

SCANIA

propulsion system

...is a well proven combination of Economy, Flexibility and Quality

**Efficient
Economic
Propulsion**



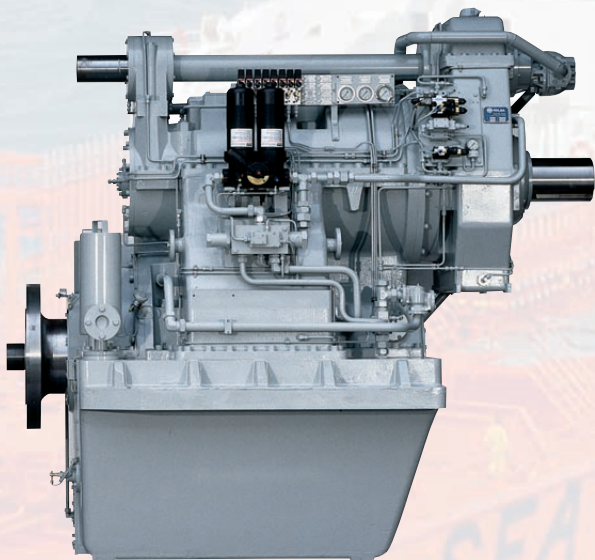
Reduction gears

Experience based design philosophy

The design of Scana Volda gearboxes are based upon long experience, engineering skills and excellent workmanship to make them one of the most reliable gearboxes in the market. Scana Volda reduction gearboxes are manufactured in the power range from 500 to 20,000kW.

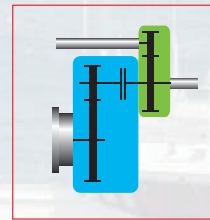
First class materials in a first class product

All materials used in the gearboxes are carefully selected to ensure the right conditions of the product. The gearhouse is made of high quality cast iron to achieve a rigid and stiff design to absorb safely all forces during operation at maximum load. Plain white-metal bearings for pinion and bull gear shaft ensures extremely good reliability. The gear wheels are of the very highest quality, and designed with large safety margins for unlimited life time.



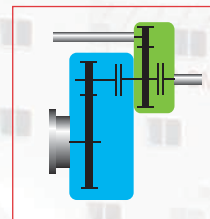
The Scana Volda SOFTCLUTCH® system

The unique PLC controlled Scana Volda SOFTCLUTCH® reduces the large torque peaks which may occur in connection with clutch engagements in today's complex propulsion systems. Softclutch can be supplied as an option.

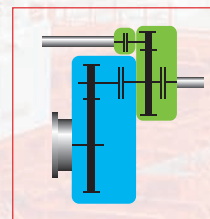


Primary driven PTO's, front mounted:

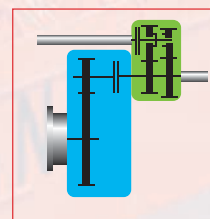
- PTO type PF without clutch.
– always running with the engine.



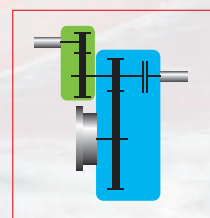
- PTO type PF with clutch.
– can run independently of the engine.



- PTO/PTI type PF with clutch.
– can run independently of the engine.
– take me home function.

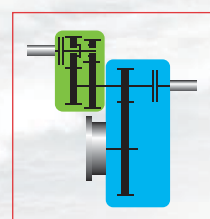


- PTO type PF with 2 speed PTO.
– possible with a constant speed at the PTO shaft at two different engine speeds.



Secondary driven PTO's, aft mounted:

- PTO type SA without clutch.
– runs only when the propeller is running.



- PTO type SA 2 speed PTO with clutch.
– special designed PTO for take me home function – the propeller may run with reduced speed.

Reduction gears

References

Scana Volda is one of the world's leading companies in development of integrated propulsion systems, and has built a world wide reputation for engineering products of the highest quality.

Repeat business is the best advertisement for the quality and reliability of a product. Scana Volda is proud to be first choice of several successful companies in the marine industry.

The reference list of Scana Volda includes a wide range of types of vessels, e.g. fishing, offshore/supply, cargo, towing, passenger cruisers, ferries, tankers and seismic research.



The offshore segment is one of the main focus areas of Scana Volda. A large number of twin-in single out gearboxes have been delivered to this demanding segment.



Scana Volda has supplied gear and cp-propeller system to "Frøyanes"; the world's first fishing vessel with a diesel electric frequency-controlled propulsion system.

