



Our Energy Your Power

**TECHNICAL DATA SHEET**  
**No. FTE0001\_V7**  
**UNDERWATER FIXING TOOL**  
**SUPRAFIX**  
**REF. 0150\_001\_000**



The **SUPRAFIX** is a new high efficiency underwater fixing tool mainly intended for underwater diving works for Oil & Gas Industries and Civil Engineering Industries.

The **SUPRAFIX** allows the quick and reliable fastening of threaded studs and drive pins to carry out permanent anchorings and assemblies on metal structures but also on reinforced concrete structures.

Thanks to its very robust design, it can be used up to **150m depth**. It can directly be reloaded underwater without a need to go to the surface.

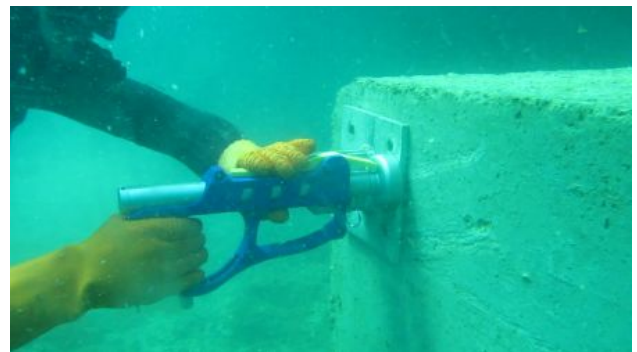
Its power is important and easily adjustable. That allows the **SUPRAFIX** to cover a wide range of possible applications.

Thanks to its particular careful ergonomic design, its compactness, its lightness and its autonomy, the **SUPRAFIX** is the **ideal tool** for any rapid intervention in any underwater environment.



#### Applications:

- ▶ Ship hulls emergency repair
- ▶ Sacrificial anodes installation for underwater cathodic protection
- ▶ Underwater cables and conduits installation
- ▶ Marine structures Strengthening in steel or concrete
- ▶ Marine salvage and wreck removal
- ▶ Building of underwater structures and offshore platforms maintenance
- ▶ Deep water dams maintenance (100m)



#### Benefits and advantages:

- ▶ Important time-saver in comparison to traditional methods of welding and chemical sealing
- ▶ Easy implementation
- ▶ Lightweight, compact and easy to handle
- ▶ Always ready for use
- ▶ Reliable and reproducible performances independent from the operator's skills



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### Safety and Certifications:

The operational safety of the **SUPRAPHIX** is a strong point of its design.

The **SUPRAPHIX safety technology is patented:** International WIPO Patent Application WO/2010/139866.

The **SUPRAPHIX** tool is certified according to the requirements of the "Commission Internationale Permanente" (CIP) under No. 001151 in the "powder actuated devices for industrial use" category.

The **SUPRAPHIX** is also compliant with the safety requirements as defined in the European Directive No. 2006/42/EC.

The EC exam attestation is No. **2223/5471/780/06/11/0013** issued by the "Banc National d'Epreuve de Saint-Etienne": European notified organism No. 2223.



### The **SUPRAPHIX** is composed of:

- ▶ A compact fixing tool
- ▶ Energetic propellers
- ▶ Fasteners: Threaded Studs and Drive Pins



### Energetic propellers:

3 power levels:

▶ GREEN : LOW



▶ YELLOW : MEDIUM



▶ RED : HIGH



The energetic propellers are compliant with the safety requirements as defined in the European Directive No. 93/15/CEE.

The EC exam attestation is No. **0080.EXP.10.0006** issued by the "Institut National de l'Environnement Industriel et des Risques" (INERIS): European notified organism No. 0080.

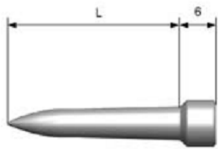
**Fasteners:**

The fasteners are made of high strength steels.

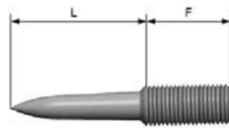
The fasteners are available in alloy steel or stainless steel (**SupraSteel**).

The SupraSteel fasteners have been specifically designed for the sacrificial anodes installation.

