

SPECIFICATION FOR A REQUEST FOR INFORMATION

Supply of High-Quality Electrical Steel Laminations Cut to Specification

TRANSNET ENGINEERING
PRODUCT DEVELOPMENT – R&D
KOEDOESPOORT

Compiler:

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Signature  **Date** 19/10/2021

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Surname & Name Boshoff, KRK

Signature  **Date** 19/10/2021

Specification for a Request for Information for the Supply of High Quality Electrical Steel Laminations Cut to Specification

1 Background and General

Transnet Engineering (TE) is in the process of the design and development of various products which requires high quality and precise electrical steel laminations. This is to ensure product performance according to design and to increase product quality as a whole.

The aim of this specification is to provide the supplier with the necessary information to enable the provision of indicative pricing for the supply of electrical steel laminations cut according to the requirements provided by Transnet within the Request for Information (RFI).

2 Delivery Address

2.1 All items quoted on within this specification shall include delivery to the following address:

- Bay 8, Koedoespoort Depot,
Cnr. Lynette Street and Koedoespoort Road,
Koedoespoort,
Pretoria,
0186

3 Scope of Work/Services

3.1 The scope associated with this RFI is provided within Table 1. It is required that supplier provide either informational feedback or an indicative pricing associated with each of the items detailed within Table 1.

Table 1: Scope Associated with this RFI and Feedback Required.

#	Scope Associated with RFI	Feedback Required
1	The supplier must provide an indication of the cutting method to be applied during the manufacturing of the laminations (Punching, Laser Cutting, Waterjet Cutting, etc.)	Information
2	Provision of the laminations from the material required as detailed in Section 4.	Information
3	Cutting of the laminations as per the drawing provided within Appendix A.	Information
4	Cutting of the laminations as per the manufacturing requirements provided in Section 5 of this RFI.	Information
5	Cutting of the laminations as per the quality requirements in Section 6 of this RFI.	Information
6	Indicative pricing associated with the provision of the following quantities of laminations:	Indicative Pricing
6.1	0 to 100 laminations.	Indicative Pricing

Specification for a Request for Information for the Supply of High Quality Electrical Steel Laminations Cut to Specification

6.2	101 to 1000 laminations.	Indicative Pricing
6.3	1001 to 6000 laminations.	Indicative Pricing
7	Delivery of laminations to delivery address.	Indicative Pricing

4 Material Requirements

- 4.1 The physical and technical properties of the required electrical steel laminations shall comply with all requirements detailed within Table 2 of this specification.

Table 2: Required Electrical Steel Properties

#	Item Description
1	<u>Electrical Steel Sheets</u> - Physical and Technical Properties: - Grade: M400/A400; - Thickness: 0.5 mm; - Coating: C5 or similar; and - Non-Grain Oriented.

5 Manufacturing Requirements for Laminations

- 5.1 It is required that the laminations be manufactured accordingly to the drawings provided in Appendix A within this specification.
- 5.2 The supplier shall note that two parts form a single laminate. This is the rotor lamination (inner component) and stator lamination (outer component) respectively. There is a clearance between the two parts of two (2) millimetre on the outer diameter of the rotor lamination.
- 5.3 The perimeter of a single rotor lamination is 9573.51 mm.
- 5.4 The perimeter of a single stator lamination is 14465.7 mm.
- 5.5 TE shall service the supplier with all required files (.step, .dxf) upon request from the supplier.

6 Quality

- 6.1 As the electrical steel laminations will be used in a custom application where the packing factor has an adverse effect on performance, high quality electrical steel laminations are required.
- 6.2 It is a strict requirement that all tolerances be met within:

Upper Limit: +0.05 mm
Lower Limit: – 0.0 mm

- 6.3 It is a strict requirement that the burr created by manufacturing process be no more than 5% of the sheet thickness. Thus, the maximum allowable thickness across the whole of the sheet shall be no more than 0.525 mm.

