

**Houghton International**  
Electro mechanical innovation



**Houghton International**

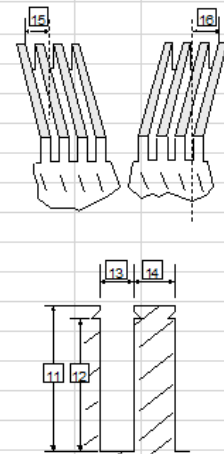
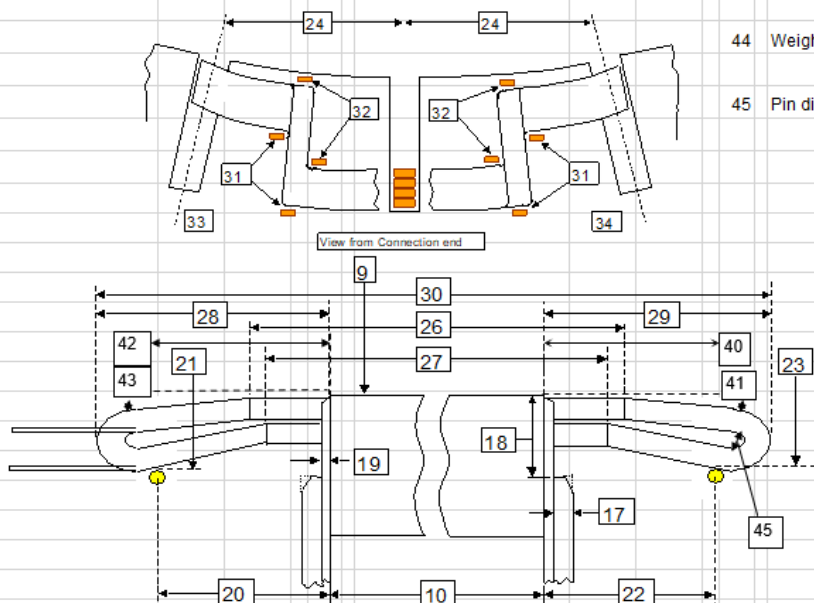
**COIL / DETAILS ENQUIRY FORM**

**Stator coils - Diamond, multi or single turn**

\* NOTE Box numbers refer to numbering on diagrams below

The fields in red boxes must be completed for an accurate quotation.

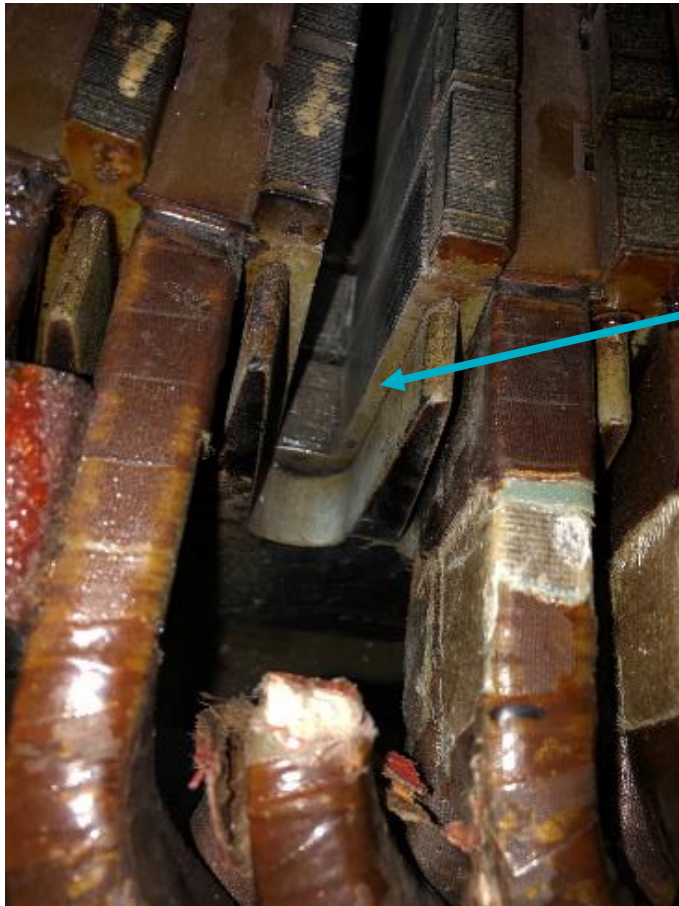
1 Manufacturer		Est. ↓ Conf. ↓		Est. ↓ Conf. ↓
2 Frame No		13 *Slot Width* 2 decimal places		Endwindings take from core not finger plate
3 Serial No		14 *Tooth Width		28 *Conn' Coil Projection
4 Frequency		Is Slot Skewed ?		29 *Back end Coil Projection
5 kW / HP / KVA		15 *Skewed To Left in mm		30 *Overall Coil Length (Nose to Nose)
6 Machine Voltage		16 *Skewed to Right in mm		*Lead position "x" applicable box
Machine Amps		17 *Clamping Plate Width		31
7 RPM		18 *Depth from core		32
Poles		19 *Finger Width		33 *Wound top left
8 Number of slots		Surge Rings		34 *Wound top right
Number of coils		20 *Connection end extension		35 Turns / coil
Record Dimensions in mm		21 *Connection end diameter		36 Wires in parallel
Estimated Dimension Est. ↓		Surge Rings		37 Bare wire size : Width
Confirmed Dimension Conf. ↓		22 *Back end extension		Thickness
9 *Core Diameter: Inner		23 *Back end diameter		38 One turn composition =
Outside		24 Coil pitch 1 -		1x1 2x1 1x2 2x2 2x3 x sketch
10 *Core length		25 Winding connection Star or Delta		Width=
11 *Total Slot Depth		26 *Coil slot length Top		Height=
12 *Depth under wedge		27 *Coil slot length Bottom		39 Insulation system "x" applicable
42 CE Stator to coil length		HAND WRAP		HiBRID
43 CE Stator to coil drop		40 NCE Stator to coil length		HiFLEX
		41 NCE Stator to coil drop		HiRES
				HiTRAX
				HiVAX
Chord:				