References

Arrangement flexibility and custom-design

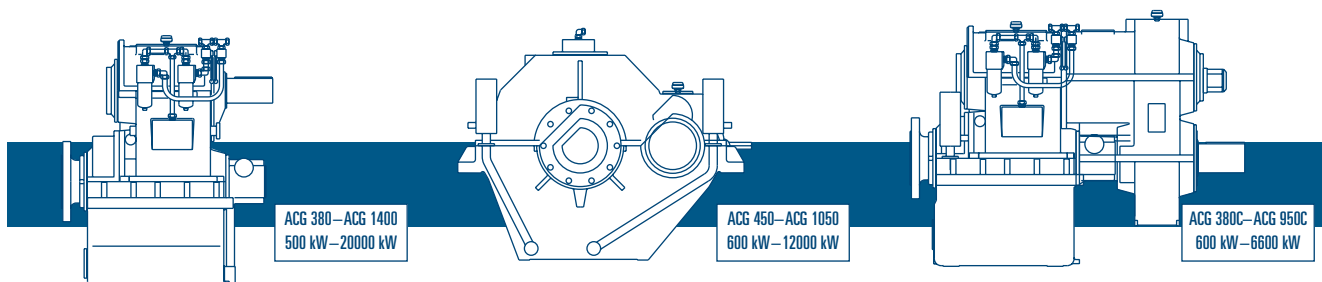
Scana Volda reduction gear concept has a great arrangement flexibility and a wide range of available PTO/PTI units in various configurations, to satisfy the demand and specifications from the customers.

