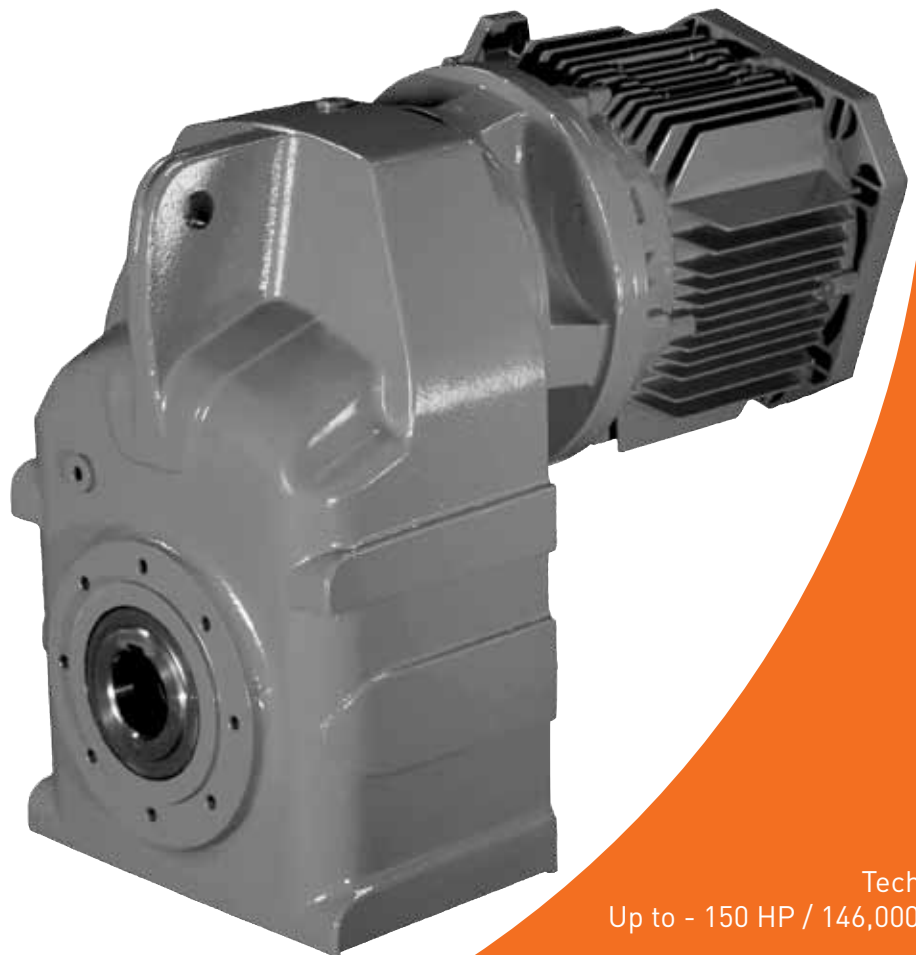


# radicon

with you at every turn

Series F Shaft Mounted Helical

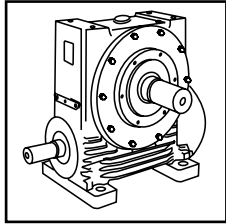


Technical  
Up to - 150 HP / 146,000 lb.in

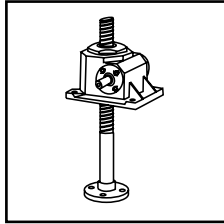
Geared Motors  
CF-2.00US1211

# PRODUCTS IN THE RANGE

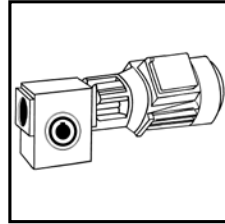
Serving an entire spectrum of mechanical drive applications from food, energy, mining and metal; to automotive, aerospace and marine propulsion, we are here to make a positive difference to the supply of drive solutions.



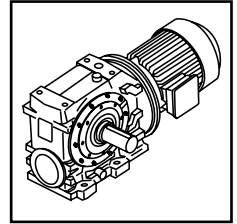
**Series A**  
Worm Gear units  
and geared motors  
in single & double  
reduction types



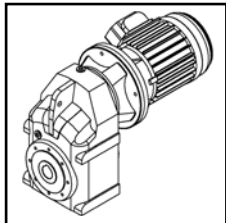
**Series BD**  
Screwjack worm  
gear unit



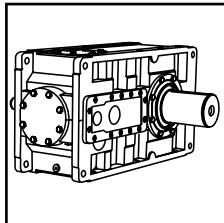
**Series BS**  
Worm gear unit



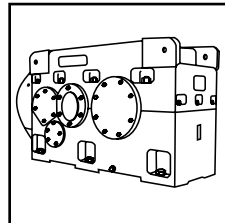
**Series C**  
Right angle drive  
helical worm geared  
motors & reducers



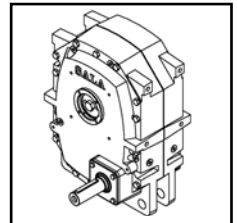
**Series F**  
Parallel angle helical  
bevel helical geared  
motors & reducers



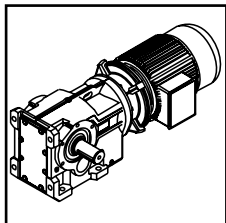
**Series G**  
Helical parallel shaft  
& bevel helical right  
angle drive gear  
units



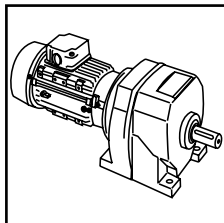
**Series H**  
Large helical parallel  
shaft & bevel helical  
right angle drive units



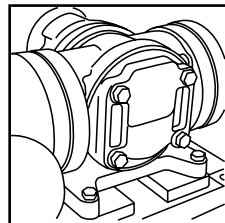
**Series J**  
Shaft mounted  
helical speed  
reducers



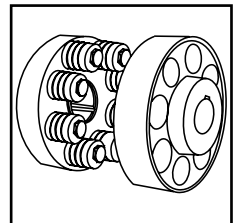
**Series K**  
Right angle helical  
bevel helical geared  
motors & reducers



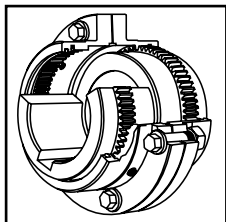
**Series M**  
In-line helical geared  
motors & reducers



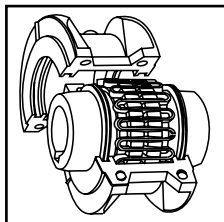
**Roloid Gear Pump**  
Lubrication and fluid  
transportation pump



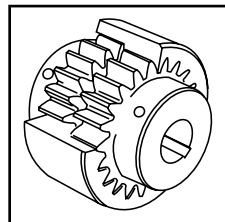
**Series X  
Cone Ring**  
Pin and bush  
elastomer coupling



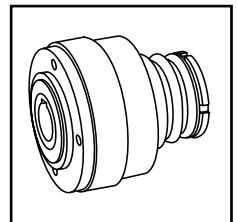
**Series X  
Gear**  
Torsionally rigid,  
high torque coupling



**Series X  
Grid**  
Double flexing steel  
grid coupling



**Series X  
Nylicon**  
Gear coupling with  
nylon sleeve



**Series X  
Torque Limiter**  
Overload protection  
device



We offer a wide range of repair services and many years experience of repairing demanding and highly critical transmissions in numerous industries.

We can create custom engineered transmission solutions of any size and configuration.

# SERIES F

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# SERIES F

## GENERAL DESCRIPTION

### Series F

Series F shaft mounted geared motors offer ratios from 5 to 100/1 in double reduction, from 100 to 360 in triple and up to 5600/1 in combined reductions. Motors are available up to 50 HP giving a maximum output torque of 63600 lb. in.

The Series F geared motor is primarily designed as a shaft mounted unit incorporating an integral torque reaction bracket. The units are also available with rubber torque bushings, output flanges, output shafts and taper release bushings to allow for trouble free maintenance. All variants are available either motorized or with input shaft assembly.

### The Range Includes

Nine sizes of units  
F02, F03, F04, F05, F06, F07, F08, F09, and F10.

- Version T - Standard unit with torque bushing
- Version W - Standard unit without torque bushing
- Version F - Standard unit with output flange

- Unit type N - Motorized
- Unit type A - Unit to allow fitting of NEMA motor
- Unit type G - Unit to allow fitting of a standard IEC motor

- Unit type R - Reducer
- Unit type S - Reducer unit fitted with a fan
- Unit type X - Reducer unit fitted with a backstop
- Unit type Y - Reducer unit with a fan and backstop

### Design Features Include

Patented standard motor connection  
(IEC or NEMA).

Ability to fit double oil seals input and output as required.

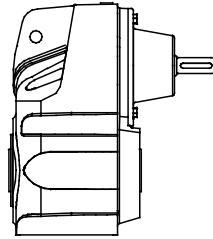
All units are dimensionally interchangeable with other major manufacturers.

Brake geared motors are available as standard.

Units are manufactured and assembled from a family of modular kits for distributor friendliness maximizing availability and flexibility.

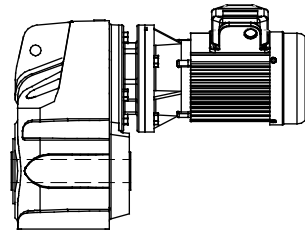
Motorized units can be fitted with a backstop module and reducer units can be fitted with a backstop and fan.