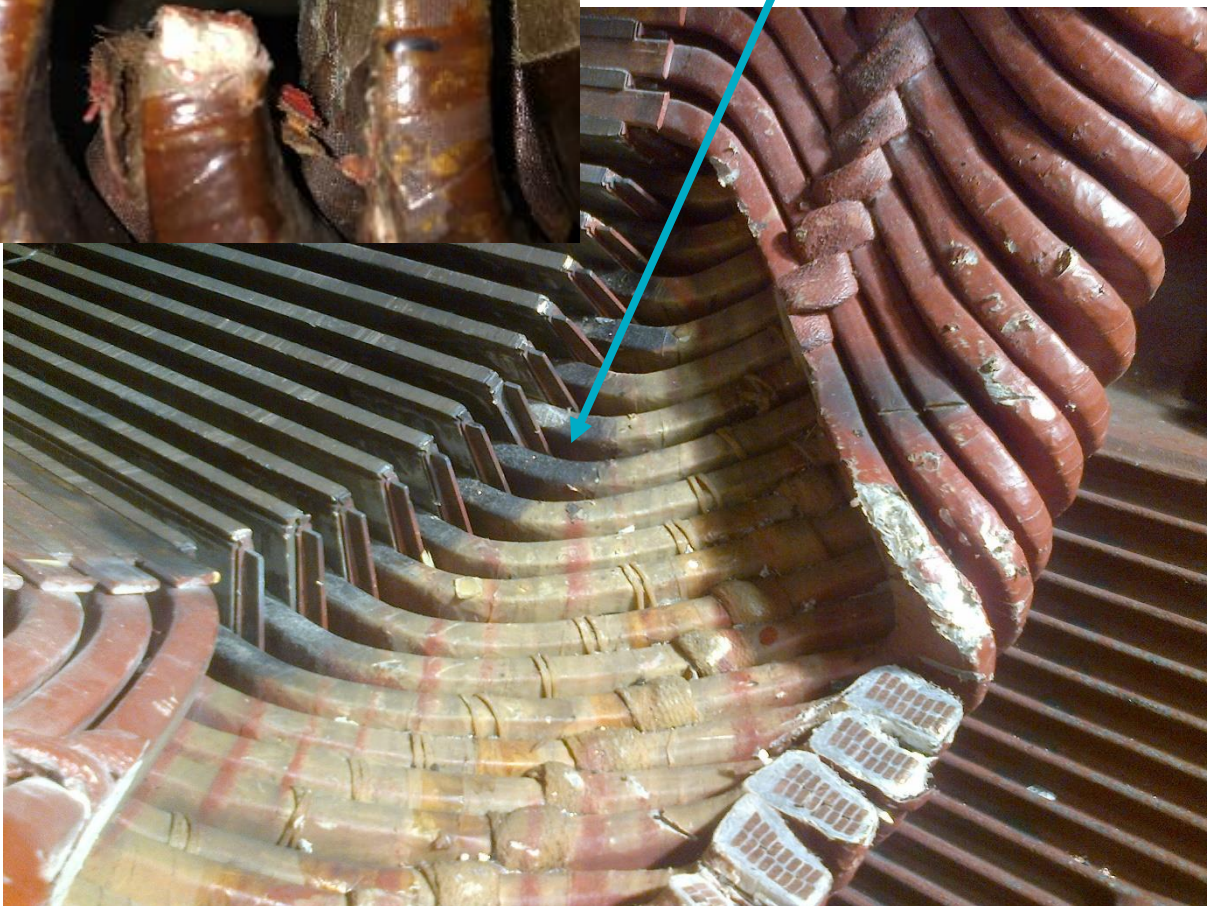


**Houghton International**  
Electro mechanical innovation

Before completing the data sheet, it is necessary to clear a slot or a pitch of coils to gain accurate information.



Ensure the slot sides are thoroughly cleaned of any old insulation





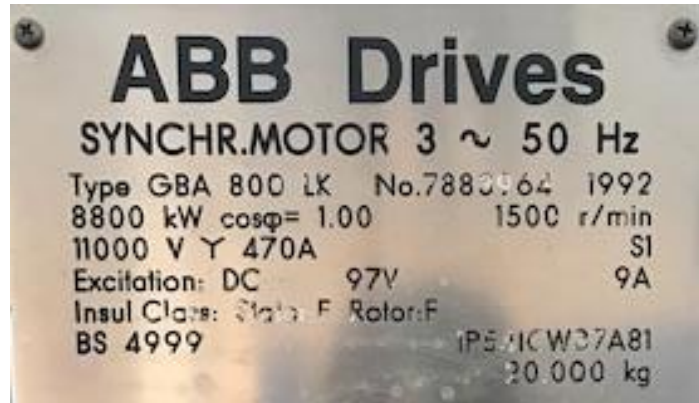
## Questions 1-9



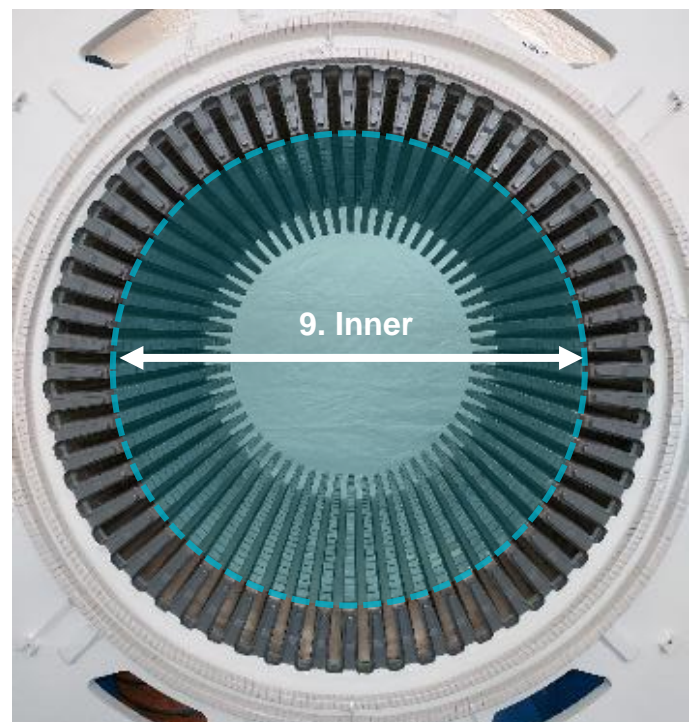
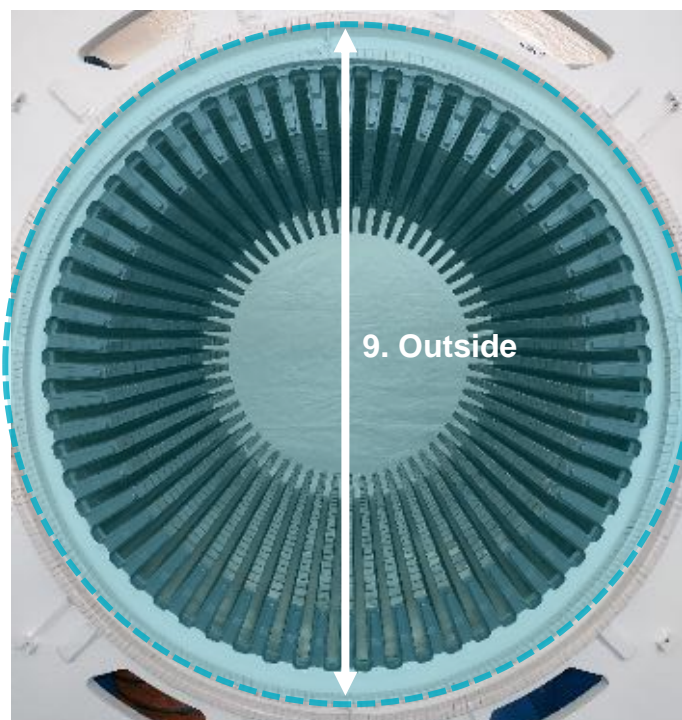
**Houghton International**  
Electro mechanical innovation

Complete no. 1-7 from manufacturer's nameplate as shown.

