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## **Interface Devices, Inc. Company Profile and Product Summary**

### **Company Overview**

Thomas W. Hotchkiss, the still current President, established Interface Devices, Inc. (IDI) in 1971. IDI was initially set-up as a custom hydraulic component manufacturer, designing and making custom manifolds, valves and other hydraulic and pneumatic components. The in-depth knowledge acquired in designing custom hydraulic circuitry led to the innovative concept of a new product, and the ELF air to oil intensifier was born. As the new product gained wide-spread acceptance, the company moved away from building custom manifolds.



IDI World Headquarters, Milford, CT, USA

Since the first ELF intensifier was built, the product range has expanded to include P and H series intensifiers for lower flow, portable or more compact applications. The company has developed Air and Gas Boosters, Coolant Boosters and Vac-Pak Vacuum pumps based on the same principle as the intensifier technology. IDI also offers a patented “Zero-leak” 4-way solenoid valve for pressures up to 6000 psi.

IDI has applied the intensifier technology to market specific applications. Most recently, the IDI technology used in Hurst Jaws of Life ® Rescue tools was employed successfully at “ground zero” in NYC for search and rescue operations. The Maverick Integral Tool was one of the star performers due to the extremely poor air quality conditions at the site.



ResQpak Portable Power Unit  
With Rescue Tool

IDI has since developed the ResQpak portable air powered hydraulic unit, which is backpack mounted and runs off standard issue SCBA bottles. This new system is suitable for use with any manufacturer’s tool and can be deployed in hazardous or oxygen deprived areas. ResQpak systems are distributed through AIR RESCUE TOOLS in Ithaca, NY.

IDI has expanded to service the aviation industry, manufacturing oxygen boosters, vacuum pumps and Mini Mule Hydraulic units for ground support services. These products are sold exclusively through TAUGHANNOCK AVIATION CORPORATION in Ithaca, New York.

In a new development, IDI has designed a coolant booster system for use in small diameter gundrilling applications, dramatically increasing tool life and productivity. In one application, MAGNA STANDARD Deep Hole Drilling Specialists eliminated drill breakage in a gundrilling process where the previously broke a drill for every 17 holes drilled. Dr. Victor Astakhov, University professor, deep hole drilling consultant and Director of R&D at HYPERTOOL, has enthusiastically endorsed the product.



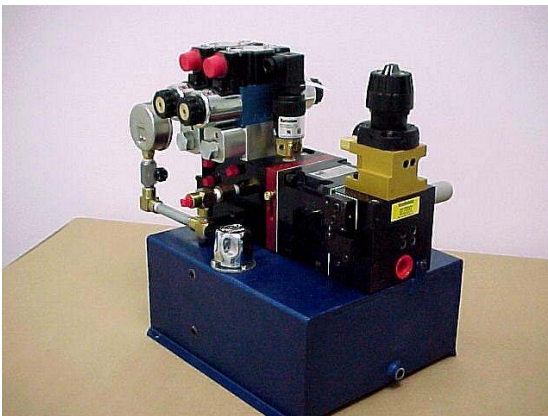
IDI 3000 psi Coolant Booster

Still, the mainstay of the company's success revolves around air to oil intensifier systems. These products are used successfully in applications requiring the need of generating and maintaining hydraulic pressure such as power work holding. Manufacturers of power clamping systems such as HILMA and VEKTEK

have been using the IDI intensifier technology for years. The pumps come in capacities from 400 to 10,000 psi output pressures. The E, P and H Series intensifiers can replace gas or electric powered hydraulic systems where constant flow is not required.

### **E, P and H Series Air Oil Intensifier Systems**

IDI Intensifier systems employ conventional air to oil intensifier concept with custom integrated hydraulic circuitry. The double acting pumps consume 1/3 less air than single acting units. Available in a multi-ratio configuration, the pumps allow for rapid cylinder movement under moderate load and powerful force at the end of the stroke.

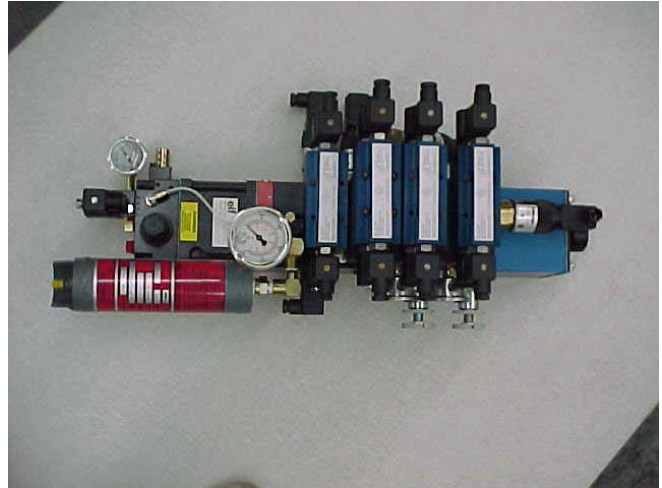


E Series Intensifier on  
5 Gallon Reservoir

IDI intensifiers are ideally suited for intermittent flow and pressure demands without the cost and complexity of pressure compensated variable volume pumps. As importantly, the air-powered units consume no electricity and create negligible heat energy. The pumps stall at the required pressure, unlike electric motor driven, fixed displacement power units. Also, the non-sparking devices can be used in hazardous environments.

