GPA 670 PSV Series

DP2 Diesel-Electric Platform Support Vessel
Exceptional Maneuverability
Optional Special Products Tanks

A Modern Diesel-Electric Platform Support Vessel Equipped with State-of-the-Art Technology.

Fuel Savings · Greater Cargo Capacity
Optional Special Products Tanks
Main Systems Redundancy · Exceptional Maneuverability

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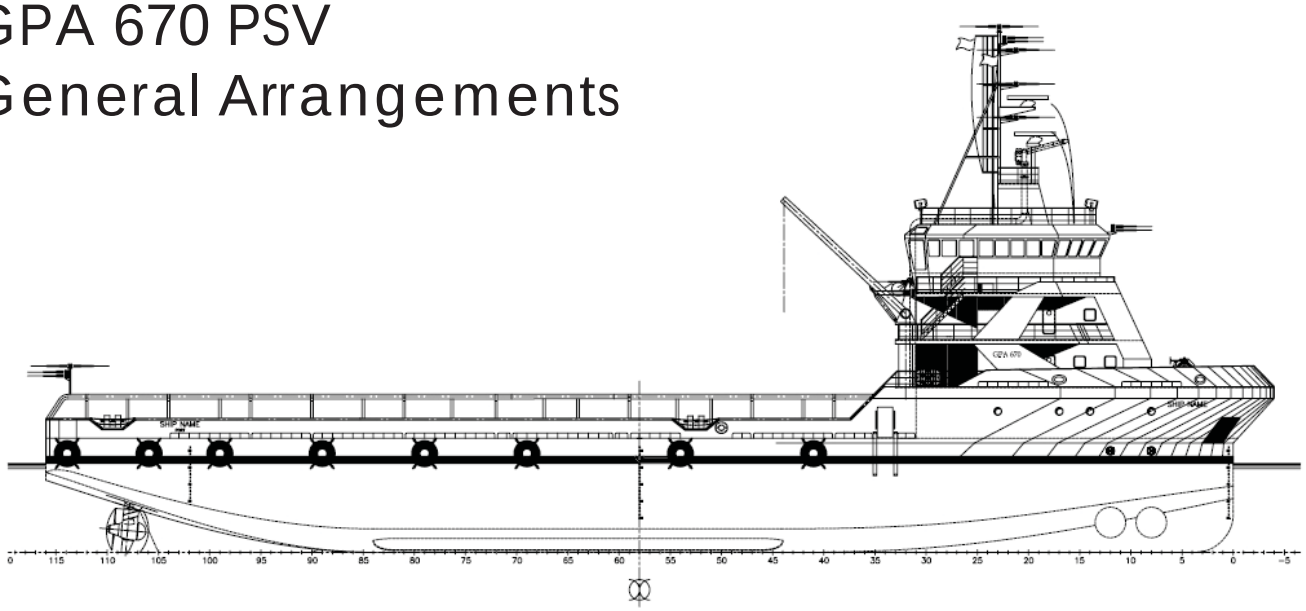
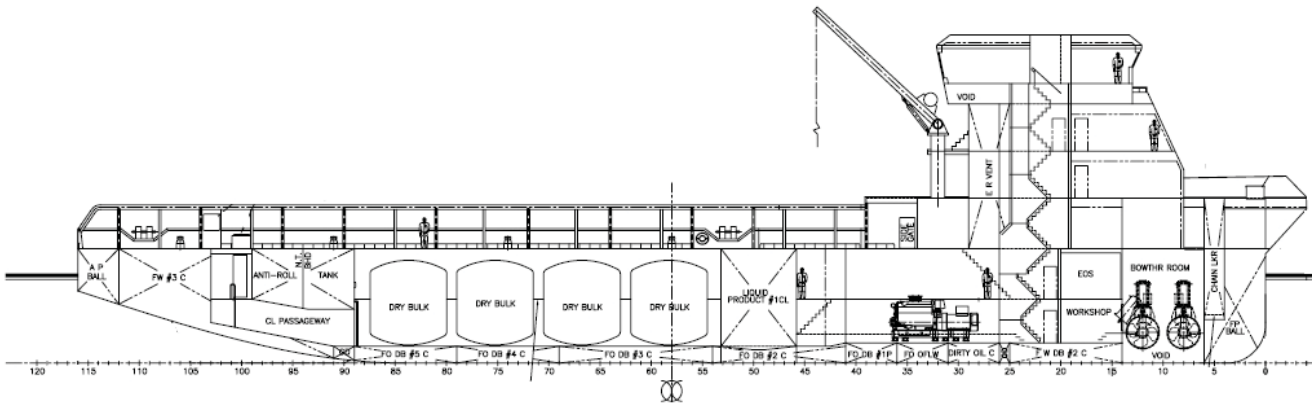
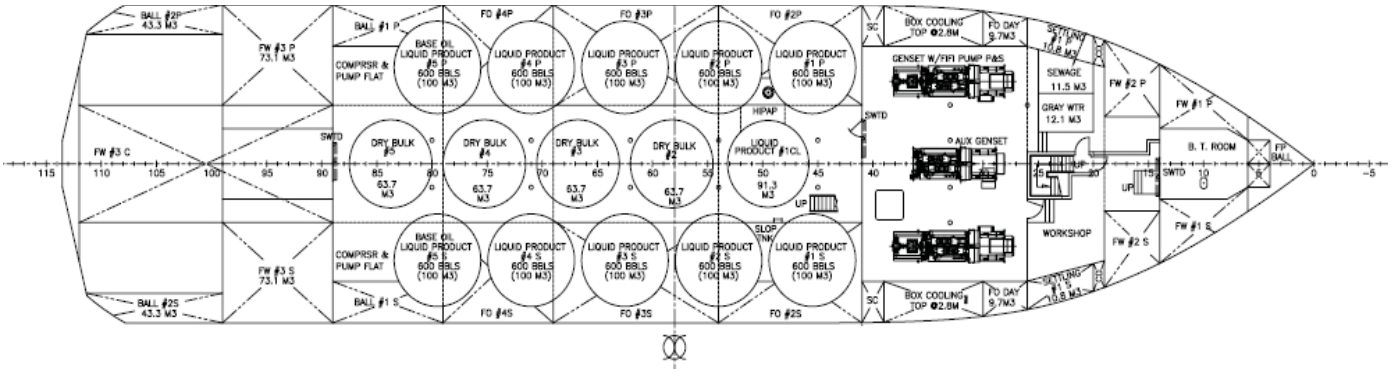
GPA 670 PSV
General Arrangements





