NIDEC MOTOR CORPORATION
8050 WEST FLORISSANT AVE.
ST. LOUIS, MO 63136

DATE: 4/18/2013

P.O. NO.: CW43
Order/Line NO.: 20473 MN 100

TO:

Model Number: CW43
Catalog Number:
Horiz. XP Premium Eff. Config.
CONF,MOTOR,HORIZ XP PRE EFF

REVISIONS:
(NONE)

ALL DOCUMENTS HEREIN ARE CONSIDERED CERTIFIED BY NIDEC MOTOR CORPORATION.
THANK YOU FOR YOUR ORDER AND THE OPPORTUNITY TO SERVE YOU.

Features:

```
Horsepower ..............  00001.00 ~ KW: .746
Enclosure ...............  TEFC
Poles ...................  02 ~ RPM: 3600
Frame Size ..............  143~T
Phase/Frequency/Voltage..  3~060~230/460 ~ Random Wound
Service Factor ..........  1.15
Insulation Class ........  Class "F" ~ Insulife 2000
Altitude In Feet (Max) ..  3300 Ft.(1000 M)
Ambient In Degree C (Max)  +40 C
Assembly Position .......  "F-1" Assembly Position
Efficiency Class ........  Premium Efficiency
Application .............  Unknown
Customer Part Number ....
Hazardous Location Info:
Division 1 ~ Class I ~ Group D
Class II N/A ~ Group N/A ~ T2B Temp Code
"AK" Dimension (Inches).. NA
Temperature Rise (Sine Wave): "B" Rise @ 1.0 SF (Resist)
Starting Method .........  Direct-On-Line Start
Duty Cycle ..............  Continuous Duty
Efficiency Value ........  77.0 % ~ NEMA Nominal
Load Inertia (lb-ft2): NEMA ~ NEMA Inertia: 1.20 ~ 1.00
Number Of Starts Per Hour: NEMA
Motor Type Code .........  LCE
Rotor Inertia (LB-FT²)        .037 LB-FT²
Qty. of Bearings PE (Shaft)   1
Qty. of Bearings SE (OPP)     1
Bearing Number PE (Shaft)     6205-2Z-J/C3
Bearing Number SE (OPP)       6203-2Z-J/C3
```

Nidec trademarks followed by the ® symbol are registered with the U.S. Patent and Trademark Office.

NIDEC MOTOR CORPORATION
8050 WEST FLORISSANT AVE.
ST. LOUIS, MO 63136

DATE: 4/18/2013

P.O. NO.: CW43
Order/Line NO.: 20473 MN 100

TO:

Model Number: CW43
Catalog Number:
Horiz. XP Premium Eff. Config.
CONF,MOTOR,HORIZ XP PRE EFF

REVISIONS:
(NONE)

ALL DOCUMENTS HEREIN ARE CONSIDERED CERTIFIED BY NIDEC MOTOR CORPORATION.
THANK YOU FOR YOUR ORDER AND THE OPPORTUNITY TO SERVE YOU.

