

YOUR PROPULSION EXPERTS



A man in a dark shirt is standing and presenting to a group of people seated around a table in a meeting room. Behind him is a large interactive screen displaying a presentation. The screen has the text 'SCHOTTEL Steering and control systems' at the top. Below this, there are several images and diagrams: a ship's bridge, a circular gauge, a person's face, and a diagram of a steering system with a chair and a steering wheel. Handwritten notes 'Co-Pilot' and 'EMCY' are visible on the screen. The text 'YOUR PROPULSION EXPERTS' is also visible at the bottom of the screen's content area.

# COURSE CATALOGUE

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## SCHOTTEL Product Training

# COURSE OVERVIEW

<b>Product courses</b>	<b>Target group</b>	<b>Duration</b>	<b>Page</b>
Basic course Azimuth Thruster (type SRP/STP 130-230 / former 170-440)	Technical / Maintenance personnel	3 days	4
Basic course Azimuth Thruster FP (type SRP/STP 260-730 / former 550-4040)	Technical / Maintenance personnel	3 days	5
Basic course Azimuth Thruster CP (type SRP 340-730 / former 1010-4040)	Technical / Maintenance personnel	4 days	6
Basic course Pump Jet (type SPJ 15-520)	Technical / Maintenance personnel	3 days	7
Basic course Combi Drive (type SCD 150-630 / former 200-3030)	Technical / Maintenance personnel	3 days	8
Basic course Transverse Thruster FP/CP (type STT 1-8)	Technical / Maintenance personnel	2 days	9
Basic course Controllable Pitch Propeller mechanic (type SCP-XG, -XW, -ZG)	Technical / Maintenance personnel	2 days	10
Basic course Controllable Pitch Propeller controls (type SCP-XG, -XW, -ZG)*	Technical / Maintenance personnel	3 days	11
Basic course Rim Drive (type SRT 800-1600)	Technical / Maintenance personnel	3 days	12
Basic course Navigator (type NAV 130-260 / former 170-550)	Technical / Maintenance personnel	3 days	13
Tailor made customer training in the ACADEMY	Technical / Maintenance personnel	3-5 days	14
Tailor made customer training on board a vessel*	Technical / Maintenance personnel	3 days	15
Advanced course Automation and Control	Ship engineers / electricians	3 days	16
Advanced course repair and maintenance in the workshop	Mechanics	3 days	17
Simulator**	Captains, Skippers, Pilots	2 days	18
Tailor made captain training on board a vessel*	Captains, Skippers, Pilots	3 days	19

All courses take place at the training ACADEMY in Spay Germany except \* | All courses take place in the classroom / mechanical workshop trainings except \*\*

# GENERAL INFORMATION FOR ALL COURSES

## **Possible language:**

German / English

(with technical interpreter:

French / Russian / Spanish / Portuguese / Chinese)

## **Place of training:**

SCHOTTEL Academy

Koblenzer Straße 21

56322 Spay / Germany

## **All courses in our ACADEMY include:**

- Theoretical training session in a classroom with state of the art presentation technology
- Practical training session in mechanical workshop on training equipment
- Accomodations at a hotel near SCHOTTEL Academy incl. breakfast and lunch
- Hot and cold drinks during the training session
- Training material on secured USB drive



## **All on-site courses include:**

- Theoretical training sessions in a classroom
- Practical training session on board a customer vessel
- Training material on secured USB drive

## **Exclusions:**

- All travel costs
- Costs for evening meals

## **Costs for training:**

please request an individual offer

## **Training dates:**

on request

## **Contact:**

Academy@schottel.com

Phone: +49 / 26 28 61-719

# BASIC COURSE AZIMUTH THRUSTER (TYPE SRP/STP 130-230 / FORMER 170-440)

**Duration:**

3 days

**Target group:**

Vessel crew, Engine room staff, Repair and maintenance personnel, Service personnel

**Number of participants:**

To ensure effective training, the number of participants is limited to 5 – 8 participants. If fewer than five participants will be sent, we reserve the right to place them in a similar training course together with other customers.

**Training goal:**

To provide general knowledge regarding installation, operation, maintenance, adjustment, diagnosis and repair procedures.

