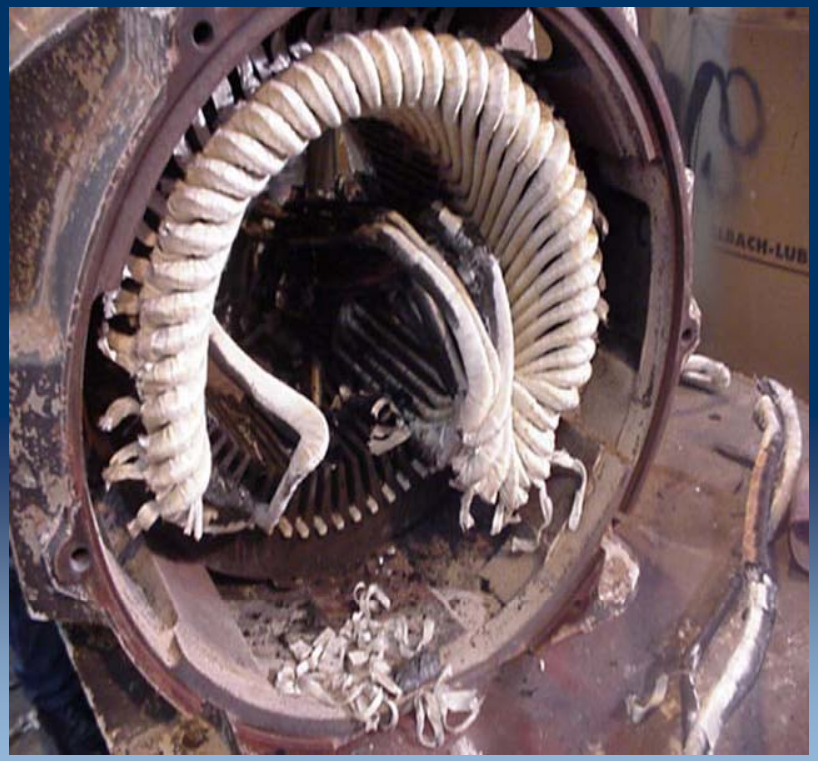
TAKING DATA ON FORM-WOUND MOTORS

By:
Manuel ”Manny” Garcia, Jr.



ACCURATE DATA

Taking accurate data allows the coil manufacturer:

“TO MAKE THE COILS RIGHT *THE FIRST TIME*.”

DATA SHEET

KENCOIL
MANUFACTURERS OF ELECTRIC COILS

2805 Engineers Rd
Belle Chasse, LA 70037
www.kencoil.com
kencoil@kencoil.com
Fax to:(504) 393-9625

Stator Coil Data Sheet **Quote #** _____

EMAIL SAVED DATA SHEET TO: kencoil@kencoil.com
Toll Free 800-221-8577, FAX TO: (504) 393-9625

Customer: _____ Customer Job Number: _____
Address: _____ Purchase Order # _____
City: _____
State: _____ Zip: _____
Customer Contact: _____ Phone: _____

Motor/Generator

Manufacturer: _____ HP/KW: _____
Speed (R.P.M.): _____ Model: _____
Voltage: _____ Phases: _____
Current (Amps): _____ SN: _____
Frame: _____ Hz: _____
Type: _____ Temp rise: _____

Winding Data

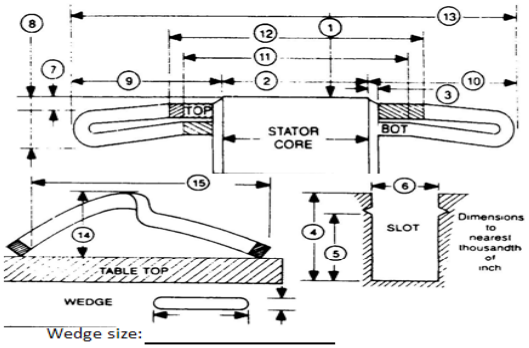
Number of slots: _____
Coil span 1 & _____
Number of circuits: _____
Connection: WYE ☐ or Delta ☐
Jumper connections: 1-4☐ or 1-7 ☐
Coil Grouping: _____

Wires in hand: _____
Turns per coil: _____
Strand insulation: Enamel ☐ Glass ☐ Mica ☐

	Thickness	Width
Wire size A:		
Wire size B:		
Wire size C:		
Wire size D:		

Core Dimensions

1. Core bore diameter: _____
2. Core length: _____
3. Finger extension: _____
4. Total slot depth: _____
5. Depth under wedge: _____
6. Slot width (in decimal units): _____
   Core back iron: _____
   Number of core vents: _____
   Size of vents: _____
   Support ring present Yes ☐ No ☐
   Support ring distance from core: _____
   Support ring diameter: _____

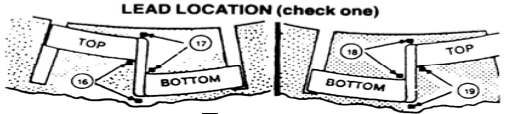


Wedge size: _____
Wedge Quantity: _____

Coil Dimensions

7. Small knuckle drop: _____
8. Large knuckle drop: _____
9. Coil extension lead end: _____
10. Coil extension opposite lead end: _____
11. Bottom straight length: _____
12. Top straight length: _____
13. Total coil length: _____
14. Table top height: _____
15. Chord dimension: _____

LEAD LOCATION (check one)

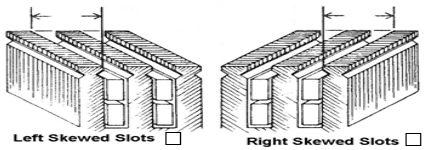


16. LEFT TOP ☐
17. LEFT BOT. ☐
18. RIGHT BOT. ☐
19. RIGHT TOP ☐

Insulation Type

V.P.I. untreated Class "F"	☐
V.P.I. Water Submergence Test Coil System	☐
Class "H" V.P.I. untreated	☐
Omni-Seal resin coated	☐
Omni-Seal Plus resin coated	☐
Class "F" varnish treated	☐
Class "H" varnish treated	☐
Hermetic V.P.I. untreated	☐
Conductor Plus Coil System	☐

Resin/varnish unit will be processed in = _____



Left Skewed Slots ☐ Right Skewed Slots ☐

Special Features

Turn insulation	☐	Terrace wound	☐
Corona shield	☐	Knuckle drop critical	☐
Taped leads	☐	End bells close	☐
Slot Paper in use	☐	Data change	☐
Skewed Slot	☐		
R.T.D.'s in use	☐	R.T.D. Ohms: _____	

Skewed distance: _____
R.T.D. quantity: _____

Customer Signature: _____

NAMEPLATE DATA INFORMATION

Customer:		Customer Job Number:	
Address:		Purchase Order #	
City:			
State:		Zip:	
Customer Contact:		Phone:	
	Motor/Generator		
Manufacturer:		HP/KW:	
Speed (R.P.M.):		Model:	
Voltage:		Phases:	
Current (Amps):		SN:	
Frame:		Hz:	
Type:		Temp rise:	

MEASURING TOOLS REQUIRED

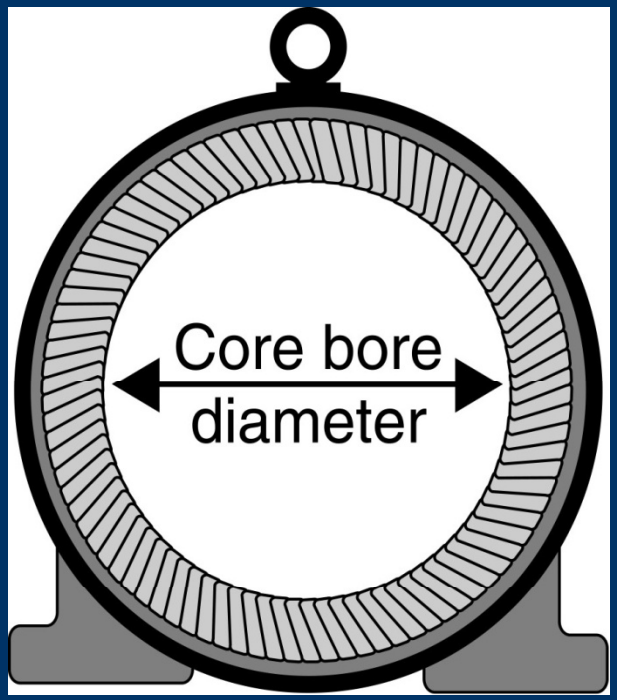
The tools require to take accurate data on form-wound coils include:

- **Steel ruler (12 inch or 300mm)**
- **Steel ruler (3 foot or 1 meter)**
- **Measuring tape**
- **A combination square (12 inch)**
- **Adjustable parallels (Starrett S154LZ)**
- **Vernier Calipers (6 inch or 150mm)**
- **Set of micrometers (0 to 2 inches or 0 to 100mm)**

Taking Stator Data

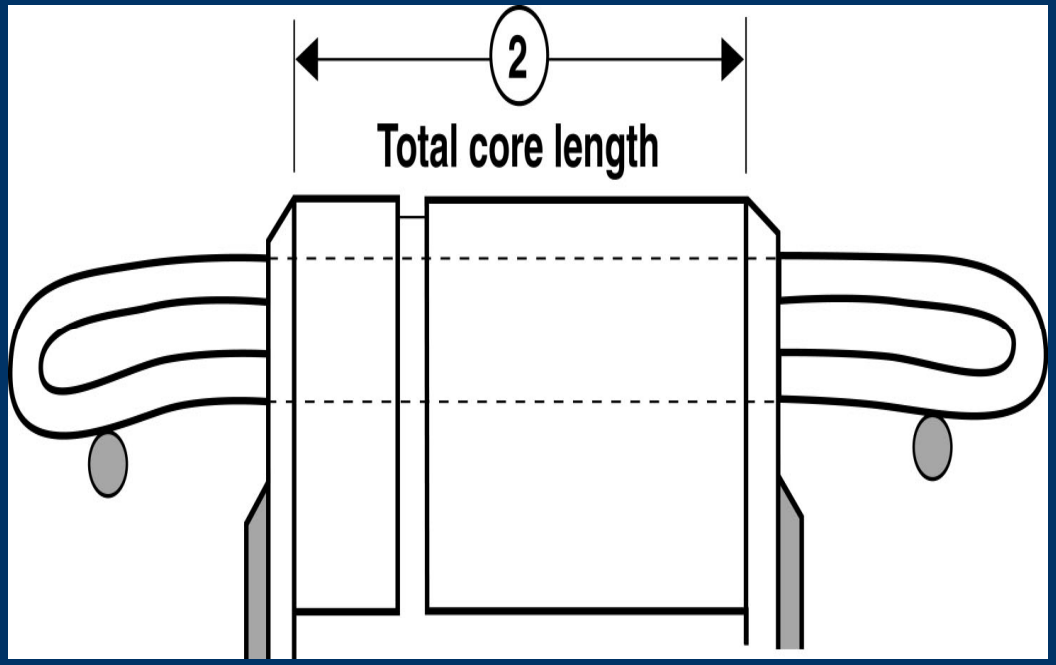
Core Bore Diameter

Measure and record the largest measurement (to nearest 1/16” or 1mm).



TOTAL CORE LENGTH

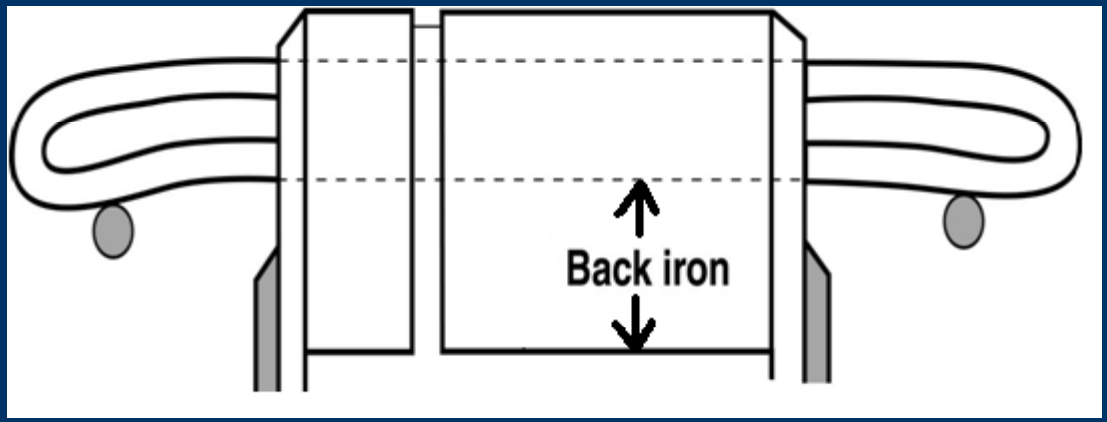
Total Core Length
This is the length of the iron excluding the finger plates. (to nearest 1/16” or 1mm)



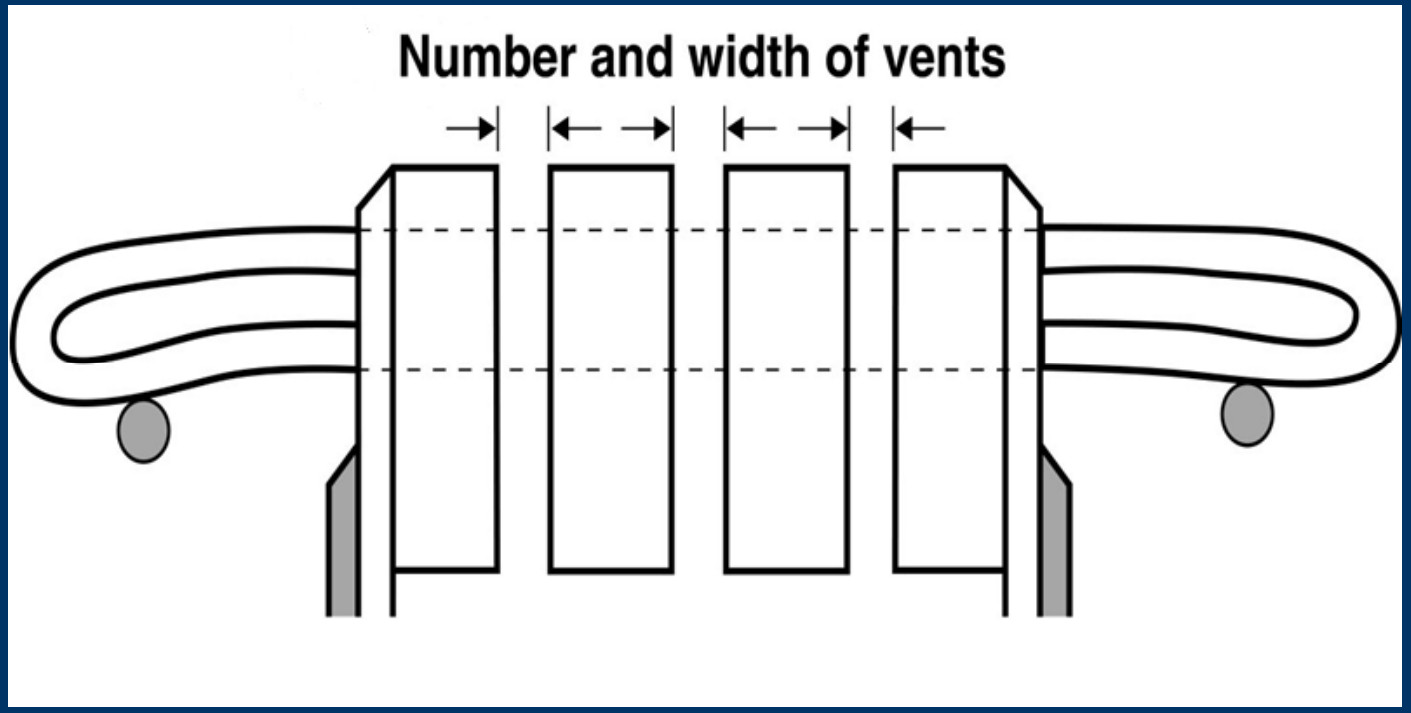
BACK IRON

Back Iron

This is the distance from the bottom of a slot to the outer edge of the stator iron (near the frame). If the back iron dimensions vary, record the maximum and minimum dimensions (to the nearest 1/16” or 1mm).