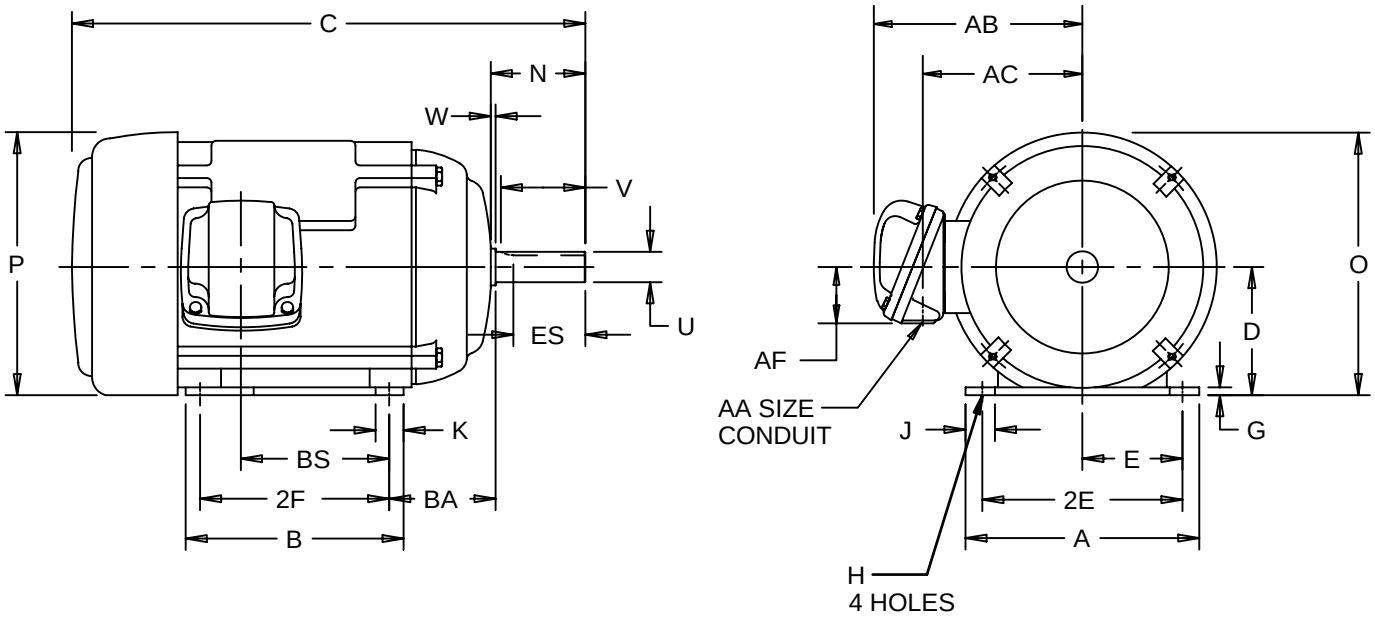
Accessories:
Corro-Duty
Thermostats - Normally Closed
Standard Leadtime: REFER TO OFFICE
Est. Weight (lbs ea): 60 ~ F.O.B.: St. Louis, MO

USE THE DATA PROVIDED BELOW TO SELECT THE APPROPRIATE DIMENSION PRINT

Horsepower	1
Pole(s)	02
Voltage(s)	460-230
Frame Size	143T
Shaft U Diameter	0.875
Outlet Box AF	1.75
Outlet Box AA	0.75

Nidec trademarks followed by the ® symbol are registered with the U.S. Patent and Trademark Office.

EFFECTIVE: 02-MAR-11	HORIZONTAL MOTORS CAST IRON FRAME FRAME: 140T BASIC TYPE: LC	PRINT: 07-2105
SUPERSEDES: 16-JAN-01		SHEET: 1 OF 1



ALL DIMENSIONS ARE IN INCHES & MILLIMETERS

	UNITS	A	B	C	E	G	J	K	K2	N	O	P [2]
	IN	6.50	6.00	13.06	2.75	.16	.94	.94	1.94	2.38	7.50	8.00
	MM	165	152	332	70	4	24	24	49	60	191	203

	UNITS	V MIN	W	AA	AB	AC	AF	BA	BS	ES MIN	SQ KEY
	IN	2.06	.13	3/4 NPT	6.78	5.34	1.75	2.25	3.94	1.41	.188
	MM	52	3		172	136	44	57	100	36	4.78

	UNITS	D -.06	2E ±.03	H +.05	U -.0005
	IN	3.50	5.50	.34	.8750
	MM	88.9	140	9	22.225

	FRAME	UNITS	2F ±.03
	143T	IN	4.00
		MM	101.6
	145T	IN	5.00
		MM	127.0

1: ALL ROUGH CASTING DIMENSIONS MAY VARY BY .25" DUE TO CASTING AND/OR FABRICATIONVARIATIONS.
2: LARGEST MOTOR WIDTH.

3: CONDUIT BOX MAY BE LOCATED ON EITHER SIDE OF MOTOR. CONDUIT OPENINGS MAY BE LOCATED IN STEPS OF 90 DEGREES REGARDLESS OF LOCATION. STANDARD AS SHOWN WITH CONDUIT OPENING DOWN.
4: TOLERANCE UNITS ARE IN INCHES ONLY.

