

FRIGSTAD ENGINEERING

The Frigstad Engineering Group has provided rig designs and engineering services to the offshore drilling and production industry since 1981. With offices in Singapore, Norway, Cyprus and Brazil, we have established strong ties with major offshore shipyards and suppliers of drilling equipment – and we are able to serve our clients worldwide.

Frigstad Engineering operates with a deeply embedded philosophy of designing and modifying rigs according to the operational needs of the professionals who work on them and with the expectations of the oil companies and investors in mind. Particular emphasis is placed upon equipment selection and arrangement which offers superior safety and operational performance while maintaining the highest levels of environmental protection and cost-efficiency.

EXPERIENCE MEETS INNOVATION

A wealth of experience earned at the sharp end of oil exploration is being harnessed to shorten the journey from drilling to production. New requirements are forcing the offshore drilling industry to challenge designs, processes and capacities that have endured the test of time.

BLUE PRINT FOR SUCCESS

Our hands-on experience has resulted in the optimum approach to design and construction of deepwater drilling rigs. Frigstad Engineering's blueprint for success has been developed with efficiency, ergonomics, safety and environmental awareness as key design priorities.

Frigstad A70™ Outline Specification 5017 - A70-DP3 Accommodation Unit

REGULATIONS			
SOLAS 1974 as amended, MARPOL 1973/78, IMO MODU-CODE 2009, all with latest amendments			
CLASSIFICATION			
DNV +1A1 COLUMN STABILIZED ACCOMMODATION UNIT, POSMOOR(ATA) optional, DYNPOS AUTRO (DP3), CRANE, HELDK, ECO, F-AM, and BWM-T, FIRE FIGHTER II or equal to ABS			
ENVIROMENTAL OPERATING LIMITS			
Maximum wind velocity	70 knots / 100 knots	Air gap (Operating/Survival)	8 m /12.5 m (26.25/41.01 ft)
Wave height Hs	15.8 m (51.83 ft)		
PRINCIPAL PARTICULARS			
Length of pontoons	86 m (282.15 ft)	Displacement (operational)	32,710 t (36,056 st)
Width & length, pipe rack deck	70 x 69 m (229.66 x 226.38 ft)	Displacement (survival)	29,390 t (32,396 st)
Height to pipe rack deck (ABL)	36.8 m (120.73 ft)	Displacement (transit)	24,320 t (26,808 st)
Draft (max. operational)	20.0 m (65.62 ft)	Water depth (max)	unlimited
Draft (survival)	15.5 m (50.85 ft)	Drilling depth (max)	NA
STORAGE CAPACITIES			
Potable water, pontoon	2,310 m³ (14,529 bbls)	Variable deck load (max oper.)	2,500 t (2,756 st)
Open pipe rack deck area	1,515 m² (16,307 ft²)	Variable deck load (max transit)	1,000 t (1,102 st), excl. chains in chain locker
Diesel fuel oil, pontoon	2,950 m³ (18,555 bbls)	Payload (max operational)	5,000 t (5,512 st)
ACCOMODATION, OFFICES AND RECREATION			
Air conditioned living quarters for 500 persons in single and double berth cabins with private sleeping area. Accommodation is upgradable to 800 persons by converting some double berths cabins to 4 berths cabin. All cabin are en-suite with bathroom			
One (1) spacious Hospital with four (4) beds sick bay, fully equipped treatment room.			
Additional fifteen (15) more beds may be added to the hospital capacity in emergency situation			
Galley, Provision Store, and Mess Room are designed to cater up to 800 POB. The Mess Room is designated as an emergency refuge room			
One (1) large change room on pipe rack deck adjacent to the coffee shop can also be used as seating during coffee break. This will increase the coffee break seating capacity to more than 200 seats. There are three (3) smaller changes room for Catering staff, Engine crew & Ladies.			
One (1) 20 seats Conference Rooms, One (1) large Oil Company Office with four (4) glass-partitioned office for eight (8) workstations and a meeting/discussion area. Additionally, lot of offices for marine crew and third party vendors.			
One (1) Helideck with D-value of 25m and MTOM of 15.6 t and an adjoining Helideck Apron capable of holding helicopter of 25m D value			
Recreation / Internet Café, Game Room, Cinema, Sauna, Coffee Shops, Gymnasium, and Helicopter Waiting Room with 40 seats			
WORKSHOP & FABRICATION SHOP			
Covered Pipe & Plate fabrication Shop, Painting & Blasting Shop, and Paint Store with total area of 254.3 m2			
MATERIAL HANDLING			
Deck cranes	One (1) 100 t pedestal deck cranes with 57 m main boom and 62m auxiliary boom One (1) 50 t pedestal deck crane with 51 main boom and 56m auxiliary boom		
Telescopic Gangway	One (1) telescopic gangway with 38.5m operating length at midstroke +/- 8.0m		
MARINE SYSTEMS			
Main power / emergency power	Six (6) diesel generators. Total installed power is approx. 29,040 kW. One (1) dedicated Emergency generator with an output capacity 1,200 kW.		
Thruster	3.8 MW azimuth thrusters with tilted nozzle and propeller		
Mooring system	Four (4) double drum windlasses with eight (8) underwater fairleads for preset mooring, optional thruster assisted mooring. Upgradable to 12 point mooring.		
OTHER			
Helicopter deck capacity	Designed for MI8 and EH 101 helicopters.		
Life-saving equipment	Eight (8) davit launch fully enclosed lifeboats Forty (40) inflatable life rafts with capacity of 25 persons each. Two (2) fast rescue/workboat boats.		