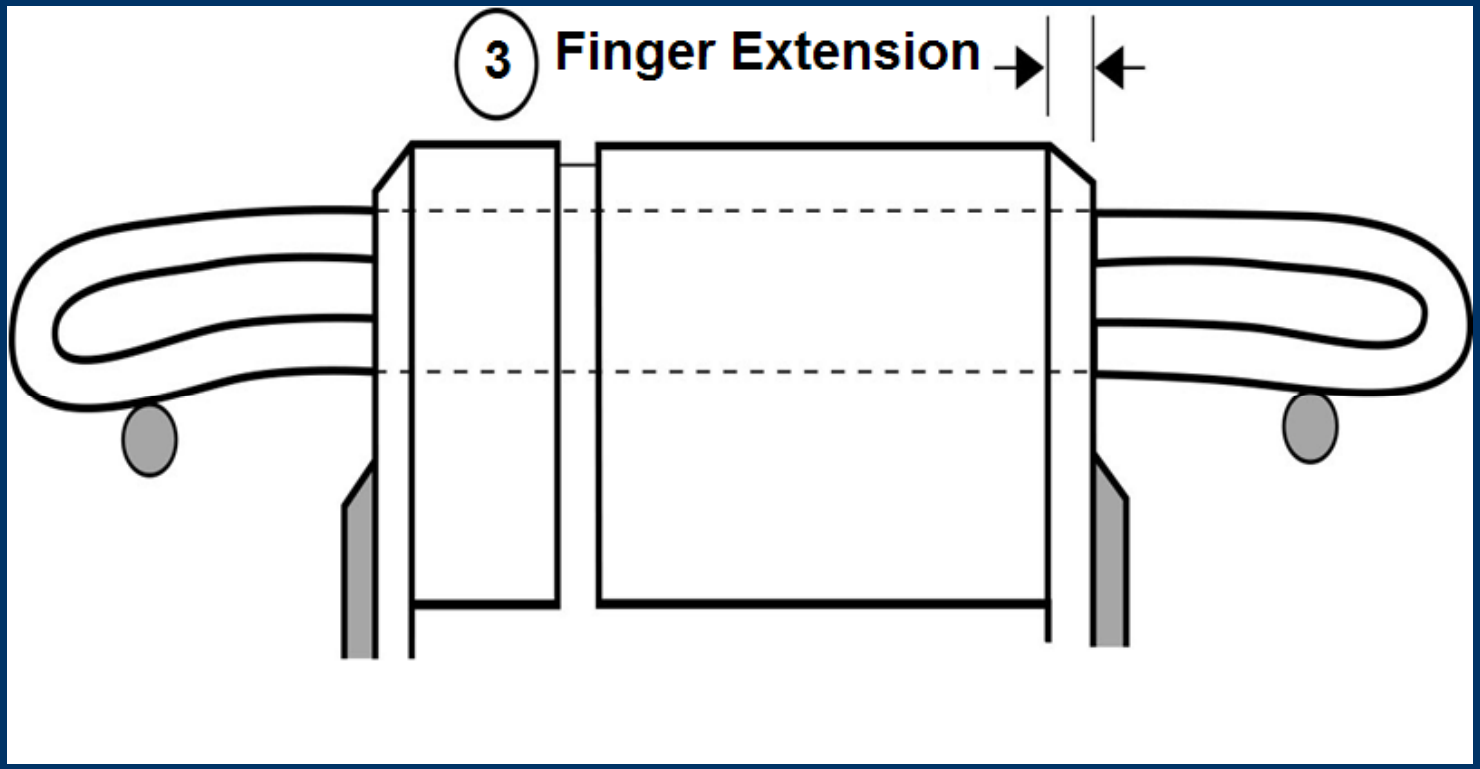


NUMBER OF VENTS/WIDTH OF VENTS



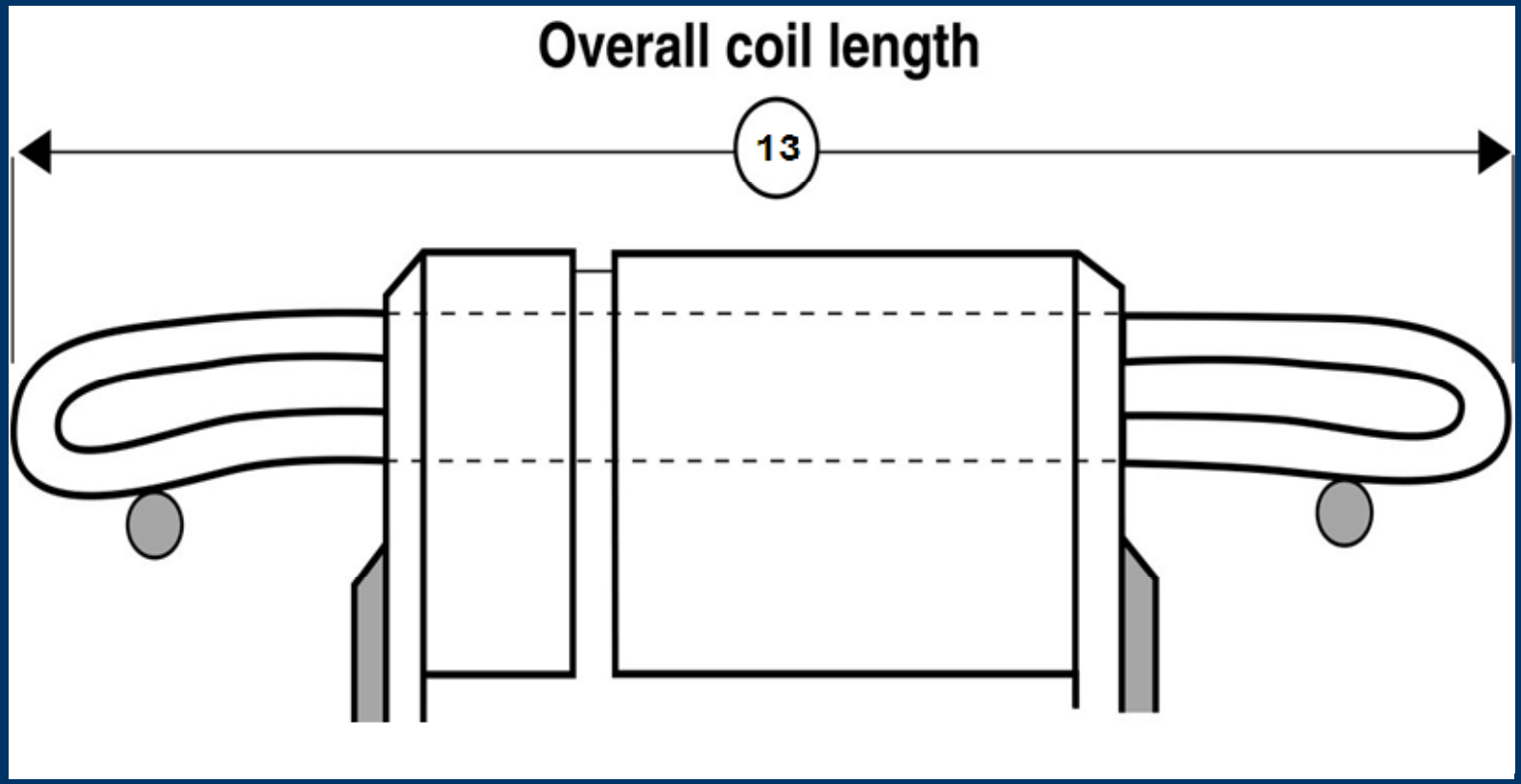
Measure to the nearest 1/16” or 1mm

FINGER PLATE WIDTH



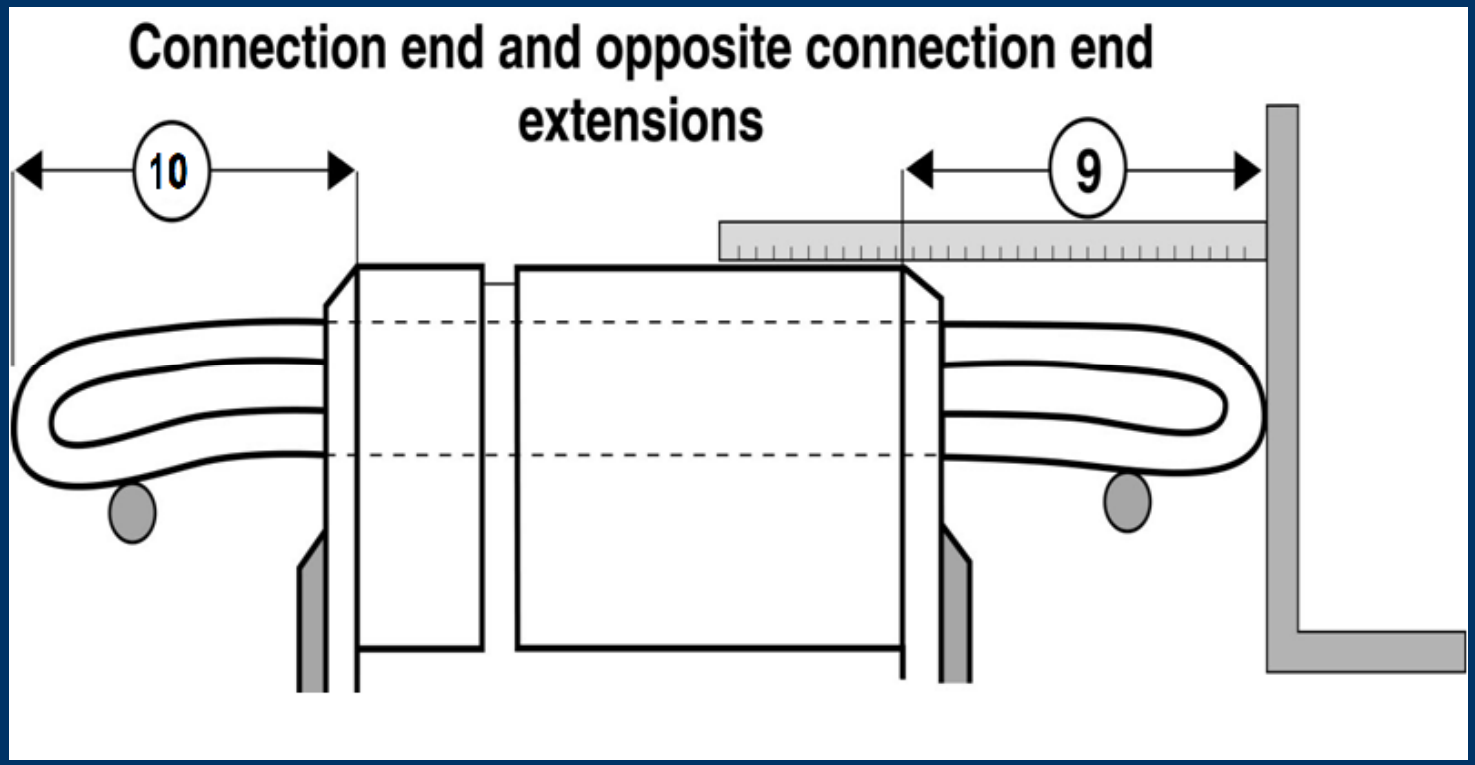
