

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0451AE231GAA009

Catalog No: R854

TerraMAX® Cast Iron Motor, 60 & 50 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 3600 & 3000 RPM,
225M Frame, TEFC



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RegalRexnord

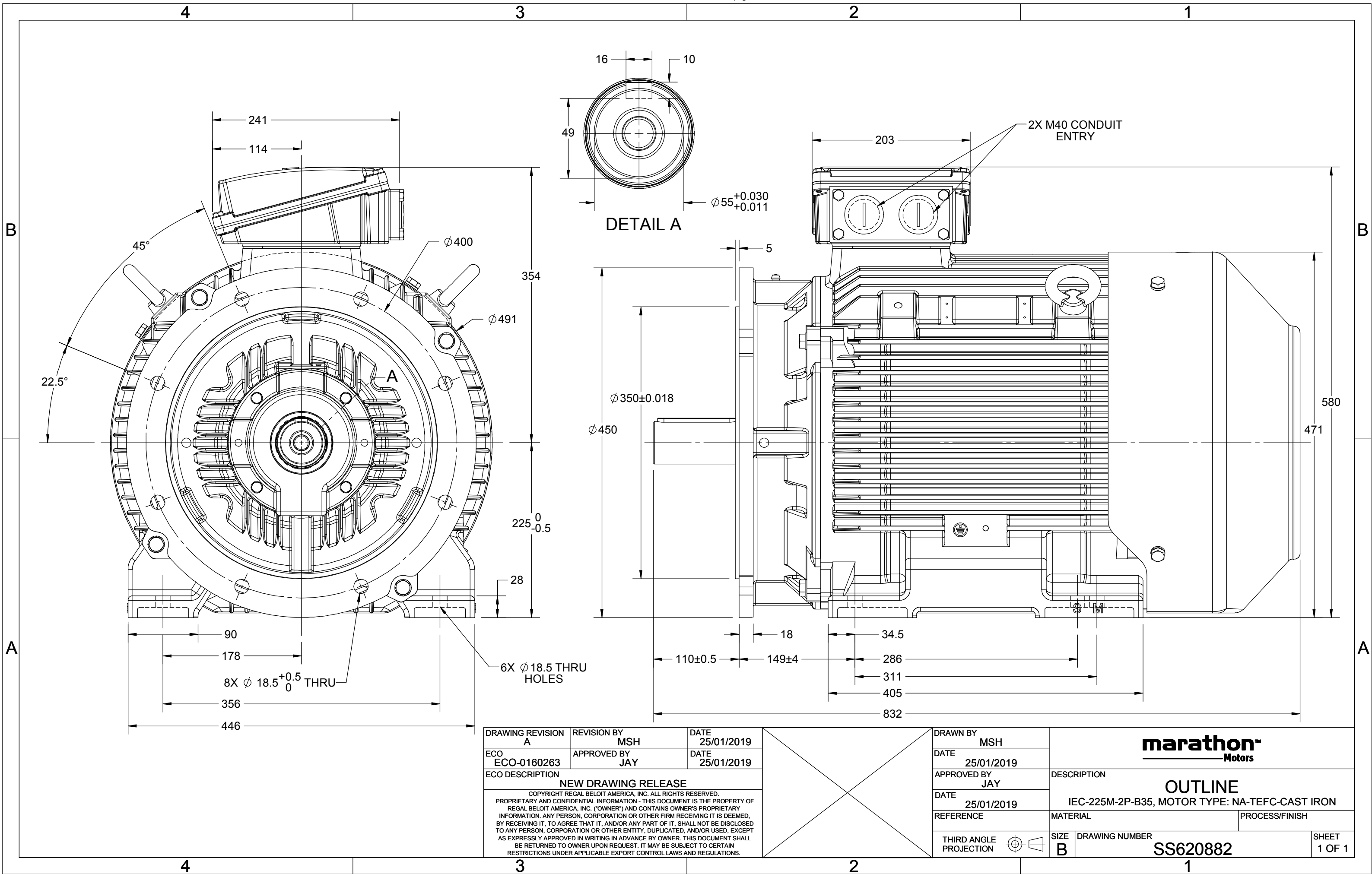
Nameplate Specifications

Phase	3	Output HP	60 & 50 Hp
Output KW	45.0 & 37.0 kW	Voltage	230/460 & 200/400 V
Speed	3575 & 2975 rpm	Service Factor	1.15 & 1.15
Frame	225M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	93.6 & 93.7 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	138/69 & 132/66 A	Power Factor	88
