

ELSE ENGINEERING

PRODUCT CATALOGUE

2023

ELSE PRECISION MACHINERY

00

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01

ABOUT US

Else Aviation Marine Construction Co. that was established in 1997. We are a manufacturing company in Ankara, Turkey. We have various types of manufacturing machines such as CNC's, turning machines and CMM in our indoor manufacturing facility. We have been working with Turkish Defense Industry, local and foreign companies.

Our mission is to produce quality and cost-effective products.

In addition, all of our products are patented and 24/7 technical support is provided after sales. Our machine park, certificates and all the information about us is available to see our website www.elseengineering.com



01

ABOUT US

ENGINEERING & WORKMANSHIP

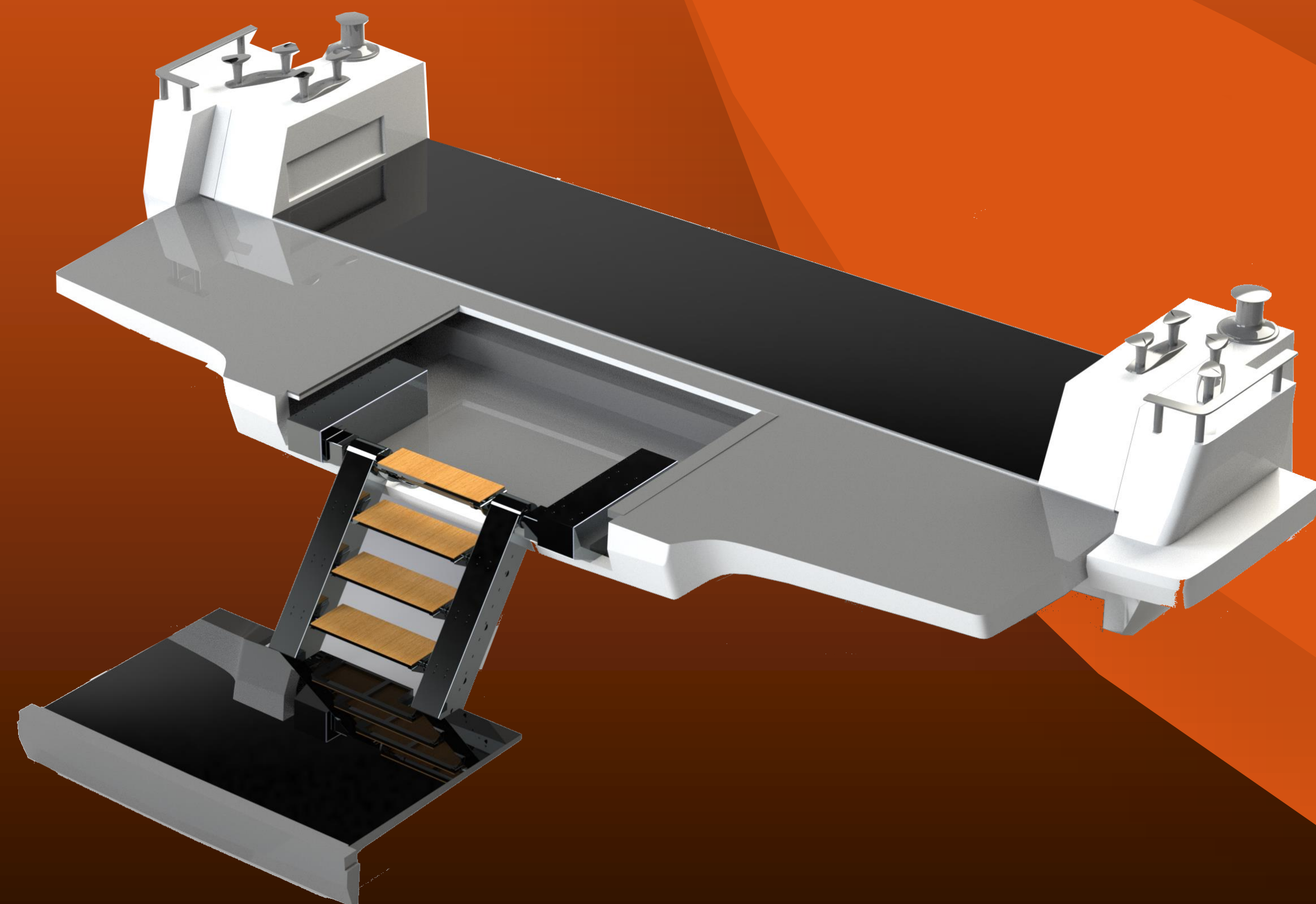
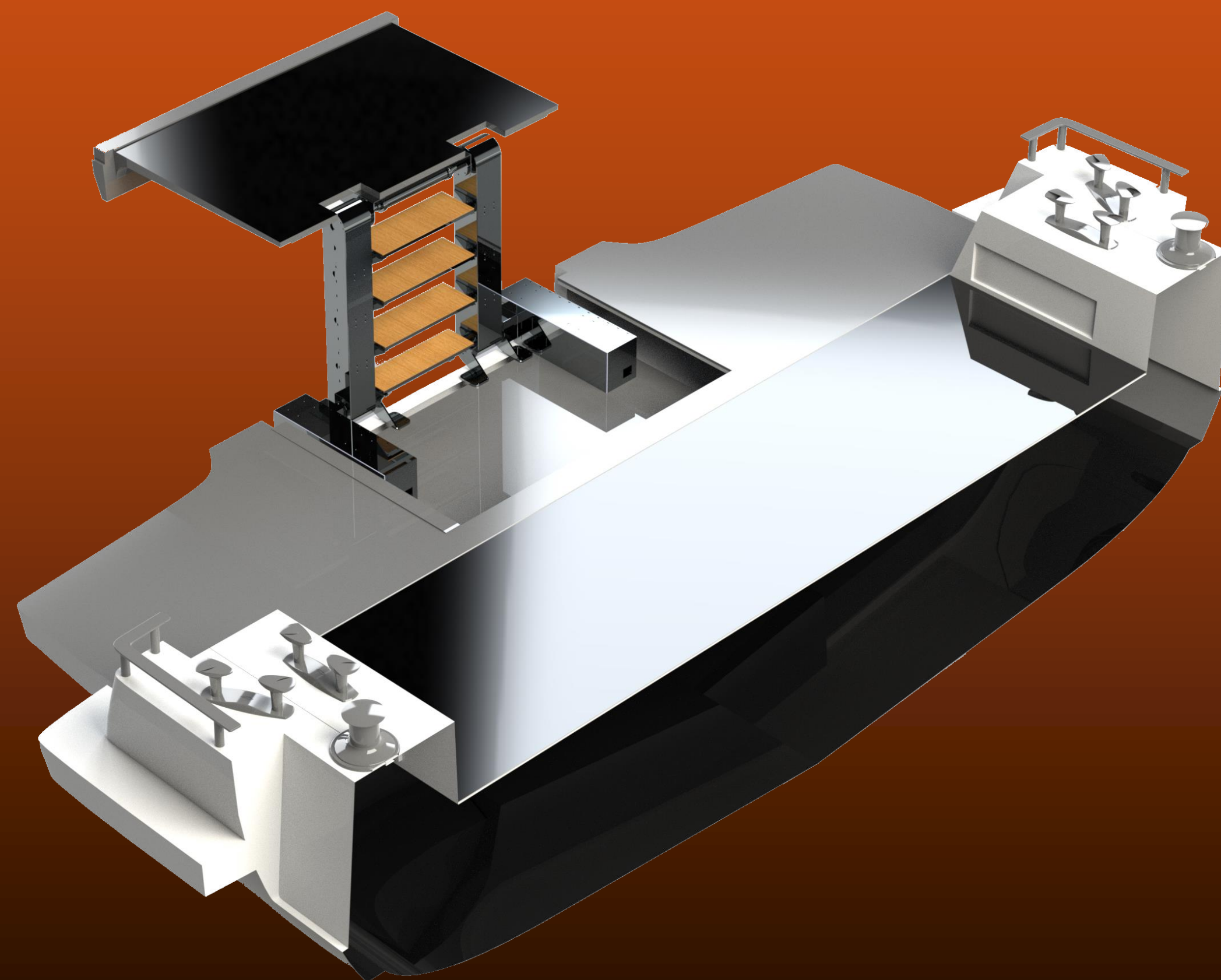
We are a growing company that offers a creative work environment for professionals seeking new talents and interested in exploring new avenues in measurement and process technology.

