

# Three Phase Modifiable NEMA® Horizontal Motors Accessories and Modifications

## 34. Lubrication (continued)

### D. Oil Mist Provisions (Ball Bearing Motors Only)

Frame:	56	140	180	210	250	280	320	360	400	444-445	447	449
Adder:	375	375	375	375	375	570	570	975	1650	1650	2025	2025

Includes providing the Motor with provisions to accommodate Oil Mist Lubrication. An Oil Mist Lubrication System (supplied by others) is a centralized system in which the energy of compressed gas, usually air taken from the plant supply, is used to atomize oil. The oil is then conveyed by air in a low pressure distribution system to application fittings on the Motor mist fittings which meter oil to bearing housings). Available on Enclosed Motors only.

## 35. Marine Duty

Frame:	56	140	180	210	250	280	320	360	400	444-445	447	449
Adder:	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%

Marine Duty is available per IEEE-45 Specifications for either Above Deck or Below Deck operation. IEEE-45 requires that motors exposed to the weather, seas, splashing or other severe moisture conditions either be water tight or protected by watertight enclosures.

Since electric motors breathe during operation, they cannot be constructed as watertight. Above Deck motors must be protected by suitable watertight enclosures. Below Deck motors should be located to avoid splashing bilge water. Above Deck also requires CORRO-DUTY®. Open Drip Proof (ODP) motors can only be used Below Deck.

NOTE: IEEE 45 requires that motors exposed to the weather, seas, splashing or other severe moisture conditions either be watertight or protected by watertight enclosures. Since electric motors "breathe" during operation, they cannot be constructed as watertight. Above-deck motors must be protected by suitable watertight enclosures.

## 36. Multi-Speed Motors

Frame:	56	140	180	210	250	280	320	360	400	444-445	447	449
Adder:	(QP)	(QP)	(QP)									

Refer to Quick Pick Chart for pricing.

Base List Price:

- Variable & Constant Torque - use base list price of High Speed HP & Poles
- Constant Horsepower - use base list of High Speed HP & Low Speed Poles

This adder includes Multi-Speed with 1.0 Service Factor. If higher Service Factor is required, the Service Factor adder must also be used. The following charts show typical Frame Size adjustments for Multi-Speed (over the standard Single Speed Base Frame Size):

Poles	Speed (RPM)	Variable Torque		Constant Torque		Constant Horsepower	
		1-Wdg	2-Wdg	1-Wdg	2-Wdg	1-Wdg	2-Wdg
2/4	3600/1800	Base	N/A	+1	N/A	+1	N/A
4/6	1800/1200	N/A	+2	N/A	+2	N/A	+1
4/8	1800/900	SEE HP TABLE BELOW					
4/12	1800/600	N/A	+2	N/A	+2	N/A	+1
6/8	1200/900	N/A	+2	N/A	+2	N/A	+1
6/12	1200/600	Base	+2	+1	+2	+1	+1

HP	Speed (RPM)	Variable Torque		Constant Torque		Constant Horsepower	
		1-Wdg	2-Wdg	1-Wdg	2-Wdg	1-Wdg	2-Wdg
1/3-2	1800/900	Base	+2	+1	+2	+1	+1
3-20	1800/900	Base	+2	+2	+3	+1	+1
25-60	1800/900	+1	+2	+2	+3	+1	+1
75+	1800/900	+1	+2	+1	+2	+1	+1



# Three Phase Modifiable NEMA<sup>®†</sup> Horizontal Motors Accessories and Modifications

## 37. Nameplates

### A. Additional Duplicate Nameplate

Frame:	56	140	180	210	250	280	320	360	400	444-445	447	449
Adder:	53	53	53	53	53	53	53	53	53	53	53	53

An Additional Duplicate Nameplate for mounting on customer equipment can be furnished when specified with the order. These additional nameplates cannot be supplied with CSA<sup>®†</sup> or UL<sup>®†</sup> logos.

### B. Additional Stamping On Main Nameplate

Frame:	56	140	180	210	250	280	320	360	400	444-445	447	449
Adder:	53	53	53	53	53	53	75	75	75	75	75	75

The main motor nameplate can be stamped with limited customer tagging information (20 characters max).

### C. Phase Sequencing Plate

Frame:	56	140	180	210	250	280	320	360	400	444-445	447	449
Adder:	53	53	53	53	53	53	53	53	53	53	53	53

Direction of rotation must be specified at order entry.

### D. Rotation Arrow Plate

Frame:	56	140	180	210	250	280	320	360	400	444-445	447	449
Adder:	53	53	53	53	53	53	53	53	53	53	53	53

Metal Plate mounted on motor with arrow showing direction of rotation. Customer must specify required direction of rotation:

- Counterclockwise facing opposite drive end
  - Clockwise facing opposite drive end
  - Dual rotation (not available on all ratings)
- Supplied as standard on motors with Uni-Directional Fans.

