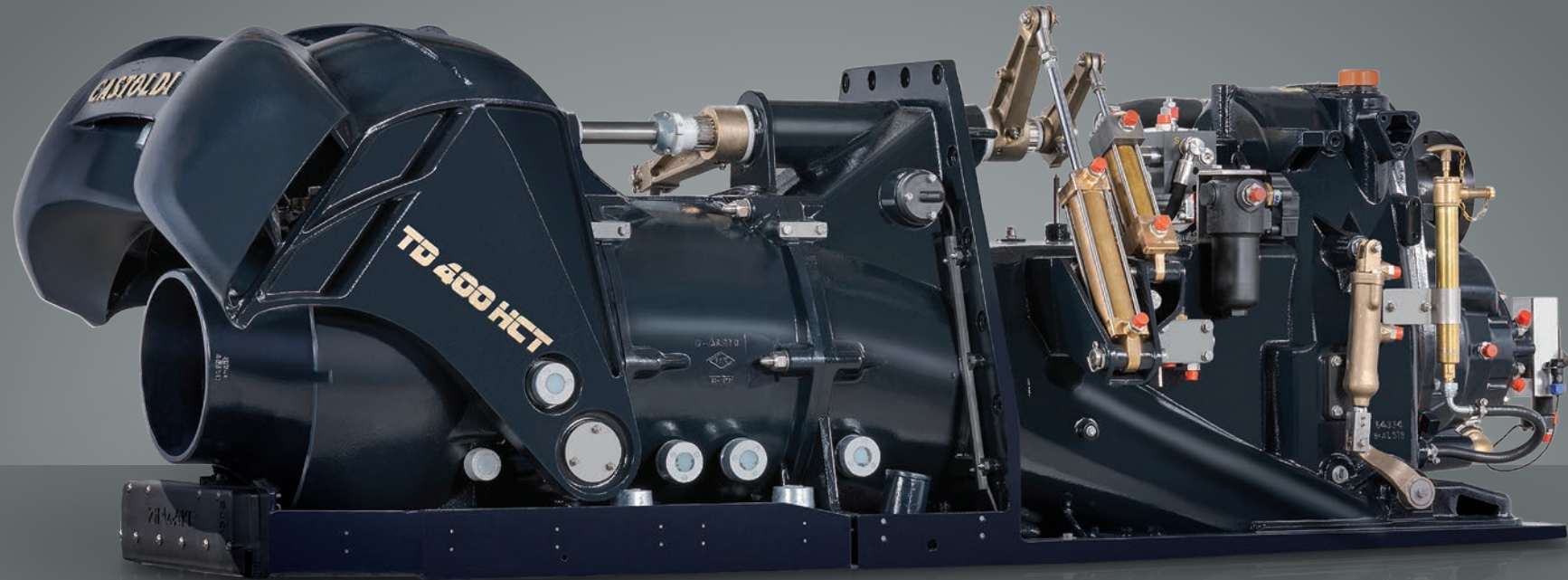


ADVANCED WATERJET DRIVE

TURBODRIVE 400 H.C.T.



CASTOLDI

Since 1962
Forerunners, always

The next evolution in our high-efficiency **H.C.T.** family represents the pinnacle of over 60 years of waterjet propulsion innovation. The **Turbodrive 400 H.C.T.** delivers unprecedented performance for marine professionals worldwide.

Featuring advanced hydrodynamic design, the **Turbodrive 400 H.C.T.** delivers superior thrust and enhanced propulsive efficiency across all speed ranges. The redesigned steering system provides exceptional precision with minimal speed loss during turns, while the new reversing bucket geometry coupled with increased hydraulic power enables rapid and efficient crash-stop maneuvers.