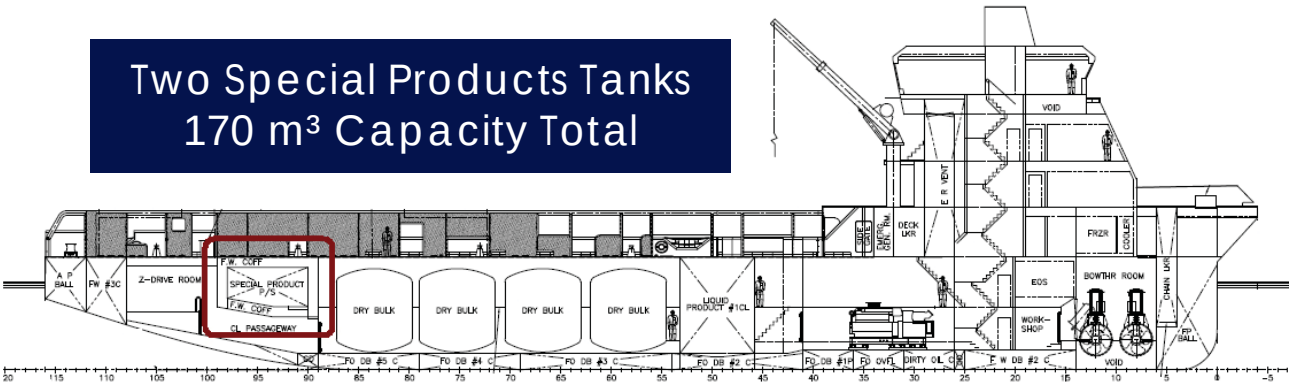


GPA 670 PSV Series

DP2 Diesel-Electric Platform Support Vessel
Exceptional Maneuverability
Optional Special Products Tanks

GPA 670 PSV MKII Special Products

Two Special Products Tanks
170 m³ Capacity Total



At the aft end of the vessel, two special products tanks with a combined capacity of 170 m³ are located to provide the capability to transport special products, such as methanol.