Measure to the nearest 1/16” or 1mm

OVERALL COIL LENGTH



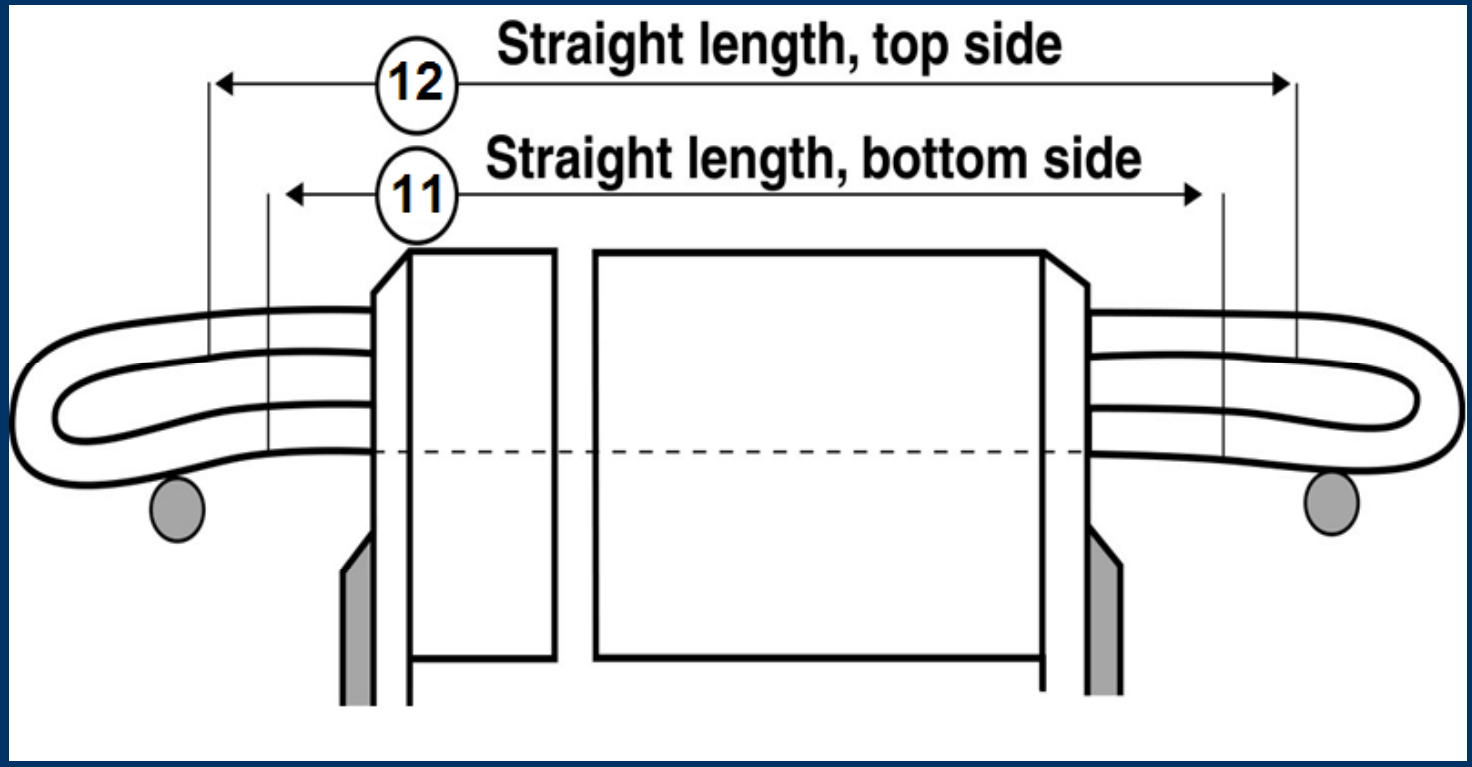
Measure to the nearest 1/16” or 1mm

CONNECTION AND EXTENSION



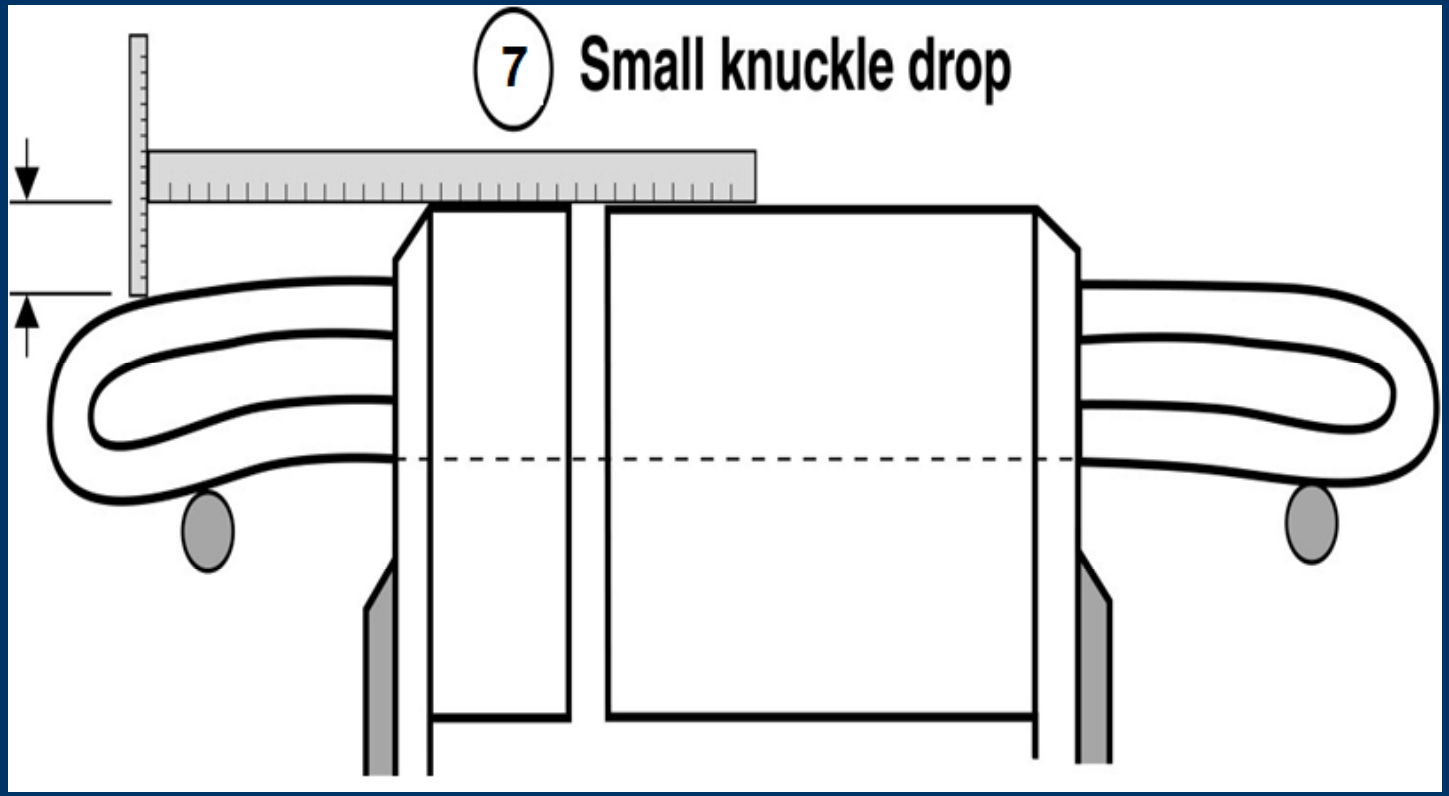