**Training contents:**

- SCHOTTEL history, products and technology
- Overview of the Service Manual and the Operating Instructions
- SCHOTTEL SRP / STP design and function
- SCHOTTEL clutch design and function
- SCHOTTEL hydraulic system design and function with explanation at training unit
- Reading SCHOTTEL electric wiring diagrams
- SCHOTTEL electric steering and speed control system with explanation at training unit
- Practical exchange of electronic devices including adjustments at training unit
- Special adjustments of the SCHOTTEL electronic system with explanation at training unit
- Practical exchange of electronic devices including adjustments at training unit
- Simulation of alarms with explanation at training unit
- Maintenance and troubleshooting aids

# BASIC COURSE AZIMUTH THRUSTER FP (TYPE SRP/STP 260-730 / FORMER 550-4040)

**Duration:**

3 days

**Target group:**

Vessel crew, Engine room staff, Repair and maintenance personnel, Service personnel

**Number of participants:**

To ensure effective training, the number of participants is limited to 5 – 8 participants. If fewer than five participants will be sent, we reserve the right to place them in a similar training course together with other customers.

**Training goal:**

To provide general knowledge regarding installation, operation, maintenance, adjustment, diagnosis and repair procedures.

**Training contents:**

- SCHOTTEL history, products and technology
- Overview of the Service Manual and the Operating Instructions
- SCHOTTEL SRP / STP design and function
- SCHOTTEL clutch design and function
- SCHOTTEL hydraulic system design and function
- Reading SCHOTTEL electric wiring diagrams
- SCHOTTEL electric steering and speed control system with explanation at training unit
- Practical application of the steering and speed system at training unit
- Special adjustments of the SCHOTTEL electronic system with explanation at training unit
- Practical exchange of electronic devices including adjustments at training unit
- Simulation of alarms with explanation at training unit
- Maintenance and troubleshooting aids

# BASIC COURSE AZIMUTH THRUSTER CP (TYPE SRP 340-730 / FORMER 1010-4040)

**Duration:**

4 days

**Target group:**

Vessel crew, Engine room staff, Repair and maintenance personnel, Service personnel

**Number of participants:**

To ensure effective training, the number of participants is limited to 5 – 8 participants. If fewer than five participants will be sent, we reserve the right to place them in a similar training course together with other customers.

**Training goal:**

To provide general knowledge regarding installation, operation, maintenance, adjustment, diagnosis and repair procedures.

**Training contents:**

- SCHOTTEL history, products and technology
- Overview of the Service Manual and the Operating Instructions
- SCHOTTEL SRP design and function
- SCHOTTEL Controllable Pitch design and function
- SCHOTTEL clutch design and function
- SCHOTTEL hydraulic system design and function
- Reading SCHOTTEL electric wiring diagrams
- SCHOTTEL electric steering and speed control system with explanation at training unit
- SCHOTTEL electric CP control system with explanation at training unit
- Practical application of the steering, CP and speed system at training unit
- Special adjustments of the SCHOTTEL electronic system with explanation at training unit
- Practical exchange of electronic devices including adjustments at training unit
- Simulation of alarms with explanation at training unit
- Maintenance and troubleshooting aids

# BASIC COURSE PUMP JET (TYPE SPJ 15-520)

**Duration:**

3 days

**Target group:**

Vessel crew, Engine room staff, Repair and maintenance personnel, Service personnel

**Number of participants:**

To ensure effective training, the number of participants is limited to 5 – 8 participants. If fewer than five participants will be sent, we reserve the right to place them in a similar training course together with other customers.

**Training goal:**

To provide general knowledge regarding installation, operation, maintenance, adjustment, diagnosis and repair procedures.

**Training contents:**

- SCHOTTEL history, products and technology
- Overview of the Service Manual and the Operating Instructions
- SCHOTTEL SPJ design and function
- SCHOTTEL clutch design and function
- SCHOTTEL hydraulic system design and function
- Reading SCHOTTEL electric wiring diagrams
- SCHOTTEL electric steering and speed control system with explanation at training unit
- Practical application of the steering and speed system at training unit
- Special adjustments of the SCHOTTEL electronic system with explanation at training unit
- Practical exchange of electronic devices including adjustments at training unit
- Simulation of alarms with explanation at training unit
- Maintenance and troubleshooting aids

# BASIC COURSE COMBI DRIVE (TYPE SCD 150-630 / FORMER 200-3030)

**Duration:**

3 days

**Target group:**

Vessel crew, Engine room staff, Repair and maintenance personnel, Service personnel

**Number of participants:**

To ensure effective training, the number of participants is limited to 5 – 8 participants. If fewer than five participants will be sent, we reserve the right to place them in a similar training course together with other customers.