We are producing solutions in accordance with current technology. In the light of our know-how and experiences we believe that you will be satisfied with our collaboration.

02

PRODUCTS

Z COMFORT DECK / TRANSFORMER



PRODUCTS

Z-COMFORT DECK / TRANSFORMER

Multifunctional hydraulically powered platform is ideal for any size of yachts.

Customisation can be made according to yachts' dimensions and loading capacity.

Z-Comfort Deck can also be used as a swim ladder, pasarella, tender lift and loading platform.

In addition, we can supply spare parts for all products.

A hydraulic powerpack is a multi-functioning platform. The unit can be moved with the ELSE software branded controller, steady panel and remote control. The intended use is providing comfort to the user via carrier mobility sections' parallelism which the existence of dynamic ladders.

Our product is an innovative design for marine life since jet-ski or boats can be carried on the platform when necessary. It's a product that can be designed for each unique yacht. It can be produced in different sizes and with different capacities.

02

PRODUCTS

COMFORT DECK / TENDERLIFT



PRODUCTS

COMFORT DECK / TENDERLIFT

It is a mechanical design that works with the hydraulic powerpack. It is a system that can be applied to sailingboats, catamaran and motor-yachts. The hydraulic systems can carry a boat, jet-ski, and other heavy pieces of equipment. These elevation units are installed and designed to level down the platform in the desired depth under the water-level.

The unit can be moved with the ELSE software branded steady panel and remote controller.

The design engineers of ELSE Inc.'s work ensures the comfort of on and off dynamic ladders that move synchronized with the platform. This creates an easier use of the platform for the owner.

With its strong investments at ELSE we are starting to make world-class history.

COMFORT DECK is a carrying patented product of by ELSE Inc.

The unit can be moved with ELSE software branded steady panel and remote control.

In these terms, we issue 2 years of guarantee for the mechanical systems and remote controls which ELSE Inc. produced. We also give 2 years of guarantee for hydraulic power packs that are manufactured with the world's leading brands.

ELSE Inc. carries a torch of the maritime sector and moves on its path while growing day by day.

COMFORT DECK is a patented product of by ELSE Inc.

02

PRODUCTS

ELSE BALCONY



PRODUCTS

ELSE BALCONY

The system is a balcony-type system that runs with a 90-degree angle that can attach to the body side including mega-yachts portside and the starboard.

A yacht balcony is an element extending the interior towards the exterior. It gives a panoramic space to enjoy the view.

Balcony platforms can be equipped with sunbeds, hydraulic swimming ladders, and parasols.

Balcony systems which are designed closer to the water establish options for swimming from the yacht to the sea, sunbathing, and scuba diving and making the activities easier to access.