Note: The details included in this specification are subject to change without prior notification

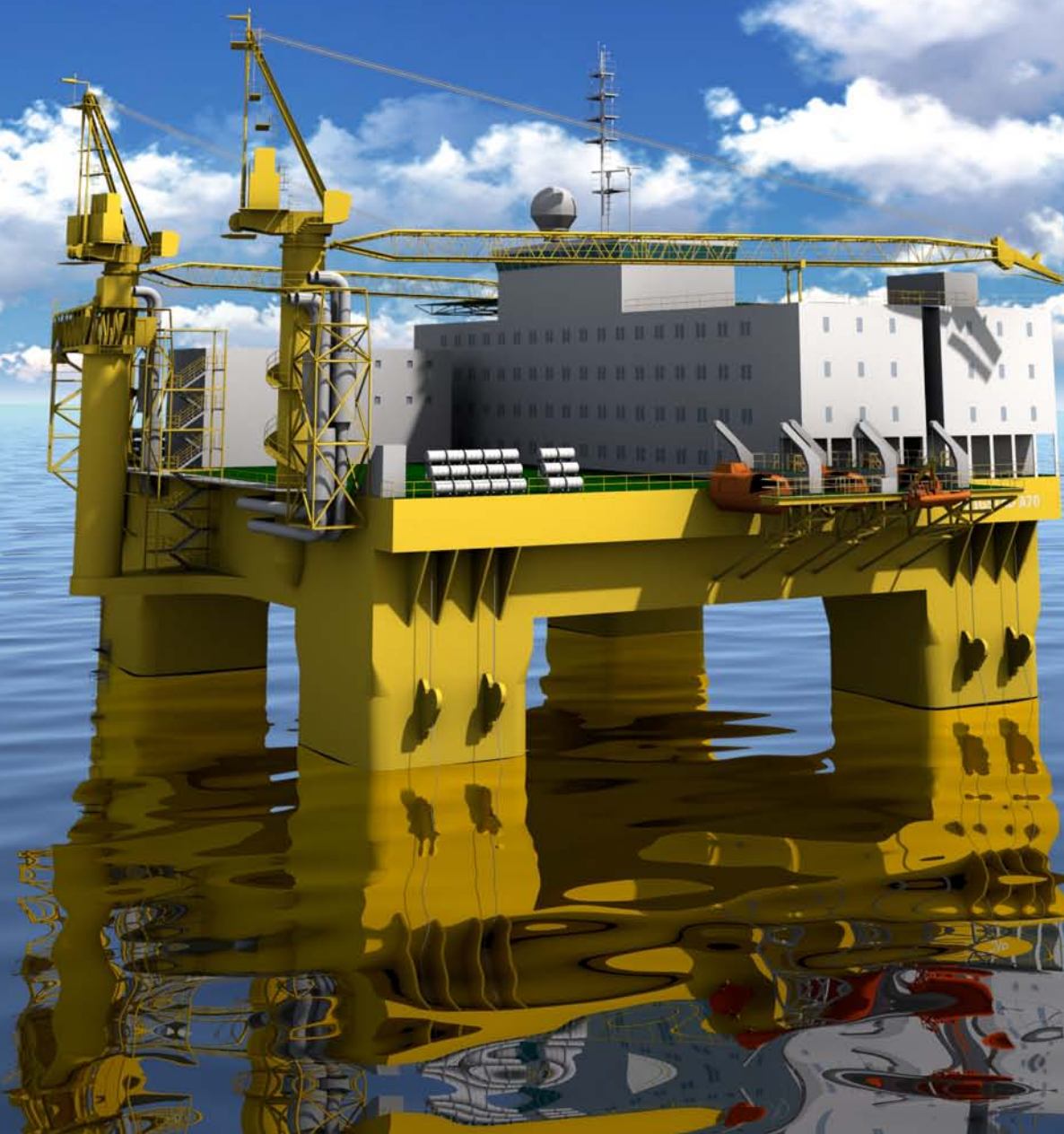
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Frigstad A70™



VIP CABIN
Fifty Three (53) single man cabins
outfitted with private bathrooms and
hotel amenities.

