

CSBC No.1 -3200hp Tug

Date : Nov 10, 2022
Rev. 10

MAIN PARTICULARS

LENGTH (O.A.):	32.83 M
BREADTH (MLD.):	9.52 M
DEPTH (MLD.):	4.30 M
DESIGN DRAFT (MLD.):	3.30 M
GROSS TONNAGE:	270 MT
NET TONNAGE:	68 MT
COMPLEMENT:	20 P
SERVICESPEED : AT DESIGN DRAFT	13 KNOT
SERVICE AREA :	COASTING
MAIN DIESEL ENGINE (DAIHATSU DS-26) : MCR 1600 hp x 730 RPM	2 SETS
PROPELLER (IHI DUCKPEELLER DP 40) : CONTROLLABLE PITCH	2 SETS
GENERATOR: (GM) 90KW x 440V x 60HZ	2 SETS
BOLLARD PULL:	47 TONS

FLAG/PORT REGISTRY :

R.O.C./KAOHSIUNG

CALL SIGN:

BR3668

OFFICIAL NO:

006020

SHIPYARD/ YEAR :

CSBC/ 1977.11

HYDRAULIC WINDLESS/WINCH

1 SET

ANCHOR

2 SETS



台灣國際造船股份有限公司
CSBC CORPORATION, TAIWAN

3, Jhonggang Rd, Siaogang Dist. Kaohsiung 81234, Taiwan R.O.C.
Tel.: +886-7-805-9888 EXT 3711 Fax: +886-7-803-4649
Email: 182document@csbcnet.com.tw <http://www.csbcnet.com.tw>