As improvements in design are being made continually this specification is not to be regarded as binding in detail and drawings and capacities are subject to alteration without notice. Drawings and 3D-models are available at <http://www.swift-gears.com>



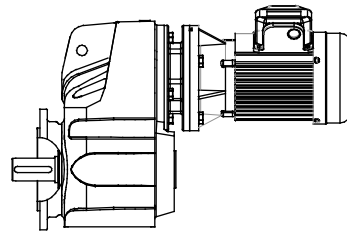
Double reduction/triple shaft mounted reducer

\* F 0 4 2 2 5 0 . T R A - 1 - - - - -



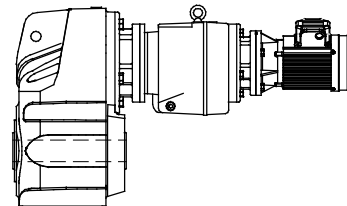
Motorized double/triple reduction shaft mount

\* F 0 4 2 2 5 0 . T N A - 1 A . 7 5 B - -



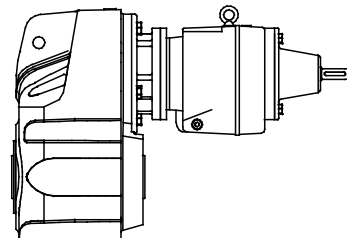
Motorized double/triple reduction with output shaft and flange

\* F 0 4 2 2 5 0 . F N N - 1 A . 7 5 B - -



Motorized quadruple reduction shaft mount

\* F 0 6 4 2 5 0 0 T N A - 1 A . 2 5 B - -



Reducer quadruple reduction shaft mount

\* F 0 6 4 2 5 0 0 T R A - 1 - - - - -

\* Typical Unit Designations

# SERIES F UNIT DESIGNATIONS

Gearbox Codes													Motor Codes							
Series	Size of Unit			No of Reductions	Revision Version	Nominal Overall Ratio			Unit Version	Type of Unit	Output Shaft	Motor Adaptor	Mounting Position	Geared Motor Power	No of Motor Poles	Additional Motor Features	Additional Gearbox Features			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
F																				
F	0	8	2	2	5	0	.	T	N	N	Q	1	D	7	.	5	B	-	-	

Example

20 - Additional Gearbox Features  
Double Oil Seal, Motorized Backstop Etc  
eg 

-	F
---	---

1 - Series F

Range 

F
---

2, 3 - Size of Unit

0	2
---	---

 Through 

1	0
---	---

4 - No of Reductions

2
---

 Through 

4
---

5 - Revision Version

2
---

 For Sizes 02 to 08  

1
---

 For Sizes 09 to 10

6, 7, 8 - Nominal Overall Ratio

eg 

5	0	.
---	---	---

9 - Unit Version

Standard Unit with Torque Bushing 

T
---

  
STD Unit without Torque Bushing 

W
---

  
STD Unit with Output Flange 

F
---

### 10 - Type of Unit

- |   |
|---|
| M |
|---|

 - Motorized with IEC standard motor (IE2)
- |   |
|---|
| N |
|---|

 - Motorized with NEMA standard motor (EPACT)
- |   |
|---|
| H |
|---|

 - Motorized with IEC high efficiency motor (IE3)
- |   |
|---|
| E |
|---|

 - Motorized with NEMA high efficiency motor (PREMIUM)
- |   |
|---|
| G |
|---|

 - Unit to allow fitting of IEC motor (customer own motor)
- |   |
|---|
| A |
|---|

 - Unit to allow fitting of NEMA motor (customer own motor)
- |   |
|---|
| R |
|---|

 - Reducer unit
- |   |
|---|
| S |
|---|

 - Reducer unit with fan kit
- |   |
|---|
| W |
|---|

 - Reducer unit with backstop CCW rotation
- |   |
|---|
| X |
|---|

 - Reducer unit with backstop CW rotation
- |   |
|---|
| Y |
|---|

 - Reducer unit with fan and backstop CW rotation
- |   |
|---|
| Z |
|---|

 - Reducer unit with fan and backstop CCW rotation

19 - Additional Motor Features

eg 

-	A
---	---

  
For Types Without Motor Enter 

-
---

18 - No of Motor Poles

-
---

 No motor

4 Pole (Std) 1800 rpm 

B
---

  
6 Pole (Std) 1200 rpm 

D
---

15, 16, 17 - Geared Motor Powers

Motor Power Required

eg 

7	.	5
---	---	---

For reducer and non standard motor types enter 

-	-	-
---	---	---

13, 14 - Mounting Position

eg 

1	D
---	---

12 - Motor Adaptor For Motorized Units Type M and G

Column 10 Entries (enter) eg 

Q
---

Motorized Units Type A & N and Reducer Units Type R, S, W, X, Y and Z (enter) 

-
---

11 - OUTPUT SHAFT

Standard Single Extension 

N
---

 (not available for F02)

Standard Hollow Shaft 

A
---

Unit with Taper Release Bushing 

T
---

 (not available for F02 and F03)

See pages 7 & 8 for metric options

\* This Page May Be Photocopied Allowing The Customer To Enter Their Order To access the on line configurator please visit [www.radicon.com](http://www.radicon.com)

# SERIES F

## EXPLANATION & USE OF RATINGS & SERVICE FACTORS

Gear unit selection is made by comparing actual loads with catalog ratings. Catalog ratings are based on a standard set of loading conditions, whereas actual load conditions vary according to type of application. Service Factors are therefore used to calculate an equivalent load to compare with catalog ratings. (i.e. Equivalent Load = Actual Load x Service Factor)

### Mechanical ratings and service factors Fm and Fs

Mechanical ratings measure capacity in terms of life and/or strength, assuming 10 hr/day continuous running under uniform load conditions.

Catalog ratings allow 100% overload at starting, braking or momentarily during operation up to 10 hours per day.

The unit selected must therefore have a catalog rating at least equal to half maximum overload.

Mechanical Service Factor Fm (Table 1) is used to modify the actual load according to daily operating time, and type of loading.

Load characteristics for a wide range of applications are detailed in Table 3 opposite, which are used in deciding the appropriate Service Factor Fm from Table 1.

If overloads can be calculated, or accurately assessed, actual loads should be used instead of Fm.

For units subjected to frequent stop/starts overloads in excess of 10 times/day multiply factor Fm x Factor Fs (table 2).

For applications where units are to operate in extremely dusty or moist/humid atmospheres unit selection should be referred to application engineers.

**Table 1. Mechanical Service Factor (Fm)**

Prime mover	Duration of service- hrs per day	Load classification-driven machine		
		Uniform mass acceleration factor $\leq 0.2$	Moderate mass acceleration factor $\leq 3$	Heavy mass acceleration factor $\leq 10$
Electric motor, steam turbine or hydraulic motor	Under 3	0.80	1.00	1.50
	3 to 10	1.00	1.25	1.75
	Over 10	1.25	1.50	2.00
Multi-cylinder internal combustion engine	Under 3	1.00	1.25	1.75
	3 to 10	1.25	1.50	2.00
	Over 10	1.50	1.75	2.25
Single cylinder internal combustion engine	Under 3	1.25	1.50	2.00
	3 to 10	1.50	1.75	2.25
	Over 10	1.75	2.00	2.50

$$\text{Mass acceleration factor} = \frac{\text{all external moments of inertia}^*}{\text{moment of inertia of driving motor}} \quad * \text{ calculated with reference to the motor speed}$$

**Table 2. Number of Starts Factor (Fs)**

Start / Stops per hour (1)	Up to 1	5	10	40	60	$\geq 200$
Factor Fs	1.00	1.03	1.06	1.10	1.15	1.20

