

# AC Motor Selection – Marathon® Single-Phase Motors

**marathon**®  
Motors

Marathon® Single-Phase Motor Selection					
Single-Phase Characteristic	Powerwash SXT	JetPump	General Purpose	Air Compressor	Fan & Blower
<b>Electrical Characteristics</b>					
<b>Horsepower range</b>	1/3 – 5	1/3 – 2	1/4 – 10	1/2 – 5	1/4 – 2
<b>Base speed (# poles)</b>	1800 (4) / 3600 (2)	3600 (2)	1800 (4) / 3600 (2)	1800 (4) / 3600 (2)	1800 (4) / 3600 (2)
<b>Standard voltage</b>	115 / 230	115 / 230	115 / 230, 208 / 230, 115 / 208 – 230 100 – 120 / 200 – 240, 120 / 140 & 100 – 120 / 200 – 240	230, 115 / 230, 115 / 208 – 230	115 / 230 (G1115), 115 / 208 – 230
<b>Phase / Base frequency (Hz)</b>	1 / 60				
<b>Service factor</b>	1.0	1.0 / 1.15	1.15 / 1.35	1.15 / 1.25 (C169)	1.15 / 1.2 / 1.25 / 1.35
<b>Design code (NEMA)</b>	B	N/A***	B, L, N, O	E, L	E, L, N
<b>Insulation class</b>	F	B	B, B3, F4	B, B3	B, B3
<b>Insulation system</b>	CR <sup>200</sup> magnet wire	N/A***	N/A***	N/A***	N/A***
<b>Duty cycle</b>	Continuous				
<b>Thermal protection</b>	None	Automatic Reset	Automatic / Manual / None	Manual / None (Z502)	Automatic / Manual / None (C235)
<b>Mechanical Characteristics</b>					
<b>Frame size (mounting)</b>	56C – 145TC	56J	48 – 215T	56 – 56H – 184T	48 – 56 – 56H
<b>Enclosure</b>	TEFC, TENV	TEFC	DP	DP	DP
<b>Frame material</b>	300 Series Stainless Steel	Rolled Steel	Rolled Steel	Rolled Steel	Rolled Steel
<b>End bracket material</b>	Stainless Steel	Cast Aluminum, Steel	Cast Aluminum	Cast Aluminum	Cast Aluminum
<b>Conduit box material</b>	Stainless Steel	Steel	Steel	Steel	N/A***
<b>Fan guard material</b>	Stainless Steel	Steel	N/A***	N/A***	N/A***
<b>Fan material</b>	Polypropylene	Plastic	N/A***	N/A***	N/A***
<b>Lead termination</b>	Conduit box	Conduit box Flying Leads (Jxxx Models) .33HP to 3HP	Conduit box	Conduit box	NPS Hole
<b>Standard mounting</b>	C-Face with Rigid Base & C-Face Round Body	Footless	Rigid Base	Rigid Base	Resilient Base
<b>Drive end shaft slinger</b>	No	Yes	No	No	No
<b>Paint</b>	N/A	Gray powder-coat	Gray powder-coat Blue enamel	Black powder-coat	Black powder-coat
<b>Bearings</b>	Double Sealed		Ball Bearings	Ball Bearings	Ball Bearings
<b>Grease</b>	Exxon Polyrex EM				
<b>Standard conduit box assembly position</b>	F1	F1	F1	F1	F1 (NPS Hole)
<b>Performance Characteristics</b>					
<b>Temperature rise</b>	N/A***				
<b>Encoder provisions</b>	No				
<b>Other Characteristics</b>					
<b>Warranty *</b>	12 months from Installation. 18 months from Purchase.				
<b>Agency listings **</b>	UL Recognized, CSA Certified, and CE Mark				

\* See Terms and Conditions for motor warranty explanation.

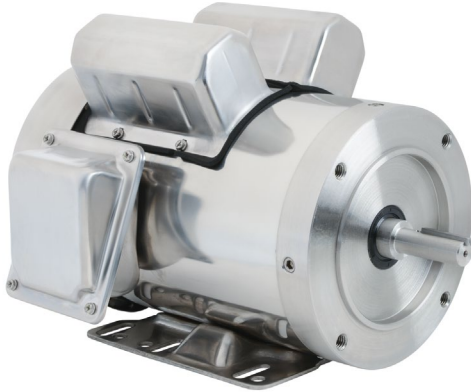
Marathon warranty service can be arranged through Marathon Electric service centers. See list of service centers on our website at [www.automationdirect.com](http://www.automationdirect.com).

\*\* To obtain the most current agency approval information, see the Agency Approval Checklist on the specific part number's web page.

\*\*\* Data not available from manufacturer.