CSBC NO.5

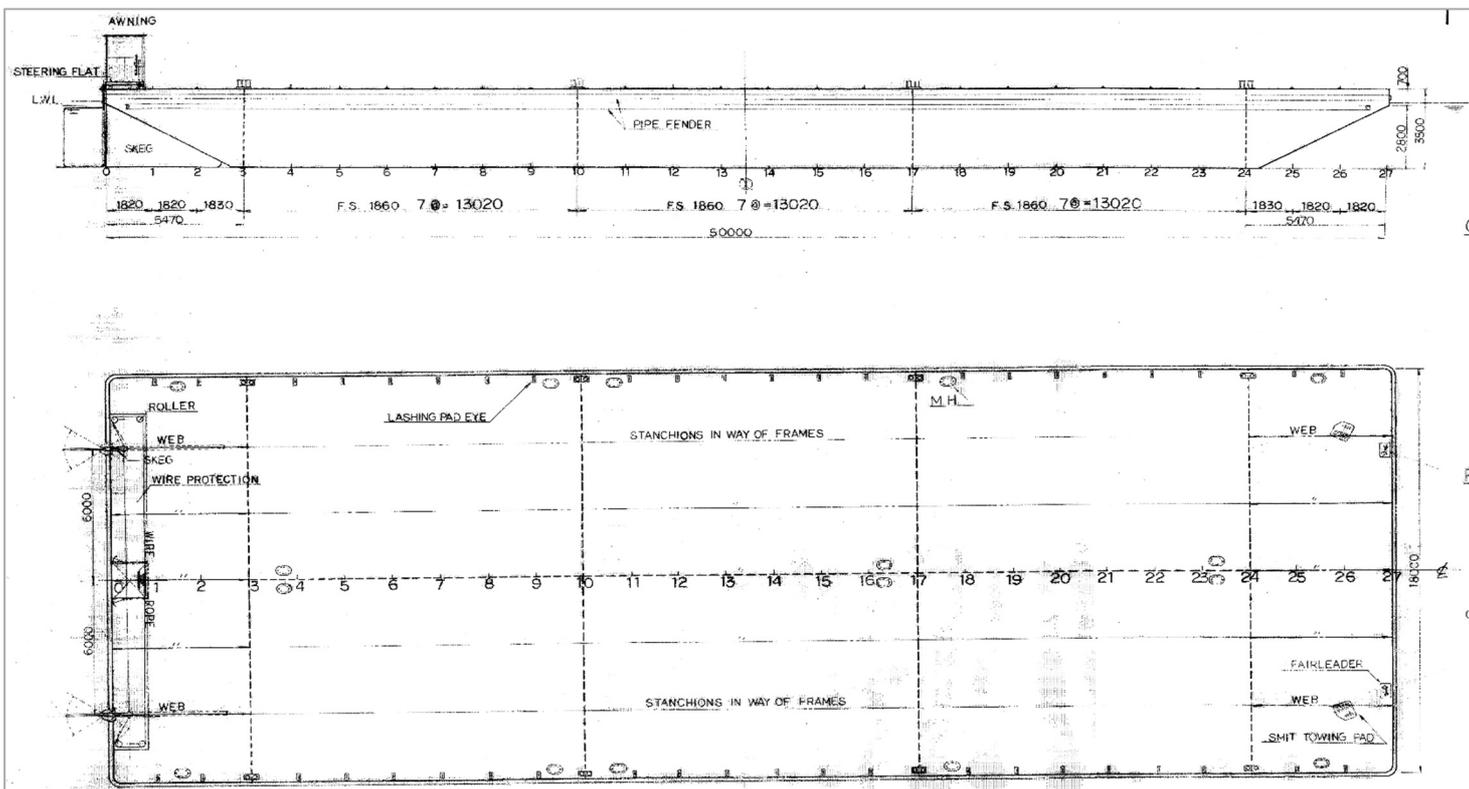
GENERAL

Flag/Port of Registry	Republic of China/Kaohsiung
Certificate	MOTC
Length (O.A.)	50.00 m
Breadth (MLD.)	18.00 m
Depth (MLD.)	3.50 m
Design draft (MLD.)	2.91 m
Scantling draft (MLD.)	2.91 m
GRT/NT	886/886



DECK

Deadweight	Abt. 2149 MT
Deck area	Abt. 900 m ²
Deck strength	3.7 MT/m ² at midship 3.5 MT/m ² at ends



CSBC NO. 11 / 12

ASD Tug / CR Certificate / 5200 HP / BP 64 MT



MAIN PARTICULARS	
Flag / Port of Registry	Republic of China / Kaohsiung
Class	CR
Length overall	38.10 M
Length BP	35.24 M
Breadth moulded	11.00 M
Depth moulded	5.00 M
Design draft moulded	3.90 M
Deadweight at design draft	230 MT
Scantling draft moulded	4.25 M
GRT	499
Bollard pull	64.0 MT
Service speed, MCR at design draft MCR 2,700hp x	12.00 kts

FUEL OIL CONSUMPTION	
FOC of M/E at MCR based on LCV	10,200 kcal/kg abt. 18.3 MT/D

ENDURANCE	
At design speed and MCR of M/E	abt. 1,400 NM

TANK CAPACITY	
Marine diesel oil	abt. 95 M ³
Lubricated oil	abt. 10 M ³
Fresh water	abt. 48 M ³
Ballast	abt. 50 M ³

ACCOMMODATION	
Berths	13 persons

MAIN ENGINE	
NIIGATA 8L28HX	2 sets
MCR	2,700 hp x 750 rpm
REDUCTION GEAR RATIO	3.099

POWER EQUIPMENT	
104 kW Diesel generator	3 sets

ANCHOR/TOWING WINCH	
Hydraulic windlass/winch	
Windlass	3 sets
Towing winch	1 set

PROPELLER UNIT	
NIIGATA ZP-41:	2 sets

CSBC NO. 15

CR&NK Certificate, L/B/D(m) : 140/41/8

Cargo area : 130 x 41 m², Deadweight : 23,000 MT

Deck load : 20 MT/m², Ballast Pump : 4 x 1500 m³/hr

MAIN PARTICULARS 主要規格

Owner 船東	CSBC CORPORATION, TAIWAN
Classification 船級社	CR CLASS, NK CLASS
Flag / Port of Registry 船旗/船籍港	Republic of China / Kaohsiung
Length overall 船長	140.00 M
Breadth Moulded 船寬	41.00 M
Depth Moulded 船深	8.00 M
Design Draft 設計吃水	5.50 M
Scantling Draft 最大吃水	7.10 M
Deadweight 設計載重 (on 5.50m draft)	23,000 MT
Deadweight 最大載重 (on 7.10m draft)	32,000 MT

LOAD CAPACITY 載重能力

Cargo area 甲板面積	5330 m ²
Deadweight 設計載重	23,000 MT at draft 5.5m
Deck load 甲板單位荷重	20 MT/m ²

DESIGN FEATURE 設計特徵

本輪為全域全時段的設計可24小時裝卸貨物，適合高雄港、基隆港、台中港和台北港等台灣各大港口作業，壓載調整能力可滿足在6M潮差變化下保持甲板與碼頭齊平。

Consider the tidal difference (Max. 6 meters) from each harbor in Taiwan (Kaohsiung, Keelung, Taichung and Taipei), the barge could be used to execute loading work at any time.