***Specification for a Request for Information for the Supply of High Quality Electrical
Steel Laminations Cut to Specification***

7 General

- 7.1 The supplier is at liberty to approach Transnet Engineering at any time for clarification of any requirement should any voids exist which impedes the supplier's ability to provide a response to this RFI. This is inclusive of any additional detail that may be required on the parts (radii, hole diameters, etc.) in Appendix A of this RFI.
- 7.2 It is required that the supplier provide a response to items 1 to 7 as detailed within Table 1 of this RFI.

***Specification for a Request for Information for the Supply of High Quality Electrical
Steel Laminations Cut to Specification***

APPENDIX A

FOR UNTOLERANCED DIMENSIONS SEE ISO 2768-1:
FOR GENERAL TOLERANCE ON WELDED CONSTRUCTIONS SEE ISO 13920: CLASS

DESIGNATION

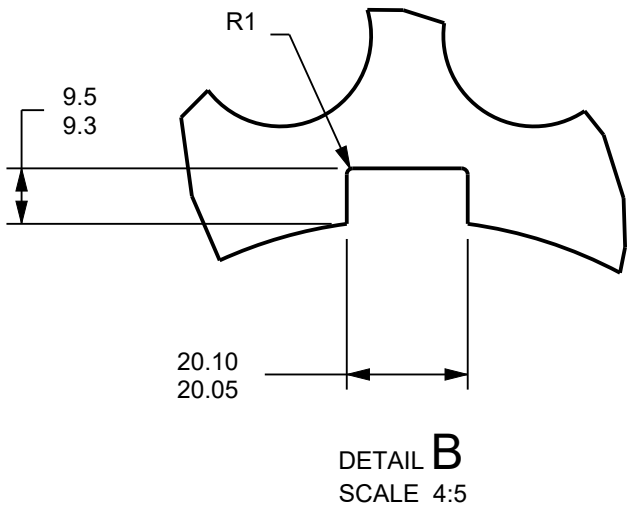
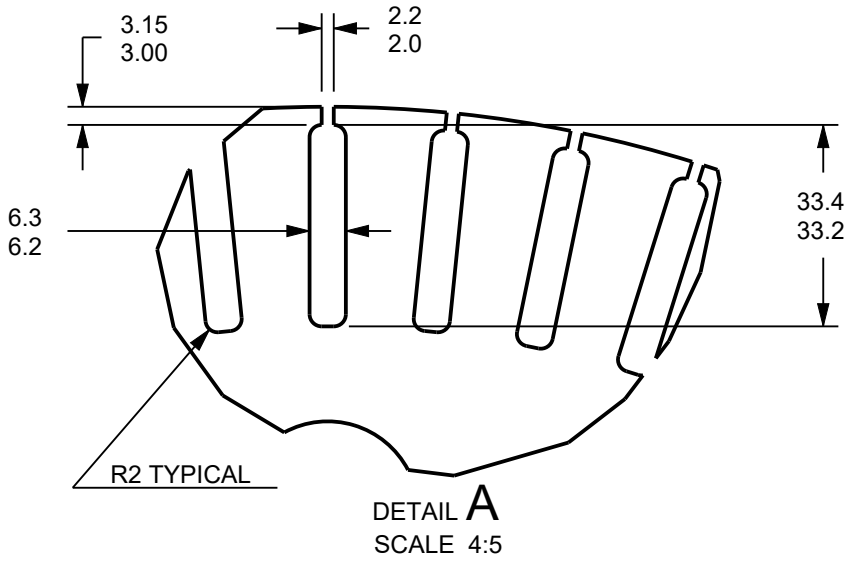
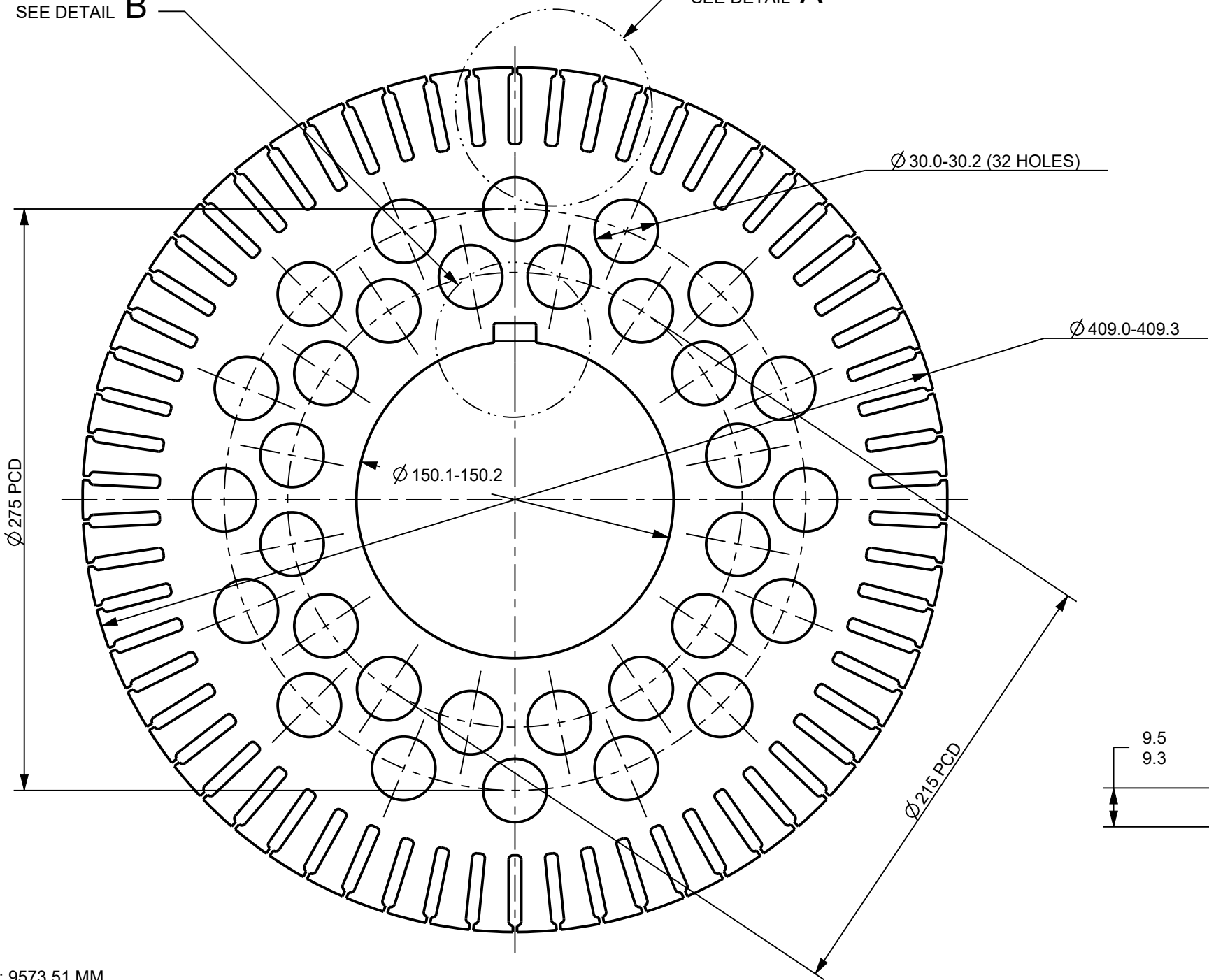


