Text & photos by Andrey Bizyukin, PhD Editted by Peter Symes BCD component

Dive System BCD

Beautifully located on the coast of the Liaurian Sea. and just opposite Elba Island, we find the Italian port of Follonica, with its busy side streets, many small seafood restaurants and reliaious processions on holidays. Not much, if anything, gives away that this port town is also the hot spot for technical diving in Italy. Follonica is the home of Dive System, one of the new rising stars in dive manufacturing.

Dive System is owned and managed by founders Paolo Zazzeri and Gioia Ancillotti. Both have been attracted by the sea since childhood, so becomina active divers and instructors as adults was hardly a surprising career move. In fact, Zazzeri, being a regular participant in spear fishing (underwater hunting) competitions, once won third place in the Italian championships.

DIVE SYSTEM of Italy

Made to Measure

The pair opened a dive center and dive shop that became

well known amona the city residents. It was out of the daily work at the dive center that a desire to improve and make dive equipment more comfortable grew, until one day, the

two finally decided to start outright production of their own equipment. The year was 1997, and Dive System, the brand, was named. It has been in manufacture ever since.

All Zazzeri and Ancillotti's dive industry colleagues and close connections, who were also high ranking course directors and such in PADI, TDI, NAUI, SSI, PSI and CEDIP, for the most part unanimously recommended the two to focus on what was then seen as the future of diving or at least a growth sector-technical diving and equipment made specifically for this field.

First production

The manufacture had its humble manufacturing process. beginnings in a small workshop where the pair designed, cut, sewed and glued their original designs. They then asked

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their colleagues to be testers and give feedback on the prototypes. Their innovations were well received by the diving community, and business just kept growing. Soon, Zazzeri and Ancillotti were able to hire their first employee.

Strateav: Innovation Having studied the products and quality of their competition, it was clear to Zazzeri and Ancillotti that in order to take scuba equipment manufacture to the next level, it was necessary to be innovative and come up with original ideas as well as employing the latest technologies in the

Dive System made contact with the Dupont company and started using Kevlar as one of the strongest materials available

for the outer abrasion layers. Pure Kevlar is a very strong but rigid material that is traditionally used for flak jackets and bulletproof vests. Therefore, the fabrics used in Dive System BCD's and dry suits contains around 25 percent Kevlar fibers to make the fabric soft and pliable enough for these uses while still making the equipment ten times more resistant to abrasion than equipment made with any other material, such as Cordura, Duratex or Supratex.

Drysuits

The top product line of the company is the dry suit line, which Dive System makes for all types of technical diving.

Dive System worker cuts out pattern pieces for the semi-drysuit

Co-founder Gioia Ancillotti at work at Dive System

Their drysuits are manufactured to meet and exceed the highest requirements set forth by the skeptical professional diving community. The flagship product of the company's drysuit line is a thin compressed neoprene drysuit with protective Kevlar

covering.

The



Aerial view of the city of Follonica

material is unique and made to order exclusively for Dive System. One of Dive System's renowned drysuit models is the CAVE, made from 3.5 mm compressed neoprene with an especially strong and reliable Kevlar made specifically for cave diving. Jim Bowden, the deepest cave diver in the world, dives in such a suit. Another model, the SOLO, is made in one and a half millimeter thin compressed neoprene with Kevlar covering and comes with a front zipper for the convenience of those who prefer to be able to zip their suits themselves. Dive System's SOLO is a serious alternative to DUI's suits, pressing their American counterparts on both quality and price.

> The EXP dry suit line, which is also made with a Kevlar combination, is a product line created especially for commercial divers and comes with a varied material thickness

of 1.5 and 3.5 mm in various parts of the suit. The company has made no compromises when it comes to quality, and it lends its design ideas to the recommendations made by some of the most authoritative participants of underwater works and experts in long duration and technically complex deep-water dives.

All Dive system suits come with separate boots attached with velcro. The boots have rigid soles and are comfortable when diving with fins or walking across a beach with sharp rocks.

Undergarments

Dive System is also the maker of undergarments, which are both very thick and light at the same time. The undergarmenst are made out of three layers with Windex on top. The insulation properties of these goodlooking garments are the equivalent of 200 Thinsulate, which means they will keep you comfortably warm for hours of diving in water temperatures of only 5 degrees.

Wetsuits

Dive System products are characterized by the use of the latest technology everywhere. Not even in the manufacturing of the low prestige semi-dry suits have Zazzeri and Ancillotti gone the traditional way. They didn't want to be yet another "boring" manufacturer of anonymous wetsuits.