裝貨甲板強度達20 MT/m²，可配合艙、側、吊裝等多元裝卸貨方式。

The deck strength (20 MT/m²) is enhanced for different loading plan, e.g., load on from the stern, side, by lifting or by SPMT.

適合國際航線需求，並配備低硫環保發電機(NOx II)與環保壓艙水處理系統。

Ocean going design and equipped green power plant with low sulfur fuel and NOx II emission, also equipped ballast water treatment system for protecting the ocean.



本駁船可同時裝載3座底部截面尺寸為30公尺 x 30公尺、高度約80公尺、每支重約1,200噸的桁架式風機水下基礎，總重達約4,000噸左右。

The BARGE could be used to load on 3 set of WTG foundations (footprint 30m x 30m, height 80m, total 4,000 MT).



本駁船可同時裝載一座整套600萬瓩離岸變電站，包含3,500噸水下桁架基礎、3,400噸變電站本體與300噸的基樁四支。

The BARGE could be used to load on one whole set 600MW offshore substation including FDN of the substation (3,500MT), topside (3,400MT) and 4 pieces of pinpiles (300 MT/pc) at the same time.



DECK MACHINERY & EQUIPMENT 甲板機具&設備

Ballast Pump 壓載泵	4 x 1500 m ³ /hr
Windlass / Mooring winch 兼用錨/絞纜機	2 sets, 10 MT
Mooring winch 專用絞纜機	3 sets, 10 MT x 12 m/min.
D/G 發電機	2x 400 kW x 1800 rpm (Tier II)
Ballast water treatment system 壓艙水處理系統	1500 m ³ /hr

CSBC NO.16 (TITAN 浩克輪)

AHTS / CR&ABS Certificate / 12,000BHP / BP 147MT / DPS-2



MAIN PARTICULARS 主要資料	
Owner 船東	CSBC CORPORATION, TAIWAN
Type of Vessel 船型	Offshore Support Vessel
Call Sign 呼號	BHKV
Navigation Limit 可行駛海域	Unrestricted
Classification 船級社	CR CLASS, ABS CLASS
Notation 船級符號	Towing Vessel, (Fire Fighting Capability), AH, Offshore Support Vessel, AMS, ACCU, DPS-2
GRT/NRT 總噸位/淨噸位	3511/1053
Ship Number 船舶編號	016731
IMO Number IMO 號碼	9559030
MMSI	416080000
Flag / Port of Registry 船旗/船籍港	Republic of China / Kaohsiung
Horse Power 馬力 Max	2 x 6,030 BHP
Bollard Pull 拉力	147MT (max attained 157.6MT)
Cruising speed 航行速度	10 Knots

Deck Machinery 甲板器材

Two (2) sets electro-hydraulic capstans.
Two (2) units electro-hydraulic Tugger Winch.
Two (2) units electro-hydraulic Storage Reel.
One (1) set of KARM Fork and Towing Pins consisting of one set Towing pin dia 450mm with flaps for horizontal locking for ships with a bollard pull up to 300ton.
Astern roller of 4500 mm long by Ø2300/Ø2500 mm SWL 450 tons.
One (1) Crane : 10 Ton @ 8m, 7 Ton @ 11.48m , 5 Ton @ 15m.

Fuel Consumption 耗油率	
Max Speed 最高速度	1850 Lt/Hr
Generator 發電機	120 Lt/Hr

Propulsion Machinery 動力裝置

Main Engines 主機	2 x MAK of 6030 BHP@ 600 rpm
Marine Gearbox 齒輪箱	2 x Reintjes
Propulsion 推進	2 x BergCPP package – 4 Blades
Bow Thruster 艏推進器	2 x 10MT (1676BHP) BERG 650kW E-motor driven
Stern Thruster 艉推進器	1 x 10 tonnes BERG 650kW e-motor driven
Dynamic Positioning 動態定位系統	DP2 type Kongsberg

Main Characteristics 主要資料	
Length overall 船長	76.00 M
Breadth Moulded 船寬	18.50 M
Depth Moulded 船深	8.00 M
Max Draft 最高吃水	6.00 M
Deck Strength 甲板承重力	7.5 MT/SqM
Clear Deck space 甲板空間	580 SqM
Cargo 甲板可承載貨物噸位	800 MT
Deadweight 載重噸位	2900 MT