1 Manufacturer	ABB
2 Frame No	GBA 800LK
3 Serial No	7880164 1992
4 Frequency	50
5 kW / HP / KVA	8800 kW
6 Machine Voltage	11000 V
Machine Amps	470
7 RPM	1500
Poles	4



8 Number of slots	60
Number of coils	60
Record Dimensions in mm	
Estimated Dimension	Est. ↓
Confirmed Dimension	Conf. ↓
9 *Core Diameter: Inner	
Outside	

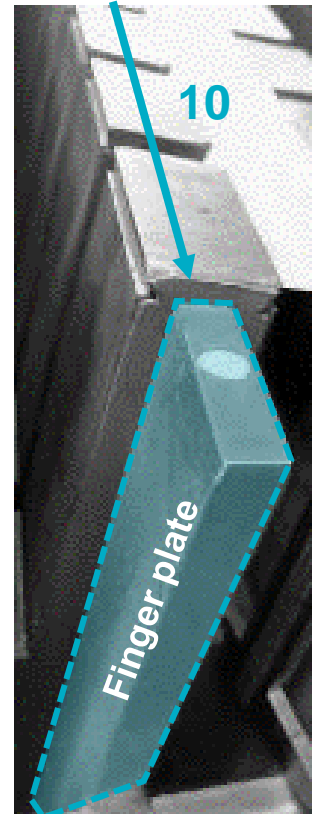
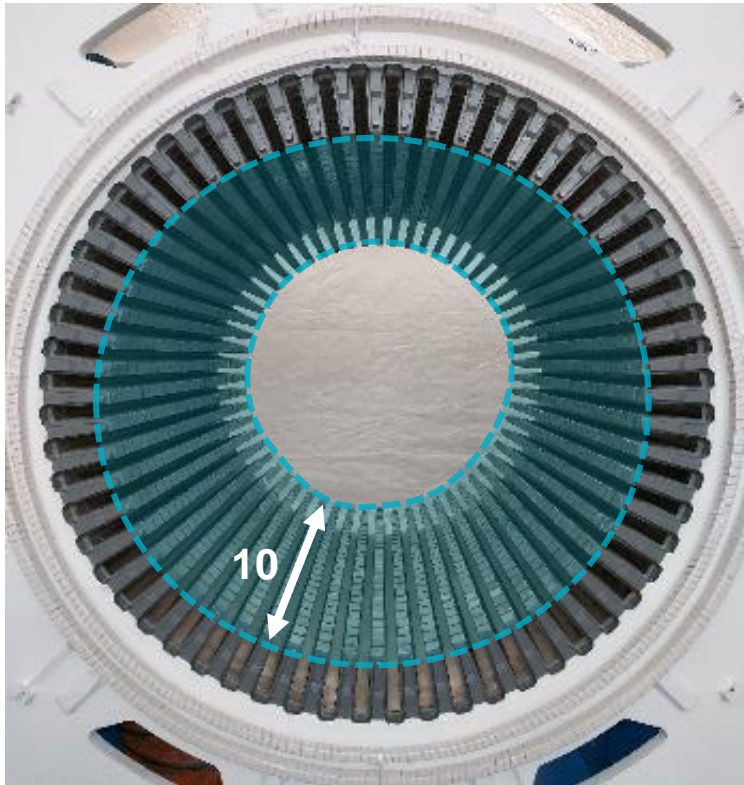


## Question 10



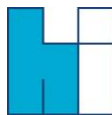
**Houghton International**  
Electro mechanical innovation

10 \*Core length



Core length dimension is not to include finger plate.

## Questions 11-14



**Houghton International**  
Electro mechanical innovation

11 \*Total Slot Depth

13 \*Slot Width\* 2 decimal places

12 \*Depth under wedge

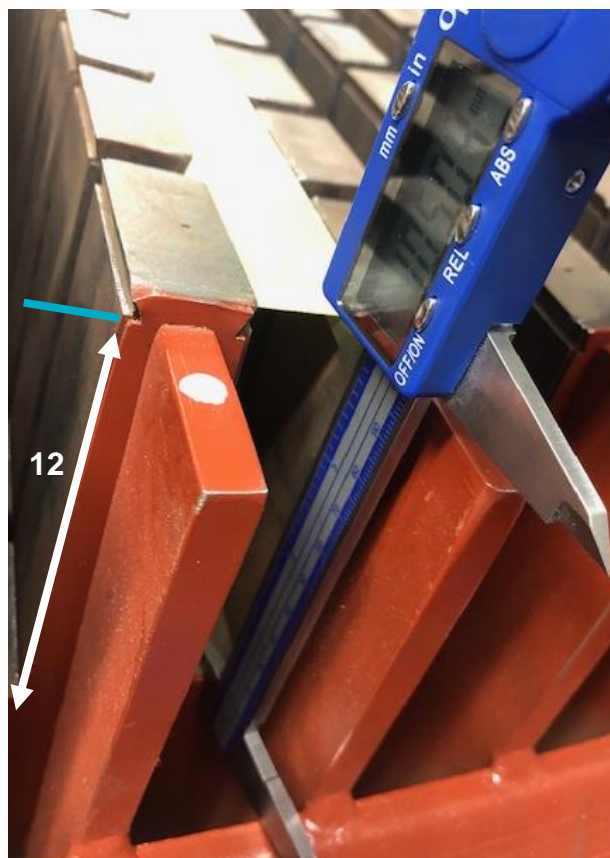
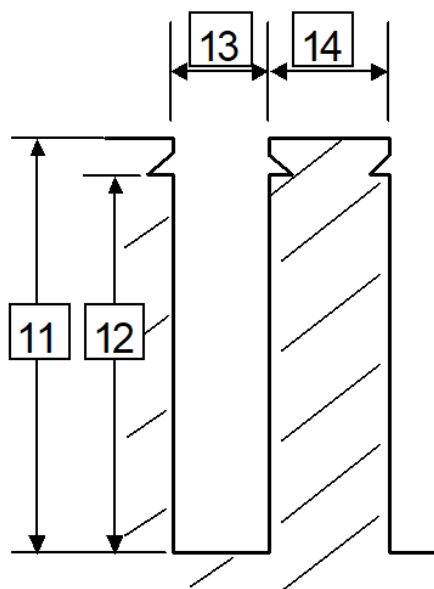
 

14 \*Tooth Width

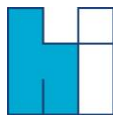
 

12. Use a Vernier Calliper to accurately measure the distance from the base of the slot to the bottom of the wedge groove.