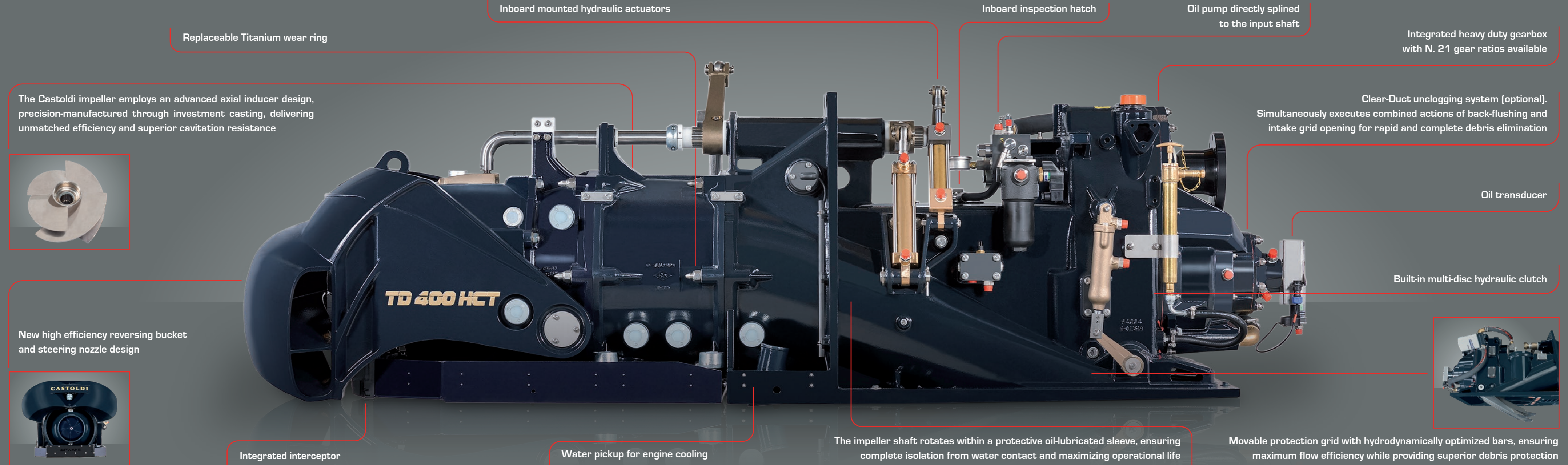
The **Turbodrive 400 H.C.T.** offers perfect interchangeability with its predecessor, a globally trusted system renowned for exceptional performance on commercial, military, and pleasure vessels. This compatibility allows for straightforward retrofitting without hull modifications.

Every **Turbodrive 400 H.C.T.** comes equipped with industry-leading innovations:

- Integrated gearbox with multiple ratio options to precisely match any engine in its power range
- Superior Clear-Duct unclogging system combining back-flushing with intake grid opening for unmatched duct cleaning
- Comprehensive control system options, including our advanced electronic **ACES**

The **Turbodrive 400 H.C.T.** marks a significant advancement in waterjet propulsion technology, setting new benchmarks for performance in the marine industry.

#Thrust #Compactness #Lightness #Durability



Replaceable Titanium wear ring

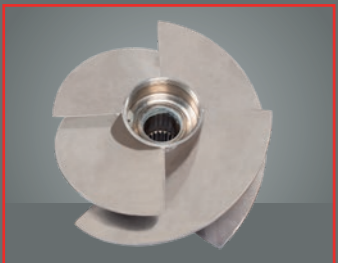
Inboard mounted hydraulic actuators

Inboard inspection hatch

Oil pump directly splined to the input shaft

Integrated heavy duty gearbox with N. 21 gear ratios available

The Castoldi impeller employs an advanced axial inducer design, precision-manufactured through investment casting, delivering unmatched efficiency and superior cavitation resistance



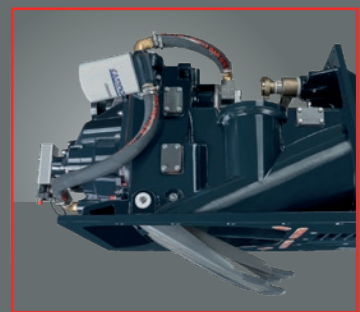
Clear-Duct unclogging system (optional). Simultaneously executes combined actions of back-flushing and intake grid opening for rapid and complete debris elimination

