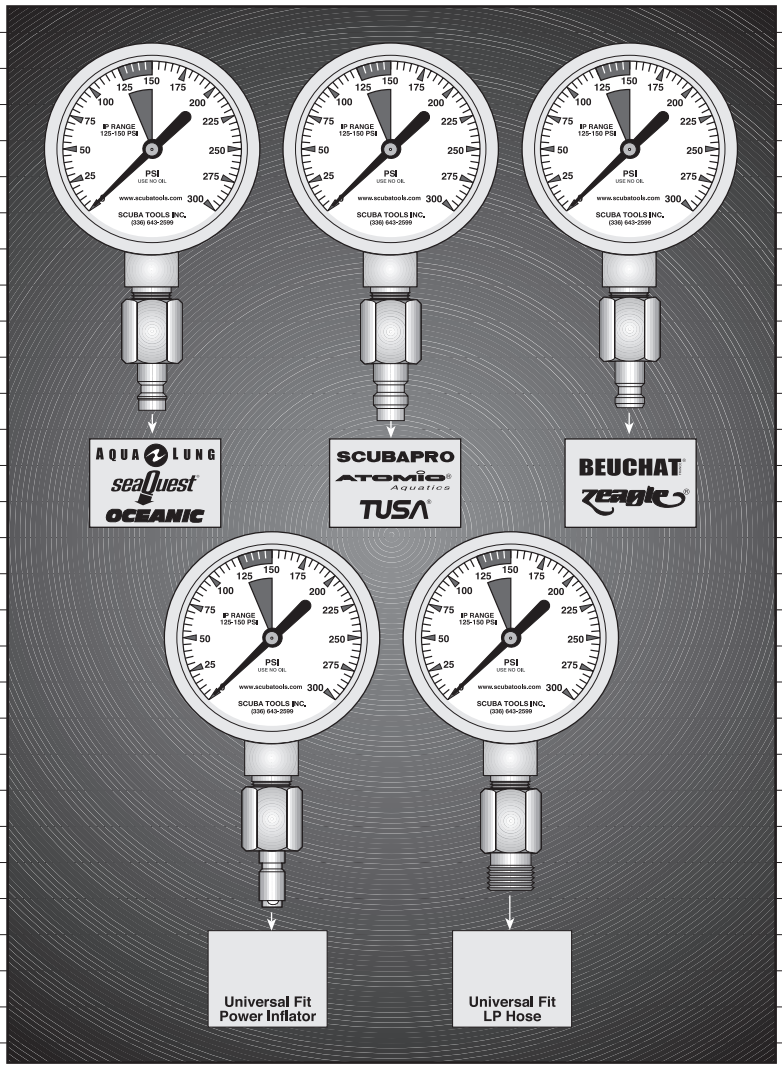
Model 20-165-114 fits the Beuchat Venturi Plus and the Zeagle Octo+ quick disconnect couplers.

Model 20-165-111 fits a standard power inflator quick disconnect coupler. This coupler has undergone design changes during its evolution. As a general rule, all power inflator couplers made within the past 10 years will mate with this adapter.

Model 20-165-112 fits the swivel end fitting of the low pressure hose. This hose fitting has not changed since the beginning of regulator manufacturing in the U.S.A. Even the larger low pressure hoses introduced in the late 1980s will fit this connector.

All three Tech Diver IPG models include the Scuba Tools Inc. custom gauge. The features of this gauge are described below. The adapters are custom machined in-house from solid brass and then nickel chrome plated for durability and appearance. These are accurate, durable, and classy instruments at an affordable price.

IPG Fits:	Number	Price
Aqua Lung, SeaQuest, Oceanic	20-165-113	$31.50
Scubapro, Atomic Aquatics,Tusa	20-165-110	$31.50
Zeagle,Beuchat	20-165-114	$31.50
Universal Inflator	20-165-111	$31.50
Dive Master IPG (LP Hose)	20-165-112	$31.50

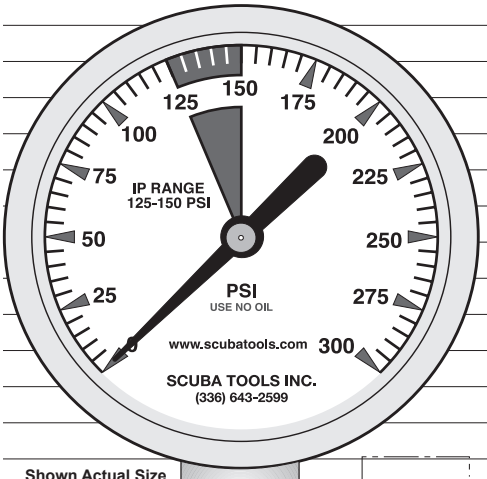


Scuba Tools Inc. IP Gauge
Shown Actual Size

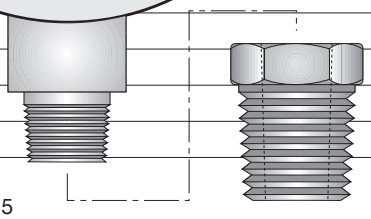
The gauge used in all hand held Scuba Tools Inc. IPGs and the Dual Drive Adjusting Tool is a custom designed instrument specifically engineered for diagnosing first stage intermediate pressure. The accuracy standard has been improved through initial calibration at 140 psi. In addition, each gauge is checked and recalibrated, if necessary, to 2% (±6 psi) within the IP red zone. The large dial face is easy to read and interpret at a glance.

The brass mount is a standard 1/8" NPTM thread, and all gauges shipped as "gauge only" are packaged with an 1/8" NPTF-1/4" NPT(M) bushing to expand the mounting options. For additional information see "Gauge Specifications" to the right of the illustration.

Description	Number	Price
Scuba Tools Inc. Pressure Ga. with 1/8" NPTF - 1/4" NPTM Bushing Adapter	79-201-000	$28.00



Shown Actual Size



Gauge Specifications:

Size	2.25"
Range	0-300 psi
Accuracy	3-2-3 Class B
Major Marks	25 psi
Minor Marks	5 psi
IP Zone	125-150 psi
Case	Brass
Tube	Bronze
Socket	Brass
Lens	Knurled Acrylic
Mount	1/8" NPT

Not for Oxygen use!

"Jaws" Grip Master Bench Vise

"Specifically designed for the diving repair bench."

The vise is a Heinrich Grip Master Vise that features a cam operated clamping device that was originally patented by Heinrich in 1946. This lever operated mechanism is time "tested tough" and produces an adjustable holding pressure of 400-1100 lbs. A simple push or pull on the center bar knob slides the movable jaw in position, and an easy press on the locking lever cams the jaw forward to securely hold the part. The total amount of clamping force is determined by the force applied to the locking lever.

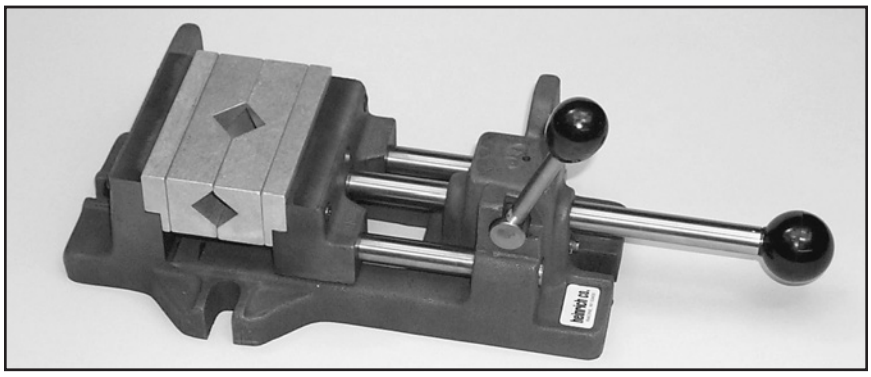
There are several reasons why this type of vise is the best for the diving repair bench. First, the clamping force is easy to control which helps to eliminate overtightening delicate parts. Second, the entire clamping and unclamping process is fast and accommodates a variety of different size parts quickly and conveniently. Third, the overall design of the vise is compatible to a variety of special soft jaws and fixtures that can be retro fitted in the vise for special clamping problems.

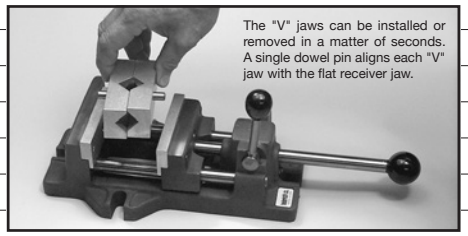
The frame of the Grip Master Vise is made from fine grain cast iron and all bars and locking components are hardened and ground. The total weight of the vise is 20 lbs. and it is built for years of trouble free service.

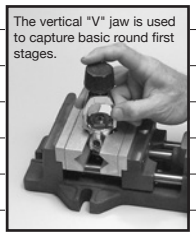
The soft jaw system included with this vise is a Scuba Tools Inc. exclusive. The jaws are designed to handle 90% of all clamping problems that cross the diving repair bench. They consist of two sets of jaws that work together. Both sets are made of alloy aluminum that have been vibratory finished to eliminate all sharp corners.

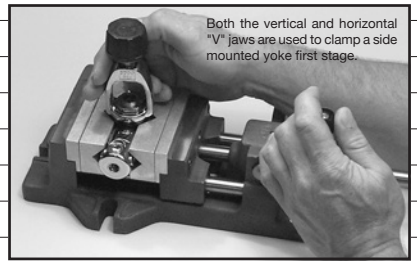
The "receiver jaws" are bolted to the vise and function as flat jaws. They are used to clamp parts that have at least two parallel surfaces.

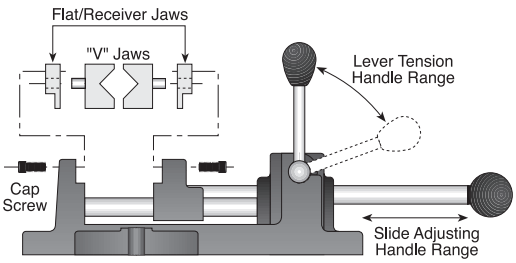
The "V Jaws" are designed to be "quick change" and are pinned to the receiver jaws with a steel dowel pin. The "V Jaws" are used for clamping round or irregular objects such as first stages.

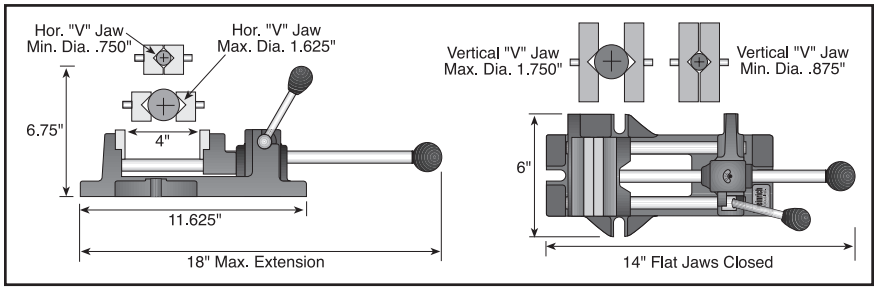












Ordering Note: *The Grip Master Vice and jaw sets are sold separately. If you are ordering the vice and complete jaw system, please include all three numbers below.*

Description	Number	Price
Grip Master Vise Only	13-100-500	$243.50
Receiver Jaw Set (2)	13-110-200	$20.25
"V" Jaw Set (2)	13-120-200	$24.50

Tips For Using This Vise System

The primary problem with any vise used to clamp delicate parts is "overtightening**"**. The appropriate tension is critical to reducing the probability of damaging parts or scratching chrome plated surfaces. This vise gives the operator the maximum "touch" for controlling the clamping pressure. The actual security of the captured part is more relative to the shape of the jaws, and how they conform to the part, than the actual clamping force. If the part fits securely in the jaws, the clamping force can be reduced to a minimum.

As a general rule, first stages come in two basic shapes. This configuration is primarily based on the position of the yoke (i.e. inline yoke and side yoke). The roundness of the body will depend on the fabricating process used to manufacture the part. Machined bodies will be perfectly round, and forged bodies may have irregularities in regard to parallel surfaces.

The side mounted yoke first stage presents the least problem in regard to clamping. The "L" shape and orientation of the yoke nut allows this type of first stage to be securely captured in the vise with minimal clamping force.

The inline yoke first stage is a bit more difficult to clamp because it will tend to rotate in the "V" jaw when force is applied to remove the yoke nut. The best procedure is to thread a First Stage Handle into one of the LP or HP ports to form a stiff leg that can rest against the horizontal "V" jaw. This restricts the rotational movement to the point where the First Stage Handle contacts the "V" jaw in both tightening and loosening directions.

Crest Ultrasonic Cleaner

"Tru-Sweep" Eliminates Hot Spots

3 Quart Ultrasonic Cleaner
With Heater & Timer

Ultrasonic cleaning is one of the most highly effective and efficient methods for cleaning regulator parts. For over 30 years, Crest technology has been used in industrial and biochemical cleaning systems. Now the same high performance has been applied to a bench top cleaner. The full wave 38.5 kHz industrial transducers provide greater cleaning power and reliability compared to conventional wafer type transducers. Crest's exclusive Tru-Sweep feature ensures uniform cleaning throughout the tank by sweeping the ultrasonic frequency +2 kHz, creating overlapping ultrasonic waves.

The unit pictured to the right has a 3+ quart cleaning tank volume. The inside tank dimensions are 9 1/4" x 5 1/4" x 4" deep, and the sonic power is rated at a whopping 270 watts. This cleaner comes complete with a 0-30 minute timer, and an ambient to 80^0 C thermostatically controlled heater. The tank, lid, and outer case are all stainless steel construction, and the unit is warranted by Crest for two years. This cleaner meets all FCC requirements and is approved by ETL/CSA. Electrical specifications: 117/120 Volts, 50/60 Hz, 3 Amps.

The parts' basket is all stainless steel with a perforated bottom. Basket sold separately.

Description	Number	Price
Crest Ultrasonic Cleaner	10-400-500	$892.50
Basket, Stainless Steel	10-450-500	$167.00

Stereoscopic Microscope - 10X & 30X Magnification

Stereoscopic microscopes are used for viewing solid three dimensional objects at low magnification. They provide an upright, unreversed image which permits easy manipulation of the object being viewed.

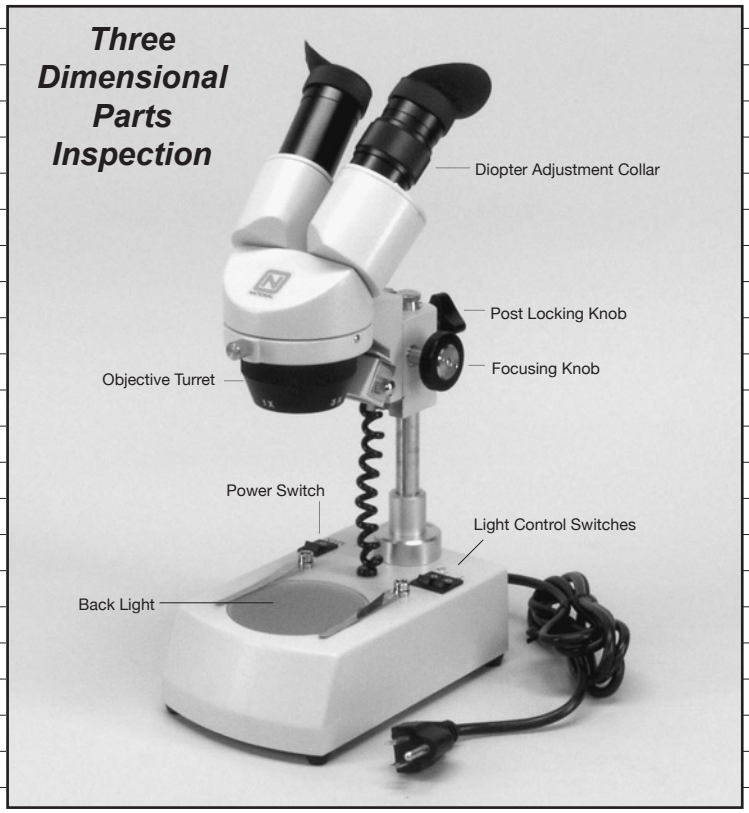
This microscope has two magnification levels: 10x and 30x. The magnification is changed by rotating the objective turret on the head of the microscope. The diopter eyepieces are individually adjustable to the eyesight of the operator. The working distance under the lens is 3 inches with a maximum part height of 2 3/8". Lighting is provided on both the top (front lighting) , as well as below (back lighting). The lights can be use independently or at the same time.

On the diving repair bench, it is often difficult to see minor imperfections on orifices, seats, pistons, etc. with the naked eye. With the dual lighting feature on this stereoscopic microscope, both internal (bore) and external inspection of critical parts is easily accommodated.

All in all, this microscope is just the right size and magnification for close-up parts inspection on the diving repair bench. We have used this instrument at Scuba Tools Inc. for years, and we are absolutely satisfied with its overall versatility and quality.

This stereoscopic microscope carries a limited 5 year warranty from National Optical & Scientific Instrument Inc., San Antonio, Texas. This warranty does not cover bulbs or fuses.

Description	Number	Price
Stereoscopic Microscope	10-500-500	$323.00



Dial Torque Wrench & "Boss" ™

3/8" Drive Dial Torque Wrench

0-300 In. Lbs. • 0-25 Ft. Lbs • 0-35 Nm

Our search for the ideal torque wrench for the diving repair bench is over! The torque range of 0-300 In. Lbs. is ideal and covers torque requirements from second stage diaphragm covers to yoke and Din assemblies.

The dial type torque wrench is arguably the most accurate torque wrench design. It is certainly the easiest and most efficient to use. The 3/8" square drive fits all standard tool industry sockets, extensions, and adapters.

The laser marked dial is divided into two 180^0 segments. One side is 0-300 in. lbs. and the other side is 0-35 Nm. The dial can be rotated to position either scale calibration on both sides of center. This torque wrench is equally accurate for tensioning components in both right and left hand torque operations. The accuracy is ±3% (60-300 in. lbs.).

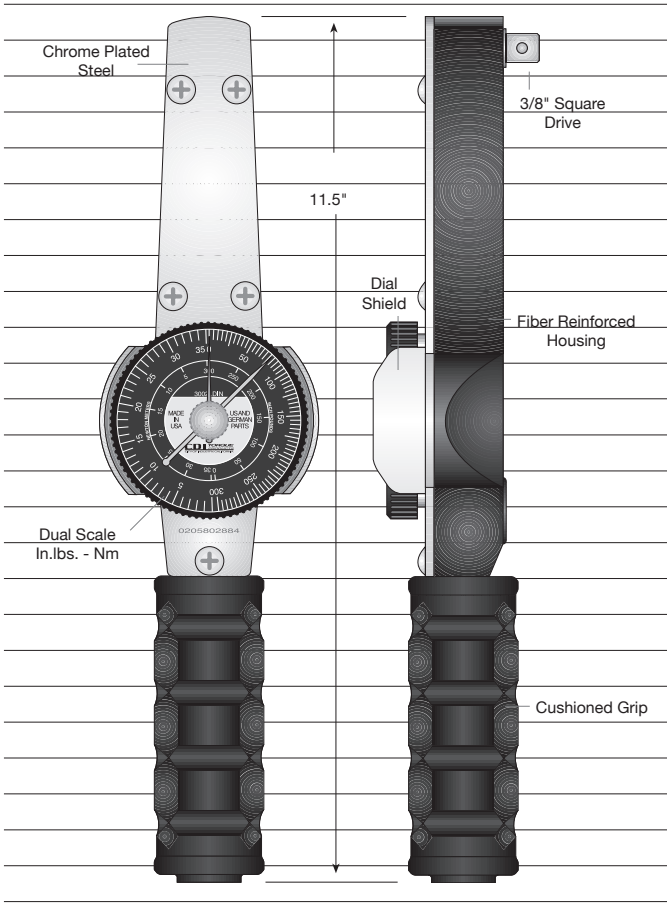
Every wrench is tested individually and a Certificate of Calibration is included. The accuracy standard can be traced to the National Institute of Standards and Technology (NIST).

One of the main advantages of a dial type torque wrench is that it can be setup in a matter of seconds. Simply "zero out" the calibration scale to be used, and position the follower needle to zero. When torque is applied and then released, the follower needle remains at the highest torque reached. This "tattletale" feature provides absolute verification of each torque operation.

In addition to setup simplicity, hitting the exact torque target is easy. By watching the needle approach the desired torque level, it is easy to stop the progression at the precise moment the follower needle hits the target. This analog method is by far the most accurate and consistent means of repeatedly achieving accurate torque levels.

This torque wrench is very durable and will provide years of dependable service with minimal care. Shipped with a fitted foam core storage case.

Description	Number	Price
3/8" Drive Dial Torque Wrench	79-600-700	$194.00



"Boss"™ Hose Protector Installation Fixture

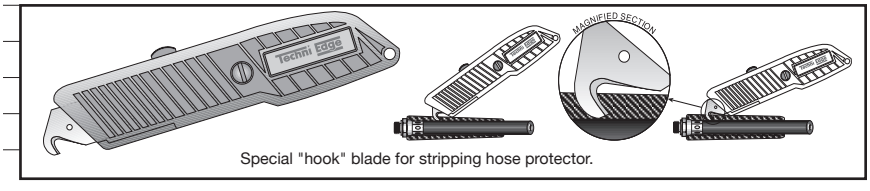
New with Stainless Steel Draw Bars

The Boss™ reduces the "pain in the wrist" job of installing hose protectors to an easy pull of the handle. This classy bench/wall fixture is designed with two stainless steel draw tubes to fit both standard HP and standard LP hose threads. Simply slide the hose protector onto the tube, thread the hose to the end of tube, and pull the handle. "The Boss" mounts either horizontally on a bench, or vertically on a wall stud. When it is not in use, the unit collapses to a 1" high profile. Built to last.

"Stripper" Knife

The Stripper Knife cuts through the thickest hose protector like butter. We searched the utility knife market until we found the best handle and correct blade profile to easily and safely do the job of cutting off old hose protectors without damaging the hose. Extra hook blades are packaged 10 to a pack.

Description	Number	Price
Boss Hose Protector Fixture	20-190-200	$82.00
3/8" Replacement SST Draw Bar	20-190-204	$11.50
7/16" Replacement SST Draw Bar	20-190-205	$11.50
Stripper Knife & Blades	14-100-500	$11.50
Replacement Blades (10)	14-110-500	$7.00



Special "hook" blade for stripping hose protector.

Slotted Cap Driver, HP Seat Tool, & Dial Calipers

Slotted Cap Driver

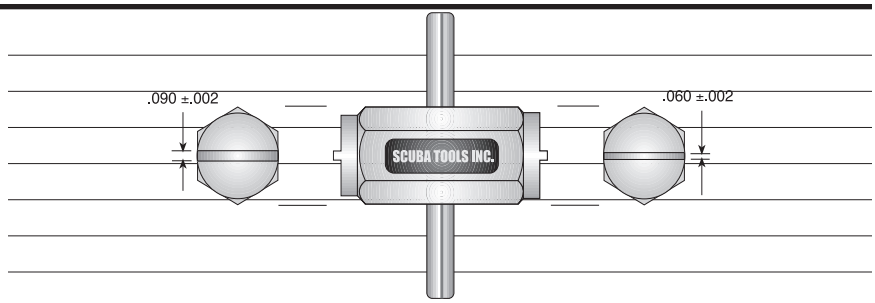
In response to many requests, we have designed a tool for removing/installing first stage caps that utilize a wide drive slot.

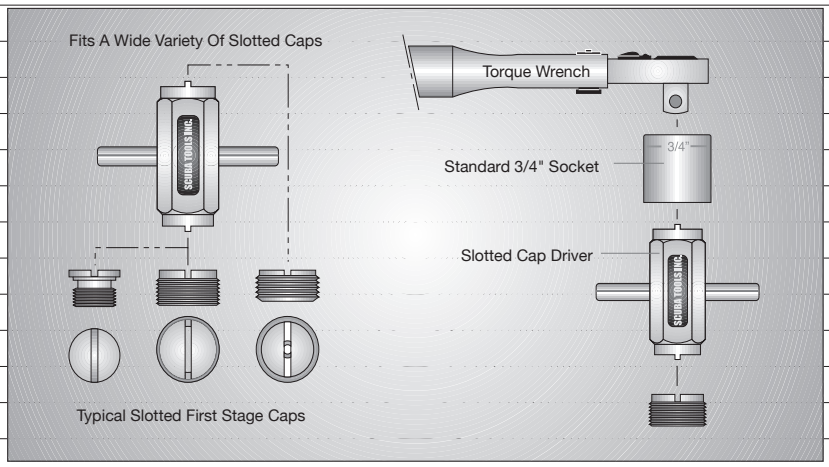
The Slotted Cap Driver has two drive blades of different widths located on opposite ends of the tool (.090" & .060" ± .002"). These two blade widths provide almost universal fit for all slotted caps from 1967 - 2004. The best procedure for selecting the blade is to always use the widest possible blade that will fit the cap. This method provides the most secure hold on the cap, and helps to prevent cap damage.

The Slotted Cap Driver can also be used to precisely torque the cap. The tool body is machined from 3/4" hex stock. A standard 3/4" socket can be installed over the hex body, allowing the use of a torque wrench during assembly (see second illustration).

The tool is made from 1018 cold roll steel that is nickel chrome plated. A SS tension pin is incorporated as a cross tee to aid in turning the tool by hand. Shipped with a reversible protective cap to cushion the sharp edges of the tool while in use.

Description	Number	Price
Slotted Cap Driver	20-159-500	$26.25





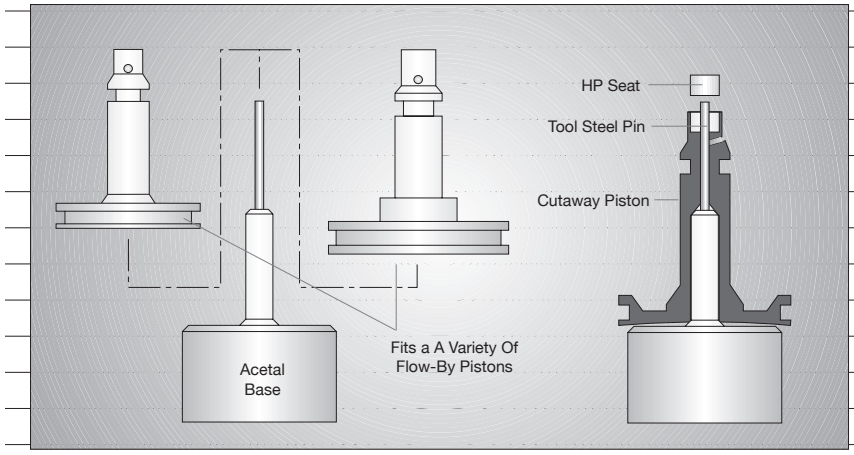
HP Seat Removal Tool

Fits Scubapro, Sherwood, & Genesis Pistons

The HP Seat Removal Tool provides an easy method for pushing the high pressure seat out of the end of flow-by pistons. The tool is used by simply placing the piston over the pin and pressing downward on the piston. This action forces the seat out of the recess in the end of the piston (see cutaway illustration).