# Powerwash SXT Washdown Duty, Single-Phase, All Stainless Steel, Totally Enclosed Motors

C-Face Footed (Rigid Base)



**marathon**<sup>®</sup>  
Motors

## Features

- Encapsulated electronic starting switch is impervious to moisture.
- Capacitor start induction run design for high starting torque unless otherwise noted.
- 1.15 Service Factor on sinewave.
- Double-sealed ball bearings.
- 303 stainless steel shaft with spring-loaded contact seals in each end.
- 300 Series stainless steel external construction: frame, end shields, conduit box, fan guard, mounting base and hardware for superior corrosion resistance.
- Internal corrosion-resistant coatings on rotor and heavy polyester varnish on the stator.
- 100% paint-free constructions.
- One-way condensation drains in each end shield and conduit box for all angle mounting.
- Nitrile Buna-N gaskets and seals on conduit box, through bolts and end shields.
- Nameplate information laser etched on frame.
- UL Recognized, CSA Certified and CE Mark.
- IP55 Rating
- Max Guard Insulation System

## Applications

Typical uses include machine tools, conveyors, packaging machines, batching machines, food and beverage equipment, pumps, and fans

### Motor Shipping Schedule \*

Same or one day \*    Up to 7 days    Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.

\* Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

### Motor Specifications – Powerwash SXT Washdown Duty, Single-Phase, Totally Enclosed, All Stainless Steel Motors

Part Number*	Price	HP	Base RPM	Volts	Service Factor	Encl.	NEMA Design	NEMA Frame	Model No.	Weight (lb)*				
<b>N341</b>	\$435.00	1/2	1800	115 / 230	1.15	TEFC	B	56C	56C17WD5327 A	29				
<b>N343</b>	\$501.00	3/4							56C17WD5328 A	36				
<b>N345</b>	\$513.00	1							56C17WD5329 A	42				
<b>N347</b>	\$522.00	1-1/2							56C17WD5330 A	53				
<b>N349</b>	\$579.00	2	3600					115 / 230	1.15	TEFC	B	145TC	145TBWD5335 A	62
<b>N348</b>	\$592.00	2										145TBWD5305	49	
<b>N340</b>	\$395.00	1/2										56C	56C34WD5301 A	26
<b>N342</b>	\$431.00	3/4										56C34WD5302 A	30	
<b>N344</b>	\$476.00	1	56C34WD5303	36										
<b>N346</b>	\$527.00	1-1/2	56C34WD5304 A	43										

\* Refer to the Motor Shipping Schedule table for shipping information. Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our website at [www.automationdirect.com](http://www.automationdirect.com).

# Powerwash SXT Washdown Duty, Single-Phase, All Stainless Steel, Totally Enclosed Motors

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Motors

C-Face Footed (Rigid Base)

## Performance Data

Performance Data - Single-Phase 56C (230V/60Hz data except as indicated) Powerwash SXT Washdown Duty All Stainless Steel, Totally Enclosed Motors											
Part Number	HP	F.L. RPM	Current @ 115V/230V (Amps)			Torque (lb.-ft)			F.L. Efficiency (%)	F.L. Power Factor	Rotor Inertia (lb.-ft <sup>2</sup> )
			230 Volt No Load Amps	Full Load Amps (115/230V)	Locked Rotor Amps (115/230V)	Full Load	Locked Rotor	Break-down			
N341	1/2	1725	3.5	8.2 / 4.1	NA* / 20	1.5	5	4.04	61	65	0.058
N343	3/4		4	9.8 / 4.9	NA* / 28.1	2.25	6.42	5.94	72	68	0.081
N345	1		4.9	13.6 / 6.8	NA* / 39	3	8.81	7.4	69	69	0.099
N347	1-1/2		5.1	15.8 / 7.9	116.8 / 58.4	4.5	15	12.7	75	75	N/A*
N349	2		4.3	16.4 / 8.2	115 / 57.5	6.0	14	14.1	74	98	N/A*
N340	1/2	3450	2.6	7.2 / 3.6	NA* / 18.4	0.75	2.56	4.08	65	71	0.058
N342	3/4		3	9.2 / 4.6	NA* / 24	1.125	2.34	2.03	72	74	0.058
N344	1		3.8	12.4 / 6.2	71.2 / 35.6	1.5	4.36	2.8	70	76	0.058
N346	1-1/2		4.8	16.4 / 8.2	NA* / 52	2.31	6.5	5.31	73	79	0.058
N348	2		4.3	18.12 / 9.06	138 / 69	3.0	7.5	7.7	83	87	N/A*

