

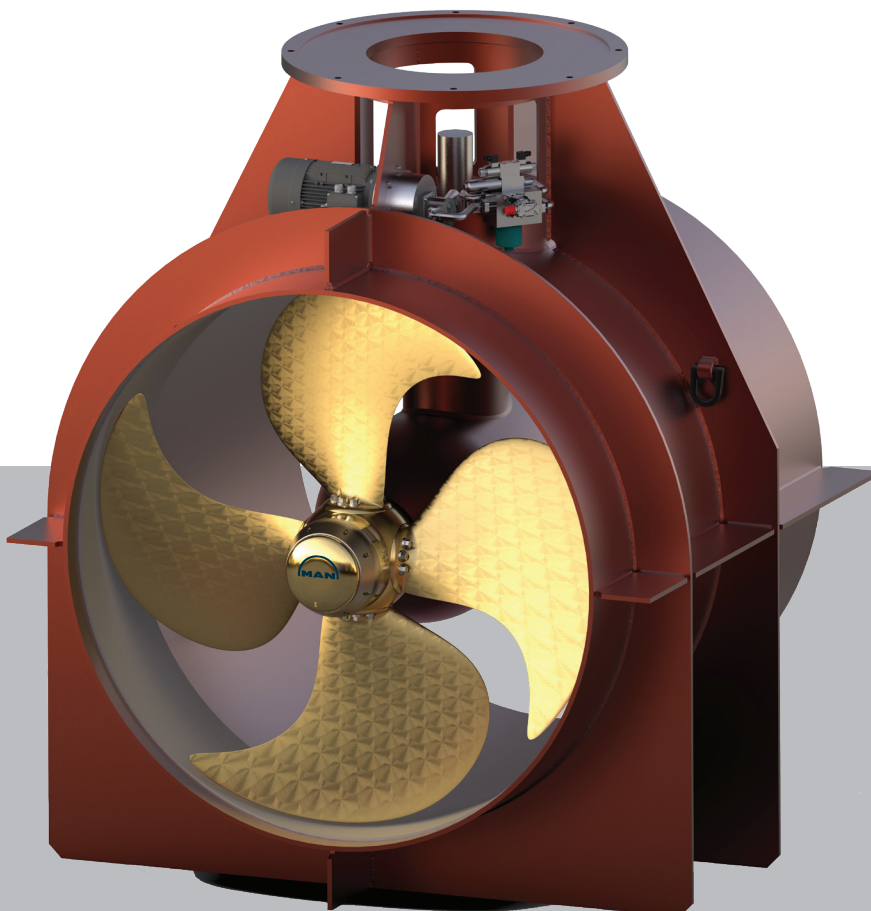
Transverse thruster

with controllable pitch propeller

MAN Alpha thruster solutions:
As part of our continuous development and constant strive to optimize propulsion and maneuvering systems – a new thruster generation has been launched.

