

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0152AE251GAA009

Catalog No: R937

TerraMAX® Cast Iron Motor, 20 & 15 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 1800 & 1500 RPM,
160L Frame, TEFC



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RegalRexnord

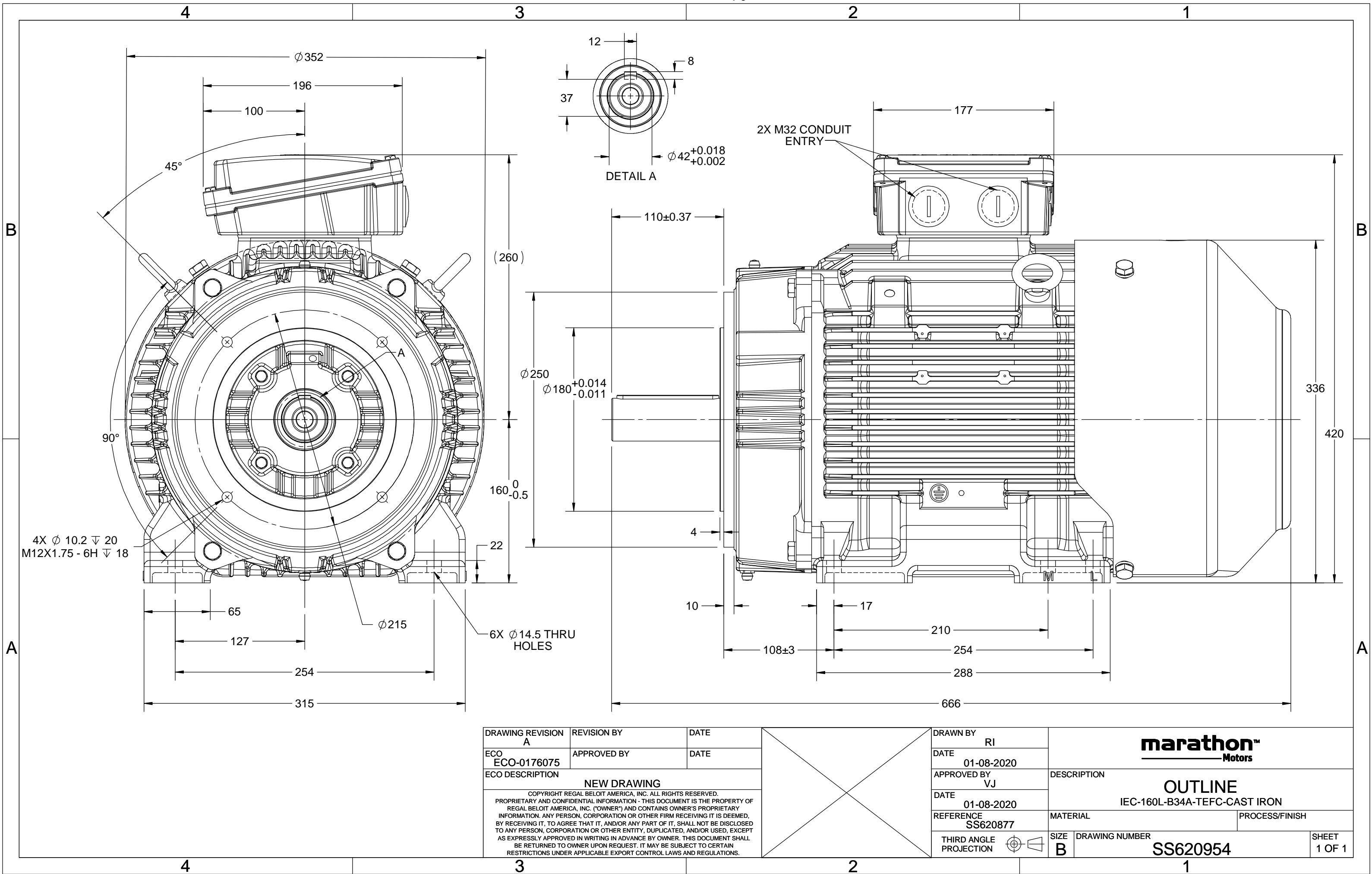
Nameplate Specifications

Phase	3	Output HP	20 & 15 Hp
Output KW	15.0 & 11.0 kW	Voltage	230/460 & 200/400 V
Speed	1775 & 1480 rpm	Service Factor	1.15 & 1.15
Frame	160L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	93 & 91.4 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	50/25.1 & 45.5/22.8 A	Power Factor	81