The tool fits a variety of both vintage and new pistons that use this method of retaining the HP seat. The base of the tool is machined from acetal rod and the .055" diameter pin is hardened tool steel.

Description	Number	Price
HP Seat Removal Tool	20-141-400	$15.25

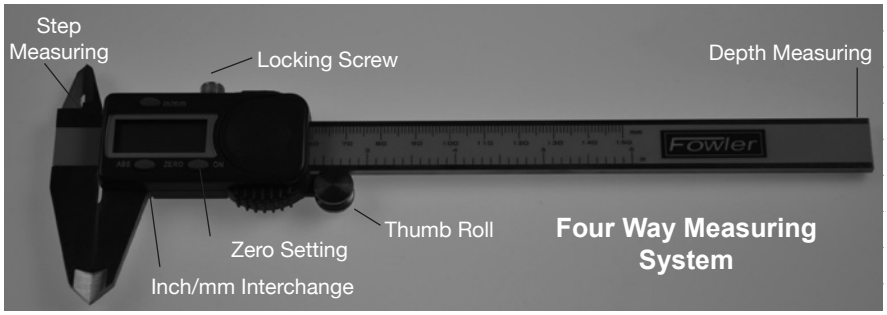


Digital inch/mm Calipers

The digital calipers illustrated to the right are an exceptional value and provide both durability and accuracy. The frames are made from hardened stainless steel, and our standards tests indicate that the accuracy is well within 0.001" and .025mm.

Digital calipers can be used to make measurements on four different parameters. The large jaws at the bottom are used to measure outside, the pointed jaws at the top can be inserted inside a hole to determine internal diameter, the slide extension on the far right end is used to measure depth, and the slide on the far left can be used to measure a step. Display can be re-zeroed and changed from inches to millimeters. These calipers are shipped with instructions in a fitted case.

Description	Number	Price
Dial Calipers	79-500-500	$42.50



First Stage Handles & Accessories

First Stage Handles
2 Models Available

The Scuba Tools Inc. First Stage Handles are designed to be used in conjunction with all diving industry first stages. When this tool is threaded into a HP or LP port, it forms a solid handle allowing easy removal/replacement of yoke nuts, piston caps, and swivel retainers. The stainless steel cross tee provides a leverage point for tightening and loosening the handle. The threaded ends are stainless steel, socket, set screws which can be replaced if damaged. There are two first stage handle models available:

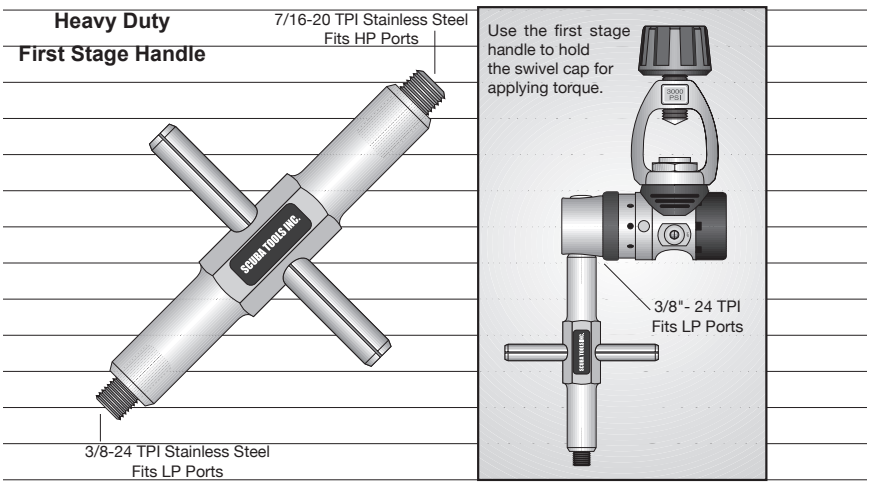
The **Heavy Duty** model is designed for the rigors of daily use on the repair bench. The flats in the center portion allow the handle to be captured in a bench vise to form an assembly post. This eliminates the necessity of clamping the regulator or regulator parts directly in the vise.

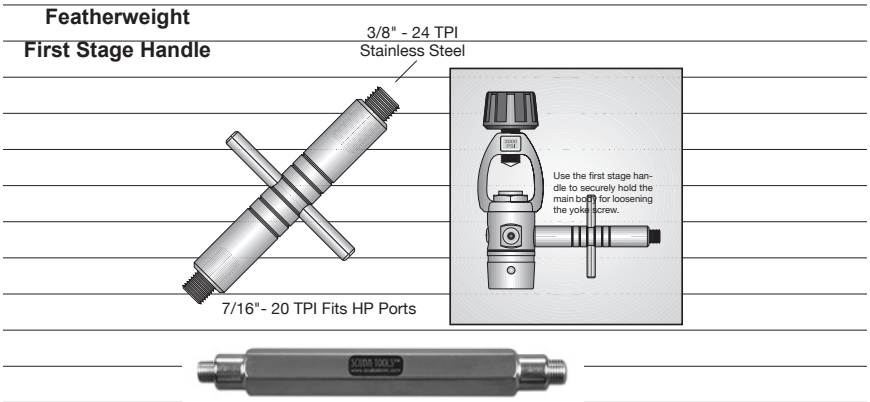
The **Featherweight** model is specifically designed for diving travel tool kits where a bench vice is seldom available. The total weight of this handle has been reduced to 2.5 ounces without compromising the overall strength (see specifications for additional information on both models).

Model	Heavy Duty	Featherweight
Body Material	Brass, Hex Cntr.	Aluminum, Rd.
Overall Length	5.187"	4.187"
Total Weight	9.25 oz.	2.5 oz.
Cross Tee	SS Tension Pin	SS Tension Pin
Small Set Screw	SS 3/8"-24 TPI	SS 3/8"-24 TPI
Large Set Screw	SS 7/16"-20 TPI	SS 7/16"-20 TPI
Body Finish	Nickel/Chrome	Natural Aluminum

Description	Number	Price
Heavy Duty 1st Stage Handle	20-115-100	$35.75
Featherweight 1st Stage Handle	20-116-200	$26.00

Description	Number	Price
Vise Handle - Brass Chrome Plated	20-114-100	$32.50





HP QDC Boot Tool

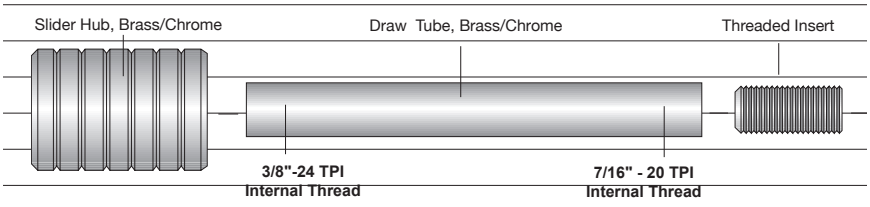
This tool is used in conjuncition with the "Boss Hose Protector Installation Tool" or the Manual handheld hose protector installation tool. This Kit contains the H.P hose male QDC adapter that simply quick connects into your Female QDC hose end. The plastic slider is used to pull the boot from the hose QDC.

Description	Number	Price
HP QDC Boot Tool	20-815-100	$19.00

Hose Protector Installation Tool

The Hose Protector Installation Tool is designed to be used in conjunction with the first stage handle (see above). It simplifies the installation of hose protectors on both low and high pressure hoses, and provides an easy method of pulling the HP hose through the hole in the instrument console.

Description	Number	Price
Hose Protector Installation Tool	20-120-100	$26.00



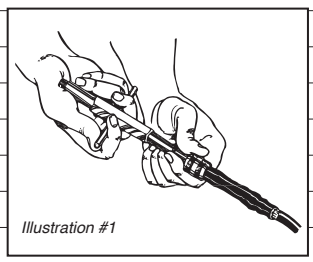


Illustration #1

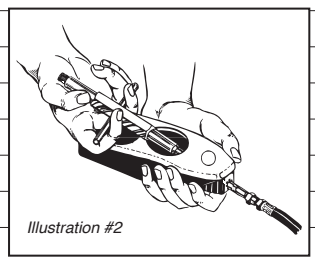


Illustration #2

Illustration #1: Hose protectors can be installed on both high and low pressure hoses by threading the tool onto the appropriate end of the first stage handle.

Illustration #2: The HP hose can easily be pulled through the hole in the instrument console by using the threaded insert to attach the HP hose swivel fitting to the end of the draw tube.

Universal Hand Tools

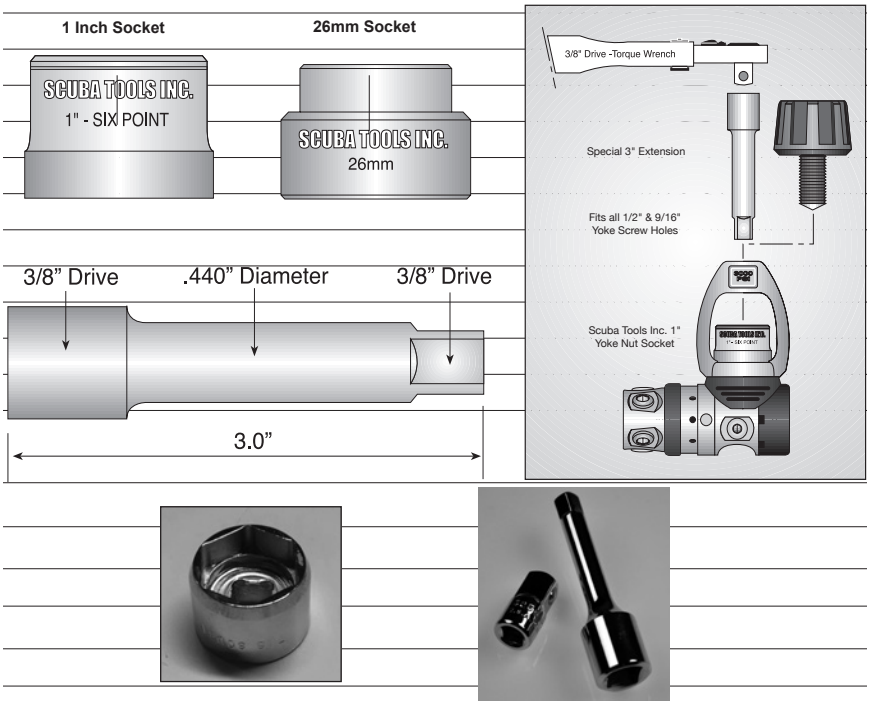
At Scuba Tools Inc., we manufacture two custom yoke nut sockets and a custom 3/8" drive extension. These tools allow the technician to accurately torque yoke nuts on most first stages.

The sockets are available in two sizes: 1 inch and 26 mm. Both sockets are manufactured specifically to fit inside the yoke and over the yoke nut (see illustration far right). These sockets incorporate a six point hex socket and a 3/8" square drive. They are machined from chrome moly and heat treated for maximum strength. The finished socket is nickel chrome plated for durability and appearance. Due to the reduced wall thickness, the maximum applied torque should not exceed 50 foot pounds.

The 3/8" drive extension has a reduced shank diameter and will fit through all 1/2" and 9/16" yoke screw holes. The extension is heat treated and nickel chrome plated. Sockets and extension sold separately.

Description	Number	Price
1" Yoke Nut Socket	20-155-500	$23.50
26mm Yoke Nut Socket	20-158-500	$23.50
7/8" Yoke Nut Socket (Zeagle)	20-154-500	$23.50
3" x 3/8 Drive Extension	20-156-500	$9.75
Extension & Adapter	20-153-500	$26.75
Oceanic FDXI & Hollis DC7		
25mm Yoke Nut Socket (Mares)	20-152-500	$23.50

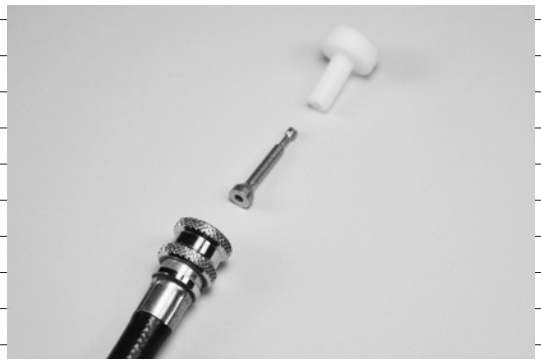
Yoke Nut Sockets - 3/8" Drive Extension



Universal LP Hose O'ring Tool

This tool assits the technician in replacing the o'ring in the universal female QDC.

Description	Number	Price
Universal LP Hose O'ring Tool	20-300-400	$14.50



First Stage Bench Plug Set

First stage plug set. 2 HP, 3 LP.

These plugs make bench work fast and easy.

Eliminating the need for a hex key during service.

Description	Number	Price
Bench Plugs	20-162-100	$42.00

Universal Hand Tools

Breaker Bar

The Scuba Tools Inc. Breaker Bar will allow the 1" Yoke Nut Socket to be used on older yokes that utilize the smaller 3/8" yoke screw. On these first stages, an extension will not pass through the yoke screw hole.

Place the Yoke Nut Socket (see above) on the yoke nut. Insert the Breaker Bar through the yoke, and index the 3/8" square drive bit into the socket. The yoke screw can be used to hold the Breaker Bar and Yoke Nut Socket firmly in place while the yoke nut is loosened (see photo, right).

The Scuba Tools Inc. Breaker Bar is machined from cold roll steel. The 3/8" square chromite drive bit is TIG welded into the center of the bar. The final assembly is nickel chrome plated for long term appearance and corrosion resistance.

This tool is not designed for measuring the torque requirements for 1" yoke nuts. Do not overtighten yoke nuts! Thread failure can cause the yoke nut to break and release under pressure.

Description	Number	Price
Breaker Bar	20-157-500	$28.00

D.I.N. Retainer Tool

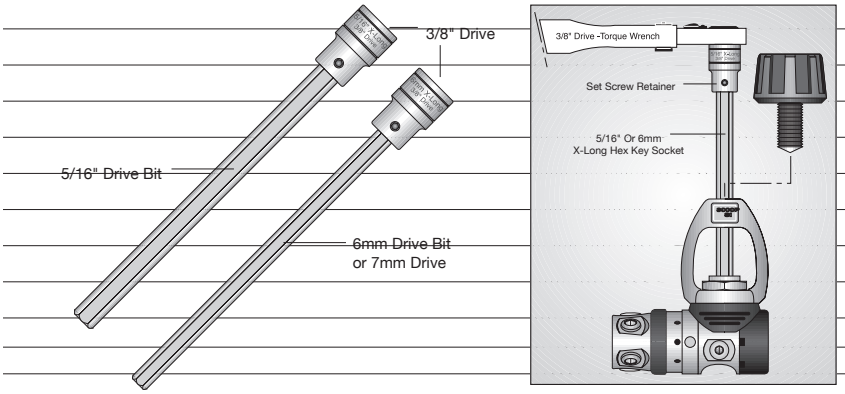
This New tool is great for saving first stage bodies. When the DIN retainer bolt is stuck fast and the hex wrench splits the side of the D.I.N. retainer you can now remove the DIN retainer in order to salvage the rest of the First stage body.

Description	Number	Price
D.I.N Retainer Tool	20-170-100	$32.50

5/16" & 6mm X-Long Hex Key Sockets

Some regulator manufacturers are internally broaching the yoke nut to provide an additional method of removing/installing this part. The majority of these first stages utilizes a 5/16" or 6mm hex socket inside the yoke nut. To reach the socket, via the yoke screw hole, an X-long hex bit is required. The tools illustrated to the right have a hex key that measures a full 5" below the drive head. This tool fits a standard 3/8" drive ratchet handle or torque wrench.

Description	Number	Price
X-Long 5/16" Hex Key Socket	16-090-500	$20.50
X-Long 6mm Hex Key Socket	16-080-500	$19.50
X-Long 7mm Hex Key Socket	16-081-500	$19.50

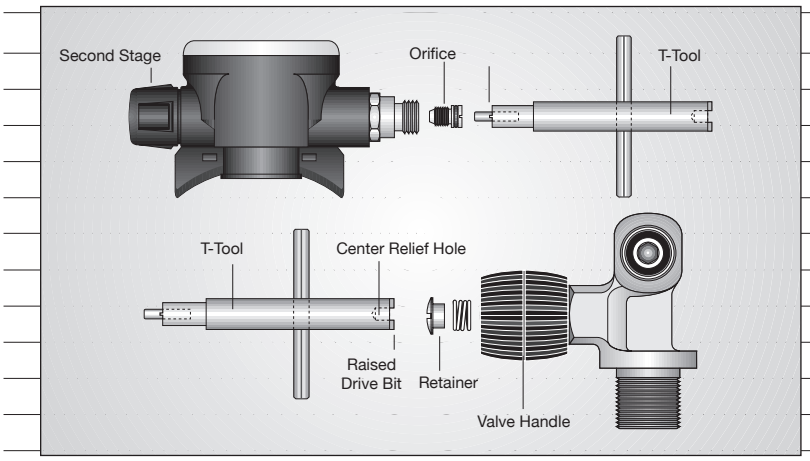


Orifice/Valve T-Handle

The Orifice/Valve T-Handle is used to install/remove the standard slotted orifice used in most diving industry second stages (see top drawing). The tool body is machined from stainless steel and a dowel pin is pressed into the driver end to hold the orifice stable while it is being installed. The cross tee handle is a stainless steel tension pin. This orifice tool eliminates the problem of scratching the internal o'ring land of the regulator air barrel. The machined shoulder above the driver bit fits the internal bore of the air barrel (.370") providing the proper alignment while the driver is engaged with the orifice.

The opposite end of the tool has a raised drive bit that fits most diving industry valve handle retainers (see bottom drawing). A relief hole is drilled in the center of the drive bit to bridge over any protrusion of the threaded valve seat stem.

Description	Number	Price
Orifice/Valve T-Handle	20-310-500	$26.00



Universal Hand Tools

Tools that make the bench versatile.

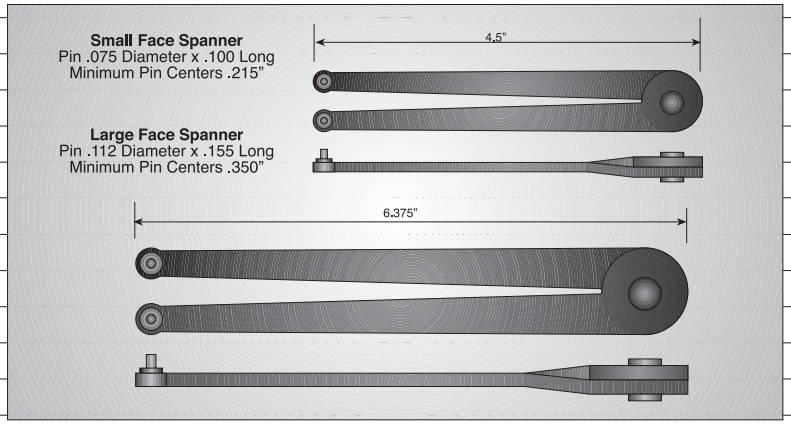
Adjustable Face Spanners - Two Sizes

Face spanners can be used for a variety of different repair bench operations. The most common application is to remove and install first stage caps that have two or more perimeter holes. They can also be used for removing second stage covers where no special tool is available.

The two face spanners illustrated to the right are the sizes most requested. The diameter of the pin and minimum pin spread are the most important selection features. This information, as well as overall length, is listed in the illustration.

These spanners are anodized steel with swagged tool steel pins. The pins are permanent and can not be replaced.

Description	Number	Price
Small Face Spanner	16-075-500	$22.50
Large Face Spanner	16-077-500	$23.50



Custom Face Spanner w/replaceable pins

Scuba Tools Custom Face Spanner utilizes Scuba Tools' replaceable set screw pins. This is the preferred tool for use on the Scubapro Air2 5th generation. The replaceable pins for this face spanner are interchangeable with the pins for Scuba Tools' Hook Spanners

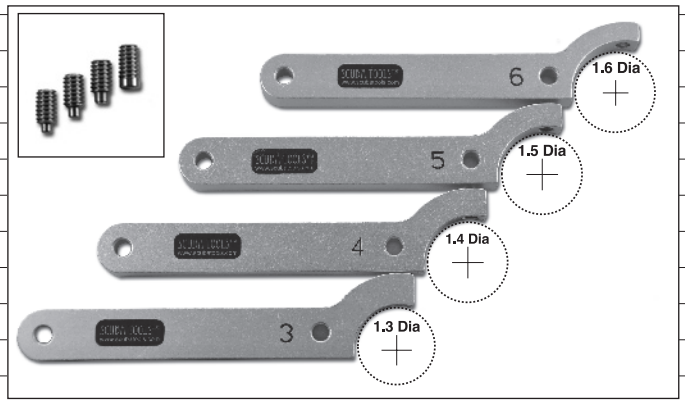
Description	Number	Price
Custom Face Spanner w/ replaceable pins	16-078-500	$35.75

Hook Spanners

A Hook Spanner set that fits everything? That's right! Well, at least we have not found any first stage that these wrenches won't fit. The set includes a progressive diameter range from 1.3" - 1.6" by .100" increments. The wrenches are numbered based on the diameter of the arc. The set includes 4 different diameter inter changeable stainless steel pins, and the body of the wrench is machined from 3/8" thick aluminum alloy. This combination produces a strong mar resistant tool that is easy on the hands and a pleasure to use.

Picking the right wrench (#3 -#6) for the job is a simple matter of using the one that is just slightly smaller than the diameter of the first stage body. This procedure allows the wrench to contact the body in two places, at the pin and the heel of the crescent. These two points are located more than 90^0 apart causing the spanner to lock firmly against the first stage body. This feature reduces the possibility of slipping out of the hole and scratching the first stage.

In addition to the set, each spanner can be purchased separately. See below.



Description	Number	Price
Set Of 4 Hook Spanner (Includes set of 4 Pins)	20-410-200	$62.50
#3 Hook Spanner (Pins sold separately)	20-403-200	$16.25
#4 Hook Spanner (Pins sold separately)	20-404-200	$16.25
#5 Hook Spanner (Pins sold separately)	20-405-200	$16.25
#6 Hook Spanner (Pins sold separately)	20-406-200	$16.25

Description	Number	Price
Set Of 4 Pins	20-420-500	$8.00
.125, .140, .156, .240 (does not include .095 or .066 pin)		
.066 dia. Pin	20-420-066	$2.00
.095 dia. Pin	20-420-095	$2.00
.125 dia. Pin	20-420-125	$2.00
.140 dia. Pin	20-420-140	$2.00
.156 dia. Pin	20-420-156	$2.00
.240 dia. Pin	20-420-240	$2.00

Description	Number	Price
Pin Spanner (AT30) - 6.5" long w/.150 dia.	20-244-500	$22.50
Pin Spanner - 4.25" long w/.090 dia.	20-411-500	$22.00

Universal Hand Tools

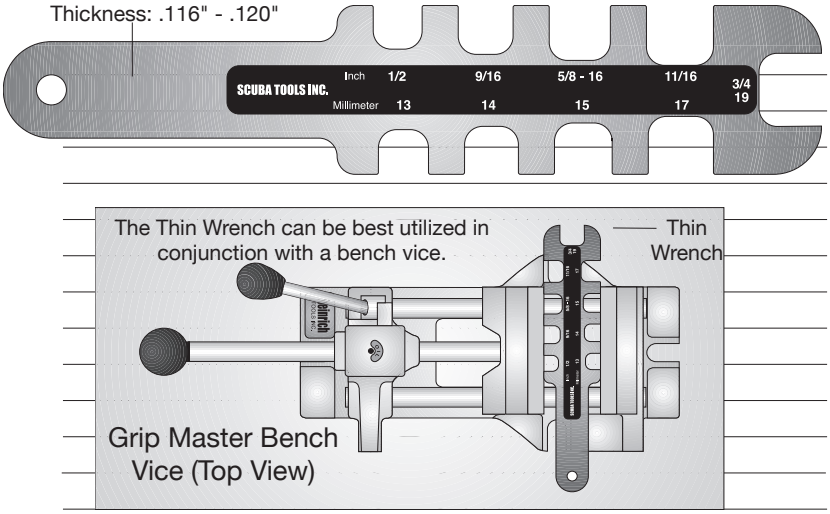
Thin Wrench™ - Less Than 1/8" Thick

Maximum Torque not to exceed 35 Ft. Lbs.

Some regulator and instrument manufacturers utilize a thin hex nut to lock components in place. These nuts are sometimes called "half" or "jam nuts". Standard wrenches are often too thick to capture these reduced thickness nuts. Enter Thin Wrench™! This tool is machined from 10 gauge (about 1/8") 4130 steel with an Electroless Nickel finish. It incorporates a series of slots that are sized to fit both inch and metric hex jam nuts (top illustration). The best approach, to using this wrench, is to clamp the Thin Wrench in a bench vice with the appropriate slot slightly exposed beyond the vice jaws. Slide the jam nut completely into the slot and use a standard wrench to loosen the full thickness nut.

Note: The thin profile reduces the strength of the tool. Torque values greater than 35 ft. lbs. will likely distort the wrench slot or round off the corners of the nut.

Description	Number	Price
Thin Wrench	20-100-500	$27.50



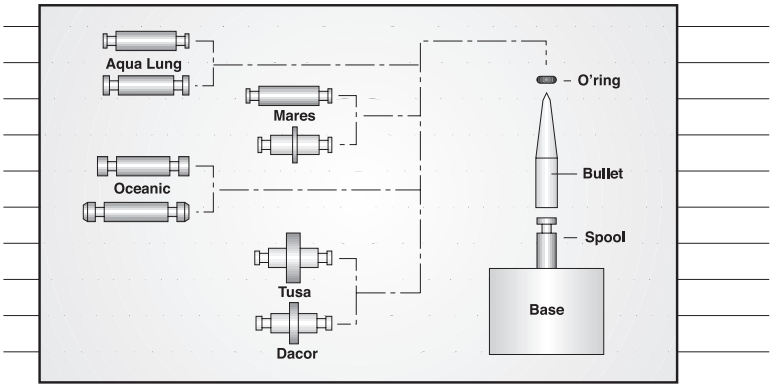
Universal HP Restrictor Bullet O'ring Kit

This o'ring bullet kit is used to aid in the installation of the o'rings onto the HP hose restrictor. The restrictor is used to seal the HP hose to a submersible pressure gauge, instrument console, or computer.