To meet the increasing demand for oil worldwide, the rapid building of vessels, capable of deepwater offshore operations, is required to replace existing, obsolete offshore vessels. GPA's vessel designs are based on efficiency and constructability:

- Efficiency Hulls
- Developable Hull Surfaces (Single Curvature Hulls)
- Transverse Framing
- Flanged Plate Construction

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GPA 670 PSV / GPA 670 PSV MKII Special Products

A State-of-the-Art Platform Supply Vessel.

Fuel Savings
The Diesel-Electric Propulsion system is environmentally friendly by decreasing CO2 emissions by 30% and also offers improved fuel efficiency. Clients benefit from considerable cost savings, as the installation of diesel generators of different output ratings can provide smaller increments of power to best suit a given operational mode. Additional electric consumers can be added to the design, such as additional thrusters or Fi-Fi pumps without adding dedicated diesel engines to drive them.

Greater Cargo Capacity
The Diesel-Electric propulsion configuration allows for greater below-deck cargo capacities. The GPA 670 PSV can carry 255 m^3 of bulk mud and 1,083 m^3 of liquid mud.

Dynamic Positioning Class II
The Dynamic Positioning system enables vessel to maintain precise position and come alongside rigs or platforms to offload cargo, even in adverse weather conditions.

Main Systems Redundancy
Three main generators, two azimuthing stern thrusters, one fixed stern thruster, two bow thrusters and Dynamic Positioning Class II.

Exceptional Maneuverability
The combination of the Diesel-Electric propulsion system with Dynamic Positioning Systems Class 2 facilitates tremendous station-keeping capabilities to carry out operations safely, even in adverse weather conditions.

These features offer more flexibility to clients, as the GPA 670 PSV can be utilized to support both shelf and deepwater operations at a very competitive operating cost.

GPA 670 PSV Series

DP2 Diesel-Electric Platform Support Vessel
Exceptional Maneuverability
Optional Special Products Tanks

GPA 670 PSV Specifications (incl. GPA 670 MKII Special Products)

MAIN CHARACTERISTICS

Length Overall	73.20 m	(240.15 ft)
Length BP	70.76 m	(232.15 ft)
Beam	16.50 m	(54.13 ft)
Depth	6.80 m	(22.31 ft)
Design Draft	5.30 m	(17.39 ft)
Maximum Draft	5.50 m	(18.04 ft)

Design Displacement
4,870 mt (4,793 lt)
Maximum Displacement
5,157 mt (5,075 lt)

Light Draft	2.50 m	(8.20 ft)
Gross Registered Tonnage		2,300

CAPACITIES

Deadweight at Max Draft 3,250 mt (3,582 st)
Cargo Deck Area
49.24 m x 13.7 m...675 m^2
(161.55 ft x 44.95 ft...7,262 ft^2)

Deck Cargo	1,600 mt	(1,764 st)

Fuel Oil Cargo
927m^3 (244,887gal) (5,830 bbl)
Fuel Oil Day Tanks
36 m^3 (9,510 gal) (226bbl)
Bulk Mud
255 m^3 (67,362 gal) (1,604 bbl)
Liquid Mud
1,083 m^3 (286,098 gal) (6,811bbl)
Rig Water
405 m^3 (106,990gal) (2,547bbl)
Cargo Fresh Water
906 m^3 (239,339gal) (5,699bbl)
Ship Fresh Water
102 m^3 (26,946gal) (642 bbl)
Foam Tank
19 m^3 (5,019gal) (120bbl)
Detergent Tank
19 m^3 (5,019gal) (120bbl)
Special Products Tanks (opt.)
174 m^3 (45,966gal) (1,094bbl)