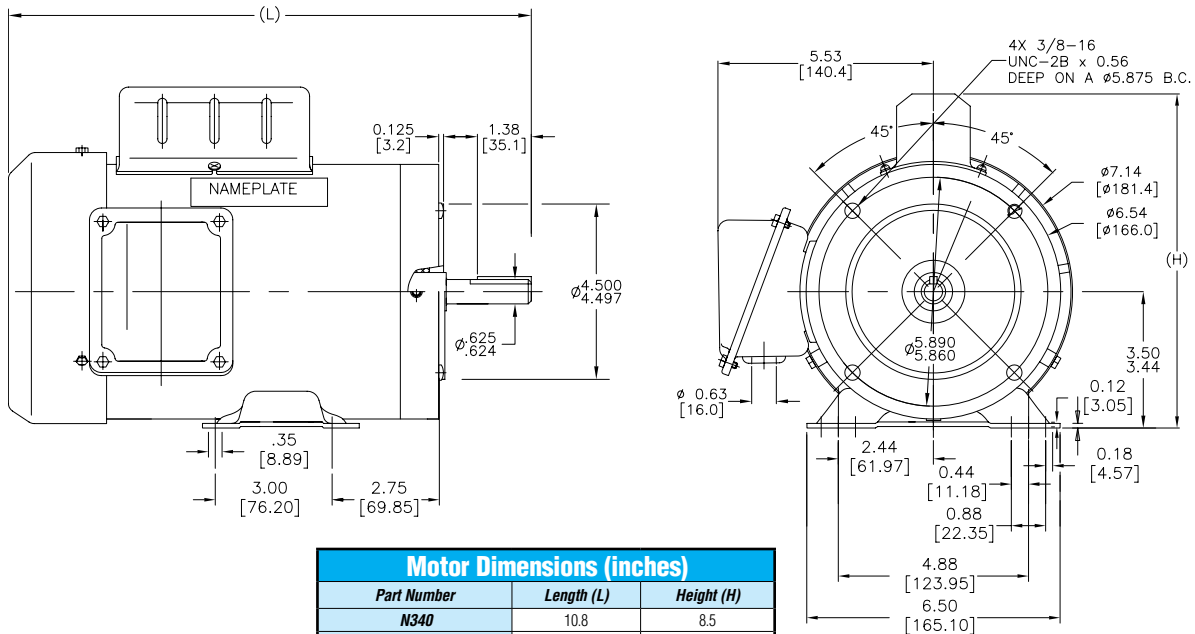
\* Data not available from manufacturer

## Dimensions

in [mm]

See our website: [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings.

Figure 1 - N340-N346 Dimensions



Motor Dimensions (inches)		
Part Number	Length (L)	Height (H)
N340	10.8	8.5
N341	11.1	8.5
N342	11.1	8.5
N343	11.7	8.9
N344	11.7	8.9
N345	12.2	9.1
N346	12.2	9.1

# Powerwash SXT Washdown Duty, 3-Phase, All Stainless Steel, Totally Enclosed Motors

## 3-Phase, C-Face, Footed (Rigid Base)

### Features

- Suitable for use on VFD 10:1 Variable torque, 10:1 (TEFC) or 1000:1 (TENV) Constant Torque
- MAX GUARD™ Class F insulation system
- 1.15 Service Factor on sinewave, 1.0 Service Factor on VFD power
- Double-sealed ball bearings
- 303 stainless steel shaft with spring-loaded contact seals in each end (drive end only on TENV)
- 300 Series Stainless steel external construction: frame, end shields, conduit box, mounting base and hardware for superior corrosion resistance
- Internal corrosion resistant coatings on rotor and heavy polyester varnish on the stator
- 100% paint-free construction
- One-way condensation drains in each end shield and conduit box for all angle mounting
- Nitrile Buna-N gaskets and seals on conduit box, through bolts and end shields
- Rated 60/50 Hz, 190/380 volt at next lower horsepower
- Nameplate information laser etched on frame
- UL Recognized, CSA Certified and CE Mark
- IP55 Rating

### Applications

- Replaces 90 volt and 180 volt PMDC motors (when used with AC variable frequency drives)
- Typical uses include: machine tools, conveyors, packaging machines, batching machines, food and beverage equipment, pumps and fans.



**marathon**®  
Motors

Motor Shipping Schedule*		
Same or one day *	Up to 7 days	Up to 10 days
Color indicates shipping lead time in business days. Check stock status online.		
*Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.		

Motor Specifications – Powerwash SXT Washdown Duty 3-Phase All Stainless Steel Totally Enclosed Motors											
Part Number*	Price	HP	Base RPM	Volts	Encl.	NEMA Design	NEMA Frame	Model No.	F.L. Amps	Weight (lb)*	Footnotes
N499	\$549.00	1	1200	208-230 / 460 - 190 / 380	TEFC		145TC	145TTWD6077	3.8-3.8 / 1.9 - 3.4 / 1.7	40	
N410	\$631.00	1/3	1800	208-230 / 460	TENV	B	56C	056T17VD5326	1.2-1.3 / .65 & 1.2 / .60	30	
N411	\$533.00	1/2		208-230 / 460 - 190 / 380	TENV		56C	56T17VD5328 A	1.5-1.6 / 0.8 - 1.6 / 0.8	23.8	
N412	\$589.00	3/4		208-230 / 460 - 190 / 380	TENV		56C	56T17VD5327 A	2.4-2.3 / 1.15 - 2.0 / 1.0	31	
N414A	\$617.00	1		230 / 460 - 190 / 380	TEFC		143TC	143TTWD6026 AA	3.0 / 1.5 - 3.0 / 1.5	44.5	
N415A	\$597.00	1-1/2					56HC	56T17WD15329 A	4.4 / 2.2 - 3.8 / 1.9	46	5
N417A	\$572.00	2					56HC	56T17WD15328 A	5.4 / 2.7 - 5.0 / 2.5	52.6	5
N418A	\$767.00	2					145TC	145TTWD6029 AA	5.4 / 2.7 - 5.0 / 2.5	53.1	
N450	\$513.00	1/3					56C	56T34VD5301 A	1.1-1.0 / 0.5 - 0.9 / 0.45	27	
N451	\$528.00	1/2	3600	208-230 / 460 - 190 / 380	TENV	56C	56T34VD5302 A	1.6-1.5 / 0.75 - 1.3 / 0.65	28		
N452	\$573.00	3/4		230 / 460	TEFC	56C	56T34VD5303	2.2-2.0 / 1.0 - 1.7 / 0.85	30		
N454A	\$589.00	1		230 / 460 - 190 / 380		143TC	143TTWD6001	2.6 / 1.3 & 2.4 / 1.2	44		
N455A	\$629.00	1-1/2		56HC		56T34WD15302 A	3.8 / 1.9 - 3.0 / 1.5	42	5		
N456A	\$647.00	1-1/2		143TC		143TTWD6002 AA	4.2-4.4 / 2.2 - 3.0 / 1.5	42.5			
N457A	\$706.00	2		208-230 / 460 - 190 / 380		56HC	56T34WD15303 A	5.6-5.0 / 2.5 - 4.6 / 2.3	44.5	5	
N458A	\$777.00	2		145TC		145TTWD6001 AA	5.6-5.0 / 2.5 - 5.2 / 2.6	45			