**DRIVE PINS**



**THREADED STUDS**



**Characteristics:**

**Threaded Studs**



**Concrete support:**

Tear strength in a healthy concrete structure with 35MPa:  
**20KN (\*)**



**Steel support:**

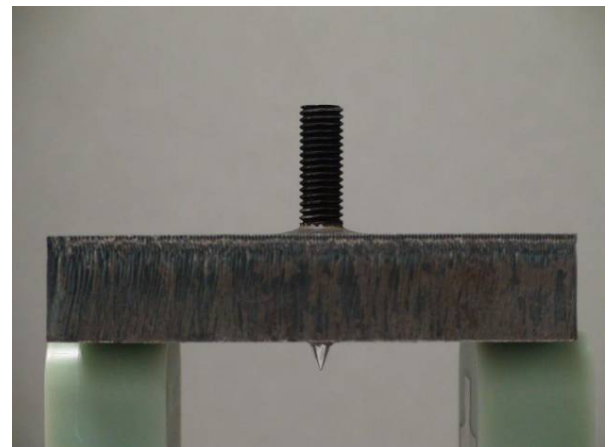
Tear strength in a mild steel S235 wall with a thickness of 20mm:  
**50KN (\*)**

(\*): Values obtained with SupraSteel fasteners.

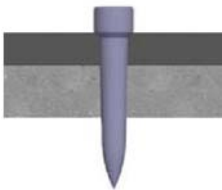
Use	Type	Designation	L (mm)	F (*) (mm)
Steel	Drive Pin	L245	24.5	-
	Drive Pin	L320	32	-
	Threaded Stud	L320-F250	32	25
Concrete	Drive Pin	L630	63	-
	Threaded Stud	L320-F250	58	25

(\*): **M10**

Choosing the fasteners length is determined by the application configuration.

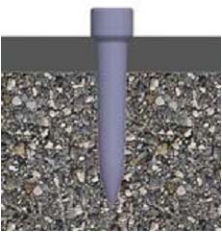


**Drive Pins**



**Steel on steel:**

Tear resistance of an assembly of two plates of mild steel S235, 10 mm on 15 mm: **45KN (\*)**.



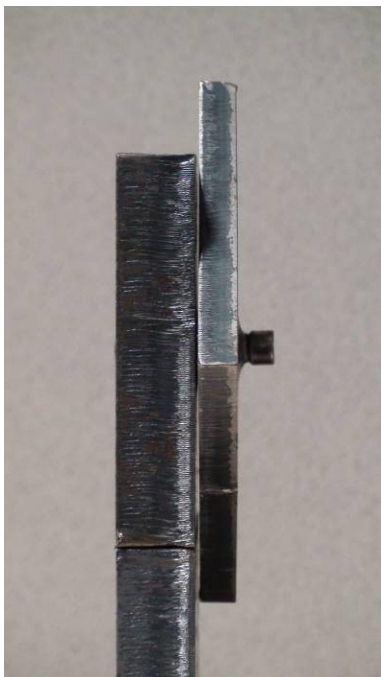
**Steel on concrete:**

Tear resistance of an assembly of a S235 mild steel plate over concrete. Plate of 8 mm and concrete at 35 Mpa : **15 KN (\*)**.

Configurations previously presented are not exhaustive. At the client's request, **SUPRAMECA** can implement mechanical holding characteristics according to the specified configurations.



(\*): Values obtained with SupraSteel fasteners.







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### PRODUCT COLOUR CONFIGURATIONS

Config. 1 – Blue & Orange



Config. 2 – Black





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Item references:

DESCRIPTION	SUPRAMECA PART NUMBER	NSN [NATO STOCK NUMBER]
SUPRAFX FIXING TOOL	0150_001_000	5130-14-567-8741
ENERGETIC PROPELLER SMALL POWER	0150_320_000	1377-14-567-8834
ENERGETIC PROPELLER MEDIUM POWER	0150_330_000	1377-14-567-8835
ENERGETIC PROPELLER STRONG POWER	0150_340_000	1377-14-567-8838
DRIVE PIN L245_A	0150_521_002	5315-14-567-8839
DRIVE PIN L320_A	0150_521_004	5315-14-567-8840
DRIVE PIN L630_A	0150_521_009	5315-14-567-8841
THREADED STUD L320_F250_A	0150_631_009	5315-14-567-8842
THREADED STUD L580_F250_A	0150_631_005	5315-14-567-8843
DRIVE PIN L245_I	0150_520_002	5315-14-567-8844
DRIVE PIN L320_I	0150_520_004	5315-14-567-8845
DRIVE PIN L630_I	0150_520_009	5315-14-567-8846
THREADED STUD L320_F250_I	0150_630_006	5315-14-567-8847
THREADED STUD L580_F250_I	0150_630_005	5315-14-567-8848

A = Alloy Steel; I = Stainless Steel SupraSteel

For further information, please contact:

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*Non contractual document.*