System Flexibility

Vertical offset

Horizontal offset

Co-axial



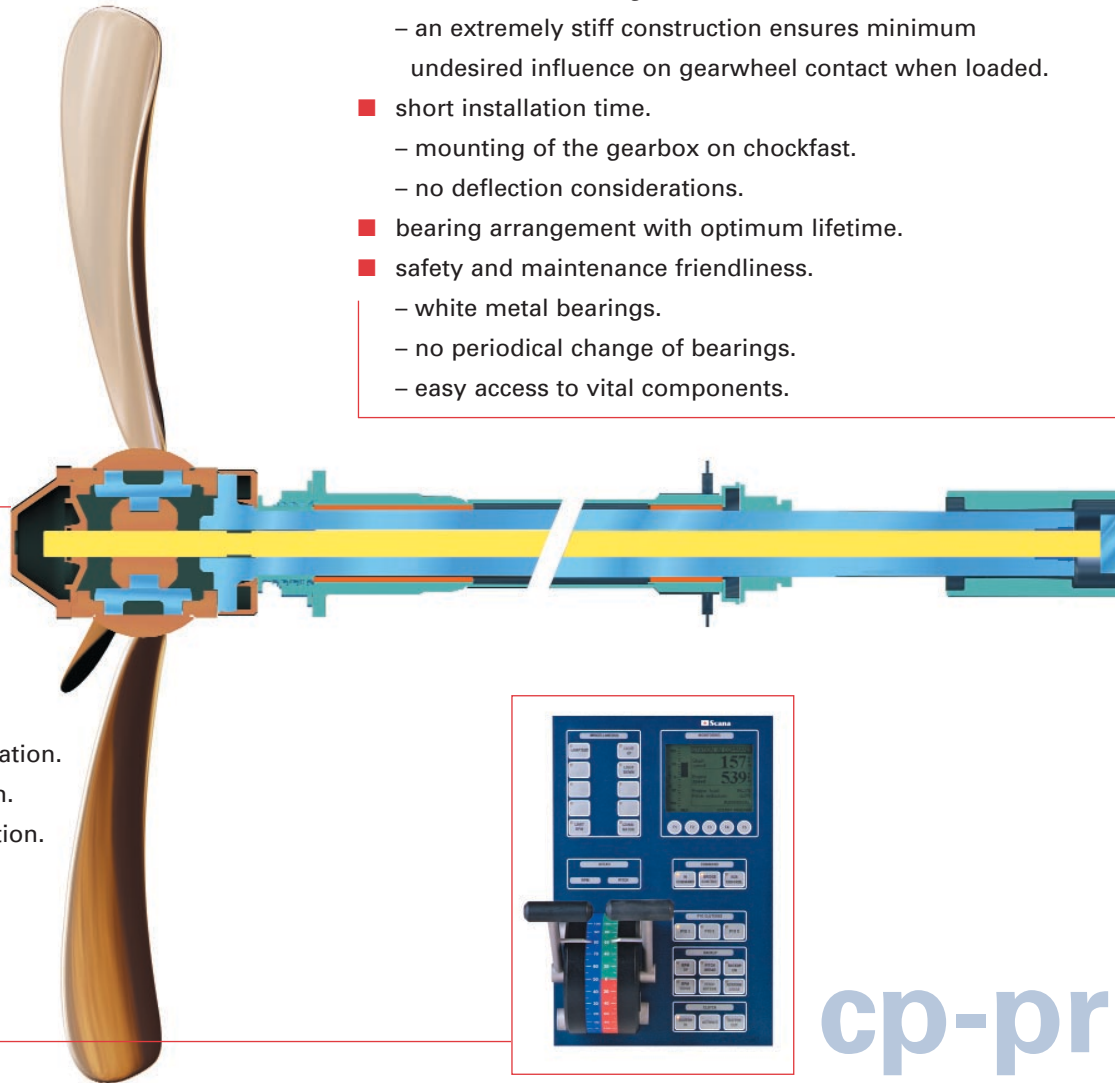
Integrated gear and cp-propeller system

Reliable and maintenance friendly propeller hub

- possible to demount propeller blades with propeller inside nozzle.
- no need for drydocking for maintenance of servo system in an ACG system having the servo system in the gearbox.
- low oil pressure inside the propeller hub reduces risk for oil spillage.
- low friction mechanism.
- easy access to vital components.

The most stable and rigid gearbox in the market

- low noise and vibration.
 - precision grinded gearwheels.
 - vibration and noise absorbant material.
 - oil lubricated bearings do not generate noise pulses.
- longer lifetime of the gearwheels and bearings.
 - rigid and thick flanges for mounting to foundation.
 - stiffening ribs inside the gearbox.
 - white metal bearings.
 - an extremely stiff construction ensures minimum undesired influence on gearwheel contact when loaded.
- short installation time.
 - mounting of the gearbox on chockfast.
 - no deflection considerations.
- bearing arrangement with optimum lifetime.
 - white metal bearings.
 - no periodical change of bearings.
 - easy access to vital components.



Remote control system designed for safety, flexibility and easy monitoring

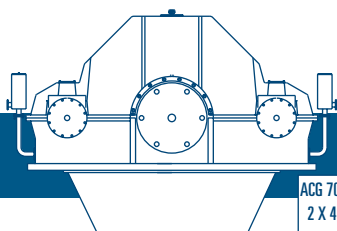
- display with all relevant information.
- guide-warning during operation.
- quick and cost efficient installation.
- easy to make adjustments during operation.