Measure within +/- 0.1mm







**CE - Connection End**

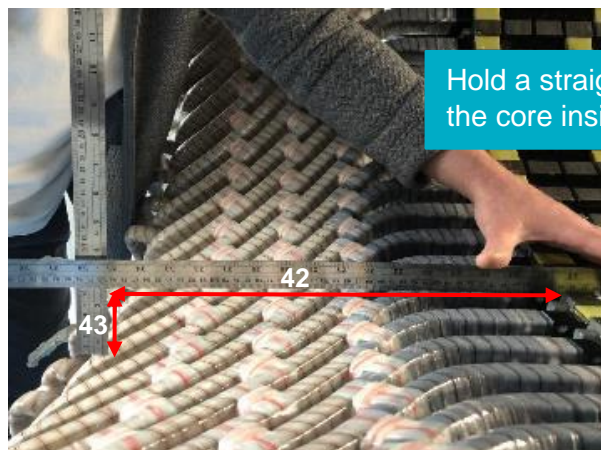
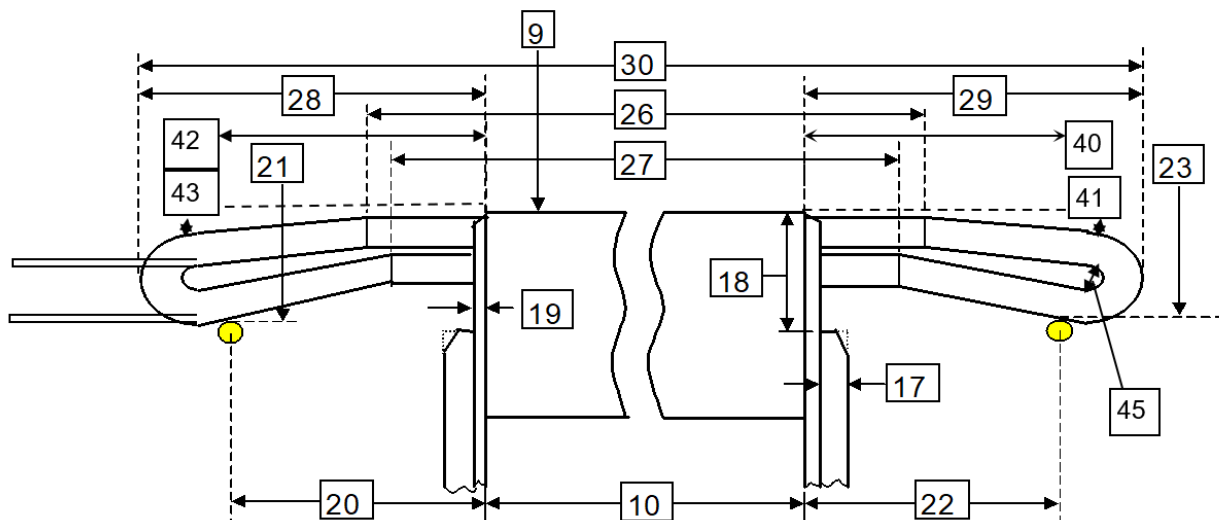
42 CE Stator to coil length

43 CE Stator to coil drop

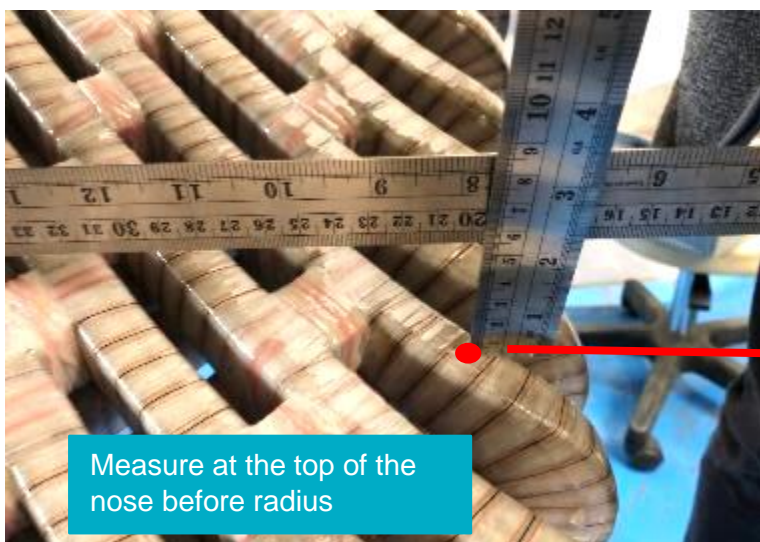
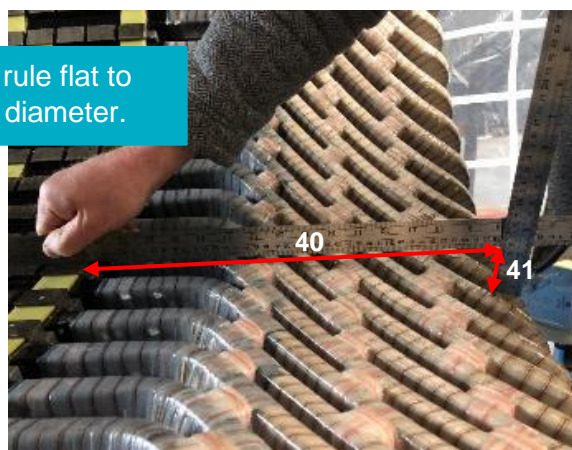
**NCE - Non-Connection End**

40 NCE Stator to coil length

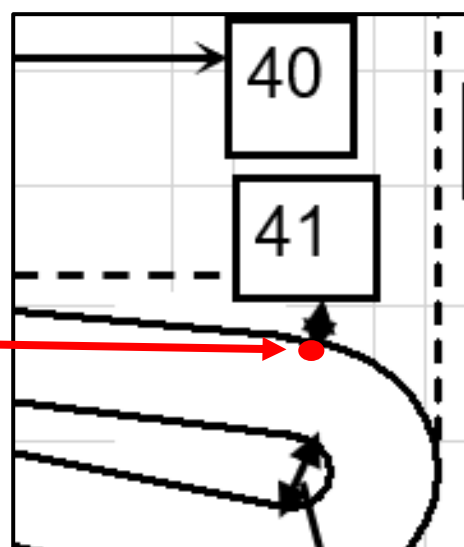
41 NCE Stator to coil drop



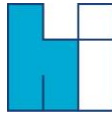
Hold a straight rule flat to the core inside diameter.



