



Anchor Handling Tug Supply Vessels - Pacific Defiance

Built to Clean Class Design, Dynamic Positioning (DP AUTR), SPS 2008, Ice C notation and equipped with a 500/400-tonne anchor handling, towing and secondary RRM Brattvaag winches, Anchor Recovery Frame (ARF), Safe Working Deck AH Cranes and enhanced station-keeping with an independent drop-down Azimuth Thruster, the D Class vessels are powered to safely support the latest generation semi-submersible rigs operating in harsh deep water environments. These vessels have sufficient cargo capacity and clear deck space for a wide range of offshore applications including but not limited to ROV mezzanine installations for ROV work, and oversize offshore equipment. The large chain carrying capabilities and winch configuration allows for a range of wire configurations to complement their ability to conduct complex composite mooring system installations that may be found on subsea mooring and pre-lay systems in the offshore sector.

The D Class vessels are:

Pacific Defiance	Pacific Dolphin
Pacific Diligence	Pacific Dove
Pacific Discovery	Pacific Dragon
Pacific Dispatch	Pacific Duchess

Top Features		Key Specifications	
1.	Ready for installation of ROV in dedicated hangar	•	Bollard Pull - 221.52 t
2.	300-tonne anchor recovery frame for torpedo anchors	•	Free Deck Area - 648 m ²
3.	Low fuel consumption on field standby	•	Brake Horsepower - 17614 bHP
4.	High speed & capacity winch system	•	Winch Line Pull - 500 t

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General Information	
Vessel Name	Pacific Defiance
Built	Drydocks World, Singapore, February 2013
Flag	Indonesia
Call Sign	JZZT
IMO No.	9456197
Classification	
Class Notation	DNV-GL +1A Fire fighter(I) Offshore service vessel(Anchor handling, Towing) Clean DYNPOS(AUTR) E0 Ice(C) SPS
Dimensions	
Length (LOA)	92.0 m
Beam	22.0 m
Summer Draft	7.5 m
Deadweight @ SummerDraft	4522.97 t
GT	6639
Deck Capacities	
Deck Load Capacity	1500 t
Deck Strength	10 t/m ²
Free Deck Area	648 m ²
Length x Width	36 x 18 m
Tank Capacities	
Base Oil	454 m ³
Brine / Mud	860 m ³ (reflects 90% filling level of the tanks)
Drill / Ballast Water	2965 m ³
Dry Bulk	236 m ³ (8334 cubic feet) (in 4 tanks)
Fresh Water	1355 m ³
Fuel Dedicated	1172 m ³

Fuel Total	1940 m ³ (including combination BO, Mud tanks)
Tank Capacities Details	Refer to Tank Capacities Table
Propulsion / Bollard Pull	
Main Engines	4 x MAN 9L-27/38 each 3285 kW = 13140 kW (17614 bHP) 2 x MAN CPP propellers in KORT nozzles, with Hi-lift flap rudders
Thrusters	2 x bow tunnel 883 kW / 1184 bHP 2 x stern tunnel 883 kW / 1184 bHP 1 x azimuth 883 kW / 1184 bHP
Bollard Pull	221.52 t at 100% MCR 225.49 t with independent driven azimuth thruster
Deck Equipment	
AH / Towing Winch	2 x 400 t RRM Brattvaag waterfall type - 20 m/min 1st layer Wire capacity of: 1 x 3200 m 76 mm dia 1 x 4100 m 76 mm dia
Special Handling Winch	1 x 500 t RRM Brattvaag waterfall type - 15 m/min 1st layer Capacity of: 1 x 13600 m 76 mm dia wire or 1 x 1900 m 203 mm (8") dia rope
Secondary Winch	2 x 170 t RRM Brattvaag - 24 m/min 1st layer Rope capacity of: 2 x 2500 m 160 mm (6") dia rope or 2 x 1600 m 203 mm (8") dia rope
Chain Lockers	4 x 156 m ³ Chain capacity of: 4 x 2000 m 76 mm chain or 4 x 1600 m 84 mm chain