Typical Applications	
Crimping	Indexing
Pressure Testing	Calibrating
Swaging	Compacting
Pressing	Torquing
Tensioning	Clamping

IDI intensifiers can be outfitted with countless hydraulic output circuit options. Choose from DO3 or DO2 subplate valve pads, two, three and four step cartridge valves. Circuitry is drilled into the body of the pump, precluding the need to plumb the desired functions externally. The pumps are suitable for use with most manufacturers valves. Air options include remote pump on/off, air filter and heavy-duty gauge options.



For a distributor in your area, check us out at [www.interfacedevices.com](http://www.interfacedevices.com) or call us at 1-800-539-0193.

H Series Unit Outfitted with 4 directional Valves and Mini Accumulator

### **“Zero Leak” DO3 Directional Valves**



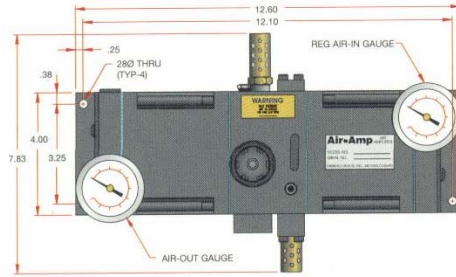
IDI has designed a patented, affordable, non-leaking directional valve capable of operating at pressures up to 6000 psi. Nominal flow rating is 3.0 GPM and maximum leakage is 5 drops per minute at 6000 psi. The valve comes with a standard NFPA DO3 (CETOP 3) subplate mounting configuration. The compact valve can be actuated by 110 or 220 volt AC or 12 or 24 volt DC solenoids. The unique

poppet design is fail safe, maintaining pressure at selected cylinder port even if power is lost or a coil fails. The valve can be equipped with different seal materials making it suitable for use with just about any fluid.



## **Air Amplifiers and Gas Boosters**

IDI offers a standard 2:1 ratio, positive displacement air amplifier for doubling air line pressure. No inlet regulator, air valve or lubricator is required. The pump stalls at the desired pressure, conserving air. The 13 lb. Amplifier is compact and uses no electrics.



IDI 2:1 Air Amplifier



3000 psi Nitrogen Booster

Boosters deliver outlet pressures from 90 to 3000 psi using 75 psi drive pressure. Inert materials are suitable for use with a variety of compressed gasses such as nitrogen, oxygen or hydrogen. Gas boosters are “shoebox” size and light weight. The pumps can be custom designed with integrated circuitry eliminating external plumbing. High pressure models use exhaust gas to cool the boosted gas pressure.

## **Vac-Pak™ Vacuum Pumps**

Air-driven, positive displacement vacuum pumps produce vacuum in a stalled condition from 2 to 29 inches of Hg. The unit consumes no air upon reaching and holding desired vacuum level. No air regulator or air lubricator is required to operate this compact, 13 lb. pump.

In a real case study, where the IDI Vac-Pak replaced venturi vacuum generators, air consumption was reduced by 1800%.



IDI Vac-Pak

## **Coolant Booster**



A 50% increase in drill feed rates and the virtual elimination of tool breakage has been reported after installing the IDI coolant booster in small gundrilling applications. The unit can be retrofit into existing low-pressure systems offering an affordable alternative to a complete new high-pressure system. Used in conjunction with a specially designed rotary union, coolant pressures can be increased from 500 to 1,100 psi up to 1,500 to 3000 psi. The noiseless unit is

nearly 100% efficient. At less than 1/3 of the price of a new high-pressure coolant system, the booster is ideal for all small diameter gun drill operations. Dr. Victor Astakhov, a well-respected consultant, author and professor on the topic of deep hole drilling, recently recommended the IDI booster for all small diameter gundrilling applications.

### **ResQpak™**

IDI is the designer and exclusive manufacturer of ResQpak, portable, air powered hydraulic system for rescue tools. The system consists of a specially designed H series intensifier mounted on a backpack frame holding two (2) standard issue SCBA air bottles. The pump has a sealed, self-contained, all attitude reservoir so it can be operated at any angle – it even works under water. The pump runs off the bottles, so it is inherently portable and can be deployed in HAZMAT or oxygen deprived areas. An integral air bar connects the two bottles allowing for the rapid changeover from a depleted bottle. Weighing only 27 lb., the ResQpak is well suited for remote and confined areas.



ResQpak Deployed with  
Lucas Tool

**For more information about Interface Devices, our products or location of distributors, call 800-539-0193 or click on [www.interfacedevices.com](http://www.interfacedevices.com)**

**For information on Aviation Ground Support Equipment call Taughannock Aviation Corporation at 800-876-1551**

**For more information on ResQpak Systems, call Air Rescue Tool at 607-256-1414**