Measure to the nearest 1/16” or 1mm

STRAIGHT LENGTH



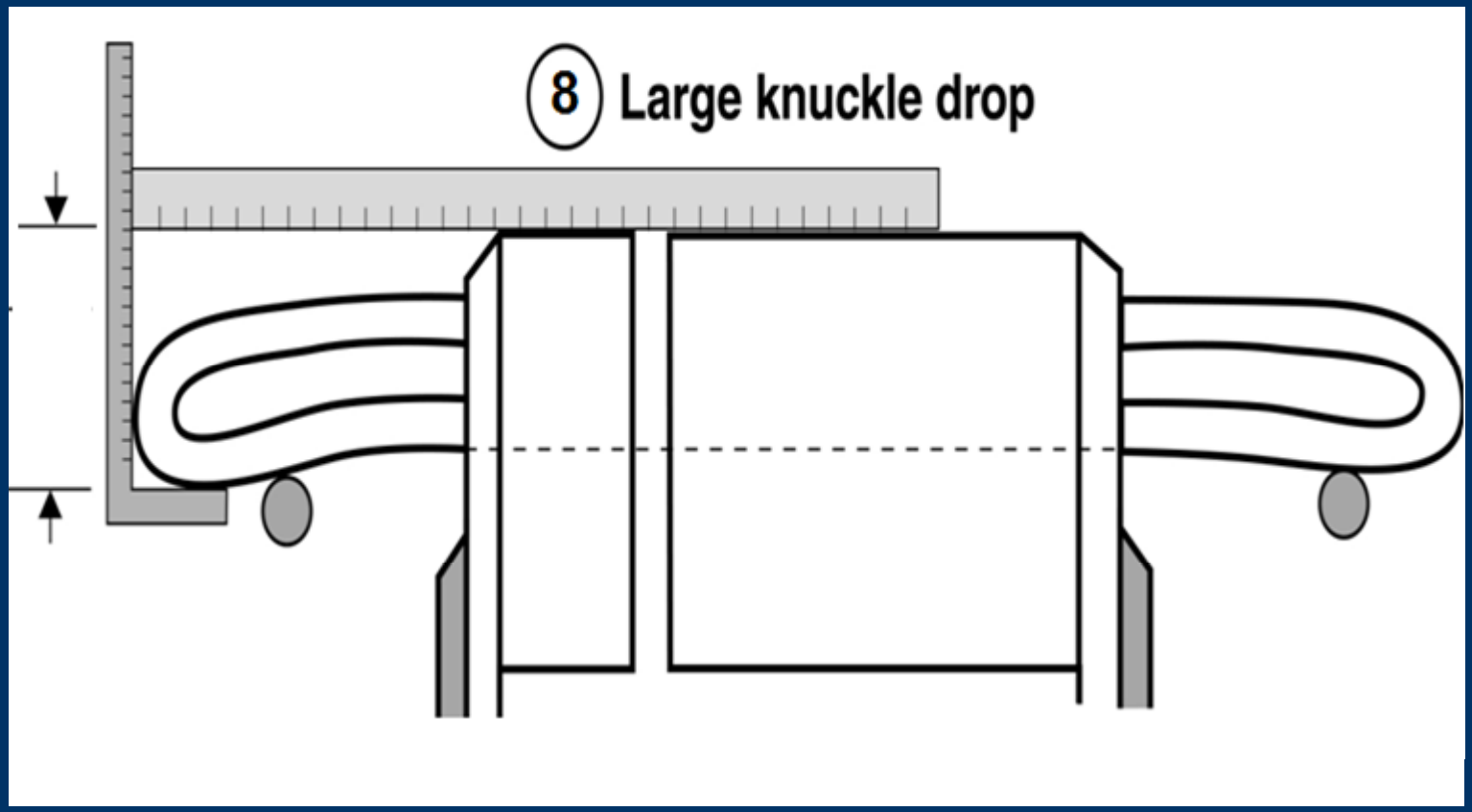
Measure to the nearest 1/16” or 1mm

SMALL KNUCKLE DROP



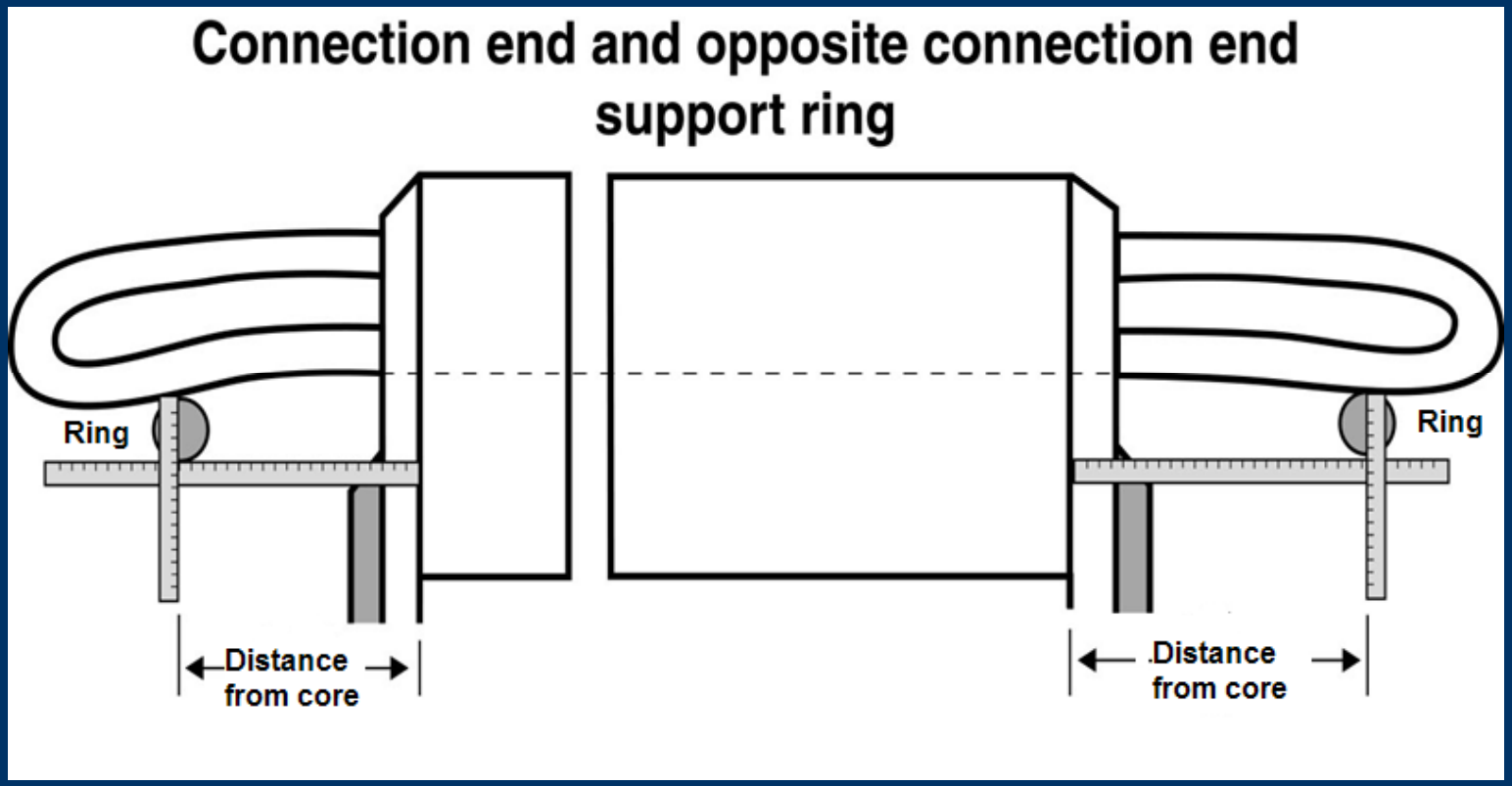
Measure to the nearest 1/16” or 1mm