Note: (1) Intermediate values are obtained by linear interpolation

# SERIES F

## LOAD CLASSIFICATION

### APPLICATION

**Table 3**

**U = Uniform load**

**M = Moderate shock load**

**H = Heavy shock load**

**† = Refer to Application Engineering**

		Driven Machine	type of load	Driven Machine	type of load	Driven Machine	type of load
		<b>Cranes</b>		log haul-incline	H	log haul presses	H
		main hoists	†	log haul-well type	H	pulp machine reel	M
		bridge travel	†	log turning device	H	stock chest	M
		trolley travel	†	main log conveyor	H	suction roll	M
				off bearing rolls	M	washers and thickeners	M
		<b>Crusher</b>		planer feed chains	M	winders	M
		ore	H	planer floor chains	M		
		stone	H	planer tilting hoist	M		
		sugar	H	re-saw merry-go-round		<b>Printing presses</b>	†
				conveyor	M		
		<b>Dredges</b>		roll cases	H	<b>Pullers</b>	
		cable reels	M	slab conveyor	H	barge haul	H
		conveyors	M	small waste conveyor-belt	U		
		cutter head drives	H	small waste conveyor-chain	M	<b>Pumps</b>	
		jig drives	H	sorting table	M	centrifugal	U
		maneuvering winches	M	tipple hoist conveyor	M	proportioning	M
		pumps	M	tipple hoist drive	M	reciprocating	
		screen drive	H	transfer conveyors	M	single acting; 3 or more cylinders	M
		stackers	M	transfer rolls	M	double acting; 2 or more cylinders	M
		utility winches	M	tray drive	M	single acting; 1 or 2 cylinders	†
				trimmer feed	M	double acting; single cylinder	†
				waste conveyor	M	rotary	
		<b>Dry dock cranes</b>				gear type	U
		main hoist	†	<b>Machine tools</b>		lobe, vane	U
		auxiliary hoist	†	bending roll	M		
		boom, luffing	†	punch press-gear driven	H		
		rotating, swing or slew tracking, drive wheels	†	notching press- belt driven	†	<b>Rubber and plastics industries</b>	
				plate planers	H	crackers	H
		<b>Elevators</b>		tapping machine	H	laboratory equipment	M
		bucket-uniform load	U	other machine tools		mixed mills	H
		bucket-heavy load	M	main drives	M	refiners	M
		bucket-continuous	U	auxiliary drives	U	rubber calenders	M
		centrifugal discharge	U			rubber mill-2 on line	M
		escalators	U	<b>Metal mills</b>		rubber mill-3 on line	M
		freight	M	draw bench carriage and main drive	M	sheeter	M
		gravity discharge	U	pinch, dryer and scrubber rolls-reversing	†	tire building machines	†
		man lifts	†	slitters	M	tire and tube press	
		passenger	†	table conveyors		openers	†
				non-reversing		tubers and strainers	M
		<b>Fans</b>		group drives	M	warming mills	M
		centrifugal	U	individual drives	H		
		cooling towers		reversing		<b>Sand muller</b>	M
		induced draft	†	wire drawing and flattening machine	M		
		forced draft	†	wire winding machine	M	<b>Sewage disposal equipment</b>	
		induced draft	M			bar screens	U
		large, mine, etc	M	<b>Mill-rotary type</b>		chemical feeders	U
		large, industrial	M	<b>ball</b>		collectors	U
		light, small diameter	U	cement kilns	H	dewatering screws	M
				dryers and coolers	H	scum breakers	M
		<b>Feeders</b>		kilns, other than cement pebble rod	H	slow or rapid mixers	M
		apron	M			thickeners	M
		belt	M	<b>Mixers</b>		vacuum filters	M
		disc	U	concrete mixers			
		reciprocating	H	-continuous	M	<b>Screens</b>	
		screw	M	concrete mixers	M	air washing	U
				-intermittent	M	rotary-stone or gravel	M
		<b>Food industry</b>		constant density	U	travelling water intake	U
		beef slicer	M	variable density	M		
		cereal cooker	U	<b>Oil industry</b>		<b>Slab pushers</b>	M
		dough mixer	M	chillers	M		
		meat grinders	M	oil well pumping	†	<b>Steering gear</b>	†
				paraffin filter press	M		
		<b>Generators-not welding</b>		rotary kilns	M	<b>Stokers</b>	U
			U				
		<b>Hammer mills</b>		<b>Paper mills</b>		<b>Sugar industry</b>	
			H	agitators, (mixers)	M	cane knives	M
		<b>Hoists</b>		barker-auxiliaries-hydraulic	M	crushers	M
		heavy duty	H	barker-mechanical	H	mills	M
		medium duty	M	barking drum	H		
		skip hoist	M	beater and pulper	M	<b>Textile industry</b>	
				bleacher	U	batchers	M
		<b>Laundry washers</b>		calenders	M	calenders	M
		reversing	M	calenders-super	H	cards	M
				converting machine, except cutters, platers	M	dry cans	M
		<b>Laundry tumblers</b>		conveyors	U	dryers	M
			M	couch	M	dyeing machinery	M
		<b>Line shafts</b>		cutters-plates	H	knitting machines	†
		driving processing equipment	M	cylinders	M	looms	M
		light	U	dryers	M	mangles	M
		other line shafts	U	felt stretcher	M	nappers	M
				felt whipper	H	pads	M
		<b>Lumber industry</b>		jordans	M	range drives	†
		barkers-hydraulic-mechanical	M			slashers	M
		burner conveyor	M			soapers	M
		chain saw and drag saw	H			spinners	M
		chain transfer	H			tenter frames	M
		chain transfer	H			washers	M
		craneway transfer	H			winders	M
		de-barking drum	H				
		edger feed	M			<b>Windlass</b>	†
		gang feed	M				
		green chain	M				
		live rolls	H				
		log deck	H				

# SERIES F

## SELECTION PROCEDURE FOR MOTORIZED UNITS

**EXAMPLE APPLICATION DETAILS**

Absorbed power of driven machine = 0.96 HP  
 Output speed of gearbox or Input speed of machine = 62 rev/min  
 Application = Uniformly loaded belt conveyor  
 Duration of service (hours per day) = 24hrs  
 Mounting position = 1  
 Ambient temperature = 68°F  
 Running time (%) = 100%

**1 DETERMINE MECHANICAL SERVICE FACTOR (Fm)**

Refer to Load Classification by Application, table 3, page 4  
 Application = Uniformly loaded belt conveyor

Conveyors-uniformly loaded or fed		
apron		U
assembly		U
belt		U
bucket		U
chain		U

U = Uniform load

Refer to mechanical service factor (Fm), table 1, page 3

Duration of service (hours per day) = 24hrs

Prime mover	Duration of service-hrs per day	Load classification-drive	
		Uniform	Moderate
Electric motor, steam turbine or hydraulic motor	Under 3	0.80	1.00
	3 to 10	1.00	1.25
	Over 10	1.25	1.50

Therefore mechanical service factor (Fm) = 1.25

If the unit is subject to frequent start/stops Fm must be multiplied by factor Fs (see table 2 page 3)

**2 DETERMINE REQUIRED OUTPUT TORQUE AT GEARBOX OUTPUT SHAFT**

Absorbed output torque =  $\frac{\text{Absorbed power} \times 63000}{\text{Gearbox output speed}}$

$\frac{0.96 \times 63000}{62} = 975 \text{ lb. in}$

**3 SELECT GEARED MOTOR**

Refer to selection table one motor size larger than absorbed power.  
 Absorbed power = 0.96 HP, therefore refer to 1.00 HP selection table.  
 Required output speed of gearbox = 62 rev/min

1.00 HP	N2 R/MIN	i	lb in	Fm	lbf	UNIT DESIGNATION	lb	
	Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 2px;">1</span> Through <span style="border: 1px solid black; padding: 2px;">20</span> Spaces to be filled when entering order	Weight	Motor Frame Size
4 POLE	70	24.53	867	3.66	1036	F 0 3 2 2 2 5 . . N . . . . 1 0 B . .	76.3	143TC
	62	27.86	984	3.29	1065	2 8 .		
	56	30.68	1085	3.00	1085	3 2 .		
	49	35.30	1244	2.62	1114	3 6 .		
	45	38.37	1353	2.41	1132	4 0 .		
	37	46.07	1620	2.01	1165	5 0 .		
	31	55.28	1940	1.68	1195	5 6 .		
	28	62.29	2186	1.44	1208	6 3 .		
	24	72.41	2550	1.07	1223	7 1 .		

**4 CHECK OUTPUT TORQUE**

Output torque of selected unit must be equal or more than required output torque at gearbox output shaft.  
 Required output torque at gearbox output shaft = 975 lb. in

1.00 HP	N2 R/MIN	i	lb in	Fm	N	UNIT DESIGNATION	lb	
	Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 2px;">1</span> Through <span style="border: 1px solid black; padding: 2px;">20</span> Spaces to be filled when entering order	Weight	Motor Frame Size
4 POLE	70	24.53	867	3.66	1036	F 0 3 2 2 2 5 . . N . . . . 1 0 B . .	76.3	143TC
	62	27.86	984	3.29	1065	2 8 .		
	56	30.68	1085	3.00	1085	3 2 .		
	49	35.30	1244	2.62	1114	3 6 .		
	45	38.37	1353	2.41	1132	4 0 .		
	37	46.07	1620	2.01	1165	5 0 .		
	31	55.28	1940	1.68	1195	5 6 .		
	28	62.29	2186	1.44	1208	6 3 .		
	24	72.41	2550	1.07	1223	7 1 .		

Selected units output torque = 984 lb. in, therefore unit is acceptable

Go to point 5



# SERIES F

## SELECTION PROCEDURE FOR MOTORIZED UNITS

### 5 CHECK SERVICE FACTOR

Service factor (Fm) of selected unit must be equal or more than required service factor.

Required service factor of gearbox = 1.25

1.00 HP	N2 R/MIN	i	lb in	Fm	lbf	UNIT DESIGNATION	lb	
	Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <input type="text" value="1"/> Through <input type="text" value="20"/> Spaces to be filled when entering order	Weight	Motor Frame Size
4 POLE	70	24.53	867	3.66	1036	F 0 3 2 2 2 5 . . . N . . . . . 1 - 0 B - -	76.3	143TC
	62	27.86	984	3.29	1065	2 8 . . . . .		
	56	30.68	1085	3.00	1085	3 2 . . . . .		
	49	35.30	1244	2.62	1114	3 6 . . . . .		
	45	38.37	1353	2.41	1132	4 0 . . . . .		
	37	46.07	1620	2.01	1165	5 0 . . . . .		
	31	55.28	1940	1.68	1195	5 6 . . . . .		
	28	62.29	2186	1.44	1208	6 3 . . . . .		
	24	72.41	2550	1.07	1223	7 1 . . . . .		