Oil transducer

New high efficiency reversing bucket and steering nozzle design



Built-in multi-disc hydraulic clutch



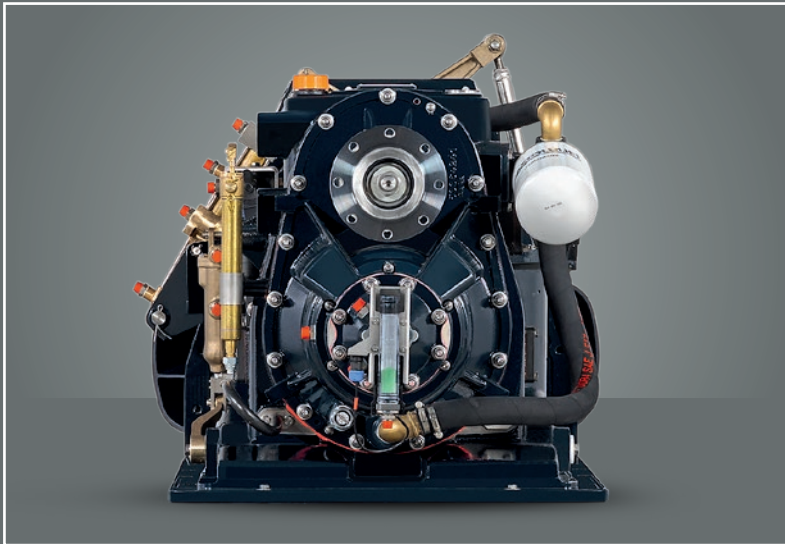
Integrated interceptor

Water pickup for engine cooling

The impeller shaft rotates within a protective oil-lubricated sleeve, ensuring complete isolation from water contact and maximizing operational life

Movable protection grid with hydrodynamically optimized bars, ensuring maximum flow efficiency while providing superior debris protection

TURBODRIVE 400 H.C.T.



- **The highest thrust and best performance**

Assured by the new component design.

- **The most effective defense against marine corrosion**

Assured by the hard anodizing treatment protecting all the aluminium alloy components with 60 microns thickness of aluminum oxide (ceramic), three layers of special paint and cathodic protection by sacrificial anodes.

- **The most efficient duct unclogging system**

Assured by the proprietary Clear-Duct technology (optional), which simultaneously executes combined actions of back-flushing and intake grid opening for rapid and complete debris elimination

- **The highest suitability to operate in sandy, dirty and shallow waters**

Thanks to the impeller shaft rotating within a protective oil-lubricated sleeve, ensuring complete isolation from water contact.

- **The longest operational life**

Thanks to the presence of all oil lubricated bearings.

