



About the vessel

The MMA Crystal is a key marine asset for MMA. The vessel has a strong track record in South East Asia and Australasia carrying out various towing and anchor handling scopes and now operates in Taiwan.

The vessel is fitted with 35T A-Frame and working class ROV as well as extensive survey equipment capable of geophysical and geotechnical operations.

MMA Crystal 克里司朵

Anchor Handling Tug Supply and Survey



Contact MMA Offshore

Australia

Head Office

Level 10
12-14 The Esplanade
Perth WA 6000

Ph: +61 8 9431 7431

Fax: +61 8 9431 7432

South East Asia

Singapore Office

9 Raffles Place, #15-02
Republic Plaza
Singapore 048619

Ph: +65 6265 1010

Fax: +65 6864 5555

United Kingdom

Aberdeen Office

15 Carden Place
Aberdeen, Scotland
United Kingdom AB10 1UR

Ph: +44 12 2465 9950

Fax: +44 12 2465 9951

General		Dimensions	
Official No	016607	LOA	70.05 m
Call Sign	BHJ J	Breadth - moulded	17 m
IMO No	9594212	Depth - moulded	7.5 m
Year Built	2008	Draft	6.1 m
Port of Registry	Tai Chung (台中)	GRT	2,763 T
Flag	Taiwan	NRT	829 T
Class	Republic of China	Deadweight	2,515 T
Class (Secondary)	American Bureau of Shipping	Free Deck Area (A-Frame fitted)	275 m ²
		Free Deck Area (A-Frame removed)	450 m ²
Notation	*A1, Offshore Support Vessel (AH), Fire Fighting Vessel Class 1, Towing Vessel, *AMS, *DPS-2	Deck Strength	7.5 T/m ²
		Mezzanine Deck	84 m ² @ 2T m ² / W 12m x L 7m

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Performance		
BHP	BHP	7,965
Speed - Maximum	Knots	14
Speed - Economical	Knots	10
Bollard Pull	T	102.14

Tank Capacity		
Fuel Oil	m ³	698.7
Fresh Water	m ³	514.1
Potable Water	m ³	514.1 (same to FW)
Foam	m ³	15.7
Ballast Water	m ³	1,336.4
Liquid Mud	m ³	382
Cement	m ³	200
Dispersant	m ³	15.7
Dry Bulk	m ³	(Refer to Cement)
Methanol	m ³	NA

Discharge Rates		
Fuel Oil	1 x 117 m ³ /hr @ 80 m head	
Fresh Water	1 x 120 m ³ /hr @ 90 m head	
Ballast / Drill Water	1 x 120 m ³ /hr @ 90 m head	
Potable Water	1 x 120 m ³ /hr @ 90 m head	
Dry Bulk	2 x 20 m ³ /hr @ 5 bar	
Liquid Mud / Brine	2 x 75 m ³ /hr @ 95 m head	

Machinery / Propulsion	
Main Engines	2 x MAK 9M25, 2,970 kW
Bow Thruster	2 x 600 kW tunnel type
Stern Thruster	1 x 600 kW tunnel type
Shaft Generators	2 x 1,800 kW
Generators	2 x Volvo Penta D12 MG, 370 kW
Emergency Generators	1 x 99 ekW @ 1,800 rpm
Propulsion	2 x CPP
Power Supply Details	440 V / 60 Hz

Deck Equipment	
Crane	PALFINGER Hyd Deck Crane PTM 400 (2 T @ 12m / 5.9 T @ 2.2m)
Capstan	2 x Electrohydraulic Brattvaag
Towing Winch	1 x Rolls Royce Electro Hydraulic Waterfall
Capacity	200 T @ 0-10 m/min
Wire Capacity	58 mm x 1400 m
Brake Holding	250 T
Anchor Handling Winch	1 x Rolls Royce Electro Hydraulic Waterfall
Capacity	200
Wire Capacity	76 mm x 800 m
Brake Holding	250 T
Shark Jaw	1 x 300 tonne Karmfork
Towing Pin	2 x 300 tonne Karmoy
Tugger Winch	2 x 12 tonne Hydraulic
Wire Capacity	24mm x 220 m
Brake Holding	15 T
Stern Roller	2.2 m x 4.8 m (250 tonne capacity)
Deck Voltage & Sockets - Quantity & Voltage	2 x 440V, 2 x 220V

A-Frame	
SWL	35 T
Height (underside cross member)	11.7 m
Reach outboard	4 m

Rescue Boat & Fire Fighting	
Rescue Boat	1 x 6 person Neuvisa RR-40 RB
FiFi Class	Class 1

Dynamic Positioning	
DP - System	MT Class II DYNPOS / DP2
DGPS - Quantity	2 x Fugro
Fanbeam - Quantity	1 x Cyscan
HIPAP	1 x Kongsberg 501

Accommodation	
Cabin (2 Berth)	Qty 18
Cabin (Single Berth)	10
Total Accommodation	46 Pax

Communication Equipment	
Navtex Receiver	Qty 1
AIS	1
Watch Alarm	1
SSB	1
Intercom	1
Inmarsat-C	2
EPIRB	1
GMDSS VHF Radio (MF/HF)	2 x VHF, 1 x MF/HF
GMDSS Handheld VHF	3

Subsea / ROV Equipment	
Bridge Survey Room	1 (online navigation)
Forecastle Deck Survey Rooms	2 (1 x client, 1 x survey)
ROV	Swift10 Work Class ROV system Quinsey Survey Navigation System 2 x Veripos LD8 DGNSS
Survey	Sonardyne Ranger 2 USBL for subsea acoustic tracking Teledyne Meridian Surveyor Gyro Compass Over the side pole for multi-sensor options Intellian V130NX VSAT
Communications	Robustal R2000-EL42 4G Modem Clear Comms

Navigation Equipment	
Magnetic Compass	Qty 1
Gyro Compass c/w Autopilot	3
GPS Navigator	1
Radar	2
Speed Log	1

Other Equipment	
Water Maker	2 x 5 m ³ /day

TRANSFORMING THE WAY MARINE SERVICES ARE DELIVERED