Nidec Motor Corporation
St. Louis, Missouri

INFORMATION DISCLOSED ON THIS DOCUMENT IS CONSIDERED PROPRIETARY AND SHALL NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN CONSENT OF NIDEC MOTOR CORPORATION

ISSUED BY	R. KING
APPROVED BY	M. GALVAN

IHP_DP_NMCA (MAR-2011) SOLIDEDGE

NAMEPLATE DATA

CATALOG NUMBER:				NAMEPLATE PART #:	431158-000		
MODEL	CW43	FR	143T	TYPE	LCE	ENCL	TE
SHAFT END BRG	6205-2Z-J/C3 - QTY 1			OPP END BRG	6203-2Z-J/C3 - QTY 1		
PH	3	MAX AMB	40 C	ID#			
INSUL CLASS	F	Asm. Pos.	F1	DUTY	CONT		

HP	1		RPM	3530		HP		RPM	
VOLTS	460	230				VOLTS			
FL AMPS	1.4	2.8				FL AMPS			
SF AMPS	1.6	3.1				SF AMPS			
SF	1.15	DESIGN	B	CODE	N	SF		DESIGN	CODE
NEMA NOM EFFICIENCY	82.5	NOM PF	80.6	KiloWatt	.746	NEMA NOM EFFICIENCY		NOM PF	
GUARANTEED EFFICIENCY	80.0	MAX KVAR	.5	HZ	60	GUARANTEED EFFICIENCY		MAX KVAR	HZ

UL DATA (IF APPLICABLE):

DIVISION	1	CLASS I	I	GROUP I	D
TEMP CODE	T2B	CLASS II		GROUP II	

VFD DATA (IF APPLICABLE):

VOLTS			
AMPS			
TORQUE 1		TORQUE 2	
VFD LOAD TYPE 1		VFD LOAD TYPE 2	
VFD HERTZ RANGE 1		VFD HERTZ RANGE 2	
VFD SPEED RANGE 1		VFD SPEED RANGE 2	
SERVICE FACTOR		FL SLIP	
NO. POLES	2	MAGNETIZING AMPS	.8
VECTOR MAX RPM		Encoder PPR	
Radians / Seconds	1	Encoder Volts	

TEAO DATA (IF APPLICABLE):

HP (AIR OVER)		HP (AIR OVER M/S)		RPM (AIR OVER)		RPM (AIR OVER M/S)	
FPM AIR VELOCITY		FPM AIR VELOCITY M/S		FPM AIR VELOCITY SEC			

ADDITIONAL NAMEPLATE DATA:

Decal / Plate	WD=158802	Customer PN	
Notes		Non Rev Ratchet	
Max Temp Rise	80C RISE/RES@1.00SF	OPP/Upper Oil Cap	GREASE
Thermal (WDG)		SHAFT/Lower Oil Cap	GREASE
Altitude			
Regulatory Notes		Regulatory Compliance	
COS		Marine Duty	
Balance		Arctic Duty	
3/4 Load Eff.	80.7	Inrush Limit	
Motor Weight (LBS)	60	Direction of Rotation	
Sound Level		Special Note 1	
Vertical Thrust (LBS)		Special Note 2	
Thrust Percentage		Special Note 3	
Bearing Life		Special Note 4	
Starting Method		Special Note 5	
Number of Starts		Special Note 6	
200/208V 60Hz Max Amps		SH Max. Temp.	
190V 50 hz Max Amps		SH Voltage	
380V 50 Hz Max Amps		SH Watts	
NEMA Inertia		Load Inertia	
Sumpheater Voltage		Sumpheater Wattage	
Special Accessory Note 1		Special Accessory Note 16	
Special Accessory Note 2		Special Accessory Note 17	
Special Accessory Note 3		Special Accessory Note 18	
Special Accessory Note 4		Special Accessory Note 19	
Special Accessory Note 5		Special Accessory Note 20	
Special Accessory Note 6		Special Accessory Note 21	
Special Accessory Note 7		Special Accessory Note 22	
Special Accessory Note 8		Special Accessory Note 23	
Special Accessory Note 9		Special Accessory Note 24	
Special Accessory Note 10		Special Accessory Note 25	
Special Accessory Note 11		Special Accessory Note 26	
Special Accessory Note 12		Special Accessory Note 27	
Special Accessory Note 13		Special Accessory Note 28	
Special Accessory Note 14		Special Accessory Note 29	
Special Accessory Note 15		Special Accessory Note 30	

NIDEC MOTOR CORPORATION

ST. LOUIS, MO

TYPICAL NAMEPLATE DATA
ACTUAL MOTOR NAMEPLATE LAYOUT MAY VARY
SOME FIELDS MAY BE OMITTED

Nidec trademarks followed by the ® symbol are registered with the U.S. Patent and Trademark Office.

