



**60 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, seagoing 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 10

harbour and seagoing tug



### GENERAL INFORMATION

Year of construction	2002
Builder	Astilleros Armon S.A., Vigo, Spain
Build type	ASD Seagoing&Harbour tug + FiFi ship
Class	Bureau Veritas
Classification	I * HULL * MACH Tug Fire fighting ship 1 - Water Spraying Unrestricted navigation * AUT-UMS
Class Register nr	02252A
Flag	Netherlands
Call sign	PCPP
IMO	9264386
Port of registry	Dordrecht

### MAIN PARTICULARS

Length o.a.	30.00 m
Breadth o.a.	10.00 m
Maximum draught	4.80 m
Air draught	22.39m
Gross tonnage	358 T
Nett tonnage	107 T

### PERFORMANCES

Bollard Pull max	60,2 tons
Speed	13,5 knots

### PROPULSION SYSTEM

Main engines	2 x CAT Type 3516B TA-HD
Total power	4.000 hp (2.983 kW) at 1800 rpm
Gearboxes	2 x Reintjes LAF 741 / 2.033:1
Azimuth Thrusters	2 x Schottel SRP1212 FP
Propellers	2 x 2300 mm fixed pitch
Nozzles	Schottel RP, pressurised
Bowthruster	1 x Schottel ST110LK 275HP

### AUXILIARY EQUIPMENT

Generator Engine sets	2 x Caterpillar 3304B T
Generator sets	2 x Caterpillar SR4
Capacity	106 kVA each 50Hz, 230/400 V
Bowthruster aux. engine	1 x Caterpillar 3406
General transfer pumps	2 x ABB pump Azcne 70m2/hr
Cool water pumps	2 x ABB MN 50-125
Fuel separator	Alfa Laval MAB 104-B24 1,6T/m3
Luboil separator	Alfa Laval MAB 104-B24 1,6T/m3

### DECK LAY-OUT

Anchor	2 x 570 kg Stockless anchor
Chain	22mm - 137,5 m short link
Deck crane	Palfinger PK12080M BS1.2 remote controlled 0.93 ton at 12,94 m, 10.7T/m
Escort winch	Bi Kateak, hydraulic, 3,5T - 54m/min Dyneema rope, ø 80mm, 100m length MBL 150T Waterfall type
Towing winches	Bi Kateak, hydraulic, 18T - 20m/min
Main winch	120T
- Brake holding force	800m - ø 44mm - MBL 1450 kN
- Towing wire	Steel wire galvanised 6x36WS IWRC RHOL 1960N/mm
Second winch	Bi Kateak, hydraulic, 25T - 14m/min
- Brake holding force	120T
- Towing wire	800m - ø 44mm - MBL 1450 kN Steel wire galvanised 6x36WS IWRC RHOL 1960N/mm
Capstan roller head	Bi Kateak, hydraulic, 5T
Stern roller	2000mm, diam. 711mm, SWL 30 tons

### FIRE-FIGHTING EQUIPMENT

FiFi level	FiFi 1 - Water Spraying
FiFi monitors	2 x Kvaerner 1200m3/hr each
FiFi system	Kvaerner FiFi-pump B 1470-002
FiFi pump capacity	3600m3/hr
Spraying system	Water, Foam (12m3)
Deluge protection	Waterspraying system fitted
Internal FiFi system	CO <sub>2</sub> in the engine room
Anti pollution	Fitted w. 2 booms with dispersant disposers

### TANK CAPACITIES

Fuel Oil (MGO)	273,00 m <sup>3</sup>
Fresh Water	54,24 m <sup>3</sup>
Foam	12,00 m <sup>3</sup>
Lub Oil	5,10 m <sup>3</sup>
Dirty Oil	5,15 m <sup>3</sup>
Engine Oil	5,15 m <sup>3</sup>
Gear Oil	7,51 m <sup>3</sup>
Hydraulic Oil	7,51 m <sup>3</sup>
Water Ballast	7,69 m <sup>3</sup>

### 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	A1 A2 A3 equipped
Searchlights	2 x Seematz 1000W
Compass	1 x Kotter type / 1 x gyro compass
Radar system	Furuno FR 1505 mk III + JRC 2253
GPS	JRC
Autopilot	Robinson APS mk III
Echo sounder	Suzuki ES 1025
VHF Radio Telephone	2 x Sailor RT 5022 + DSC, 25 Watt
VHF Handheld	2 x Axis-50
Navtex	JRC NCR 330
AIS	SAAB R4
SART	McMurdo S4
Communication	VSAT - Iridium - SSB - Phone
ECDIS system	2 x Transas ECDIS system
Weather system	Meteogroup SPOS onboard

### CONTACT DETAILS

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