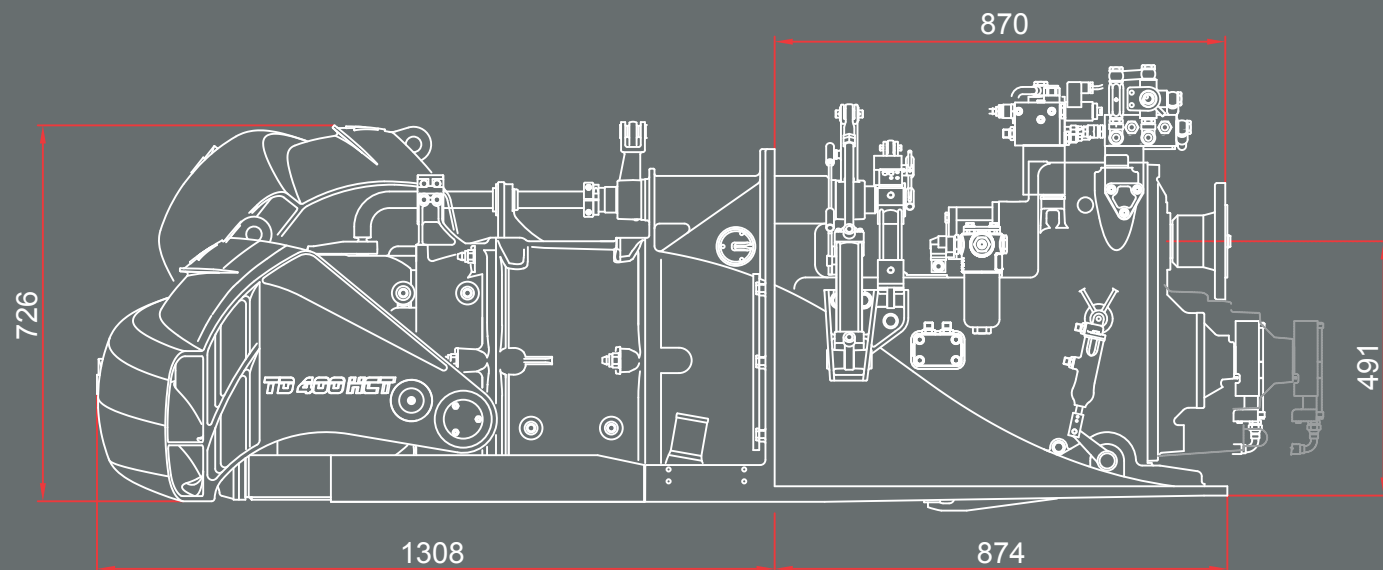
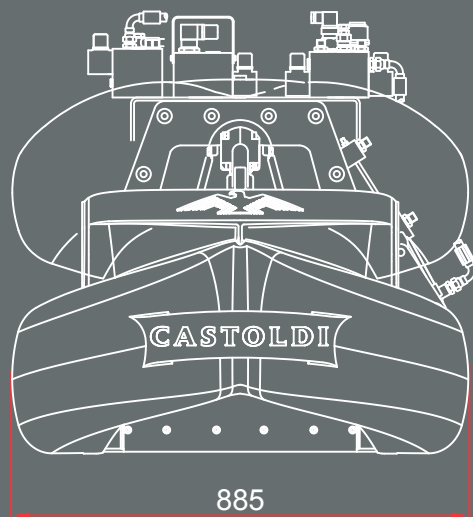
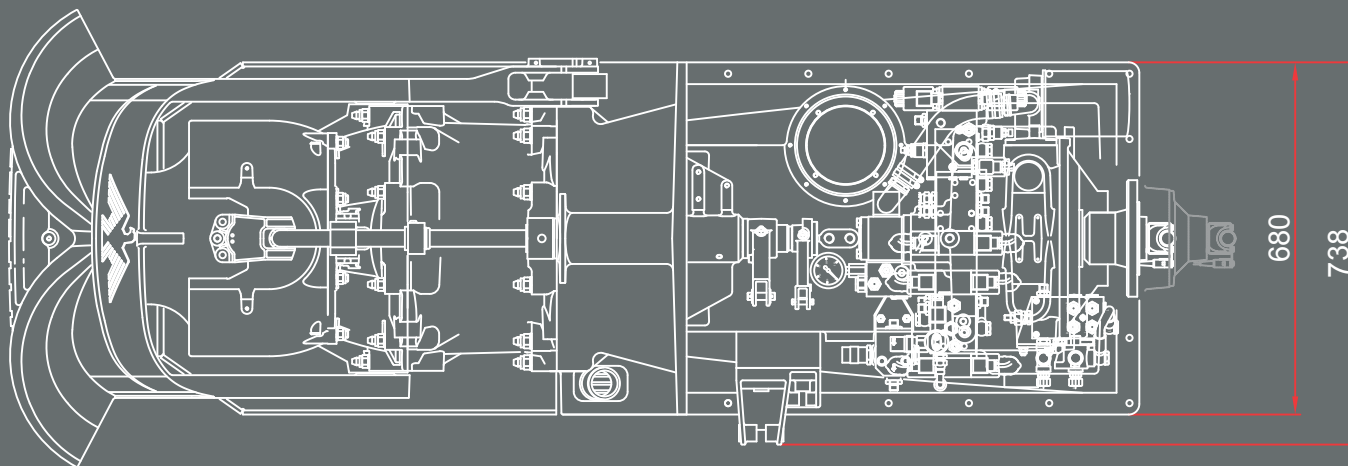
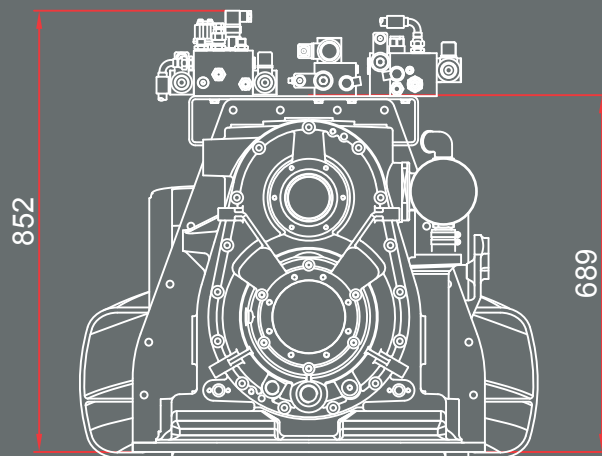
- **The most compact installation**

Thanks to the presence of the built-in gearbox and hydraulic multi-disc clutch.