DYNAMIC POSITIONING SYSTEM (CLASS II)

BV classed DPS-2 Redundant Positioning System Comprising:
2 Operating Consoles
1 Computer with 1 printer
2 Anemometers
2 Gyrocompasses
1 Laser Reference System
2 DGPS
1 Vertical Reference Unit
1 Independent Joystick Control System

PERFORMANCE

Top Speed Max Draft		13 knots
Top Speed Light Draft		15 knots
Fuel Consumption at 5.3 m Draft		
Cruising Speed	12.5 knots	150 gph
Economical Speed	11 knots	120 gph

PROPULSION - MACHINERY

Total Installed Power 5,475 kW (7,340 hp)
Main Diesel Generators 3 x 1,825 kW (2,501 hp)
440 V / 60 Hz (Cummins QSK 60)
Emergency Generator 1 x 170 kW (228 hp)
480 V / 60 Hz (Cummins 6 CTA 8.3)
Emergency Generator
for MK II Special Products Caterpillar
1 x 186 kW (250 hp) C9
Main Propulsion 2 x 2,000 kW (2,720 hp)
Z-drive, 360° azimuthing (Kawazaki KST-200 ZF / A)
Bow Tunnel Thrusters 2 x 746 kW (1,000 hp)
CPP at 1,200 rpm (Kawazaki KST 105 B3)

CARGO DISCHARGE

Fuel Oil 660 gpm at 295 ft
(150 m3 / h at 90m)
Rig Fresh Water 660 gpm at 295 ft
(150 m3 / h at 90m)
Liquid Mud (LM) 2 x 330 gpm at 492 ft
(2 x 75 m3 / h at 150 m)
LM Segregated System: Integrated / Segregated(4 Tanks each system)
LM Agitation Flygt Mixers
LM Tank Cleaning System Butterworth
Bulk Material (BM) Compressors rated for 55 st / hr at 196 ft (50 mt / hr at 60 m)
BM Segregated System Integrated / Segregated (2 Tanks each system)

DECK EQUIPMENT

Rescue Boat: 1 x MOB boat with davit
SOLAS cargo ship safety equipment
Tugger Winch: 1 x 11 st (10 mt) pull
Deck Cargo Crane:
2.2 st @ 52 ft (2mt @ 16 m)
Telescopic Boom / Electro - hydraulic
Anchor Windlass: 1
Roll Reduction System: 2 Roll Stabilization Tanks (Tanks for MK II Special Products)
Firefighting System Class I:
2 pumps at 6,604 gal / min
(1,500 m3 / h) each
2 monitors at 5,283 gal / min
(1,200 m3 / h) each

CONTROL & SAFETY

Fully integrated DP / control dual redundant system
Alarm, monitoring and control system for periodically unattended machinery space.
Remote control and monitoring of liquid mud and bulk mud cargo systems

ELECTRONICS

2 Radars
1 Navigation Gyro Compass
1 Depth Sounder
1 Speed Log
1 Immarsat B or F77
1 mini M
1 EPIRB (2 radar transponders)
1 GPS
1 UHF, 2 VHF (bridge to bridge)
1 Radio System compliant with GMDSS A3 rules

ACCOMMODATION

Fully Air-conditioned
Accommodations for 22 people composed of:
4 x 1 man cabins
5 x 2 man cabins
2 x 4 man cabins
1 Hospital, Galley, Provision Room, Stores, Mess Room, 2 Day Rooms

REGISTRATION

Type Platform Support Vessel
Designer Guido Perla & Associates, Inc.
Classifications BV 1 Hull Mach Unrestricted Navigation Supply Vessel/Oil, Firefighting Ship 1 AM-AT-R (class 2)USCG Subchapter L, Full Ocean

GPA 670 PSV Series

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Exceptional Maneuverability
Optional Special Products Tanks

In 2006, a ten-vessel GPA 670 PSV series was completed for Bourbon Offshore at Zhejiang Shipyard.

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In 2008, a four-vessel GPA 670 PSV MKII Special Products series was completed for Bourbon Offshore at Zhejiang Shipyard in China.