LARGE KNUCKLE DROP



Measure to the nearest 1/16” or 1mm

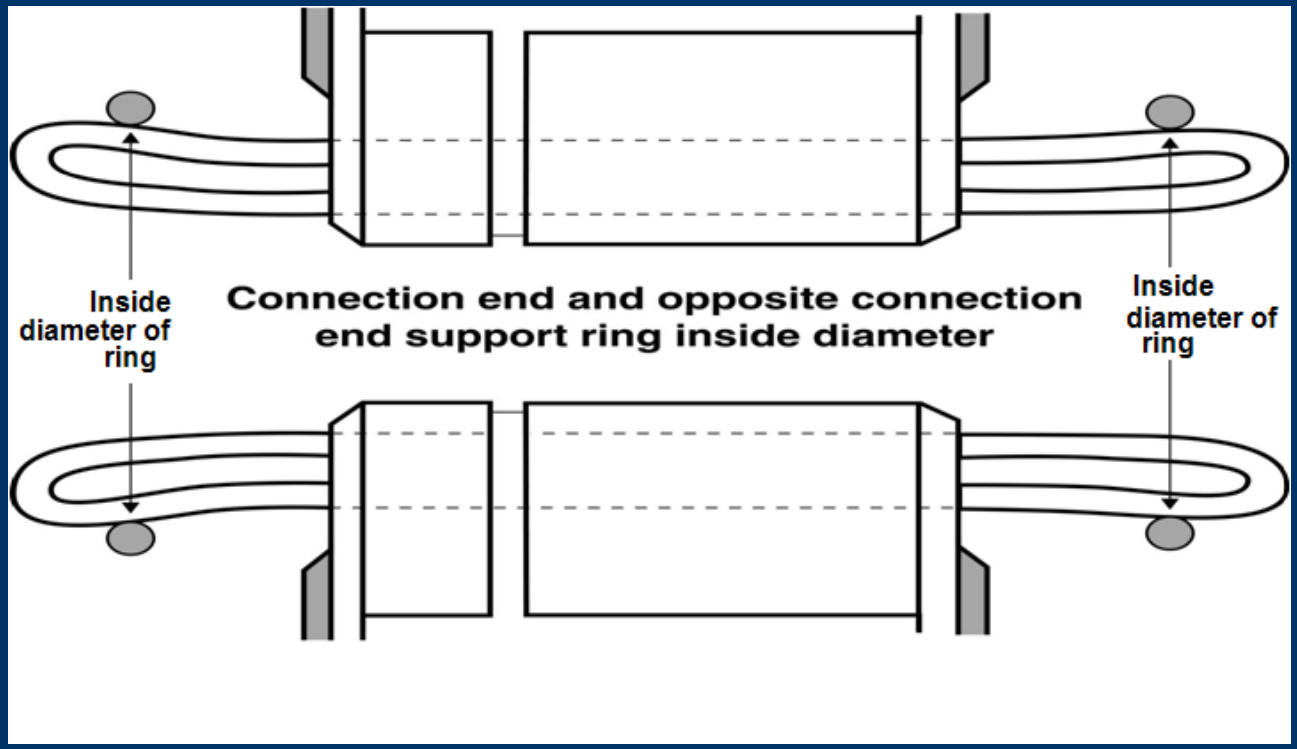
SUPPORT RING FROM CORE



Measure to the nearest 1/16” or 1mm

Large Motors Have More Than One Support Ring.

