

Sperry Marine

Hydraulic Steering Gear



**Proven design for maximum
performance and reliability**

Hydraulic Steering Gear

A dependable and versatile range of hydraulic steering systems. Providing hydraulic steering gear for many different requirements.

With a long history of expertise in navigational systems, Northrop Grumman Sperry Marine has an unrivalled reputation for providing equipment and systems to suit the specific needs of mariners.

We provide a wide range of steering gears to suit many different requirements, from working tugs to super-yachts with multiple rudders.

Our steering systems offer many benefits, including:

- Cost-effectiveness and convenience
- Wide range of products
- Tailored to your needs
- Fully type-approved
- Total support

Cost-effective and Convenient

It couldn't be easier to acquire your new Northrop Grumman Sperry Marine steering system. We provide a single point of contact to ensure delivery, installation and commissioning of your complete package, according to your specification.

Our innovative use of standard components enables us to achieve low cost configurations.

Wide Range of Products

We can provide steering systems for all types of vessels and yachts, from 15 meters up to 100 meters, 5000 GT, and

for all hydraulic steering configurations – single rudder, multiple independent synchronised rudders or mechanical linked rudders.

The range includes simple hand hydraulic steering systems as well as complex electric-hydraulic power steering systems, and includes motor starter systems, alarm systems, steering control systems, autopilot interfacing and rudder indicators.

System features include:

- cylinders with spherical bearings
- split or non-split helms
- rudder angles to 60 degrees
- low-noise vane pumps

A variety of optional features include:

- proportional valves
- dual- or multi-flow fast steering response
- adjustable pumps
- servo hand pumps
- all control systems
- control panels

Tailored to Your Needs

Sperry Marine steering gears use standard sets of cylinders that can be employed in most applications. This modular design allows us to easily design and configure systems to meet

specific requirements and regulations, while obtaining the best cost-performance ratio, with the minimum maintenance. We can provide almost any required configuration:

- Mechanical rudder interface
- Manual hydraulic steering
- Single electric-hydraulic steering system
- Dual electric-hydraulic steering system.

Modes of operation include full follow-up and non follow-up, in either single or dual configurations.

Besides being cost-effective, this modular approach also means that we can install your steering system quickly and efficiently.

If your requirements cannot be met through our modular process, we can always design solutions to meet your specific requirements.

Fully type-approved

All Sperry Marine steering system components are designed and manufactured to meet all major classification standards, including: LROS, ABS, BV, GL, USCG, DNV,RINA, SOLAS, IMO and SI.

We always ensure that our steering systems are installed by experienced engineers, who will undertake all commissioning and sea trials.

Steering Gear Calculation Sheet

General Information

Customer
Shipyard
Contact Person
Tel. No

Type of vessel
Hull No.
Class Society
Class Notation
Flag State

Technical Information

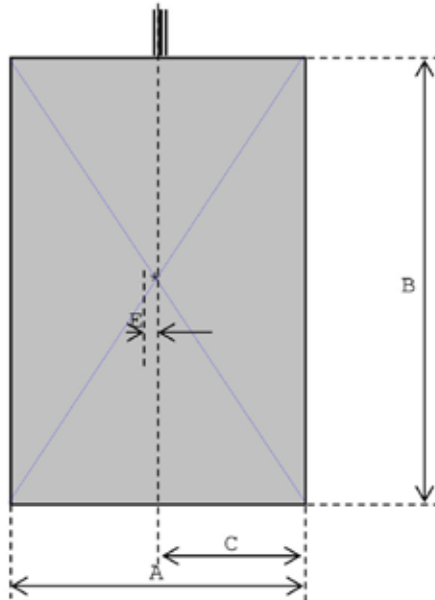
Ships power supply
Frequency (Hz)
No. of rudders
Connecting rod
Rudder distance (mm)
Tiller type
Stock diameter (mm)
Lever direction
Key direction

Speed
Max. angle
H.O.Time
Diesel Engine Type
PTO on Diesel
RPM Idle
RPM on PTO
Remarks
Text Labels

Knots
Degrees
Sec. +/- 1 Sec.

1.15

ENG.



All sizes in mm

A = mm

B = mm

C = mm

E = mm

Nozzle

Maximum rudder torque at max angle
Maximum rudder torque with nozzle
Max required rudder torque
Steering gear type
Steering gear size
Cylinder size
Cylinder travel volume
Total pumps per rudder
Minimum hydraulic flow required
Size of pump required
Theoretical relief valve pressure
Theoretical working pressure
Hydraulic unit type
Req. E-motor power at max. torque (S6)
Req. E-motor power for cont. use (S1)
Req. Diesel motor power