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Anchor Recovery Frame	1 x RRM 200 t Max Wire Tension
Towing Pins	4 x RRM 400 t MWL
Shark Jaws	2 x RRM 800 t SWL
Centering Device	2 x RRM 45 t SWL
Stop Pins	2 x Karmoy 100 t SWL
Stern Roller	2 x RRM 3.0 x 4.5 m @ 750 t MWL @ 90 deg wire angle
Capstans	2 x RRM 15 t
Tugger Winches	2 x RRM 24 t fwd main deck + 1 x 17 t fwd main deck center
Tugger Winches FWD	Capacity of 600 m of 26 mm wire each for the 24 t; Locally, remote, portable-wireless control. Capacity of 200 m of 25 mm wire for the 17 t; Locally, remote, portable-wireless control.
AH Crane	2 x RRM 5 t @ 10 m with tool for AH operations
Provision Crane	1 x knuckle type, capacity 5 t @ 15 m radius. Winch hook travel of up to 1000 m
Chain Gypsies	2 x 76 mm + 2 x 84 mm
Performance & Economy	
Economical Speed	24 m ³ /day @ 10 kts 32 m ³ /day @ 13 kts
DP<20%	13.9 m ³ /day on 2 Mes
DP>35%	27.5 m ³ /day on 4 Mes
Standby in Field	4.6-6.9 m ³ /day @ 1-4 kts
Standby in Port	1.8 m ³ /day
Note	Performance & Economy figures are given at mean vessel draft of 6.5 m (2800 t deadweight) & Beaufort Scale 2.
Dynamic Positioning System	
Type	GE C-Series DPS-21 Duplex DP
Reference Systems	2 x Sonardyne HPR prepared 2 x Veripos DGPS 1 x Fanbeam
Motion Reference Units	3 x Gyro Tokimec TG8000 3 x Wind Sensor Gill Wind Observer Ultrasonic 3 x VRU, 2 x TTS DMS-10 / 1 x SMC IMU 107
Rescue Boat	
1. 1 x Maritime Partner MP660 Springer, 10 person, SOLAS approved FRB with inboard diesel waterjet.	
Accommodation	
Person Capacity	Total 37 29 in 1man cabin & 8 in 2man cabins

Tank Capacities Table

D Class Tank Capacities @ 100%								
Tank	Volume	WB/DW	FW	FO	Brine	Mud	Base Oil	Glycol
1 WB/DW	285.228	285.228						
2 WB/DW	291.642	291.642						
3 WB/DW	291.819	291.819						
4 FO	206.075			206.075				
5 FO	206.075			206.075				
8 FW	169.905		169.905					
9 FW	104.412		104.412					
14 FW	196.033		196.033					
15 FW	203.793		203.793					
17 WB/DW	154.786	154.786						
18 WB/DW	154.975	154.975						
20 WB/DW	210.968	210.968						
21 WB/DW	210.968	210.968						
22 WB/DW	62.765	62.765						
23 FW	183.262		183.262					
24 FW	183.262		183.262					
29 FW	59.175		59.175					
30 FW	59.175		59.175					
33 FO	133.275			133.275				
34 FO	133.275			133.275				
35 WB/DW	96.707	96.707						
40 WB/DW	82.451	82.451						
41 WB/DW	82.451	82.451						
57 FO Service	31.752			31.752				
58 FO Service	31.752			31.752				
59 FO Settling	26.074			26.074				
60 FO Settling	26.074			26.074				
61 FO/BO	112.467			112.467			112.467	
62 FO/BO	112.467			112.467			112.467	
63 FO/BO	114.921			114.921			114.921	
64 FO/BO	114.921			114.921			114.921	
66 MUD/BRINE/GLY	83.547				83.547	83.547		83.547
67 MUD/BRINE/GLY	83.547				83.547	83.547		83.547
68 MUD/BRINE/GLY	82.595				82.595	82.595		82.595
69 MUD/BRINE/GLY	82.595				82.595	82.595		82.595
72 RCL/WB/DW	156.33	156.33						
73 RCL/WB/DW	156.33	156.33						
74 MU/BR/GLY/RCL	156.33				156.33	156.33		156.33
75 MU/BR/GLY/RCL	156.33				156.33	156.33		156.33
76 FO/MU/BR/GLY	156.33			156.33	156.33	156.33		156.33
77 FO/MU/BR/GLY	156.33			156.33	156.33	156.33		156.33
81 WB/DW	96.666	96.666						
82 WB/DW	96.666	96.666						
86 FO	98.698			98.698				
87 FO	114.762			114.762				
104 WB/DW	96.707	96.707						
155 FW	98.098		98.098					
156 FW	98.098		98.098					
157 WB/DW	149.743	149.743						
158 WB/DW	149.743	149.743						
159 FO	82.114			82.114				
169 FO	82.114			82.114				
161 WB/DW	69.121	69.121						
162 WB/DW	69.121	69.121						
Dedicated Tanks:	@ 100%	2965.187	1355.213	1172.04				
With Multiuse Tanks:	@ 100%			1939.476	957.604	957.604	454.776	957.604
		WB/DW	FW	FO	Brine	Mud	BO	Glycol
Bulk Capacity of 235.9 m ³ in four dedicated tanks								
NB: RCLs 72, 73, 74 & 75 cannot be used for chain & product at the same time								

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