\* Refer to the Motor Shipping Schedule table for shipping information.  
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Footnotes: 5 = 56H, 143T, and 145T Combination Base with 12 mounting holes

# Powerwash SXT Washdown Duty, 3-Phase, All Stainless Steel, Totally Enclosed Motors

3-Phase, Footed (Rigid Base)

## Performance Data

Performance Data – Powerwash SXT Washdown Duty 3-Phase All Stainless Steel Totally Enclosed Motors														
Part Number	HP	F.L. RPM	Min. RPM	F.L. AMPS @460V	N.L. AMPS @460V	F.L. Torque (lb-ft)	B.D. Torque (lb-ft)	Max. CHP RPM*	Max. Safe RPM	F.L. Effic.	F.L. Power Factor	Rotor Inertia (lb-ft <sup>2</sup> )	Footnotes	
N410	1/3	1740	N/A**	.65	N/A**	16	72	N/A**	N/A**	78.5	63	N/A**	10:1 Variable Torque	
N499	1	1150	115	1.9	1.3	4.5	17.4		4000	82.5	60			
N411	1/2	1740	174	0.8	0.6	1.15	5.56		5400	81.5	68			
N412	3/4	1740	174	1.15	0.7	2.25	10.18			82.5	73			
N414A	1	1750	175	1.5	1	2.99	15.83	3600		85.5	71.5			
N415A	1-1/2	1750	175	2.2	1.3	4.513	21.05		4000	86.5	73.5			
N417A	2	1750	175	2.7	1.4	5.981	25.44			86.5	80			
N418A	2	1750	175	2.7	1.4	5.981	25.44			86.5	80			
N450	1/3	3450	345	0.5	0.3	8.2	24			74	84.7			0.028
N451	1/2	3450	345	0.75	0.3	12.2	38.7	5400	7200	77	83			0.03
N452	3/4	3450	345	1.0	0.5	1.11	2.55			78.5	86	N/A**	10:1 Variable Torque	
N454A	1	3450	N/A**	1.3	1/5	24.3	76.3	N/A**	N/A**	80	89.5			
N455A	1-1/2	3510	351	1.9	0.8	2.238	9.81	2700	4000	84	88			
N456A	1-1/2	3510	351	1.9	0.8	2.238	9.81	5400	7200	84	88			
N457A	2	3490	349	2.5	0.9	3.001	11.84	2700	4000	85.5	87.5			
N458A	2	3450	345	2.5	0.9	3.001	11.84	2700	4000	85.5	87.5			

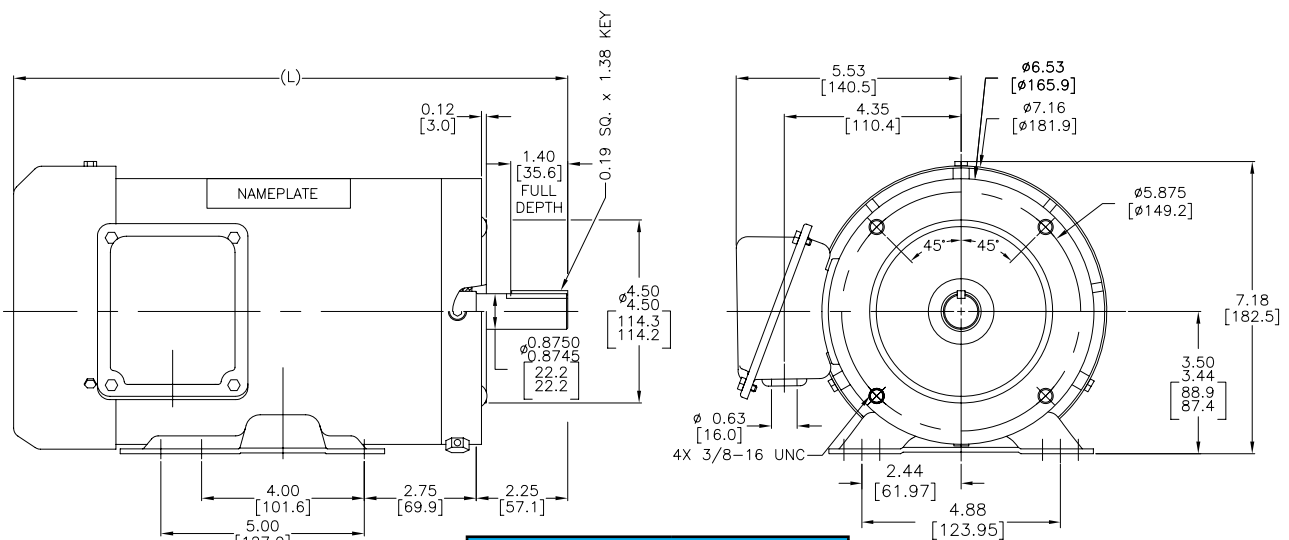
\* Maximum Constant HP RPM is for direct-coupled loads.  
 \*\* Data not available from manufacturer