2D STATUS

IN WORK

SEE DETAIL B

SEE DETAIL A



NOTE:
PERIMETER: 9573.51 MM

AMENDMENTS
MASS 0.31 Kg

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ASSEMBLY DRG No.

DRAWN

N.B.S

CHECKED

S.A

CLASS

APPROVED

K.B

TYPE PROTOTYPE

DATE

01/04/2021

SCALE

2:5

KILNER PARK R&D
ROTOR LAMINATION PT2

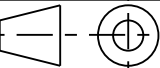
MATERIAL

M400-50
EN 10106
0.5MM LAMINATION STEEL
409X409X0.5

SHEET 1 OF 1

A-3

PROJECTION



DOCUMENT REFERENCE No.

TRANSNET ENGINEERING

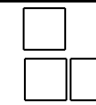
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PELG_177Z_0217

REV.

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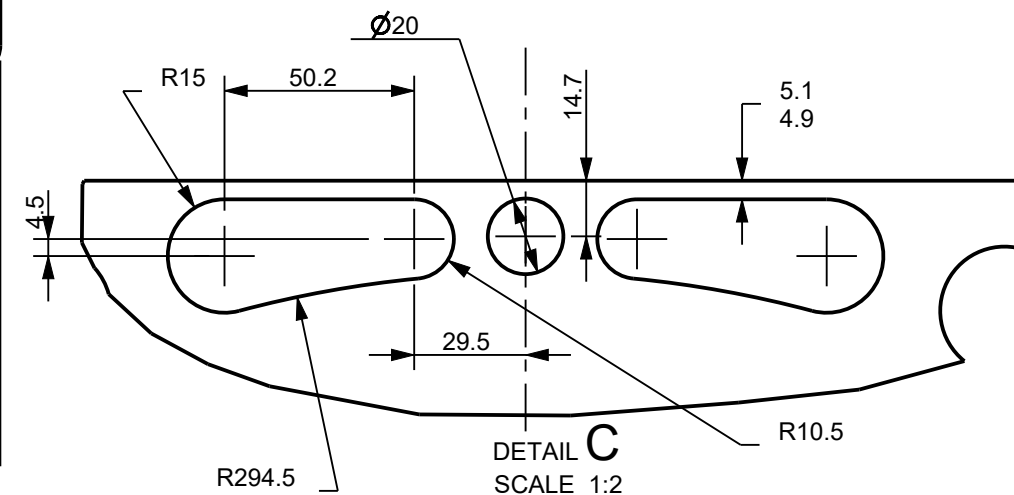
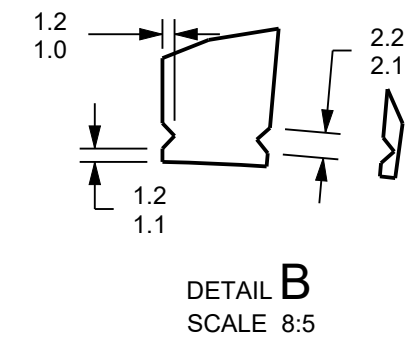
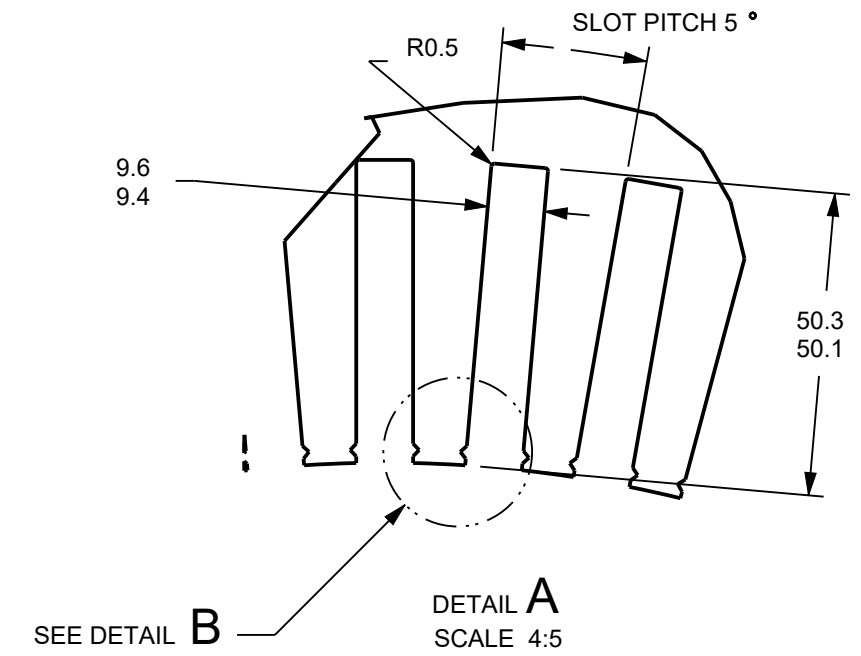
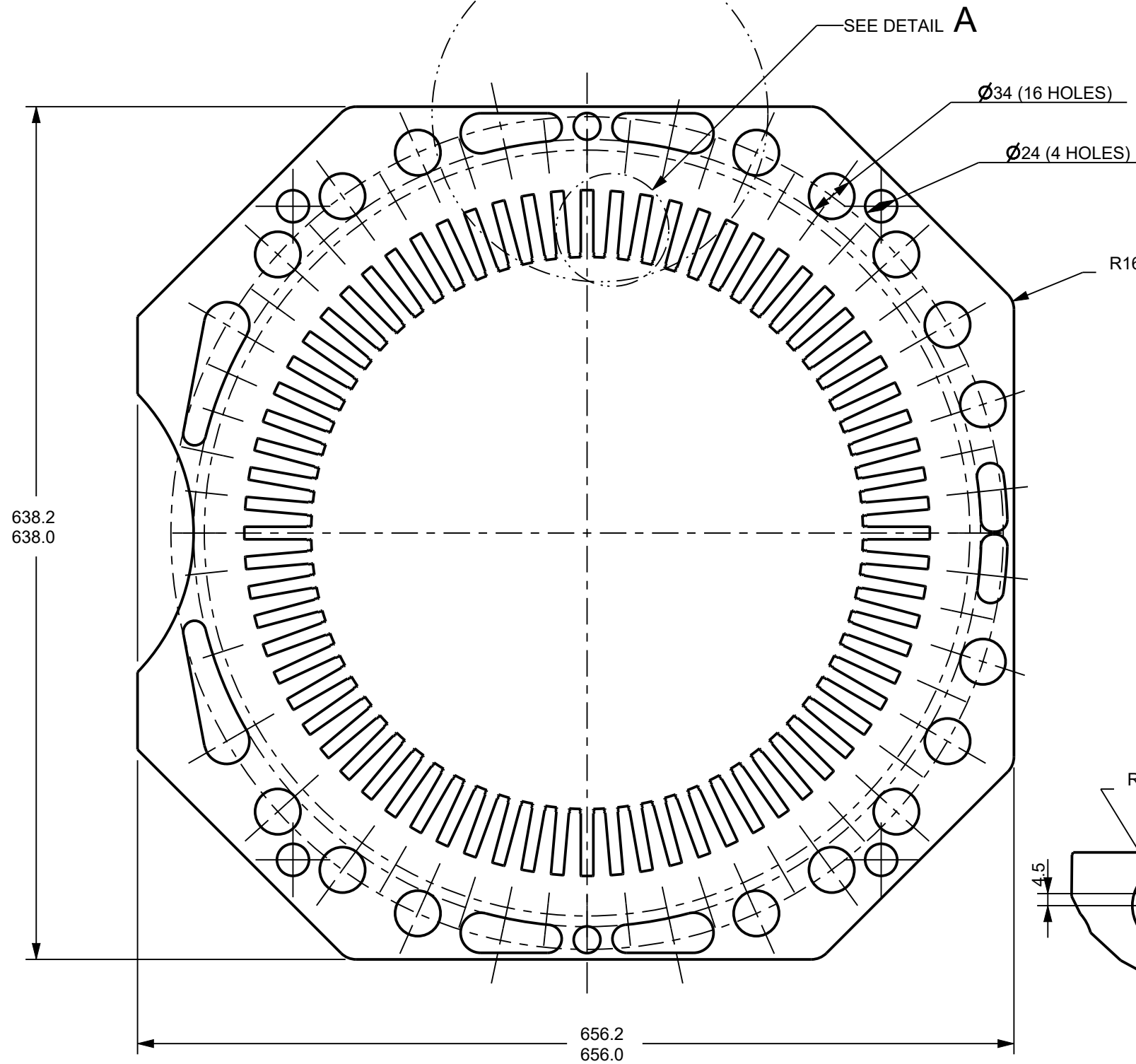
FOR UNTOLERANCED DIMENSIONS SEE ISO 2768-1: DESIGNATION
FOR GENERAL TOLERANCE ON WELDED CONSTRUCTIONS SEE ISO 13920: CLASS