MOTOR PERFORMANCE

MODEL NO.	CATALOG NO.	PHASE	TYPE	FRAME
CW43	NA	3	LCE	143T

ORDER NO.	20473	LINE NO.	

MPI:	143524	143525
HP:	1	1
POLES:	2	2
VOLTS:	460	230
HZ:	60	60
SERVICE FACTOR:	1.15	1.15
EFFICIENCY (%):		
S.F.	82.9	82.9
FULL	82.5	82.5
3/4	80.7	80.7
1/2	76	76
1/4	63.4	63.4
POWER FACTOR (%):		
S.F.	83.4	83.4
FULL	80.6	80.6
3/4	73.3	73.3
1/2	61.4	61.4
1/4	42.4	42.4
NO LOAD	14.9	14.9
LOCKED ROTOR	70.2	70.2
AMPS:		
S.F.	1.6	3.1
FULL	1.4	2.8
3/4	1.2	2.4
1/2	1	2
1/4	0.9	1.7
NO LOAD	0.8	1.7
LOCKED ROTOR	14.8	29.5
NEMA CODE LETTER	N	N
NEMA DESIGN LETTER	B	B
FULL LOAD RPM	3530	3530
NEMA NOMINAL EFFICIENCY (%)	82.5	82.5
GUARANTEED EFFICIENCY (%)	80	80
MAX KVAR	0.5	0.6
AMBIENT (°C)	40	40
ALTITUDE (FASL)	3300	3300
SAFE STALL TIME-HOT (SEC)	11	11
SOUND PRESSURE (DBA @ 1M)	69	69
TORQUES:		
BREAKDOWN{% F.L.}	492	492
LOCKED ROTOR{% F.L.}	348	348
FULL LOAD{LB-FT}	1.5	1.5

The Above Data Is Typical, Sinewave Power Unless Noted Otherwise

NIDEC MOTOR CORPORATION

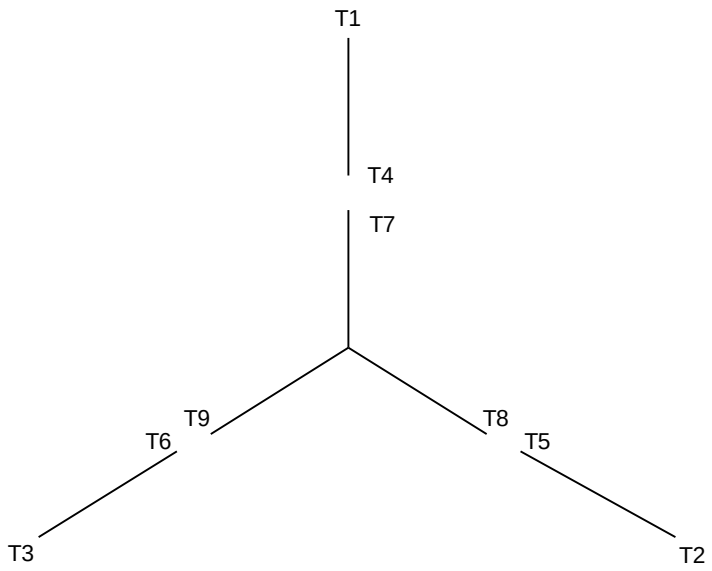
ST. LOUIS, MO

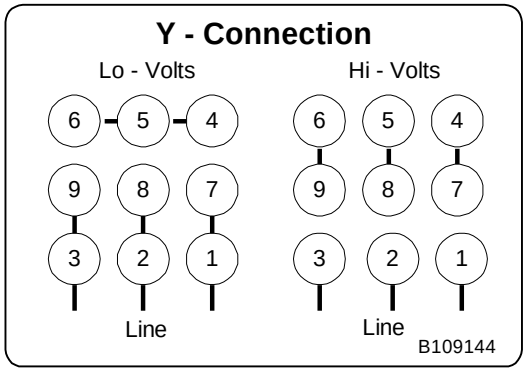
Nidec trademarks followed by the ® symbol are registered with the U.S. Patent and Trademark Office.

B109144

Motor Wiring Diagram

9 Lead, Dual Voltage (WYE Conn.)





To reverse direction of rotation interchange connections L1 and L2.

Each lead may have one or more cables comprising that lead.
In such case each cable will be marked with the appropriate lead number.