See our website: [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings.

## Dimensions

in [mm]

Figure 1 – N414A, N418A, N456A, N458A, N499 Dimensions



Motor Dimensions (inches)	
Part Number	Length (L)
N414A	13.9
N418A	14.3
N456A	13.7
N458A	13.7
N499	13.9

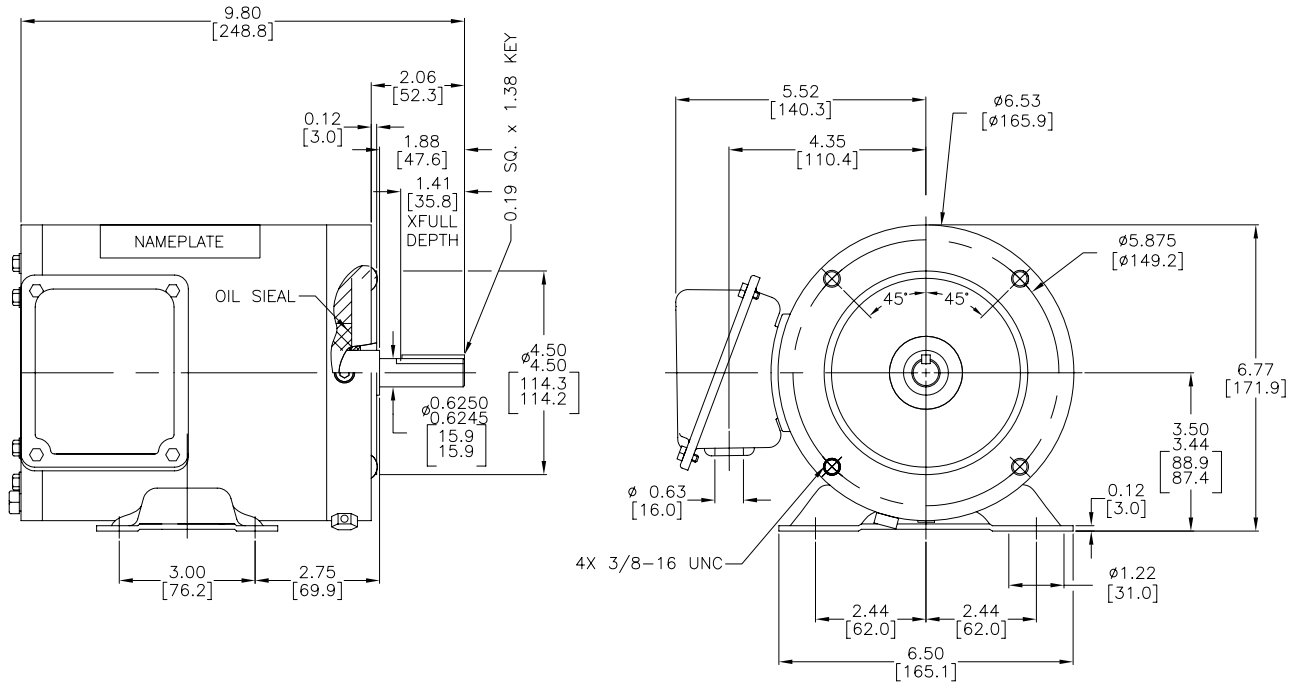
# Powerwash SXT Washdown Duty, 3-Phase, All Stainless Steel, Totally Enclosed Motors