The kit includes a base for holding the restrictor vertical in a stable position. The bullet is then installed over the groove in the restrictor. The lubricated o'ring is installed onto the main shaft and then rolled into the groove after the bullet has been removed.

The bullet will fit a large majority of the HP restrictors used in the diving industry. The illustration shows the restrictors we tested during development. The bullet may also fit additional HP restrictor variations.

Description	Number	Price
HP Restrictor Bullet & Base	20-144-400	$13.00

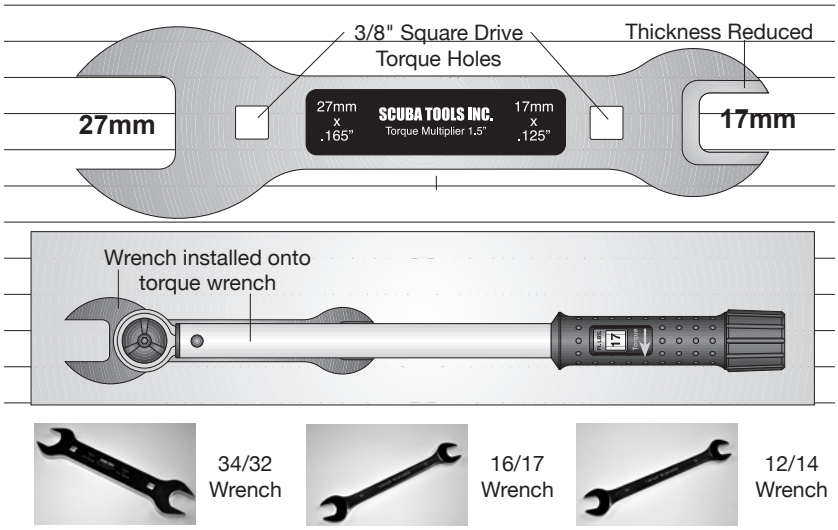


27 - 17mm First Stage Wrench

Fits Imported First Stages Including Poseidon®

The 27-17mm First Stage Wrench fits two popular metric first stage cap sizes. It also features two internal 3/8" drive holes for using a torque wrench to precisely tighten the caps. The overall thickness of the wrench is .162" - .165" (8 gauge). This thickness is reduced on the 17mm end to .125" (1/8") in the area where the wrench engages the nut or side slots. The wrench is machined from AR235 steel with an Electroless Nickel finish and has a maximum torque rating of 75 ft. lbs. Complete instructions on using this wrench with a torque wrench are included with each wrench.

Description	Number	Price
27/17mm First Stage Wrench	20-900-500	$38.50
34/32 Wrench	11-736-500	$49.00
16/17 Wrench	11-735-500	$14.20
12/14 Wrench	11-730-500	$12.40



34/32 Wrench

16/17 Wrench

12/14 Wrench

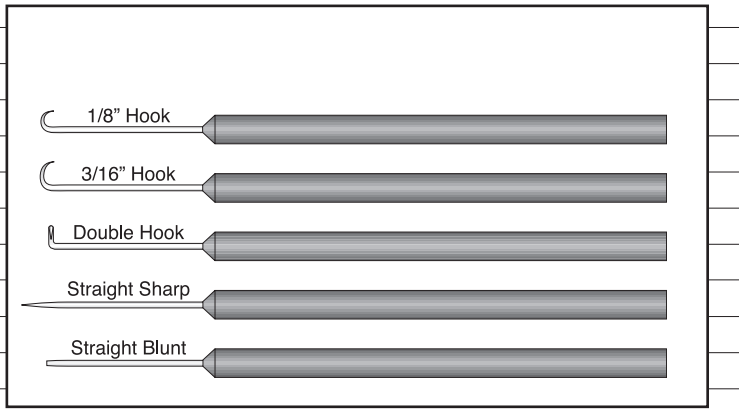
Poseidon® is the registered tradename of: Poseidon Industri AB, Vastra Frolunda, Sweden

Universal Hand Tools

Plastic Handle O'ring Picks

The o'ring picks illustrated to the right utilize a stainless steel probe molded into a plastic handle. The pick ends have been formed into several useful shapes for removing o'rings efficiently. The full set of five picks is sold in a reusable storage tube with removable plastic caps. Caution: These pick are very sharp! Use care when handling and using these picks.

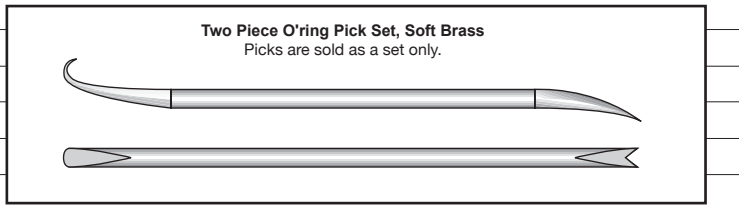
Description	Number	Price
O'ring Pick Set, 5 pcs. & Storage Tube	10-125-400	$10.75
1/8" Hook, Plastic Handle, Small	10-103-400	$2.15
3/16" Hook, Plastic Handle, Medium	10-104-400	$2.15
Double Hook, Plastic Handle	10-102-400	$2.15
Straight Sharp, Plastic Handle	10-105-400	$2.15
Straight Blunt, Plastic Handle	10-120-400	$2.15



O'ring Pick Set, Soft Brass

The two o'ring picks illustrated to the right are sold as a set packaged in a plastic pouch. The advantage of this type of pick is that the relatively soft brass material is less likely to scratch expensive regulator parts.

Description	Number	Price
O'ring Pick Set (2), Soft Brass	10-102-100	$15.25

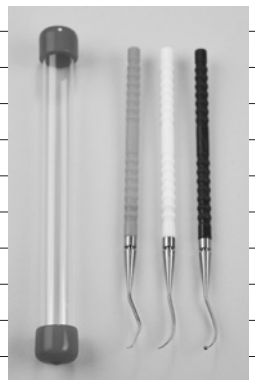


Nylon O'ring Pick

Description	Number	Price
Nylon O'ring Pick	10-127-400	$5.25

Brass Pick Set, 3pc (plastic handle)

Description	Number	Price
Brass Pick Set, 3pc (plastic handle)	10-126-400	$20.50



OMS Tools

OMS Poppet Tool Kit

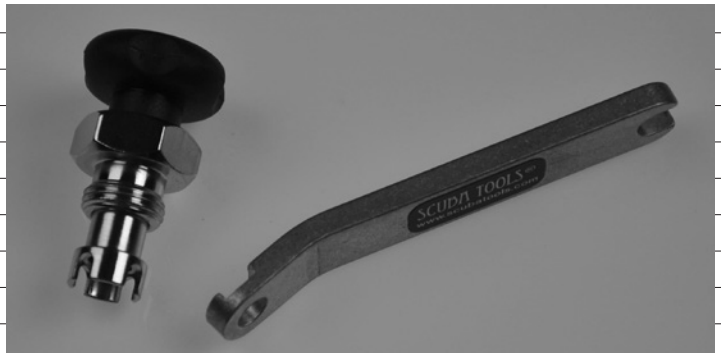
The Poppet Tool Kit is designed to assist the technician in the assembly, disassembly, and adjustment of the demand valve components.

The kit consists of a special wrench for starting and adjusting the nyloc nut, and a poppet drive tool for turning the poppet from the ouside of the case. The poppet drive tool also retains the poppet and spring without inward hand pressure. Note: This tool kit can be used on all models of OMS second stages.

The wrench is machined aluminum and the poppet drive assembly is chrome plated brass with a molded knob.

This tool kit has received extremely high praise for simplifying the job of installing the demand valve components on OMS second stages.

Description	Number	Price
OMS Poppet Tool Kit	21-200-100	$29.00



Atomic Aquatics Tools

ATOMIC

Atomic Aquatics Second Stage T-Tool

The Atomic Aquatics Second Stage T-Tool is designed to accommodate three functions involved in the disassembly/assembly of the Ti 2 second stage. These three functions are illustrated to the right.

• **Figure #1:** Access to the AFC (Automatic Flow Control) components is accomplished by removing the outer cover. The tabs on the T-Tool index with the slots in the AFC cover and allow it to be removed and installed easily.

• **Figure #2:** The orifice installation end of the T-Tool is used to "preposition" the orifice at the "approximate location" within the inlet tube. This setting is not the final adjustment. The precise location of the orifice is set during final "air on" adjustment procedures.

• **Figure #3:** The poppet alignment installation tool controls the rotation of the poppet so that it will mate properly with the demand lever. In order for the poppet to pass the lever tabs, the lever must be elevated to its highest point (slightly beyond vertical). Insert the poppet into the tool as shown in Figure #3. Align the reference flat on the tool with the lever flat machined into the air inlet tube. Insert the poppet into the air inlet tube until it is fully installed. Lower the lever and retract the tool.

Description	Number	Price
Atomic Second Stage T-Tool	24-100-400	$26.00

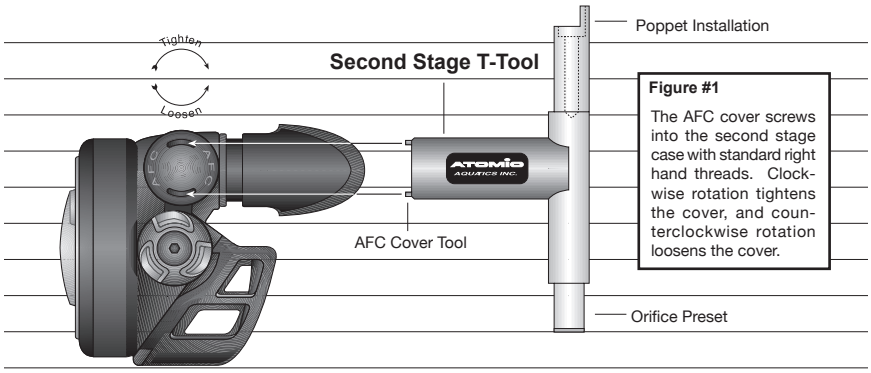
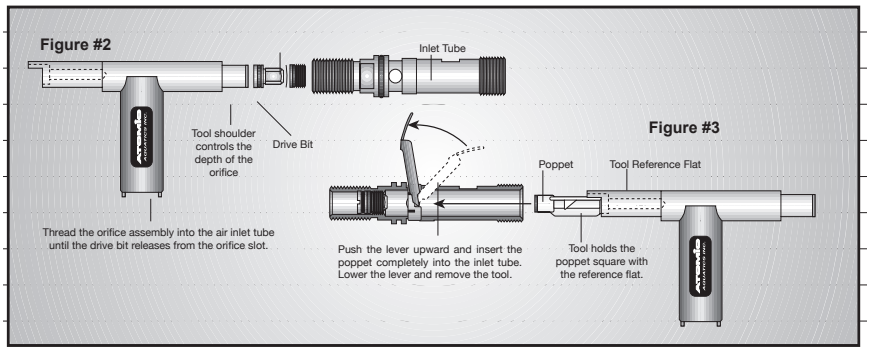


Figure #1
The AFC cover screws into the second stage case with standard right hand threads. Clockwise rotation tightens the cover, and counterclockwise rotation loosens the cover.



Atomic Aquatics Pin-Lok First Stage Tool

The Atomic Aquatics Pin-Lok First Stage Tool provides a "scratch proof" method of separating the first stage body on both the titanium and chrome plated brass models.

The main body of the tool is machined from 2" acetal rod and the drive cap screws are solid nylon. These materials allow the swivel cap to be disassembled/assembled from the first stage body with no metal-to-metal contact between the tool and the first stage.

The head of the nylon cap screw is utilized as a thumb screw and only finger pressure is required to set the tool. The tips of the nylon cap screws are machined to index with any two opposite drive holes in the first stage swivel cap.

Description	Number	Price
Atomic Pin-Lok Tool	24-160-140	$40.25

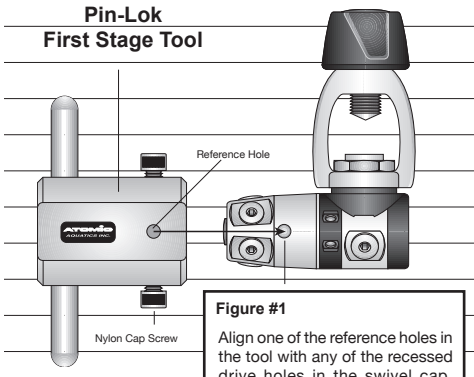
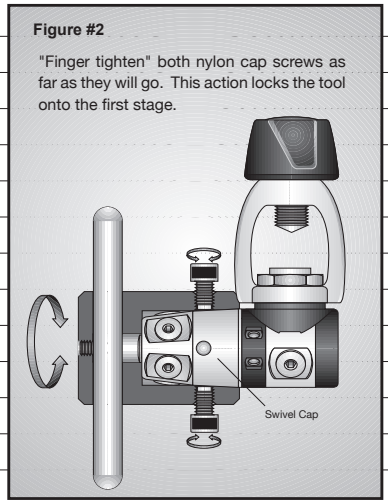


Figure #1
Align one of the reference holes in the tool with any of the recessed drive holes in the swivel cap. Push the tool onto the first stage until the two holes are in precise visual alignment.



Atomic Aquatics First Stage T-Tool

The Atomic Aquatics First Stage T-Tool combines three tools for the disassembly/assembly of the Ti 2 titanium and brass first stages. The illustrations to the right show the basic tool functions.

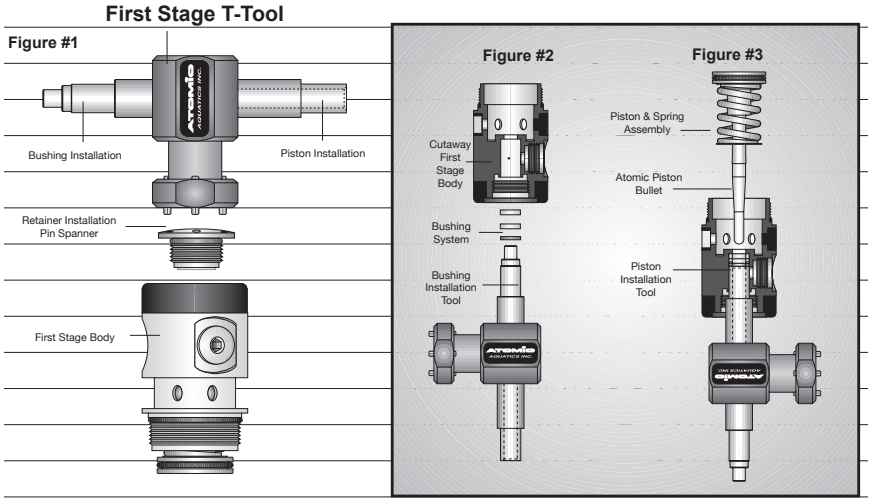
Figure #1: The Pin Spanner Wrench is used to remove/install the HP Seat Retainer. The three drive pins index into any three holes in the retainer.

Figure #2: The Bushing Installation Tool is used to install the bushing components into the first stage body. The parts are stacked on the smallest diameter of the tool and then inserted into the body.

Figure #3: The opposite end of the tool cross tee is used to hold the bushing system in place while the piston assembly is inserted from the other side of the body. The center bore in the tool allows the piston bullet to pass through the bushing system and into the tool.

This tool comes packaged with a special Atomic Piston Bullet. This tool has been modified to include a 3/8 square hole at the end of the tool for torquing the HP Seat Retainer.

Description	Number	Price
First Stage T-Tool & Bullet	24-150-140	$31.50
Piston Bullet Only	24-110-400	$7.00



Atomic Aquatics Tools

Atomic Aquatics Packing Tool

Atomic Aquatics Packing Tool: The Atomic Aquatics Packing Tool is designed to install MCG 111 ChristoLube into the ambient chamber of Atomic Aquatics first stages.

The Packing Tool assembly replaces the swivel cap assembly during packing operations. The 2 ounce tube of MCG 111 ChristoLube threads directly into the Packing Cap (see first illustration to the right).

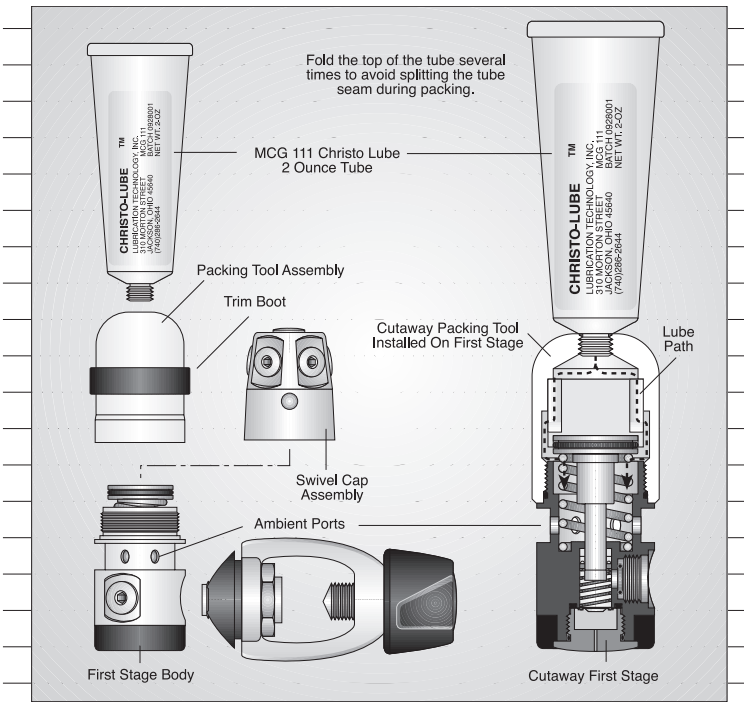
The Packing Tool has a special internal plug that seals on the top of the piston and forces the lube around the piston and into the first stage spring cavity (see cutaway view).

This method of environmentally packing the first stage helps to prevent air from being trapped in the lubricant during packing operations. The lube is injected into the spring cavity on the opposite end of the first stage ambient ports. This lube path allows the air to escape through the ambient ports as the lubricant fills the cavity.

The trim boot can be installed over the packing cap after the lube is visually observed in the ambient ports.

The Packing Tool components are machined from white acetal plastic. Complete instructions are included with each tool.

Description	Number	Price
Atomic Packing Tool	24-170-400	$37.00
MCG 111 ChristoLube, 2oz.	15-711-111	$33.50



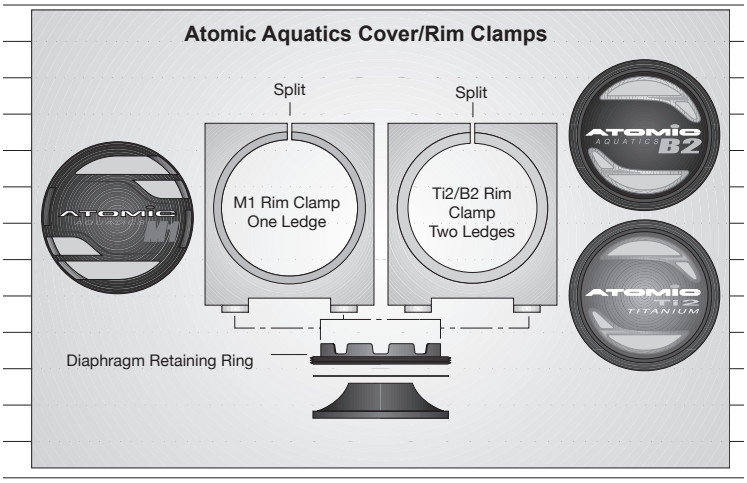
Atomic Aquatics Cover/Rim Clamps

There are two different rim clamps that fit the Atomic Aquatics second stage rims. The M1 clamp has a single internal ledge and fits only the M1 rim. The Ti2/B2 rim clamp has two internal ledges and fits the outer rims of both the Ti2 and B2 second stages.

The clamps are used by inserting the stuck cover/rim into the clamp until it contacts the stop ledge. The clamp is then captured in a bench vise so that the split side of the clamp is inside the vise jaws. "Gently" tightening the vise jaws pinches the entire cover/rim without distorting the case.

The clamps also have two self centering tabs machined into the side of the clamp opposite the split. The tabs index with the notches in the castle ring that retain the diaphragm assembly. The castle retaining ring can be easily removed/installed using this tool feature. The clamps are machined from aluminum and vibratory finished.

Description	Number	Price
Atomic Ti2/B2 Rim Clamp	24-200-200	$29.50
Atomic M1 Rim Clamp	24-201-200	$25.50



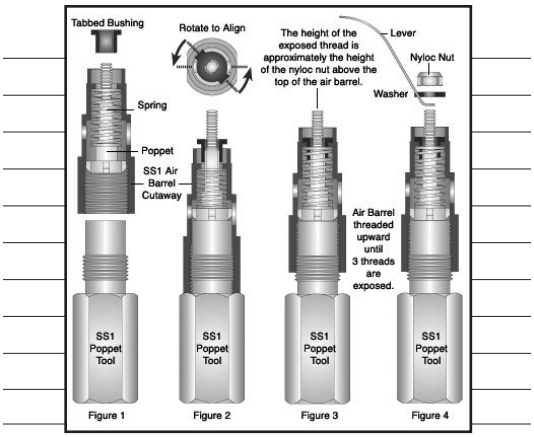
Atomic SS1 Poppet Tool

The Atomic Aquatics SS1 Poppet Tool is designed to assist the technician in assembling the SS1 poppet, spring, tabbed bushing, and lever components.

With the poppet and spring installed inside the air barrel, thread the air barrel onto the tool until the air barrel touches the shoulder on the tool (figures 1 & 2). In this position, the tabbed bushing can be installed and aligned with the flats on the poppet stem. If the tabs on the bushing do not align with the notches in the air barrel, the bushing and poppet can be rotated to achieve alignment (top of figure 2). Push the bushing into the notches in the air barrel and unthread the tool until approximately three threads are exposed on the tool. After the tabbed bushing has been pushed completely onto the notches on the air barrel, the lever, washer, and nyloc nut can be easily installed onto the threaded end of the poppet (figures 3 & 4).

The upper end of the SS1 Poppet Tool is dimpled so that it does not touch the soft seat on the poppet. The tool is machined from 5/8" hex brass bar and can be captured in a vise to aid in the assembly process. Natural brass finish.

Description	Number	Price
Atomic Aquatics SS1 Poppet Tool	24-190-100	$19.50

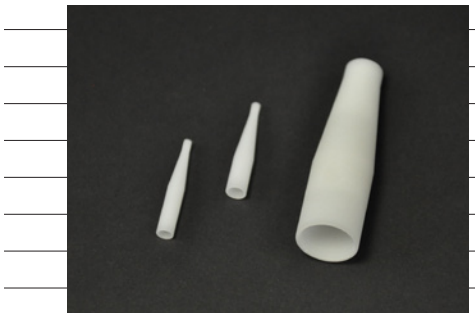


Atomic Aquatics Tools

ATOMIC

Cobalt O'ring Kit

This tool kit consists of 3 oring bullets to assist in the installation of the orings in the Atomic Cobalt H.P. QDC Computer hose.



Description	Number	Price
Cobalt O'ring Kit	24-300-400	$12.00

Genesis & Sherwood Tools

GENESIS SHERWOOD®

Genesis First Stage Wrench

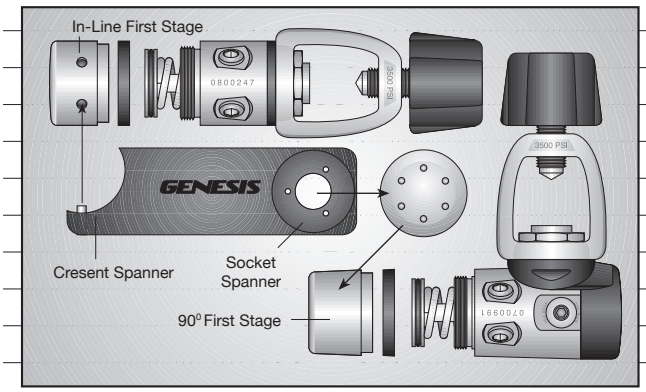
The Genesis Spanner Wrench is a dual function tool that is used in the disassembly/assembly of Genesis first stages.

The crescent spanner is an open end wrench that fits the outside diameter of the inline first stage. The drive pin can be indexed in any of the perimeter ambient holes, and the wrench can be used to turn the cap in either direction.

The three pin socket spanner is designed to fit the cap on the 90^0 first stage. The socket diameter fits the cap and the three drive pins can be indexed with any three of the blind holes in the end of the cap. The cap can be both removed and installed with this spanner.

The Genesis First Stage Wrench is machined from aluminum bar stock and fitted with stainless steel pins.

Description	Number	Price
Genesis First Stage Wrench	20-600-200	$28.00



Genesis/Oceanic Poppet Tool Kit

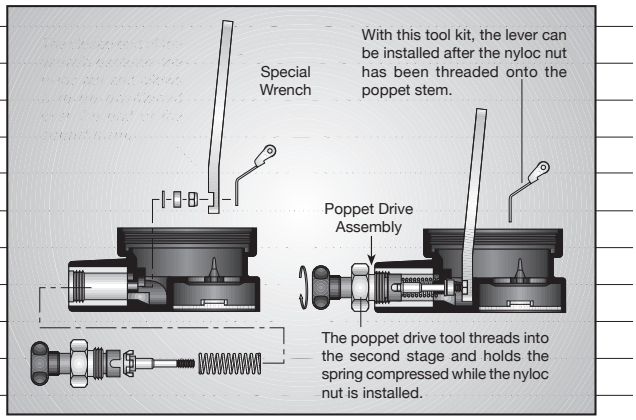
The Genesis Poppet Tool Kit is designed to assist the technician in the assembly, disassembly, and adjustment of the demand valve components.

The kit consists of a special wrench for starting and adjusting the nyloc nut, and a poppet drive tool for turning the poppet from the outside of the case. The poppet drive tool also retains the poppet and spring without inward hand pressure. Note: This tool kit can be used on all models of Genesis second stages. To conserve space, only one second stage is shown in the illustrations to the right.

The wrench is machined aluminum and the poppet drive assembly is chrome plated brass with a molded knob.

This tool kit has received extremely high praise for simplifying the job of installing the demand valve components on both Genesis and Oceanic second stages.

Description	Number	Price
Genesis Poppet Tool Kit	20-640-100	$29.00



Apeks/Genesis/Sherwood Inflator T-Tool

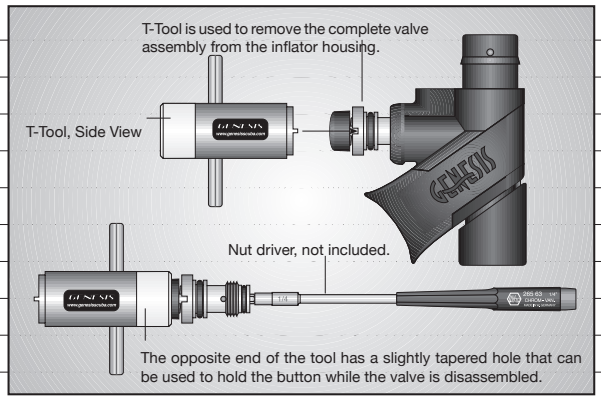
This T-Tool fits both Genesis and Sherwood power inflators.