Measure at the top of the nose before radius



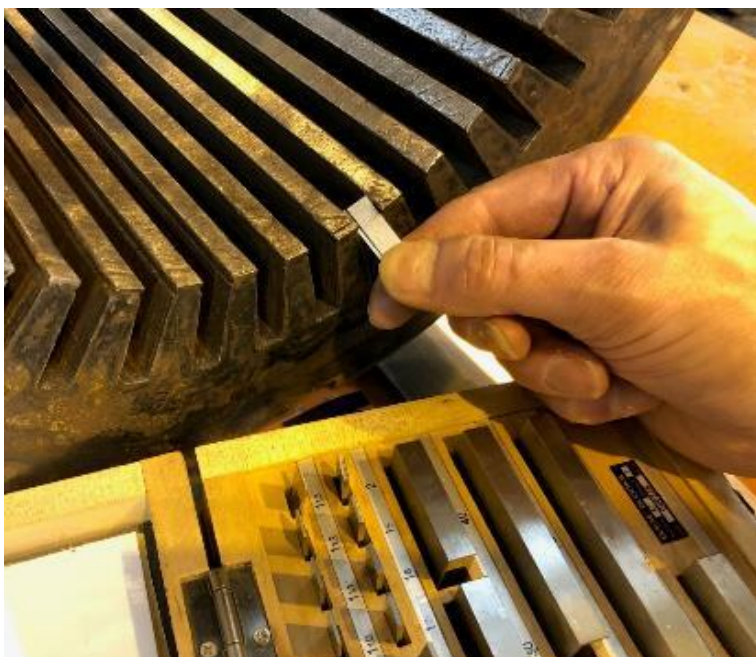
## Questions 13-16



**Houghton International**  
Electro mechanical innovation

13	*Slot Width* 2 decimal places		22.84
14	*Tooth Width		
	Is Slot Skewed ?		
15	*Skewed To Left in mm		
16	*Skewed to Right in mm		

13. The Slot width must be measured as accurately as possible.  
For metric measure (mm) - 2 decimal places  
For imperial measure (inches) – 3 decimal places

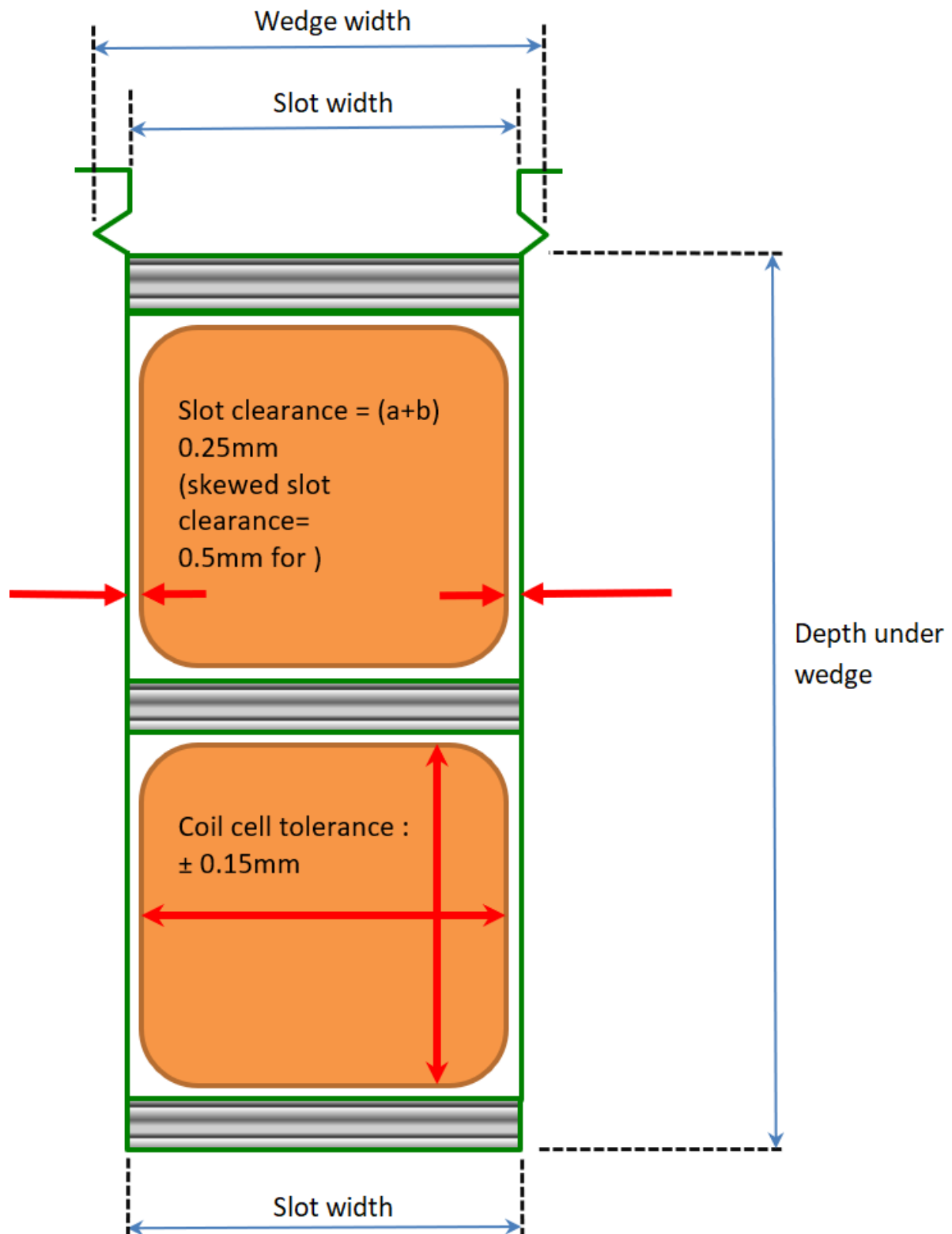


Gauge blocks

Use calibrated gauge blocks or a ground steel block and feeler gauges.

Internal micrometres or callipers can be used if confident with operation and good accessibility.