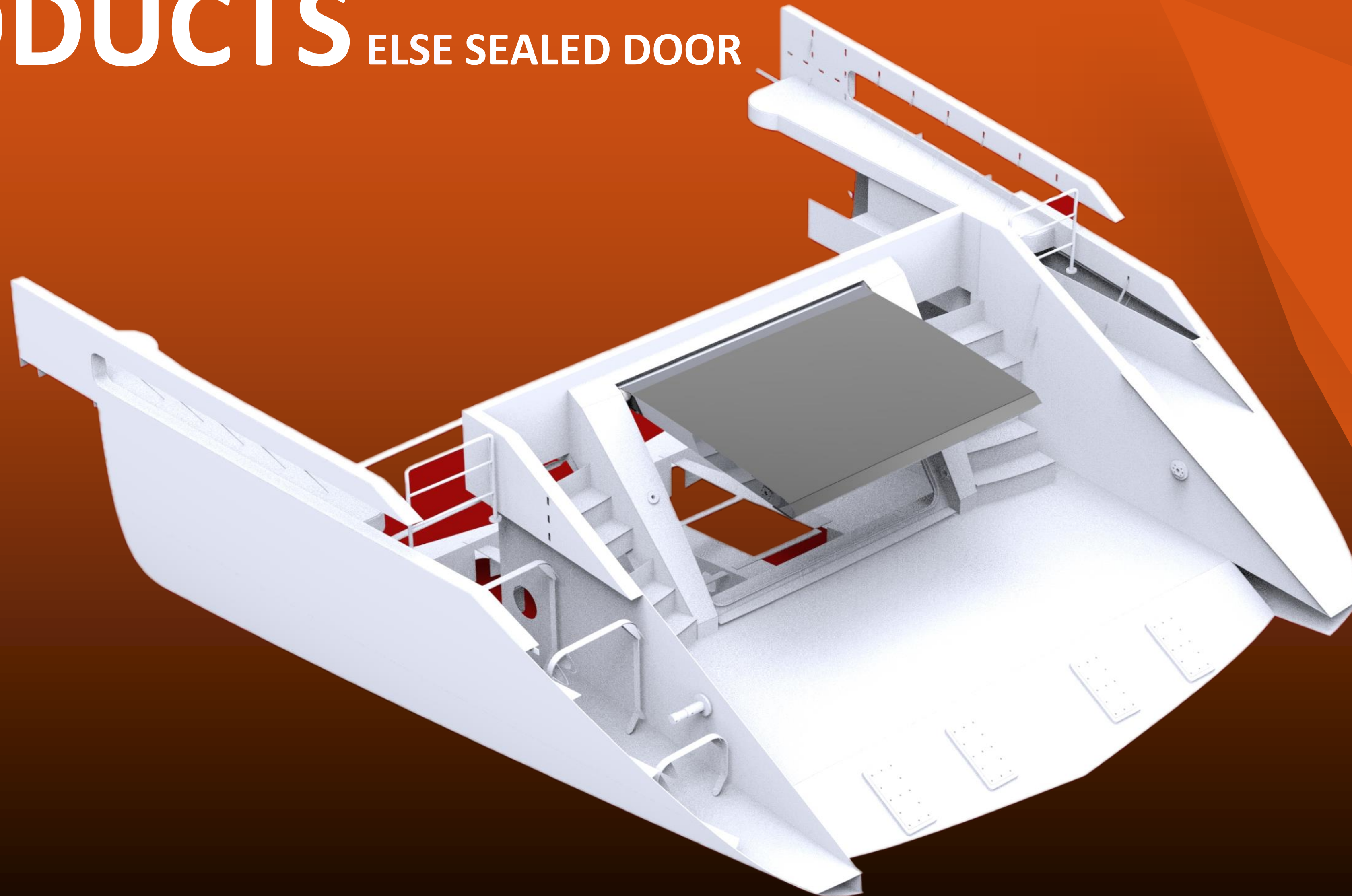
Foldable balcony systems which are integrated into the yachts' bodies are coming into use and designed by the ELSE Inc. engineers to provide security and are supported with automatic railings.

ELSE BALCONY is a patented product of by ELSE Inc.