The valve assembly can be removed by indexing the two drive tabs into the slots machined into the valve body (see top illustration). These slots are recessed under the inflator button.

After the valve assembly has been removed, the T-Tool can be used to hold the button while the center brass spool is removed. The opposite end of the tool is internally machined with a slight taper. The taper serves to hold the button while the center spool is unthreaded (see bottom Illustration).

The main tool body is machined from steel and then nickel chrome plated. The tapered hole end of the tool is machined from acetal rod and pinned to the main body with the stainless steel cross tee. Instructions are included with every tool.

Description	Number	Price
Genesis Inflator T-Tool	20-660-200	$28.00



Genesis & Sherwood Tools

GENESIS SHERWOOD

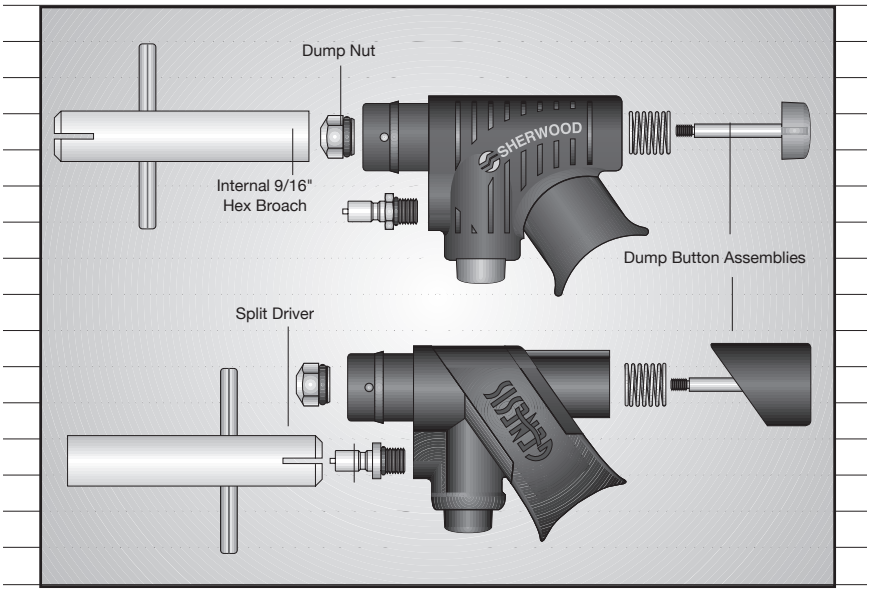
Genesis/Sherwood Inflator Dump Button T-Tool

This tool is designed to remove the recessed nut assembly that retains the dump button and spring. This tool also can be used to remove the quick disconnect (QD) fitting. The dump nut can be captured by the tool and unthreaded by inserting the 9/16" hex broached end of the tool into the BC hose cavity. After inserting the tool, and indexing the socket over the dump nut, push the dump button in as far as it will go before removing the nut. This procedure will keep the dump button from rotating during disassembly.

The opposite end of the tool is machined with a special split driver to assist in removing the QD fitting from the inflator body. This tool feature was included to remove the original QD fitting that did not have hex flats at the base of the fitting. The split driver may not be strong enough to remove a very tight QD fitting.

The body of the tool is machined from white acetal plastic with a stainless steel cross pin.

Description	Number	Price
Genesis Dump Button T-Tool	20-670-400	$16.75



Oceanic / Genesis

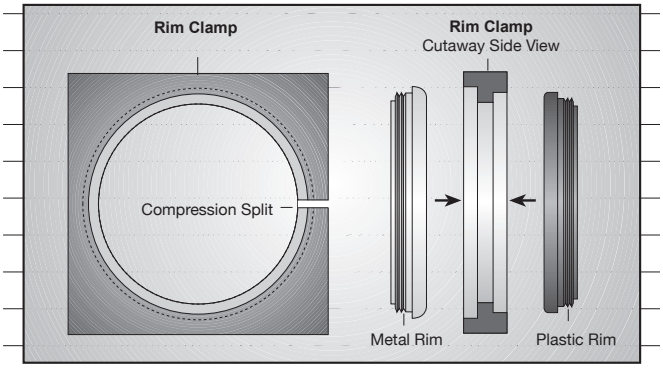
GENESIS OCEANIC

Genesis/Oceanic Rim Clamp

The rim clamps listed below fit a variety of both Genesis and Oceanic second stages. The internal ledges are sized to fit the rims exactly to prevent rim distortion during removal. After the rim has been installed into the clamp, the clamp can be "squeezed gently" in a bench vise to keep the rim from slipping while it is removed by turning the second stage housing.

The Genesis Rim Clamp fits the GS2000, Atlas, and Octopus second stages. This clamp also fits the Oceanic Gamma 2, Explorer, and GT. The Oceanic Rim Clamp fits the larger Alpha 7 second stages.

Description	Number	Price
Genesis Cover Rim Clamp	20-680-200	$26.25
Oceanic Rim Clamp	20-800-200	$26.25



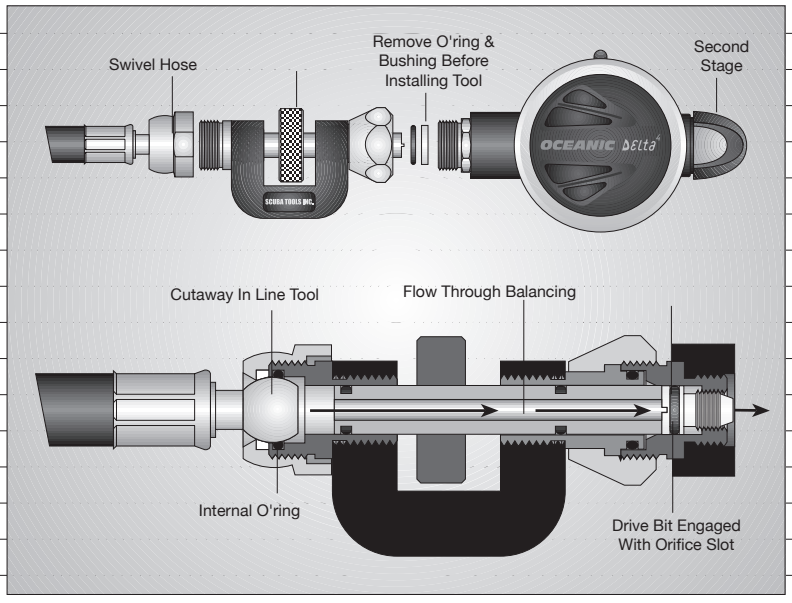
Oceanic Swivel Hose In Line Tool

Fits Only Oceanic Second Stages With A Swivel Hose

The Oceanic In Line Adjusting Tool is designed to make precise orifice adjustments while the second stage is pressurized. This tool only fits Oceanic second stages that utilize the swivel hose! The tool threads directly onto the second stage after the o'ring and bushing have been removed, and the swivel hose threads onto the opposite end of the tool. The hose fitting on the tool has an internal o'ring that seals with the swivel hose end (see lower illustration).

The tool features flow through balancing and will not push back when the assembly is pressurized. The feature allows for more sensitivity when adjusting the orifice to the leak stop position. The aluminum yoke is anodized black and other components are chrome plated brass. This tool is designed and manufactured by Scuba Tools Inc.

Description	Number	Price
Oceanic In Line Tool	20-825-200	$80.50

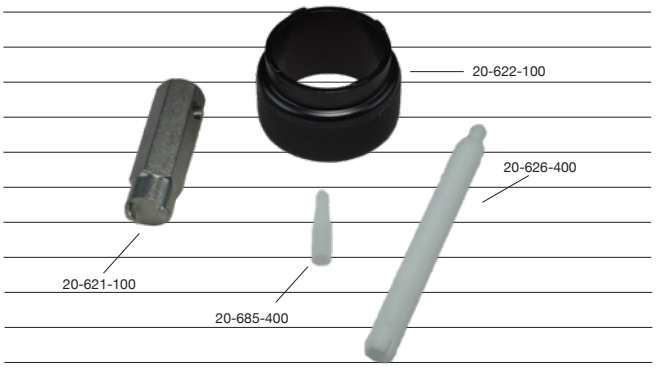


Sherwood Tools

Sherwood SR1/SR2 Tool Kit

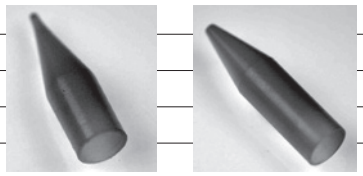
Includes the cover retainer ring tool (Sherwood # 20-703-100), poppet alignment flange o-ring installation tool (Sherwood # 20-706-100) and 1st stage seat retainer tool (Sherwood #20-701-100) used for removing and installing the high pressure seat retainer and piston.

Description	Number	Price
Sherwood SR1/SR2 Tool Kit	20-620-600	$57.75
Cover Retainer Ring Tool	20-622-100	$18.75
Poppet Alignment/O'ring Install Tool	20-626-400	$13.75
First Stage Seat Retainer Tool	20-621-100	$20.25
Piston Stem O-Ring Cone	20-685-400	$8.50



O'ring Bullets

Description	Number	Price
O'Ring Bullet, Sherwood Piston	20-690-400	$6.50
O'Ring Bullet, Sherwood Seat	20-695-400	$6.50



Sherwood Hammerhead Socket

This socket type tool comes with 2 dog point set screws that will engage the spanner holes on the outside diameter of the Sherwood Hammer Head 1st stage cap. This is the best case scenario for maximum tool engagement and minimal damage to the 1st stage cap.This tool has a 3/8" Sq. drive hole for use with breaker bars and torque wrenches. The tool can be used without removing the hoses from the 1st stage.

Description	Number	Price
Sherwood Hammerhead Socket	20-630-200	$24.50

Brut Poppet Orifice Installation Tool

Description	Number	Price
(Sherwood Part#20-900-100) Brut Poppet Orifice Installation Tool	20-611-200	$13.25

Blizzard Pro Nut Driver

Description	Number	Price
Blizzard Pro Nut Driver	20-612-200	$13.25

Oceanic / Aeris Tools

QDC In Line Adapter

The Oceanic/Aeris QDC In-Line Adapter is used in conjuntion with the Dual Drive In-Line Adjusting tool for making final adjustments to the Oceanic Air XS and Aeris Air Link Breathable inflators. *Note: Dual Drive InLine Adjusting Tool Not Included*

Description	Number	Price
QDC In Line Adapter	20-850-100	$46.50

Swivel Octopus In Line Adapter

This Dual Drive Adapter is designed to be used in conjunction with the Dual Drive In Line tool to make final adjustments on the Oceanic/Aeris Swivel 180/Octo 90 second stages. This adapter will thread on to the Dual Drive Tool and thread on to the 2nd stage replacing the 90 deg. turret to make your final adjustment in an "AIR ON CONDITION" therefore making the adjustment one time.

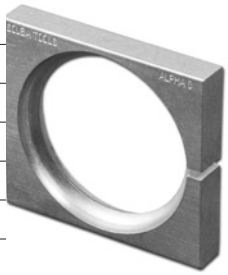
Note: Dual Drive InLine Adjusting Tool Not Included

Description	Number	Price
Swivel (180) Octopus In Line Adapter	20-860-100	$46.50

Oceanic Rim Clamp Alpha 8 & Delta 4

The "Alpha 8"/"delta 4" Rim Clamp assissts removal of stubborn cover rings. This tool can be used by hand or lightly clamp the tool in a vise, place the 2nd stage face down in the Rim clamp, tighten the vise until you have gripped the ring and twist.

Description	Number	Price
Oceanic Rim Clamp Alpha 8 & Delta 4	20-805-200	$26.25



Aeris Rim Clamp ION

The "ION" Rim Clamp assissts removal of stubborn cover rings. This tool can be used by hand or lightly clamp the tool in a vise, place the 2nd stage face down in the Rim clamp, tighten the vise until you have gripped the ring and twist.

Description	Number	Price
Aeris Rim Clamp ION	20-870-200	$24.00

Breathable Inflater Poppet Tool

The Air Link Poppet Tool is designed to assist the technician with assembly, disassembly, and adjustment of the demand valve components. This tool retains the poppet and spring making it much easier to place the spacers, nylock nut, and lever into position and make the final adjustment.

Description	Number	Price
Air Link Poppet Tool	20-855-100	$28.00

Oceanic/Aeris/Hollis First Stage Socket

Description	Number	Price
First Stage Socket	20-880-100	$23.50

Genesis Tools

GENESIS OCEANIC

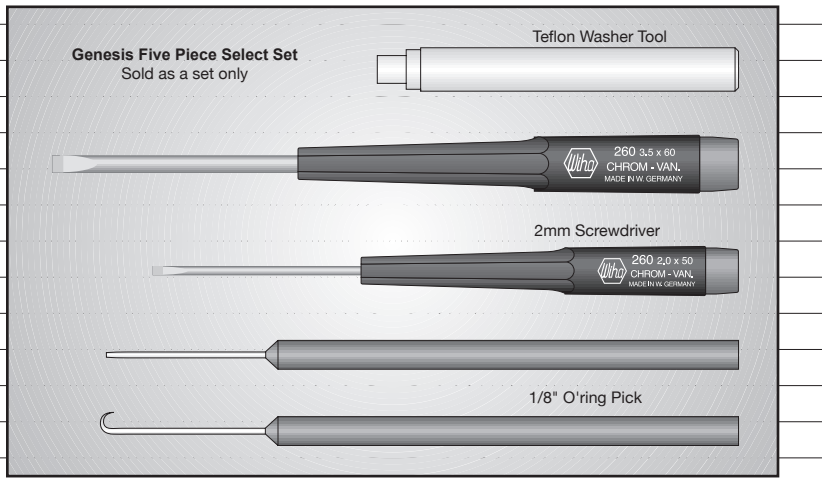
Genesis Select Set

The Genesis Select Set is a collection of tools that perform a number of repair operations on Genesis first and second stages.

The Teflon Washer Tool is used to properly seat the teflon washer in the GS2000 first stage. The two Wiha screw drivers are sized to assist the technician in removing/installing the "C" clip that retains the flow vane in the GS2000 second stage. The Blunt Probe can be used to push the HP seat out of first stage pistons, and the O'ring Pick is used as a general purpose tool throughout the Genesis repair procedures.

Complete information regarding tool use is included with each tool set. Sold as a set only.

Description	Number	Price
Genesis Select Set (5 pcs.)	11-090-500	$20.75
Teflon Washer Tool only	20-610-400	$6.75



Genesis-Aqua Lung

GENESIS AQUA LUNG

Genesis Pressure Test Tool

The Genesis Pressure Test Tool is designed to check the internal schrader valve function after the GS 2000 first stage is completely assembled.

Proper use of this test tool requires an intermediate pressure gauge (not included).

The cylinder cup seals against the outer first stage boot by using firm downward hand pressure. With the cylinder cup sealed, the plunger can be rapidly depressed to momentarily apply pressure to the internal diaphragm. The diaphragm will activate the schrader valve causing the intermediate pressure to surge upward 5-10 psi. The IP will return to lock up pressure when the plunger motion stops. The above procedure assimilates the effect of increasing/decreasing ambient water pressure.

A continuous leak from the schrader valve can also be tested with this tool assembly. Simply seal the cylinder cup against the first stage and watch to see if the plunger is pushed upward out of the cylinder. Complete testing procedures are included with each tool.

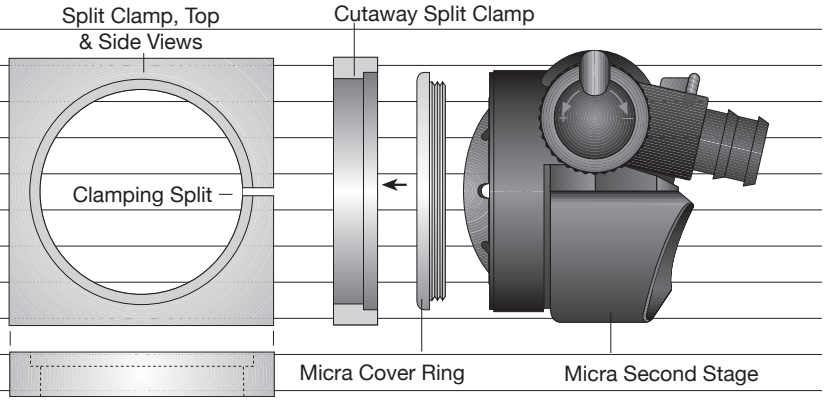
Description	Number	Price
Genesis Pressure Tool	20-650-400	$27.50

Micra Cover Ring Split Clamp

The Micra Cover Ring Split Clamp is the newest in a series of similar clamps used to remove outer cover rings that can not be removed easily by hand. This clamp fits both the plastic and metal rings used on the Micra family of second stages.

The split clamp design provides nearly 100% contact with the outer diameter of the ring. The best method for using the split clamp is to capture the clamp in a bench vise. Clamping force should be applied gently until the split in the clamp closes on the ring. With the second stage secured in this manner, the second stage housing can be turned to loosen the ring.

Description	Number	Price
Micra Cover Ring Split Clamp	20-206-200	$26.50



Genesis-Aqua Lung

GENESIS AQUA LUNG

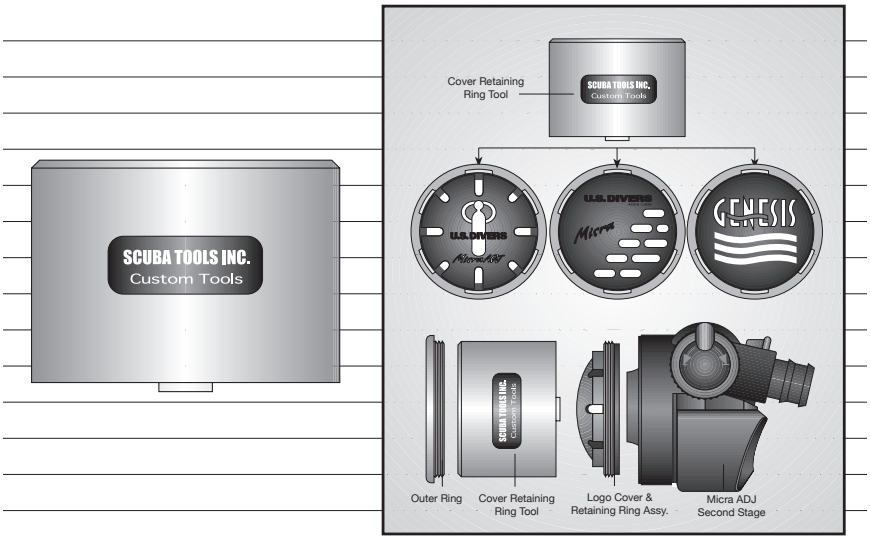
Micra/Valor Cover Retaining Ring Tool

The Scuba Tools Inc. Cover Retaining Ring Tool is designed to thread/unthread the notched retaining ring that secures the logo cover and diaphragm in the Aqua Lung Micra (Micra ADJ) and Genesis Valor second stages.

The machined drive tabs on the tool index with any two adjacent notches in the retaining ring, permitting the ring to be easily removed/installed. The inside diameter of the tool has been reduced to allow it to slide over the logo cover. The orientation of the logo, in relationship to the second stage housing, may require some trial and error to achieve precise alignment.

The Cover Retaining Ring Tool is machined from 6061-T6 aluminum tubing.

Description	Number	Price
Cover Retaining Ring Tool	20-210-200	$14.50



Aqua Lung-SeaQuest-Genesis

AQUA LUNG seaQuest GENESIS

"C" Clip Tool

The "C" Clip Tool is designed to assist in the disassembly/assembly of the following second stages:

- SeaQuest® XR2® (all tool functions)
- Aqua Lung® Impulse® (all tool functions)
- Aqua Lung Micra®-Micra ADJ® ("C" Clip function)
- Genesis® Valor® ("C" Clip function)

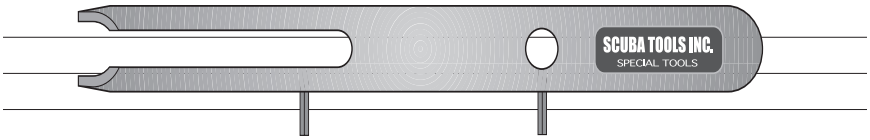
The illustrations show the basic function of the tool. For additional information regarding the repair procedures for these second stages, consult the specific manufacturers' repair manuals.

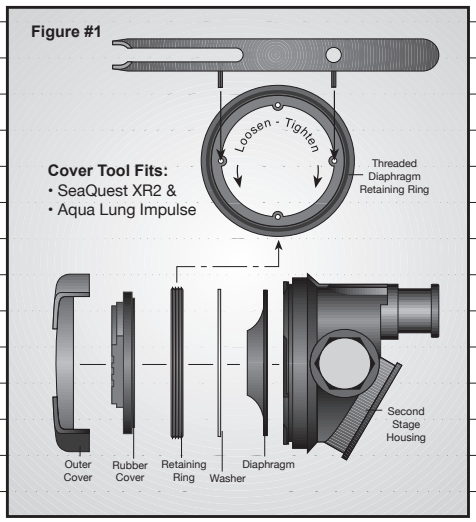
Figure #1: The SeaQuest XR2 and the Aqua Lung Impulse utilize an internal threaded ring that retains the diaphragm and frictionless washer. The two side pins on the tool will index with any two cross holes or slots in the ring and allow it to be rotated in either direction.

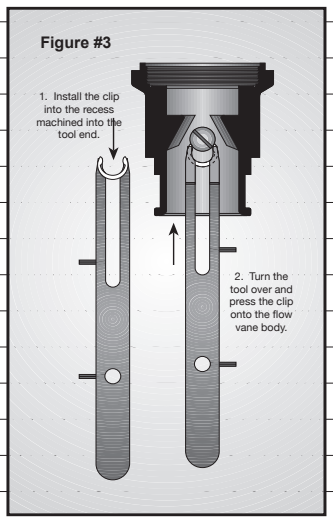
Figure #2: The flow vane assembly on all of the above second stages is retained by an internal "C" clip. The forked end of the tool is designed to push on both ends of the clip simultaneously. The clip can be removed from either the diaphragm or the mouthpiece side of the housing. If the clip is removed via the mouthpiece channel, the tool can be rested flat against the housing. This method eliminates the possibility of the tool digging into the housing. The only disadvantage to removing the clip from this side, is that the open end of the clip must be turned so that it faces in the opposite direction.

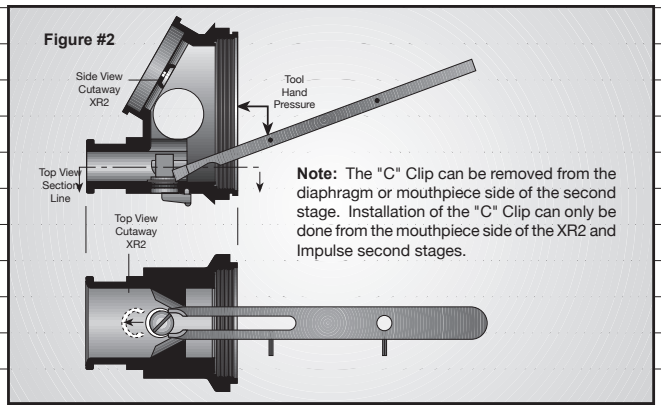
Figure #3: The "C" clip can only be installed from the mouthpiece side of the second stage. The forked end of the tool has a machined ledge to hold the "C" clip. Press the clip into the ledge by applying pressure that will slightly spread the forks. This spring tension will retain the clip while it is being positioned. Push the clip onto the molded groove on the flow vane body. **Be sure that the clip is fully installed and locked in place.** The watertight integrity of the housing relies on this assembly.

Description	Number	Price
"C" Clip Tool	20-187-200	$20.00









Aqua Lung-SeaQuest-Genesis

AQUA LUNG seaQuest GENESIS

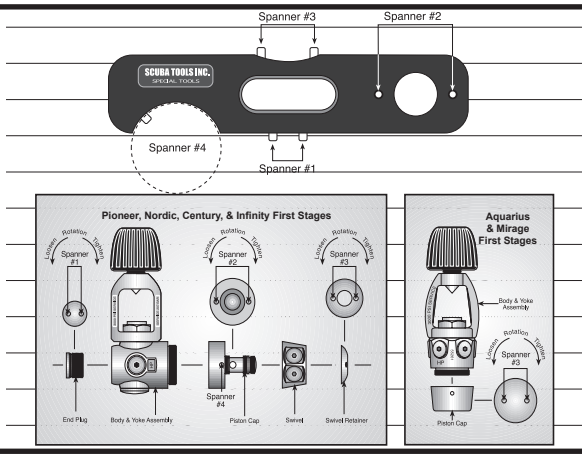
Aqua Lung/SeaQuest Quad Spanner Wrench

The Quad Spanner Wrench is specifically designed to aid in the disassembly/assembly of the Pioneer®, Nordic®, Century®, Infinity®, Mirage®, and Aquarius® first stages. The tool includes 4 different spanner wrenches that fit the pin holes in the various components of these regulators. The illustrations to the right show the appropriate use of each spanner and the relationship of the parts as they are disassembled. These drawings are self-explanatory for all spanner applications.

All Quad Spanner pins are replaceable should they become damaged. A complete replacement set of pins is included for your convenience. The worn or damaged pins can be removed with a standard 1/8" punch. It is important to remove the damaged portion of the pin with a file or bench grinder before attempting to drive the pin out of the wrench. This will prevent enlarging the pin hole and maintain a secure fit for the replacement pin.

The Quad Spanner Wrench is machined from aluminum alloy bar stock.

Description	Number	Price
Quad Spanner Wrench	20-180-200	$40.25



Aqua Lung & Apeks Tools

AQUA LUNG apeks

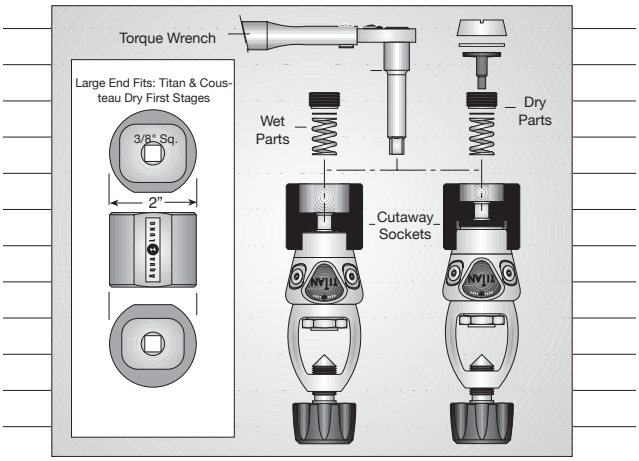
Aqua Lung Spring Retainer Socket

This custom hand tool was developed as a joint project with Aqua Lung and fits all Titan and Cousteau first stages. It provides an easy way to apply torque to the spring and diaphragm retainer. This tension is important to the life and function of the diaphragm.