2D STATUS

IN WORK

NOTE:
TOTAL PERIMETER: 14465.7 MM



-/A
UPDATED SLOT
HEIGHT
13-04-2021
N.B.S

AMENDMENTS

MASS 0.66 Kg

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DRAWN

N.B.S

CHECKED

S.A

CLASS

APPROVED

K.B

TYPE PROTOTYPE

DATE

01/04/2021

SCALE

1:4

DOCUMENT REFERENCE No.

KILNERPARK R&D
STATOR LAMINATION PT2

MATERIAL

M400-50
EN 10106
0.5MM EM STEEL
700 x 700

SHEET 1 OF 4

TRANSNET ENGINEERING

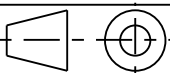
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REV. A

A-3

PROJECTION



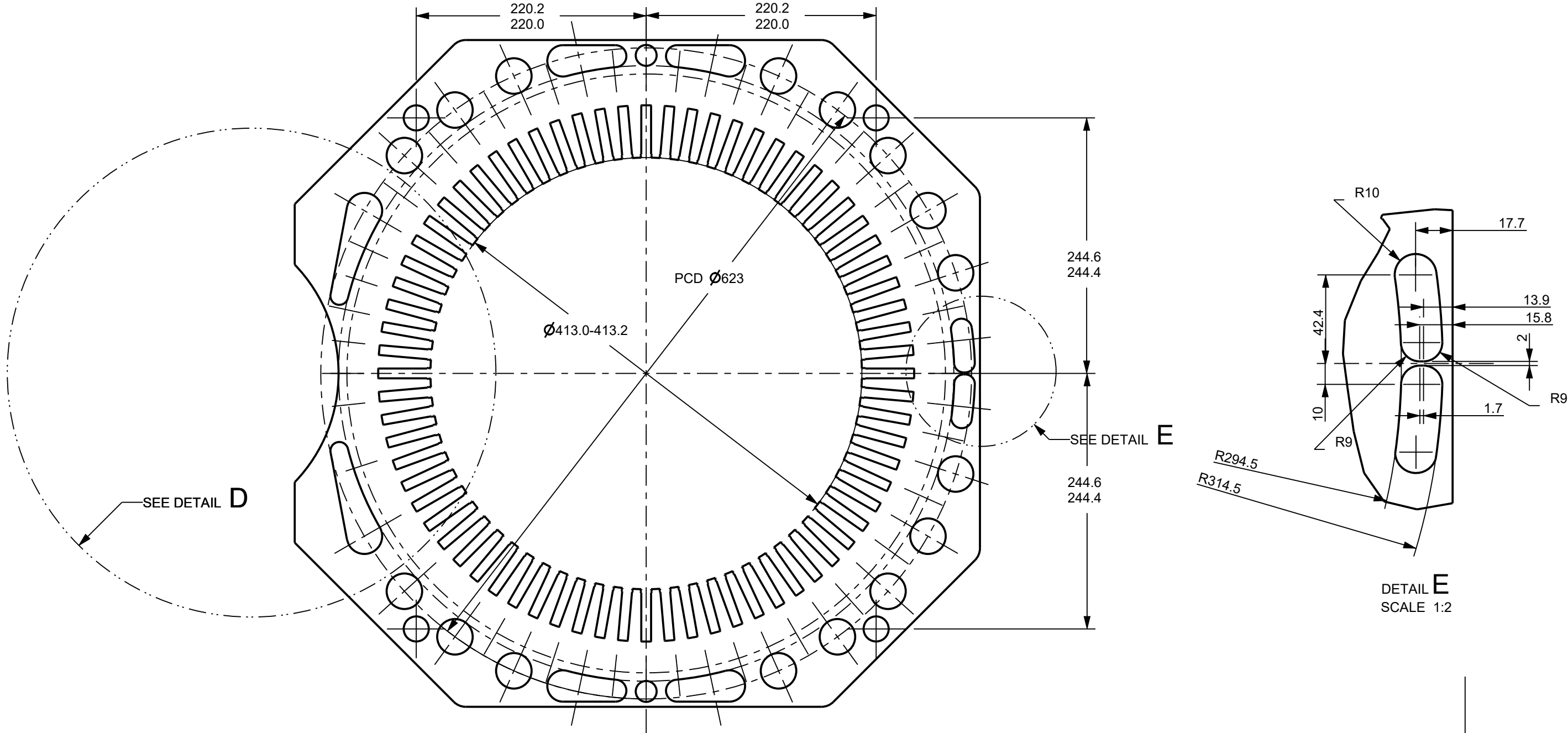
FOR UNTOLERANCED DIMENSIONS SEE ISO 2768-1:
FOR GENERAL TOLERANCE ON WELDED CONSTRUCTIONS SEE ISO 13920: CLASS