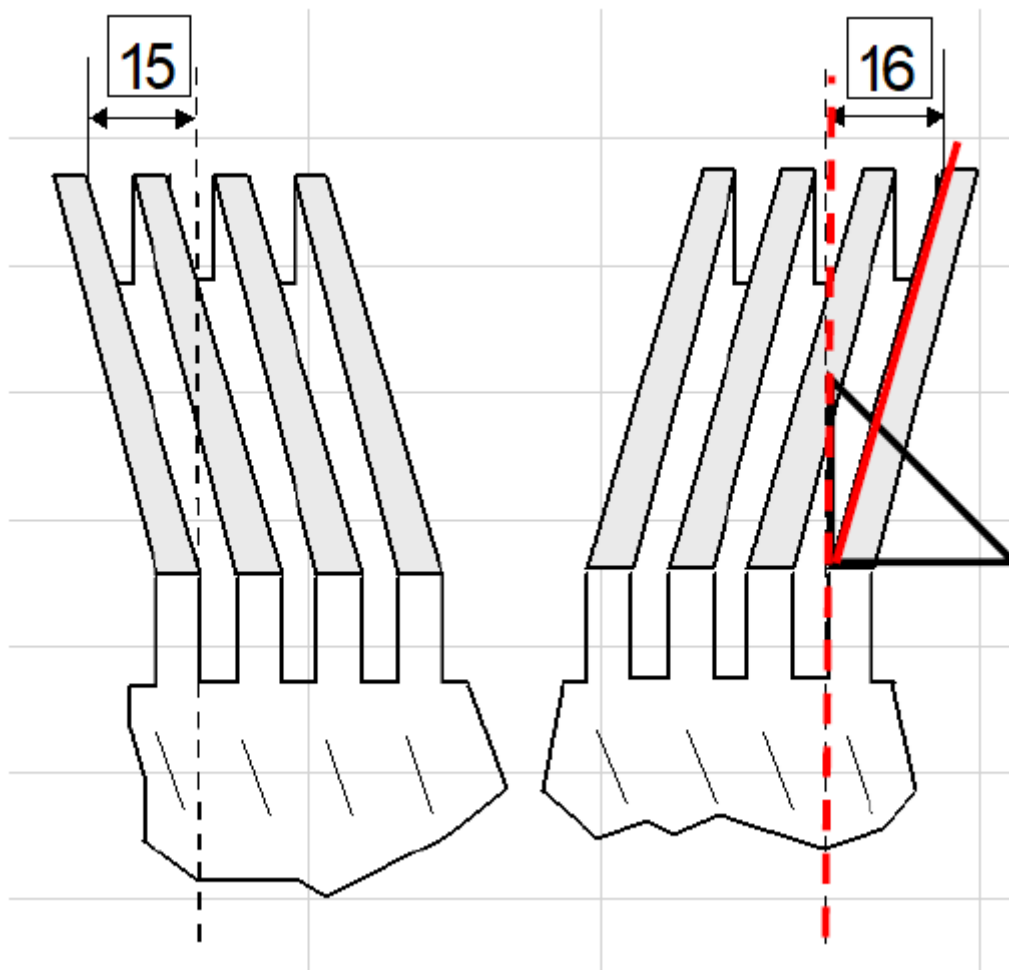




Is Slot Skewed ?

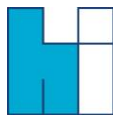
15 \*Skewed To Left in mm

16 \*Skewed to Right in mm

Use a square to measure the amount of core deviation over the length of the core.

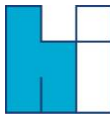
Note if skewed to left or right? (looking at connection end/front)



Skewed to the left hand  
side by 24mm







**Questions 20-23**

Surge Rings

20 \*Connection end extension

--	--

21 \*Connection end diameter

--	--

Surge Rings

22 \*Back end extension

--	--

23 \*Back end diameter

--	--



**23Ø** Inside diameter of ring at point where the ring (including packing) touches the coil

**22** From the core to support ring centre (do not measure from fingerplate)

For each ring measure the distance out from the core to the centre of the ring and the diameter across the inside of each ring.

This gives a point at which the bottom side of the coil will touch the ring.

If packing is fitted include this as reducing the ring inside diameter.

Note that these measures are for the formation of the coil, not ring manufacture.

## Questions 24-30

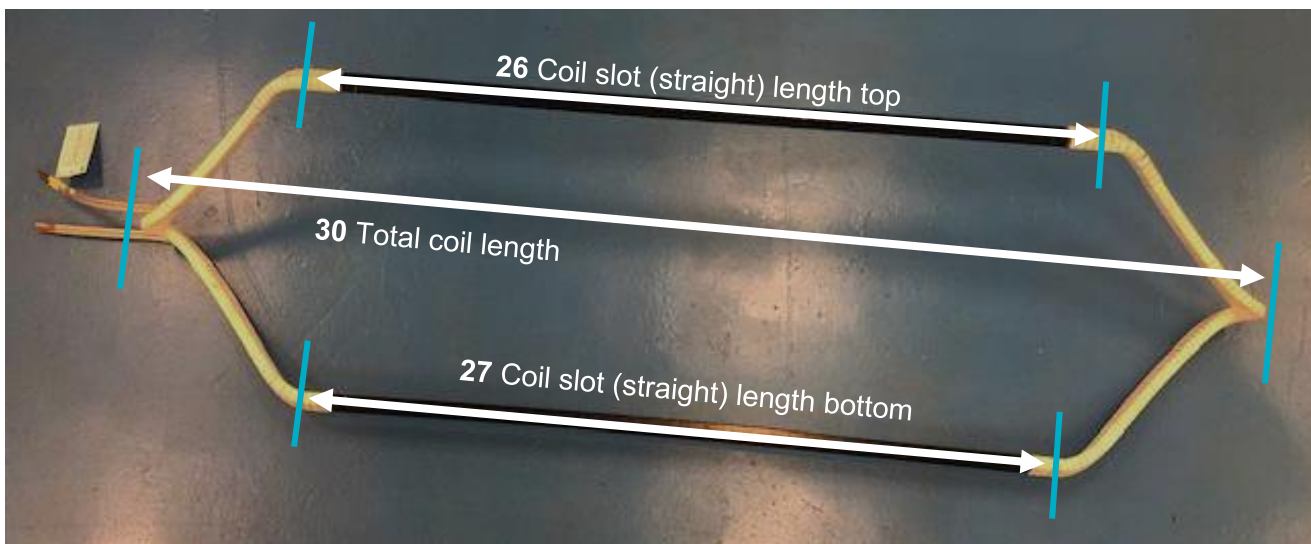
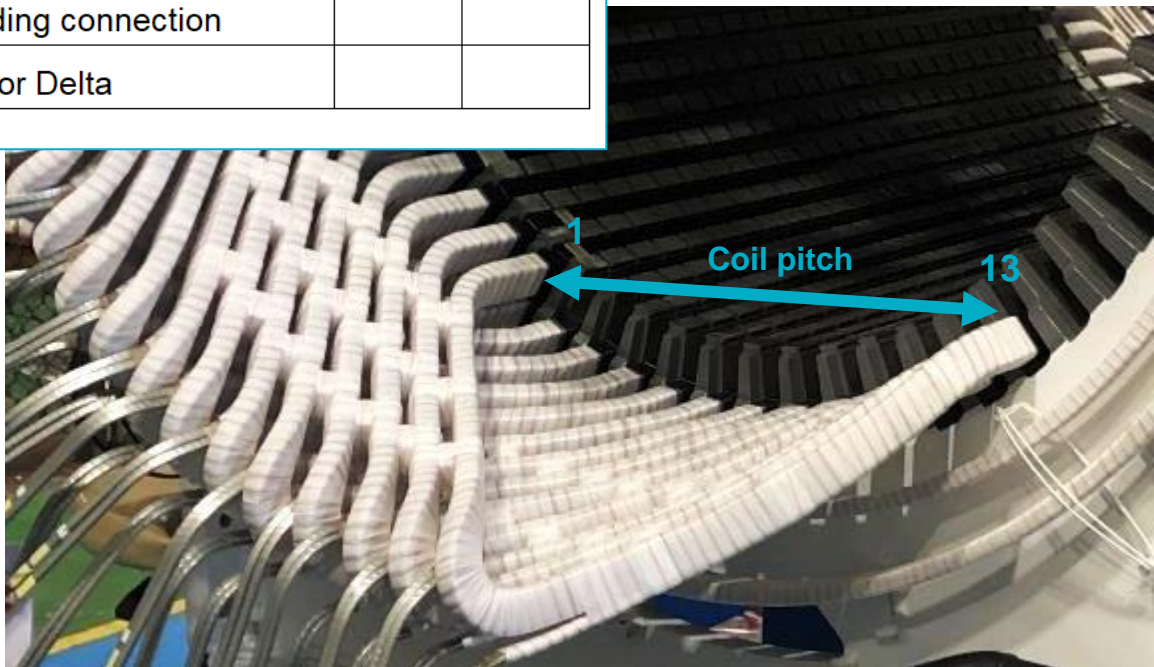