On the contrary, Zazzeri and Ancillotti were intent on thinking outside the box in this area as well and came up with something novel that would revolutionize the concept of semi-dry suits. Again, they applied a new material—a special soft rubber not unlike neoprene but made for high pressures. At a depth of 90 meters, the material is compressed by only 14 percent.

This material is then covered, not by cheap plush, but by fashionable multi-coloured lycra, which is elastic in all directions. Imagine the classic lycra suit and think of how flexible it is, then add the unique quality seals, some more mobility and comfort and the fact that it is practically incompressible at any depth. Now, you've got a suit that lasts and lasts.

But a good suit is not only about using quality materials; the product's service life is also defined by the glue that keeps the pieces of materials together, and each company has their own closely

guarded secret when it comes to glues, explains Zazzeri.

Wing BCDs One

Dive System BCD

more highlight from Dive System is the wing type BCDs for technical diving. All their BCDs are modular with the option of exchanging wings. The BCD range has been one of the company's biggest commercial successes and have been favoured by beginners, experienced deep divers and cave explorers alike.

The MOD BCD comes with an universal harness, always with stainless steel D-rings, detachable pockets and a steel or titanium back plate with adapter for one cylinder or twin

tanks.

is an European continuation of equipment

Dive System drysuit

Dive System BCD

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The 3K BCD stands out in all its simplicity. It

New lid fixture

Dive System BCD

Dive System BCD

Dive System regulator

Dive System uses a strong and flexible neoprene-like rubber in their semi-drysuits

manufacatured according to the DIR principle (Doing It Right) favoured by so many cave divers.

Also worth a mention, is the TEKKY and REC.TEK BCD-modular systems with soft harnesses, lots of steel D-rings and the integrated weight pockets. It is possible to use one or two bladder wings made from cordura or keylar with these BCDs.

All inflators are fitted with a steel cord inside, which considerably increases their durability and reliability. The material, volume and colour of the BCDs can be custom made to order in any combination.

The BCD bladders also deserve special mention. Previously, bladders were welded from Cordura, so they were resistant to abrasion and couldn't be punctured, i.e. by sharp metal objects of a wreck. The problem with Cordura is that it lacks the necessary elasticity for the job and would leave at least a liter of air in a BCD that should be empty. A diver was therefore required to use additional weights to compensate for this extra positive buoyancy.

Consequently, a completely new solution was required and a new material with properties far surpassing the older ones was developed. All BCD bladders from Dive System are now made with this new material. It is a very dense yet soft and elastic thermoplastic, which cannot be pierced by sharp objects.

Slaves to fashion

Today's fashion trends in diving seem to be very much influenced by technical diving. The result is that more and more

sport divers want to have and use eauipment like the "technicals" or at least something that resembles the equipment used by technical divers.

Thus, a new breed of divers appeared on the scene—"semi technical divers" the people, which by appearance seem to be technical divers, but really weren't. It became prestigious for the average diver to look like a deep sea explorer. You probably have one or two of your dive buddies who belong to this category.

Especially for these folks, Dive System developed the NET BCD. It is mounted with a new Japanese inflator and comes with most of the external attributes of the technical BCD even though it has really been developed and adapted for normal non-decompression dives.

Testing

Every time Zazzeri and Ancillotti design new equipment, they always send it for testing by various dive-centers. The tests are conducted very rigidly, and it is not necessarily done in a season. After testing, the experimental equipment comes back to the company for service, study and analysis. All the information and experience gathered are then taken into account and incorporated into perfecting the design for next season's testing. Only after thorough testing will any new equipment enter production.

Needless to say, we did not pass up the opportunity to try out Dive System's equipment in open water when we were given the offer. A high powered speedboat whisked us over to the island of Elba and the harbour of Porto Azurro in no time.

Excited, we donned completely new suits and went into the water along the rocky shoreline. The dive took us past a vertical slope and we enjoyed the rich fish life that is so characteristic of this part of the Mediterranean.

A school of barracudas swam close to examine us before two small sharks frightened them off and they disappeared into the blue haze. We had a fabulous dive that took us down to more than 40 meters to explore a cave.

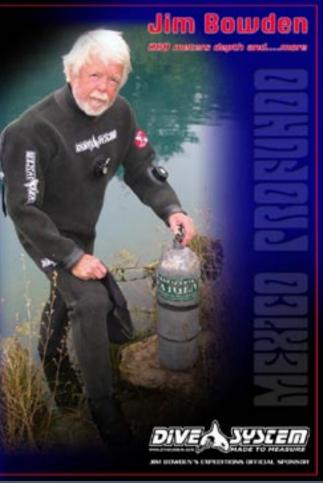
Our impressions? First, we felt very comfortable at any depth in our 5mm semi-dry suits and did not feel cold even after an hour and a quarter in water of just 13° C. Secondly, the suits were very close to being neutrally buoyant. Our BCDs allowed us to remain motionless in any pose: on the back, on any one side or even upside down-with absolute ease. We enjoyed both the dive and this new equipment very much. Experience says that the two usually go hand in hand.