Selected unit's service factor (Fm) = 3.29, therefore unit is acceptable.

Alternatively an F04 unit could be selected which has a larger diameter output bore

1.00 HP	N2 R/MIN	i	lb in	Fm	lbf	UNIT DESIGNATION	lb	
	Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <input type="text" value="1"/> Through <input type="text" value="20"/> Spaces to be filled when entering order	Weight	Motor Frame Size
4 POLE	70	24.53	867	3.66	1036	F 0 4 2 2 2 5 . . . N . . . . . 1 0 B - -	76.3	143TC
	62	27.86	984	3.29	1065	2 8 . . . . .		
	56	30.68	1085	3.00	1085	3 2 . . . . .		
	49	35.30	1244	2.62	1114	3 6 . . . . .		
	45	38.37	1353	2.41	1132	4 0 . . . . .		
	37	46.07	1620	2.01	1165	5 0 . . . . .		
	31	55.28	1940	1.68	1195	5 6 . . . . .		
	28	62.29	2186	1.44	1208	6 3 . . . . .		
	24	72.41	2550	1.07	1223	1 1 . . . . .		

Selected unit's service factor (Fm) = 3.29, therefore unit is acceptable.

### 6 CHECK OVERHUNG LOADS

If sprocket, gear, etc is mounted on the output shaft then refer to Overhung Loads Procedure, and compare with allowable overhung load (lb) of selected unit

Allowable overhung load (lb) must be equal or more than calculated overhung load (P)

1.00 HP	N2 R/MIN	i	lb in	Fm	lbf	UNIT DESIGNATION	lb	
	Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <input type="text" value="1"/> Through <input type="text" value="20"/> Spaces to be filled when entering order	Weight	Motor Frame Size
4 POLE	70	24.53	867	3.66	1036	F 0 3 2 2 2 5 . . . N . . . . . 1 0 B - -	76.3	143TC
	62	27.86	984	3.29	1065	2 8 . . . . .		
	56	30.68	1085	3.00	1085	3 2 . . . . .		
	49	35.30	1244	2.62	1114	3 6 . . . . .		
	45	38.37	1353	2.41	1132	4 0 . . . . .		
	37	46.07	1620	2.01	1165	5 0 . . . . .		
	31	55.28	1940	1.68	1195	5 6 . . . . .		
	28	62.29	2186	1.44	1208	6 3 . . . . .		
	24	72.41	2550	1.07	1223	7 1 . . . . .		

NOTE: If any of the following conditions occur then consult Application Engineering

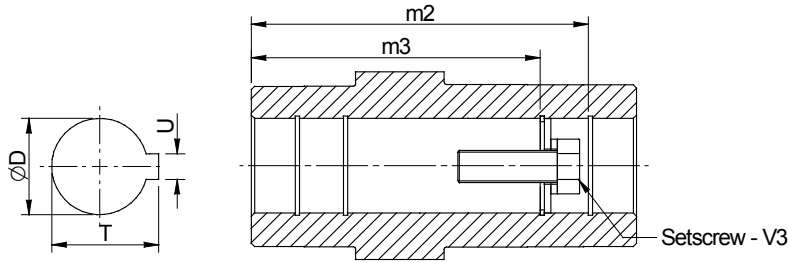
- a) Mass acceleration factor > 10
- b) Ambient temperature is above 104°F (40°C)

# SERIES F OUTPUT OPTIONS

## OUTPUT BORE OPTIONS, COLUMN 11 ENTRY

## Column 11 Entry

Standard / Inch Hollow Shaft



Output Shaft Bore

Inch Hollow Shaft

**A**

Inch Taper Release \*

**T**

(entry depends on shaft diameter contact Application Engineering)

Metric Hollow Shaft

**H**

\* See pages 84 - 85 for dimensions of these shaft options

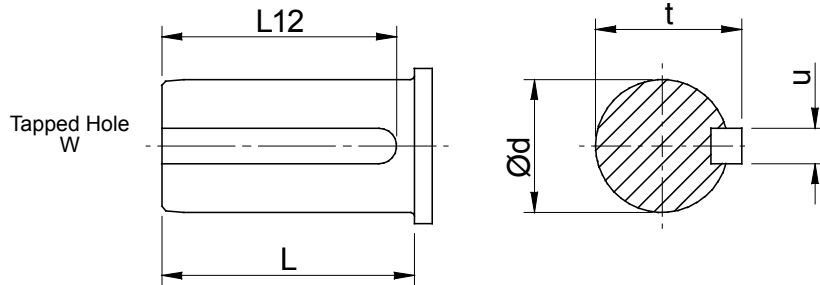
UNIT SIZE	TYPE OF BORE	COL 11 ENTRY	DIMENSIONS IN INCHES (Metric bore dimensions in mm)						
			∅ D	m1	m2	m3	T	U	v3
F02	Inch	A	1.001" / 1.000"	4.63"	4.13"	3.5"	1.11"	0.250"	3/8"UNFx2"
	Metric	H	25.021 / 25.000	117.5	105	89	28.5	8	M10x50
F03	Inch	A	1.251" / 1.250"	6.16"	4.8"	4.13"	1.37"	0.250"	3/8"UNFx2"
	Metric	H	30.025 / 30.000	156.5	122	105	33.5	8	M10x50
F04	Inch	A	1.376" / 1.375"	6.16"	5.20"	4.80"	1.53"	0.313"	1/2"UNFx2.25"
	Metric	H	35.021 / 35.000	156.5	132	122	38.5	10	M12x55
F05	Inch	A	1.501" / 1.500"	7.05"	6.85"	5.59"	1.67"	0.375"	5/8"UNFx2.75"
	Metric	H	40.025 / 40.000	179	174	142	43.5	12	M16x70
F06	Inch	A	1.501" / 1.500"	8.07"	6.85"	6.14"	1.67"	0.375"	5/8"UNFx2.75"
	Metric	H	40.025 / 40.000	205	174	156	43.5	12	M16x70
F07	Inch	A	2.001" / 2.000"	9.19"	7.80"	7.20"	2.23"	0.500"	5/8"UNFx2.75"
	Metric	H	50.025 / 50.000	233.5	198	183	54	14	M16x70
F08	Inch	A	2.376" / 2.375"	10.63"	9.06"	8.27"	2.66"	0.625"	3/4"UNFx3.25"
	Metric	H	60.030 / 60.000	270	230	210	64.5	18	M20x80
F09	Inch	A	2.751" / 2.750"	12.99"	10.63"	-	3.04"	0.625"	3/4"UNFx3.25"
	Metric	H	70.030 / 70.000	330	270	-	75	20	M20x80
F10	Inch	A	3.251" / 3.250"	14.57"	12.32"	-	3.59"	0.750"	3/4"UNFx3.25"
	Metric	H	80.030 / 80.000	370	313	-	85.5	22	M20x80

# SERIES F OUTPUT OPTIONS

## OUTPUT SHAFT OPTIONS COLUMN 11 ENTRY

## Column 11 Entry

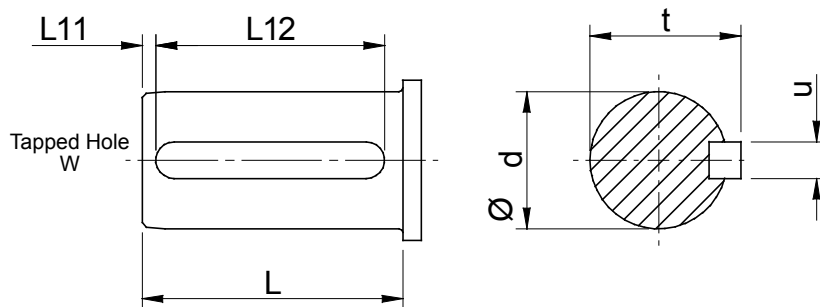
### Inch Shafts



Inch Single Extension N

Metric Single Extension C

### Metric Shafts



UNIT SIZE	TYPE OF BORE	COL 11 ENTRY	DIMENSIONS IN INCHES (Metric shaft dimensions in mm)						
			Ø D	L	L11	L12	t	u	w
F02	Inch	N	-	-	-	-	-	-	-
	Metric	C	-	-	-	-	-	-	-
F03	Inch	N	1.0000" / 0.9995"	1.85"	*	1.57"	1.11"	0.250"	3/8"UNFx 0.75"
	Metric	C	25.015 / 25.002	47	3	40	28	8	M10x22
F04	Inch	N	1.2500" / 1.2495"	2.20"	*	2.00"	1.36"	0.250"	1/2"UNFx 1.13"
	Metric	C	30.015 / 30.002	56	3	50	33	8	M12x28
F05	Inch	N	1.3750" / 1.3745"	2.60"	*	2.38"	1.51"	0.3125"	5/8"UNFx 1.5"
	Metric	C	35.018" / 35.002"	66	3	60	38	10	M16x36
F06	Inch	N	1.625" / 1.624"	3.00"	*	2.38"	1.78"	0.375"	5/8"UNFx 1.5"
	Metric	C	40.018 / 40.002	76	3	70	43	12	M16x36
F07	Inch	N	2.002" / 1.999"	3.74"	*	2.75"	2.23"	0.500"	5/8"UNFx 1.5"
	Metric	C	50.018 / 50.002	95	3	80	53.5	14	M16x36
F08	Inch	N	2.375" / 2.374"	4.49"	*	3.69"	2.65	.625"	3/4"UNFx 1.65"
	Metric	C	60.030 / 60.011	114	3	100	64	18	M20x42
F09	Inch	N	2.875" / 2.874"	5.32"	*	4.63"	3.20"	0.750"	3/4"UNFx 1.65"
	Metric	C	70.030 / 70.011	135	3	110	74.5	20	M20x42
F10	Inch	N	3.625" / 3.624"	6.77"	*	5.94"	4.01"	0.875"	3/4"UNFx 1.65"
	Metric	C	90.035 / 90.013	172	5	140	95	25	M20x42