DESIGNATION



2D STATUS

IN WORK



-/A
UPDATED SLOT
HEIGHT
13-04-2021
N.B.S

AMENDMENTS

MASS 0.66 Kg

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CLASS

APPROVED

K.B

TYPE PROTOTYPE

DATE

01/04/2021

SCALE

1:4

KILNERPARK R&D
STATOR LAMINATION PT2

MATERIAL

M400-50
EN 10106
0.5MM EM STEEL
700 x 700

SHEET 2 OF 4

TRANSNET ENGINEERING

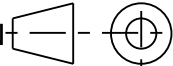
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REV. **A**

A-3

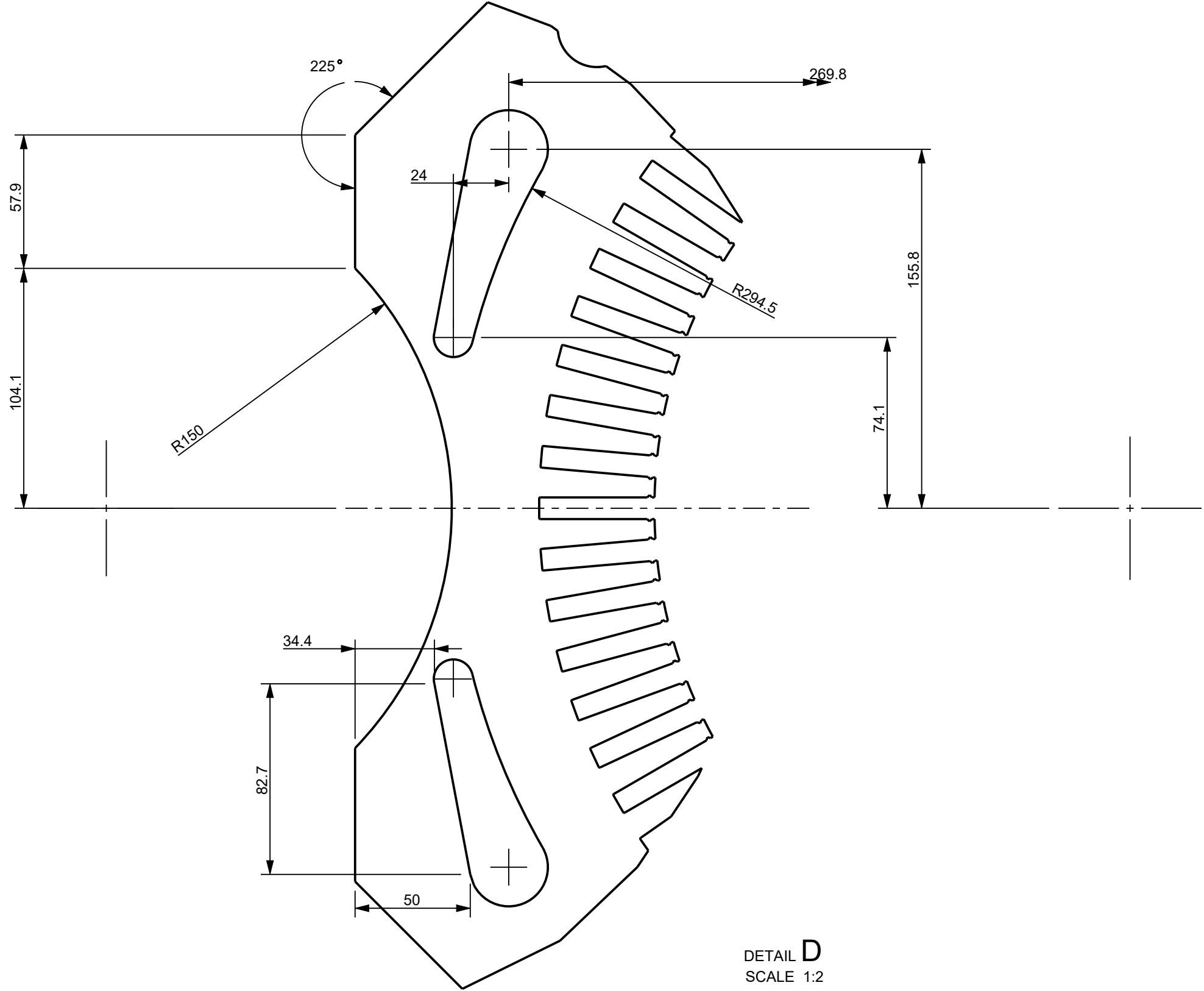
PROJECTION



DOCUMENT REFERENCE No.

FOR UNTOLERANCED DIMENSIONS SEE ISO 2768-1: DESIGNATION