Success on the market

Making courageous and innovative decisions has brought the company Deep cave diver, Jim Bowden, uses Dive System its well deserved success. Enthusiastic responses to Dive System equipment what sets his company apart: comes in from everywhere in the world, "We are leading the Italian market and their popularity seems to be growing in manufacture of technical BCDs and drysuits from compressed neoprene with steadily. We asked Zazzeri to tell us his opinion of Kevlar covering and semi dry suits with







Dive System Lift Bag



lycra. All these represents original designs, development and patents by Dive System. In the near future, we plan to expand the assortment and to increase the volume of manufacture. Our strengths are having a flexible manufacture and our quality. The technical diver of today is highly individual and every one of them believes that just his equipment and his dive configuration is unique and correct and that he has unique way to do unique diving. Certainly, it is very difficult to make equipment personal for every such person, but it is possible to try to find common ground and make equipment that satisfies all these individual requirements.

"For example, if we are producing a piece of equipment in exactly the right size, in the best quality, with trouble-free serviceability, it must still be marketed at a reasonable price. The main principle of our company is to put all our resources into our own manufacturing. We do everything

Elba Island

ourselves, so the auality of our product relies solely upon us. "In addition, we have successful designs, patterns and new materials. We are constantly experimenting and researching. We are confident that we produce

good and really safe equipment for any diver. However, trading them should be left only to the experts with an understanding of all the subtleties of divina.

"In these factors, lies our strength and guarantee of success. Technical diving is the trend of the time. It is necessary to understand this and to have a feel for its features and the essential needs of the market," said Zazzeri.

Evolution of technical diving continues. To meet progress in the field, all Dive System employees get to work already around seven o'clock in the morning. It is in this place where the best Italian equipment for technical diving is born. Everyday, Dive System becomes more and more popular among technical divers all over the world. The company has grown so much that the time has come to expand manufacture and build a new factory adapted for the highest level of technological



underwater equipment. It will be a new factory of 4500 square meters. It will be the future of technical diving.

For more information, visit: www.divesystem. com ∎



Get comprehensive information on DEMA's 2006 show at the click of a mouse. With a bright, new look, the easy-tonavigate website for DEMA Show 2006 has been launched at www.DEMAShow.com

Providing vital information about the upcoming DEMA Show 2006 taking place November 8-11, 2006, in Orlando, Florida, the DEMA Show website is an invaluable resource for all exhibitors and attendees. The site currently features everything from show registration guidelines and a downloadable floor plan to information on sponsorship opportunities, access to the Exhibitor Resource Center and a link to the official website for the Orlando/Orange County Convention & Visitors Bureau to help exhibitors and attendees plan their trip.

Next

In the coming months, hotel information will be posted to the site and show participants will be able to book their rooms online. In additional, information on show features like the DEMA Retailer Resource Center, DEMA Awards Party and Silent Auction, a schedule of DEMA-sponsored and exhibitor-sponsored seminars and dive training and certification organization presentations and events will be added to the site. The site will continue to be updated throughout the year, so check back frequently for updated information.

Media

For the media interested in obtaining information on the show, all press releases written and distributed on the show will be posted and archived in the online press room. Media wishing to attend the show will find a printable Media Registration form as well. Continuing to be the largest trade

Co-founder, Paolo Zazzeri

event in the world for companies doina business in the scuba diving, ocean sports and adventure/dive travel industries. More than 600 exhibitors from around the world and thousands of dive and travel industry professionals are expected to gather at this



year's show, which will offer the most extensive educational program in the industry.

Trade only

DEMA Show 2006 is a trade event open only to industry professionals and is produced by the Diving Equipment & Marketing Association (DEMA), and managed on its behalf by National Trade Productions, Inc. (NTP). DEMA is an international organization dedicated to the promotion and growth of the recreational scuba diving and snorkeling industry. With more than 1,200 members, this non-profit, global organization promotes scuba diving through many initiatives including consumer awareness programs, media campaigns and sponsorship of the DEMA Show.

More info

For more information on DEMA call 858-616-6408 or visit www.dema.org For more information about DEMA Show 2006 visit: www.demashow.com. Companies that would like to exhibit at the Show can contact Christine von Steiger at 1-800-687-7469 x 207 (U.S. only), 703-706-8207 or demasales@ntpshow.com

To find out about sponsorship opportunities, contact Tom Markusson at 1-800-687-7469 x 206 (U.S. only), 703-706-8206 or demasales@ntpshow.com