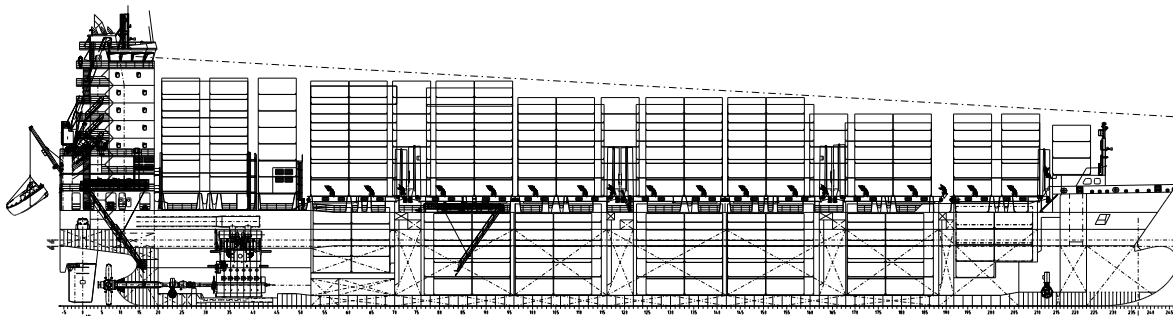


DESIGN-TYPE “abh-1600 TEU” MULTI-PURPOSE CONTAINER SHIP



Design: abh INGENIEUR-TECHNIK GmbH

Type of Vessel: MULTI-PURPOSE CONTAINER SHIP

Tonnage: London-Rules: abt. GT 19,000

Deadweight: abt. 25,000 tdw at D = 10.50 m

Classification: GL +100 A5 E3 G (Hold 3, 4, 5) BWM IW DG + MC E3 AUT/NAV-O
“Equipped for Carriage of Containers”
“Equipped for Heavy Cargoes”

Operation Range: 15,000 NM

Main Dimensions:

Length over all	abt.	177.75 m
Length between perp.	abt.	167.99 m
Breadth moulded	abt.	26.60 m
Depth to main deck	abt.	14.90 m
Design Draught	abt.	9.50 m
Scantling Draught	abt.	10.50 m

Speed: abt. 18.80 kn at D = 9.50 m at 85% MCR

Stack Loads:	<u>on Deck</u>	<u>in Hold</u>	<u>on Hatch</u>
20'	85 t 120 t	60 t	
30'	105 t	90 t	
45'	150/120 t	165 t	105 t

Distributed Loads: holds 2 - 5, 15 t/m² global, 18 t/m² local,

Container Capacity:	<u>20'</u>	<u>40' + 20'</u>	<u>45'</u>	<u>Reefer</u>
in hold	abt. 456	222 + 12	183	144
on deck	abt. 1247	488 + 271	410	237
Total	abt. 1703	710 + 283	593	381

ISO, EURO, CPC, EASY LOAD and 2600 Wide Body Containers also in holds

Total number 14 t/TEU: abt. **900 TEU** (at 10.50 m draught)

Container heights in holds: 5 x 8'6" or 5 x 9'6"

Hatches:

Weather deck hatches: (folding-type hatch covers, non-sequential)

hatch 1	abt. 13.320 x 13.950 m, one pair
hatch 2	abt. 14.800 x 19.270 m, one pair
hatch 3 + 4	abt. 29.600 x 22.000 m, two pairs
hatch 5	abt. 13.320 x 22.000 m, one pair

Tank Capacities:

HFO	appr.	3,300 m ³
MDO	appr.	190 m ³
MGO	appr.	10 m ³
Cylinder Oil	appr.	50 m ³
Lub.-Oil (Storage)	appr.	160 m ³
Fresh Water	appr.	250 m ³
Ballast Water	appr.	11,000 m ³

Deck's Machinery:

2 comb. anchor/mooring winches with 1 mooring drum, 2 warping heads and 1 mooring winch on forecastle deck, pull 12 t
3 high pressure hydr. autom. mooring winches with warp. head, pull 12 t
1 electro hydr. steering gear, rotary vane type

Deck's Equipment:

1 free-fall motor lifesaving boat for 22 persons
2 life rafts for each 22 persons, 1 for 6 persons
1 rescue boat
1 comb. electro-hydraulic crane for provision/rescue boat/life raft, SWL 0.99t, 3.0 m outreach over board
1 service crane, SWL 4 t, 14 m outreach
Provided for later installation of 3 deck cranes, SWL 250 t

Special Plants:

bow thruster, CPP propeller, el. driven, abt. 1,000 kW
stern thruster, fixed propeller, el. driven, abt. 450 kW
container cell guides for 40'/45'-Container
remote controlled ballast water valves
anti heeling plant, pump system ≈500 m³/h
fully-balanced flap-type rudder
el. hold air vent for 6-fold air change, 4,500 cbm/h for reefer
1 signal mast on forecastle deck
1 combined signal / radar mast on top of wheelhouse

Propulsion Plant:

1 2-stroke engine for HFO, power 14,520 kW, for 730 cSt
prepared for exhaust gas scrubber, wet type
1 elastic coupling
1 pitch propeller CPP

Aux. Engine Plant:

2 aggr. for HFO abt. 1.400 kW, 900 rpm, 220/440 V, 60 Hz
2 aggr. for HFO abt. 1050 kW, 900 rpm, 220/440 V, 60 Hz
1 aggr. for MDO abt. 400 kW, 1800 rpm, 220/440 V, 60 Hz
2 starting air compressors, 1 top-up and 1 working compressor
3 fuel oil separators for HFO/MDO
2 fuel oil transfer pumps for HFO
2 HFO-Booster units for ME/AE
4 fuel oil transfer pumps for HFO/MDO
3 lub.-oil separators for ME/AE
2 lub.-oil main pumps, 1 lub.-oil transfer pump
1 lub.-oil automatic filter
1 oil-fired thermo oil heater, 1,800 kW
1 thermo oil boiler plant
1 exhaust gas heat exchanger, 1,600 kW
1 stand-by lub. oil pump for ME
1 cylinder lub.-oil pump
1 bilge water separator acc. MARPOL 01.10.1973
5 fresh water cooling pumps (HT/LT)
1 fresh water cooling system for HT/LT
2 ballastwater pumps, abt. 350 m³/h, 3.5 bar
1 BWM Treatment plant, 500 m³/h
2 bilge-/fire-fighting pumps
1 freshwater pressure tank
2 freshwater generators, each 46 t/day
1 sewage treatment plant
2 fire-fighting pumps acc. rules
1 emergency fire-fighting pump
1 CO₂-fire-fighting plant for cargo hold/engine room
1 heating, incl. warm water and air-heating in accommodation
1 AC-plant
1 sludge/solid waste incinerator, 600 kW

E-Plant:

Power	440 V, 60 Hz
Lighting	230/440 V, 60 Hz
Emergency light	230/440 V, 60 Hz
Automation	24 V, DC

Special Plant incl. Nautical Equipment:

1 signal flash light, 1 search light
1 GYRO-compass with autopilot
1 bearing compass on wheelhouse top
1 rudder indicator
2 sea radar units
1 echo sounder, 1 log
2 VHF marine radio stations
1 APN-navigator
1 wireless telegraph (DSC)
1 sound powered telephone
1 radio direction finder
1 EPIRP-sea buoy
1 VDR, 1 AIS
1 complete GMDSS radio station for A1, A2, A3

Accommodation: 22 persons Emden, July 2011