

Canadian Solar EMEA GmbH, Landsberger Straße 94, 80339 Munich, Germany

ALUMERO
Systematic Solutions GmbH
Sonnenweg 1-2,
5164 Seeham
Austria

No. TS20179071

April 7th, 2017

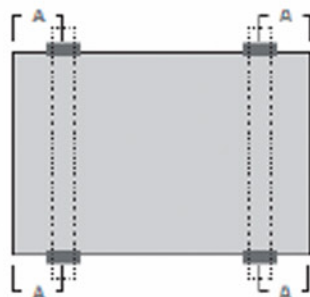
Regard: Emailing: Freigabe Alumero Laminatklemme für Ihr Dymond Modul

Dear Mr. Rosenstatter,

Thank you for your inquiry about our product. We hereby confirm that the usage of your preferred mounting system (Appendix 1 to 3) in combination use with our CS6X-M-FG (Appendix 4) and CS6X-P-FG (Appendix 5) modules is approved for a maximum uplift load and down force load of 690 Pa. The following conditions are binding:

1. The clamp (Appendix 1) can be installed at distance $A = (440 \pm 20)$ mm, as shown in illustration A
2. The clamp (Appendix 2) can be installed at distance $A = (420-497)$ mm, as shown in illustration A

Illustration A



Design load and safety factor will be determined by the racking supplier or professional engineer.

Please refer to our PV Module Installation Manual, Appendix 7, for the mounting methods that are currently approved. The PV system must be designed by a registered professional engineer. The designs and procedures must comply with industry standards of photovoltaic system and must always take module specifications into consideration. System designers and installers are solely responsible for the proper design of the supporting structure.

CANADIAN SOLAR EMEA GMBH

Landsberger Straße 94, 80339 Munich, Germany
Sitz / Registered Office: Munich, Registergericht / Registry Court: District Court Munich HRB 181 167,
Geschäftsführung / General Manager: Susanne Pflug
P +49 89 5199 6890, M sales.emea@canadiansolar.com, www.canadiansolar.com

Appendix 1: 800323 art 14632.pdf

Appendix 2: 800323 art 14723.pdf

Appendix 3: P195.structure.clamp.pdf

Appendix 4: Canadian_solar-Datasheet-Dymond-CS6X-M-FG-v5.531_EN.pdf

Appendix 5: Canadian_Solar-Datasheet-Dymond-CS6X-P-FG-v5.531_EN.pdf

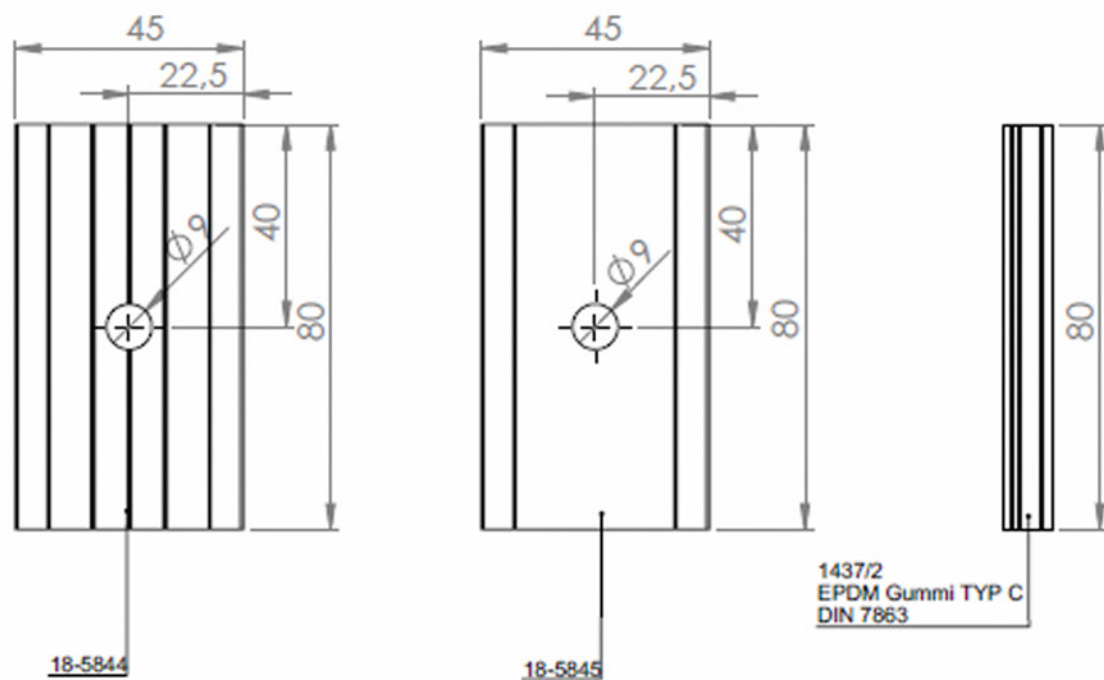
Appendix 6: Dymond_Module_Installation_Manual_en_v1.6.pdf