## Dimensions

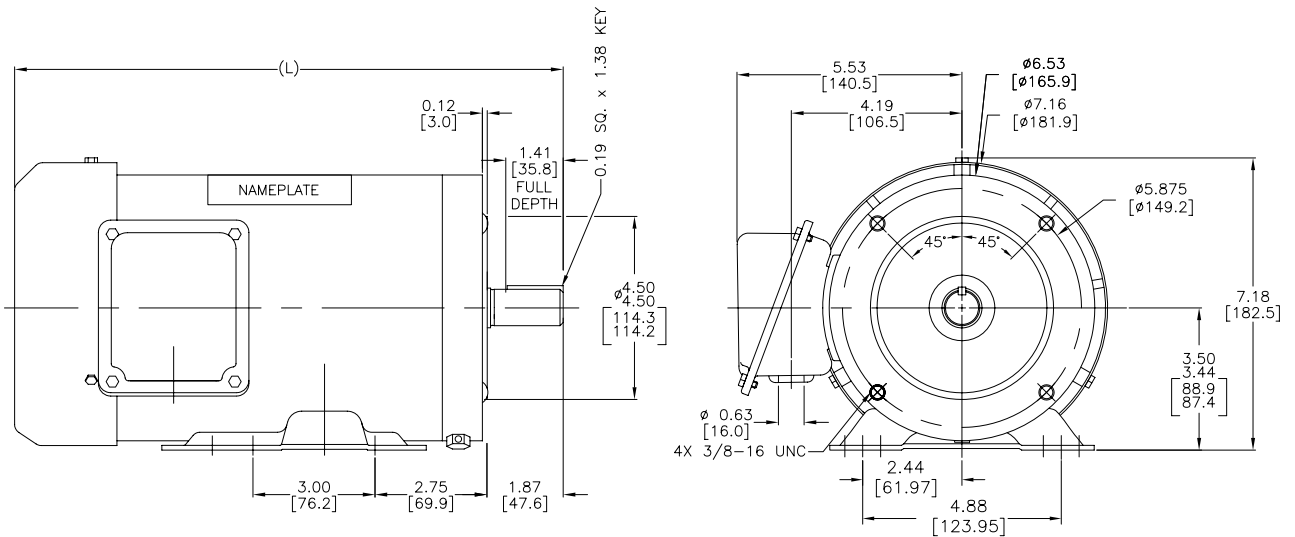
## 3-Phase, Footed (Rigid Base)

in [mm]

**Figure 2 – N411, N412, N450, N451, N452 Dimensions**



**Figure 3 – N415A, N417A, N455A, N457A Dimensions**



Motor Dimensions (inches)	
Part Number	Length (L)
N415A	13.6
N417A	14.0
N455A	13.6
N457A	13.6

# Powerwash SXT Washdown Duty, 3-Phase, All Stainless Steel, Totally Enclosed Motors

C-Face Footless



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Motors

## Features

- Suitable for use on VFD 10:1 Variable torque, 10:1 (TEFC) or 1000:1 (TENV) Constant Torque
- MAX GUARD<sup>™</sup> Class F insulation system
- 1.15 Service Factor on sinewave, 1.0 Service Factor on IGBT power
- Double-sealed ball bearings
- 303 stainless steel shaft with spring-loaded contact seals in each end (drive end only on TENV)
- 300 Series Stainless steel external construction: frame, end shields, conduit box, mounting base and hardware for superior corrosion resistance
- Internal corrosion resistant coatings on the rotor and heavy polyester varnish on the stator
- 100% paint-free construction
- One-way condensation drains in each end shield and conduit box for all-angle mounting
- Nitrile Buna-N gaskets and seals on conduit box, through bolts and end shields
- Rated 60/50 Hz, 190/380 volt at next lower horsepower
- Nameplate information laser etched on frame
- UL Recognized, CSA Certified and CE Mark
- IP55 Rating

## Applications

- Replaces 90 volt and 180 volt PMDC motors (when used with AC variable frequency drives)
- Typical uses include machine tools, conveyors, packaging machines, batching machines, food and beverage equipment, pumps and fans.

### Motor Shipping Schedule \*

Same or one day \*    Up to 7 days    Up to 10 days

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### Motor Specifications – Powerwash SXT Washdown Duty 3-Phase All Stainless Steel Totally Enclosed Motors

Part Number*	Price	HP	Base RPM	Volts	Encl.	NEMA Design	NEMA Frame	Model No.	F.L. Amps	Weight (lb)*
<b>N430</b>	\$505.00	1/3	1800	208-230 / 460 - 190 / 380	TENV	B	56C	56T17VD5329 AA	1.2-1.3 / 0.65 - 1.2 / 0.60	21.2
<b>N431</b>	\$521.00	1/2						56T17VD5330 A	1.5-1.6 / 0.80 - 1.6 / 0.80	23
<b>N432</b>	\$573.00	3/4						56T17VD5331 A	2.4-2.3 / 1.15 - 2.0 / 1.0	30.2
<b>N433A</b>	\$514.00	1						56T17WD15330 A	3.4-3.0 / 1.5 - 3.0 / 1.5	43.5
<b>N434B</b>	\$592.00	1			TEFC		143TC	143TTWD6527 FR	3.4-3.0 / 1.5 - 3.0 / 1.5	44
<b>N436A</b>	\$560.00	1-1/2					145TC	145TTWD6031 A	4.8-4.4 / 2.2 - 3.8 / 1.9	47
<b>N437A</b>	\$628.00	2					56C	56T17WD15332 A	5.4 / 2.7 - 5.0 / 2.5	52
<b>N438B</b>	\$676.00	2					145TC	145TTWD6528 A	5.8-5.4 / 2.7 - 5.0 / 2.5	52.6