kNm
kNm
kNm

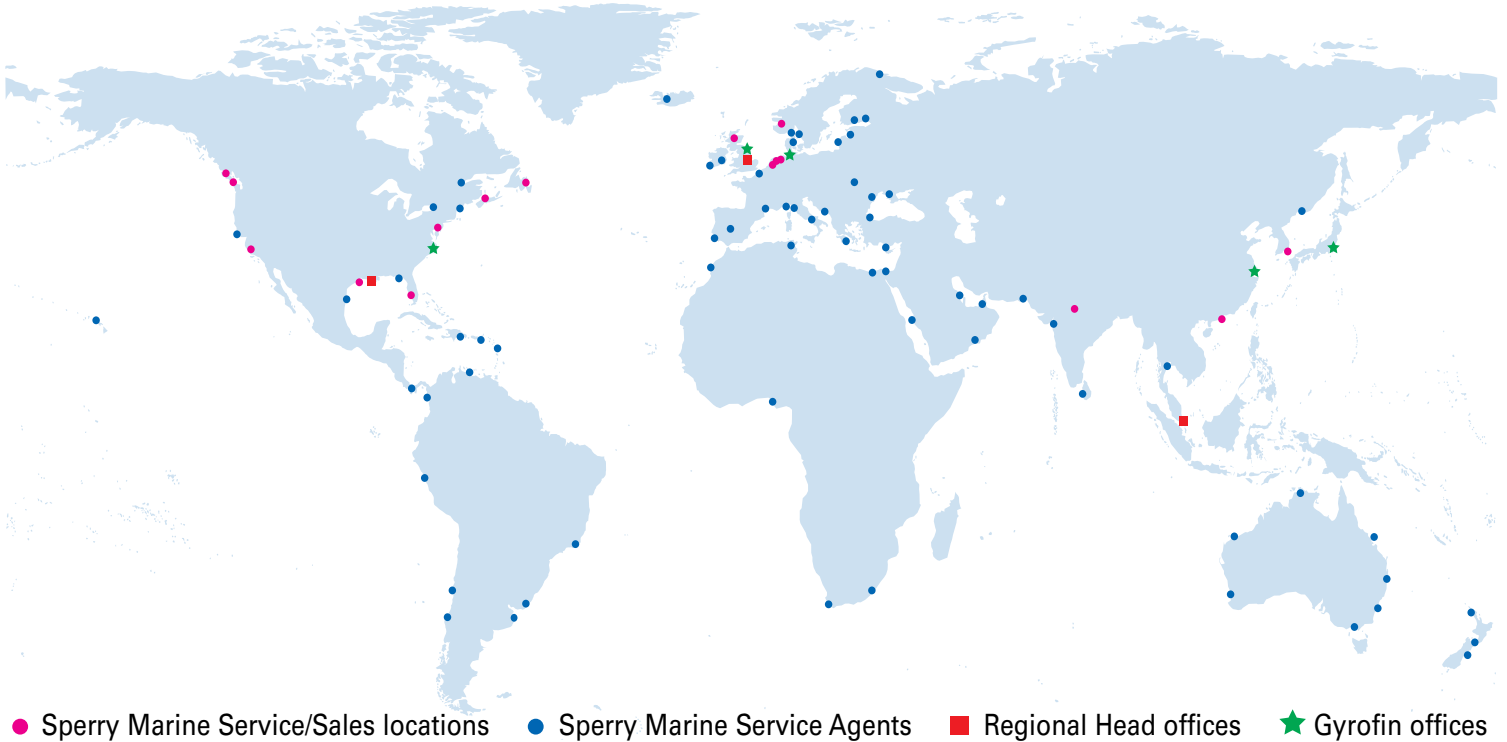
CC
Ltr / min.
CC pump
Bar
Bar
kW
kW
kW

Mandatory to be filled in by the yard
To be filled in by Sperry Marine
To be filled in by Sperry Marine or the yard

Total Support: 24/7/365

As with all Northrop Grumman Sperry Marine systems and products, our steering systems are supported by one of the world's most extensive worldwide service networks, with help available around the clock, 24 hours a day, 365 days a year. Our global service network provides prompt shipboard maintenance and repair services in every major seaport in the world.

We also offer comprehensive maintenance contracts, as well as support for all products for at least ten years after any is discontinued, so providing continuing peace of mind to all our customers.



For more information, please contact:

AMERICAS

New Orleans, LA USA
Tel: +1 504-328-9171

ASIA

China, Shanghai
Tel: +86-21-5179-0199

Hong Kong, Sheung Wan
Tel: +852-2581-9122

Japan, Tokyo
Tel: +81 (03)-3863-7401

Singapore
Tel: +65-6274-3332

South Korea, Busan
Tel: +82-51-247-7455

CANADA

Nova Scotia, Halifax
Tel: +1 902-468-9479

British Columbia, Vancouver
Tel: +1 604-821-2090

EUROPE

Belgium, Antwerp
Tel: +32-3-233-14-33

Denmark, Copenhagen
Tel: +45-77-33-66-33

Germany, Hamburg
Tel: +49-40-299-00-0

The Netherlands, Vlaardingen
Tel: +31 (0)-10-4451600

Norway, Bergen
Tel: +47-55-94-94-94

United Kingdom, London
Tel: +44 (0)-20 8329-2000

www.sperrymarine.com

A division of the Northrop Grumman Corporation, Sperry Marine provides a range of sophisticated navigation solutions for mariners around the world: autopilot and steering control systems, compass systems, integrated bridge and platform management systems, navigation radar and ECDIS, speed/velocity logs. Working with mariners around the globe for over 100 years.

Specifications and features subject to change without notice.
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