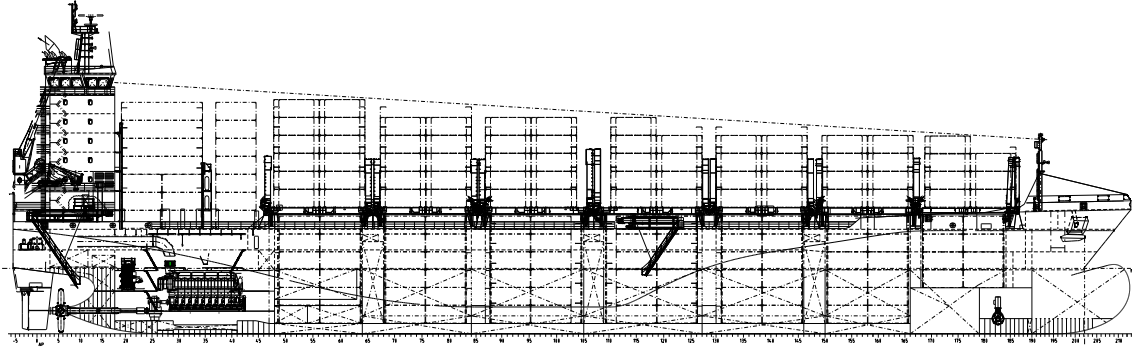


DESIGN-TYPE "abh-1400 TEU" CONTAINER SHIP -GEARLESS-



Design: abh INGENIEUR-TECHNIK GmbH

Type of Vessel: Container Ship

Tonnage: London-Rules: abt. GT 17,000

Deadweight: abt. 22,200 tdw at D = 10.50 m

Classification: GL + 100 A5 E3 BWM IW "Containership"
+ MC E3 AUT
"SOLAS II-2, REG. 19"

Operation Range: 15,000 NM

Main Dimensions:

Length over all	abt.	168.10 m
Length between perp.	abt.	157.50 m
Breadth moulded	abt.	25.60 m
Depth to main deck	abt.	15.20 m
Design Draught	abt.	9.50 m
Scantling Draught	abt.	10.50 m

Speed: abt. 20.00 kn at D = 9.50 m at 90% MCR

Stack Loads:

	<u>on Deck</u>	<u>in Hold</u>	<u>on Hatch</u>
20'/30'	90 t	180 t	60 t
30'/30'/45'	120 t	200 t	90 t

Container Capacity:

	<u>20' +40'</u>	<u>40' +20'</u>	<u>45' Reefer</u>
in hold	abt. 606	296 + 14	86 205
on deck	abt. 750+40	372 + 86	274 224
Total	abt. 1356+40	668 +100	360 429

for ISO/EURO (mixed) and CPC types also in holds

Total number 14 t/TEU:	abt.	1018 TEU	(at 10.50 m draught)
	abt.	970 TEU	(at 9.50 m draught)
	abt.	840 TEU	(at 8.50 m draught)

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

Weather Deck Hatches:

hatches:

hatch 1	abt. 12.775 x 14.944 m, 2 panels
hatch 2	abt. 12.775 x 20.064 m, 2 panels
hatch 3, 6, 7	abt. 12.700 x 22.888 m, 3 panels
hatch 4, 5	abt. 13.200 x 22.888 m, 3 panels
hatch covers:	flap-type hatch covers, non-sequential

Deck's Machinery:

2 comb. anchor/mooring winches with 1 mooring drum and 2 warping heads
and 1 mooring winch on forecastle deck
2 high pressure hydr. autom. mooring winches with warp. head, pull 10 t
1 electro hydr. steering gear

Deck's Equipment:

1 free-fall motor lifesaving boat for 26 persons
2 life rafts for each 26 persons, 1 for 6 persons
1 rescue boat
1 combined service crane for provision/freesfall boat recovering, SWL 5t,
15.5 m outreach
1 combined rescue boat/liferaft crane

Special Plants:

bow thruster, cpp propeller, el. driven, abt. 1000 kW
container cell guides for 40'-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
1 elastic coupling
1 pitch propeller cpp

Aux. Engine Plant:

4 aggr. for HFO abt. 1.440 kW, 1000 rpm, 220/440 V, 60 Hz
1 aggr. for MD0 abt. 360 kW, 1800 rpm, 220/440 V, 60 Hz
2 start air compressors
2 fuel oil separators for HFO
1 fuel oil separator for MDF
2 fuel oil transfer pumps for HFO
2 HFO-Booster unit
2 fuel oil transfer pumps for MDF
1 lub.-oil separator for ME
1 lub.-oil separator for AE
2 lub.-oil main pumps
1 lub.-oil automatic filter
1 tank heating system with steam
1 oil-fired steam boiler
1 steam exhaust gas boiler
1 stand-by lub. oil pump for ME
1 cylinder lub.-oil pump
1 bilge water separator acc. MARPOL 01.10.1973
5 cooling water pump (HT/LT)
5 plate-cooler for ME and AE
2 ballastwater pumps, abt. 350 m³/h, 2 bar
BWM fitted
2 bilge-/fire-fighting pumps
1 freshwater pressure tank
1 freshwater generator 16 t/day
1 sewage treatment plant
1 sludge pump
1 fire-fighting plant for engine room acc. rules
1 emergency firefighting 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 incinerator

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
complete GMDSS-equipment

Accommodation:

23 persons

Emden, August 2011