

Bow- and stern thrusters



The Hydrosta SIDER bow thruster range is made out of high-quality materials. The range includes hydraulically driven bow thrusters and bow thrusters equipped with an electric motor. The hydraulic models are supplied in 10, 15, 22, 35, 45, 60, 80, 100, 125, 150, 175 and 200 HP and the electrically driven Sider in 5, 11, 20, 35, 45, 60, 75, and 90 kW.

Design

The Sider is characterised by compactness and robustness, whilst to the hydrodynamic shape of the tailpiece and propellers the water resistance is minimised and increased the efficiency. Because of the counter-rotating propeller concept the thrust is increased in relation to the specific diameter of the tunnel. The hydraulic bow thrusters are suitable for continuous operation. The electric bow thrusters have a limited duty cycle which depends upon several factors. Normal duty cycle is about 10 min each hour. However, this depends on the variations of the thrusters. Ask for detailed information.

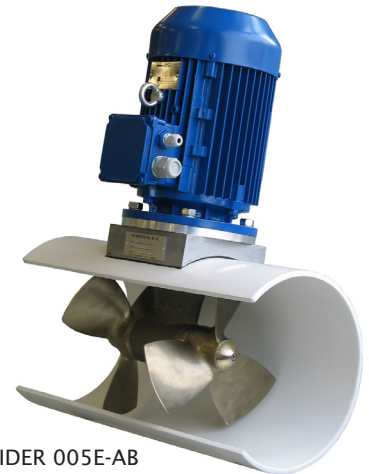
Technical

By using a special grease as lubrication for the bearings and drives the Sider thrusters are maintenance free. The bigger power thrusters are also available with oil bath lubrication on request.

A labyrinth construction between the propeller and the housing is protecting the double sealing against small fishing lines, etc.

The thruster installation is secured by two bolts. The tailpiece centres itself in the tunnel.

The 15, 22 and 35 HP variants are supplied with a geared motor. The 45 to 200 HP variants are supplied with a axial piston motor.



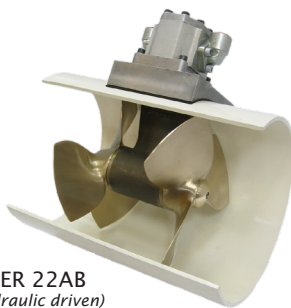
SIDER 005E-AB

Materials

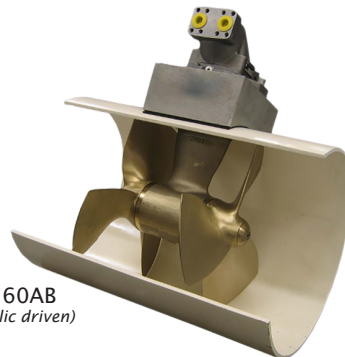
The Siders are made out of excellent materials that is resistant to the harsh environment of seawater. The housing and the propellers are made of "zinc-free" aluminium bronze*.

The Sider thrusters are also available in seawater-resistant aluminium. The aluminium versions must be coated before to use under water. In this variant the propellers are made of stainless steel or aluminium bronze.

* aluminium bronze (CuNiAl) in accordance with DIN 1714



SIDER 22AB
(hydraulic driven)



SIDER 60AB
(hydraulic driven)

Control options hydraulic SIDER

The Siders can be operated in three ways:

- On/off, zero - full power (switching with joystick)
- 2-positions, zero - half power - full power (with 2-position joystick)
- Proportional, proportional adjustment from 0 to full power in combination with proportional joystick

Proportional control is hardly recommended for Sider 22 HP and above.

With the 2-position tiller it is possible to set the half-power position as required.

With proportional operation it is possible to hold the current thrust by using a pushbutton.

Operation electric SIDER

The electric Siders are controlled by using a frequency controller. This frequency controller comes with a special program. This program ensures that the electric motor runs at the correct speed at maximum power and that the propeller characteristic is incorporated in operation. As a result the power of the bow thrusters is linear in line in operation with the control joystick.



SIDER 020E-AL
(electrical driven)

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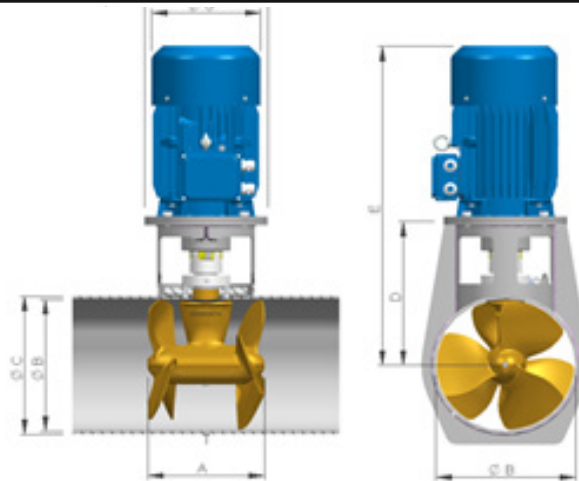
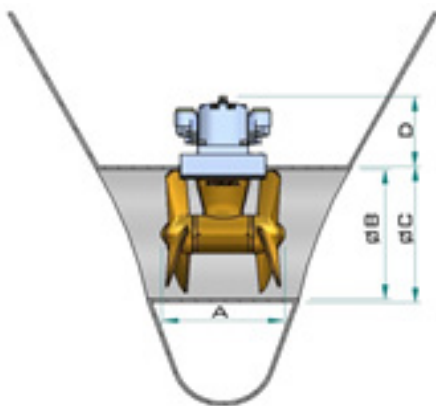
Dimensions

Dimensions SIDER hydraulic bow thrusters

See table and drawing below for the overall dimensions of the Sider bow thrusters. Reserve free space above the Sider for assembling the hydraulic motor and to connect the hoses to the hydraulic motor.

Dimension	10/15 hp		22/35 hp		45/60 hp		80/100 hp				125/150 hp			175/200hp						
A mm	262		285		365		465				533			748						
B mm	257		340 (342 alu)		441		539				636			789						
C mm	273		356 (358 alu)		457		559				660			813						
D mm	135		165		235		305				310			580						
Specification	10 hp	15 hp	22 hp	35 hp	45 hp	60 hp		80 hp			100 hp		125 hp			150 hp		175 hp	200 hp	
Flow input l/min	22	34	44	70	94	137	146	135	145	175	155	167	200	195	210	250	225	240	305	445
Pressure input bar	195	215	225	225	230	225	200	295	275	230	320	295	250	285	265	220	295	275	245	220
Prop. output kW	7,3	11	16	26	33	44		60			74		92			110		150	150	

SIDER, hydraulic



SIDER, electric

Dimensions SIDER electric bow thruster

For the electric Siders reserve free space for mounting the drive motor for assembling. For the greater Siders the bell housing piece must be supported to the hull.

Dimension	5 kW	7.5 kW	10 kW	18 kW	20 kW	26kW	33/44 kW	60/75 kW	90 kW
A mm	262	262	262		285	285	360	465	530
B mm	257	257	257	342	342	342	439	540	636
C mm	273	273	273	358	358	358	457	559	660
D mm	173	173	173	370	370	370	..	..	590
E mm	489	523	523	821	821	916	..	..	1,345
F mm	200	200	200	300	400	300	..	..	450
G mm	205	225	233	270	270	315	..	..	490