Navigation & Communication Equipment 通訊器材

GMDSS	Area 3
GyroCompass 陀螺羅經	1 x Gyrostar II
Radar 雷達	2 x Furuno FR 1510
Echo sounder 測深儀	1 x Furuno FE 700
SART	2 x Mc Murdo RT-9
EPIRB	1 x SaracomEB-10
Navtex Receiver	1 x Furuno NX-500
Autopilot 自動航行	1 x RaytheonNP-60
Weather Fax 氣象傳真	1 x Furuno FAX-207
Speed Log 速度記錄儀	1 x Furuno DS-80
GPS Plotter GPS 繪圖儀	1 x Furuno GP-90
Satellite Internet 衛星網路	1 x Thuraya Sat Internet

Capacity 容量	
Fuel Oil 燃油	1,300 cum
Fresh / Portable Water 飲用水	700 cum
Drill Water 鑽井水	900 cum
Liquid Mud 液體污泥	800 cum
Dry Bulk 乾貨	310 cum
Foam 泡沫	10 cum
Detergent 清潔劑	10 cum
Base Oil / Brine 基油/鹼水	140 cum
Bilge Holding Tank 黑水	10 cum
Dirty Bilge Tank 黑油	11 cum

Accommodation 住宿

Fully air conditioning total 46 共46鋪位
6 x 1 berth cabin 單人房6間
20 x 2 berth cabins 雙人房20間
1 x Sickbay & 1 x Prayer Room 1間病房以及1間祈禱室

Auxiliaries 發電機	
2 x CAT 425eKWeach	
2 x shaft generator of 2300 KW each	
1 x CAT 72KW emergency genset	

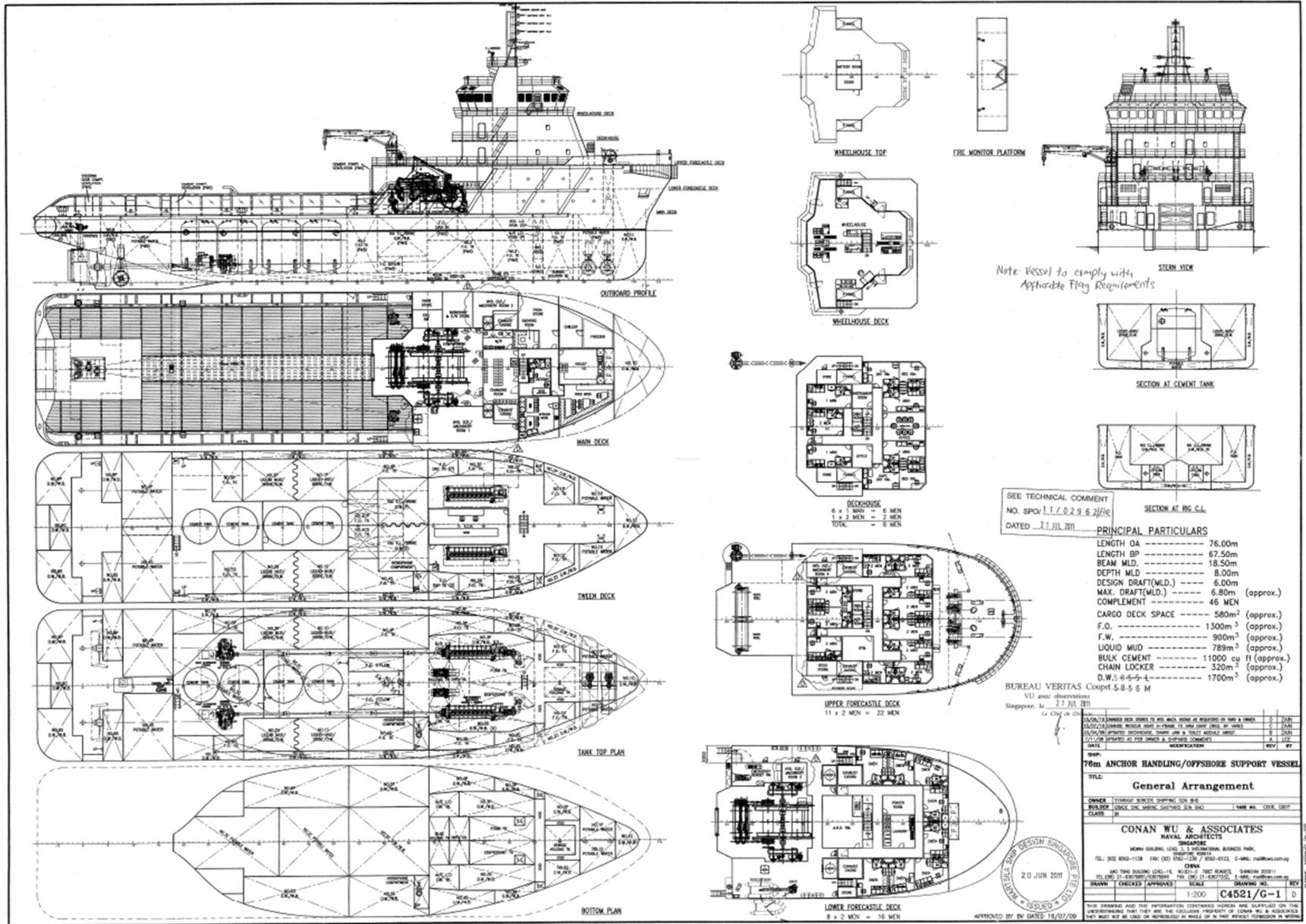
Fire Fighting 滅火能力	FIFI 1
Fire Pumps 滅火泵	Fire Pumps 1500m3/hr at 14 bar Jason/Aker
Fire Monitor 滅火噴槍	Fire Monitor 1200m3/hr at 12 bar& 120mthrow length
Life Saving Appliances As per SOLAS 74/78, Port of	As per SOLAS 74/78, Port of Registry and Classification's requirements.