cp-pr

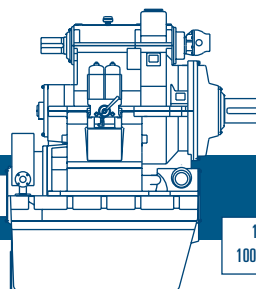
Twin in/single out

Single pto/pti

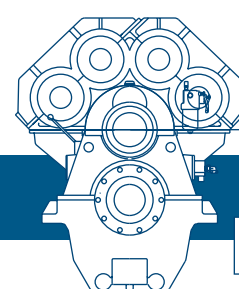
Multiple pto



ACG 700TS–ACG 1700 TS
2 X 400 kW–8900 kW

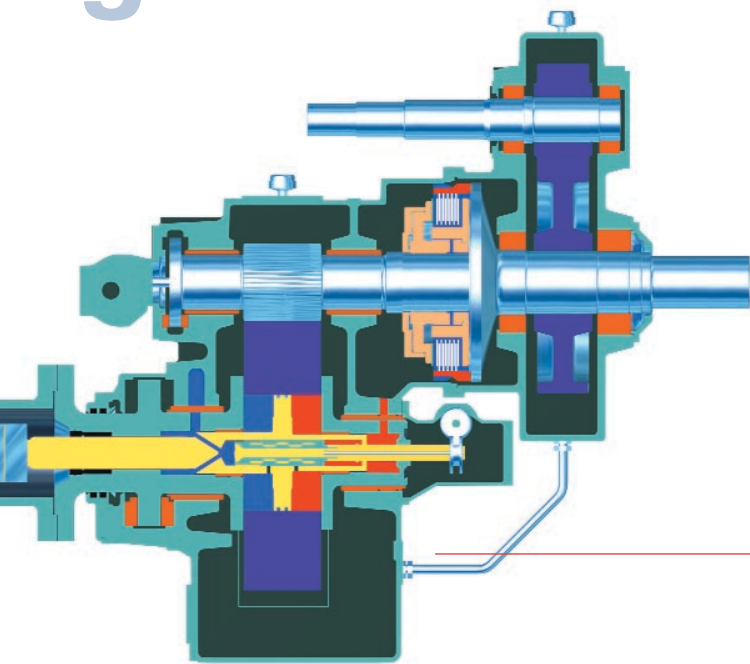


1 OR 2 SPEED
100 kW–3000 kW

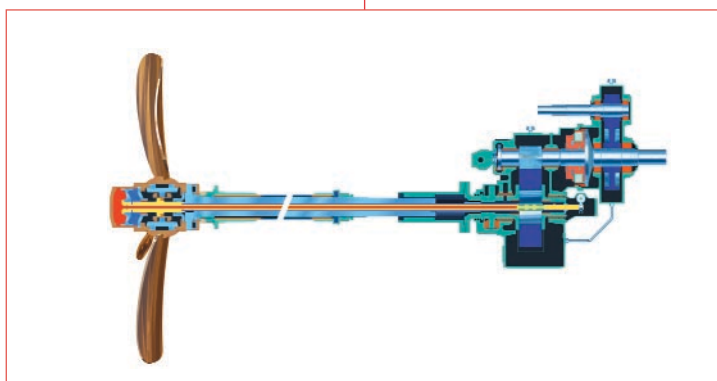


1 TO 8 UNITS
100 kW–3000 kW

Integrated gear



Propeller



The most cost efficient and reliable solution

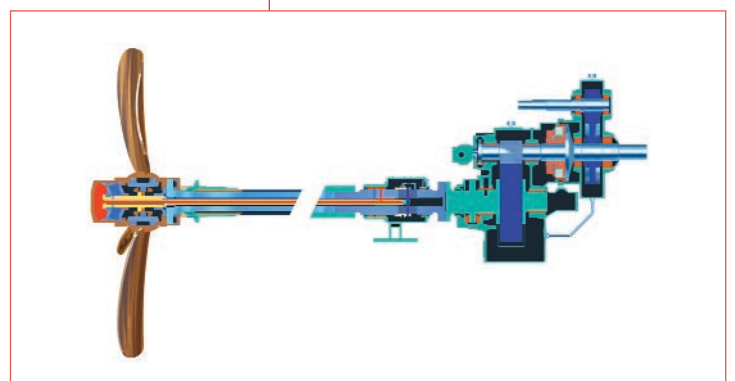
- integrated systems secure optimum interface in operation as well as mounting.
- the total installation have one hydraulic system for oil supply to gear lubrication, servo oil for propeller pitch setting, clutch and cooling.
- less components e.g. with no separate power pack and adherent equipment, give time saving installation and a space-saving system.
- complete set of reduction gears in type and power range.
- complete program of PTO and PTI solutions.
- the large configuration variety gives opportunities to optimise systems for all kind of vessels and conditions.
- one supplier of gearbox and cp-propeller ensures total delivery and support.
- short version models for space saving installations.

Alternative system configurations:

ACG system; a complete gear and cp-propeller system consisting of a cp-propeller, input shaft and a gearbox with a built in clutch. The servo motor and the servo system is placed inside the gearbox.

EACG system; a complete gear and cp-propeller system with the servo placed inside the propeller hub, and the servo system in the gearbox.

EF system; a complete gear and cp-propeller system for propellers with long shafts, with the servo motor in the hub and a radial OD-box in the shaft line.



Remote control system

The remote control system is based on an electronic computerised platform. The flexibility of the remote control system ensures easy adjustment and adaptability to meet the requirements from the propulsion system. The system interfaces with all kinds of prime movers.

The Processing Unit connects the output and input signals from all control units, sensors and control panels related to the entire propulsion system. The Processing Unit can be supplied with a computer screen for monitoring the status of the propulsion system.

The system has the following control functions:

- pitch control.
- RPM control.
- clutch control.

Available operation modes:

- individual pitch and RPM.
- fixed RPM.
- combination of pitch and rpm to follow the optimum load curve.
- failure detection by self test functions.
- interface for joystick and DP-system.

Service

Service and maintenance is a good investment

Scana Volda is placing more and more emphasis on offering service to propellers and reduction gears in operation. Life Cycle cost has become a daily term for ship operators, as planned maintenance is not only sensible but also very profitable for the total operational costs.

The service team from Scana Volda has a special product knowledge, as it is the same people both assembling and maintaining the gears, propellers and rudders. All repairs and exchanges are performed quickly and with the best possibilities for a continuous and safe operation in order to avoid unpleasant and expensive stops. Scana Volda offers 24 hour service. Spare parts and support are available from a world wide network of agents and service stations.

Main Bridge panel



Slave panel 1

Slave panel 2

Processing unit



Control room panel

Clutch

Main Engine governor

RPM pick up

Pitch actuator

Alarm plant



All work performed by Scana Volda service engineers and all original spare parts are guaranteed according to international delivery conditions.

The company



*Scana Volda is located in Volda,
about 60 km south of Ålesund*

Scana Volda is a well established supplier of efficient, economic propulsion systems.

Scana Volda is a part of the Scana group, and the company adds CP-propellers and ships reduction gears to the assortment of marine equipment.

Scana Volda has 90 years of experience in manufacturing of ship's equipment. The company is established in the market as an independent supplier of propulsion equipment designed and manufactured in house, with its own sales-, marketing- and service organisation.

Scana Volda emphasises high quality and excellence in all phases of design, production, assembly and commissioning. The company is committed to offer after sales service and customer care.

Scana Volda Core Values

- the customer in focus.
- quality in all activities.
- innovation.
- safety and job satisfaction.
- profit and limited risk exposure.