

# Pool & Spa OEM Pump/Motor Replacement Guide

## Square Flange and C-Flange Motors

### Square Flange and C-Flange Motors

Motors and pumps need to be properly matched to one another to provide consistent, predictable performance. When selecting your Nidec Motor Corporation replacement motor you will need to know six important pieces of information:

- 1) Pump Mounting (ie. Square Flange, C-Flange, etc.)
- 2) Horsepower
- 3) Service Factor
- 4) Voltage
- 5) Frequency
- 6) Phase

**Most of this information can be attained from the motor nameplate. Always be sure that the total of horsepower times service factor of your new motor is equal to or greater than the total of horsepower times service factor of the original motor.**

$$\text{Total Output HP} = (\text{horsepower}) \times (\text{service factor}) \\ = \text{THP or SFHP}$$

PUMP OEM	BRANDNAME	CATEGORY
American	American Eagle	J
American	Ultra-Flow/Power Pump	S
Aqua-Flo	Dominator	S
Astral	2000 Series	J
Baker Hydro	Hydron	J
Carvin	Magnum	J
Carvin	Okra	S
Hayward	Max-Flo	S
Hayward	Northstar	N
Hayward	Super II Pump	J
Hayward	Super Pump	J
Hayward	Tristar	T
ITT Marlow	Argonaut	J
Jacuzzi Brothers	Cygnat	S
Jacuzzi Brothers	Magnum	J
Jandy	ePump	S
Jandy	FloPro	S
Jandy	Stealth	S
Jandy	VS PlusHP	S
Letro	Legend	P
Pentair	Challenger	S
Pentair	Dyna-Pro	S
Pentair	IntelliFlo	S
Pentair	IntelliPro	S
Pentair	Max-E-Pro	S
Pentair	SuperFlo	S
Pentair	SuperMax	S
Pentair	WhisperFlo	S
Polaris	PB4	P
Speck Pumps	433	J
Speck Pumps	Badu Pro	J
Speck Pumps	ES90	J
Sta-Rite	Dura-Glas	S
Sta-Rite	Max-E-Glas	S
Waterway	Champion	S
Waterway	Power Defender	S
Waterway	SMF	S
Waterway	SVL56	S

### CATEGORY "N" HAYWARD NORTHSTAR C-FLANGE THREADED SHAFT

HP	SERVICE FACTOR	VOLTAGE	ENERGY EFFICIENT EXTREME E® 6.5" Frame
3/4	1.85	208-230/115	ESN1072
1	1.40	208-230/115	EUSN1102
1	1.85	208-230/115	ESN1102
1 1/2	1.25	208-230/115	EUSN1152
1 1/2	1.60	208-230/115	ESN1152
2	1.20	208-230/115	EUSN1202
2	1.35	208-230	ESN1202
3	1.20	208-230	EUSN1302
3	1.60	208-230	ESN1302

### CATEGORY "C" NEMA C-FLANGE KEYED SHAFT

HP	SERVICE FACTOR	VOLTAGE	STANDARD EFFICIENCY 6.5" FRAME	ENERGY EFFICIENT EXTREME E® 6.5" Frame
1/2	1.60	230/115	ASB120	ASB656
3/4	1.50	230/115	ASB121	ASB634
1	1.40	230/115	ASB122	ASB653
1.5	1.30	230/115	ASB123	ASB795
2	1.20	230	ASB124	ASB808
3	1.15	208-230		ASB817

### CATEGORY "T" HAYWARD TRISTAR REPLACEMENTS-SQUARE FLANGE

HP	SERVICE FACTOR	VOLTAGE	STANDARD EFFICIENCY 6.5" FRAME	ENERGY EFFICIENT EXTREME E® 6.5" Frame
1/2	1.98	208-230/115		ET3205
3/4	1.85	208-230/115		ET3207
3/4	1.25	230/115	ASB852	
1	1.85	208-230/115		ET3210
1	1.25	230/115	ASB853	
1.5	1.60	208-230/115		ET3215
1.5	1.10	230/115	ASB854	
2	1.35	208-230		ET3220
2	1.10	230/115	ASB859	
2.5	1.04	230	ASB840	
3	1.15	208-230	ASB844	

### CATEGORY "J" NEMA C-FLANGE THREADED SHAFT

HP	SERVICE FACTOR	VOLTAGE	STANDARD EFFICIENCY		ENERGY EFFICIENT EXTREME E®		ENERGY EFFICIENT VARIABLE SPEED
			6.5" FRAME	5.5" FRAME	6.5" FRAME	5.5" FRAME	
1/2	1.60	230/115	ASB126	EST1052	ASB657	ECT1052	
3/4	1.00	230/115	ASB227	EUST1072			
	1.50	230/115	ASB127	EST1072	ASB638	ECT1072	
1	1.00	230/115	ASB228	EUST1102			NPTT125
	1.40	230/115	ASB128	EST1102	ASB654	ECT1102	
1.5	1.00	230/115	ASB229	EUST1152			NPTT165
	1.30	230/115	ASB129	EST1152	ASB796		
2	1.00	230/115	ASB230	EUST1202			NPTT225
	1.20	230	ASB130	EST1202	ASB809		
2.5	1.00	230	ASB231	EUST1252			NPTT270
3	1.15	208-230			ASB818		AVSJ3
5	1.00	208-230			ASB819		