The socket is machined from a solid 2" round aluminum bar and has two different socket cavities on opposite ends. One end fits the "wet" version of the Titan and Cousteau first stages, and the other end fits the "dry" configuration of these two first stages. The center of the socket is broached 3/8" square to accommodate a 3/8" drive extension. A torque wrench is used to apply the proper torque to the retainer.

It is important to note that this socket will not fit older SEA first stages.

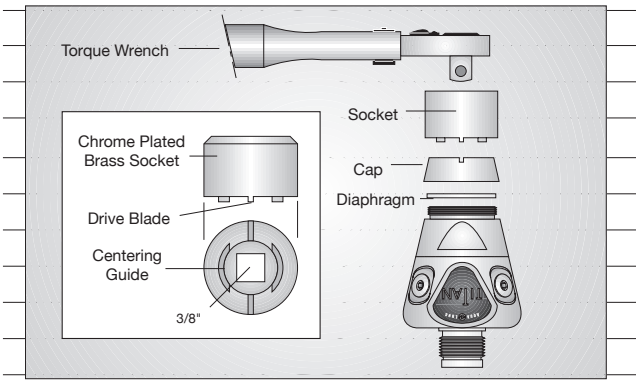
Description	Number	Price
Spring Retainer Socket	20-225-200	$28.25



Aqua Lung Dry Cap Socket

The Dry Cap Socket is designed to accurately apply torque to the ambient diaphragm cap on the dry versions of the Titan and Cousteau first stages. The socket incorporates a drive blade that indexes with the slots in the cap. A centering flange maintains alignment during torquing operations. A 3/8" drive torque wrench can be fitted directly to the socket (see second illustration to the right). The socket is machined from solid brass.

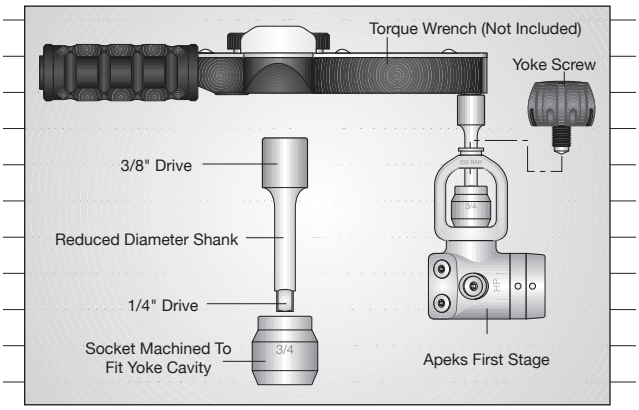
Description	Number	Price
Dry Cap Socket	20-226-100	$17.75



Apeks Socket & Extension

The Apeks Socket & Extension kit is specifically designed to remove, install, and torque the yoke nut on most Apeks first stages. The extension features a 3/8" square female drive to fit a 3/8" torque wrench or ratchet handle. The extension shank has been reduced to allow it to pass through the yoke screw hole. The bottom of the extension is machined to a square 1/4" male drive. The 3/4" (19mm) socket features a 1/4" female drive and the exterior has been shaped to capture the yoke nut completely. Both the extension and the socket are hardened tool steel. The exterior is polished and nickel chrome plated. The extension and 1/4" male drive are rated for a maximum torque of 45 ft. lbs. Socket and extension are not sold separately.

Description	Number	Price
Apeks Socket & Extension	20-242-500	$33.75

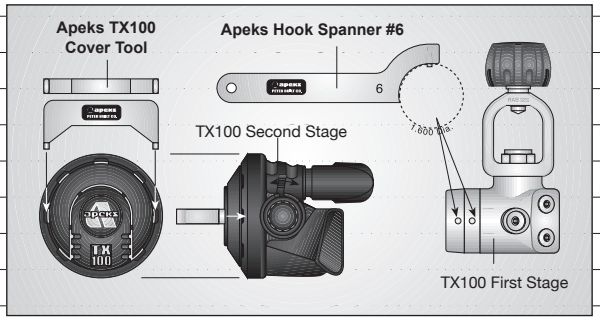


Aqua Lung & Apeks Tools

Apeks TX100 Cover Tool & Hook Spanner

The bottom illustration to the right shows two tools specifically designed for the Apeks TX100. The cover tool incorporates two rectangular drive posts that index with the slots in the TX100 cover. The hook spanner is designed to remove the main diaphragm retainer and the ambient diaphragm cap. These tools are machined from aluminum alloy, and the hook spanner pin is an 1/8" stainless steel dowel pin. This wrench is also available in the set of hook spanners featured on page 20.

Description	Number	Price
TX 100 Cover Tool	20-236-200	$15.00
TX 100 Hook Spanner (#6) with .140 diameter Pin	20-406-201	$18.25

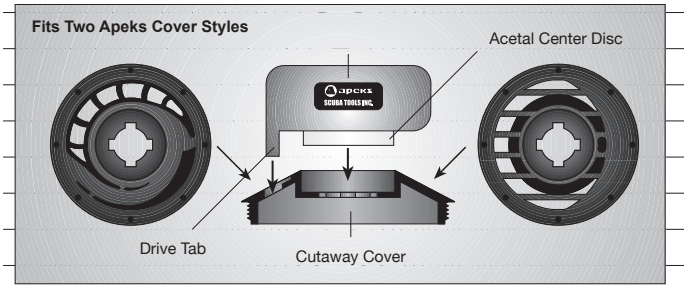


Apeks Cover Key

Fits: AT 20, ATX 40, ATX 50, TX 200, & ATX 200

The Apeks Cover Key is designed to remove a variety of Apeks second stage covers (see above). This cover key utilizes a round center disc that fits into the purge button cavity. The drive tab on the outer perimeter indexes with any hole in the cover large enough to accept the tab. Machined from aluminium with an acetal center disc.

Description	Number	Price
Apeks TX & ATX Cover Key	20-240-200	$17.75



Aqua Lung Lever Height Adjusting Tool

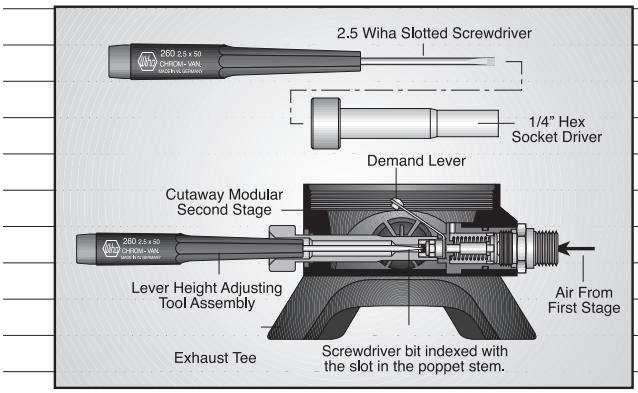
The Aqua Lung Lever Height Adjusting Tool fits "21" earlier models of Aqua Lung second stages. It replaces the original tool assembly that incorporated a hollow shafted 1/4" nut driver and reground screwdriver.

This tool features a custom 1/4" socket driver that is specifically engineered to fit the second stage housing port. It has an internal guide that precisely centers the screwdriver bit with the slot in the poppet shaft. The socket driver is machined from alloy steel, fully polished, heat treated, and nickel chrome plated.

The screwdriver is a 2.5mm Wiha precision slotted driver. The blade is manufactured from chrome vanadium molybdenum steel, hardened, and vapor chrome plated.

Together, these two tools form the ideal combination for making final adjustments to the demand valve and lever height.

Description	Number	Price
Lever Height Adj. Tool	20-215-500	$31.00



Aqua Lung Poppet Driver

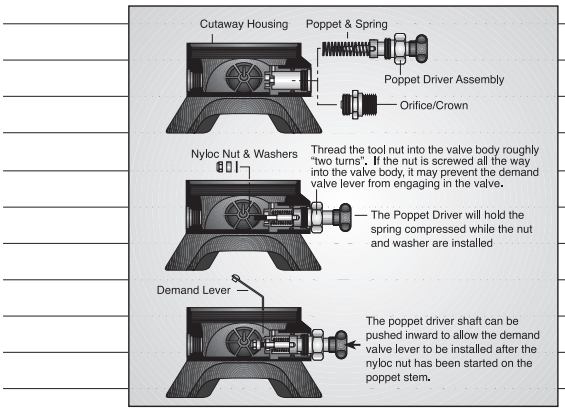
The Aqua Lung Poppet Driver is designed to assist the technician in the assembly of valve components in "30" older Aqua Lung second stages.

The tool incorporates a sliding nut that can be threaded into the valve body from outside the second stage housing. The nut holds the poppet and spring in place while the washers and nut are installed internally. This feature eliminates the need to compress and hold the poppet spring tension by hand during assembly procedure.

The poppet stem is machined with four drive slots that index with the poppet tabs. The stem and poppet can be freely rotated by turning the external knob. This tool feature allows the nut to be held stationary while the poppet is turned to start the nut and thread it onto the poppet shaft.

The Aqua Lung Poppet Driver shaft and sliding nut are machined from solid brass and plated with nickel chrome. The knob is molded from black polypropylene and mounted with a zinc plated steel shaft. Instructions included.

Description	Number	Price
Aqua Lung Poppet Driver	20-220-100	$27.00



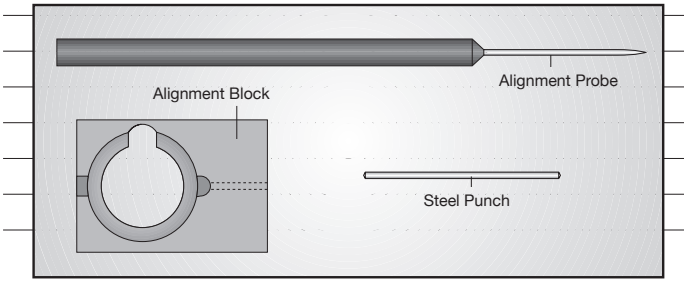
Micra ADJ Knob Tool Kit

The Micra ADJ Knob Tool Kit consists of three individual tools (pictured right). When used in the proper sequence, they will allow easy removal/installation of the 1/16" SS tension pin used to retain the knob on the Aqua Lung Micra ADJ.

The punch is made from hardened steel. The alignment block is machined from solid brass. When the block is clamped in a standard bench vise, it forms a "hands free" fixture that positions the knob so that the tension pin can be easily removed/installed.

Complete instructions for the use of this tool kit are included with the kit.

Description	Number	Price
Micra ADJ Knob Tool Kit	20-205-100	$18.25



Aqua Lung & Genesis Tools

AQUA LUNG

Orifice & Spring Pad Preset Tool

Works with Micra & Micra ADJ and Genesis Valor & Valor Octopus.
Used to preposition the orifice & spring pad in the second stages mentioned above.

Description	Number	Price
Orifice & Spring Pad Preset Tool	20-200-200	$15.75

Aqua Lung / Suunto HP QDC Tools

HP QDC Connector Tool

This tool is designed to aid the service technician in the disassembly/assembly of the Aqua Lung/Suunto computer QDC (Quick Disconnect Coupler).

The hex brass driver is fitted with two stainless steel drive pins that index with the recessed holes in the QDC swivel body. This tool holds the swivel assembly in place while the hose is removed (see first illustration).

Description	Number	Price
Aqual Lung/Suunto QDC Tool	20-230-100	$20.25

Aqua Lung / Mares

Aqua Lung/Mares Valve Body Tool

Fits: Aqua Lung LPO Second Stage

This tool is used to engage the slot on the valve body on the inside of the regulator. It allows you to hold the valve body to avoid stripping the plastic housing. It is especially useful on disassembly of exceptionally tight regulators.

Description	Number	Price
Aqual Lung/ Mares Valve Body Tool	20-228-100	$17.00

SeaQuest Air Source Tools

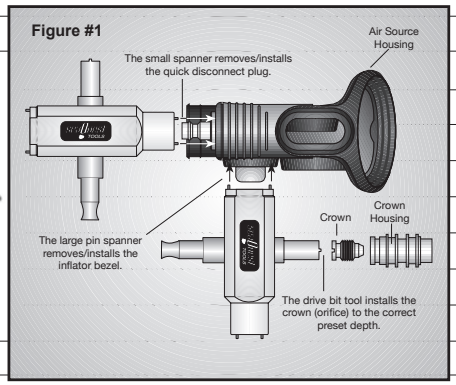
seaQuest®

SeaQuest Air Source T-Tool

The SeaQuest Air Source T-Tool is a three function tool used in the disassembly/assembly of the Air Source breathable inflator. The small pin spanner is used to capture the quick disconnect plug, and the large pin spanner removes and installs the recessed inflator bezel. The cross tee is designed with a drive bit and shoulder to locate the crown (orifice) inside the crown housing at the correct preset depth (see Figure #1).

The main body of the T-Tool is machined from solid acetal plastic, and the cross tee is anodized aluminum. The pins are 302 stainless steel, and the cross tee is retained by a stainless steel set screw.

Description	Number	Price
Air Source T-Tool	20-250-140	$23.00



SeaQuest Air Source Cover Tool

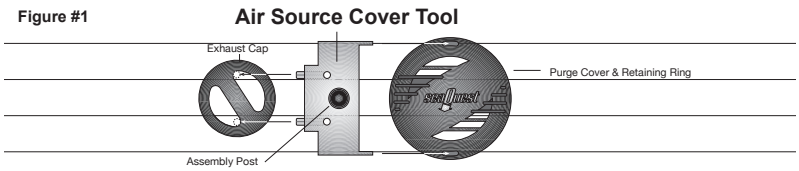
The SeaQuest® Air Source Cover Tool provides three functions related to the disassembly/assembly of the Air Source breathable inflator.

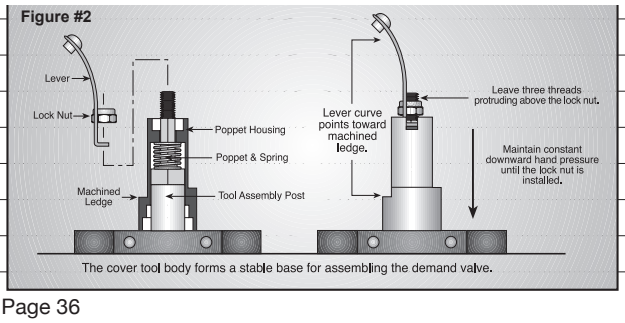
The tabs on the slotted end of the tool index with the purge cover and the retaining ring simultaneously. The drive pins on the opposite side of the tool are used to remove the exhaust cap (see Figure #1).

The assembly post, mounted in the center of the tool, is designed to hold the poppet and spring compressed while the lock nut is installed (see Figure #2).

The tool body and assembly post are machined from aluminum, and the drive pins are zinc plated steel. Complete instructions are packaged with the tool.

Description	Number	Price
Air Source Cover Tool	20-255-100	$16.75





SeaQuest Air Source Tools

SeaQuest Air Source Oral Inflator Assembly Tool

This tool provides a method of compressing the Air Source oral inflation components so that they can be installed into the housing. When this mechanism is held in compression, the soft cover can be accurately positioned and sealed into the housing. This operation is critical to the watertight integrity of the SeaQuest Air Source.

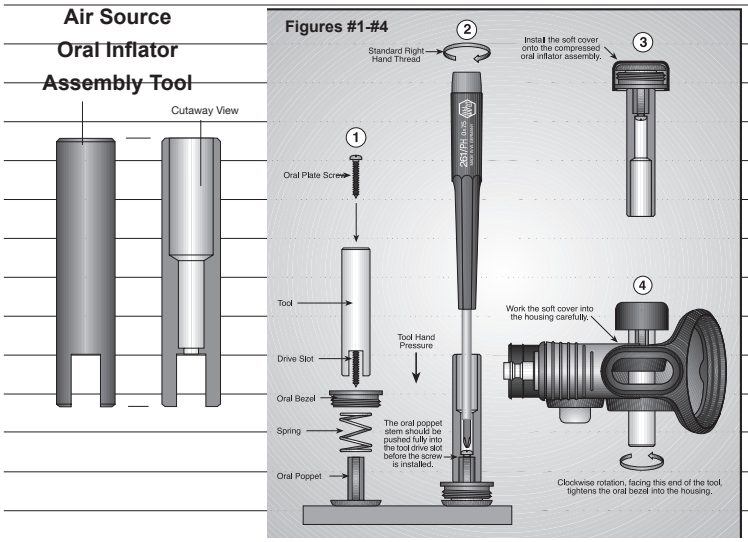
Figure #1 illustrates the oral inflator components and the proper order of assembly. The oral plate screw is used to clamp the parts together.

Figure #2 shows how the tool drive slot compresses the parts to the proper height for final assembly in the case. Do not overtighten this screw! The threads are very delicate and may strip if too much torque is applied.

Figure #3 shows a full cutaway of the compressed oral inflator components with the soft cover installed.

Figure #4 features the final assembly of the oral inflator components into the Air Source housing. The tool not only holds the parts in compression, but also serves as a driver to thread the oral bezel into place. After installation, the screw and tool are removed from the bottom side of the housing.

Description	Number	Price
Air Source Oral Inflator Tool	20-260-100	$9.75



Scubapro Tools

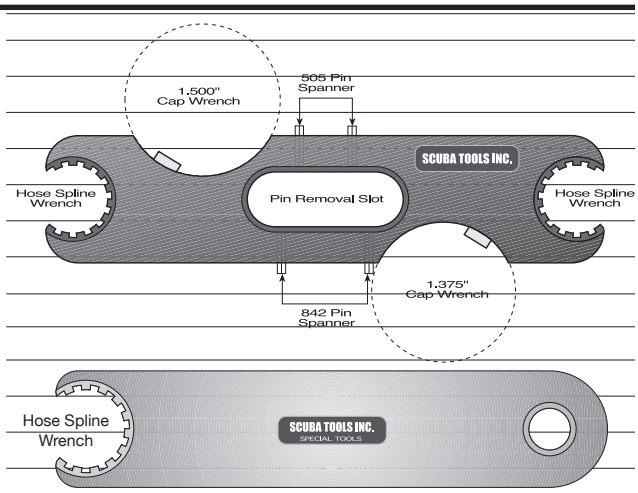
SCUBAPRO

Scubapro Multi-Tool & "Just-A-Wrench"™

Multi-Tool: The Scuba Tools Inc. Multi-Tool has proven that it is "the right tool for the job". It is available in both brass and aluminum. The hose spline wrench(s) fits the Scubapro swivel hose ends and the crescent shaped cuts form first stage cap wrenches. The cap wrenches are machined in two different diameters and will fit all Scubapro first stages. Two pin spanners positioned on either side of the Multi-Tool fit most Scubapro® first and second stage caps and plugs. A special "punch and pin kit" is available for the Multi-Tool. The kit includes 24 tension pins (5/64" x 1/2") and a special tool steel punch with a brass handle.

"Just-A-Wrench"™: We are constantly asked for a simple Scubapro splined hose wrench. The Scuba Tools Inc. "Just-A-Wrench"™ is great for easy handling on the repair bench or ideal for the travel tool box. Aluminum only.

Description	Number	Price
Multi-Tool, Brass Chrome	20-100-100	$44.75
Multi-Tool, Aluminum	20-100-200	$42.75
Just-A-Wrench, Aluminum	20-101-200	$17.25
Punch & Pin Kit, Multi-Tool	20-110-100	$11.50



Resort Tech Tool Kit

Tool Kit designed for Scubapro Resort Techs

Description	Number	Price
Resort Tech Tool Kit	40-100-100	$423.00

Scubapro Mk 17 Socket

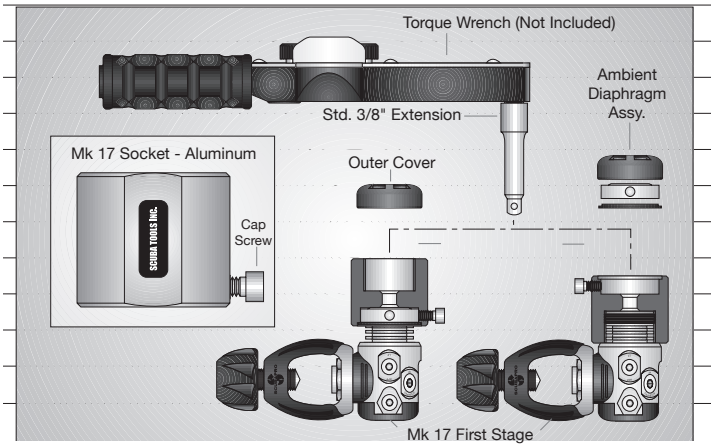
The Scubapro Mk 17 Socket is designed to remove, install, and torque both of the diaphragm retainers on the Mk 17 first stage. The socket has two internal socket cavities that are reversed to accommodate the two different retainers.

The lower left illustration shows a cutaway socket installed onto the ambient diaphragm retainer. The cap screw in the socket is used to index with one of the perimeter holes on the retainer. A standard 3/8" extension is used to drive the socket. A torque wrench is recommended for final assembly tension.

The lower right illustration shows the socket installed onto the primary diaphragm retainer. The plastic washer must be removed to allow the socket to index over the retainer.

For specific torque requirements for the Mk 17 first stage, consult the schematic or contact Scubapro Technical Service Department.

Description	Number	Price
Scubapro Mk 17 Socket	20-280-400	$38.00



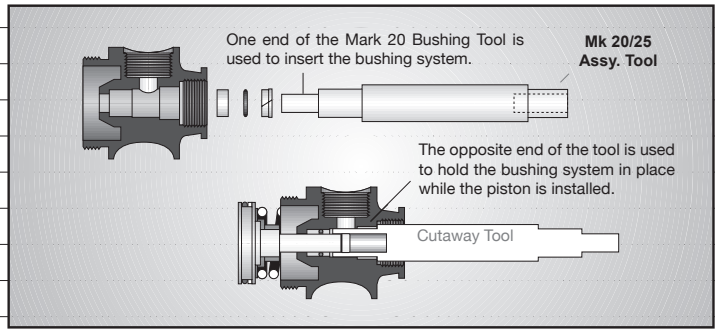
Scubapro Tools

SCUBAPRO

Scubapro Mk20/Mk25 Assembly Tool

The Mark 20/25 Assembly tool is used to install the piston stem bushing system and retain the bushing system while the piston is inserted into the main body. The parts are positioned on the tool against the first ledge and then the tool is used to insert the entire bushing system inside the main body. The opposite end of the tool is used to align the piston when it is inserted from the opposite side of the first stage body. The tool is drawn in cutaway view to expose the internal hole in the end of the tool.

Description	Number	Price
Mark 20 Assembly Tool	20-150-200	$18.25



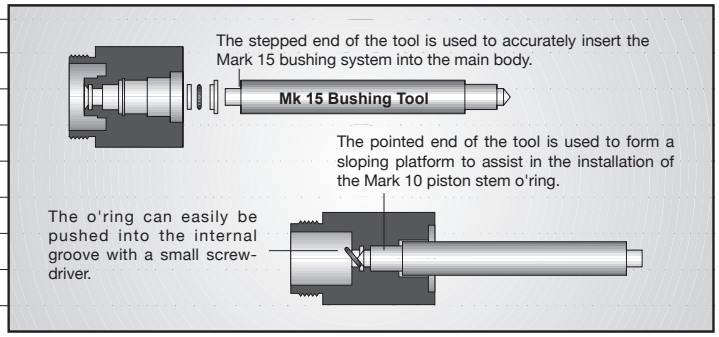
Scubapro Mk 15 Bushing Tool

The Mark 15 Bushing Tool is used to install the bushing components in the Scubapro® Mark 15 first stage.

The top illustration shows the bushing components in relationship to the tool. Installation is accomplished by sliding the bushings and o'ring on the tool ledge and then inserting them into the main body.

The bottom illustration shows the pointed end of the tool inserted into the main body of the Scubapro® Mark 10 first stage. With the tool in place, the piston stem o'ring can be easily installed from the opposite end.

Description	Number	Price
Mark 15 Bushing Tool	20-145-200	$16.50



TorqueVario Torque Control Screwdriver, 5-10 inch lbs.

Torque Control Screwdriver, 5-10 inch lbs. (.2 inch increments). For use with Scubapro A700. Ergonomic molded multi-component handle, light and compact. Handle size proportioned to optimize torque range. Audible and perceptible click when the torque setting has been attained, automatically resets for next torque cycle. *Note: Bit sold separately.*

Description	Number	Price
TorqueVario Torque Control Screwdriver 5-10 inch lbs.	11-602-500	$136.00
TorqueVario Torque Control Screwdriver 1-5 inch lbs.	11-601-500	$136.00

Torx Blade T10

Torx Blade T10 for Torque Control Screwdriver

Description	Number	Price
Torx Blade T10 for Torque Control Screwdriver	11-666-500	$8.00
#1 Phillips Torque Blade	11-654-500	$8.00

Description	Number	Price
Scubapro Cover Tool	20-135-400	$15.00

Scubapro-Tusa Tools

SCUBAPRO TUSA®

Scubapro Air 2 Seat Slider

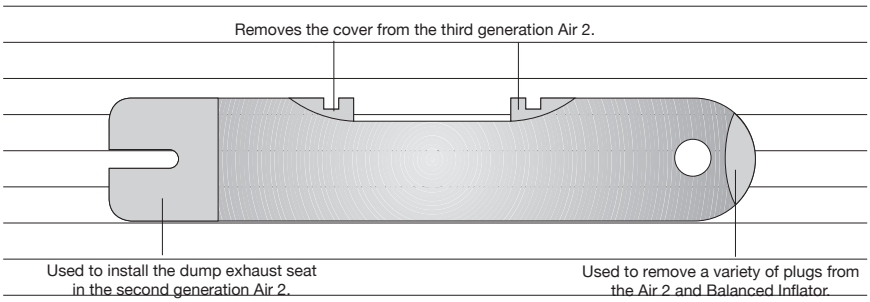
The Air 2 Seat Slider serves as a multiple function tool for 2nd and 3rd generation Scubapro® Air 2s.

The center notch and tabs are used to remove the recessed cover from the 3rd generation Air 2.

The rounded end of the tool can be used to remove a variety of plugs on both Air 2s and the balanced power inflator.

The tool can also be used to install the combination dump exhaust seat on the 2nd generation Air 2. The slot is used to hold the spring, o'ring, and washer in place while the seat is slid along the tool surface. This procedure is explained in detail in the instructions included with the tool.