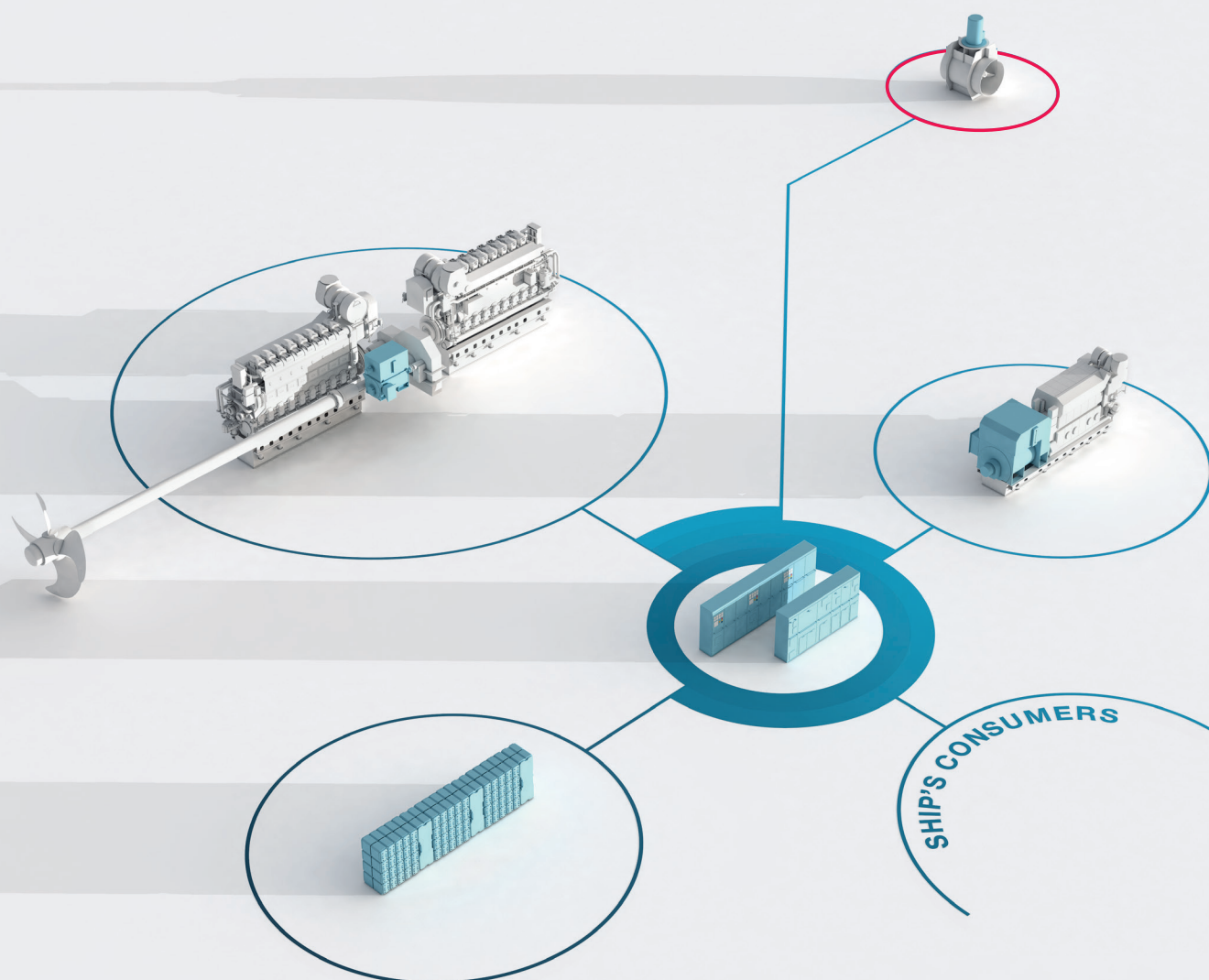
Benefits at a glance

- Compact design with high thrust performance for safe vessel maneuverability
- Hydrodynamically optimized for high efficiency and low noise
- Robust design based on more than a century of CP Propeller and propulsion experience
- Rapid starting-up and thrust power availability
- Safe and accurate maneuvering orders and executions via the Alphatronic 3000 Thruster Control System (TCS)
- Easy shipyard projecting, installation and commissioning
- Minimal operational maintenance requirements.