Auxiliaries 發電機	
One (1) unit electro-hydraulic anchor windlass mooring winch. The hydraulic will consist of two gypsies and two mooring drums. Both the gypsies and mooring drums will be operated by manual jaw clutches. It is driven by high torque low speed hydraulic motor through a single stage of spur gear reduction housed in totally enclosed oil-bath gearbox.	

Other Equipment 其他設備

Life Rafts 救生筏	6 x 25 men
Rescue Boat 救援艇	1 x 6 men rigid inflatable c/w davit & 40 HP outboard engine.
Compressor 空氣壓縮機	1 x BA recharging compressor
Gas Detector system 氣體檢測系統	5HZS & Hydrocarbon sensors

Anchor-Handling/Towing 錨定裝置/拖船工具	
One (1) set electro-hydraulic low pressure double drum towing / anchor handling winch in waterfall arrangement.	



SEE TECHNICAL COMMENT
 NO. SPOV.1.1.2.2.9.6.2/FIR
 DATED ...21 JUL 11

PRINCIPAL PARTICULARS

LENGTH OA	76.00m
LENGTH BP	67.50m
BEAM MLD.	18.50m
DEPTH MLD.	8.00m
DESIGN DRAFT(MLD.)	6.00m
MAX. DRAFT(MLD.)	6.80m (approx.)
COMPLEMENT	46 MEN
CARGO DECK SPACE	580m ² (approx.)
F.O.	1300m ³ (approx.)
F.W.	900m ³ (approx.)
LIQUID MUD	785m ³ (approx.)
BULK CEMENT	11000 cu ft (approx.)
CHAIN LOCKER	320m ³ (approx.)
D.W.S. 0-5-4	1700m ³ (approx.)

BUREAU VERITAS Coupel 5-8-5 G
 VU 2000 APPROVED
 Singapore, le 21 JUL 11
 Le Chef de Département

NO. 1	OWNER	SHANGHAI SHIP DESIGN SINGAPORE	REV	01
NO. 2	DESIGNER	CONAN WU & ASSOCIATES	REV	02
NO. 3	CHECKER	CONAN WU & ASSOCIATES	REV	03
NO. 4	APPROVED	CONAN WU & ASSOCIATES	REV	04
NO. 5	ISSUED	CONAN WU & ASSOCIATES	REV	05

76m ANCHOR HANDLING/OFFSHORE SUPPORT VESSEL

TEL: **General Arrangement**

OWNER: SHANGHAI SHIP DESIGN SINGAPORE
 DESIGNER: CONAN WU & ASSOCIATES
 CLASS: **CONAN WU & ASSOCIATES**
 NAVAL ARCHITECTS
 SINGAPORE
 1000 NORTH BRIDGE ROAD, #05-01/02/03/04/05/06/07/08/09/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57/58/59/60/61/62/63/64/65/66/67/68/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99/100
 TEL: 352 8500-1138 FAX: (65) 6342-7538 / 6342-4121 E-MAIL: info@conanwu.com.sg
 CHINA
 AND THE BUILDING LEVELS, MOSTLY 1:100 SCALE, DRAWING NO. 0011
 TEL: 352 8500-1138 FAX: (65) 6342-7538 E-MAIL: info@conanwu.com.sg
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C4521/G-1 D

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