Sincerely,

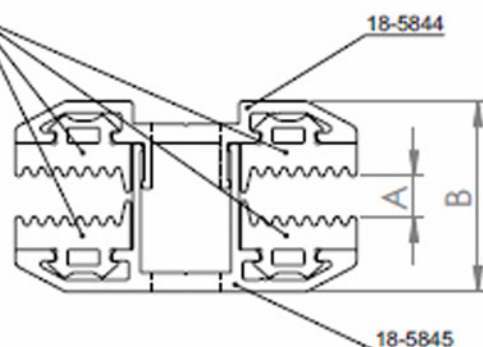
Athanasios Michailidis

Technical Engineering Coordinator, EMEA

Acting on behalf of the respective selling Canadian Solar entity



1437/2
EPDM Gummi TYP C
DIN 7863



	min.	max.
A	5,3	9,2
B	25,1	29

Uwagi/Bemerkungen:



Tel. + 48-32-346-17-60
ul. Kluczborska 29
41-508 Chorzów
e-mail: alumero@alumero.pl

Wersję elektroniczną sporządził/
Elektronische Form erstellte von:

mgr inż. Radosław Gajos

Nr rys./Zg.-Nr.:

800323 Art.Nr.: 14632

Format/Format:

A4

Rysunek zatwierdził/
Zeichnung freigegeben:

mgr inż. Mirosław Domagalski

Nazwa rysunku/Benennung:

Alumero Laminate Mittelklemme CLICK 6.8 L=80

Indeks/Index:

B

Data/Datum:

2014-03-05

Waga/Gewicht:

0,086 kg/Stk

Wykończenie/Bearbeitung:

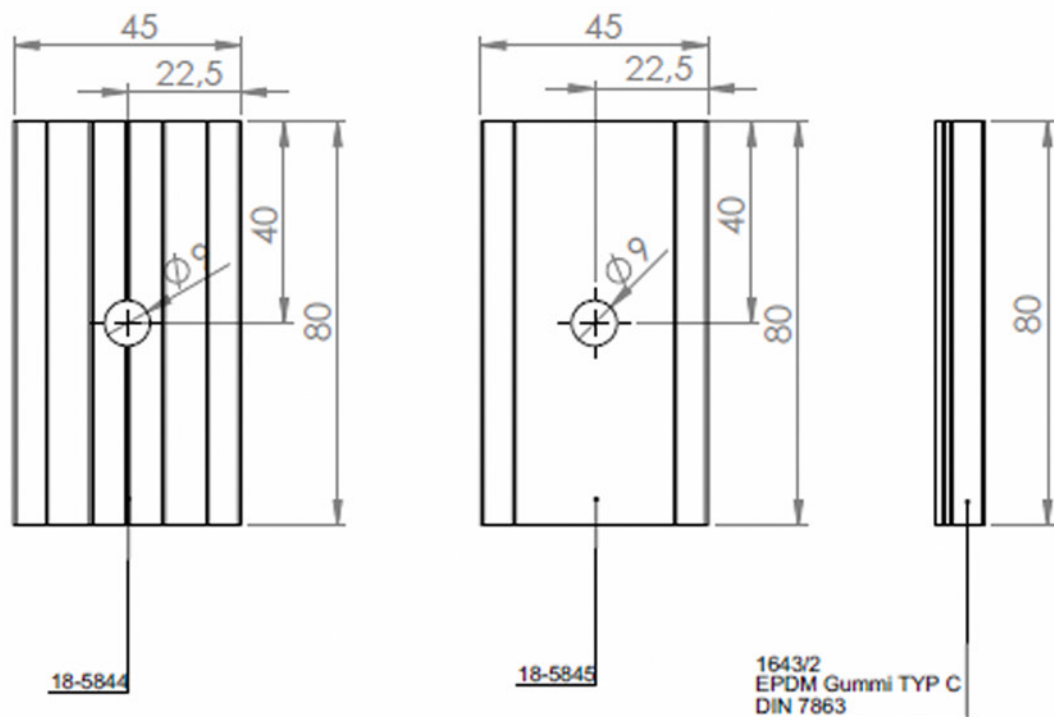
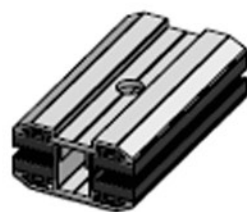
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Materiał/Material:

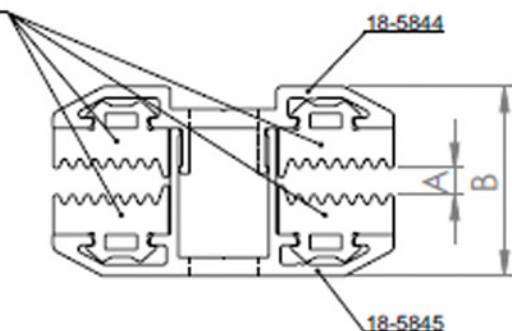
EN AW 6060/T5;
EPDM 70 ± 5 % Sha

Skala/Maßstab:

1:1



1643/2
EPDM Gummi TYP C
DIN 7863



	min.	max.
A	3,5	7,4
B	25,1	29

Uwagi/Bemerkungen:



Tel. + 48-32-346-17-60
ul. Kluczborska 29
41-508 Chorzów
e-mail: alumero@alumero.pl

Metal Components

Wersję elektroniczną sporządził/
Elektronische Form erstellte von:

mgr inż. Mirosław Domagański

Nr rys./Zg.-Nr.:

800323 Art.Nr.: 14723

Format/Format:

A4

Rysunek zatwierdził/
Zeichnung freigabener:

Nazwa rysunku/Benennung:

Alumero Laminatmittelklemme CLICK 5.0 L=80

Indeks/Index:

B

Data/Datum:

2015-03-20

Waga/Gewicht:

0,090 kg/Stk

Wykończenia/Bearbeitung:

-

Materiał/Material:

EN AW 6060/T5;
EPDM 70±5°ShA

Skala/Maßstab:

1:1






*Transparent double-glass module can be provided upon request.


DOUBLE-GLASS MODULE

DYMOND CS6X-330 | 335 | 340M-FG

Canadian Solar's Dymond CS6X-M-FG module is a 72 cell double-glass module. By replacing the traditional polymer backsheet with heat-strengthened glass, the Dymond module has a lower annual power degradation than a traditional module and better protection against the elements, making it more reliable and durable during its lifetime.