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	G
Drive End Bearing Size	6313	Opp Drive End Bearing Size	6213
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	2	Rotation	Selective Clockwise
Resistance Main	.11 Ohms	Mounting	B3
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Shaft Diameter	55.000 in
Assembly/Box Mounting	F3	Inverter Load	CONSTANT 2:1/VARIABLE 10:1
Connection Drawing	8442000715	Outline Drawing	SS620882

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DRAWING REVISION
A
 ECO
 ECO-0194685
 ECO DESCRIPTION

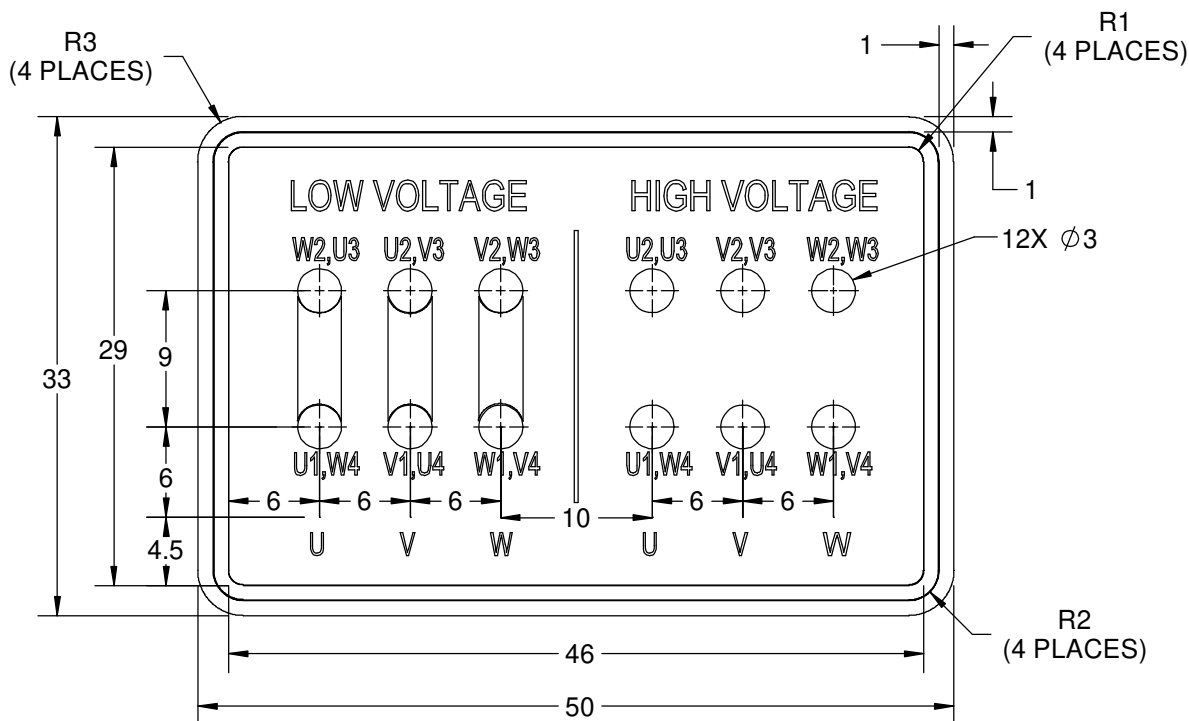
REVISION BY
S.MUDDA
 APPROVED BY
SUMANTA