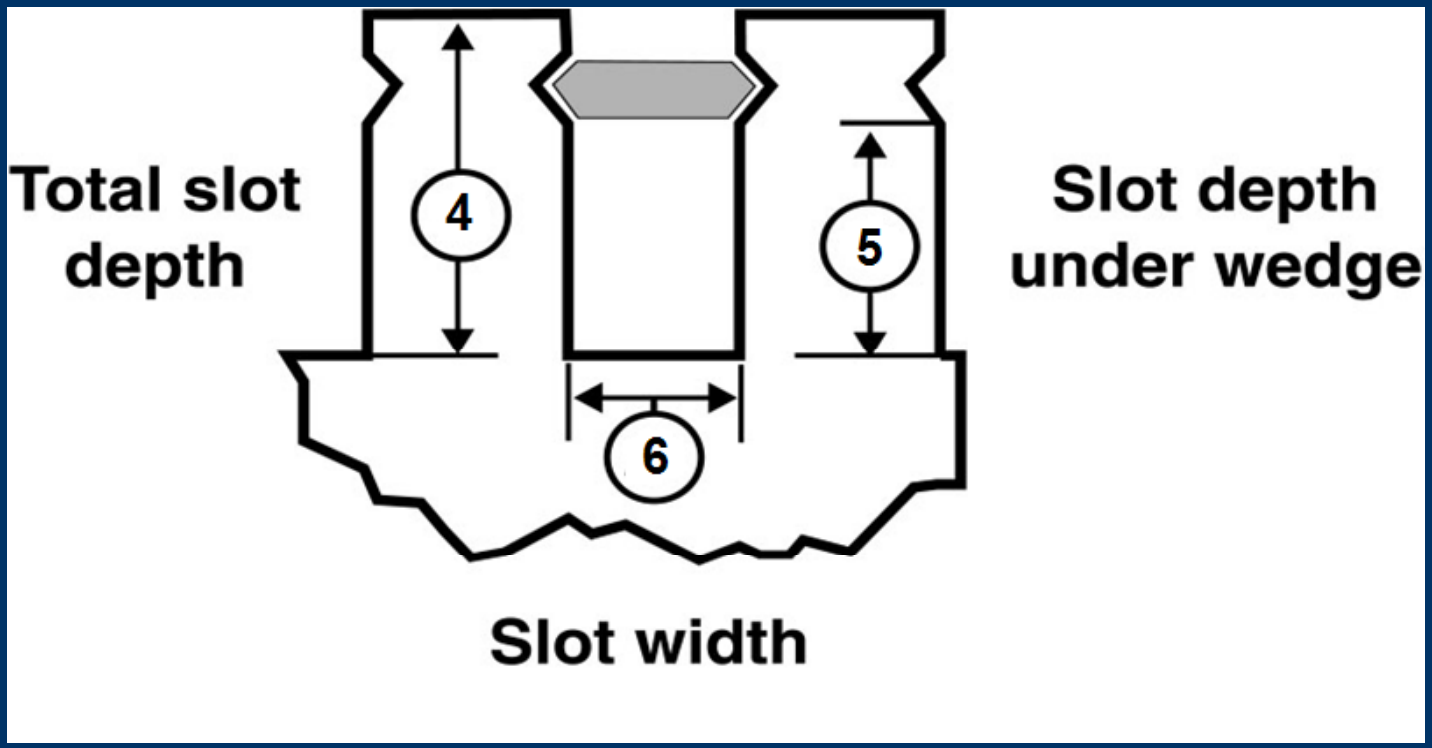
SUPPORT RINGS INSIDE DIAMETER



Measure to the nearest 1/16” or 1mm

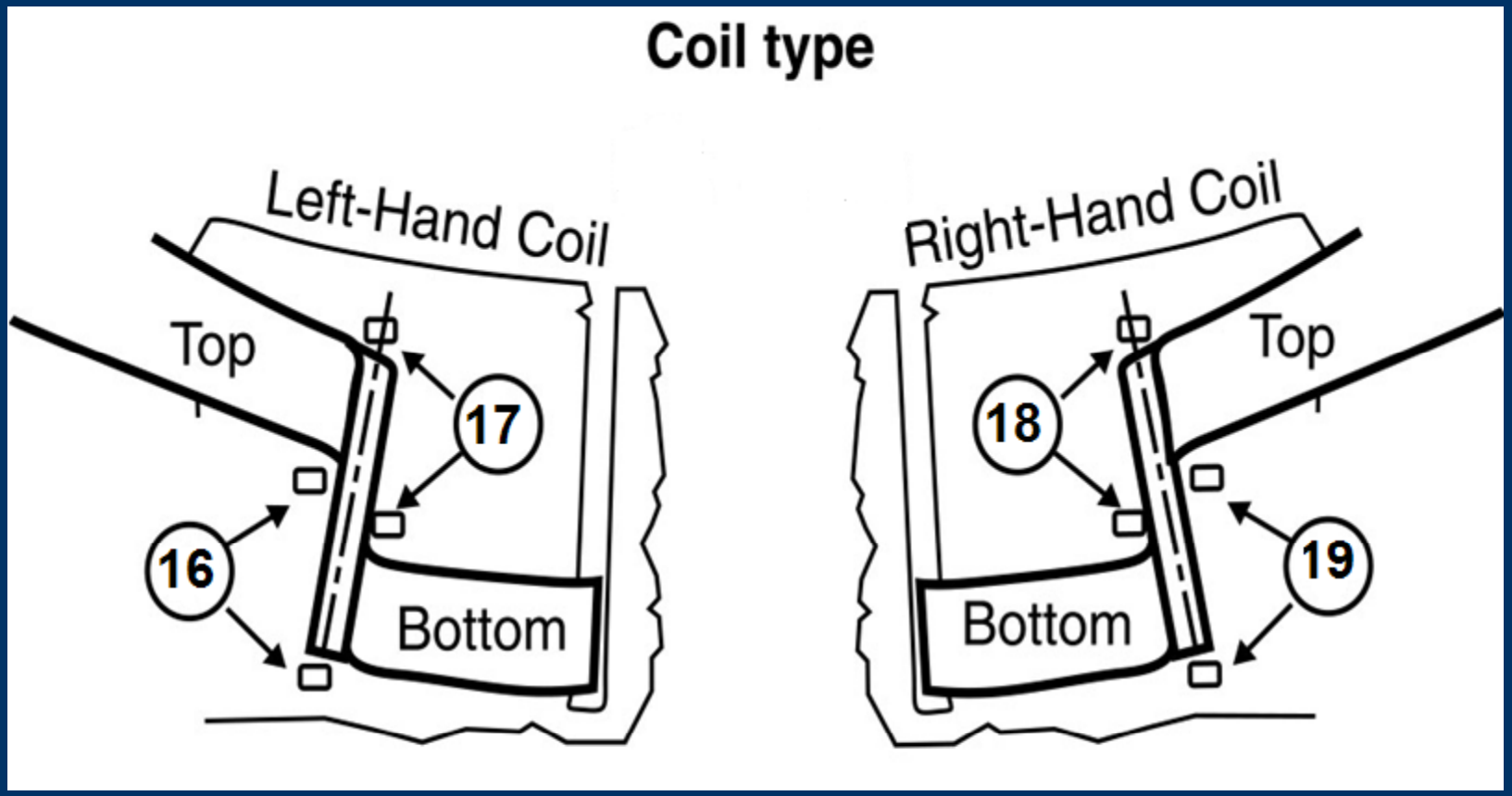
***Large Motors Have More Than One Support Ring.**