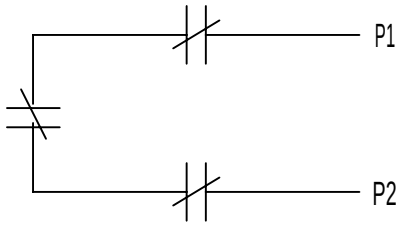
Connection Plate: B109144
Connection Decal: 344136

THERMOSTATS

1. MOTOR IS EQUIPPED WITH QTY-3 (1 PER PHASE) NORMALLY CLOSED THERMOSTATS. THERMOSTATS ARE SET TO OPEN AT HIGH TEMPERATURE.

2. CONTACT RATINGS FOR THERMOSTATS: 120-600 VAC, 720 VA

N. C. THERMOSTATS



NOTE: THERMOSTATS LEADS MAY BE LOCATED IN EITHER THE MAIN OUTLET BOX OR IF SO EQUIPPED, AN AUXILIARY BOX.

ACCESSORY LISTING

QTY-3 N.C. THERMOSTATS

REVISION DESCRIPTION FOR: MISC STL0211 - UPDATED FORMAT .	SCALE: NONE	UNITS: IN	TITLE: CUSTOMER CONNECTION DIAGRAM
MATERIAL: ---	TOLERANCES ON DIMENSIONS (UNLESS OTHERWISE SPECIFIED)	INCHES / mm	ISSUED BY: R. KING; APPROVED BY: C. CADE
MUST BE COMPLIANT TO RoHS DIRECTIVE EU 2002/95/IEC AND REGULATION EC 1907/2006 (REACH) AS AMENDED	ANGLES X°= ±1°		CODE; DWG NO. 0834066; REV G; SHEET NUMBER 1 OF 1; DWG SIZE A

NIDEC MOTOR CORPORATION

REVISION DATE: 24-FEB-11

NIDEC CONFIDENTIAL
NIDEC MOTOR CORPORATION 24-Feb-11

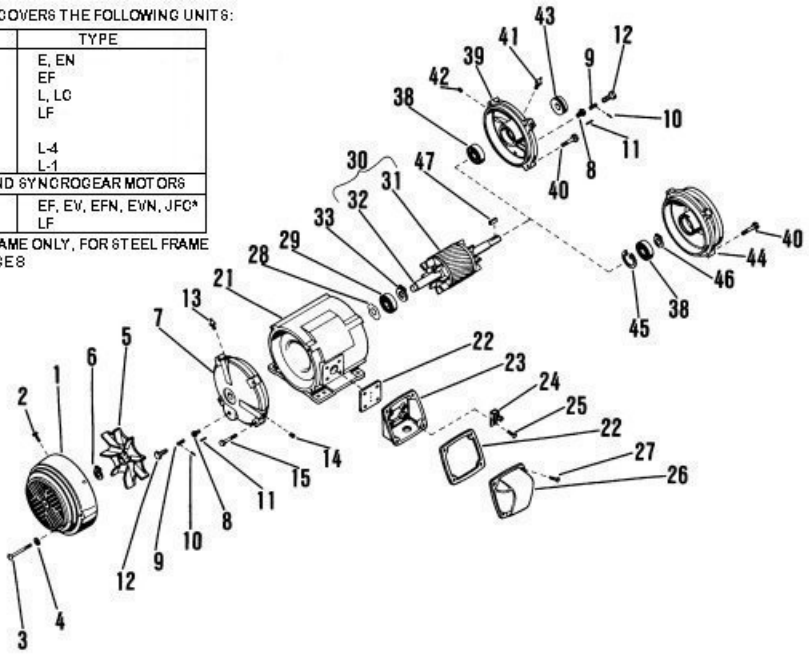
RENEWAL PARTS

FRAMES 56 THRU 145 - TOTALLY ENCLOSED AND EXPLOSION PROOF MOTORS
TYPES: E, ECA, ECF, EF, EFN, EN, EV, FL, FLC, FLCA, FLCF, FLF, FLFN, JFC, L, LC, LCAI, LCE, LCEF, LCEI, LCF, LCI, LE, LEF, LF, LF1, LFCE, LFI, LI, L1, L4, LC1, LCA, LCFI, LCI4, LE1, LF4, LFN, NC, NCA, NCE, NCEF, NCF

THIS PARTS LIST COVERS THE FOLLOWING UNITS:

FRAME	TYPE
56	E, EN
56C	EF
143T, 145T	L, LC
143TC, 145TC	LF
143JM, 145JM	L-4
143JP, 145JP	L-1
VARIDRIVE AND SYNCROGEAR MOTORS	
56	EF, EV, EFN, EVN, JFC*
143T, 145T	LF

* CAST IRON FRAME ONLY, FOR STEEL FRAME UNITS, SEE PAGE 8



ITEM NO.	QTY	NAME OF PART
1	1	Fan Cover Guard (Not used on EN, EFN, EVN)
2	4	Screw (Not used on EN, EFN, EVN)
3	2	Round Head Screw (Type EV only)
4	2	Lockwasher (Type EV only)
5	1	Fan (Not used on EN, EFN, EVN)
6	1	Retaining Snap Ring (Not used on EN, EV, EFN, EVN)
7	1	Bracket
8	2	Reducer Fitting (Type LC)
9	2	Special Plug (Type LC)

ITEM NO.	QTY	NAME OF PART
10	2	Spring Pin (Type LC)
11	2	Spring Pin (Type LC)
12	2	Vent Plug
13	1	Grease Fitting
14	1	Hex Countersunk Pipe Plug
15	4	Hex Head Cap Screw
16-20	-	Not Used
21	1	Wound Stator Assembly
22	1	Combination Gasket (Type JFC)

WARNING:
Any disassembly or repair work on explosionproof motors will void the Underwriters Laboratories, Inc. label unless done by the manufacturer, or a facility approved by the Underwriters Laboratories, Inc. Refer to your nearest sales office for assistance.

BEARINGS:
Refer to motor nameplate for the bearing numbers.

PRICES:
Parts stocking distributors: refer to renewal parts numerical index. All Others: refer to your nearest parts distributor.

reference: Renewal Parts Section 700, Pages 16 & 17

RENEWAL PARTS

FRAMES 56 THRU 145 - TOTALLY ENCLOSED AND EXPLOSION PROOF MOTORS
TYPES: E, ECA, ECF, EF, EFN, EN, EV, FL, FLC, FLCA, FLCF, FLF, FLFN, JFC, L, LC, LCAI, LCE, LCEF, LCEI, LCF, LCI, LE, LEF, LF, LF1, LFCE, LFI, LI, L1, L4, LC1, LCA, LCFI, LCI4, LE1, LF4, LFN, NC, NCA, NCE, NCEF, NCF

ITEM NO.	QTY	NAME OF PART
23	1	Outlet Box Base
24	1	Terminal Lig (Not used on EN, EV, EVN)
25	4	Hex Head Machine Screw (Round Head Screw on Types EN, EV, EVN)
26	1	Outlet Box Cover
27	4	Screw
28	1	Wave Spring Washer (Use on Types "D"Base, E, L, LC, EF)
29	1	Ball Bearing (Refer to Section 775)
30	1	Rotor Assembly (Includes Items 31 and 32)
31	1	Rotor Core
32	1	Rotor Shaft
33	1	Retaining Snap Ring (Used on EV & EVN)
34-37	-	Not Used

ITEM NO.	QTY	NAME OF PART
Items 38 thru 47 are for types EF & LF with "C" brackets, E, L, EN, LC, L-1, L-4		
38	1	Ball Bearing (Refer to Section 775)
39	1	Bracket (Not usd with "C" or "D' Bracket)
40	4	Screw
41	1	Grease Fitting
42	1	Hex Countersunk Pipe Plug
43	1	Water Deflector (Types I-1, L-4, LF)
44	1	"C" or "D' Bracket
45	1	Retaining Snap Ring (Types L-1, L-4, LF)
46	1	Retaining Snap Ring (Types L-1, L-4, LF)
47	1	Square Key

WARNING:
Any disassembly or repair work on explosionproof motors will void the Underwriters Laboratories, Inc. label unless done by the manufacturer, or a facility approved by the Underwriters Laboratories, Inc. Refer to your nearest sales office for assistance.

BEARINGS:
Refer to motor nameplate for the bearing numbers.

PRICES:
Parts stocking distributors: refer to renewal parts numerical index. All Others: refer to your nearest parts distributor.

reference: Renewal Parts Section 700, Pages 16 & 17

Copyright © 2010 Nidec Motor Corporation. All rights reserved.