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	J
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6209
UL	Recognized	CSA	N
CE	Y	IP Code	55
Number of Speeds	1	Efficiency Class	IE3

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	4	Rotation	Reversible
Resistance Main	.49 Ohms	Mounting	B3
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Shaft Diameter	42.000 in
Assembly/Box Mounting	F3	Inverter Load	CONSTANT 2:1/VARIABLE 10:1
Outline Drawing	SS620954	Connection Drawing	8442000715

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DRAWING REVISION
A
 ECO
 ECO-0194685
 ECO DESCRIPTION

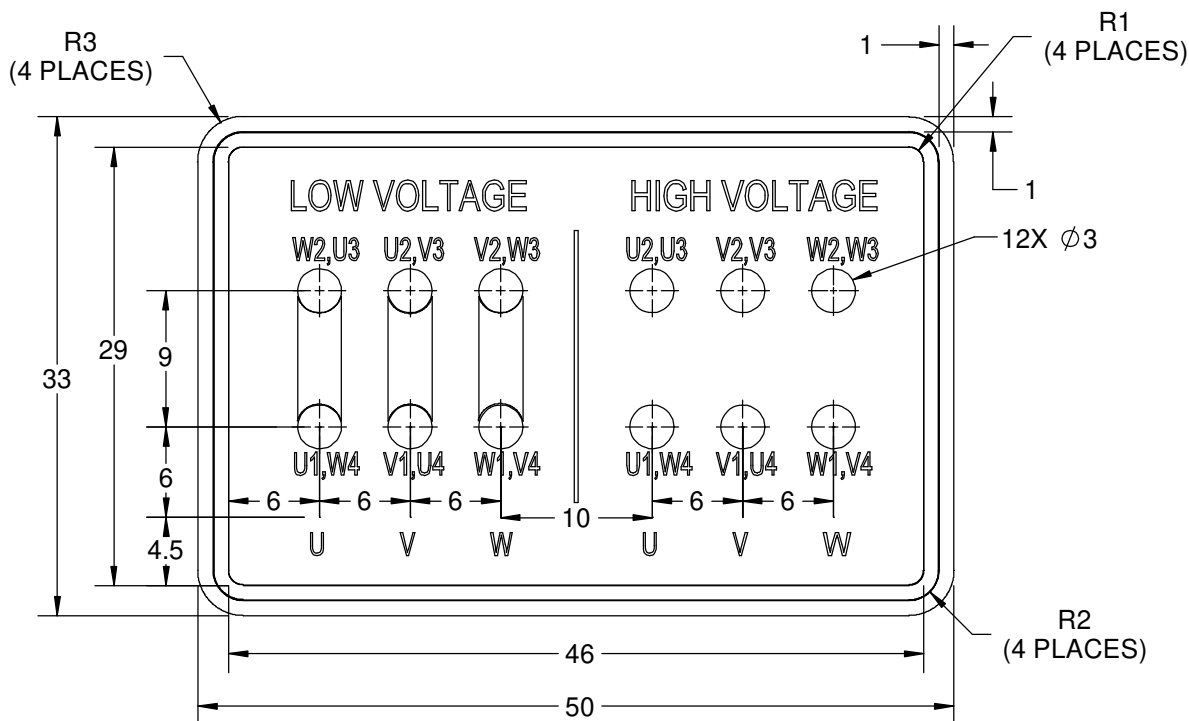
REVISION BY
S.MUDDA
 APPROVED BY
SUMANTA