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

NEW DRAWING

GEOMETRIC TOLERANCE

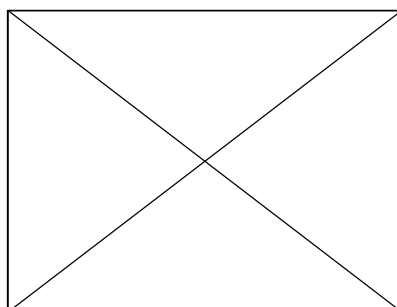
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



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 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: SS620882
WINDING: IE3L2252201 NONE 1
SPEED: _____

CUSTOMER P.O. #: _____
REFERENCE MODEL #: TCA0451AE231GAA009
CAT #: R854
CUSTOMER PART #: _____
MOUNTING: F3

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
60	45	3600	3575	225M	TEFC	TCA 225MA02	G	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (* C)	ELEV.(Ft.)
3	60/50	230/460#200/400	138/69&132/66	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	93.6	3/4 LD EFF	93.6	1/2 LD EFF	92.4	GTD EFF	ELECT. TYPE
F.L. PF	88.0	3/4 LD PF	84.0	1/2 LD PF	77.0	92.6	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (* C)
88.2 LB-FT	448	137 LB-FT	248 LB-FT	80

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK ²	MAX. LOAD WK ²	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
79 dBA	88 dBA	9.3 LB-FT ²	9.3 LB-FT ²	15 SEC.	2	419	KG.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
FF-FLANGE-400	STANDARD	B3	HORIZONTAL	NO	NONE	NO	NONE	BLUE (ENAMEL)

BEARINGS	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE ODE	SG S5-V100	STANDARD IEC	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
BALL BALL						
6313 6213						

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
0.066	0.028	0.303	0.388	11.761	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: _____ DATE: 11/27/2020	BRAKE: NONE NONE NONE FT-LB: NA VOLTAGE: NONE UL: V - LI,ME-INS,CONST UL REC
FORM: 3531 REV_4 2/27/06	HZ: _____

REGAL®

Data Sheet									
Date: 4/9/2020		TCA0451AE231GAA009							
Customer: _____		Submittal							
Attention: _____		Data @ 460 V							
Submitted by: _____									
Motor Load Data									
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	22.2	28.7	39.4	53.4	69.0	78.1	84.9	448	
Torque (ft-lb)	0.00	21.9	43.9	66.0	88.2	102	111	137	
RPM	3600	3593	3587	3580	3575	3568	3565	0	
Efficiency (%)		87.9	92.4	93.6	93.6	93.4	93.2		
P.F. (%)	8.0	56.0	77.0	84.0	88.0	89.0	89.0	63.4	
Motor Speed Data									
	LR	Pull-Up	BD	Rated	Idle				
Speed (RPM)	0	1200	3422	3575	3600				
Current (Amps)	448	426	278	69.0	22.2				
Torque (ft-lb)	137	130	248	88.2	0.00				
Information Block									
HP					60.0				
Sync. RPM					3600				
Frame					225				
Enclosure					TEFC				
Construction					TCA 225MA02				
Voltage					230/460#200/400 V				
Frequency					60 Hz				
Design					N				
LR Code letter					G				
Service Factor					1.15				
Temp Rise @ FL					80 °C				
Duty					CONT				
Ambient					40 °C				
Elevation					3,300 feet				
Rotor/Shaft wk ²					9.3 Lb-Ft ²				
Ref Wdg					IE3L2252201 NONE				
Sound Pressure @ 1M					79 dBA				
VFD Rating					CONSTANT 2:1/VARIABLE 10:1				
Outline Dwg					SS620882				
Conn. Diag					8442000677				
Additional Specifications:									
0									
0									
EQUIV CKT (OHMS / PHASE)									
R1		R2		X1		X2		Xm	
0.0660		0.0280		0.3030		0.3880		11.7610	

Efficiency (%) (Blue line)
P.F. (%) (Red line)
Current (Amps) (Black line)

IEC

Speed -Torque Curve

Torque (Blue line)
Amps (Red line)

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 : TCA0451AE231GAA009

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

Catalog No : R854

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