### CATEGORY "S" SQUARE FLANGE

HP	SERVICE FACTOR	VOLTAGE	STANDARD EFFICIENCY		ENERGY EFFICIENT EXTREME E®		ENERGY EFFICIENT VARIABLE SPEED
			6.5" FRAME	5.5" FRAME	6.5" FRAME	5.5" FRAME	
1/2	1.30	230/115		EUSQ1052			
	1.90	230/115	ASB846	ESQ1052	ASB845	EQC1052	
3/4	1.27	230/115	ASB852	EUSQ1072		EUQC1072	
	1.65	230/115	ASB847	ESQ1072	ASB661	EQC1072	
1	1.25	230/115	ASB853	EUSQ1102		EUQC1102	NPTQ125
	1.65	230/115	ASB848	ESQ1102	ASB841	EQC1102	
1.5	1.10	230/115	ASB854	EUSQ1152		EUQC1152	NPTQ165
	1.50	230/115	ASB858	ESQ1152	ASB842		
2	1.10	230/115	ASB859	EUSQ1202			NPTQ225
	1.30	230	ASB748	ESQ1202	ASB843		
2.5	1.04	230	ASB840	EUSQ1252			NPTQ270
3	1.15	208-230	ASB844		ASB844		AVSS3
5	1.00	208-230			ASB850		

### CATEGORY "P" POOL CLEANERS

HP	SERVICE FACTOR	VOLTAGE	BRAND	NIDEC 56™ 6.5" Frame
3/4	1.50	230/115	Polaris	ASB625
	1.50	230/115	Letro	ASB668

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

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## Square Flange and C-Flange Motors

### Category “S” Square Flange

HP	SF	Voltage	Standard Efficient		Premium Efficient extreme-E® (6.5" Fr. Dia.)	High Efficiency (5.5" Fr. Dia.)
			(6.5" Fr. Dia.)	(5.5" Fr. Dia.)		
1/2	1.30	230/115	ASB846	ASQ095	ASB845	AQC095
	1.90	230/115	ASB846	ASQ095	ASB845	AQC095
3/4	1.27	230/115	ASB846	ASQ095	ASB845	AQC095
	1.65	230/115	ASB847	ASQ125	ASB661	AQC125
1.0	1.25	230/115	ASB847	ASQ125	ASB661	AQC125
	1.65	230/115	ASB848	ASQ165	ASB841	AQC165
1.5	1.10	230/115	ASB848	ASQ165	ASB841	AQC165
	1.50	230/115	ASB858		ASB842	ASQ225
2.0	1.10	230/115	ASB858		ASB842	ASQ225
	1.30	230	ASB748		ASB843	ASQ260
2.5	1.04	230	ASB748		ASB843	ASQ260
3.0	1.15	208-230			ASB844	
5.0	1.00	208-230			ASB850	

### Category “J” NEMA® C-Flange Threaded Shaft

HP	SF	Voltage	Standard Efficient		Premium Efficient extreme-E® (6.5" Fr. Dia.)	High Efficiency (5.5" Fr. Dia.)
			(6.5" Fr. Dia.)	(5.5" Fr. Dia.)		
1/2	1.60	230/115	ASB126	AST095	ASB657	ACT095
3/4	1.00	230/115	ASB126	AST095	ASB657	ACT095
	1.50	230/115	ASB127	AST125	ASB638	ACT125
1.0	1.00	230/115	ASB127	AST125	ASB638	ACT125
	1.40	230/115	ASB128	AST165	ASB654	ACT165
1.5	1.00	230/115	ASB128	AST165	ASB654	ACT165
	1.30	230/115	ASB129		ASB796	AST225
2.0	1.00	230/115	ASB129		ASB796	AST225
	1.20	230	ASB130		ASB809	AST275
2.5	1.00	230	ASB130		ASB809	AST275
3.0	1.15	208-230			ASB818	
5.0	1.00	208-230			ASB819	

### Category “C” NEMA® C-Flange Keyed Shaft

HP	SF	Voltage	Premium Efficient extreme-E® (6.5" Fr. Dia.)
1/2	1.60	208-230/115	ASB656
3/4	1.50	208-230/115	ASB634
1.0	1.40	208-230/115	ASB653
1.5	1.30	208-230/115	ASB795
2.0	1.20	208-230	ASB808
3.0	1.15	208-230	ASB817

### Category “T” HAYWARD TRISTAR®† Replacements Square Flange

HP	SF	Voltage	Standard Efficient (6.5" Fr. Dia.)	Premium Efficient extreme-E® (6.5" Fr. Dia.)
1/2	1.98	208-230/115		ET3205
3/4	1.85	208-230/115		ET3207
	1.25	230/115	ASB846	
1.0	1.85	208-230/115		ET3210
	1.25	230/115	ASB847	
1.5	1.60	208-230/115		ET3215
	1.10	230/115	ASB848	
2.0	1.35	208-230		ET3220
	1.10	230/115	ASB858	
2.5	1.04	230	ASB748	
3.0	1.20	208-230		ET3230
	1.15	208-230		ASB844

### Category “N” HAYWARD NorthStar™† C-Flange Threaded Shaft

HP	SF	Voltage	Premium Efficient extreme-E® (6.5" Fr. Dia.)
3/4	1.85	208-230/115	ESN1072
1.0	1.40	208-230/115	EUSN1102
	1.85	208-230/115	ESN1102
1.5	1.25	208-230/115	EUSN1152
	1.60	208-230/115	ESN1152
2.0	1.20	208-230/115	EUSN1202
	1.35	208-230	ESN1202
3.0	1.20	208-230	EUSN1302
	1.60	208-230	ESN1302

### Category “P” Pool Cleaners

HP	SF	Voltage	Brand	Standard Efficient (6.5" Fr. Dia.)
3/4	1.50	230/115	Polaris	ASB625
	1.50	230/115	Letro	ASB668