



**70 TON
BOLLARD PULL**
harbour and seagoing tug

State-of-the-art, reliable, optimised performance

Since the foundation in 1918, MULLER has been building on expertise, reliability and inventiveness in the maritime business. With specialised marine equipment, we can offer you a tailored fit competitive towage service for your specific needs. MULLER performs core activities such as Harbour assistance, Coastal&Deep-sea towage, salvage and Heavy-lift&Transport. MULLER is owner of its own inland & seagoing tugs up to 70 tons BP, sea-going ballastable heavy-lift pontoons to 16.500 tons DWT, it's own harbour and yard in Dordrecht. Our crew is the driving element behind all those resources, with knowhow, no-nonsense mentality, experienced and utmost dedication to offer extensive support to the offshore and marine industry.



EN AVANT 20

harbour and seagoing tug



GENERAL INFORMATION

Year of construction	12/2006
Builder	Lindenau GmbH Schiffswerft, Kiel, Germany
Build type	ASD Seagoing&Harbour tug
Class	Germanischer Lloyd
Classification	HULL * 100 A5 M E1 with freeboard 1.009m Tug MACH * MC E1 AUT
Class Register nr	GL-112608
Flag	Netherlands
Call sign	PCUZ
IMO	9408645
Port of registry	Dordrecht

MAIN PARTICULARS

Length o.a.	32.50 m
Breadth o.a.	11.64 m
Maximum draught	5.00 m
Air draught	23.76m
Gross tonnage	448 T (Suez 540 T)
Nett tonnage	134 T (Suez 340 T)
Deadweight tonnage	254,74 T
Displacement	834,22 T

PERFORMANCES

Bollard Pull max	69,2 ton
Bollard Pull cont.	66,7 ton
Speed	12,7 knots

PROPULSION SYSTEM

Main engines	2 x ABC Type ABC 8 MDZC
Total power	5.100 hp (3.744 kW) at 1000 rpm
Transmission	Clutch type Kendrion Airflex 24VC1000
Azimuth Thrusters	2 x Schottel SRP1515 FP
Propellers	2 x 2600 mm fixed pitch
Nozzles	Schottel RP, pressurised

AUXILIARY EQUIPMENT

Generator Engine sets	2 x Cummins genset
Generator sets	2 x Caterpillar SR4
Capacity	150 kVA each 50Hz, 230/400 V
General transfer pumps	2 x Iron Man DHBB 50-50/200 25m3/hr
Fuel separator	GEA Westfalia OTC2-02
Luboil separator	GEA Westfalia OTC2-02
Watermaker (FW)	5m3/day freshwater generation capacity

DECK LAY-OUT

Anchor	2 x 570 kg Stockless anchor
Chain	22mm - 137,5 m short link
Deck crane	Palfinger PK32080M BS1.2 remote controlled 1.6 ton at 13,80 m
Escort fore-winch	Brusselle, double drum, hydraulic, 44.9T pull 2 x 100m, 52mm dyneema winchline
Towing aft-winch	1 x split drum, Brussele type SLH 180.45/1S-1
Power/speed	hydraulic powered nom. pull 350kN @ 0-6m/min over 68kN @ 0-26.4m/ min upto about 48kN at 0-30m/min Stall pull 400kN, brake holding force 1800kN (wet) 2x remote controlled band-brakes, friction clutch
Towing wire	A) 850m - ø52mm - MBL 1893 kN - 193 T B) 650m - ø52mm - MBL 1893 kN - 193 T Steel wire galvanised 6x36WS IWRC RHOL 1960N/mm
Capstan	11T pull, 25T braking. Brusselle, type HK10 hydraulic, vertical head

TANK CAPACITIES

Fuel Oil (MGO)	232,00 m ³
Fresh Water	24,00 m ³
Lub Oil	10,50 m ³
Dirty Oil	9,50 m ³
Sewage	7,00 m ³
Water Ballast	61,00 m ³

ACCOMODATION

Heated and air-conditioned living spaces for 10 persons, consisting of a galley and mess room, captain's cabin, C.E cabin and a 1st officer cabin, officers sanitary facilities on the main deck, four double crew cabins, and crew's sanitary facilities below deck.

NAUTICAL & COMMUNICATION EQUIPMENT

GMDSS area	A3, (A1 A2 A3 equipped)
Searchlights	2 x Seematz 1000W
Compass	1 x Kottter type / 1 x gyro compass
Radar system A	Raython NSC 25 TFT
Radar system B	Raython NSC 25 TFT
Radar river system	Elna-4007/9TFT
GPS	Raython NSC 18
Autopilot	Raython Pilot Star D AP02-S01
Echo sounder	Raython GDS101
Speedlog	Skipper EMC24
VHF Radio Telephone	2 x Sailor RT 5022 + DSC, 25 Watt
VHF Handheld	2 x Jotron TR20 GMDSS
Navtex	JRC NCR 333
AIS	SAAB R4 AIS GPS
SART	McMurdo S4
Communication	VSAT - Iridium - SSB - Phones
ECDIS system	2 x Transas Navi-Sailor 4000 system
Weather system	Meteogroup SPOS onboard
Weather station	Lambrecht realtime monitoring
Navigation lights	Norselight NLC8/40
Bridge nav. watch system	Janssen WGA-33
Inmarsat C system	Furuno Felcom 18
VSAT system	Intellian by Radio-Holland
Maintenance system	MARAD 4.43 system onboard & office

CONTACT DETAILS

E-mail, VSAT	ea20@muller-dordrecht.nl
E-mail Office	operations@muller-dordrecht.nl
Sat-C Bridge	424480816@c12.stratosmobile.net 424480817@c12.stratosmobile.net
Telephone Bridge	+31 (0) 651 614 581
VSAT Telephone	+31 (0) 854 013 855
Iridium Telephone	+881 623 427 115
Telephone Office	+31 (0) 786 392 000