Description	Number	Price
Air 2 Seat Slider	20-125-200	$14.75



Scubapro-Tusa Tools

SCUBAPRO TUSA®

Scubapro/Tusa Spider 2 Tool

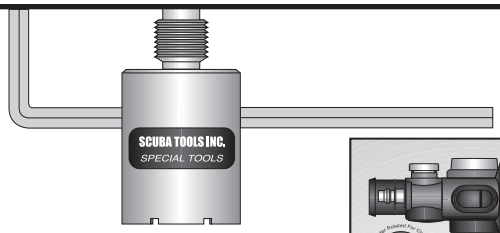
The Scuba Tools Inc. Spider 2 tool is designed to do four special jobs required in the disassembly, assembly, and adjustment of the Tusa Duo-Air and the Scubapro Air 2.

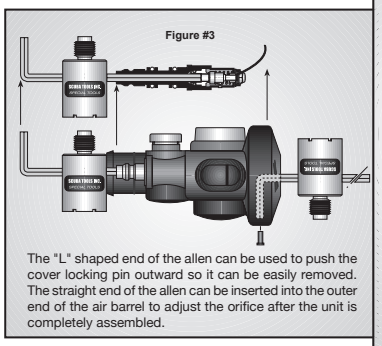
Figure #1: The tool gets its name from the special machined socket that fits the external webs of the plastic spider. The spider is threaded into the main housing in a recessed cavity on the underside of the main housing. The socket indexes over the small external portion of the webs and allows the spider to be removed/installed without removing the exhaust valve or damaging the spider itself.

Figure #2: The top of the Spider #2 is machined into a pre-assembly post that holds the poppet and spring in the depressed position while the bushing, lever, washer, and nut are installed. It is nearly impossible to hold the poppet and spring in this position without this tool because of its recessed location.

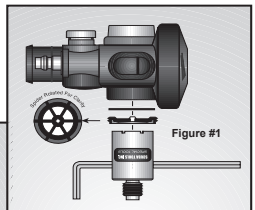
Figure #3: The long straight end of the allen wrench cross handle is used to adjust the position of the downstream orifice after the unit is completely assembled in the housing. The "L" shaped end of the allen wrench can be used to dislodge the cover pin so that the cover can be unthreaded from the main housing.

The Spider 2 tool is machined from solid brass and the zinc plated allen wrench is retained in the body by a stainless steel set screw. Body is a natural brass finish.

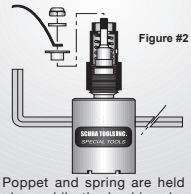




The "L" shaped end of the allen can be used to push the cover locking pin outward so it can be easily removed. The straight end of the allen can be inserted into the outer end of the air barrel to adjust the orifice after the unit is completely assembled.



Spider and exhaust valve can be removed/installed as a single unit.



Poppet and spring are held in place while the bushing, lever, washer, and nyloc nut are installed.

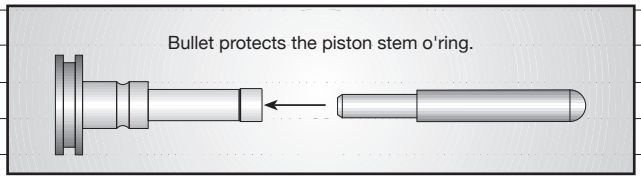
Description	Number	Price
Spider 2 Tool	20-136-100	$32.75

Scubapro Piston Bullet
Natural Brass

The Scubapro Piston Bullet is designed to guide the piston easily into Scubapro first stages without damaging the internal piston stem o'ring. The bullet is inserted into the end of the piston allowing the major diameter to completely cover the knife edge on the end of the piston. Once the piston is installed, the bullet can be removed from the opposite end of the first stage.

Description	Number	Price
Scubapro Piston Bullet, Brass	20-140-100	$7.25

Fits all Scubapro piston first stages.



Scubapro Mk 16/Mk17/Mk18 First Stage Tool
Tusa R400

The Scubapro Mark 16 First Stage Tool is designed to assist the technician in several assembly and disassembly operations.

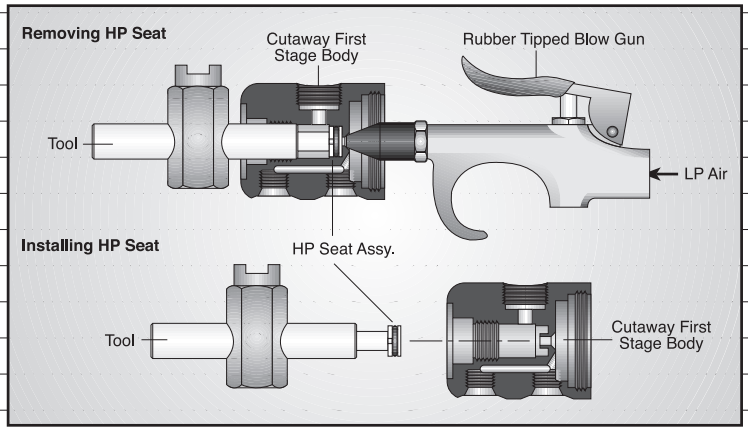
The HP seat can be both removed and installed using the machined end of the cross tee. For removal, the tip of the tee is used to block air flow through the seat and allow the air pressure from a rubber tipped blow gun to force the seat into the remove channel. Installation is achieved by loading the HP seat onto the tip of the tee and inserting it into place in the first stage body (see top illustration).

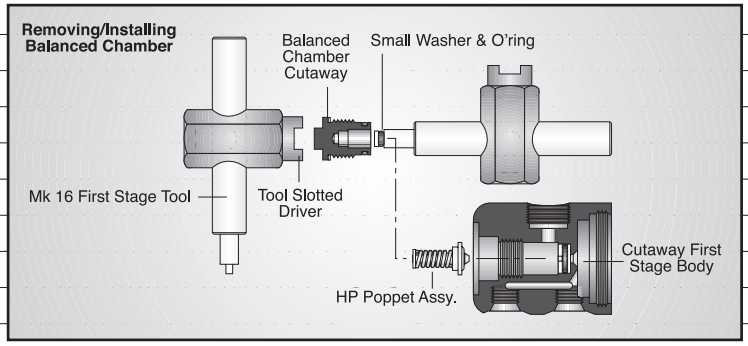
The body of the tool is machined to form a drive slot used to remove and install the balanced chamber. The tip of the cross tee is used to insert the small washer and o'ring inside the balanced chamber before assembly into the first stage body (see bottom illustration).

The Mk16 First Stage Tool body is machined from brass and the cross tee is acetal plastic. The cross tee is retained in the body by a stainless steel set screw.

This special tool is shipped with complete instructions for tool use. This tool is used for removal and installation of the knife edge seat on Scubapro Mk 11/16/17/17 EVO/18. It has been modified to work on the new Mk17 and Mk17 EVO, with an feature added to remove the seat without using a blow gun.

Description	Number	Price
Scubapro Mk16/Mk17/Mk18 & TUSA R400 First Stage Tool	20-270-100	$24.00





Tusa/Scubapro Tools

TUSA® SCUBAPRO

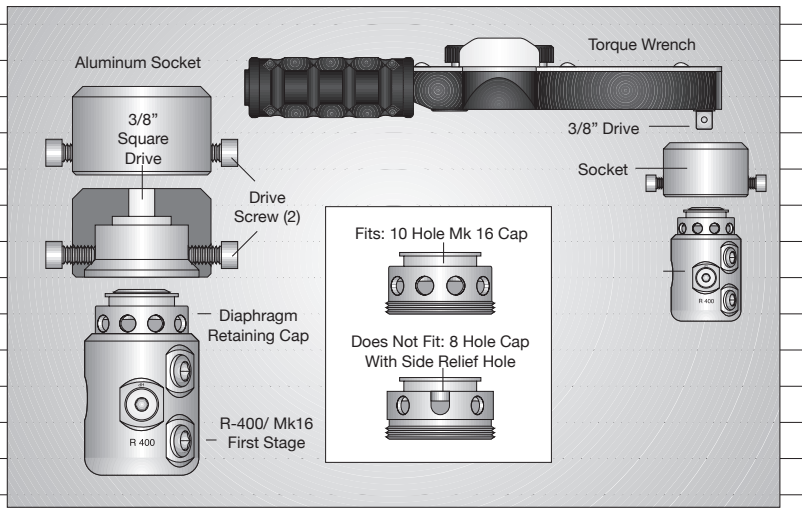
Tusa R400 & Scubapro Mk16/Mk11 Socket

Fits: Tusa R400, Scrubapro Mk11 & "New" Scubapro Mk 16 First Stages

This socket will fit the Tusa R-400 first stage and the "new" Scubapro Mk 16 first stages. The "new" designator refers to Mk16s that have a 10 hole diaphragm retainer cap (see illustration for more details).

The socket is machined from aluminum alloy and has two 6mm SS cap screws located 180⁰ apart. With the screws retracted, the socket will fit over the cap. Once installed on the first stage, the screws are hand threaded in the two adjacent holes and serve as drive pins to remove, install, and torque the diaphragm retaining cap. The center hole is broached 3/8" square and will fit any 3/8" drive torque wrench. No extension is required for driving this socket.

Description	Number	Price
R400 - Mk16 Socket	20-765-200	$27.00



Flow Vane Removal Tool

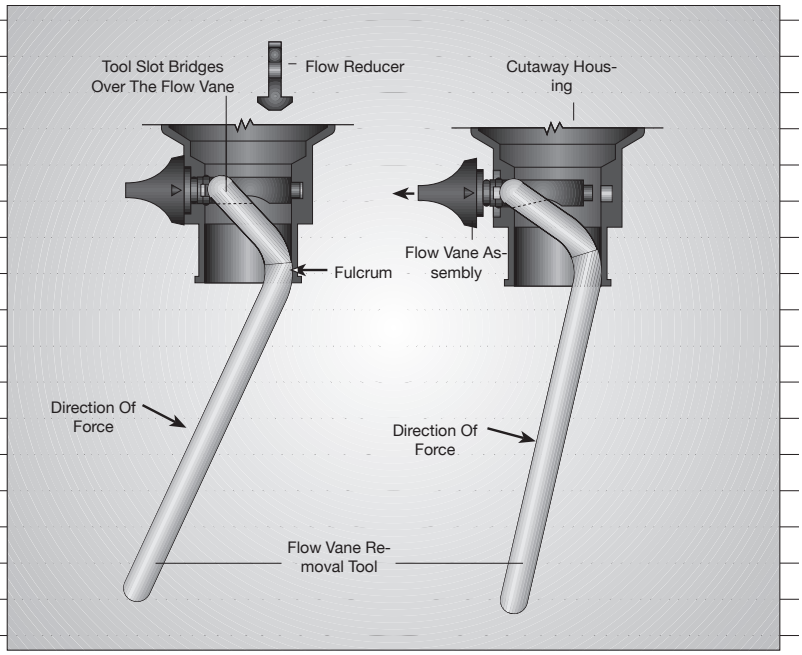
Fits: Tusa S-60 & Scubapro R380 Second Stages

The Flow Vane Removal Tool is designed to remove the flow vane assembly on the Tusa S-60 and the Scubapro R380/390 second stages.

The procedure for using this tool requires that the flow reducer be removed (see illustration). The tool is then inserted inside the mouthpiece shank with the slot in the end of the tool bridging over the flow vane. The bend in the tool is used as a fulcrum against the inside of the mouthpiece shank. By applying pressure on the tool handle, in the direction indicated, the flow vane assembly can be pushed out of the second stage housing. In this position, the flow vane assembly can be completely removed by hand. After servicing the o'ring, the flow vane assembly can be snapped back into place. Note: Be certain that the crescent shaped cut in the flow vane is facing out toward the mouthpiece shank when it is reinstalled.

The Flow Vane Removal Tool is fabricated from brass rod and vibratory finished.

Description	Number	Price
Flow Vane Removal Tool	20-770-100	$14.75



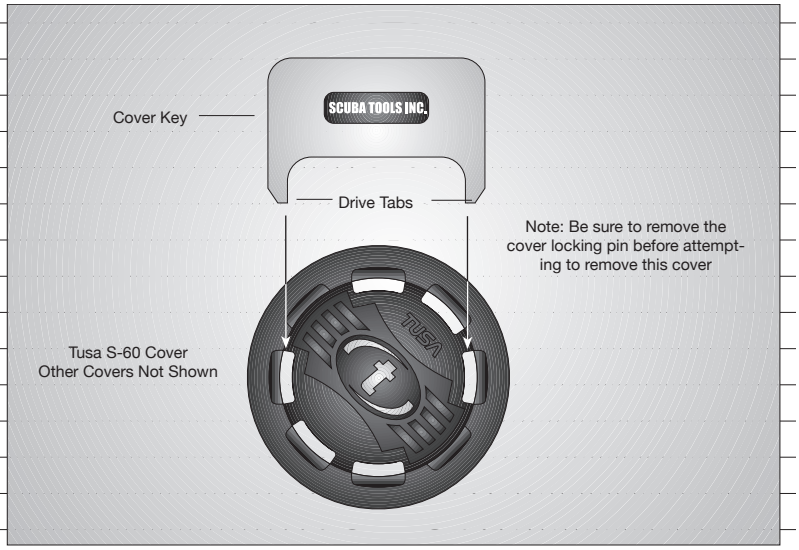
Tusa S-60 & Scubapro R380 Cover Key

This Cover Key is designed to fit the Tusa S-60 and Scubapro R380/390 second stage covers. It may also fit other Scubapro second stages.

The drive tabs on the cover key are inserted into any two adjacent cover holes. The tool can then be rotated in either direction to remove/install the cover. Important note: These two second stage covers are "pinned " to the second stage housing. The pin must be removed before the cover can be loosened (locking pin not shown).

The Cover Key is machined from aluminum bar stock and vibratory finished to remove all sharp edges.

Description	Number	Price
S60 /R380 Cover Key	20-775-200	$14.75



Uwatec & Scubapro Tools

Uwatec - Sherwood - Oceanic QDC Connector Tool Kit

This tool kit is designed to aid the service technician in the disassembly/assembly of the Uwatec Aladin, Sherwood Wisdom, or Oceanic Pro Plus air computer QDC (Quick Disconnect Coupler).

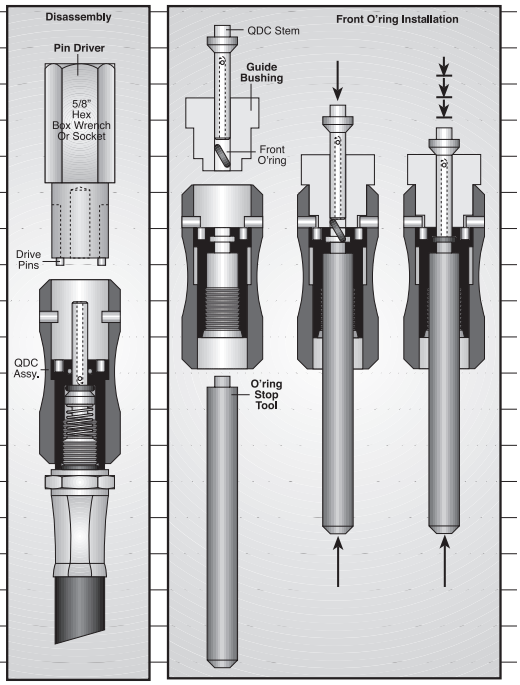
The hex brass driver is fitted with two stainless steel drive pins that index with the recessed holes in the QDC swivel body. This tool holds the swivel assembly in place while the hose is removed (see first illustration).

The Aladin QDC has two o'rings that seal to the computer module. The rear (bottom) o'ring can be easily installed and presents no special problems.

The front (top) o'ring is more difficult to install. This o'ring is located in a recessed groove in the swivel housing. The tool kit includes a Guide Bushing and O'ring Stop Tool designed to simplify this installation process. Insert the O'ring Stop Tool in the hose end of the coupler. Insert the o'ring in the small end of the bushing and slide the bushing into the swivel end of the coupler. Using the QDC stem as a plunger, tamp down gently on the o'ring (see second illustration). The stop tool prevents the o'ring from passing through the center hole. The o'ring will turn sideways when it hits the stop tool and slide into the groove easily.

The QDC Tool Kit is shipped with complete instructions for tool use.

Description	Number	Price
Uwatec QDC Tool Kit (includes Oceanic Bushing)	20-325-100	$34.50
Oceanic Bushing	20-325-101	$6.00



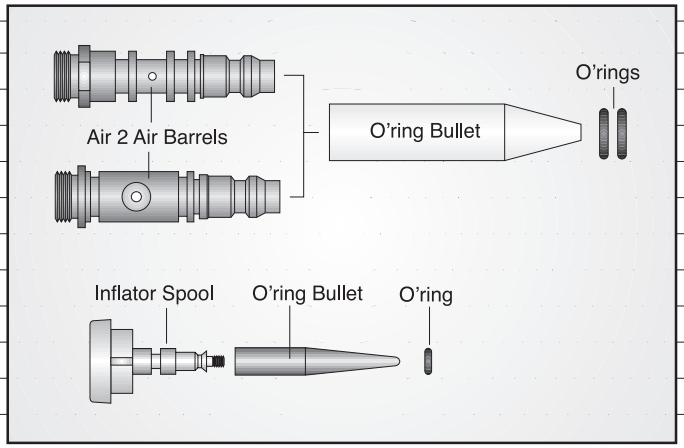
Scubapro Air 2/Inflator O'ring Bullet Kit

This tool kit contains two o'ring bullets to assist in the installation of o'rings on all models of Scubapro Air 2s and balanced inflators.

The Air 2 o'ring bullet will fit older generation Air 2s as well as the current model (see illustration, right). The bullet is used by sliding it all the way over the air barrel. The o'ring farthest from the right end of the air barrel is installed in the appropriate groove first. The second o'ring is installed by sliding the bullet outward until the leading edge of the bullet is aligned with the second groove in the air barrel. Lubricate the o'rings and bullet before installation! The Inflator o'ring bullet is used in the same manner.

The smaller inflator bullet is stored inside the cavity of the Air 2 bullet. A plastic cap is used to keep the two bullets together while not is use.

Description	Number	Price
Air 2/Inflator O'ring Bullet Kit	20-142-140	$13.00



Scubapro Mk 5/Mk10 O'ring Tool Kit

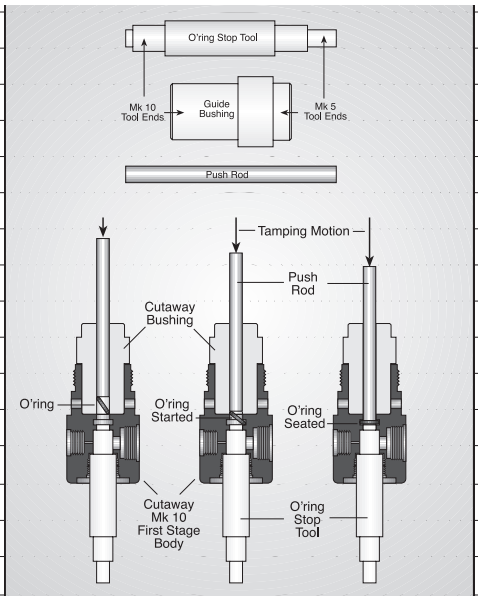
This tool kit is designed to assist the technician in the installation of the Mk5/Mk10 piston stem o'ring.

The kit consists of three separate tools. The O'ring Stop Tool and Guide Bushing are machined with two different ends to work in conjunction with both the Scubapro Mk5 and Mk10 first stages. The appropriate end of both tools "must" be used correctly to insure correct installation of this o'ring. The Push Rod is universal and is used with both first stages.

The bottom right illustration shows the Mk10 first stage body and Guide Bushing cutaway. The Mk5 installation procedure is identical to the Mk10 procedure.

Install the o'ring on the appropriate end of the guide bushing. Insert the Guide Bushing and o'ring into the first stage body. The hole in the center of the Guide Bushing aligns precisely with the hole in the first stage body. The Push Rod is used to gently tamp the o'ring downward against the O'Ring Stop Tool. The o'ring will be forced sideways into the o'ring groove completing installation. The Mk5/Mk10 O'ring Tool Kit is shipped with complete instructions for tool use.

Description	Number	Price
Mk5/Mk10 O'ring Tool Kit	20-275-400	$22.00



Scubapro Tools

SCUBAPRO

Subgear Cover / Diaphragm Tool

Used to remove the cover from Scubgears Second Stages and the other side is used to assist in the seating of second stage diaphragms.

Description	Number	Price
Subgear Cover/Diaphragm Tool	20-340-400	$21.00

Scubapro Balanced Chamber Tool

SCUBAPRO

Scubapro Balanced Chamber Tool
Fits: G500, S600, S600T, & G250HP

The Scuba Tools Inc. Balanced Chamber Adjustment Tool was designed specifically to modify the amount of spring force applied to the back of the poppet. This spring force is one of the major factors for controlling demand effort.

The Scuba Tools Inc. version of this tool differs from the tool manufactured by Scubapro in one very important feature:

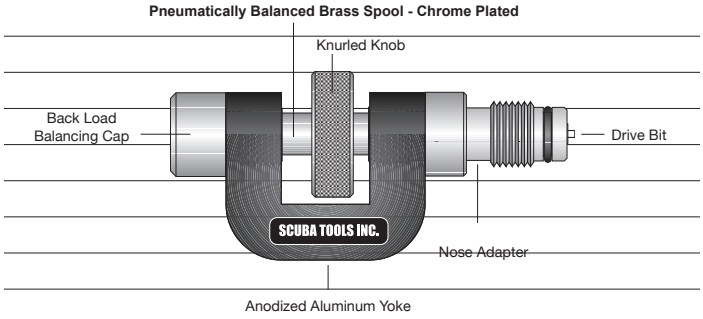
"The drive spool is totally pneumatically balanced and does not require inward hand pressure to keep the drive bit engaged."

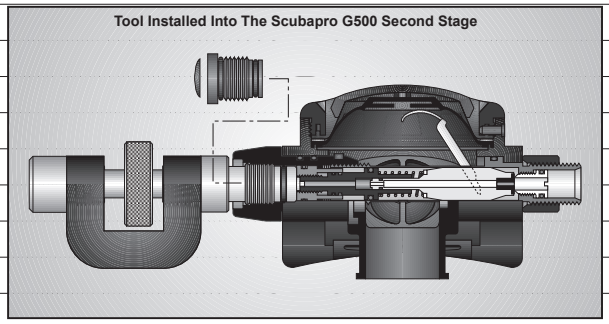
Air balancing is achieved by applying equal forces to both ends of the drive spool. Simply slide the spool inward until the drive bit engages with the slot in the balancing chamber and it will "stay put" without holding it in place. By eliminating the need to fight the spool position, the applied spring force can be adjusted precisely.

The Scuba Tools Inc. Balanced Chamber Adjusting Tool is designed to put the "touch" back into this adjustment process. It is manufactured from the finest materials and is built for years of trouble free service. For other construction and application details, see illustrations to the right.

Description	Number	Price
Balanced Chamber Tool	20-550-200	$67.00

Bottom Illustration: The knob can be used to indicate the approximate position of the balance chamber. When the knob touches the inside of the nose adapter, the balancing chamber is at its maximum forward position (maximum spring load). When the balancing chamber is threaded outward, it will stop at its maximum extended position (minimum spring force).





Tusa Tools

TUSA®

Tusa Inflator Button Tool

Used to remove and install the inflator button retainer ring on Tusa Inflators.

Description	Number	Price
Tusa Inflator Button Tool	20-720-100	$19.50

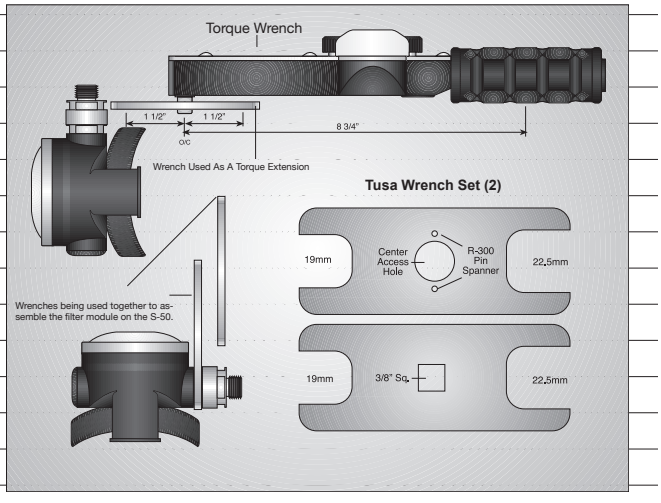
Tusa Wrench Set (2)
Disassemble, Assemble, & Torque S40 - S50

The Tusa Wrench Set provides a variety of specialized functions for the repair of the Tusa S-40, S-50, and R-300 regulators.

The wrenches feature a 19mm and 22.5mm open end design for removing, installing, and torquing second stage components that can not be accessed with a standard wrench. The wrenches can be used either individually or together to service these parts. One of the wrenches has a center broached square hole that allows either size wrench to be used as a torque extension (crowsfoot). The other wrench features a pin spanner in the center of the wrench for removing/installing the adjusting screw assembly on the R-300 first stage.

The Tusa Wrench Set is machined from high strength aluminum alloy, and the pin spanner utilizes removable SS tension pins. Shipped with complete instructions including the method of calculating torque when using a torque extension.

Description	Number	Price
Tusa Wrench Set (2)	20-750-200	$30.25



Tusa Tools

TUSA®

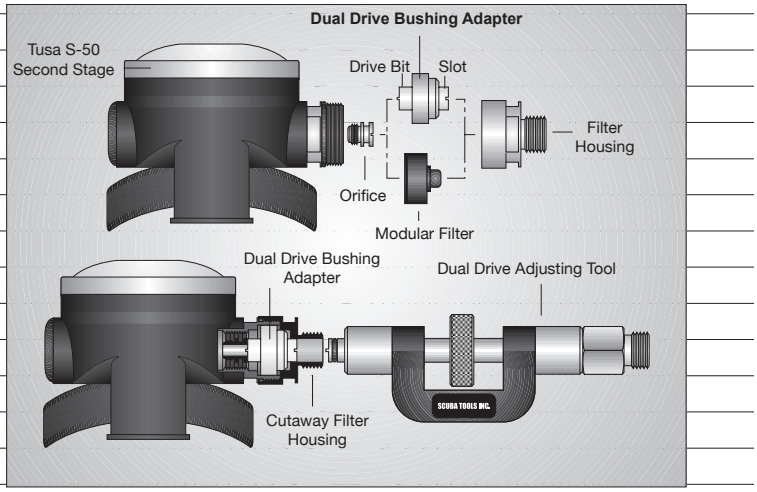
Dual Drive Bushing Adapter

Use The Dual Drive Adjusting Tool On the S-50

The S-50 second stage features a modular inline air filter. This filter blocks access to the orifice when the filter is installed. The Dual Drive Bushing Adapter is installed in place of the filter during final orifice adjustments. The bushing has a drive bit on one end and a slot on the other end. The drive bit is installed and indexed with the orifice, leaving the slotted end accessible inside the filter housing. In this configuration, the Dual Drive Adjusting Tool can be used normally to make precision adjustments to the orifice with the second stage under pressure. When the final adjustment procedure is complete, the modular filter is reinstalled in the filter housing.