LIVING QUARTERS
Living Quarters with total capacity of
500 men, upgradable to 800 men, all
in 1 and 2 men cabins with private
sleeping area.

PAYLOAD
Providing 5,000 MT
Payload, reducing
operation cost.

STORE AND WORKSHOP
Large Store for Operator. Spacious
Mechanical, Electrical Workshop.
Huge Storage and Working
area for Pipe & Plate Shop,
Painting & Blasting, Paints, and
Oxy-Acetylene Bottles.

PIPE RACK DECK STORAGE
T70 Drilling Tender provides 1,514.3
m2 Pipe Rack Deck Storage Area.

SUPERB LOGISTICS
One (1) No of Cargo Lifts with six (6) MT
capacity providing access to all decks.
Four (4) Nos of Cargo Lifts for each
column for easy handling for logistics.
Two (2) Nos of Passenger Lifts in LQ for
crew comforts. Dedicated and spacious
Forklift Path with three (3) MT rating all
around rig allowing convenient access for
logistics.

HOSPITAL
Fully Functional Hospital with six (6) beds and a
sick bay room located on the pipe rack deck easily
accessible to helideck via elevator or stairs. A
fully equipped treatment room to cope with most
accidental injuries. Eight (8) cabins adjacent to
the hospital can be converted into an emergency
hospital thereby adding fifteen (15) more beds to the
hospital capacity.

RECREATIONAL FEATURES
Two (2) Nos of separated Sauna for Male and Female
Crews. One (1) Cinema equipped with video and sound
system for projection of movies and fitted with cushion
seats. One (1) Gymnasium with eight (8) treadmills, ten
(10) exercise bike, two (2) elliptical machine, three (3) multi
station exercise apparatus and a free weight area for free
weight, dumb bells and bench. One (1) recreation / internet
café. One (1) game room with one (1) or two (2) table tennis
table and some board games.

LIFE SAVING EQUIPMENT
Eight (8) Davit Launched Lifeboats.
Forty (40) Inflatable Rafts, 25
persons each. Two (2) fast Rescue
Boats.

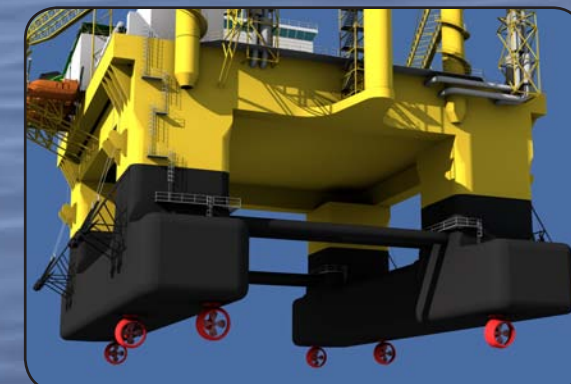
MAIN POWER
Six (6) Diesel Engines with total installed
power of 29 MW with one (1) dedicated
Emergency Engine with installed power
1.2 MW. Power System is designed with
the latest Closed Ring System, providing
flexibility in operation and minimizing the
running cost of the rig.

HULL DESIGN
A70 Semisubmersible
Accommodation Unit is Frigstad's
proprietary design providing a superb
motion, huge payload, and stability.

MOORING SYSTEM
Four (4) sets of Double Drum Traction
Windlasses come with eight (8) Nos
of underwater fairleads for pre-set
mooring system and thruster assisted
mooring.

MOTION RESPONSE
Improved heave, roll, and pitch
responses. Providing high operability
window.

A70™ DESIGN FEATURES



MODERN SQUARE HULL WITH 4 COLUMNS
Double Symmetry Hull, providing stability
in all axis, improving rig efficiency and
increasing rig operability window.



HELIDECK
Helideck complying with CAP437 with 15.6
MT landing weight, suitable for S61, S92,
M18, Super Puma A322. Dedicated Helideck
Apron is available with similar rating.



PERSONAL TRANSFER BRIDGE
Telescopic Bridge with maximum reach of
38.5 m comes with automated lift off feature
for better safety of the personnel transfer.



BRIDGE AND OFFICES
Modern design Bridge with a good visibility
for a better working environment. Ample
Office Spaces for Operators and Company
Men.



THRUSTER
Six (6) Nos of 3.8 MW Azimuth Thruster with
tilted nozzle and propeller providing DP 3
capacity.



SUPERB LOGISTICS
Two (2) Nos of Deck Crane, 100 MT and
50 MT capacities, providing coverage for
working areas of the rig.