02

PRODUCTS

ELSE SEALED DOOR



PRODUCTS

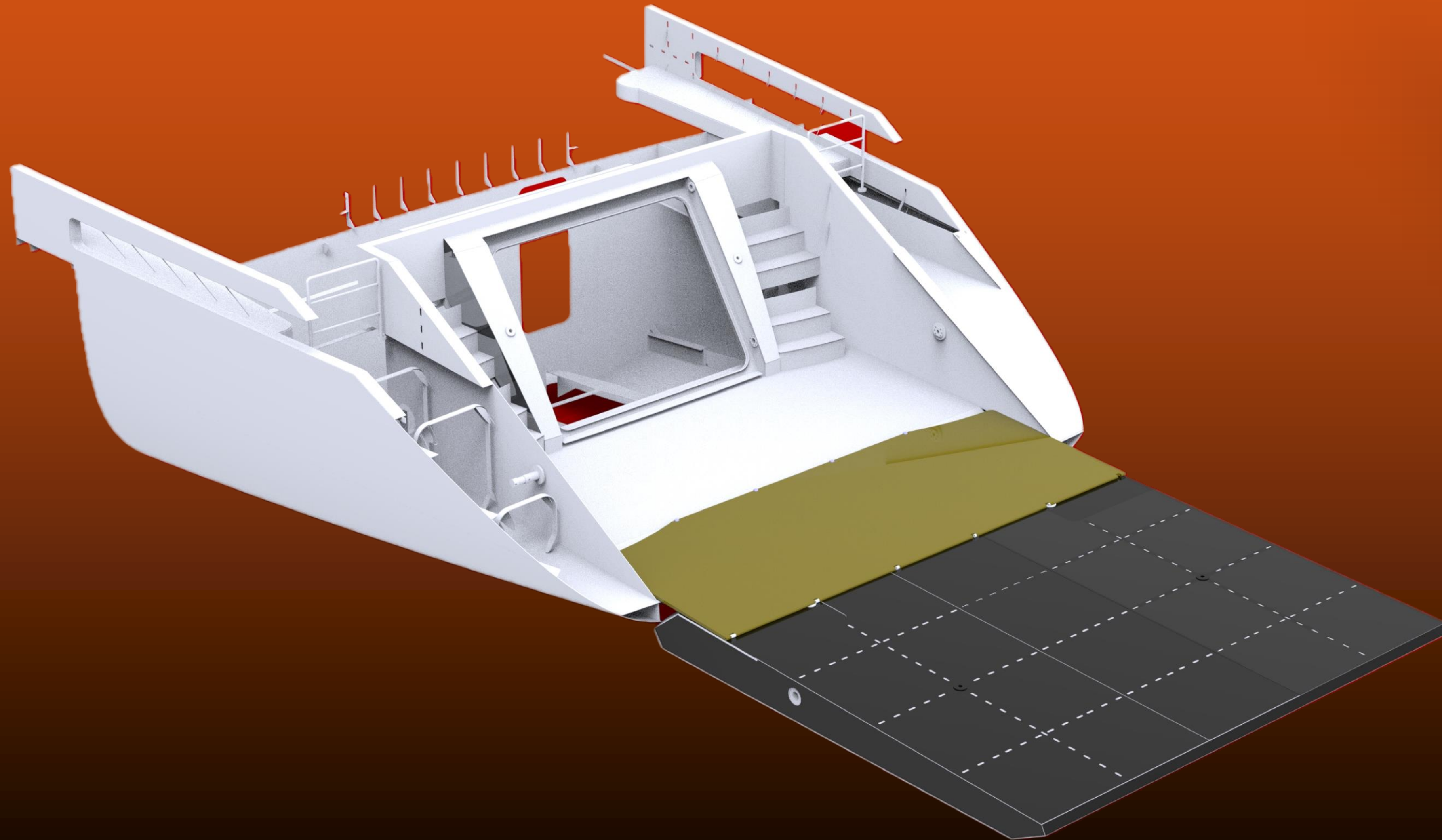
ELSE SEALED DOOR

Else Sealed Door is a hydraulic door system which making at least 50 degrees angular movement in the selected location of the yacht. Sealed door material is choosen aluminum because aluminum has a less density than any kind of steel, with this opportunity system can move with less power than any kind of steel and also weight of the system is less than steel. Aluminum can also not making any kind of chemical reactions with sea water. To get angular movement, system has a two hydraulic cylinder which are located to the near of the system wall. System has also have a hydraulic power pack which is located inside of the yacht, With this power pack cylinders has getting enough power to lifting the door. With this system you can seperate the electric unit, hydraulic unit etc. and aft side of the yacht. In the inside of the door system, we are using gasget to provide sealing of the system. With this gasget system you dont see even a water drop inside of the door. Hydraulic cylinder is choosen for a dimension of the door. Sealed door can make between 50 and 90 degrees angular movement. System has a two hydraulic locks, which can provide to not open system spontaneously in close position.

02

PRODUCTS

ELSE PLATFORM



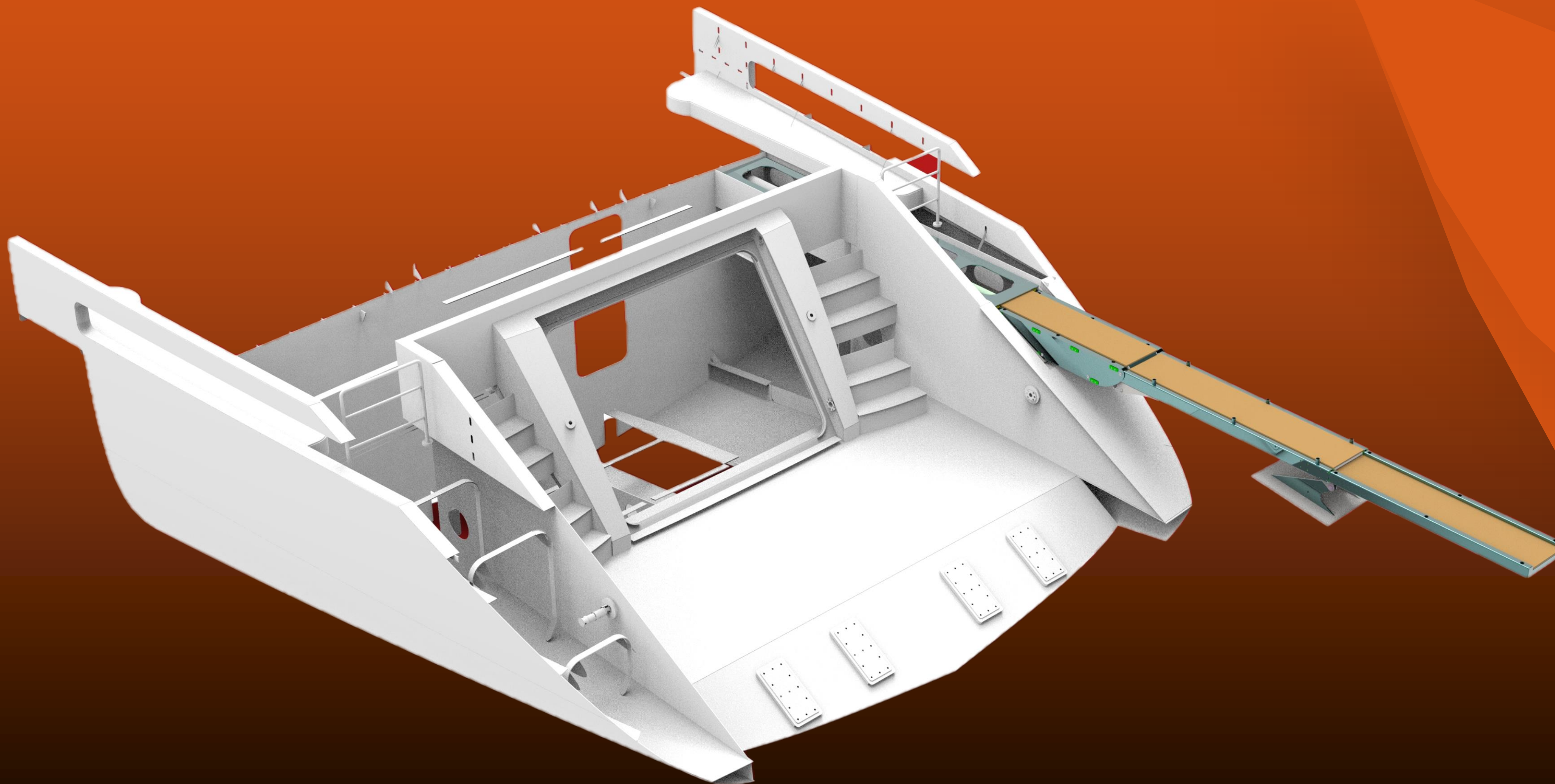
PRODUCTS ELSE PLATFORM

Else Platform is a hydraulic platform which making at least 90 degrees on the aft of the yacht. Platform material is choosen aluminum because aluminum is less density than any kind of steel, with this opportunity you can lift system with less force than steel. And also not making any kind of chemical reactions with sea water. To get angular movement, system using two hydraulic cylinder. Hydraulic power pack which is located inside of the yacht is giving force to the cylinders. Also we are using a thin plate to not see a hydraulic cylinders when the system is open position. System can lift minimum 500 kg weight. With this system, you can expand your yacht aft side. Hydraulic cylinders are choosen for weight which system will carry for. According the design of the yacht, system can make between 90 and 135 degree angular movement. In emergency situation, system has a two hydraulic lock to not open spontaneously in closing position. This hydraulic locks are getting power to the same hydraulic power pack which can feed also hydraulic cylinder. System has a hinge mechanism in the connection between aft and system, owing to this system in open position platform will parallel to the aft.