KEY FEATURES

-  Up to IEC1500 V_{oc} system voltage, saving on BoS costs
-  Minimizes micro-cracks and prevents snail trails
-  20 % more energy generation
-  Suitable for harsh environments, such as coasts, deserts and lakes
-  Fire Class A certified according to IEC 61730-2 / MST 23
-  5400 Pa snow load, 2400 Pa wind load

 **30 years** power output warranty

 **10 years** product warranty on materials and workmanship

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2008 / Quality management system
ISO 14001:2004 / Standards for environmental management system
OHSAS 18001:2007 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730: VDE / CE / MCS / CEC AU / INMETRO
UL 1703: CSA / IEC 61701 ED2: VDE
UL 1703 / IEC 61215 performance: CEC listed (US)
IEC 60068-2-68: SGS / Take-e-way



* As there are different certification requirements in different markets, please contact your local Canadian Solar sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

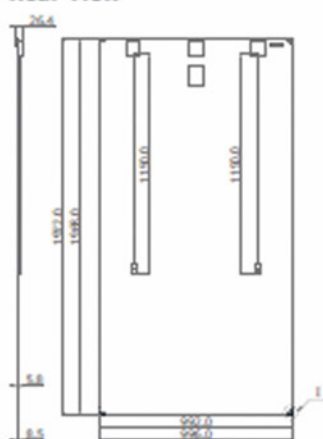
CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. As a leading PV project developer and manufacturer of solar modules with over 17 GW deployed around the world since 2001, Canadian Solar Inc. (NASDAQ: CSIQ) is one of the most bankable solar companies worldwide.

CANADIAN SOLAR INC.

545 Speedvale Avenue West, Guelph, Ontario N1K 1E6, Canada, www.canadiansolar.com, support@canadiansolar.com

ENGINEERING DRAWING (mm)

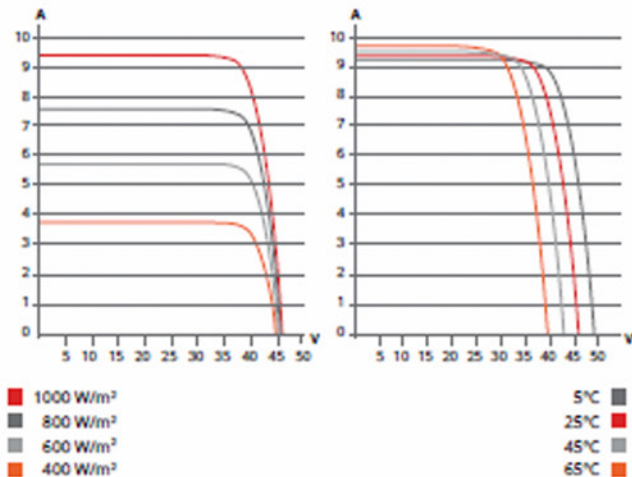
Rear View



Corner Protector Detail



CS6X-335M-FG / I-V CURVES



ELECTRICAL DATA | STC*

CS6X	330M-FG	335M-FG	340M-FG
Nominal Max. Power (Pmax)	330 W	335 W	340 W
Opt. Operating Voltage (Vmp)	37.5 V	37.8 V	37.9 V
Opt. Operating Current (Imp)	8.80 A	8.87 A	8.97 A
Open Circuit Voltage (Voc)	45.9 V	46.1 V	46.2 V
Short Circuit Current (Isc)	9.31 A	9.41 A	9.48 A
Module Efficiency	16.90%	17.16%	17.42%
Operating Temperature	-40°C ~ +85°C		
Max. System Voltage	1500 (IEC) or 1000 V (UL)		
Module Fire Performance	CLASS A (IEC 61730)		
Max. Series Fuse Rating	15 A		
Application Classification	Class A		
Power Tolerance	0 ~ + 5 W		

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL DATA | NOCT*

CS6X	330M-FG	335M-FG	340M-FG
Nominal Max. Power (Pmax)	238 W	242 W	245 W
Opt. Operating Voltage (Vmp)	34.2 V	34.5 V	34.6 V
Opt. Operating Current (Imp)	6.96 A	7.01 A	7.10 A
Open Circuit Voltage (Voc)	42.1 V	42.3 V	42.4 V
Short Circuit Current (Isc)	7.54 A	7.62 A	7.67 A

* Under Nominal Operating Cell Temperature (NOCT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

PERFORMANCE AT LOW IRRADIANCE

Outstanding performance at low irradiance, with an average relative efficiency of 96.5 % for irradiances between 200 W/m² and 1000 W/m² (AM 1.5, 25°C).