Transverse thruster

System solution example

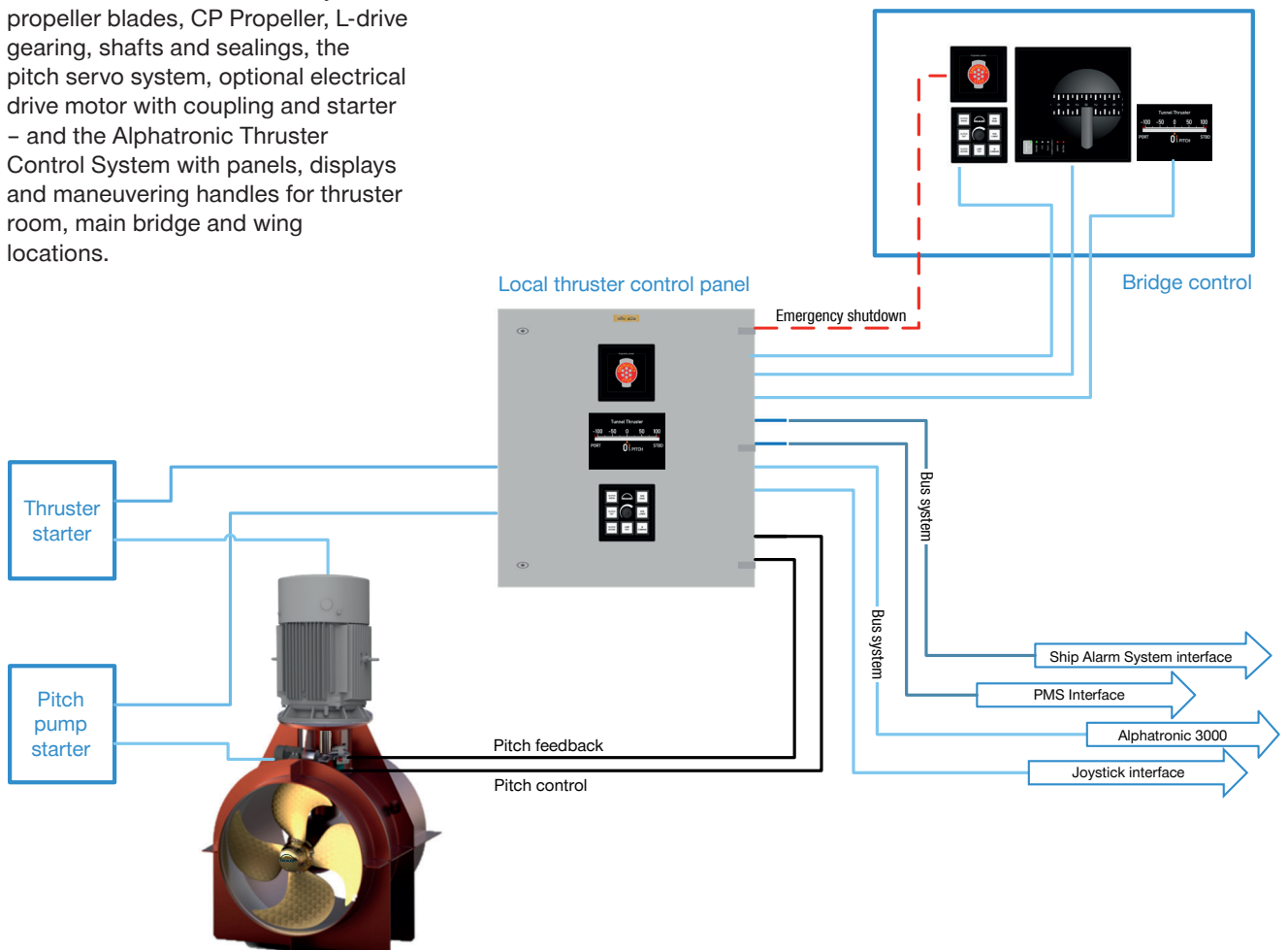


Complete thruster offering

The MAN Alpha transverse thrusters are designed for both bow and stern application for most vessel types. Our package solutions usually consist of the thruster unit with welded housing, tunnel with circular stiffeners and stainless steel band in way of propeller blades, CP Propeller, L-drive gearing, shafts and sealings, the pitch servo system, optional electrical drive motor with coupling and starter – and the Alphatronic Thruster Control System with panels, displays and maneuvering handles for thruster room, main bridge and wing locations.