02

PRODUCTS

ELSE PASARELLA



PRODUCTS ELSE PASARELLA

Else Passarella is a hydraulic gangway system which is located to the left or right side of the yacht. We are using 316L stainless steel for this system because 316L has a more strength than aluminum and also not making any kind of chemical reaction with sea water. Else Pasarella can make forward and backward movement and also making 20 degrees angular movement up and down. To forward and backwars, system using a timing belt, With this timing belt system can forward and bacward any dimension you want. To making angular movement, system has a two hydraulic cylinder. System has also have a hydraulic power pack which is located inside of the yacht, With this power pack cylinders has getting enough power to lifting the gangway. In the gangway side, if you want to extend the gangway lenght, we are using the one more hydraulic cyinder to increase the length. With this system, you can reach the pier way more easy. And also you dont need to get your yacht to getting closer to the pier, with this opportunity you can avoid the any kind of crash between pier and aft side of the yacht

02

PRODUCTS

MULTIFUNCTIONAL LADDER



PRODUCTS

MULTIFUNCTIONAL LADDER

These are composed of 316L stainless steel and can be attached to any type of yachts that can turn into a ladder system that can move upwards, downwards, forwards and backwards.

As ELSE Inc., we make it easier to get in and get off the boat for each individual from different age groups.

With the help of the carrier wings that can move parallel to the stairs, these designs turn into ladders.

Special designs with the desired number of stairs help to make efficacious for each yacht structure.

ELSE Inc., designs long-lasting systems by creating parallel-shifting designs compared to similar systems.

In these terms, we issue 2 years of guarantee for the mechanical systems and remote controls which ELSE Inc. produced.

We also give 2 years of guarantee for hydraulic power packs that are composed with the world's leading brands.

02

PRODUCTS

UAV HELICOPTER



PRODUCTS

UAV HELICOPTER

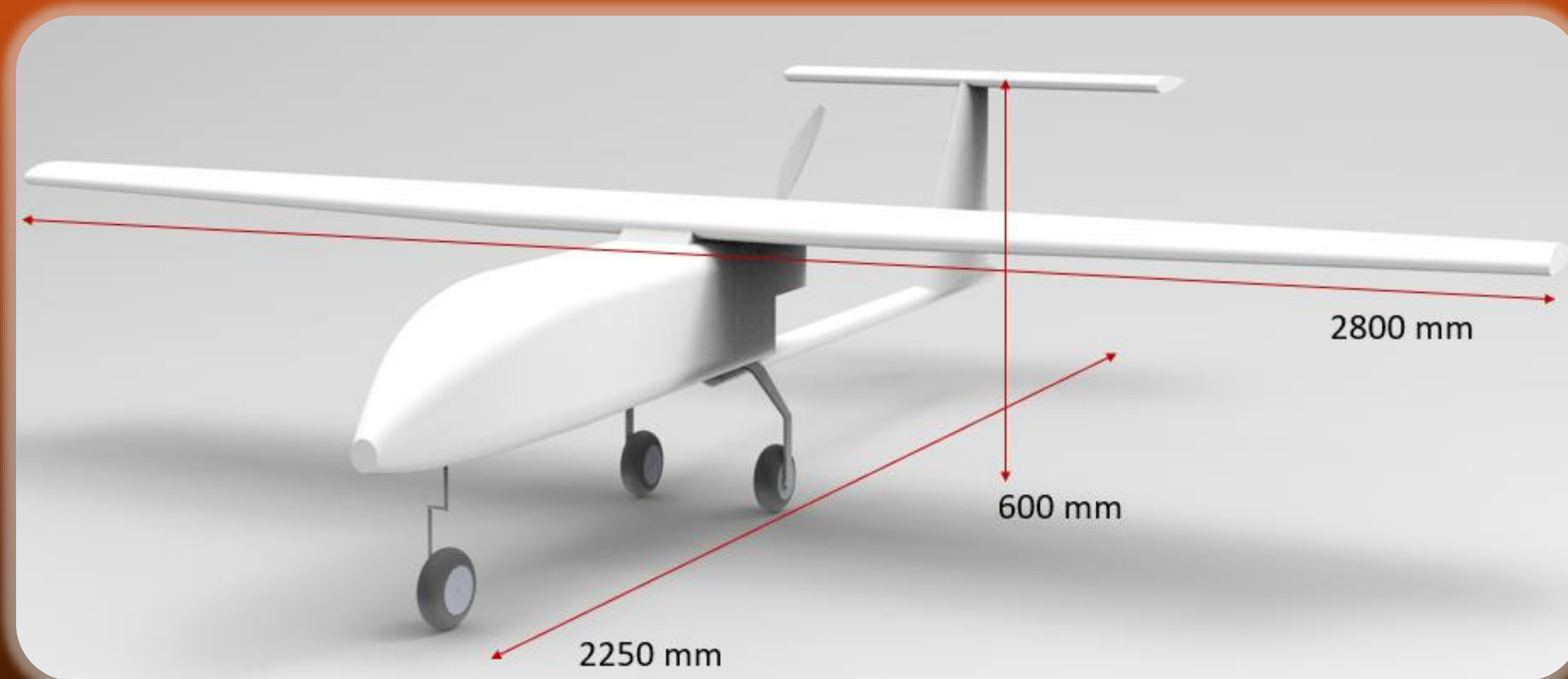
ELSE Aviation is concentrating on the development of the ELSE-H1 helicopter UAV. The development team comprises highly qualified personnel in unmanned vehicle systems. The development intent is to provide solutions for the navy, ground forces, and various civilian applications.

ELSE-H1 will be able to fly up to 10,000 feet with a 5-hour endurance, carrying payloads of 50 kilograms. To increase payload weight, a trade-off can be made with endurance.

02

PRODUCTS

ELSE EAGLE MKI



PRODUCTS

ELSE EAGLE MKI

The design, analysis and calculations of Eagle UAV have been completed and production continues.

It is produced in sizes that are not common in our country, and it is designed to be easily used in the field, but also to perform tasks as a tactical UAV.

Data	Metric	Imperial	Remarks
Maximum TOW (Take-off Weight)	15 kg	33 lbs.	ISA
Standard TOW	12 kg	26.5 lbs.	Including day payload(400 gr)
Payload (Camera)*	5 kg	11 lbs.	To be supplied as needed
Engine	1.8 kW	2.5 HP	ISA
Fuel*	4 liters	1.06 Gallon	US
Cruise Speed	24 m/s (87 km/h)	54 miles/h	47 Knots
Maximum Speed	34 m/s (122 km/h)	76 miles/h	66 Knots
Endurance*	5 hours	5 hours	With reserve
Maximum Altitude	3050 meters	10,000 feet	ISA
Range**	50 km	31 miles	With standard radio links
* Fuel and flight time may vary according to the requested payload weight. ** It may increase up to 75 km depending on the radio link requested or used.			