FOR GENERAL TOLERANCE ON WELDED CONSTRUCTIONS SEE ISO 13920: CLASS

2D STATUSIN WORK



DETAIL D
SCALE 1:2

-/A
UPDATED SLOT
HEIGHT
13-04-2021
N.B.S

AMENDMENTS

MASS0.66 Kg

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		CHECKED	S.A
CLASS		APPROVED	K.B
TYPE	PROTOTYPE	DATE	01/04/2021
		SCALE	1:4

KILNERPARK R&D
STATOR LAMINATION PT2

MATERIAL

M400-50
EN 10106
0.5MM EM STEEL
700 x 700

SHEET 3 OF 4

A-3 PROJECTION

DOCUMENT REFERENCE No.

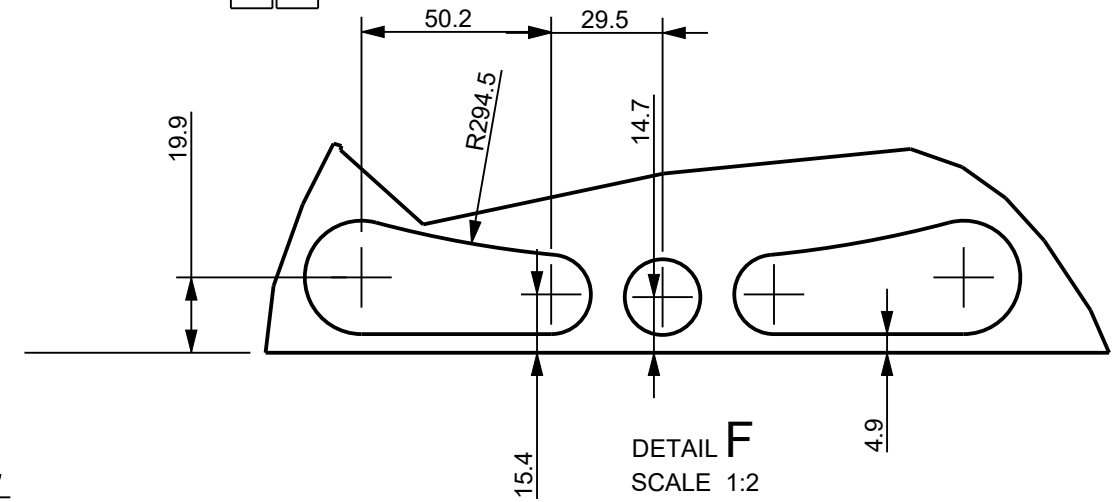
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PELG_177Z_0218

REV. A

IN WORK

REV.
A