

Motor Mounting Types

Motor Mounting Types

- Overview/Objectives:
 - Mounting Types and Their Uses
 - Industry Dimensional Standards Overview and Comparison

Motor Mounting Types

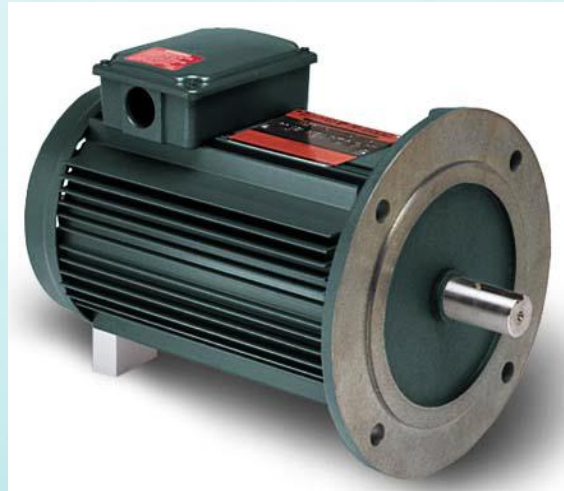
- Base Mount / Foot Mounted
- Flange Mounted:
 - C- Flange
 - D-Flange
- P-Base
- Pump Mount
- IEC Metric
 - B3 base
 - B5 C-face
 - B14 Flange



