

Vessel's Particulars
The Astrotype II (Typ 8138 II)



Flag	GERMAN, alternatively NETH.ANTILLES
Port of Registry	LEER, Willemstad / N.A.
Class	Germanischer Lloyd +100 A5 E "Container Ship" Solas II-2 Reg. 54 +MC E AUT
Builders	Stocznia Gdynia JSC
LOA/LBP	194,06 m / 181,76 m
B (mld)	28,20 m
D (mld)	16,80 m
Design Draught	9,70 m
Scantling Draught	11,517 m DISPL. 39.700 tons DW 29.240 tons
Container Draught	10,50 m
Light Ship	10.460 tons
Deadweight	abt. 29.240 ts on scantling draught of 11,52 m abt. 21.400 ts on design draught of 9,70 m
Accomodation	19 + 4 + 4 + 1 = 28 in total
Tonnage	International Gross abt. 23.722 BRZ Net abt. 9.843 BRZ
Main Engine	B & W 6L 70 MC developing 17.200 kW at 108 rpm The engine is equipped for pier to pier operation on 600 cst fuel.
Bow Thruster	1 x 900 kW giving abt. 15.0 tns thrust
Propeller	Fixed pitch, medium screw average propeller = 6.80 m Pm = 6120 mm Weight=31.500 kg
Diesel Generators	2 x 8 cyl + 1 x 6 cyl Wärtsila Vasa R 20 , 900 rpm Total 4065 kVA 450V/60 Hz Unifuel as main engine Idle port consumption about 2.0 ts /day

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Cruising Range	abt. 16.000 nm
Performance	<p>Min. constant revs = 102 rpm/min. Depending on ME/Load needed following consumption/speeds are possible :</p> <p>20.0 KN ---- 56.0 ts / day HFO 20.5 KN ---- 65.0 ts / day HFO 21.0 KN ---- 68.0 ts / day HFO</p>
Service Speed	21,0 knots / DRFT 10.50 m / 90% MCR / 15% sea margin / DWT 25.400 tons
Communications	<p>Full satellite communications incl. telephone, telex and facsimile. And HSD Transfer / E-Mail, Internet access. The installation meets the requirements of the Global Maritime Distress and Safety system.</p>
Bridge	Equipped for "ONE MAN BRIDGE" operation NAV-0 C.
Container Intake	1835 TEU
Cargo Flexibility	<p>The vessel is designed to accommodate containers of following dimensions.</p> <p>20' containers 20' x 8'0" x 8'6" or 20'c x 8'0" x 9'6" 40' containers 40' x 8'0" x 8'6" or 20' x 8'0" x 9'6" 45' containers 45' x 8'0" x 9'6" 49' containers 49' x 8'0" x 9'6"</p> <p>All locations are designed for 40' or 20' units. Hatches 1B, 2A, 4A, 4B are arranged for oversized units of 45' and 49' on deck.</p>
Reefer Plugs	<p>Total :</p> <p>325 a 8 KW thereof 123 a 8 KW in hold 203 a 14 KW on deck</p> <p>Each is capable of supplying any type of 'integral' reefer unit found in the market. All positions are suitable for 40' units.</p> <p>A "PC" monitoring system Bidirectional (L + S) and log are installed in the shipoffice with an alarm on the bridge.</p>
Cargo Acceptance	<p>Hold 1A : IMO cargoes 1-9 as per SOLAS-Ch. VII Hold 1B - 4B : IMO cargoes 2-8 as per SOLAS-Ch. VII (except bay adjacent to ER bulkhead)</p>

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Cargo Holds

9 cargo holds dimensioned according to standard container dimensions for maximum container intake. The sides of all cargo holds are flush with the hatch coamings.