MANUFACTURING

All of our production works are operated in the machine park. Our equipment and machines in different capacities that we use in our manufacturing facility are the best in the market and we provide high quality services with our professional technical team. We work with many companies in various sectors such as defense industry that desires lowest tolerance and maximum quality.



03

MANUFACTURING



03

MANUFACTURING SPARE PART PRODUCTION

03

MANUFACTURING FIBER PRODUCTION

03

MANUFACTURING FIBER PRODUCTION



MACHINE PARK

Else Engineering has largely invested in its own factory. Within this investment, factory is equipped with CNC machines which are operated most frequently. Apart from CNC, welding machines, turning machines, milling machines are included. All equipped machinery is selected out of the best quality brands.

ELSE
TOS DN 50X1500
UNIVERSAL
TORNA
NO:ELSE1881-7

04

OUR MACHINE PARK

Mazak Integrex 200Y

Hermle C20V

Hermle C20V

Cincinnati Acramatic 850SX

Jinn Fa Jcm800

DN50X2000 Universal Lathe

Pvno Majska Die Milling Cutter



04

OUR MACHINE PARK



05

QUALITY ASSURANCE & CERTIFICATES

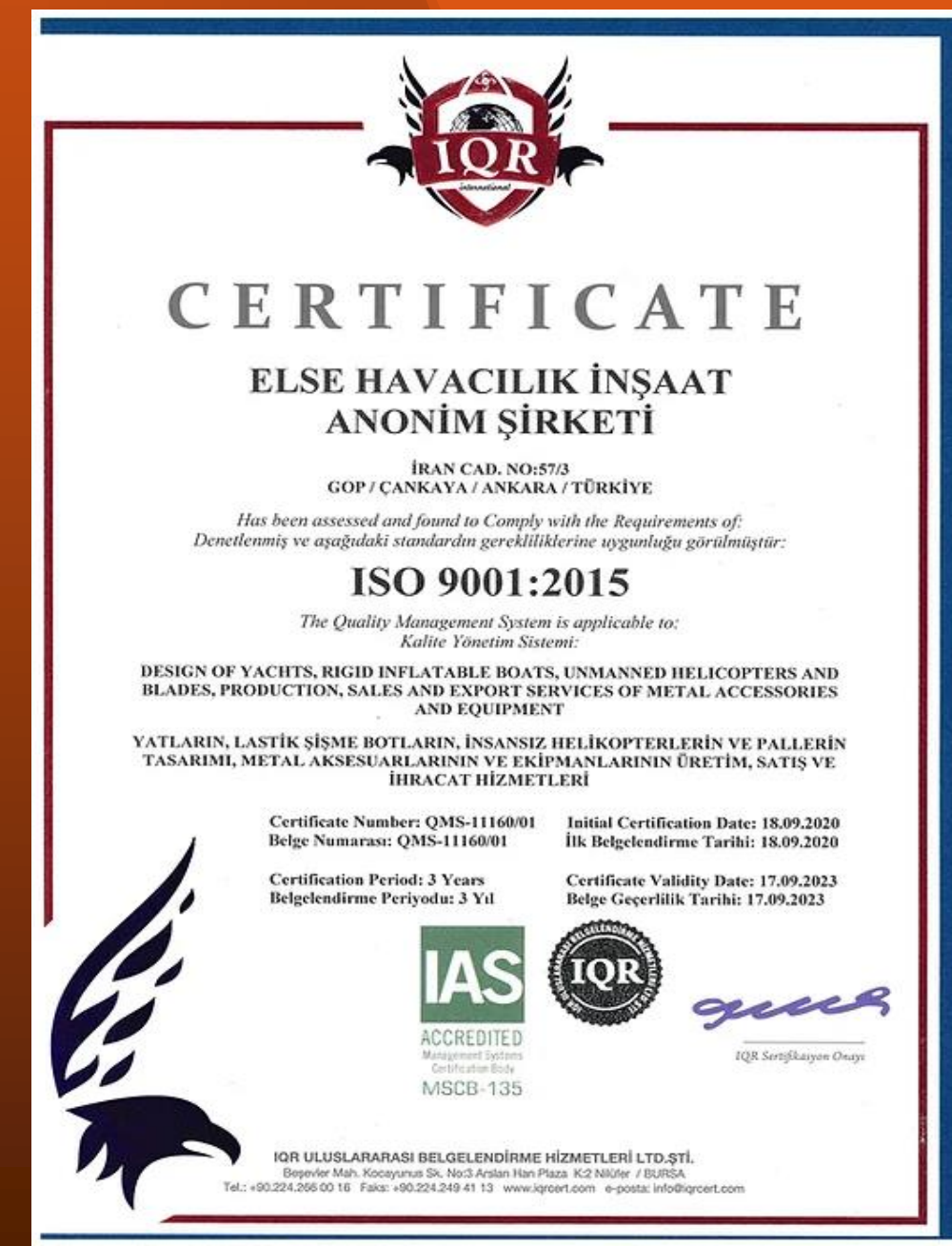


QUALITY ASSURANCE & CERTIFICATES

Nikon LK CMM device is used for the measurements with the safety of 0.001 margin of error.



QUALITY ASSURANCE & CERTIFICATES



QUALITY ASSURANCE & CERTIFICATES



CERTIFICATE

ATTESTATION CERTIFICATE OF MACHINERY DIRECTIVE

Technical file of the company mentioned below has been inspected and audit has been completed successfully.
2006/42/EC Machinery Directive has been taken as references for these processes.

Company Name : **Else Havacılık İnşaat A.Ş.**

Company Address : **İran Caddesi No:57/3 Gaziosmanpaşa Çankaya ANKARA / TURKEY**

Related Directives and Annex : **Machinery Directive 2006/42/EC / Annex VIII**

Related Standards : **EN ISO 12100, EN ISO 4413**

Product Name : **Hydromechanical Carrier Lift Mechanism**

Product Brand/Model/Type : **1881 Else Pro Tender Lift**

Certificate Number : **M.2021.103.ST.1181.01**

Initial Assessment Date : **25.06.2020**

Registration Date : **06.07.2020**

Reissue Date/No : **07.07.2022/02**

Expiry Date : **05.07.2023**


UDEM International Certification
Auditing Training Centre Industry
and Trade Inc. Co.