**Houghton International**  
Electro mechanical innovation

24 Coil pitch 1 -

25 Winding connection

Star or Delta



26 \*Coil slot length Top

27 \*Coil slot length Bottom

Measure the straight portion of the coil only.

Reference the two points of bend and measure the distance between them (ideally from inside).





## Questions 28-29



**Houghton International**  
Electro mechanical innovation

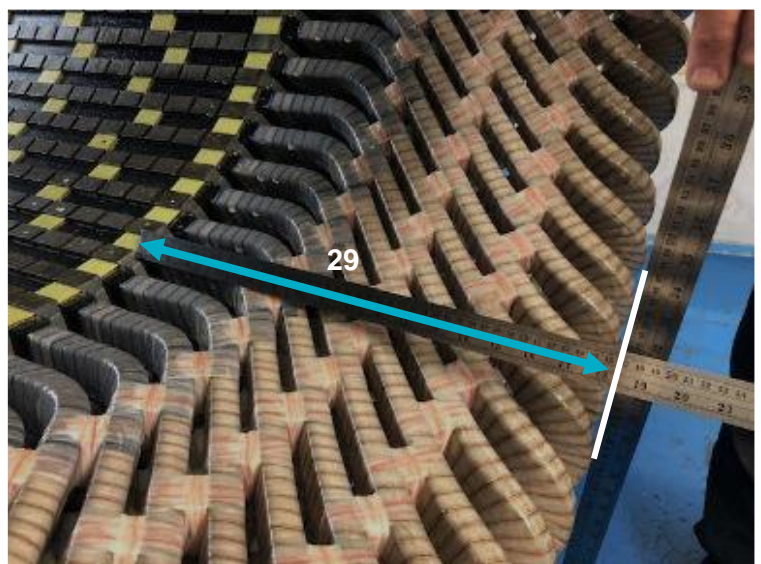
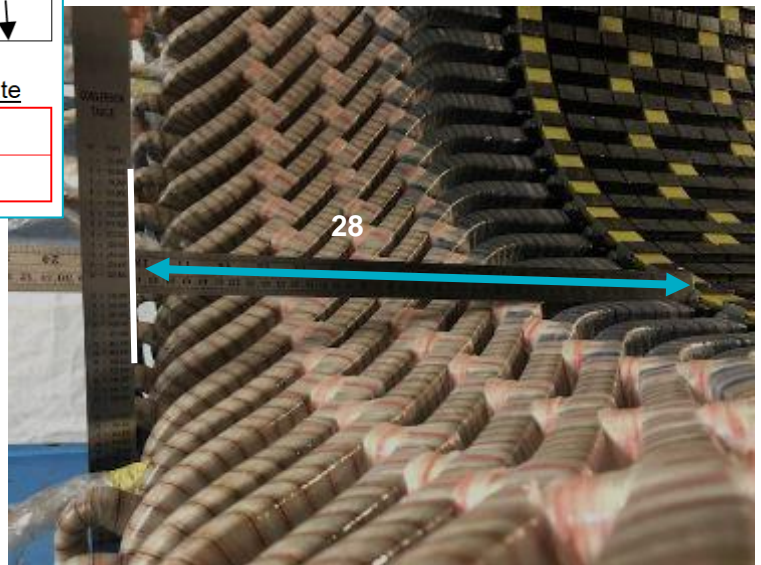
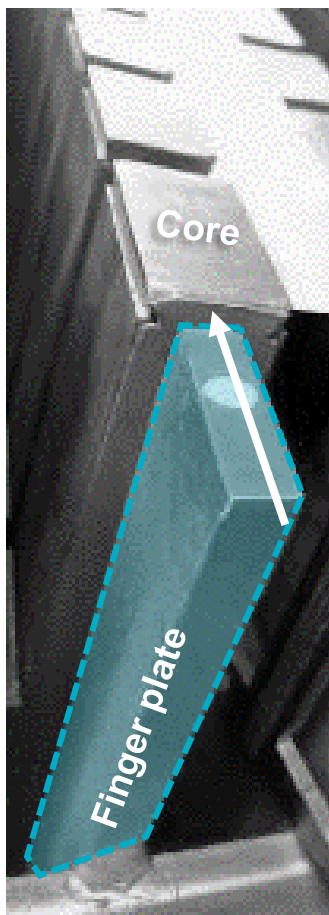
Est. ↓ Conf. ↓

Endwindings take from core not finger plate

28 \*Conn' Coil Projection

29 \*Back end Coil Projection

Do not include finger plate or lead connections (nose/knuckle only).