# SERIES F MOTOR ADAPTERS

## DOUBLE REDUCTION UNITS

### NEMA Flanges C face Column 12 entry for units type A (Column 10)

MOTOR	RATIO COVERAGE	F0222		F0322 F0422		F0522		F0622		F0722		F0822		F0921		F1021	
		6.3 - 14.	16. - 90.	7.1 - 25.	28. - 100	5.0 - 14.	16. - 71.	7.1 - 20.	22. - 100	7.1 - 16.	20. - 100	7.1 - 25.	28. - 100	5.0 - 25.	28. - 100	5.0 - 25.	28. - 100
56C	COLUMN 12 ENTRY	*T	*U	T	U	-	Q	-	Q	-	Q	-	M	-	-	-	-
143/145TC		*V	*W	V	W	-	R	-	R	-	R	-	N	-	-	-	-
182/184TC		*X	-	*X	-	S	T	S	T	S	T	J	P	-	S	-	P
213/215TC		-	-	-	-	U	-	U	-	U	V	K	Q	-	T	-	Q
254/256TC		-	-	-	-	-	-	-	-	W	-	L	U	P	U	L	R
284/286TC		-	-	-	-	-	-	-	-	-	-	-	-	Q	V	M	S

### IEC Flanges B14 Column 12 entry for units type G (Column 10)

MOTOR	RATIO COVERAGE	F0222		F0322 F0422		F0522		F0622		F0722		
		6.3 - 14.	16. - 90.	7.1 - 25.	28. - 100	5.0 - 14.	16. - 71.	7.1 - 20.	22. - 100	7.1 - 16.	20. - 100	
71	COLUMN 12 ENTRY	*H	*H	-	H	-	-	-	-	-	-	
80		*B	*K	B	K	-	G	-	G	-	G	
90		*D	*R	D	R	-	J	-	J	-	J	
100		*E	*S	E	S	B	L	B	L	B	L	
112		*E	*S	E	S	B	L	B	L	B	L	
132			-	-	-	-	-	-	-	-	D	N

Motor codes marked \* are not suitable for units with Taper Release Bushing

### IEC Flanges B5 Column 12 entry for units type G (Column 10)

MOTOR	RATIO COVERAGE	F0222		F0322 F0422		F0522		F0622		F0722		F0822		F0921		F1021	
		6.3 - 14.	16. - 90.	7.1 - 25.	28. - 100	5.0 - 14.	16. - 71.	7.1 - 20.	22. - 100	7.1 - 16.	20. - 100	7.1 - 25.	28. - 100	5.0 - 25.	28. - 100	5.0 - 25.	28. - 100
63	COLUMN 12 ENTRY	*F	*F	-	F	-	V	-	V	-	-	-	-	-	-	-	-
71		*G	*G	-	G	-	D	-	D	-	-	-	-	-	-	-	-
80		*A	*J	*A	*J	W	F	W	F	-	F	-	D	-	E	-	-
90		*C	*Q	*C	*Q	Y	H	Y	H	-	H	-	E	-	F	-	-
100		-	-	-	-	A	K	A	K	A	K	A	F	-	G	-	E
112		-	-	-	-	A	K	A	K	A	K	A	F	-	G	-	E
132		-	-	-	-	N	P	N	P	C	M	B	G	-	H	-	F
160		-	-	-	-	-	-	-	-	E	-	C	H	A	J	A	G
180		-	-	-	-	-	-	-	-	-	-	-	-	B	K	B	H
200		-	-	-	-	-	-	-	-	-	-	-	-	C	-	C	-
225		-	-	-	-	-	-	-	-	-	-	-	-	D	-	D	-
250		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
280		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Limited Availability / Non Preferred

# SERIES F MOTOR ADAPTERS

## TRIPLE REDUCTION UNITS

### NEMA Flanges C face Column 12 entry for units type A (Column 10)

MOTOR	RATIO COVERAGE	F0232	F0332 F0432	F0532	F0632	F0732	F0832	F0931	F1031
		90. - 315	100 - 360	80. - 280	100 - 360	100 - 360	100 - 360	100 - 360	100 - 360
56C	COLUMN 12 ENTRY	*U	U	U	U	Q	Q	X	-
143/145TC		*W	W	W	W	R	R	Y	-
182/184TC		-	-	-	-	T	T	Z	S
213/215TC		-	-	-	-	-	V	-	T
254/256TC		-	-	-	-	-	-	-	U
284/286TC		-	-	-	-	-	-	-	V
324/326TC		-	-	-	-	-	-	-	W

### IEC Flanges B14 Column 12 entry for units type G (Column 10)

MOTOR	RATIO COVERAGE	F0232	F0332 F0432	F0532	F0632	F0732	F0832
		90. - 315	100 - 360	80. - 280	100 - 360	100 - 360	100 - 360
71	COLUMN 12 ENTRY	*H	H	H	H	-	-
80		*K	K	K	K	G	G
90		*R	R	R	R	J	J
100		-	-	-	-	-	L
112		-	-	-	-	-	L
132		-	-	-	-	-	N

Motor codes marked \* are not suitable for units with Taper Release Bushing

### IEC Flanges B5 Column 12 entry for units type G (Column 10)

MOTOR	RATIO COVERAGE	F0232	F0332 F0432	F0532	F0632	F0732	F0832	F0931	F1031
		90. - 315	100 - 360	80. - 280	100 - 360	100 - 360	100 - 360	100 - 360	100 - 360
63	COLUMN 12 ENTRY	*F	F	F	F	-	-	-	-
71		*G	G	G	G	-	-	-	-
80		*J	*J	J	J	F	F	L	E
90		*Q	*Q	Q	Q	H	H	M	F
100		-	-	-	-	K	K	N	G
112		-	-	-	-	K	K	N	G
132		-	-	-	-	-	M	-	H
160		-	-	-	-	-	-	-	-
180		-	-	-	-	-	-	-	-
200		-	-	-	-	-	-	-	-
225		-	-	-	-	-	-	-	-



Limited Availability / Non Preferred

# SERIES F MOTOR ADAPTERS

## QUADRUPLE REDUCTION UNITS

### NEMA Flanges C face Column 12 entry for units type A (Column 10)

MOTOR	RATIO COVERAGE	F0342 F0442	F0542	F0642	F0742	F0842	F0941	F1041
		400 - 50C	320 - 40C	400 - 50C	400 - 50C	400 - 56C	400 - 56C	400 - 56C
56C	COLUMN 12 ENTRY	U	U	U	U	Q	Q	Q
143/145TC		W	W	W	W	R	R	R
182/184TC		-	-	-	-	T	T	T
213/215TC		-	-	-	-	-	-	V

### IEC Flanges B14 Column 12 entry for units type G (Column 10)

MOTOR	RATIO COVERAGE	F0342 F0442	F0542	F0642	F0742	F0842	F0941	F1041
		400 - 50C	320 - 40C	400 - 50C	400 - 50C	400 - 56C	400 - 56C	400 - 56C
71	COLUMN 12 ENTRY	H	H	H	H	-	-	-
80		K	K	K	K	G	G	G
90		R	R	R	R	J	J	J
100		-	-	-	-	L	L	L
112		-	-	-	-	L	L	L
132		-	-	-	-	-	-	N

### IEC Flanges B5 Column 12 entry for units type G (Column 10)

MOTOR	RATIO COVERAGE	F0342 F0442	F0542	F0642	F0742	F0842	F0941	F1041
		400 - 50C	320 - 40C	400 - 50C	400 - 50C	400 - 56C	400 - 56C	400 - 56C
63	COLUMN 12 ENTRY	F	F	F	F	V	V	-
71		G	G	G	G	D	D	-
80		J	J	J	J	F	F	F
90		Q	Q	Q	Q	H	H	H
100		-	-	-	-	K	K	K
112		-	-	-	-	K	K	K
132		-	-	-	-	P	P	M
160		-	-	-	-	-	-	P



Limited Availability / Non Preferred

# SERIES F LUBRICATION

Gear units 02, 03, 04, 05, 06 & 07 will be supplied filled with a quantity of EP mineral oil (Grade 6E) appropriate to the intended mounting position. However if, as requested, the unit is supplied without lubricant then the oil quantity required is obtained from Table 2. Gear units 08, 09, and 10 are supplied without lubricant. Recommended lubricants are listed in the Approved Lubricant scheme booklet.

## TEMPERATURE LIMITATIONS

The standard lubricant is suitable for operation in ambient temperatures of 32°F to 95°F (0°C to 35°C), outside of this consult Table 1 or our Application Engineers.