DATE
 16/11/2020
 DATE
 16/11/2020

NEW DRAWING

GEOMETRIC TOLERANCE

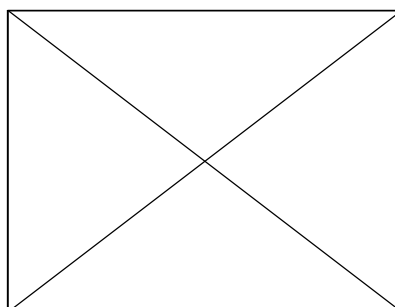
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



NOTES:

1. PRESSURE-SENSITIVE ADHESIVE COATED PAPER ON THE BACK OF SELF-ADHESIVE.
2. AT THE END OF YELLOW, WORDS, SYMBOLS, LETTERS ARE BLACK, BORDER IS BLACK.
3. THE TOLERANCE OF THE LINEAR SIZE OF THE TOLERANCE WITHOUT THE TOLERANCE BY THE TABLE.
4. LEAD TERMINAL MARKINGS FONT SIZE : T1-T12 & U1-U4,V1-V4& W1-W4 OF ARIAL WITH 3mm SIZE
5. OTHER LETTER FONT SIZE SHOULD BE 3.5mm.

8WD.442.2017



DRAWN BY
S.MUDDA
 DATE
 16/11/2020
 APPROVED BY
SUMANTA
 DATE
 16/11/2020
 REFERENCE
 THIRD ANGLE PROJECTION

REGAL™ Regal Beloit America, Inc.
 DESCRIPTION
CONN DIAGRAM-NAMEPLATE
 MATERIAL
 PROCESS/FINISH
 SIZE **A** DRAWING NUMBER **8442000715** SHEET **1 OF 1**



P.O. BOX 8003
WAUSAU, WI 54401-8003
PH. 715-675-3311

DATA VOLTS: 460

CERTIFICATION DATA SHEET

CUSTOMER: _____
ORDER #: _____
CONN. DIAGRAM: 8442000677
OUTLINE: SS620954
WINDING: IE3L1604202 NONE 1
SPEED: _____

CUSTOMER P.O. #: _____
REFERENCE MODEL #: TCA0152AE251GAA009
CAT #: R937
CUSTOMER PART #: _____
MOUNTING: F3

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
20	15.00	1800	1775	160L	TEFC	TCA 160LA04	J	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (* C)	ELEV.(Ft.)
3	60/50	230/460#200/400	50/25.1&45.5/22.8	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	93.0	3/4 LD EFF	93.0	1/2 LD EFF	92.2	GTD EFF	ELECT. TYPE
F.L. PF	81.0	3/4 LD PF	74.0	1/2 LD PF	62.0	92.0	SQ CAGE INV RATED

F.L. TORQUE		LR AMPS @ 460 V		L.R. TORQUE		B.D. TORQUE		F.L. RISE (° C)			
59.2	LB-FT	179		145	LB-FT	245%	189	LB-FT	319%	80	

SOUND PRESSURE @ 3 FT.	SOUND	POWER	ROTOR WK ²	MAX. LOAD WK ²	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
68 dBA	77 dBA		2.86 LB-FT ²	2.86 LB-FT ²	10 SEC.	2	166	KG.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
FT-FLANGE-215	STANDARD	B3	HORIZONTAL	NO	NONE	NO	NONE	BLUE (ENAMEL)

BEARINGS	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT	MATERIAL	FRAME MATERIAL
DE ODE							
BALL BALL	POLYREX EM	STANDARD IEC	NONE	NONE	1045 HOT ROLLED (C-204)		CAST IRON
6309 6209							

THERMOSTATS	PROTECTORS	WDG RTD's	BRG RTD's	THERMISTORS	CONTROL	SPACE	HEATERS
NONE	NOT	NONE	NONE	NONE	FALSE		NA

R1 (ohms/ph)	R2 (ohms/ph)	X1 (ohms/ph)	X2 (ohms/ph)	Xm (ohms/ph)	VIBRATION (in/sec)	FLOAT
0.298	0.156	0.752	0.979	21.940	0.150	ODE