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# Powerwash SXT Washdown Duty, 3-Phase, All Stainless Steel, Totally Enclosed Motors

C-Face Footless

## Performance Data

Performance Data – Powerwash SXT Washdown Duty 3-Phase All Stainless Steel Totally Enclosed Motors													
Part Number	HP	F.L. RPM	Min. RPM	F.L. AMPS @460V	N.L. AMPS @460V	F.L. Torque (lb-ft)	B.D. Torque (lb-ft)	Max. CHP RPM*	Max. Safe RPM	F.L. Effic.	F.L. Power Factor	Rotor Inertia (lb-ft <sup>2</sup> )	Footnotes
N430	1/3	1740	N/A**	0.65	0.5	16	72	N/A**	N/A**	78.5	63	N/A**	Line Start ONLY Recommended!
N431	1/2		1.74	0.8	0.6	24	89	2700	7000	81.5	68		1000:1 Constant Torque Nameplate footnote: Suitable at 208V at 1.0 S.F.
N432	3/4		N/A**	1.15	0.7	36	163	N/A**	N/A**	82.5	73		Line Start ONLY Recommended!
N433A	1	1750	175	1.5	1.0	2.99	15.83	2700	4000	85.5	71.5		10:1 Variable Torque Nameplate footnote: NEMA Nom. Efficiency, suitable for use at 230/460V only
N434B	1		N/A**	1.5	2	2.99	15.83	N/A**	N/A**	85.5	71.5		Line Start ONLY Recommended! Nameplate footnote: NEMA Nom. Efficiency, suitable for use at 230/460V only
N436A	1-1/2		175	2.2	1.3	4.513	21.05	2700	4000	86.5	73.5		10:1 Variable Torque
N437A	2	3450	175	2.7	1.4	5.981	25.44	5400	4000	86.5	80		10:1 Variable Torque Nameplate footnote: Suitable at 208V at 1.0 S.F.
N438B	2	1750	N/A**	2.7	1.4	5.981	25.44	N/A**	N/A**	86.5	80		Line Start ONLY Recommended! Nameplate footnote: NEMA Nom. Efficiency, suitable for use at 230/460V only

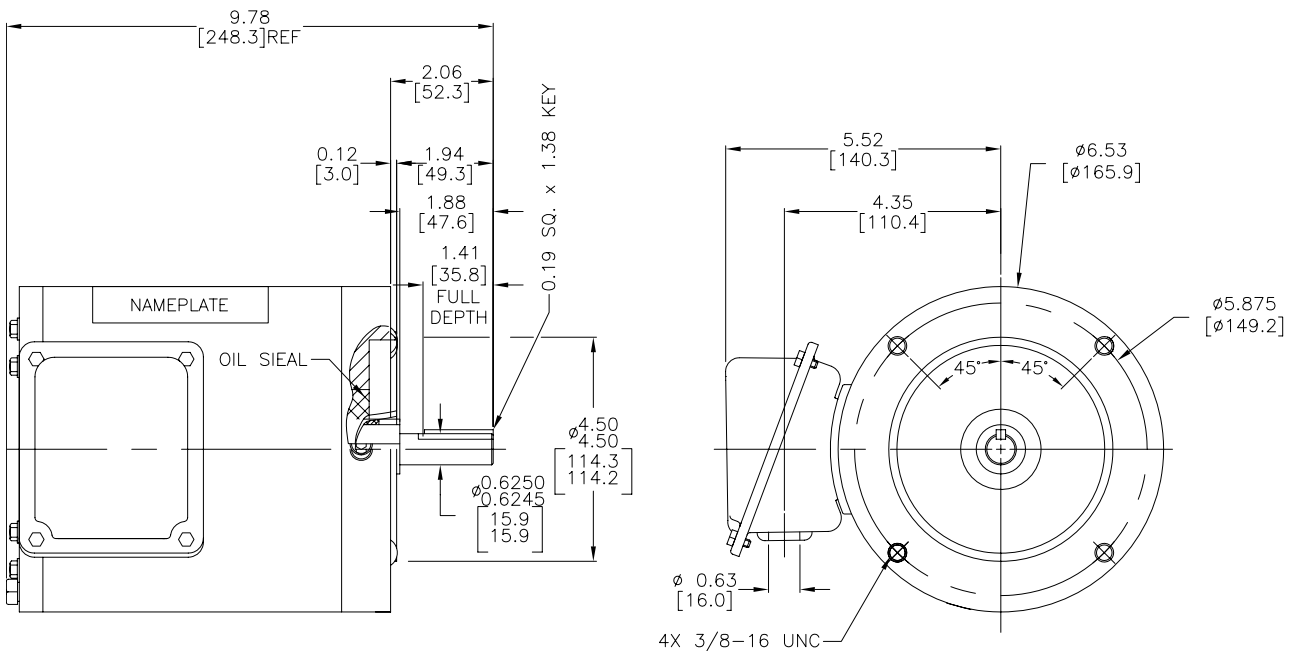
Notes: \* Maximum Constant HP RPM is for direct-coupled loads.  
\*\* Data not available from manufacturer.