The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to on-going innovation, research and product enhancement, Canadian Solar Inc. reserves the right to make any adjustment to the information described herein at any time without notice. Please always obtain the most recent version of the datasheet which shall be duly incorporated into the binding contract made by the parties governing all transactions related to the purchase and sale of the products described herein.

Caution: For professional use only. The installation and handling of PV modules requires professional skills and should only be performed by qualified professionals. Please read the safety and installation instructions before using the modules.

MECHANICAL DATA

Specification	Data
Cell Type	Mono-crystalline, 6 inch
Cell Arrangement	72 (6x12)
Dimensions	1968x992x5.8mm (77.5x39.1x0.23 in) without J-Box and corner protector
(Incl. corner protector)	1972x996x8.5 mm (77.6x39.2x0.33 in) without J-Box
Weight	27.5 kg (60.6 lbs)
Front / Back Glass	2.5 mm heat strengthened glass
Frame	Frameless
J-Box	Split J-Box, IP67, 3 diodes
Cable	4 mm ² (IEC) or 4 mm ² & 12 AWG 1000 V (UL)
Cable Length	1150 mm (45.3 in), 500 mm (19.7 in) (+) and 350 mm (13.8 in) (-) is optional for portrait installation*
Connectors	T4 series or MC4 series or UTX(IEC1500V), T4 series or 05-6 (UL1000V)
Per Pallet	30 pieces, 930kg (2050.3lbs)
Per container (40' HQ)	660 pieces

* The application of this short length cable can only be used in portrait installation (clamping mounting method) systems in which the distance between modules should be less than or equal to 50 mm. In the event the distance between the PV modules to be installed is more than 50 mm, please make sure to consult our technical team for evaluation and advice.

TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.41 % / °C
Temperature Coefficient (Voc)	-0.31 % / °C
Temperature Coefficient (Isc)	0.053 % / °C
Nominal Operating Cell Temperature	45±2 °C

PARTNER SECTION





DOUBLE-GLASS MODULE

DYMOND CS6X-315 | 320 | 325 | 330P-FG


Canadian Solar's Dymond CS6X-P-FG module is a 72 cell double-glass module with an extended power output warranty. By replacing the traditional polymer backsheets with heat-strengthened glass, the Dymond module has a lower annual power degradation than a traditional module and better protection against the elements, making it more reliable and durable during its lifetime.

KEY FEATURES

-  Up to IEC1500 VDC system voltage, saving on BoS costs
-  Minimizes micro-cracks and prevents snail trails
-  21.5 % more energy generation
-  Suitable for harsh environments, such as coasts, deserts and lakes
-  Fire Class A and Type 3 / Type 13 certified according to IEC 61730-2 / MST 23 and UL 1703
-  5400 Pa snow load, 2400 Pa wind load



*Transparent double-glass module can be provided upon request.

 **30 years** power output warranty

 **10 years** product warranty on materials and workmanship

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2008 / Quality management system
ISO 14001:2004 / Standards for environmental management system
OHSAS 18001:2007 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730: VDE / CE / MCS / CEC AU / INMETRO
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UL 1703: CSA / IEC 61701 ED2: VDE / IEC 60068-2-68: SGS
Take-e-way

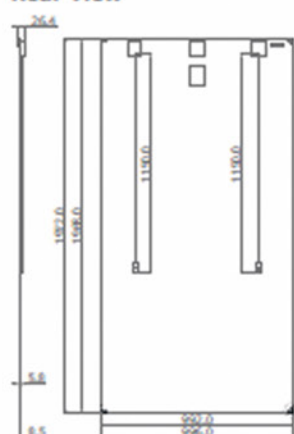


* As there are different certification requirements in different markets, please contact your local Canadian Solar sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

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ENGINEERING DRAWING (mm)