**Training goal:**

To provide general knowledge regarding installation, operation, maintenance, adjustment, diagnosis and repair procedures.

**Training contents:**

- SCHOTTEL history, products and technology
- Overview of the Service Manual and the Operating Instructions
- SCHOTTEL SCD design and function
- SCHOTTEL LEACON sealing design and function
- SCHOTTEL S-COM design and function
- Reading SCHOTTEL electric wiring diagrams
- SCHOTTEL electric steering and speed control system with explanation at training unit
- Practical application of the steering and speed system at training unit
- Special adjustments of the SCHOTTEL electronic system with explanation at training unit
- Practical exchange of electronic devices including adjustments at training unit
- Simulation of alarms with explanation at training unit
- Maintenance and troubleshooting aids



# BASIC COURSE TRANSVERSE THRUSTER FP/CP (TYPE STT 1-8)

**Duration:**

2 days

**Target group:**

Vessel crew, Engine room staff, Repair and maintenance personnel, Service personnel

**Number of participants:**

To ensure effective training, the number of participants is limited to 5 – 8 participants. If fewer than five participants will be sent, we reserve the right to place them in a similar training course together with other customers.

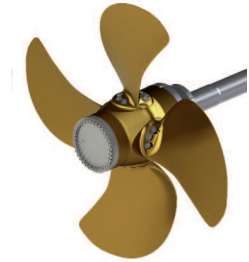
**Training goal:**

To provide general knowledge regarding installation, operation, maintenance, adjustment, diagnosis and repair procedures.

**Training contents:**

- SCHOTTEL history, products and technology
- Overview of the Service Manual and the Operating Instructions
- SCHOTTEL STT design and function
- SCHOTTEL Controllable Pitch design and function
- SCHOTTEL hydraulic system design and function
- Reading SCHOTTEL electric wiring diagrams
- SCHOTTEL electric speed control system with explanation at training unit
- SCHOTTEL electric CP control system with explanation at training unit
- Practical application of the CP and speed system at training unit
- Special adjustments of the SCHOTTEL electronic system with explanation at training unit
- Practical exchange of electronic devices including adjustments at training unit
- Simulation of alarms with explanation at training unit
- Maintenance and troubleshooting aids

# BASIC COURSE CONTROLLABLE PITCH PROPELLERS MECHANIC (TYPE SCP-XG, -XW, -ZG)

**Duration:**

2 days

**Target group:**

Vessel crew, Engine room staff, Repair and maintenance personnel, Service personnel

**Number of participants:**

To ensure effective training, the number of participants is limited to 4 – 5 participants. If fewer than four participants will be sent, we reserve the right to place them in a similar training course together with other customers.

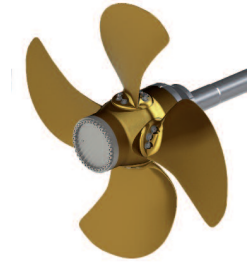
**Training goal:**

To provide general knowledge regarding installation, operation, maintenance, adjustment, diagnosis and repair procedures.

**Training contents:**

- SCHOTTEL history, products and technology
- Overview of the Service Manual and the Operating Instructions
- SCHOTTEL SCP design and function with explanation at training unit
- SCHOTTEL hydraulic system design and function with practical application at training unit
- SCHOTTEL shaft line design and function with practical application at training unit
- Maintenance and troubleshooting aids

# BASIC COURSE CONTROLLABLE PITCH PROPELLERS REMOTE CONTROL (TYPE SCP-XG, -XW, -ZG)

**Duration:**

3 days

**Target group:**

Vessel crew, Engine room staff, Repair and maintenance personnel, Service personnel

**Number of participants:**

To ensure effective training, the number of participants is limited to 4 – 8 participants. If fewer than four participants will be sent, we reserve the right to place them in a similar training course together with other customers.

**Training goal:**

To provide general knowledge regarding operation, adjustment, diagnosis and repair procedures.

**Training contents:**

- Overview of the Service Manual and the Operating Instructions
- Reading electric wiring diagrams
- Design and function of the remote control system with explanation at training unit
- Practical application of the remote control system at training unit
- Special adjustments on the remote control system with explanation at training unit
- Practical exchange of electronic devices including adjustments at training unit
- Simulation of alarms with explanation at training unit
- Maintenance and troubleshooting aids

# BASIC COURSE RIM THRUSTER (TYPE SRT 800-1600)

**Duration:**

3 days

**Target group:**

Vessel crew, Engine room staff, Repair and maintenance personnel, Service personnel

**Number of participants:**

To ensure effective training, the number of participants is limited to 5 – 8 participants. If fewer than five participants will be sent, we reserve the right to place them in a similar training course together with other customers.