SLOT WIDTH

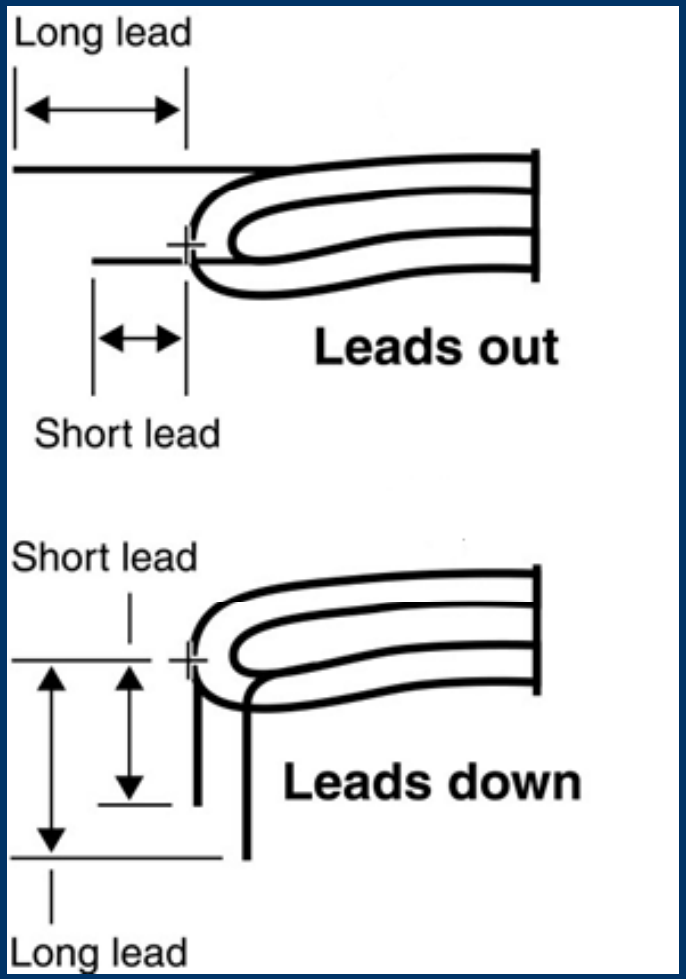


Accuracy of Measurement .005" or 0.1mm

COIL TYPE


Coil type
Left-Hand Coil
Top
17
16
Bottom
Right-Hand Coil
Top
18
19
Bottom

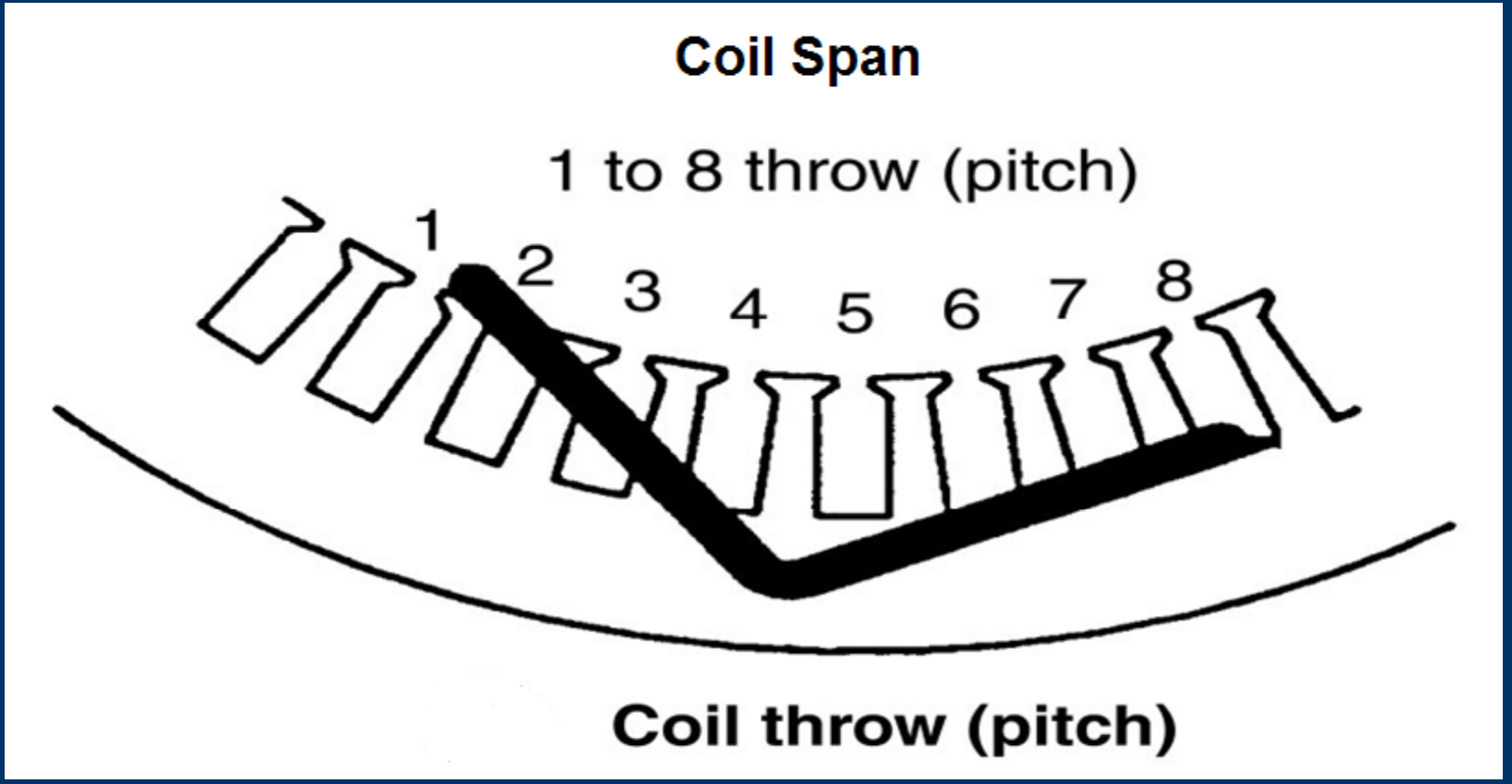
LEAD LOCATION



JUMPER-CONNECTION-CIRCUITS-SLOTS

- *JUMPER*. Determine and record the internal connection of the coil group (e.g. 1-4 or 1-7).
- *CONNECTION*. Determine and record the connection of the stator windings: Wye or Delta.
- *NUMBER OF CIRCUITS*. Determine and record the number of parallel circuits.
- *NUMBER OF SLOTS*. Count and record the number of stator slots.

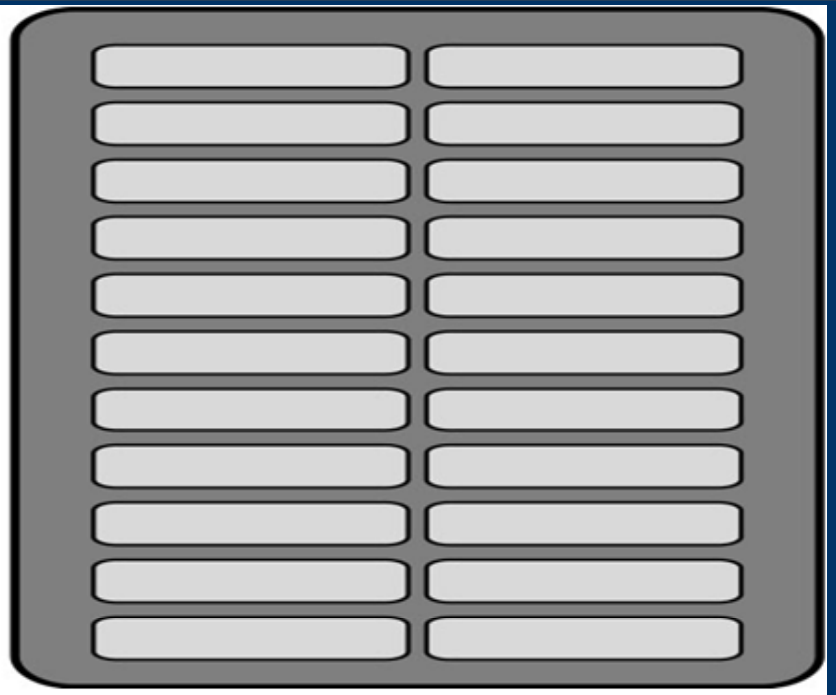
COIL THROW



TURNS PER COIL

Turns per coil

2 wires "in hand"
11 turns per coil



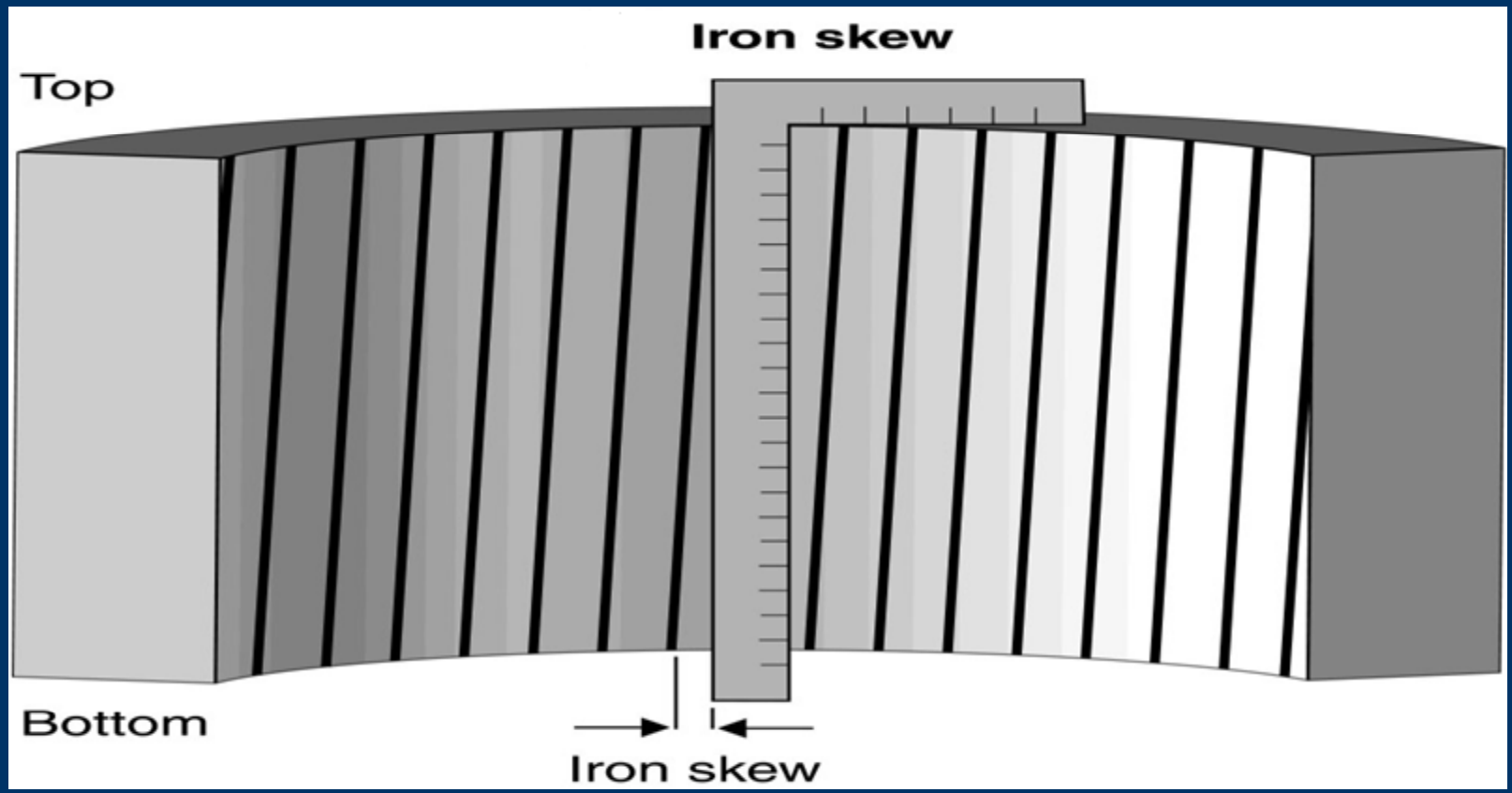
- 1 wire in hand or in parallel = 22 turn terrace wound coil.
- Count several coils to make sure these have the same turns.

STRAND INSULATION

Strand Insulation

- Film
- Extra heavy film “Quad”
- Single glass
- Double glass
- Mica Taped
- Other
- Is the motor used with an inverter?

IRON SKEW



IMPORTANT TIPS

- Is the stator fully wedged?
- Do the wedges have vent groves?
- Are the wedges:
  - Glass
  - 100% Magnetic (metal dust and epoxy)
  - Magnetic Permeable
  - Epoxy Glass
- Is the blocking special?
- Count turns on several coils.
- Take a picture of special features .
- Is the motor operated with an inverter?

DATA SHEET IS COMPLETE

"Strip & Wind"

IS

NEXT!

¿Any Questions?