* N O T E S *					INVERTER TORQUE: CONSTANT 2:1/VARIABLE 10:1 INV. HP SPEED RANGE: NONE	
					ENCODER: NONE	
					NONE	
					NONE PPR	

PREPARED BY: _____	BRAKE: NONE	
DATE: 11/27/2020	NONE	NONE
	FT-LB: NA	
	VOLTAGE: NONE	HZ:
FORM: 3531 REV_4 2/27/06	UL: V - LI,ME-INS,CONST UL REC	

REGAL®

Data Sheet									
Date: 4/13/2020		TCA0152AE251GAA009							
Customer: _____		Submittal							
Attention: _____		Data @ 460 V							
Submitted by: _____									
Motor Load Data									
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	12.0	14.1	16.4	20.5	25.1	28.1	30.2	179	
Torque (ft-lb)	0.00	14.6	29.4	44.2	59.2	68.2	74.2	145	
RPM	1800	1794	1788	1782	1775	1,772	1769	0	
Efficiency (%)		88.0	92.2	93.0	93.0	92.5	92.2		
P.F. (%)	5.0	38.0	62.0	74.0	81.0	83.0	84.0	63.4	
Motor Speed Data									
	LR	Pull-Up	BD	Rated	Idle				
Speed (RPM)	0	600	1615	1775	1800				
Current (Amps)	179	170	106	25.1	12.0				
Torque (ft-lb)	145	138	189	59.2	0.00				
Information Block									
HP	20.0								
Sync. RPM	1800								
Frame	160								
Enclosure	TEFC								
Construction	TCA 160LA04								
Voltage	230/460#200/400 V								
Frequency	60 Hz								
Design	N								
LR Code letter	J								
Service Factor	1.15								
Temp Rise @ FL	80 °C								
Duty	CONT								
Ambient	40 °C								
Elevation	3,300 feet								
Rotor/Shaft wk ²	2.86 Lb-Ft ²								
Ref Wdg	IE3L1604202 NONE								
Sound Pressure @ 1M	68 dBA								
VFD Rating	CONSTANT 2:1/VARIABLE 10:1								
Outline Dwg	SS620954								
Conn. Diag	8442000677								
Additional Specifications:									
0									
0									
EQUIV CKT (OHMS / PHASE)									
R1	R2	X1	X2	Xm					
0.2980	0.1560	0.7520	0.9790	21.9400					

Efficiency (%) P.F. (%) Current (Amps)

IEC

Speed -Torque Curve

Torque Amps

EC Declaration of Conformity

The undersigned representing
the manufacturer:

Regal Beloit America
100 East Randolph St.
Wausau, WI 54401

and the authorized representative
established within the Community:

Marathon Electric UK
6F Thistleton Road Ind. Estate
Market Overton
Oakham, Rutland LE15 7PP UK

are committed to providing customers with products that comply with applicable regulations and international protocols to which they are subject, including the requirements of the European Parliament Directive on the Harmonization of the laws relating to electrical equipment designed for use within certain voltage limits (2014/35/EU).

Regal Beloit America declares that the following product(s), to which this declaration relates, are in conformity with the relevant sections of the EC standards listed below.

This statement supersedes any statements previously issued pertaining to the product(s) listed below and is subject to change without notice.

Model No : TCA0152AE251GAA009

(Model No. may contain prefix and/or suffix characters)

Catalog No : R937

Rework No : N/A

Directives :

Low Voltage Directive 2014/35/EU

Harmonized Standards Used :

EN 60034-1: 2010 (IEC 60034-1: 2010)

EN 60034-5: 2001/A1:2007 (IEC 60034-5: 2000/A1:2006)

Authorized Representative:



Michael A. Logsdon
Vice President, Technology

Authorized Representative in the Community:



Julian Clark
Marketing Engineer

Created on 09/01/2022

CE 22