### E. Shipping Tag (#6 Paper Tag)

Frame:	56	140	180	210	250	280	320	360	400	444-445	447	449
Adder:	N/C	N/C	N/C									

A #6 Paper Shipping Tag, with customer tagging information, can be supplied at no charge when specified at time of motor order.

### F. Special Features (I.D.) Nameplate

Frame:	56	140	180	210	250	280	320	360	400	444-445	447	449
Adder:	53	53	53	53	53	53	75	75	75	75	75	75

Special Identification Plates can be mounted on the motor with limited customer specified tagging information (100 characters max).

### G. Starting Duty Nameplate

Frame:	56	140	180	210	250	280	320	360	400	444-445	447	449
Adder:	53	53	53	53	53	53	53	53	53	53	53	53

Starting Duty Plate listing number of allowable starts in succession and required "off" time between subsequent starts. Customer's Load Inertia is required at order entry. A Starting Duty Plate is required if the number of starts is anything other than NEMA<sup>®†</sup> Standard.

## 38. Paint

### A. Nidec Motor Corporation's Standard Paint For CORRO-DUTY<sup>®</sup> Motors

Frame:	56	140	180	210	250	280	320	360	400	444-445	447	449
Adder:	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%

† All marks shown within this document are properties of their respective owners.



# Three Phase Modifiable NEMA®† Horizontal Motors Accessories and Modifications

## 38. Paint (continued)

The motor will be painted with Nidec Motor Corporation's standard paint used for CORRO-DUTY® motors (unless Special Paint is specified), including:

- On Open Motors: exterior of motor, interior unmachined surfaces of brackets, bracket grills (if any), exterior unmachined surfaces of bearing caps (if any) and air deflectors (if any)
  - On Enclosed Motors: exterior of motor, exterior unmachined surfaces of Short End bracket, interior unmachined surfaces of fan cover, metal fans (if used) and sheet metal parts exposed to exterior atmosphere (if any)
- Only applicable to Non-CORRO-DUTY® motors.

### B. Special Paint

<b>Frame:</b>	56	140	180	210	250	280	320	360	400	444-445	447	449
<b>Adder:</b>	150	150	225	300	375	450	525	600	675	750	750	750

Special paint must be approved by the plant prior to quoting. A Material Safety Data Sheet (MSDS) must be sent to the plant for their review. Special paint can be furnished (once approved) if compatible with our standard primer, is commercially available, and suitable for air drying (paints containing lead or zinc cannot be used, and sand blasting is not available). Motors can be supplied with just the standard primer at no charge, if requested at time of order.

## 39. Prints & Data (Submittals) (Net Adders)

<b>Frame:</b>	56	140	180	210	250	280	320	360	400	444-445	447	449
<b>Adder:</b>	(QP)	(QP)	(QP)									

Refer to Quick Pick List for pricing. Submittals adders are NET ADDERS. The following submittals are considered Standard Submittals, and are available at no charge if requested at the time of motor order:

- Certified Dimension Print
- Bearing Life Calculation
- Instruction Manual
- Wiring Diagram
- Rotor Inertia
- Performance Data
- Conduit Box Details
- Parts List
- Recommended Spare Parts
- Cut Sheets for Accessories
- Nameplate Data
- Major Component Weights
- Paint Specification
- Rotor Air Gap (Calculated)

## 40. Purge Ports

<b>Frame:</b>	56	140	180	210	250	280	320	360	400	444-445	447	449
<b>Adder:</b>	375	375	375	375	375	570	570	975	1650	1650	2025	2025

Arrange motor to accommodate Air Purging Systems. Drilled and tapped holes in each end of the motor. Used in applications where the air must be purged out of the motor prior to startup.

## 41. Screens

### A. Standard Material

<b>Frame:</b>	56	140	180	210	250	280	320	360	400	444-445	447	449
<b>Adder:</b>	N/A	N/A	N/A	N/A	N/A	255	308	375	555	578	578	578

Corrosion-Resistant rodent screens provided over the air inlet and air outlet openings. Available on Open Drip Proof (ODP) motors. Available on 280 frame and above.

### B. Stainless Steel

<b>Frame:</b>	56	140	180	210	250	280	320	360	400	444-445	447	449
<b>Adder:</b>	N/A	N/A	N/A	N/A	N/A	275	378	549	828	864	864	864

Stainless Steel rodent screens provided over the air inlet and air outlet openings. Available on Open Drip Proof (ODP) motors. Available on 280 frame and above.

## 42. Sealant

### A. Rotor Assembly Treatment Used On CORRO-DUTY® Motors

<b>Frame:</b>	56	140	180	210	250	280	320	360	400	444-445	447	449
<b>Adder:</b>	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%

Coating of rotor assembly, standard on CORRO-DUTY® motors.

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