**Training goal:**

To provide general knowledge regarding installation, operation, maintenance, adjustment, diagnosis and repair procedures.

**Training contents:**

- SCHOTTEL history, products and technology
- Overview of the Service Manual and the Operating Instructions
- SCHOTTEL SRT design and function
- Reading SCHOTTEL electric wiring diagrams
- SCHOTTEL electric speed control system with explanation at training unit
- Practical application of the speed control system at training unit
- Special adjustments of the SCHOTTEL electronic system with explanation at training unit
- Practical exchange of electronic devices including adjustments at training unit
- Simulation of alarms with explanation at training unit
- Maintenance and troubleshooting aids

# BASIC COURSE NAVIGATOR (TYPE NAV 130-260 / FORMER 170-550)

**Duration:**

3 days

**Target group:**

Vessel crew, Engine room staff, Repair and maintenance personnel, Service personnel

**Number of participants:**

To ensure effective training, the number of participants is limited to 5 – 8 participants. If fewer than five participants will be sent, we reserve the right to place them in a similar training course together with other customer.

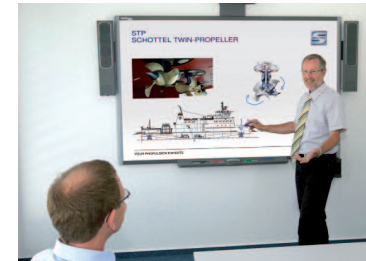
**Training goal:**

To provide a general knowledge regarding installation, operation, maintenance, adjustment, diagnosis and repair procedures.

**Training contents:**

- SCHOTTEL history, products and technology
- Overview of the Service Manual and the Operating Instructions
- SCHOTTEL NAV design and function
- SCHOTTEL clutch design and function
- SCHOTTEL hydraulic system design and function
- Reading SCHOTTEL electric wiring diagrams
- SCHOTTEL electric steering and speed control system with explanation at training unit
- Practical exchange of electronic devices including adjustments at training unit
- Special adjustments of the SCHOTTEL electronic system with explanation at training unit
- Practical exchange of electronic devices including adjustments
- Simulation of alarms with explanation at training unit
- Maintenance and troubleshooting aids

# TAILOR MADE CUSTOMER TRAINING IN THE ACADEMY

**Duration:**

3 - 5 days

**Target group:**

Vessel crew, Engine room staff, Repair and maintenance personnel, Service personnel

**Number of participants:**

To ensure effective training, the number of participants is limited to 5 – 8 participants.

**Training goal:**

To provide general knowledge regarding installation, operation, maintenance, adjustment, diagnosis and repair procedures.

**Training contents:**

- SCHOTTEL history, products and technology
- Overview of the Service Manual and the Operating Instructions
- SCHOTTEL SRP/STP/SCD/SPJ/NAV/SRT/SCP design and function
- SCHOTTEL Controllable Pitch design and function
- SCHOTTEL LEACON sealing design and function
- SCHOTTEL S-COM design and function
- SCHOTTEL clutch design and function
- SCHOTTEL hydraulic system design and function
- Reading SCHOTTEL electric wiring diagrams
- SCHOTTEL electric steering and speed control system with explanation at training unit
- SCHOTTEL electric CP control system with explanation at training unit
- Practical application of the steering, CP and speed system at training unit
- Special adjustments of the SCHOTTEL electronic system with explanation at training unit
- Practical exchange of electronic devices including adjustments
- Simulation of alarms with explanation at training unit
- Maintenance and troubleshooting aids

# TAILOR MADE CUSTOMER TRAINING ON BOARD A VESSEL



## **Duration:**

3 days

(2 days of theoretical, 1 day of practical training on board)

## **Target group:**

Vessel crew, Engine room staff, Repair and maintenance personnel, Service personnel

## **Number of participants:**

To ensure effective training, the number of participants is limited to 5 – 12 participants.

## **Training goal:**

To provide general knowledge regarding installation, operation, maintenance, adjustment, diagnosis and repair procedures.