**TABLE 1 OIL GRADES**

LUBRICANT	AMBIENT TEMPERATURE RANGE		
	23°F to 68°F (type E) (-5°C to 20°C) -22°F to 68°F (type H) (-30°C to 20°C)	32°F to 95°F (0°C to 35°C)	68°F to 122°F (20°C to 50°C)
EP Mineral Oil (type E)	5E (VG 220)	6E (VG 320)	7E (VG 460)
Polyalphaolefin based Synthetic (type H)	5H (VG 220)	5H (VG 220)	6H (VG 320)

**TABLE 2 Lubrication Quantity (Liters)**

DOUBLE REDUCTION										
Unit Size	F0222	F0322	F0422	F0522	F0622	F0722	F0822	F0921	F1021	
MOUNTING POSITION	1	0.8	1.3	1.3	2.1	3.5	6.3	10.7	19	34
	2	0.4	0.8	0.8	1.4	2.3	3.5	7.1	13	22
	3	0.4	1.1	1.1	1.4	2.3	3.4	8.8	17	28
	4	0.5	0.8	0.8	1.8	3.0	5.0	4.7	15	27
	5	1.1	1.2	1.2	2.8	4.5	8.0	9.7	24	43
	6	1.3	2.0	2.0	3.2	5.2	9.0	17.2	25	43

TRIPLE REDUCTION										
Unit Size	F0232	F0332	F0432	F0532	F0632	F0732	F0832	F0931	F1031	
MOUNTING POSITION	1	0.8	1.2	1.3	2.1	3.5	6.3	10.4	19	34
	2	0.4	0.8	0.8	1.4	2.3	3.5	7.3	15	24
	3	0.4	1.1	1.1	1.4	2.3	3.4	9.2	17	28
	4	0.5	0.8	0.8	1.8	3.0	5.0	5.3	16	27
	5	1.1	1.2	1.2	2.8	4.5	8.0	9.7	24	43
	6	1.3	2.0	2.0	3.2	5.2	9.0	17.4	25	43

QUADRUPLE REDUCTION											
Unit Size	F0342		F0442		F0542		F0642		F0742		
	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary	
	M0122	F0322	M0122	F0422	M0322	F0522	M0322	F0622	M0322	F0722	
MOUNTING POSITION	1	0.5	1.3	0.5	1.3	0.8	2.1	0.8	3.5	0.8	6.3
	2	0.5	0.8	0.5	0.8	0.8	1.4	0.8	2.3	0.8	3.5
	3	0.5	1.1	0.5	1.1	0.8	1.4	0.8	2.3	0.8	3.4
	4	0.5	0.8	0.5	0.8	0.8	1.8	0.8	3.0	0.8	5.0
	5	0.7	1.2	0.7	1.2	1.1	2.8	1.1	4.5	1.1	8.0
	6	1.0	2.0	1.0	2.0	1.4	3.2	1.4	5.2	1.4	9.0

QUADRUPLE REDUCTION..CONT							
Unit Size	F0842		F0941		F1041		
	Primary	Secondary	Primary	Secondary	Primary	Secondary	
	M0522	F0822	M0522	F0921	M0722	F1021	
MOUNTING POSITION	1	1.5	10.7	1.5	19.0	2.6	34.0
	2	1.5	7.1	1.5	13.0	2.6	22.0
	3	1.5	8.8	1.5	17.0	2.6	28.0
	4	1.5	4.7	1.5	15.0	2.6	27.0
	5	2.0	9.7	2.0	24.0	3.2	43.0
	6	2.6	17.2	2.6	25.0	4.7	43.0

Conversion Table:  
Liters to Gallons = Liters x 0.26

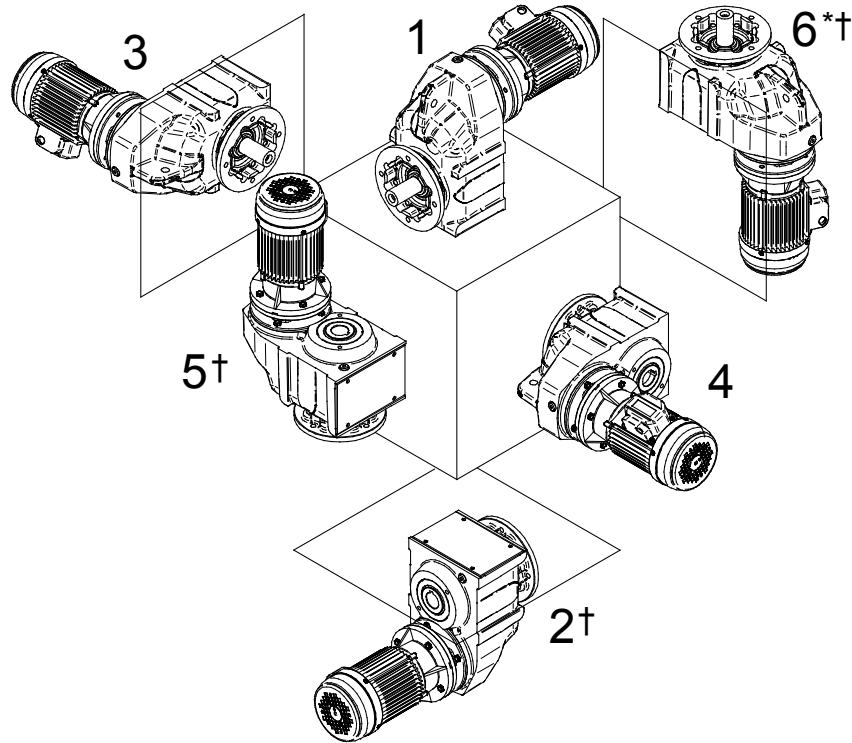
\* NOTE: Primary units filled with Grade 6E lubricant suitable for all ambient temperatures between 32°F and 95°F (0°C and 35°C)

# SERIES F MOUNTING POSITIONS

## Mounting Positions

## COLUMN 13 ENTRY

Enter  for units with no oil fill

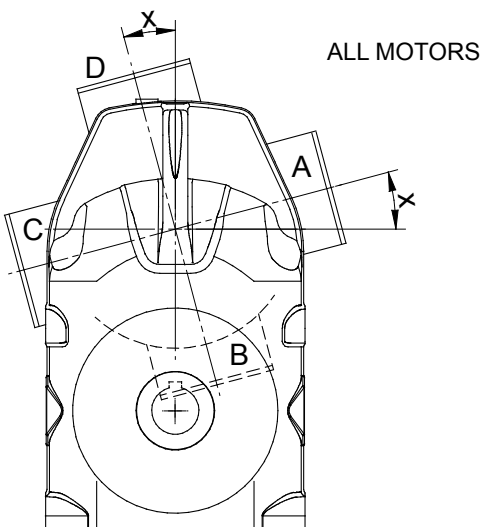


\* Mounting Position 6 is not recommended for Geared Motors - Consult Application Engineering  
 † Gear Units selected for use in mounting positions 2, 5 and 6 should only be used with overall ratios greater or equal to those shown in the table below

Unit Size	Input Speed (rpm)			
	< 1000	< 1500	< 1800	> 1800
F02 - F07	All	All	All	Consult Application Engineering
F0822	All	9.0	9.0	
F0921	8.0	11.0	12.0	
F1021	11.0	16.0	18.0	

## MOUNTING POSITIONS - SHOWN AS MOTORIZED - APPLIES ALSO FOR REDUCERS

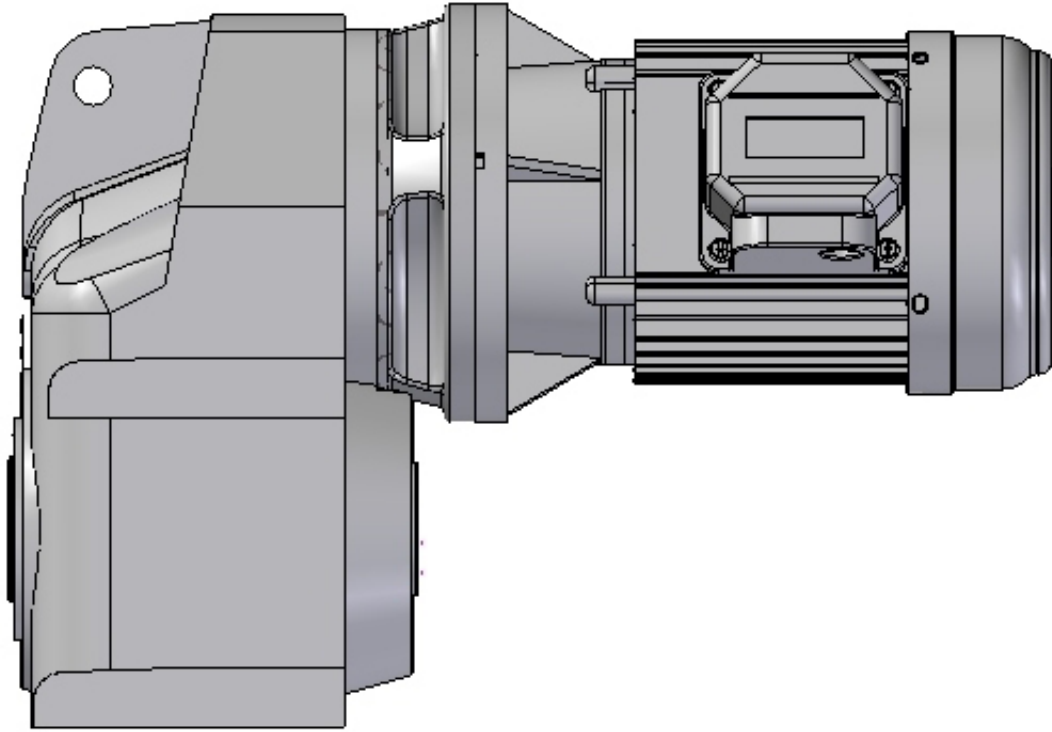
### COLUMN 14 ENTRY



Column 14 Entry	Angle X				
	F02	F03	F04	F05	F06
A	15°	23°	23°	9.5°	16.5°
B	105°	113°	113°	99.5°	106.5°
C	195°	203°	203°	189.5°	196.5°
D	285°	293°	293°	279.5°	286.5°
-	Reducer or no motor fitted				