Hold NO. 1A+B
Lenght 1 x 40' or 2 x 20'
Breadth 7 x 8',0" maximum
Depth 4 x 9'6", 5 x 8'6"

Hold NO. 2A+B
Lenght 1 x 40' or 2 x 20'
Breadth 9 x 8',0" maximum
Depth 5 x 9'6", 6 x 8'6"

Hold NO. 2C
Lenght 1 x 40' or 2 x 20'
Breadth 9 x 8',0" maximum
Depth 5 x 9'6", 6 x 8'6"

Hold NO. 3A+B
Lenght 1 x 40' or 2 x 20'
Breadth 9 x 8',0" maximum
Depth 5 x 9'6", 6 x 8'6"

Hold NO. 4A+B
Lenght 1 x 40' or 2 x 20'
Breadth 9 x 8',0" maximum
Depth 5 x 9'6", 6 x 8'6"

Homogeneous Load

1620 TEU (12 tons SGB criteria)
1392 TEU (14 tons SGB criteria)
1350 TEU (16 tons SGB criteria)
1250 TEU (18 tons SGB criteria)
1180 TEU (20 tons SGB criteria)
to be finally confirmed when commissioned

Max. Stack Load

In holds

FEU 180 tons / TEU 144 tons
6 layers of containers 8'06" hight (except NO 1A + 1B)
or 2 x 9'06" - 4 x 8'06"

On poop deck

FEU 100 tons / TEU 80

On hatch covers

NO 1 A : FEU 90 tons / TEU 60 tons
NO 1 B - 4B : FEU 118 tons / TEU 80 tons
45' / 48' 100 tons

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Hatch Covers

Supported pontoons subdivided longitudinally, 2 times per hatch.
Hatch sealing arrangement permits handling of pontoons independent of adjacent pontoons thereby avoiding requirements for sequential loading and unloading.

Twistlock foundation are welded to the hatch covers (110 mm), otherwise the covers are flush. Container lashing is by American twistlocks (semiautom.) and lashrods on lash bridges. The vessel has sufficient fittings and lashings on board for securing a full cargo of containers.

Maximum pontoon weight 35 tons mid. loose lashing material.

Pontoon size (in mtrs)

Ps	C	Sb
No 1 hatch 9,35 x 13,7	-	9,35 x 13,7
No 2-9 hatch 8 x 13,7	8 x 13,7	8 x 13,7

Hatch Sizes

No. 1 ---- 12.80 x 18.50 / 13.20 m

No. 2-9 -- 12.80 x 23.60 1620 TEU (12 tons SGB criteria)

Hold Ventilation

1A: 6 airchanges per hour
2A+B+C 4A+B: 12 airchanges per hour
all other holds: 2 airchanges per hour

Cargo Gear

3 x 45 tons SWL
electro hydraulic driven
slewing, lifting jib. cargo cranes

Outreach:

Crane No1 - 29 m
Crane No2 - 30 m
Crane No3 - 30 m

Location:

Crane No1 - Hatch No. 1+2
Crane No2 - Hatch No. 2+3
Crane No3 - Hatch No. 4+Poop

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Container Stowage

Theoret. Intake	Poop	Hatch 4B	Hatch 4A	Hatch 3B	Hatch 3A	Hatch 2C	Hatch 2B	Hatch 2A	Hatch 1B	Hatch 1A	Total
on deck											
49'	-	16	-	16	-	15	-	12	-	1	60
45'	-	32	32	32	32	32	-	24	24	-	208
40'	70	64	64	55	55	55	55	44	43	18	523
20'	140	128	128	119	110	104	110	88	87	36	1055
in hold											
40'	-	42	50	52	52	52	48	40	23	15	374
20'	-	6	2	-	-	-	4	6	4	10	32
20'	-	-0	102	104	104	104	100	86	50	40	780 (1835)

Container capacity on deck

type of container storage version	20'	40'	45'	49'
20'	1055	-	-	-
40'	-	523	-	-
45'	-	315	208	-
49'	-	463	-	60

Contact

ALPHA SHIP GmbH
 Domshof 14/15
 D-28195 Bremen
 Germany
 Phone +49 (421) 17398-0
 Fax +49 (421) 17398-99
 eMail bremen@alphaship.de