## Dimensions

in [mm]

See our website: [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings.

Figure 1 – N430-N432 Dimensions





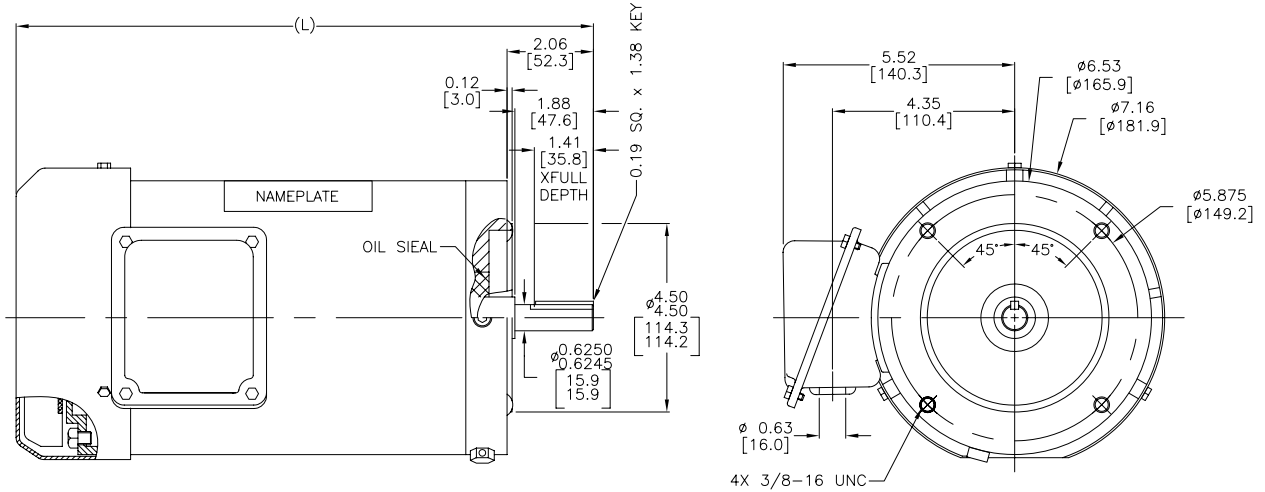
# Powerwash SXT Washdown Duty, 3-Phase, All Stainless Steel, Totally Enclosed Motors

## Dimensions

## C-Face Footless

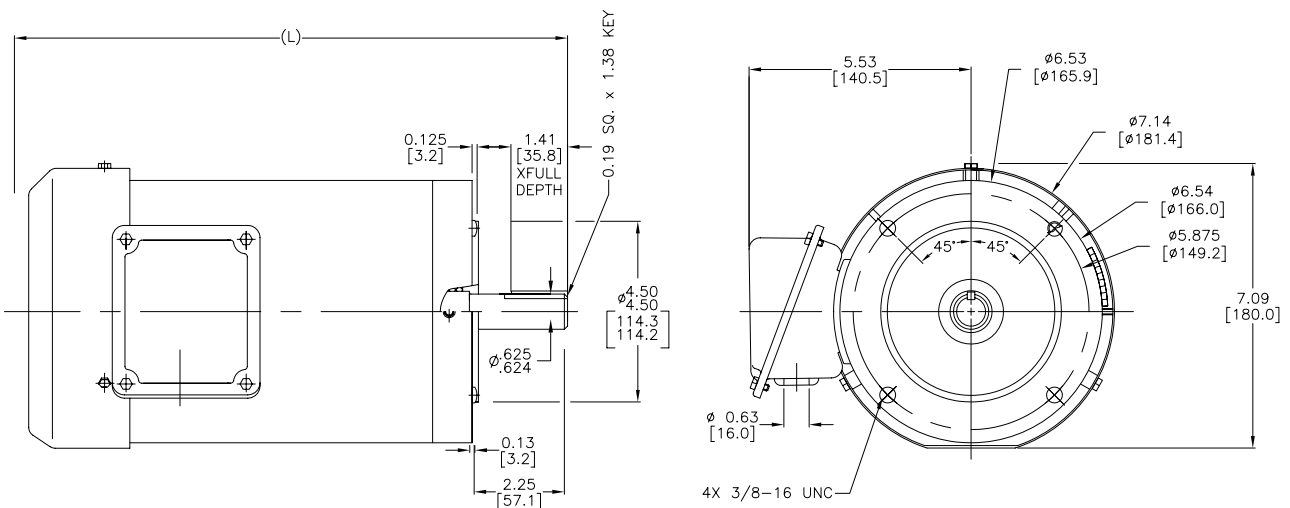
in [mm]

Figure 2 – N433A, N437A Dimensions



Motor Dimensions (inches)	
Part Number	Length (L)
N433A	13.2
N437A	14.0

Figure 3 – N434B, N436A, N438B Dimensions



Motor Dimensions (inches)	
Part Number	Length (L)
N434B	13.7
N436A	13.7
N438B	14.1