The validity of the certificate can be checked through www.udem.com.tr. The CE mark shown on the right can only be used under the responsibility of the manufacturer with the completion of EC Declaration of Conformity for all the relevant Directives. This certificate remains the property of UDEM International Certification Auditing Training Centre Industry and Trade Inc. Co. to whom it must be returned upon request. The above named firm must keep a copy of this certificate for 15 years from the registration of certificate. This certificate of only covers the products stated above and UDEM must be notified in case of any changes on the products.

Address: Mülk Kent Mahallesi 2073 Sokak (Eski 93 Sokak) No:10 Çankaya – Ankara – TÜRKİYE
Phone: +90 312 443 03 90 **Fax:** +90 312 443 03 76
E-mail: info@udem.com.tr www.udem.com.tr



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Related Directives and Annex : **Machinery Directive 2006/42/EC / Annex VIII**

Related Standards : **EN ISO 12100, EN ISO 4413**

Product Name : **Hydromechanical Carrier Mechanism**

Product Brand/Model/Type : **1881 Else Pro Transformer**

Certificate Number : **M.2021.103.ST.1181.02**

Initial Assessment Date : **26.06.2020**

Registration Date : **06.07.2020**


Reissue Date/No : **07.07.2022/02**

Expiry Date : **05.07.2023**


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E-mail: info@udem.com.tr www.udem.com.tr



SERTİFİKA

MAKİNA EMNİYETİ YÖNETMELİĞİ TASDİK BELGESİ

Aşağıda adı geçen firmanın teknik dosyası incelenmiş denetimi başarıyla tamamlanmıştır.
Bu işlemler için 2006/42/AT Makina Emniyeti Yönetmeliği referans alınmıştır.

Firmanın Adı : **Else Havacılık İnşaat A.Ş.**

Firmanın Adresi : **İran Caddesi No:57/3 Gaziosmanpaşa Çankaya ANKARA / TÜRKİYE**

İlgili Direktifler ve Ekleri : **2006/42/AT Makina Emniyeti Yönetmeliği / EK VIII**

İlgili Standartlar : **EN ISO 12100, EN ISO 4413**

Ürün Adı : **Hidromekanik Taşıyıcı Lift Mekanizması**

Ürün Marka/Model/Tipi : **1881 Else Pro Tender Lift**


Sertifika Numarası : **M.2021.103.ST.1181.01**

Belgelendirme Denetim Tarihi : **25.06.2020**

Tescil Tarihi : **06.07.2020**


Yeniden Basım Tarihi/No : **07.07.2022/02**

Geçerlilik Tarihi : **05.07.2023**


UDEM Uluslararası Belgelendirme
Denetim Eğitim Merkezi
San. ve Tic. A.Ş.

Bu belgeyi geçerliliği www.udem.com.tr internet sayfasından kontrol edebilirsiniz. Sağ tarafta gösterilen CE işareti ilgili AT yönetmeliği beyanları tamamlanmış ve sadece belgelendirme kurumuna aittir. Bu belge sadece yukarıda belirtilen ürün/ürünleri kapsamına alır. Ürün/ürünlerde herhangi bir değişiklik olması durumunda UDEM haberdar edilmelidir. Bu belgenin mülkiyeti hatta UDEM Uluslararası Belgelendirme Denetim Eğitim Merkezi San. ve Tic. A.Ş.'ye aittir ve değiştirilmeden kullanılmalıdır. Yalnızca adı geçen firma ve UDEM bu belgeyi bir kopyasını Tescil Tarihinden itibaren 15 yıldan fazla muhafaza etmelidir.

Adres: Mülk Kent Mahallesi 2073 Sokak (Eski 93 Sokak) No:10 Çankaya – Ankara – TÜRKİYE
Tel: +90 312 443 03 90 **Faks:** +90 312 443 03 76
E-posta: info@udem.com.tr www.udem.com.tr



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İlgili Standartlar : **EN ISO 12100, EN ISO 4413**