Dimensions

Clear Duct version



TURBODRIVE 400 H.C.T.

Impeller: Duplex stainless steel, investment cast

Impeller housing: G Al Si 9 aluminum alloy

Impeller housing wear ring: Titanium

Impeller shaft: Aquamet 17 stainless steel

Input shaft: 39 Ni Cr Mo 3 high grade steel

Stator: G Al Si 7 aluminum alloy

Steering nozzle and reversing bucket: G Al Si 7 aluminum alloy

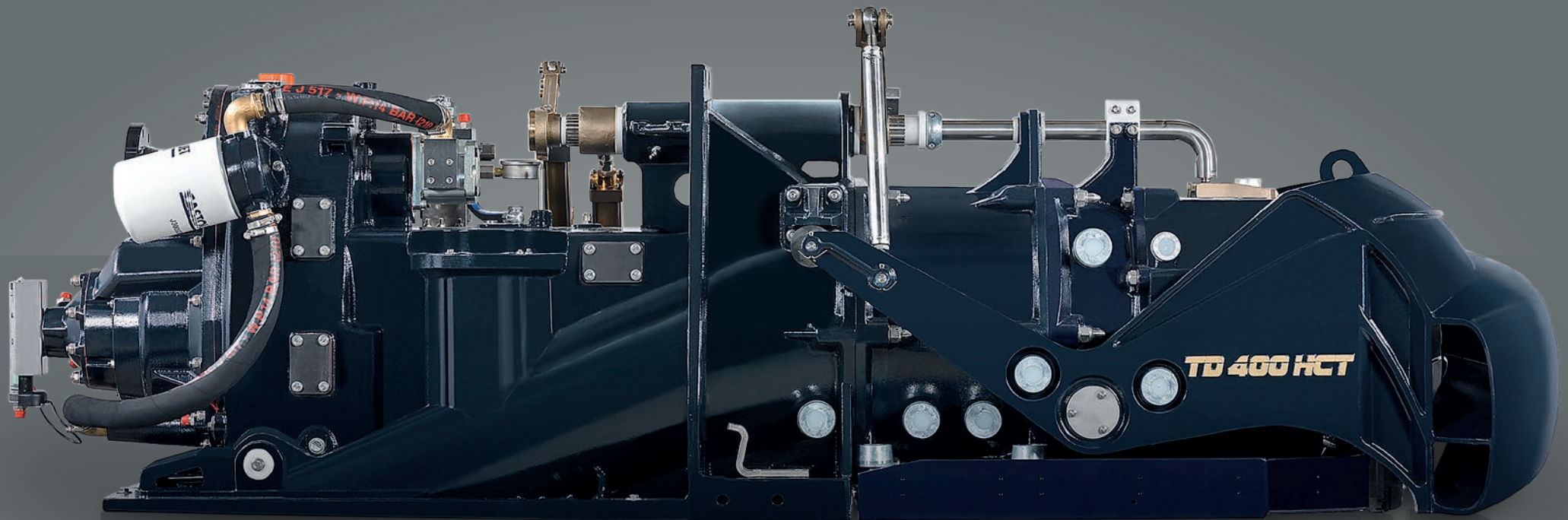
Steering shaft: Nitronic 50

Reversing shaft: AISI 316 stainless steel

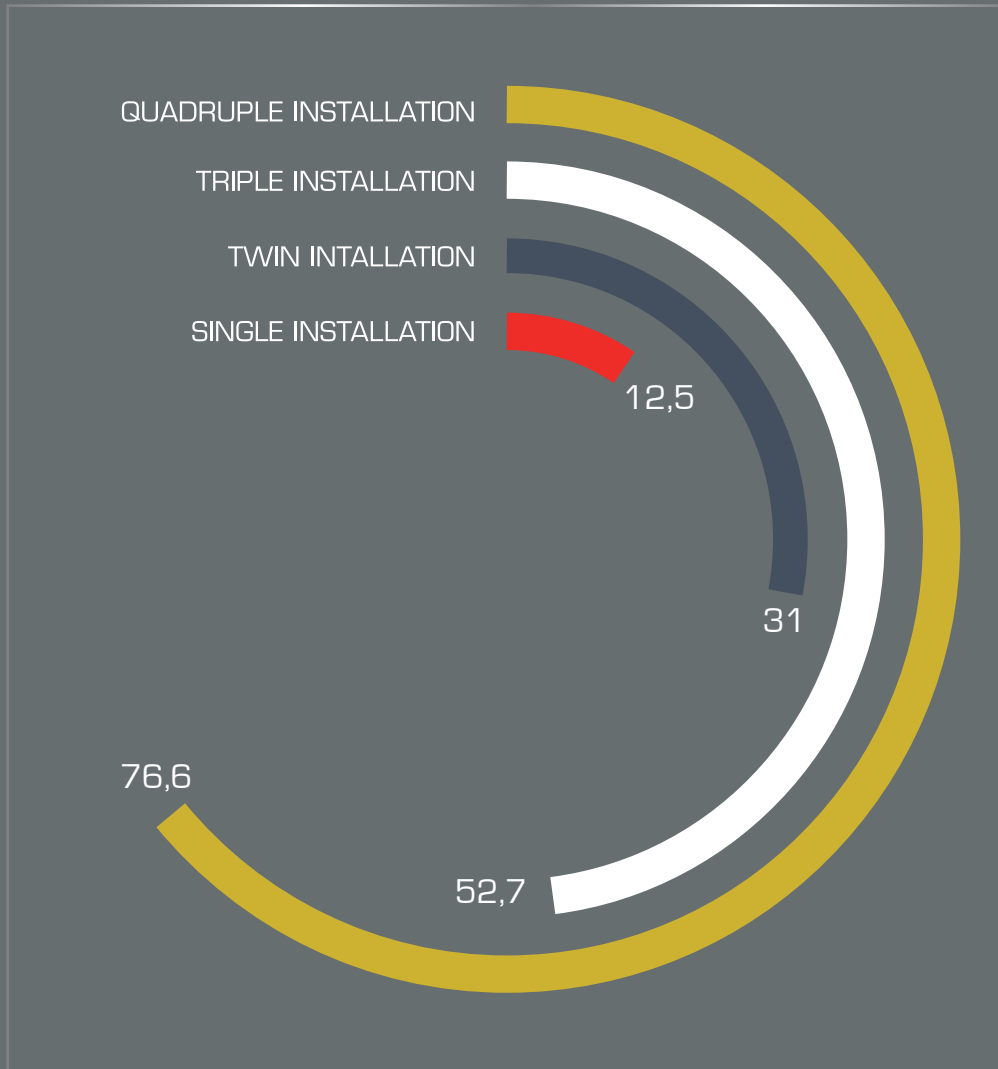
Waterjet body: G Al Si 9 aluminum alloy

Gear wheels: Surface carbo hardened high grade 18 Ni Cr Mo 5 steel

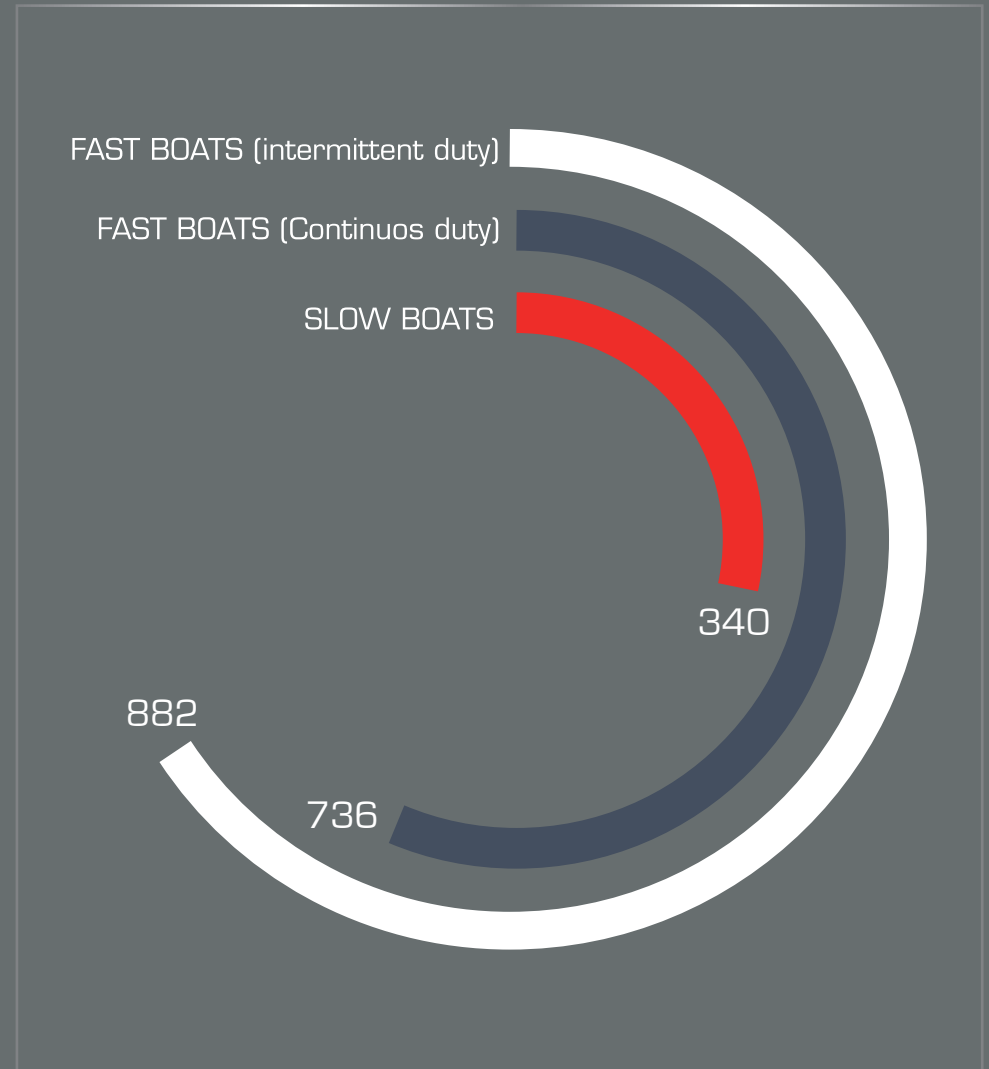
The whole unit is protected by a hard anodizing treatment, plating all light-alloy components with 60 microns thickness of aluminum oxide (ceramic), three layers of special paint and cathodic protection by sacrificial anodes