Column 14 Entry	Angle X	
	F07	F08, F09, F10, F11, F12
A	28°	0°
B	118°	90°
C	208°	180°
D	298°	270°
-	Reducer or no motor fitted	



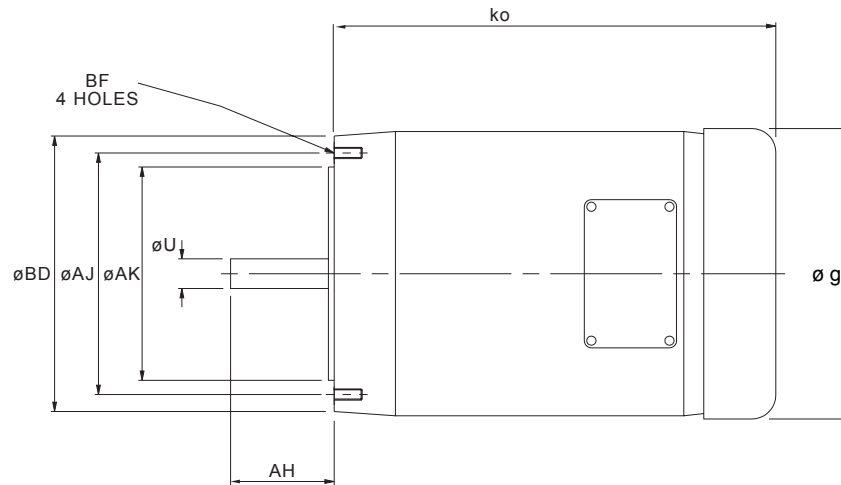


**MOTORIZED**  
**SERIES F**

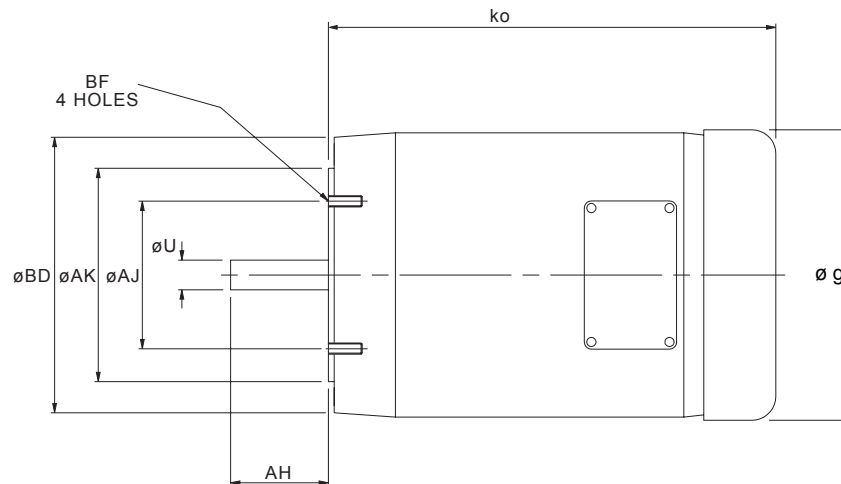
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# SERIES F MOTOR DETAILS

## NEMA Standard Motors



MOTOR FRAME SIZE	Ø BD	Ø AJ	Ø AK	Ø U	AH	ko max	Ø g	BF TAP UNC
56C	6.50	5.875	4.5	0.625	2.062	12.00	6.13	3/8 - 16
143TC/145TC	6.50	5.875	4.5	0.875	2.125	12.00	7.19	3/8 - 16



MOTOR FRAME SIZE	Ø BD	Ø AJ	Ø AK	Ø U	AH	ko max	Ø FP	BF TAP UNC
182TC/184TC	9.00	7.25	8.5	1.125	2.625	15.50	8.50	1/2 - 13
213TC/215TC	9.00	7.25	8.5	1.375	3.125	16.50	10.19	1/2 - 13
254TC/256TC	10.00	7.25	8.5	1.625	3.75	20.00	12.50	1/2 - 13
284TC/286TC	11.25	9.00	10.5	1.875	4.375	23.25	15.56	1/2 - 13
324TC/326TC	13.875	11.00	12.5	2.125	5.00	25.25	16.94	5/8 - 11
364TC/365TC	13.875	11.00	12.5	2.375	5.625	27.00	19.00	5/8 - 11
404TC/405TC	13.875	11.00	12.5	2.875	7.00	30.00	20.63	5/8 - 11

\* Motor lengths for our standard motors.  
These lengths may vary if alternative motor is fitted.

# SERIES F

## ADDITIONAL MOTOR FEATURES

### ADDITIONAL MOTOR FEATURES - COLUMN 19 ENTRY

Column 19 Entry	Brake Motor	Hand Release on Brake	Forced Ventilation/ Constant Blower (TECB)	Thermistors	Special
-					
A	•				
B	•	•			
C			•		
D	•		•		
E	•	•	•		
F				•	
G	•			•	
H	•	•		•	
K			•	•	
L	•		•	•	
M	•	•	•	•	
S					•

Please refer to our Application Engineers for details of the following additional motor features:

- Wash down
- Customized brake torque
- Seperate brake supply
- Anti Condensation heater
- Bi-metal temperature detectors, Thermostat
- Metal fan cover
- Rain cowl
- Seperate terminal box

# SERIES F

## ADDITIONAL GEARBOX FEATURES

### ADDITIONAL GEARBOX FEATURES - COLUMN 20 ENTRY

Column 20 Entry	Double Oil* Seals	Oil Level** Glass	Motorized Backstop***		Special****
			CW Rotation	CCW Rotation	
-					
A	•				
B		•			
C	•	•			
D			•		
E	•		•		
F		•	•		
G	•	•	•		
H				•	
I	•			•	
J		•		•	
K	•	•		•	
L					•

\*Double oil seals are for output shafts only. Double oil seals are NOT AVAILABLE on Taper Release output shafts.

\*\*Oil level glass is available on F06-F10. Oil level glass is NOT AVAILABLE on F02-F05 units.

\*\*\*Limited frame size availability.

NEMA Frame sizes 182TC - 326TC & IEC Frame sizes 100 - 200

\*\*\*\*Please refer to our Application Engineers for details regarding special gearbox features.

# SERIES F EXACT RATIOS

## EXACT RATIOS - DOUBLE REDUCTION

Column Entry			F0222	F0322	F0422	F0522	F0622	F0722	F0822	F0921	F1021	F1121	F1221
6	7	8											
4.5			-	-	-	-	-	-	-	-	-	4.53	4.63
5.0			-	-	-	4.841	-	-	-	5.085	5.107	5.16	5
5.6			-	-	-	-	-	-	-	-	-	5.53	5.73
6.3			5.903	-	-	6.806	-	-	-	6.567	6.433	6.3	6.19
7.1			7.974	6.262	6.262	7.628	7.494	6.772	6.959	7.000	7.133	7.2	7.31
8.0			-	-	-	-	-	-	-	7.846	7.758	8.2	7.9
9.0			9.069	8.784	8.784	8.563	8.750	9.380	9.865	8.807	8.812	8.75	9.19
10.			10.27	9.680	9.680	10.87	9.807	10.54	10.96	10.13	9.772	9.97	9.92
11.			-	-	-	12.33	-	-	-	11.35	11.48	11.33	11.55
12.			13.14	10.99	10.99	-	11.009	11.59	12.19	12.68	12.39	12.9	12.48
14.			14.16	13.96	13.96	14.70	13.98	15.13	15.76	14.66	14.46	13.66	13.88
16.			17.88	15.86	15.86	16.93	15.85	17.21	17.70	16.37	15.61	15.56	14.99
18.			-	-	-	19.69	-	-	-	17.58	18.07	17.96	17.77
20.			20.27	19.46	19.46	-	18.90	20.89	20.77	20.04	20.46	20.46	19.19
22.			23.16	21.59	21.59	22.03	21.76	22.98	23.40	22.70	22.76	22.42	22.84
25.			25.77	24.52	24.52	23.48	25.31	26.41	27.24	25.88	21.70	25.54	24.67
28.			28.41	27.86	27.86	27.83	28.32	29.95	30.21	28.41	24.45	28.4	28.92
32.			31.26	30.68	30.68	29.71	30.18	33.03	33.07	31.56	28.46	32.34	31.23
36.			36.63	35.30	35.30	36.87	35.77	37.83	37.41	36.69	31.57	34.96	35.61
40.			43.94	38.37	38.37	43.47	38.19	42.77	42.23	40.76	34.55	39.83	38.46
45.			-	-	-	47.60	-	-	-	44.58	39.09	44.74	43.75
50.			51.22	46.07	46.07	-	47.40	49.59	51.19	49.22	44.13	50.96	47.26
56.			56.91	55.28	55.28	58.34	55.89	59.14	59.69	57.58	53.49	51.85	54.03
63.			68.54	62.29	62.29	65.02	61.20	64.77	65.57	63.56	62.38	59.06	58.36
71.			78.56	72.41	72.41	72.92	75.00	77.72	80.36	67.71	68.52	-	-
80.			-	-	-	-	-	-	-	76.14	83.97	-	-
90.			89.28	82.18	82.18	-	83.59	89.42	87.75	87.44	91.70	-	-
100			-	93.43	93.43	-	93.75	99.36	101.05	98.32	105.60	-	-

