

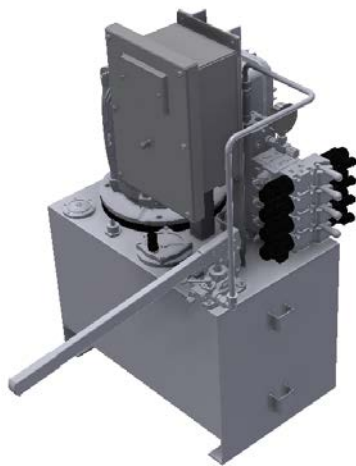
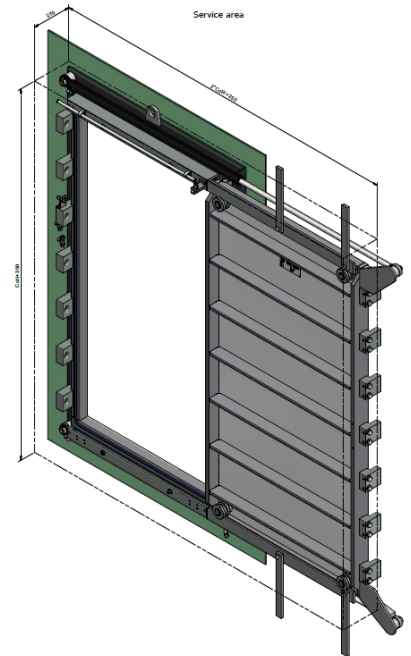
### EAGLE Inland Waterways watertight sliding door

The electro-hydraulic watertight sliding door type EAGLE Inland Waterways is a compact watertight door. It is supplied as a completely finished and tested unit, ready for welding in. It combines the well known proven mechanical design of the doors with a standardized and simplified hydraulic & electric system.

The design and manufacture of EAGLE Inland Waterways doors are in full compliance with the safety regulations for inland waterways to fulfil the watertight integrity of the vessel. The mechanical door construction is approved by all major classification societies.

### General description / operation & control

The EAGLE Inland Waterways has a centralised electro-hydraulic system which means that the system consists of doors which are controlled from a central power pack with valve block and e-control box. The doors are completely assembled, only the rail extensions with support and bolts are loose supplied. The system is capable of closing or opening the doors between 20-40 seconds.



### Normal local operation

Local power operation by push buttons at either side of the bulkhead, closing and opening. "Door open" as well as "Door close" is active operated which means that the door will stop after the release of the push button. The motor is only running while the push buttons are operated.

### Remote power operation

By close switch from the wheelhouse panel (each door). The 'doors closed' mode automatically re-closes the doors after they have been opened locally. (pre-warning of 5-10 seconds is provided). The 'local control' mode allows the doors to be opened locally without automatic re-closure.

Note: Closing above bulkhead deck by means of additional hand pump not required for inland waterways.

### Alarm/indication signals

Locally there are two audible alarm (sounder) combined with a visual alarm (flash light). The wheelhouse panel is equipped with indication lights for open/close indication and alarm signalling incl. buzzer when main or control power supply is lost.

## Specifications

### Cylinders

Standard: Two (2) cylinders, one located at the top of the door, one at the bottom.

Optional: One (1) cylinder, located at the centre of the door (*cylinder and bracket loose supplied, piping is yard supply*).

### Sill height

Standard: 140mm sill

Optional: 40mm sill or 20mm sill (low sill execution)

### Available sizes

Height: max. 2100mm. Width: max. 1200mm.

### Water pressure

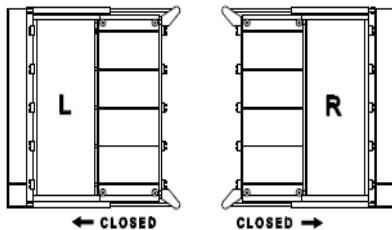
Max. 25 mWc (i.e. test pressure) at size 2000x800 mm

Limited to 8,5 mWc (i.e. test pressure) at size 2100x1400 mm



Option: Low sill

### Sliding directions



#### Sliding direction:

L = left closing

R = right closing

### Centralised Hydraulic system

Centralised hydraulic power pack with a direction control valve for each door. The power unit has one pump unit with an electromotor (size depending on amount of doors). The HPU is executed in IP68 and has a IP68 JB for the connection of the electrics.

### Centralised Electrical system

- Mounted on door: IP68 position indicators open/closed.
- Local mounted next to door: IP68 RAL7032 watertight junction box, with connected to IP66 sounder/flashlight, 2x IP67 pushbutton boxes.
- Central control box to be placed above bulkhead deck: Ritall, IP65, RAL 7035 in which elec control is located of WTSD and HPU.