MAXIMUM SUGGESTED DISPLACEMENT (t)



MAX POWER INPUT (kW)



Impeller: N. 4 blades, single stage, axial flow

Impeller diameter: 400 mm at the inlet

Stator: N. 5 blades

Integrated heavy duty gearbox: With N. 21 gear wheels ratio available

Input flange: Suit up to 225 mm diameter drive shaft flange

Impeller disconnecting/connecting system: Built-in multi-disc hydraulic clutch

Transom angle: 90°

Drive shaft rotation: Clockwise looking at the input driveshaft flange

Inspection hatch: Inboard

Hydraulic actuators: All inboard, waterjet mounted

Water pick-up for engine cooling: Suit 2" 1/2 GAS

Hydraulic plant: Pump, solenoid valves and piping assembly (all inboard-mounted directly on waterjet unit)

Unit dry weight (including gearbox, hydraulic clutch, water intake, grid, duct, anodes etc.): 509 kg

Hydraulic weight (oil pump, actuators, solenoid valves, brackets): 50 kg

Entrained water volume: 114 l

Oil volume: 22 kg "SAE 30" Uni-Grade oil type (gearbox and hydraulics)

B.P.R.: Additional water intake for take-off improvement

Water intake protection: Movable debris screen grid with hydrodynamically optimized bars featuring dual-action movement

Bearings: All oil lubricated

Clear-Duct (optional): Advanced unclogging system through simultaneous back-flushing and intake grid opening operations, 31 kg

Reversing system: Castoldi compact "Twin-Duct" reversing bucket. (75% of the forward static thrust)

Steering system: Castoldi steering nozzle integrated in a protective bowl



CASTOLDI

Since 1962
Forerunners, always

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