## Questions 31-34



**Houghton International**  
Electro mechanical innovation

\*Lead position

31 

x
---

32 

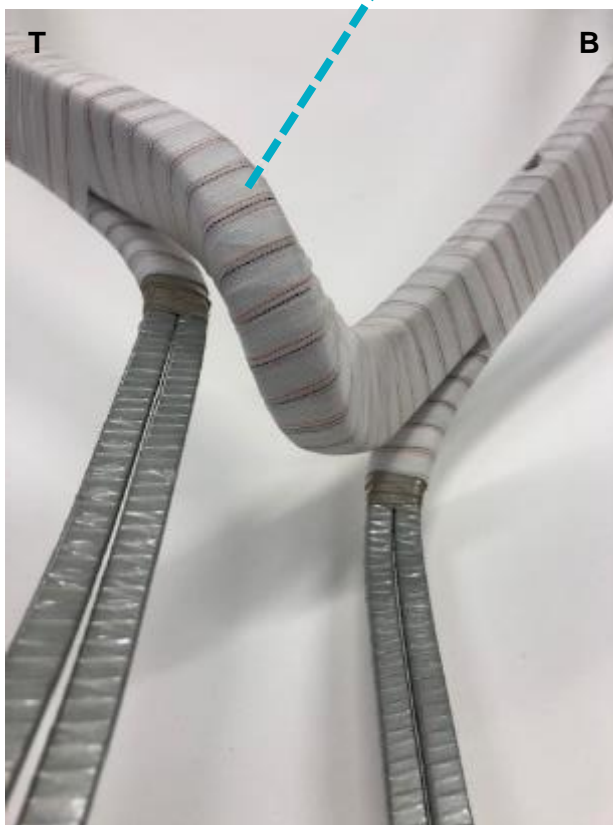
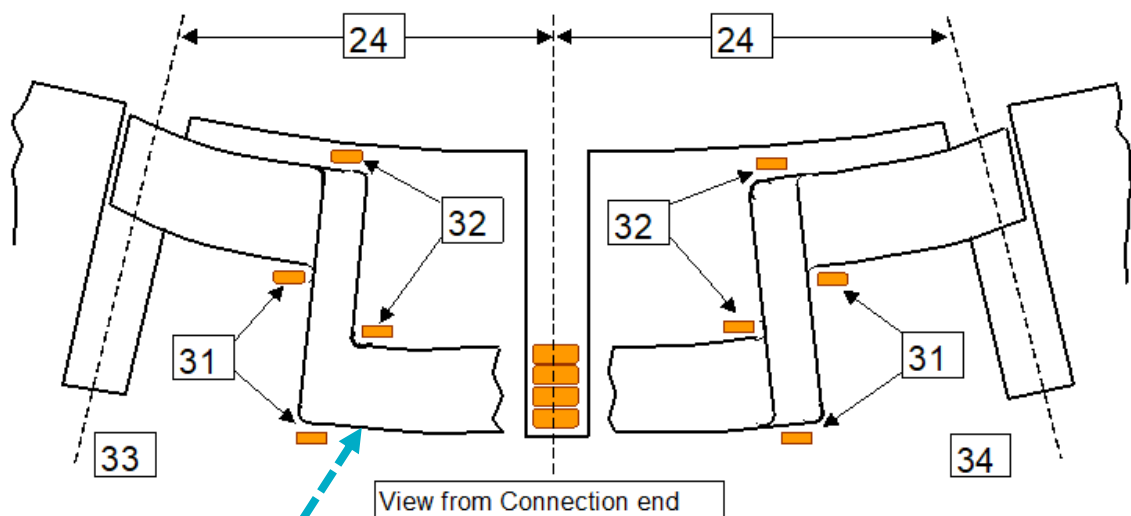
--

"x" applicable box

33 \*Wound top left 

x	

34 \*Wound top right



When looking at the connection end of the coil is the top side of the coil (nearest core bore) to the left or the righthand side?

For this example, the top side is to the left (33) and the lead positioning is (31).

Please state any special features required such as extra lead length or turn tape to conductor sections.

## Questions 35-39



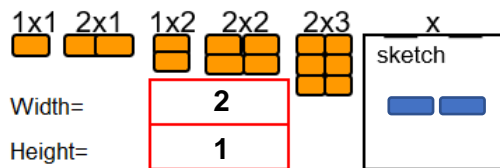
**Houghton International**  
Electro mechanical innovation

35 Turns / coil  **9**

36 Wires in parallel  **2**

37 Bare wire size : Width   
Thickness

38 One turn composition =



39 Insulation system "x" applicable

HiBRID™	<input type="text"/>
HiFLEX™	<b>x</b>
HiRES™	<input type="text"/>
HiTRAX™	<input type="text"/>
HiVAX™	<input type="text"/>

For the example shown the wire composition is 2 x 1

The number of wires in parallel =2

The turns/coil = 9

Please make a separate note/diagram for any alternative configuration such as turn tape.

Measure the conductors as close to or from the main coil stack. Sometimes alternative wire section are uses within the phase/lead connections.

Make a note of the type of insulation system at present.

State if an upgraded or alternative system is required.



2 x 1



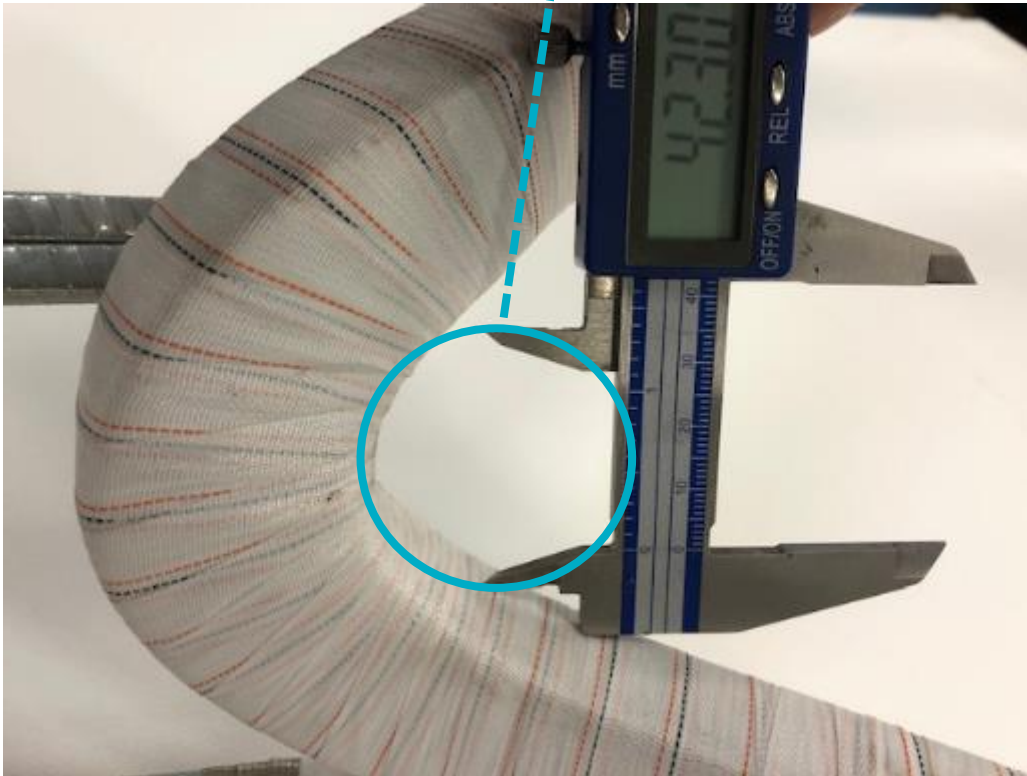
**Questions 44-45**

44 Weight of each coil (kg)

45 Pin diameter

Make a note of the type of insulation system at present.

State if an upgraded or alternative system is required.



The Pin diameter is a useful dimension but not always easy to obtain from a wound stator.

If the top and bottom of knuckle (nose) dimensions are alternatively presented this will be equally as useful.