Power supply: 400VAC, 3Ph, 50Hz or 440VAC, 3Ph, 60Hz for pump motor: 24VDC or 230VAC, 1Ph, 50Hz for control and indication system.

### Surface treatment

Door frame and door plate: shotblasted SA2,5 and primed with one layer of Hempel's shopprimer E1527C.

Cylinders: shotblasted and primed. Catch blocks, rails, wheels: galvanised. Hydraulic unit: RAL9010

### Installation, operation and maintenance manual

Two (2) hard copy in English language.

One (1) CD-Rom in English language.

**General arrangement drawings**

- 4411.11.co HxW (1 cyl. LC)
- 4411.12.co HxW (1 cyl. RC)
- 4411.21.co HxW (Low sill LC)
- 4411.22.co HxW (Low sill RC)
- 4411.41.co HxW (40mm sill LC)
- 4411.42.co HxW (40mm sill RC)
- 4411.51.co HxW (2 cyl. LC)
- 4411.52.co HxW (2 cyl. RC)

*All components are pre-mounted by Winel incl. local electric wiring unless otherwise specified.*

**Options:**

**Wheelhouse panel**

Panel for installation on the bridge, providing indication and alarm signals of the doors. Panel is executed with a switch for each door to activate the close command, indication lights open/closed, alarm indications for power loss, buzzer, accept alarm, dimmer and a led-test button. Panel has to be supplied with two separate power supplies (24 VDC normal supply and emergency supply), an automatic switch-over is provided.



**Additional ECR panel / Hotel reception panel**

Panel for installation in the Engine Control Room or Hotel reception. Panel has identical functionality as the wheelhouse panel.

**Additional control of valves for climate / sewage system**

De power pack unit can be executed with additional hydraulic valves for the control of climate / sewage system. In case a door is switched to 'door closed' mode from the bridge, the valve which belongs to that door will also be closed.

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**Options****Sill plate**

Sill plate stainless steel for flush installation on deck: pre-mounted bolted hinged plate mounted on doorframe. Plate will be lifted up by doorplate during closing of the door. *For 140mm sill only.*

**24Vdc transformer**

24Vdc transformer in separate watertight box, loose supplied.

**NMD package**

- Internal wiring numbering; all internal wiring of control system will be numbered according e-diagram.
- Test pressure + 5mWc; doors will be pressure tested 5 mWc higher then design pressure.

**Emergency station for doors**

Manual hand pump unit with valve, oil tank and lever to close door from above freeboard deck level. Indication box for open and closed (red/green led) included welding plate and mounting material. One hydraulic pipe system (between hand pump and the door). Piping is yard supply.

- 3 ltr. oil tank for doors with door width < 1000mm
- 5 ltr. oil tank for doors with door width > 1000mm

**Remote closure indication box (for DNV classified doors)**

Consist of: Remote closure indication box (2x) showing warning on each side of the door that door is in central closed mode operation. IP67 box incl. red led with text: 'remote controlled'. Incl. welding bracket (2x) & bolts (8x). Loose supplied. *Only applicable on DNV classified doors.*

**Safety bar**

Additional sensor in clear opening. Sensor will be triggered when clear opening is blocked for some reason and the door automatically open. Note: not covered by SOLAS. Yard has to discuss the use of a safety bar/sensor with owner and class/flag state.

**1200mm stop**

Additional sensor located at 1200mm width of door. According SOLAS a watertight sliding door has a maximum clear opening of 1200mm. During normal operation the door cannot be opened further than 1200mm. In case door is opened further an alarm will be given at wheelhouse panel.

**A60 Insulation**

The door blade will be insulated with an approved A60 MED insulation material. The hand pump and control handle at bulkhead will be elongated to accommodate insulation material at bulkhead plate.

**Fire door on frame**

An additional A60 hinged fire door will be placed on the door frame.

**EEX execution**

- EEX Sounder & flashlight: an EEX sounder/flashlight will be placed on the non-component side of bulkhead in case EEX is applicable on that side of door.
- Full EEX components; all electrical components on the WTSD will be executed in EEX. The starter/control box will be loose supplied an needs to be located outside EEX zone. Same as HPU which need to be placed outside EEX zone.



## PRODUCT SPECIFICATION

### Electro-Hydraulic Watertight Sliding door 4411 EAGLE Inland Waterways

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#### **End layer paint inside bulkhead plate**

For easy painting on board the inside bulkhead plate can be painted in a final colour (to be advised by yard at order) before installation of the components.

#### **End layer paint door and frame**

The complete doorframe and doorplate can be painted in a final colour (specification to be advised by yard at order). Note: Paint will be damaged during testing, transport and installation on board.

#### **Installation, operation and maintenance manual**

Additional hard copy in English language.  
Additional CD-rom in English language.