Ürün Adı : **Hidromekanik Taşıyıcı Mekanizma**

Ürün Marka/Model/Tipi : **1881 Else Pro Transformer**


Sertifika Numarası : **M.2021.103.ST.1181.02**

Belgelendirme Denetim Tarihi : **26.06.2020**

Tescil Tarihi : **06.07.2020**

Yeniden Basım Tarihi/No : **07.07.2022/02**

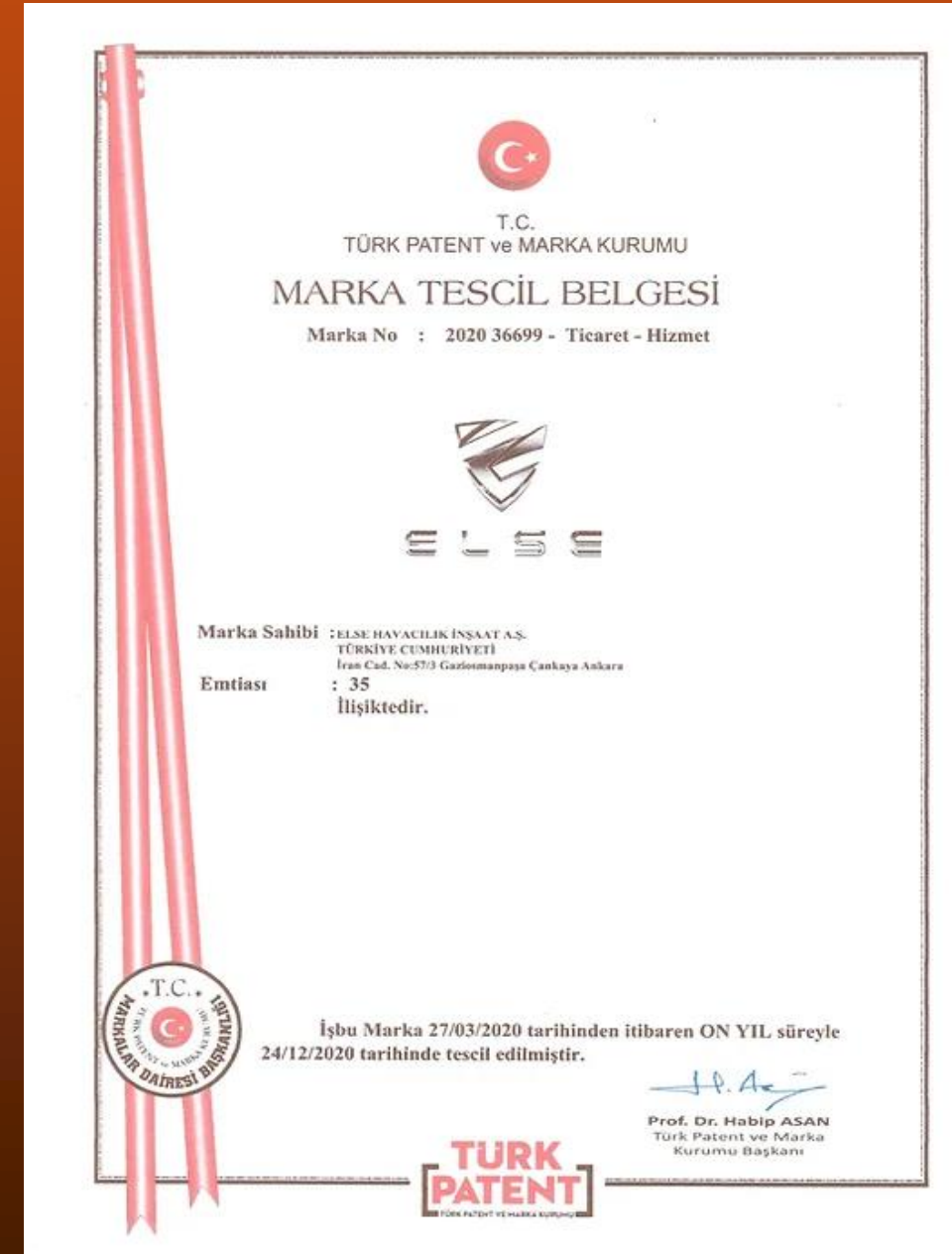
Geçerlilik Tarihi : **05.07.2023**


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QUALITY ASSURANCE & CERTIFICATES



06

ESTABLISHED PROJECTS

MARINE / ELSE COMFORT DECK

Muğla/ Fetiye ANEMOS 78



06

ESTABLISHED PROJECTS

MARINE / Z-COMFORT DECK
MULTIFUNCTIONAL TILTING LADDER

Muğla/ Ören JASMINA 3



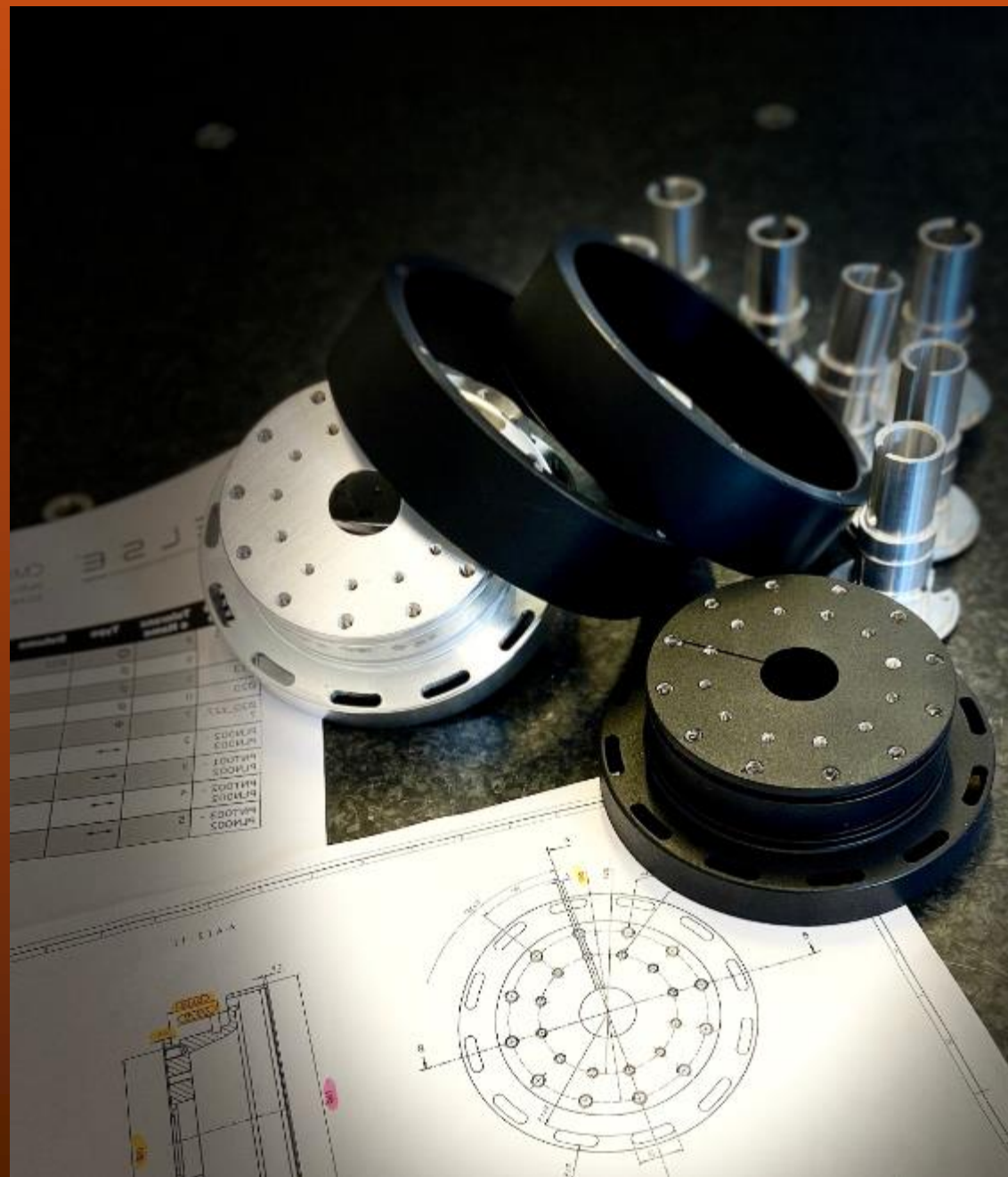
06

ESTABLISHED PROJECTS

DRAGON BOAT & COASTAL ROWING



ESTABLISHED PROJECTS SPARE PARTS



BUSSINESS PARTNERS