The Dual Drive Bushing Adapter is machined from brass and should only be used on a free turning orifice. Using the adapter to remove a stuck orifice will result in damage to the adapter drive bit.

Description	Number	Price
Dual Drive Bushing Adapter	20-755-400	$11.75



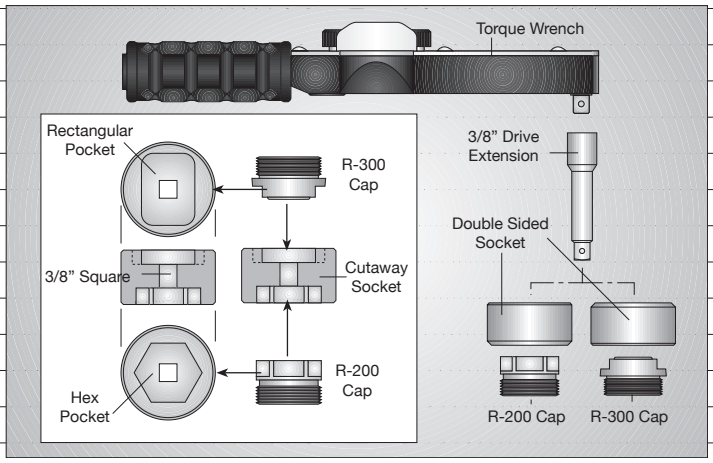
Tusa R200/R300 Socket

Disassemble & Torque Both Diaphragm Retainers

The Tusa R-200/ R-300 Socket is a double sided socket that provides a means of removing, installing, and torquing the diaphragm retainers on the R-200 and R-300 first stages.

The socket is machined from 2" diameter aluminum bar stock with a rectangular pocket in one end and a hex pocket in the other end. The center hole is broached 3/8" square and will fit all 3/8" drive torque wrenches. The square drive center hole is recessed below the surface and requires the use of a standard 3/8" drive extension (not included) to access the drive hole. The aluminum material provides a low damage solution to dealing with the service of these two diaphragm retainers. Natural aluminum finish.

Description	Number	Price
Tusa R200/R300 Socket	20-760-200	$27.00



Tusa O'Ring Installation Tool - Inflate Poppet

TUSA O'ring installation tool for inflator poppet (TUSA MT-2A)

Description	Number	Price
Tusa O'Ring Installation Tool	20-732-100	$8.25

TUSA O'ring Installation Tool - Exhaust System

Bullet tool for inflator button o-ring and exhaust stem o'ring. (TUSA part no's MT-1A and MT-4A)

Description	Number	Price
Tusa O'Ring Inner Body Installation Tool	20-731-100	$8.25

TUSA Inner Body O'ring Installation Tool

New function added to this tool to eliminate o'ring pinching.

Description	Number	Price
Tusa O'Ring Inner Body Installation Tool	20-730-400	$15.25

Tusa Tools

TUSA Multi Purpose Rod

A multipurpose tool used to push the diaphragm out of the 1st stage. The handle is concave on the face where the rod meets to help protect against damage to the crown of the 1st stage orifice when installing.

Description	Number	Price
Tusa Multi Purpose Rod	20-745-400	$13.25

400 TUSA 2nd Stage Orifice Tool

(TUSA MT4-8) Used to adjust the 2nd stage orifice and threaded end used for extracting the 2nd stage orifice and 1st stage piston.

Description	Number	Price
Tusa 2nd Stage Orifice Tool	20-747-400	$23.50

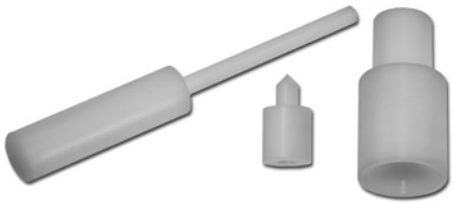
TUSA Retaining Screw Bit S-30, S-40, S-70

(TUSA MT-RSB30) Used when removing or installing the adjuster side retaining screw on the TUSA S-30,S-40, and S-70 2nd stages.

Description	Number	Price
Tusa Retaining Screw Bit	20-748-400	$24.00

Tusa R-500 O'ring Install Tool Kit

The TUSA R-500 O'ring Install Tool Kit simplifies the placing of the "O" ring in the R-500 TUSA first stage.



Description	Number	Price
Tusa R-500 O'Ring Install Tool Kit	20-746-400	$31.25

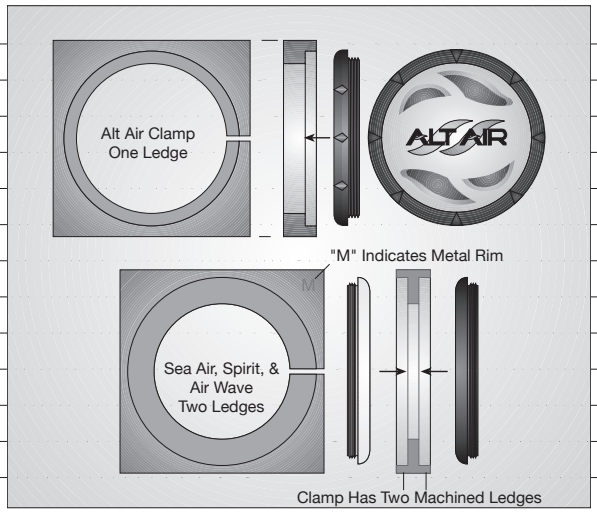
Tusa & XS Scuba Tools

TUSA® XS SCUBA

XS Scuba Rim Clamps

Alt Air Rim Clamp: This clamp is used to remove the outer cover ring on the XS Scuba Alt Air second stage. The split clamp design provides nearly 100% contact with the outer diameter of the ring. The best method for using the split clamp is to capture the clamp in a bench vise. Clamping force should be applied gently until the split in the clamp closes on the ring. With the second stage secured in this manner, the second stage housing can be turned to loosen the ring.

Sea Air, Spirit, & Air Wave Rim Clamp: It is designed to assist the technician in removing second stage diaphragm retaining rims on the above second stages. The internal ledges are sized to fit the rims exactly. After the rim has been installed into the clamp, the clamp can be "squeezed gently" in a bench vise to keep the rim from slipping while it is removed by turning the second stage housing.



Description	Number	Price
Alt Air Rim Clamp	20-795-200	$24.00
Sea Air, Spirit, & Air Wave Clamp	20-790-200	$25.00

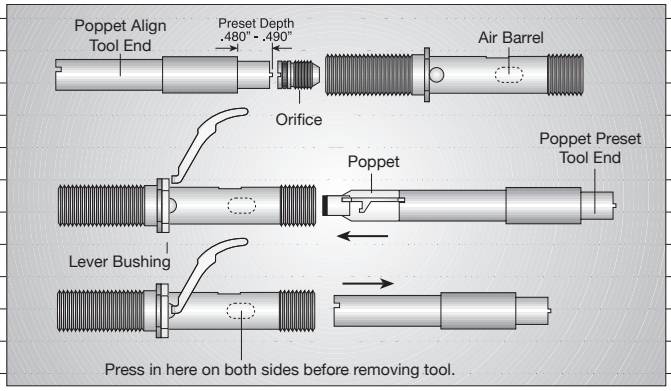
Tusa & XS Scuba Tools

TUSA® XS SCUBA

XS Scuba Poppet Align/Preset Tool

The XS Scuba Poppet Align/Preset Tool is designed as a dual function tool. One end is used to preset the depth of the orifice in the air barrel, and the opposite end is used to control the poppet orientation when it is installed into the air barrel. The orifice is installed and preset to the approximate depth first. After inserting the orifice into the air barrel, engage the drive bit with the orifice slot and thread the orifice into the air barrel as far as it will go. This will position the orifice at a depth of .480" - .490". With the orifice positioned, turn the tool around and insert the poppet into the notched end of the tool. Orientate the poppet and tool, as shown in the illustration to the right, and slide it into the air barrel as far as it will go. Install the lever into the air barrel. Shipped with complete instructions.

Description	Number	Price
XS Scuba Poppet Tool	20-785-400	$17.75



Tusa S-40/S-50 Cover Tool

Remove, Install, & Torque Cover & Ring Components

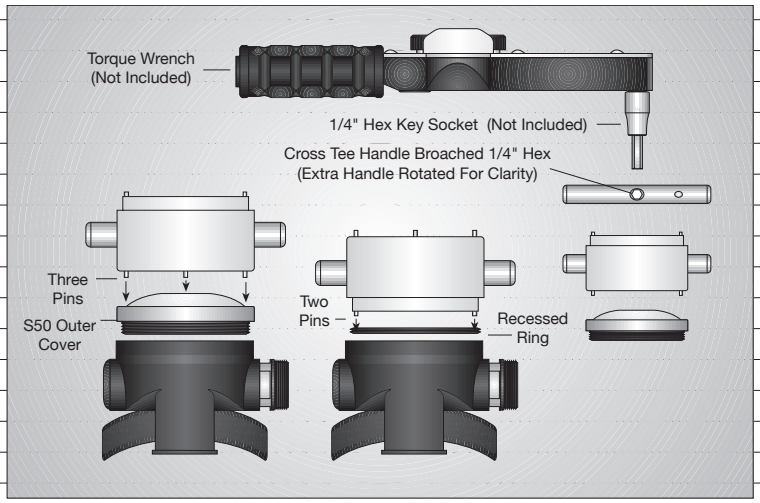
This Tusa Cover Tool is a multifunction tool for removing, installing, and torquing both the outer covers and diaphragm retaining rings on the S-40 and S-50 second stages.

The "three pin" side of the tool will index with the outer covers, and the "two pin" side of the tool fits the holes in the recessed diaphragm retaining ring.

The cross tee handle of the tool is broached 1/4" hex. This feature allows the tool to be used in conjunction with a torque wrench to achieve the proper assembly tension. A 1/4" hex key socket is required between the torque wrench and the broached center hole (not included).

The body of the tool is machined from nylon tube and the cross tee handle is aluminum. Shipped with instructions.

Description	Number	Price
Tusa S40/S50 Cover Tool	20-780-200	$32.25

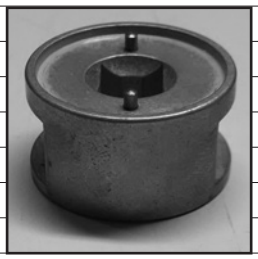


Poseidon Tools

Poseidon Socket

The Poseidon Socket has been designed to replace the use of a pin spanner on 1rst stages. The socket has a 3/8" Sq. drive hole for breaker bars and can also be held from the outside with a wrench allowing you to reach through the 3/8" Sq hole with a hex wrench and break the plug loose from the first stage cap.

Description	Number	Price
Poseidon Socket	23-100-100	$17.50

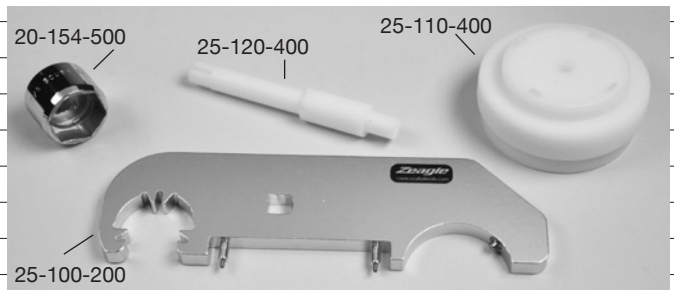


Zeagle Tools

Zeagle Tool Kit, 4pc

This 4 pc tool kit consists of the Zeagle Multi-Spanner, Zeagle Cover & Diaphragm Tool, Zeagle Poppet Assy & Seat Saver Tool, and 7/8" Yoke Nut Socket.

Description	Number	Price
Zeagle Tool Kit, 4pc	25-130-600	$90.75
Zeagle 7/8" Yoke Nut Socket	20-154-500	$23.50
Zeagle Poppet/Orifice Tool	25-120-400	$17.75
Zeagle Cover & Diaphragm Tool	25-110-400	$16.00
Zeagle Multi-Spanner Tool	25-100-200	$39.75



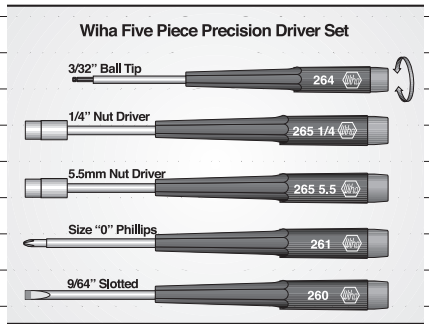
Select Hand Tools

Wiha "Select Set" & Individual Tools

Right away you'll decide, "These are my favorite precision tools". The tools feel good in your hand, do the job without a whimper, and look like professional tools should. These precision drivers exemplify the same pride in craftsmanship that we build into our own custom tools.

The "Select Set," shown to the right, contains five drivers specifically chosen for the diving repair bench. They feature chrome vanadium molybdenum steel blades that are hardened and chrome plated. The tips are precision ground for exact fit and the tapered handles are topped with a rotating cap for precise finger tip control. These five tools are available in a set or as individual tools.

Description	Size	Number	Price
Precision Select Set	**5 Pieces**	**11-100-500**	**$31.00**
Ball Point Hex Driver	3/32"	11-153-500	$ 6.00
Nut Driver	1/4"	11-168-500	$ 8.60
Nut Driver	5.5mm	11-178-500	$ 8.60
Phillip's Screwdriver	Size #0	11-144-500	$ 5.15
Slotted Screwdriver	9/64"	11-135-500	$ 5.00
Nut Driver	7/32"	11-166-500	$ 8.60
Slotted Screwdriver	2 mm	11-133-500	$ 5.10
Slotted Screwdriver	3 mm	11-134-500	$ 4.90
Square	Size #0	11-475-500	$ 6.50
Precision Torx	T10	11-600-500	$ 5.75
Precision Ball End Hex	1.5 x 50mm	11-155-500	$ 6.00



Wiha "Standard Set" & Individual Tools

The five tools pictured to the right are basic to all diving repair centers. They were selected for overall size, feel, and quality.

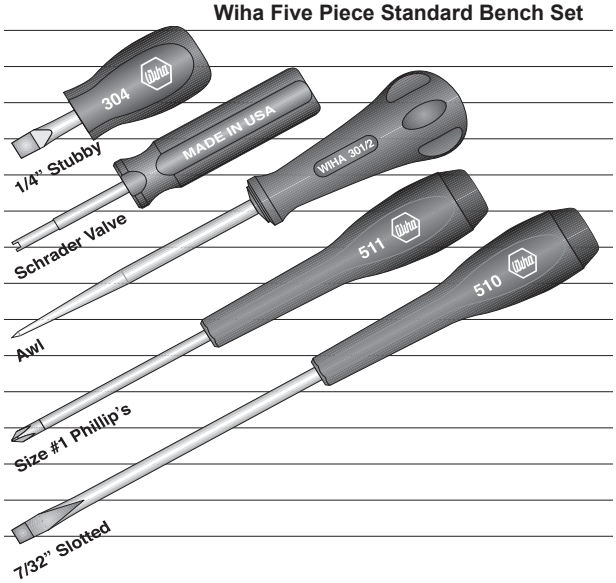
Stubby Screwdriver: The Wiha "stubby" 1/4" screwdriver was selected because of the narrow dimension in the middle of the blade.

Schrader Valve Tool: This Schrader valve tool has the reach necessary for removing/installing Schrader valves, even in the most recessed locations in power inflators and quick disconnect couplers.

Awl: The Wiha awl is a general purpose tool used for removing/installing tension pins and small parts with holes in deep recessed areas.

Screwdrivers (2): The slotted and Phillip's screwdrivers feature the Wiha dynamic handle with rotating palm cap. These five tools are available in a set or as individual tools.

Description	Size	Number	Price
Standard Tool Set	**5 Pieces**	**11-010-500**	**$41.50**
Stubby Screwdriver	1/4" Tip	11-465-500	$ 8.80
Schrader Valve Tool	1.65" Bit	12-100-500	$ 6.50
Awl	7" Blade	11-310-500	$ 7.80
Phillip's Screwdriver	Size #1	11-210-500	$ 9.70
Slotted Screwdriver	7/32" Tip	11-255-500	$11.95



Retaining Ring Plier 90° Tip

This "plier style" spanner is one of the best universal tools for regulator repair we have seen to date. Made from high quality forged CV Tool Steel. Induction hardened tips. Heavy duty tool steel riveted box joints. The .070 dia. tip is the most widely used and fits nearly every regulator first and second stage cap in the diving industry.

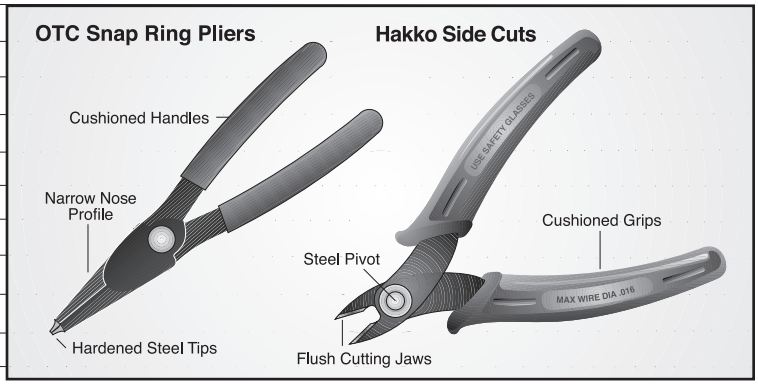
Description	Tip Dia.	Number	Price
Plier Spanner	.035	16-035-500	$26.75
Plier Spanner	.050	16-050-500	$26.75
Plier Spanner	.070	16-070-500	$26.75

Snap Ring Pliers & Side Cuts

Snap rings used in diving equipment are generally located in tight quarters. The OTC snap ring pliers, illustrated to the right, were selected for the narrow tips and nose profile to reach small snap rings in deeply recessed grooves.

The Hakko side cuts feature flush cutting jaws that are perfect for trimming mouthpiece tie wraps. The steel pivot is very rigid and the cushioned grips are a pleasure to hold. The overall length of the side cuts is 5" and they are ideal for light duty work in close quarters.

Description	Number	Price
OTC Snap Ring Pliers	10-101-500	$18.00
Hakko Side Cuts, 5"	16-020-500	$11.25



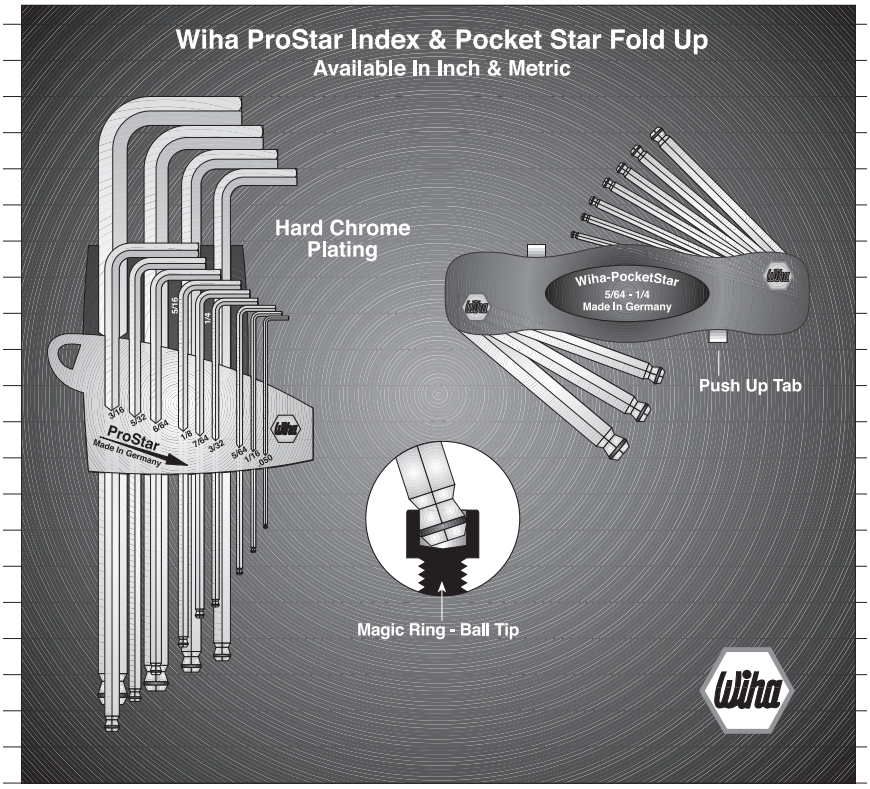
Hex Key Sets & Lubricants

Wiha Magic Ring Hex Key Sets

Wiha has developed a series of hex key wrenches that surpasses anything we would have expected from a simple L-shaped hex key wrench.

- **Magic Ring:** The tip of every wrench has an embedded spring steel ring that holds the screw in place (see illustration). The magic ring will hold steel, stainless steel, brass, and nylon screws and fasteners on the tip of the wrench while they are positioned and started.
- **Hard Chrome Finish:** The exterior of the CVM hardened tool steel wrenches is coated with a bright hard chrome plating.
- **Chamfered Ball Tips:** These wrenches are precision machined with a chamfered edge and 25^0 ball tip for easy alignment and insertion in tight quarters.
- **Extra Long:** All L-wrenches are extra long in length for added access in tough to reach places.
- **"Tip & Slide" Pro Star Indexes:** The Pro Star indexes are designed to allow the front index panel to slide to the right and out of the way of the back index.
- **"Push Out" Pocket Star Fold Up:** The Pocket Star Fold Up has a back loaded tab that pushes the hex keys out of the recess in the handle. This eliminates digging the keys out of the handle one at a time.

Wiha Majic Ring Ball Tip Sets	Number	Price
Inch Pocket Star Fold Up	11-503-500	$30.00
Metric Pocket Star Fold Up	11-502-500	$29.00
Inch X-Long Ball Tip Hex Set	11-501-500	$54.00
Metric X-Long Ball Tip Hex Set	11-500-500	$44.00



Syringe - Pak Lubricants

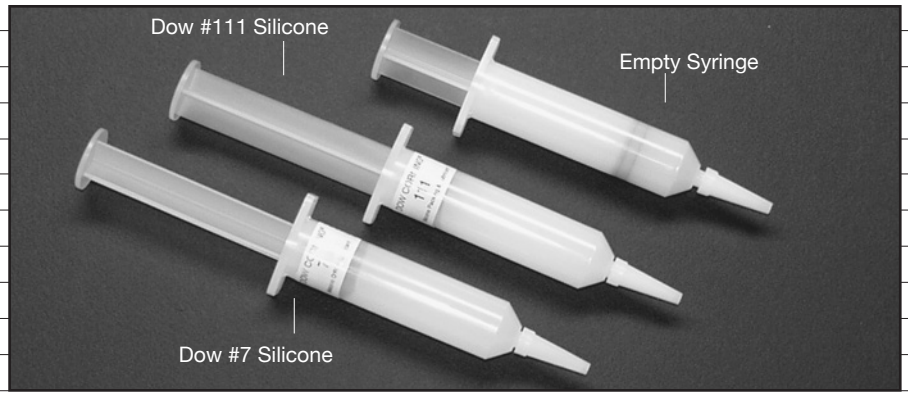
ChristoLube: This "super lubricant" has been adopted industry wide for regulator maintenance. This compound provides excellent lubrication qualities, is not water soluble, and is very inert. ChristoLube is available in MCG 129 for general lubrication, and MCG 111 for dynamic lubrication. Both formulas can be used universally for regulator service. Some regulator manufacturers specify one or both when working on their products. Be sure to consult their technical service department if you are in doubt. MCG 129 is available in 2 oz. syringe only. MCG 111 is available in .8 oz. syringe, 2 oz. syringe, 2 oz. tube and 8 oz. tube. MSD sheet included.

ChristoLube	Number	Price
MCG 129 2 oz. Syringe	15-710-129	$27.00
MCG 111 .8 oz Syringe	15-708-111	$16.75
MCG 111 2 oz. Syringe	15-710-111	$36.00
MCG 111 2 oz. Tube	15-711-111	$33.50
MCG 111 8 oz. Tube	15-718-111	$134.00

Dow Silicone: Silicone products are also avalible at Scuba Tools Inc. Syringe-Paks: Dow #7 for o'ring lubrication, and Dow #111 for environmental packing. Both products are packaged in 1 oz. syringes only.

Empty Syringe: If you need an empty syringe, the standard Scuba Tools Inc. 30cc. is available.

Dow Silicone	Number	Price
Dow #7, 1 oz. Syringe	15-700-007	$9.75
Dow #111, 1 oz. Syringe	15-700-111	$9.75
Empty 30 cc. Syringe	55-200-400	$3.00



Cylinder Tools

Crows Feet Set

These Crows Foot Wrenches are designed to loosen and properly torque and install tank valves into tanks. (these wrenches are torque rated for Brass/Bronze tank valves only.They are 3/8" sq.drive. Improper usage will result in permanent damage to tools.

Description	Number	Price
Crows Feet Set	80-300-500	$125.00

Cylinder Plug

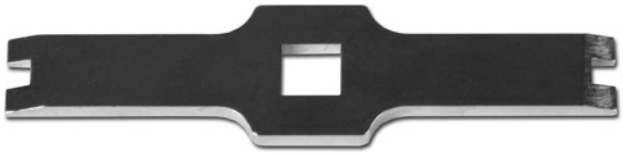
Tank Plugs for tank tumbling. These plugs have long enough threads to keep tumbling media from entering the threads of the tank. Manufactured with a 3/8" square on the top for faster, easier, installation and removal by using the combination tank plug tool/valve knob screwdriver

Description	Number	Price
Cylinder Plug	80-320-200	$15.00

Custom Valve Tool

This tool is a combination tank plug wrench for use with tumbling plugs and valve knob screwdriver. Machined from 4140 Chrome Moly with a screwdriver blade on each end and a 3/8' square hole in the center for aiding the installation and removal of the tank plugs.

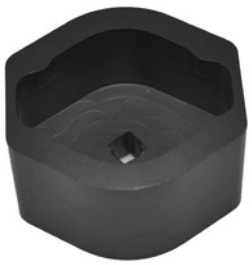
Description	Number	Price
Custom Valve Tool	80-310-500	$16.00



SCBA VALVE TOOL

This custom designed socket is used to remove and install valves on Scott, ISI, and possibly other, SCBA cylinders without damage. The 3/8 inch drive allows for proper torquing. A must for every SCBA cylinder inspector.