Integrated pitch servo system – with option for installation on gravity tank



MAN Alpha Transverse thrusters

Standard thruster range

Thruster type	Propeller diameter [mm]	Max input power [kW]	Input speed 50 Hz [r/min]	Input speed 60 Hz [r/min]	Propeller speed 50 Hz [r/min]	Propeller speed 60 Hz [r/min]	Side force* 50 Hz [kN]	Side force* 60 Hz [kN]	Hub type
TT1200	1,200	350	1,440	1,740	411	497	50.6	50.2	VBS360
TT1300	1,300	425	1,440	1,740	384	464	60.7	60.3	VBS360
TT1450	1,450	550	1,440	1,740	347	419	77.6	77.1	VBS360
TT1650	1,650	750	1,440	1,740	310	374	104.0	103.4	VBS440
TT1900	1,900	1,000	960	1,150	274	329	138.4	137.4	VBS440
TT2100	2,100	1,300	960	1,150	253	303	176.2	175.0	VBS490
TT2350	2,350	1,700	960	1,150	229	274	227.1	225.6	VBS600
TT2750	2,750	2,500	960	1,150	200	240	326.1	324.0	VBS660
TT3200	3,200	3,700	720	850	178	210	468.6	466.1	VBS790
TT3700	3,700	5,400	720	850	158	187	664.2	660.7	VBS940

*) Max side force values for standard configuration without deduction factors

The standard range is four-bladed transverse thrusters, based on the MAN Alpha CPP Mk5 design

The thrusters are compliant with EPA VGP 2013 regulations when filled with an EAL (Environmentally Acceptable Lubricant)

Power and application range

Standard thrusters are available in the range from 350 kW and upwards, with propeller diameters up to 3,700 mm – serving a vast number of applications for ferries, cargo, Ro-Ro, passenger and naval vessels.

Maneuverability ensured

The transverse thruster solutions are designed for efficiently providing the vessel side force – improving and safeguarding the maneuvering capability e.g. when berthing in port, slow speed maneuvering and emergency steering.

Robust, compact and efficient

Very reliable blade/hub designs with proven servo system, pitch setting and sealing principles – are derived from our propulsion propellers. Small hub/propeller diameter ratios reduce weight, inertia, and raise efficiency.

Hydrodynamic optimization

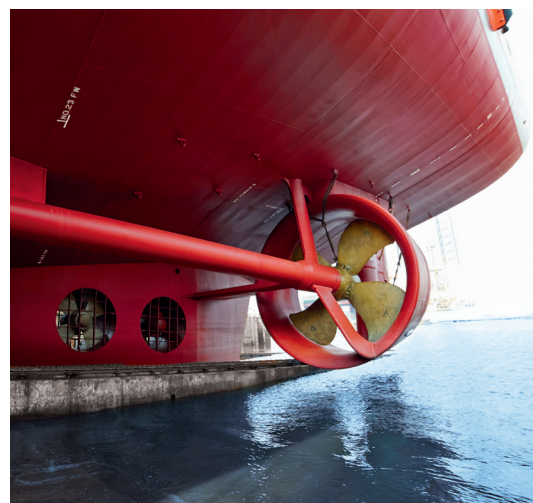
Our propeller blade/hub designs are CFD-optimized to superior thrust efficiency as well as vibration and noise suppression.

Alphatronic thruster control system

The Alphatronic 3000 Thruster Control System (TCS) includes logic and intuitive maneuver handle panels, touch screen displays for general thruster setup, monitoring, start-up and command take-over actions. The propeller pitch and thrust direction at fixed speed are controlled by a single handle or via interface to joystick system.

Project and operational support

Pre-project plant conception, layout, power and installation estimations are offered. Thruster and propulsion service synergies are ensured with our global PrimeServ network – safeguarding efficient local expertise, parts supply and manpower.



Aft ship with stern thrusters and main propeller

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