## **Training contents:**

- SCHOTTEL history, products and technology
- Overview of the Service Manual and the Operating Instructions

- SCHOTTEL SRP/STP/SCD/SPJ/NAV/SRT/SCP design and function with explanation at unit
- SCHOTTEL Controllable Pitch design and function with explanation at unit
- SCHOTTEL LEACON sealing design and function with explanation at unit
- SCHOTTEL S-COM design and function with explanation at unit
- SCHOTTEL clutch design and function with explanation at unit
- SCHOTTEL hydraulic system design and function with explanation
- Reading SCHOTTEL electric wiring diagrams
- SCHOTTEL electric steering and speed control system
- SCHOTTEL electric CP control system with explanation at unit
- Practical application of the steering, CP and speed system at unit
- Special adjustments of the SCHOTTEL electronic system with explanation at unit
- Practical exchange of electronic devices including adjustments at unit
- Simulation of alarms with explanation at unit
- Maintenance and troubleshooting aids

Suggestions and requests regarding the training program will be considered, if possible.

# ADVANCED COURSE AUTOMATION AND CONTROL

**Duration:**

3 days

**Target group:**

[electricians only] high skilled electricians, ship engineers with extensive experience (only participants who have passed the basic SCHOTTTEL course before)

**Number of participants:**

To ensure effective training, the number of participants is limited to 4 – 5 participants. If fewer than four participants will be sent, we reserve the right to place them in a similar training course together with other customers.

**Training goal:**

To provide specific knowledge regarding maintenance, adjustment, diagnosis and repair procedures on the control systems

**Training contents:**

- Reading SCHOTTTEL electric wiring diagrams with practical application incl. CAN-Bus explanation
- SCHOTTTEL electric steering, CP and speed control system with practical application at training unit
- Explanation of basic datasheets for DCM, DPV, S-ODS, CoPilot, etc.
- Practical exchange of electronic devices including adjustments at training unit
- Adjustments and settings on electrical devices like calibrating the encoders
- Special adjustments of the SCHOTTTEL electronic system with explanation at training unit
- Working with SCHOTTTEL Operation and Diagnostic System (S-ODS)
- Practical trouble-shooting exercises on the training equipment
- Simulation of alarms with explanation at training unit
- Maintenance and troubleshooting aids



# ADVANCED COURSE REPAIR AND MAINTENANCE IN THE WORKSHOP



## **Duration:**

3 days

## **Target group:**

[mechanics only] repair and maintenance personnel, service personnel (only participants who have passed the basic SCHOTTEL course before)

## **Number of participants:**

To ensure effective training, the number of participants is limited to 4 – 5 participants. If fewer than four participants will be sent, we reserve the right to place them in a similar training course together with other customers.

## **Training goal:**

To provide general knowledge regarding mechanical operation, maintenance, adjustment and repair procedures.

## **Training contents:**

- Overview of the Service Manual and the Operating Instructions
- SCHOTTEL SRP/STP/SCD/NAV design and function
- Exchange of SCHOTTEL steering shaft sealing with practical application at training unit
- Exchange of SCHOTTEL propeller shaft sealing with practical application at training unit
- Exchange of SCHOTTEL propeller with practical application at training unit
- Evaluation on status of gear assembling with practical application at training unit
- Maintenance and troubleshooting aids

# SIMULATOR

**Duration:**

2 days

**Target group:**

Captains, Skippers, Pilots

**Number of participants:**

To ensure effective training, the number of participants is limited to 1 – 3 participants.

**Training goal:**

To provide safe application, operation and handling of various types of vessels equipped with 360° azimuth Rudderpropeller



**Training contents:**

- Instruction on using SCHOTTEL specific controls for 360° azimuth steering
- Instruction on handling the SCHOTTEL-Vessel-Bridge-Simulator
- Practical application and exercises with selected vessel types and various weather/environment scenarios

(Please note, that this seminar does not include any nautical training.)

# TAILOR MADE CAPTAIN TRAINING ON BOARD A VESSEL

**Duration:**

3 days

(0,5 days of theoretical, 2,5 days of practical training on board)

**Target group:**

Captains, Skippers, Pilots

**Number of participants:**

To ensure effective training, the number of participants is limited to 2 – 6 participants.

**Training goal:**

To provide general knowledge regarding tug handling, operation and different towing principles.

**Training contents:**

- Basic tug operation and manoeuvring
- Handling of SCHÖTTEL azimuth thruster on board of a tug boat
- Free sailing with a tug
- Tug assisting methods
- Escorting methods
- Push-Pull methods
- Emergency crash stopping
- Methods of making fast at speed

Suggestions and requests regarding the training program will be considered, if possible.

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56322 Spay / Germany  
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