Description	Number	Price
SCBA Valve Tool	80-500-500	$175.00



Yoke O'ring Tool

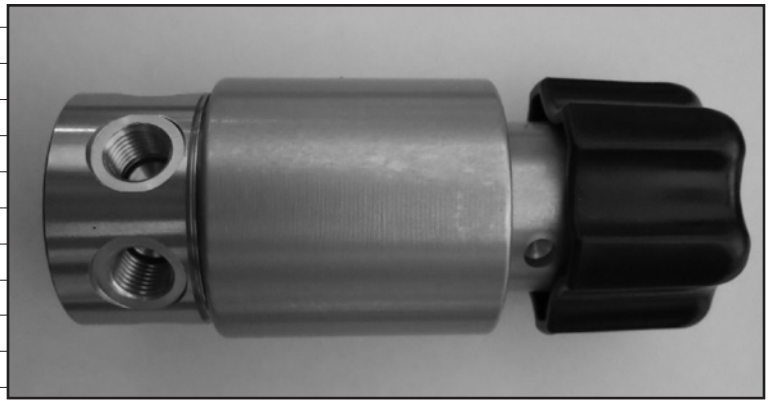
Need to install o-rings in quick fashion? This tool takes the tedium out of doing it. With just a push and a twist, the o-ring is seated quickly and easily. Fits most standard scuba valve face o-rings.

Description	Number	Price
Yoke O-ring Tool	80-360-200	$22.00

Air Supply

0-5000 psi Reducing Regulator

An Aqua Environment® piston type, reducing regulator. This regulator is rated at 6000 psi input with a variable output from 0-5000 psi. The regulator is self-venting (pressure is relieved internally when the output pressure is decreased). The regulator is equipped with two high pressure ports for monitoring both input and output pressures. The 1/4" NPTF input port is located on the left side of the regulator and can be connected directly to a high pressure (maximum 6000 psi) supply line.



Description	Number	Price
0-5000 psi Reducing Regulator	26-155-100	$308.00
Repair Kit	26-155-101	$70.00

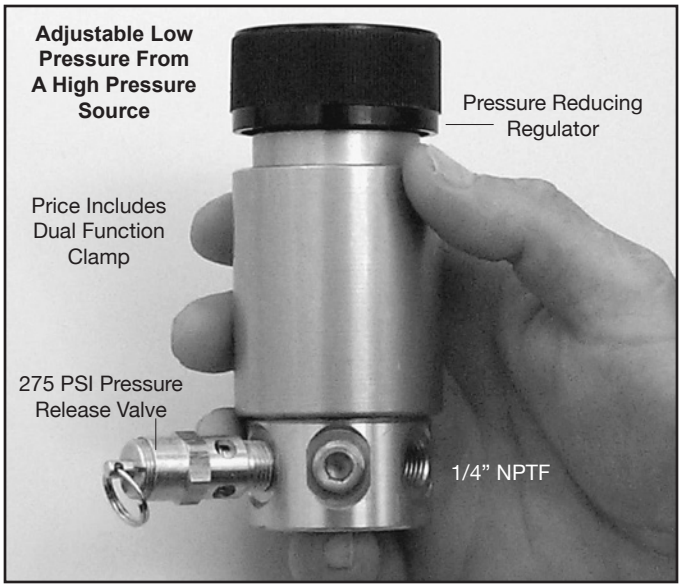
0-400 PSI Pressure Reducing Regulator

The Aqua Environment® pressure reducing regulator is the ideal way to generate a “low pressure air supply” for the repair bench. The input side of the regulator will accept up to 6000 psi and can be connected directly to a high pressure cascade or bank system. The output side of the regulator can be adjusted from 0-400 psi. The regulator is equipped with a pressure release valve preset at 275 psi. This fixes the upper limit of the regulator output within the pressure range of standard low pressure air hoses or air coils.

The regulator is designed to “internally vent” descending pressures. This means when the knob is retracted (screwed out), the output pressure will drop automatically without releasing the pressure externally.

The output pressure range of this unit is also perfect for the A.I.R. Flow Analyzer Flow Vac.

Input/output ports are 1/4” NPTF, and maintenance on this regulator is greatly simplified by the use of a factory sealed service cartridge that is replaced as a unit. Dual function mounting clamp included.



Description	Number	Price
0-400 psi Reducing Regulator	26-150-100	$331.00
Repair Kit	26-150-101	$70.00

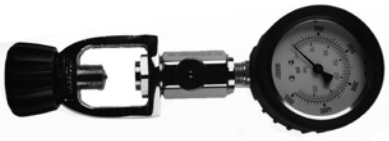
Yoke Filler With Bleed

Description	Number	Price
Yoke Filler With Bleed	20-198-100	$80.00

DIN Filler With Bleed

Description	Number	Price
DIN Filler With Bleed	20-199-100	$113.00

Yoke Tank Checker w/bleed



Description	Number	Price
Yoke Tank Checker	20-168-200	$130.00

DIN Tank Checker w/bleed

Description	Number	Price
DIN Tank Checker	20-169-200	$165.00

Hose Assemblies & Adapters For The Repair Bench

High Pressure Hose (Non-Diving Application):

Scuba Tools Inc. now has available Parker® 526-BA high pressure hose. This hose maintains the breathing air quality standards as described by CGA G-7-1997 Grade E. Parker® 526-BA hose is suitable for SCUBA air station and repair bench applications. The hose construction consists of a seamless thermoplastic inner tube reinforced by two layers of high strength synthetic fiber and a weather resistant thermoplastic outer cover. The outer cover is pinpricked for pneumatic service. Not for oxygen service. Note the following specifications:

Parker® 526-BA HP Hose

Size	I.D. Nominal Inches	O.D. Nominal Inches	Minimum Bend Radius	Minimum Burst Pressure	Maximum Working Pressure	Operating Temperature Range	Maximum Elongation @ WP
1/4"	0.255	0.500	2.0"	24,000 psi	6,000 psi	-40 F To + 180 F	+2%

Low Pressure Hose (Non-Diving Application):

Scuba Tools Inc. is also stocking Parker® GPH low pressure hose. This hose utilizes a PVC core tube, fiber reinforcement, and a blue PVC cover. All layers are chemically bonded for optimum kink resistance and flexibility. This hose has an excellent resistance to abrasion, ozone, and UV light. Parker GPH "is not" certified for breathing air. Note the following specifications:

Parker® GPH LP Hose

Size	I.D. Nominal Inches	O.D. Nominal Inches	Minimum Bend Radius	Minimum Burst Pressure	Maximum Working Pressure	Operating Temperature Range	Typ. Vol. Expansion @ WP
1/4"	0.250	0.510	0.625"	1,200 psi	300 psi	-15 F To + 150 F	1.4 cc/ft

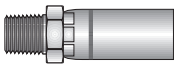
When ordering hose assemblies, please follow the three steps below:

1. Type Of Hose (right)
2. Length Of Hose

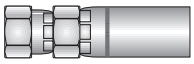
Description	Number	Price
Parker 526-BA HP Hose	17-100-000	$9.00 Ft*
Parker GPH LP Hose	17-200-000	$1.85 Ft*

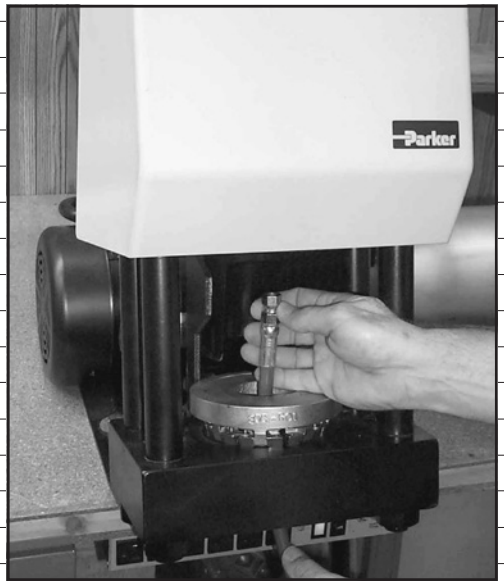
3. Specify Two Hose End Fittings (right)

1/4" NPT Male Fixed Hose End
Part Number 17-300-500



1/4" JIC 37° Female Swivel Hose End
Part Number 17-350-500





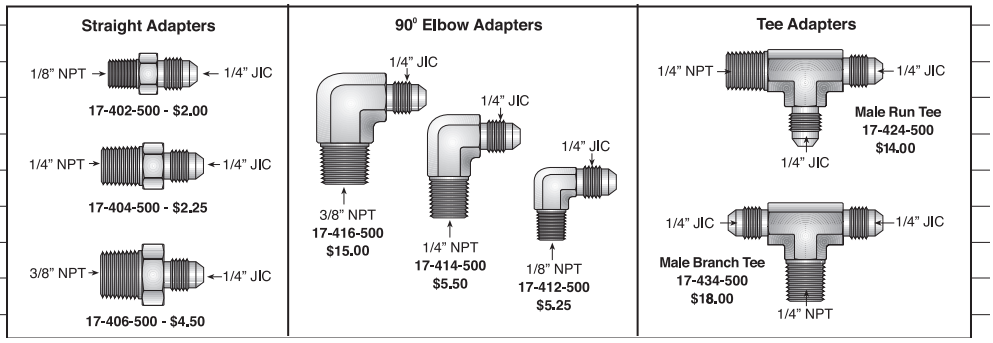
Scuba Tools Inc. has installed the Parker® hydraulic crimping system designed specifically for permanently installing Parker® hose end fittings.

***Hose Assembly Cost:** The cost of any hose assembly can be calculated by multiplying the cost per foot times the length of the hose. Add $14.00 to this cost. This charge ($14.00) covers the two end fittings and the assembly charge. Example: 10 ft. HP Hose Assembly - (Hose = $9.00 per foot x 10 feet = $90.00) + (Fittings & Assembly = $14.00) Total cost $104.00.

High Pressure Adapters

Scuba Tools Inc. is stocking a limited number of high pressure adapters for the above HP hose assemblies.

The working pressure of all fittings and adapters, listed to the right, exceed the working pressure of the 526-BA high pressure hose. Fittings are machined from steel and are zinc phosphate coated for general corrosion resistance. Order fittings directly from the display information to the right.

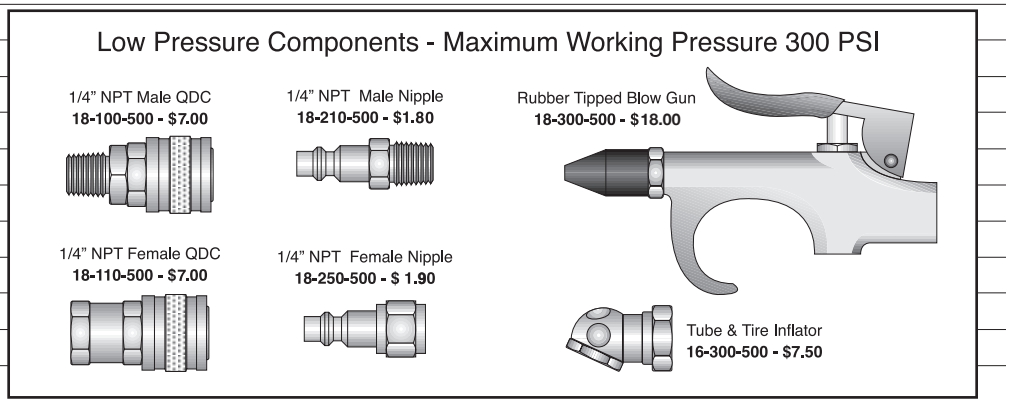


Low Pressure Accessories

The low pressure components listed to the right can be used to customize the LP air system on the repair bench. All of the accessories utilize 1/4" NPT threads (male or female) and the QDCs fit all of the nipples listed. The low pressure hose assemblies above (17-200-000) can be cut to custom length to suit your needs.

The components on this page "are not" designed for use as breathing air hoses and are not recommended for diving.

Pressure relief valves and special diving industry QDCs are listed on the next page. The diving industry QDCs "do not" interchange with the fittings on this page.

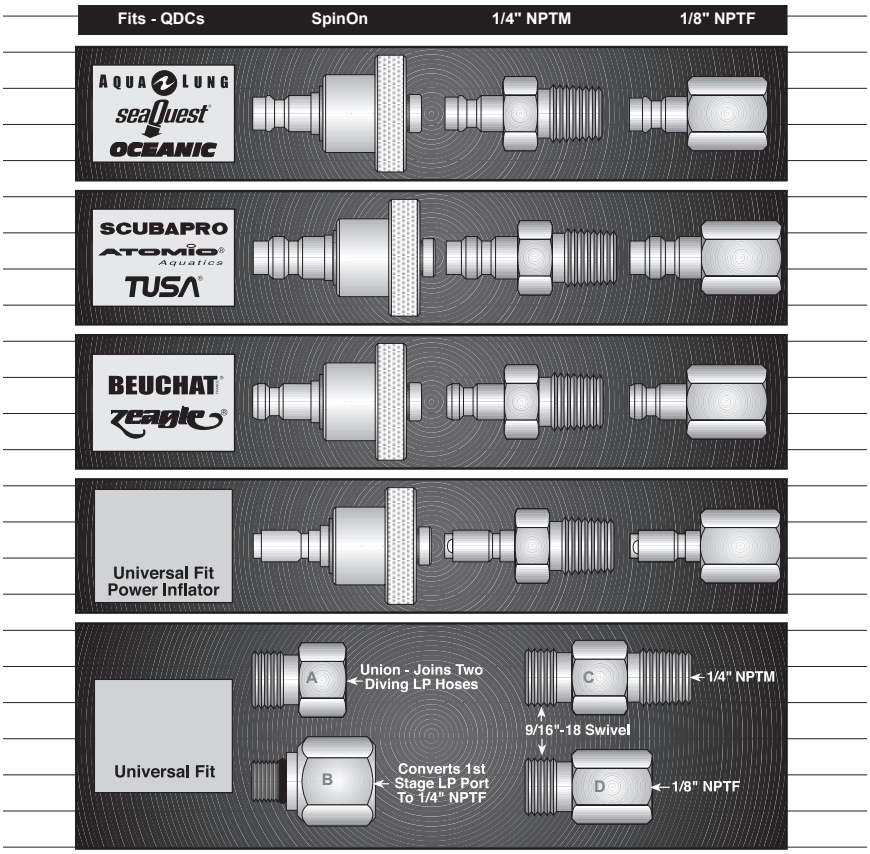


Scuba Tools QDC Adapters & Brass Fittings

QDC - Quick Disconnect Coupler

Scuba Tools Inc. Adapters - Brass/Chrome

Description	Number	Price
Fits: Aqua Lung, SeaQuest, & Oceanic QDCs		
QDC to SpinOn (9/16"-18)	20-163-102	$16.25
QDC to 1/4" NPTM	20-161-106	$6.00
QDC to 1/8" NPTF	20-161-107	$6.00
Fits: Scubapro, Atomic Aquatics, & Tusa QDCs		
QDC to SpinOn (9/16"-18)	20-163-100	$16.25
QDC to 1/4" NPTM	20-161-100	$6.00
QDC to 1/8" NPTF	20-161-101	$6.00
Fits: Beuchat & Zeagle QDCs		
QDC to SpinOn (9/16"-18)	20-163-103	$16.25
QDC to 1/4" NPTM	20-161-108	$6.00
QDC to 1/8" NPTF	20-161-109	$6.00
Fits: Most Power Inflators QDCs		
QDC to SpinOn (9/16"-18)	20-163-101	$16.25
QDC to 1/4" NPTM	20-161-102	$6.00
QDC to 1/8" NPTF	20-161-103	$6.00
Fits: All Standard Hoses & First Stages		
A. 9/16"-18 M to 3/8"-24 F	20-161-104	$6.00
B. 3/8"-24 M to 1/4" NPTF	20-161-105	$6.00
C. 9/16"-18 M to 1/4" NPTM	20-160-100	$6.00
D. 9/16"-18 M to 1/8" NPTF	20-160-101	$6.00

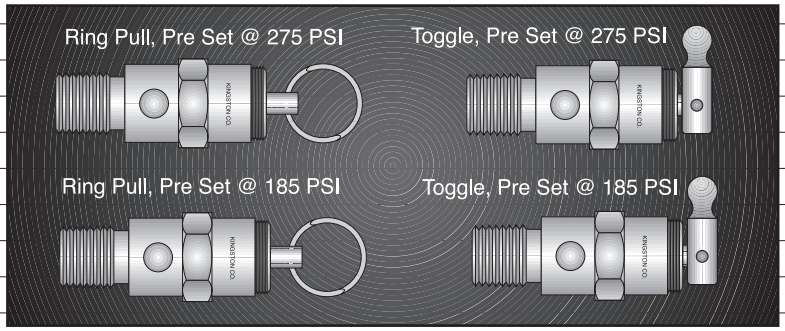


Pressure Release Valves (PRV)

The PRVs shown right all utilize a 1/4" NPT male end. All valves have Viton seats and are factory preset to their specified release pressures.

Important Note: These valves are intended for protecting against over-pressurization of gauges and hoses. They are not intended for use in diving equipment applications.

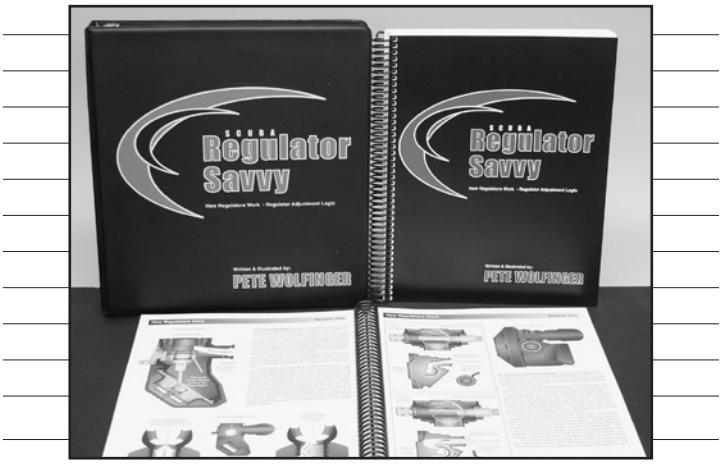
Pressure Release Valves	Number	Price
Ring Pull, Pre Set @ 275 psi	10-304-100	$13.50
Ring Pull, Pre Set @ 185 psi	10-204-100	$13.50
Toggle, Pre Set @ 275 psi	10-306-100	$17.50
Toggle, Pre Set @185 psi	10-206-100	$17.50



Regulator Savvy

Regulator Savvy is a different kind of regulator repair manual. For many years, I have believed that professional regulator service could be better served by teaching the fundamental functions of the regulator, rather than relying solely upon a procedural approach. This book translates this idea into physical reality. The manual is presented both in a three ring binder and spiral bound. It contains 187 pages and over 300 new-to-the-world illustrations. It is not a "Do It Yourself" guide to regulator repair, but instead builds a solid base of knowledge that applies to every phase of regulator service. It is my sincere hope that Regulator Savvy serves to inspire every technician to strive for his highest potential.

Description	Number	Price
Regulator Savvy, 3 Ring Binder	30-100-000	$64.00
Regulator Savvy, Spiral Bound	30-100-100	$37.75



Notes

Conversion Charts

Fractional Inch Conversion Chart

Fraction	Decimal	Millimeter
1/64	.016	
1/32	.031	
	.039	1mm
3/64	.047	
1/16	.063	
5/64	.078	
	.079	2mm
3/32	.094	
7/64	.109	
	.118	3mm
1/8	.125	
9/64	.141	
5/32	.156	
	.158	4mm
11/64	.172	
3/16	.188	
	.197	5mm
13/64	.203	
7/32	.219	
15/64	.234	
	.236	6mm
1/4	.250	
17/64	.266	
	.276	7mm
9/32	.281	
19/64	.297	
5/16	.313	
	.315	8mm
21/64	.328	
3/8	.375	
11/32	.344	
	.354	9mm
23/64	.359	
25/64	.391	
	.394	10mm
13/32	.406	
27/64	.422	
	.433	11mm
7/16	.438	
29/64	.453	
15/32	.469	
	.472	12mm
31/64	.484	
1/2	.500	
	.512	13mm

Fraction	Decimal	Millimeter
33/64	.516	
17/32	.531	
35/64	.547	
	.551	14mm
9/16	.563	
37/64	.578	
	.591	15mm
19/32	.594	
39/64	.609	
5/8	.625	
	.630	16mm
41/64	.641	
21/32	.656	
	.669	17mm
43/64	.672	
11/16	.688	
45/64	.703	
	.709	18mm
23/32	.719	
47/64	.734	
	.748	19mm
3/4	.750	
49/64	.766	
25/32	.781	
	.787	20mm
51/64	.797	
13/16	.813	
	.827	21mm
53/64	.828	
27/32	.844	
55/64	.859	
	.866	22mm
7/8	.875	
57/64	.891	
29/32	.906	
	.906	23mm
59/64	.922	
15/16	.938	
	.945	24mm
61/64	.953	
31/32	.969	
63/64	.984	
	.984	25mm
1	1.000	

If you're like most of us, the conversion between Metric and English information can be confusing. The charts on this page may help to clarify some of the most commonly used diving industry crossover numbers.

All numbers are rounded and should not be used for precise calculations.

Cubic Feet To Liters Conversion Chart

SCFM	LPM
1	28.32
2	56.63
3	84.95
4	113.27
5	141.58
6	169.90
7	198.22
8	226.53
9	254.85
10	283.17
11	311.49
12	339.80
13	368.12
14	396.44
15	424.75
16	453.07
17	481.39
18	509.70
19	538.02
20	566.34
21	594.65
22	622.97
23	651.29
24	679.60
25	707.92
26	736.24
27	764.55
28	792.87

Low Pressure Conversion Chart

in/H_20	PSI	in/Hg	bar	mbar	kPa
0.1	0.004	0.007	0.0002	0.25	0.025
0.2	0.007	0.015	0.0005	0.50	0.050
0.3	0.011	0.022	0.0007	0.75	0.075
0.4	0.014	0.029	0.0010	0.99	0.099
0.5	0.018	0.037	0.0012	1.24	0.124
0.6	0.022	0.044	0.0015	1.49	0.149
0.7	0.025	0.051	0.0017	1.74	0.174
0.8	0.029	0.059	0.0020	1.99	0.199
0.9	0.032	0.066	0.0022	2.24	0.224
1	0.036	0.073	0.0025	2.49	0.249
2	0.072	0.147	0.0050	4.97	0.497
3	0.108	0.220	0.0075	7.46	0.746
4	0.144	0.294	0.0099	9.95	0.995
5	0.180	0.367	0.0124	12.44	1.244
6	0.216	0.441	0.0149	14.92	1.492
7	0.253	0.514	0.0174	17.41	1.741
8	0.289	0.587	0.0199	19.90	1.990
9	0.325	0.661	0.0224	22.38	2.238
10	0.361	0.734	0.0249	24.87	2.487
11	0.397	0.808	0.0273	27.36	2.736
12	0.433	0.881	0.0298	29.85	2.985
13	0.469	0.955	0.0323	32.33	3.233
14	0.505	1.028	0.0348	34.82	3.482
15	0.541	1.101	0.0373	37.31	3.731
16	0.577	1.175	0.0398	39.79	3.979
17	0.613	1.248	0.0423	42.28	4.228
18	0.649	1.322	0.0447	44.77	4.477
19	0.685	1.395	0.0472	47.26	4.726
20	0.721	1.469	0.0497	49.74	4.974
21	0.758	1.542	0.0522	52.23	5.223
22	0.794	1.615	0.0547	54.72	5.472
23	0.830	1.689	0.0572	57.20	5.720
24	0.866	1.762	0.0597	59.69	5.969
25	0.902	1.836	0.0621	62.18	6.218
26	0.938	1.909	0.0646	64.67	6.467
27	0.974	1.983	0.0671	67.15	6.715
28	1.010	2.056	0.0696	69.64	6.964

Pressure Conversion Factors

PSI x 2.036 = Inches Of Mercury (in. Hg)

PSI x 703.1 = Millimeters Of Water (mm/H_20)

PSI x 51.75 = Millimeters Of Mercury (mm/Hg)

PSI x .0689 = Bar

PSI x 68.95 = Millibar (mbar)

PSI x 6895 = Pascal (Pa)

PSI x 6.895 = Kilopascal (kPa)

Torque Conversion Factors

1 ft. lb. = 12 in. lb.

1 ft. lb. = 1.36 Newton Meters (Nm)

SCUBA TOOLS INC.

Phone (336) 643-2599 • Fax (336) 643-2799 • www.scubatools.com

Scuba Tools, Inc
1018 Lashley Road
Greensboro NC 27455
Phone (336) 643-2599
Fax (336) 643-2799
Website: www.scubatools.com

Order Form

Fax (336) 643-2799

First Name:_____ Last Name:_____
Company Name:_____
(**Billing Address**) Street:_____
City: _____ State:_____ Zip:_____ Country:_____
(**Shipping Address**) Street:
City:_____ State:_____ Zip:_____ Country:_____
Phone:_____ Fax:_____
Email Address:_____

Card # __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ Exp. Date ____/____ 3 Digit Security Code __ __ __
Name on Credit Card:_____

Item #	Description	Quantity	Price	Total

Order Total			Shipping & Handling Domestic (incl AK & HI)	Canada & Mexico	International
$0.01	to	$20.00	$9	$26	$39
$20.01	to	$50.00	$10	$27	$42
$50.01	to	$75.00	$11	$28	$46
$75.01	to	$100.00	$12	$29	$54
$100.01	to	$150.00	$14	$31	$58
$150.01	to	$250.00	$17	$34	$62
$250.01	to	$350.00	$20	$37	$72
$350.01	to	$500.00	$23	$40	$82
$500.01	to	$650.00	$25	$43	$92
$650.01	to	$800.00	$27	$46	$98
$800.01	to	$950.00	$29	$49	$105
$950.01	to	$1,100.00	$31	$55	$109
$1,100.01	to	$1,250.00	$33	$63	$114
$1,250.01	to	$1,400.00	$35	$70	$119
$1,400.01	to	$1,600.00	$38	$80	$134
$1,600.01	to	$1,800.00	$41	$90	$149
$1,800.01	to	$2,000.00	$45	$100	$164
$2,000.01	to	$2,200.00	$48	$110	$179
$2,200.01	to	$2,400.00	$52	$120	$194
$2,400.01	to	$2,600.00	$57	$130	$209
$2,600.01	to	$2,800.00	$61	$140	$224
$2,800.01	to	$3,000.00	$66	$150	$239

Subtotal	
Shipping & Handling	
Sales Tax 6.75% (NC only)	
Total	

Prices are subject to change without notice.

Shipping Charges are subject to change without notice