Missions
Wide range of propulsion systems designed and produced by DCNS for all types of surface ships.

Through innovative solutions and services, DCNS sets out to be the most valued business partner with products that are capable of meeting the most stringent special naval requirements such as:
- power range from 15 MW to 68 MW,
- shock resistance,
- flexibility and silence for all types of missions,
- compactness,
- proven reliability and minimised maintenance,
- optimised total costs for ownership.
DCNS proposes custom-made solutions, from propulsion equipment or system’s design to its on-board integration. DCNS is able to adapt to its customers’ needs in providing innovative systems.

**Transfer of Technology (ToT) and partnership**
- Design assembly,
- local content.

**Global shipbuilder**
- Propulsion system approach,
- naval and propulsion system architects,
- global ship optimisation.

**Propulsion system supplier**
- Design, manufacturing, support capabilities,
- complete kinematic line equipment: gearbox, thrust block, shaftline, etc.

**Propulsion system integrator**
- Optimising system design and integration,
- warranty of overall system performances,
- ancillaries, controls and monitoring devices are specifically designed according to the global propulsion system performance.

**VERSATILE GEARBOX**

Propulsion systems compliant with a wide range of ships:
- <2500 t or >8,000 t with low military performance,
- between 3,000 t and 5,000 t with high military performance,
- more than 5,000 t with high military performance.

**TAILOR-MADE ARCHITECTURES**

**NEAR 60 YEARS EXPERIENCE IN NAVAL PROPULSION**

Advansea concept ship, compact hybrid propulsion with batteries
NAVAL GEARBOX

Silent and shock resistant gearboxes for optimised compact machinery compartments
DCNS gearboxes are optimised according to a ship’s propulsion system characteristics, thus guaranteeing military vessel performances while easing the ship’s general arrangement.

A key component for ships’ propulsion system performances
DCNS gearboxes are delivered fully tested further to thorough factory trials performed on dedicated trial benches.

10 NAVIES OPERATE DCNS GEARS

Long-lasting innovative gears for outstanding combat vessels
DCNS’ reduction gears are designed and manufactured to the highest standards using state-of-the-art CAD (3D modelling) and up-to-date manufacturing and machining process (DIN 2 grinding machine). They are supplied with complete ancillaries (lubrication and cooling systems), and controls.

Services for enhanced propulsion systems
Gearbox performances are forecasted and checked through simulation. Besides conventional gearbox factory trials, the following additional trials could be performed upon request using DCNS’ in-house facilities and infrastructures:
- nominal power,
- back-to-back testing.

DCNS gearboxes are delivered with a full set of additional services. Gearbox integration engineering consists in:
- fitting the gearboxes inside the hull,
- shipyard assistance for appropriate gearbox mounting strategy selection (rigid, decoupled, elastic) and mounted devices selection proposals,
- recommendations for gearbox mounting and alignment methodology.

On-board services include:
- shipyard assistance for gearbox installation,
- setting to work and commissioning services (HATs and SATs),
- through-life servicing.

10 NAVIES OPERATE DCNS GEARS

10 NAVIES OPERATE DCNS GEARS
SHAFTLINE AND THRUST BLOCK

Custom-made
Design and manufacturing of naval shaftlines and thrust blocks with extreme precision to optimise noise reduction and power transmission efficiency.
- Design and analysis, deflection, bearing positions, longitudinal and radial vibration,
- on-board integration and maintenance,
- complete scope of shaftline equipment components:
  - propeller and intermediate shafts (with high precision hollow boring),
  - thrust blocks (stand alone or gear box integrated),
  - hydraulic sleeve couplings, flange couplings,
  - torque measurement facilities,
  - water, grease or oil lubricated bearings,
  - stern tube seals and seal protection (rope and net cutters),
  - bulkhead glands,
  - hydraulic disk breaks and mechanical shaft locking devices,
  - earthing devices.

Dimensions
- Max length: 22 m
- Max diameter: 1,200 mm
- Max weight: 50 tons
- Deep drilling: 14 mm-150 mm
- Hollow boring up to: 450 mm
- Precision: 5/100

Surface treatment
- Heat treatment,
- sleeves for bearings,
- cladding, resin and stainless steel.

PROPELLER

Silent propellers for naval ships, with requirements which need hydrodynamic studies or particular performances such as:
- high propulsive efficiency,
- low noise radiation,
- low pressure fluctuations on hull.

Propellers with or without particular components: bolted fixed pitch, monobloc fixed pitch.

Realisation at first mounting, or during retrofit or maintenance operations.

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