Rear View



Corner Protector Detail



ELECTRICAL DATA | STC*

CS6X	315P-FG	320P-FG	325P-FG	330P-FG
Nominal Max. Power (Pmax)	315 W	320 W	325 W	330 W
Opt. Operating Voltage (Vmp)	36.6 V	36.8 V	37.0 V	37.2 V
Opt. Operating Current (Imp)	8.61 A	8.69 A	8.78 A	8.88 A
Open Circuit Voltage (Voc)	45.1 V	45.3 V	45.5 V	45.6 V
Short Circuit Current (Isc)	9.18 A	9.26 A	9.34 A	9.45 A
Module Efficiency	16.14%	16.39%	16.65%	16.90%
Operating Temperature	-40°C ~ +85°C			
Max. System Voltage	1500 (IEC) or 1000 V (UL)			
Module Fire Performance	Type 3 / Type 13 (UL 1703) or CLASS A (IEC 61730)			
Max. Series Fuse Rating	15 A			
Application Classification	Class A			
Power Tolerance	0 ~ + 5 W			

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL DATA | NOCT*

CS6X	315P-FG	320P-FG	325P-FG	330P-FG
Nominal Max. Power (Pmax)	228 W	232 W	236 W	239 W
Opt. Operating Voltage (Vmp)	33.4 V	33.6 V	33.7 V	33.9 V
Opt. Operating Current (Imp)	6.84 A	6.91 A	6.98 A	7.05 A
Open Circuit Voltage (Voc)	41.5 V	41.6 V	41.8 V	41.9 V
Short Circuit Current (Isc)	7.44 A	7.50 A	7.57 A	7.66 A

* Under Nominal Operating Cell Temperature (NOCT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

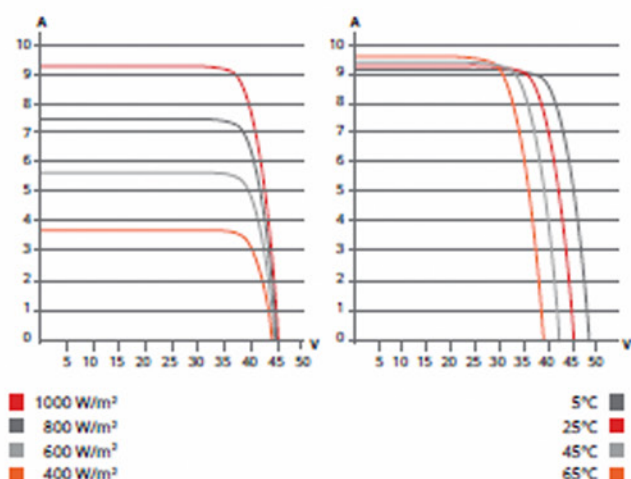
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CS6X-320P-FG / I-V CURVES



MECHANICAL DATA

Specification	Data
Cell Type	Poly-crystalline, 6 inch
Cell Arrangement	72 (6x12)
Dimensions	1968x992x5.8mm (77.5x39.1x0.23 in) without J-Box and corner protector
(Incl. corner protector)	1972x996x8.5 mm (77.6x39.2x0.33 in) without J-Box
Weight	27.5 kg (60.6 lbs)
Front / Back Glass	2.5 mm heat strengthened glass
Frame	Frameless
J-Box	Split J-Box, IP67, 3 diodes
Cable	4 mm ² (IEC) or 4 mm ² & 12 AWG 1000 V (UL)
Cable Length	1150 mm (45.3 in), 500 mm (19.7 in) (+) and 350 mm (13.8 in) (-) is optional for portrait installation*
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Per Pallet	30 pieces, 930 kg (2050.3 lbs)
Per container (40' HQ)	660 pieces

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TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.41 % / °C
Temperature Coefficient (Voc)	-0.31 % / °C
Temperature Coefficient (Isc)	0.053 % / °C
Nominal Operating Cell Temperature	45±2 °C

PARTNER SECTION

