



DIVER-1 LTD

3700-VIDIN, 33.Mizia str. tel/fax:+35994600650, mob:+359887534243, e-mail:diver162@gmail.com; www.diver1.net



Why our electrode?

Some of our main activities are wreck removal and emergency salvage.

In our work process, we use a specific system for underwater cutting – Ultra Thermic Cutting. We usually work under difficult conditions such as low visibility; therefore, the use of many electrodes is required.

Throughout the years, we have been using a variety of electrode brands for underwater cutting and we have managed to fully analyze their pros and cons. We have been working with electrodes developed in Russia, Germany, The Netherlands, The United Kingdom, The USA and Bulgaria.

Our analysis concluded that some of those electrodes worked as expected, while others didn't perform well enough. Pricewise, some are expensive, others very expensive. There isn't a wide variety of electrode brands to choose from. In this field, you usually have to deal with whatever is currently on the market, regardless of price and quality.

In predictable types of work (such as wreck removal), you could easily prepare and organize your team to come up with a potential solution by considering pre-orders and periodic deliveries. However, the most common projects are of an emergency kind.

On a yearly basis, we burn around 5000 – 7000 electrodes, change 3 handles and many collets, consumables, rubbers, heads and so on. At the end of the day, the expenses are very high, however, we thought there should be an optimal solution in terms of cost reduction.

Hence, we developed a plethora of analyses to determine which electrodes were the most appropriate for our works. We made a chemical analysis, considering the optimal work length, got into contact with component manufacturers, established a technical basis and began working with qualified personnel for manufacturing.

Now, we are proud to announce that we produce high-quality electrodes, priced perfectly adequate in accordance with the market prices. And the most important of all, the price meets all the requirements we have set.

Our electrodes are adapted to be fully functional in muddy water. The length of a single electrode comes in 2 variants, either 50 cm or 60 cm. And the active



DIVER-1 LTD

3700-VIDIN, 33.Mizia str. tel/fax.+35994600650, mob:+359887534243, e-mail:diver62@gmail.com; www.diver1.net



cutting part, is respectively either 45 cm or 55 cm. The diameter is 10 mm. With the suitable collet (which we also sell), our electrodes could fit in every underwater cutting torch.

The electrodes burn easily at 12V and 24V, and from 90A to 140A. After interrupting the tension, they continue to burn and cut. Extinguishing is done by cutting off the access to the oxygen. If you turn off the electrode, you could easily ignite it again. For better cutting performance, we have increased the oxygen (O₂) levels. They are higher than the standard for underwater works by 0.3 – 0.5 Bars. The recommended pressure for cutting is 6.5 Bars at the point of work. However, the easiest way to determine this is for the diver to analyze the oxygen flow coming out of the electrode. Optimally, it should be between 20 and 30 centimeters. Please, check out the oxygen regulation table below.

Oxygen regulation according to the depth

Depth in m	Indication of the pressure gauge
1	3,3
10	7.7
12	7.9
15	8.2
18	8.5
21	9.0
24	9.4
27	9.8
30	10.2
34	10.5
37	10.8
40 ,	11.2
43	11.5
46	11.7
49	12.2
52	12.8
55	13.0



DIVER-1 LTD

3700-VIDIN, 33.Mizia str. tel/fax.+35994600650, mob:+359887534243, e-mail:diver62@gmail.com; www.diver1.net



58	13,5
61	13.8

If you found out all of that appealing to your needs, feel free to use contact form or give us a call. We provide tax invoices, deliver to anywhere in Europe, regardless of the quantity.

Good luck in your underwater cutting works!

Kind regards,

Ivaylo Dushkov