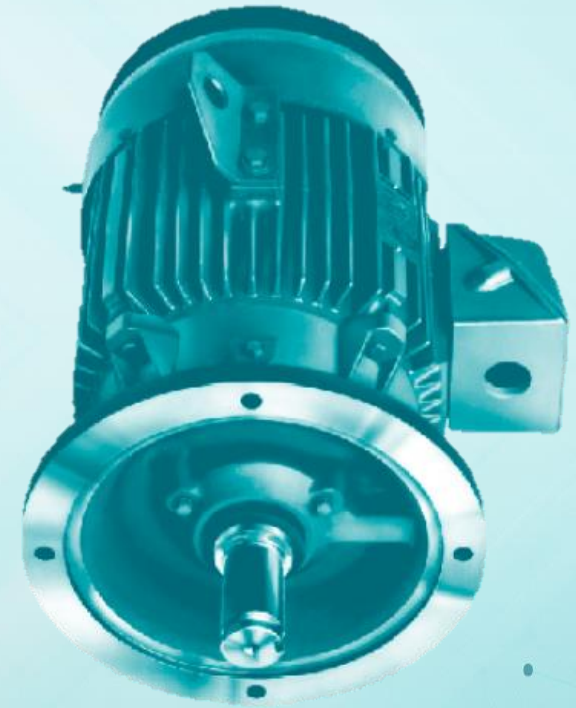
Motor Mounting Types



C-Face



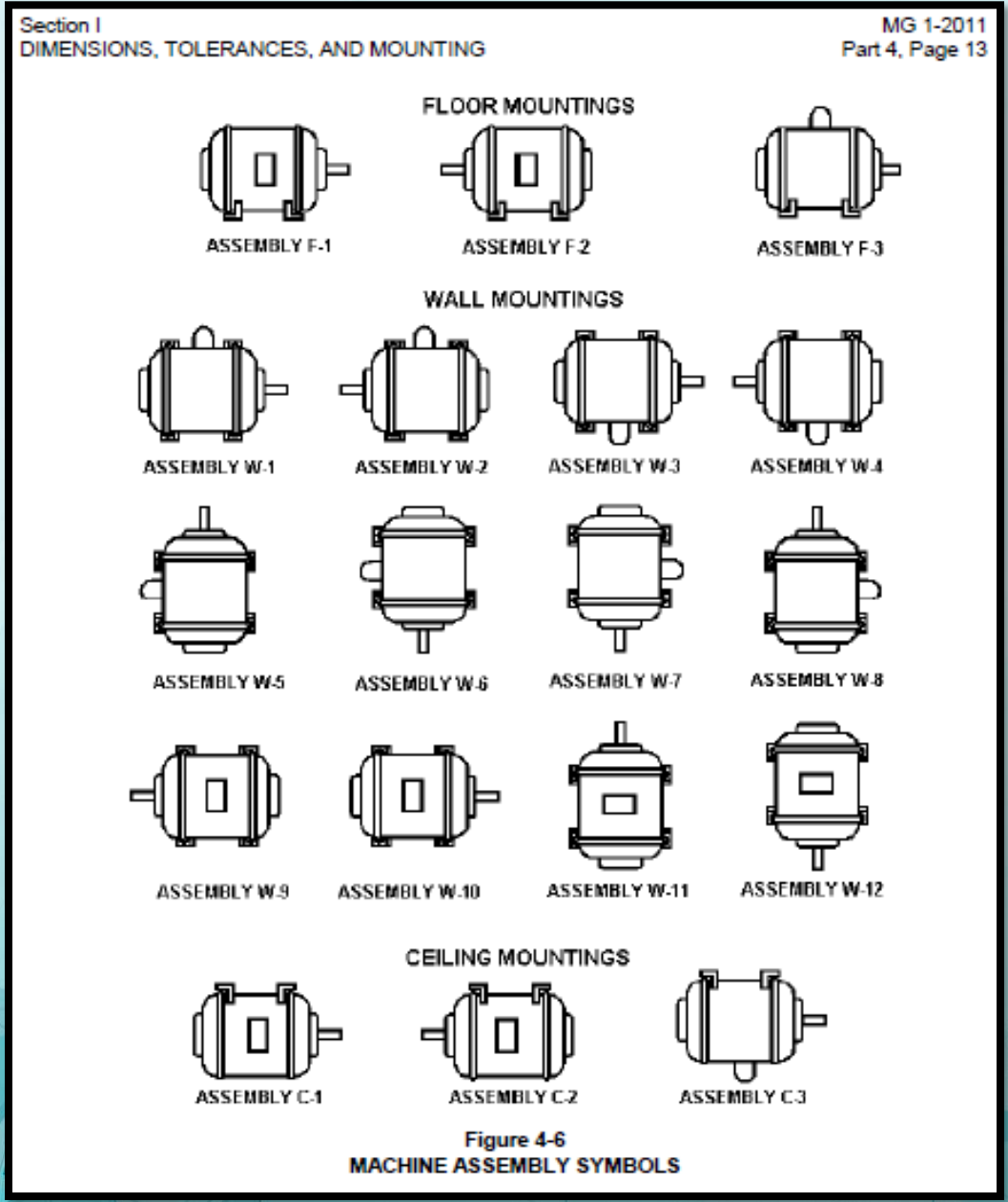
D-Flange



P-Base

Examples of flange mounts

Motor Mounting Types - Positioning



Industry Standards

NEMA and IEC

NEMA

National Electrical Manufacturers Association

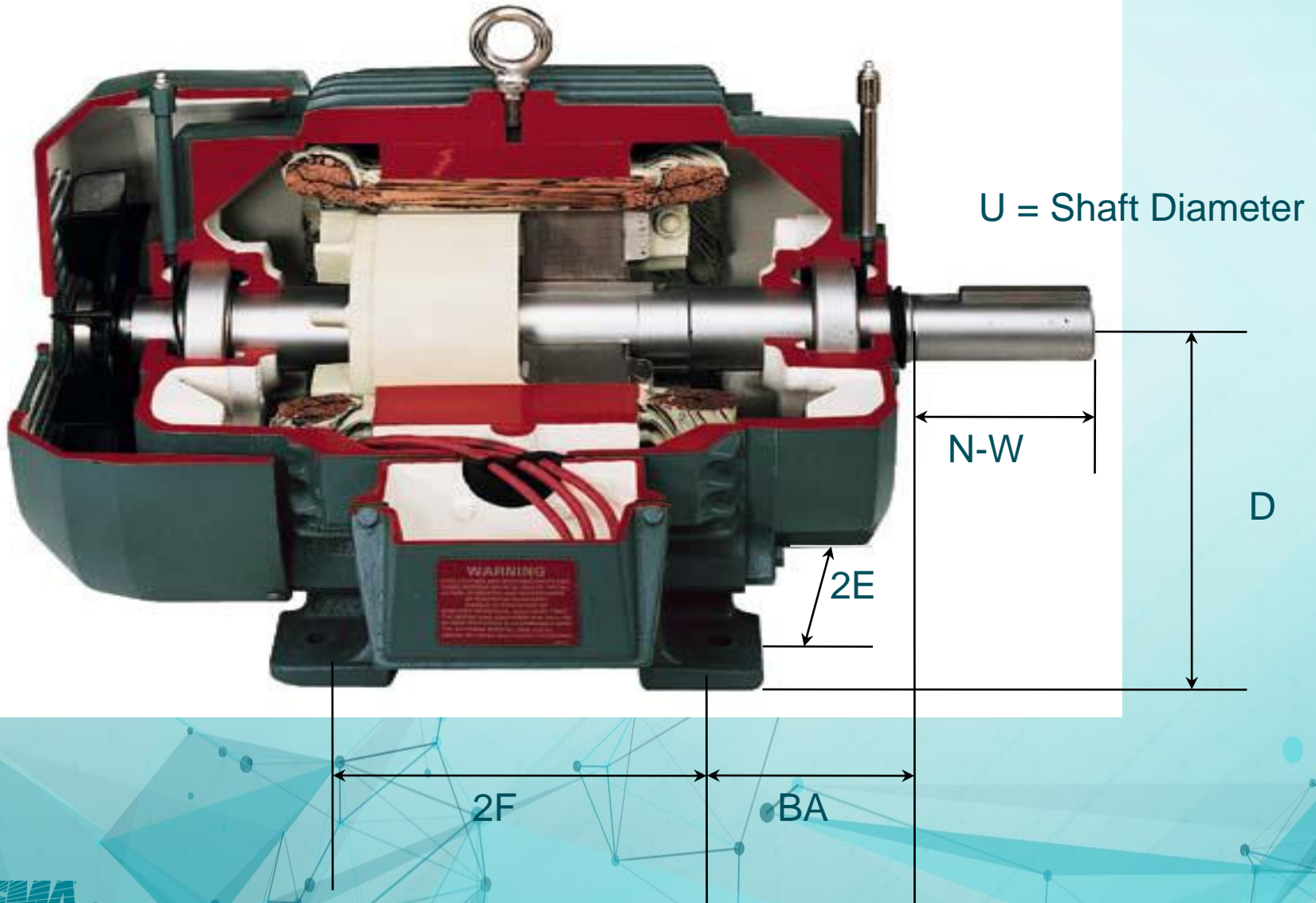
- Common within North American market.
- NEMA Standards Publication MG 1-2011 for Motors and Generators is specification title.

IEC

International Electrotechnical Commission

- Worldwide organization.
- IEC 60034 Rotating Electrical Machines is specification title.

NEMA Dimensions



NEMA Dimensions “D” Dimension

Frame Size	“D” Dimension
48	3” (48/16)
56	3.5”
143T, 145T	3.5” (14/4)
182T, 184T	4.5”
213T, 215T	5.25”
254T, 256T	6.25”
284T, 286T	7”
324T, 326T	8”
364T, 365T	9”
404T, 405T	10”
444T, 445T, 447T, 449T	11”
5006, 5008, 5010, 5012	12.5”
5808, 5810, 5812	14.5”

NEMA Dimensions

- Frame Size
 - Integral and Large AC Motors
 - First two digits / 4 = “D” dimension in inches
 - Third Digit (and fourth) = Relative Length - 2F Dimension
 - Fractional HP Motors
 - Two digits / 16 = “D” dimension in inches
 - Prefix Letters = Relative Length
 - Suffix Letters show mountings, Special Shafts, Mountings
- HP - NEMA sizes or Special
- Duty - Continuous, Time Based

Quiz

- Name two motor mounting types.
- Who maintains the two global standards for motor construction?
- What does the D dimension specify?

- Base/Foot mount, Flange, P-Base,
- Pump, IEC metric
- NEMA (MG-1) and IEC (60034)
- Radius to center of shaft in inches