# SERIES F EXACT RATIOS

## EXACT RATIOS - TRIPLE REDUCTION

Column Entry			F0232	F0332	F0432	F0532	F0632	F0732	F0832	F0931	F1031
6	7	8									
4 5 .	-	-	-	-	-	-	-	-	-	-	-
5 0 .	-	-	-	-	-	-	-	-	-	-	-
5 6 .	-	-	-	-	-	-	-	-	-	-	-
6 3 .	-	-	-	-	-	-	-	-	-	-	-
7 1 .	-	-	-	-	-	-	-	-	-	-	-
8 0 .	-	-	-	78.8	-	-	-	-	-	-	-
9 0 .	92.02	-	-	86.8	-	-	-	-	-	-	-
1 0 0	101.5	99.52	99.52	99.86	101.4	108.6	114.2	102.5	102.8		
1 1 2	111.6	109.7	109.7	108.6	111.6	115.7	124.9	113.9	114.2		
1 2 5	130.8	120.7	120.7	130.3	128.4	137.1	141.3	132.3	129.5		
1 4 0	-	-	-	-	-	-	-	147.0	143.9		
1 6 0	156.9	141.5	141.5	156.4	139.6	146.4	159.5	160.8	162.9		
1 8 0	182.9	169.7	169.7	176.2	167.6	181.7	193.4	177.5	187.7		
2 0 0	203.3	197.8	197.8	204.9	201.1	214.2	225.5	207.7	205.2		
2 2 5	244.8	219.8	219.8	232.5	226.6	234.6	247.7	229.3	236.4		
2 5 0	-	-	-	-	-	-	-	244.2	253.9		
2 8 0	280.6	264.7	264.7	264.3	263.4	287.5	303.6	274.6	272.7		
3 1 5	318.8	303.4	303.4	-	298.9	320.4	331.5	315.4	319.8		
3 6 0	-	344.8	344.8	-	339.8	359.4	381.8	354.7	343.6		

## EXACT RATIOS - QUAD REDUCTION

Column Entry			F0342	F0442	F0542	F0642	F0742	F0842	F0941	F01041
6	7	8								
3 2 0	-	-	314.4	-	-	-	-	-	-	-
3 6 0	-	-	351.7	-	-	-	-	-	-	-
4 0 0	410.0	410.0	412.8	404.2	404.1	395.8	395.7	400.7		
4 5 0	456.1	456.1	444.3	445.1	464.4	460.4	460.2	445.3		
5 0 0	502.9	502.9	489.3	498.0	534.1	490.0	511.0	489.8		
5 6 0	577.7	577.7	562.8	571.2	580.7	570.0	594.3	562.9		
6 3 0	637.0	637.0	611.9	629.0	658.5	637.7	664.9	638.3		
7 0 0	701.0	701.0	694.2	723.5	726.3	679.7	708.7	704.0		
8 0 0	821.3	821.3	837.0	786.6	831.8	805.5	839.9	806.2		
9 0 0	914.9	914.9	931.5	892.4	944.4	909.5	926.7	924.8		
1 0 C	997.6	997.6	1026	983	1040	1018	1037	1049		
1 1 C	1097.9	1098	1148	1130	1090	1085	1105	1157		
1 2 C	1237.1	1237	1180	1238	1196	1191	1177	1325		
1 4 C	1449.3	1449	1377	1346	1350	1412	1395	1498		
1 6 C	1543.2	1543	1552	1615	1571	1594	1520	1564		
1 8 C	1798.9	1799	1848	1770	1770	1890	1802	1792		
2 0 C	2026.9	2027	2082	1995	2052	2017	1924	2026		
2 2 C	2252.1	2252	2242	2184	2312	2293	2180	2349		
2 5 C	2406.9	2407	2421	2539	2454	2503	2387	2523		
2 8 C	2758.8	2759	2747	2882	2785	2703	2815	2801		
3 2 C	3152.7	3578	3123	3112	3225	3232	3082	3068		
3 6 C	3578.4	3578	3481	3532	3660	3628	3656	3681		
4 0 C	4101.5	4102	3904	3937	4161	3961	3777	4235		
4 5 C	4662.8	4663	-	4415	4679	4415	4210	4550		
5 0 C	5299.2	5299	-	5019	5319	4952	4722	4706		
5 6 C	-	-	-	-	-	5702	5310	5056		

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

**0.25 HP**

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
292	5.90	51	9.94	406	F 0 2 2 2 6 . 3 _ N _ _ _ _ . 2 5 B - -	51.1	56C
216	7.97	70	8.57	447	7 . 1		
190	9.07	79	8.04	465	9 . 0		
168	10.27	90	7.51	483	1 0 .		
131	13.14	116	6.50	519	1 2 .		
122	14.16	124	6.24	530	1 4 .		
96	17.88	158	5.34	566	1 6 .		
85	20.27	179	4.91	586	2 0 .		
74	23.16	205	4.48	609	2 2 .		
67	25.77	226	4.17	627	2 5 .		
61	28.41	249	3.90	642	2 8 .		
55	31.26	275	3.66	658	3 2 .		
47	36.63	323	3.34	685	3 6 .		
39	43.94	386	2.95	716	4 0 .		
34	51.22	450	2.53	741	5 0 .		
30	56.91	499	2.28	759	5 6 .		
25	68.54	603	1.89	788	6 3 .		
22	78.56	687	1.45	808	7 1 .		
19	89.28	783	1.25	826	9 0 .		
19	92.02	793	1.44	835	F 0 2 3 2 9 0 . _ N _ _ _ _ . 2 5 B - -	53.3	56C
17	101.45	874	1.31	846	1 0 0		
15	111.65	963	1.18	858	1 1 2		
13	130.81	1130	1.01	871	1 2 5		
11	156.93	1355	0.86	822	1 6 0		
21	82.18	722	3.41	1665	F 0 3 2 2 9 0 . _ N _ _ _ _ . 2 5 B - -	66.5	56C
18	93.43	817	2.68	1723	1 0 0		
17	99.52	863	3.50	1757	F 0 3 3 2 1 0 0 _ N _ _ _ _ . 2 5 B - -	68.7	56C
16	109.72	952	3.28	1802	1 1 2		
14	120.75	1049	3.10	1847	1 2 5		
12	141.47	1229	2.65	1923	1 6 0		
10	169.72	1470	2.22	1952	1 8 0		
8.7	197.84	1715	1.90	1903	2 0 0		
7.8	219.82	1901	1.71	1865	2 2 5		
6.5	264.71	2298	1.42	1786	2 8 0		
5.7	303.42	2632	1.24	1718	3 1 5		
5	344.83	2975	1.09	1646	3 6 0		
4.2	410.03	3431	0.85	1582	F 0 3 4 2 4 0 0 _ N _ _ _ _ . 2 5 B - -	88.5	56C
21	82.18	722	3.41	1665	F 0 4 2 2 9 0 . _ N _ _ _ _ . 2 5 B - -	66.5	56C
18	93.43	817	2.68	1723	1 0 0		
17	99.52	863	3.50	1757	F 0 4 3 2 1 0 0 _ N _ _ _ _ . 2 5 B - -	68.7	56C
16	109.72	952	3.28	1802	1 1 2		
14	120.75	1049	3.10	1847	1 2 5		
12	141.47	1229	2.65	1923	1 6 0		
10	169.72	1470	2.22	1952	1 8 0		
8.7	197.84	1715	1.90	1903	2 0 0		
7.8	219.82	1901	1.71	1865	2 2 5		
6.5	264.71	2298	1.42	1786	2 8 0		
5.7	303.42	2632	1.24	1718	3 1 5		
5	344.83	2975	1.09	1646	3 6 0		
4.2	410.03	3431	0.85	1582	F 0 4 4 2 4 0 0 _ N _ _ _ _ . 2 5 B - -	88.5	56C
11	156.40	1357	3.94	2809	F 0 5 3 2 1 6 0 _ N _ _ _ _ . 2 5 B - -	81.9	56C
10	176.23	1529	3.67	2899	1 8 0		
8.4	204.87	1781	3.37	2966	2 0 0		
7.4	232.53	2016	3.13	2921	2 2 5		
6.5	264.35	2290	2.47	2854	2 8 0		
5.5	314.39	2661	2.16	1729	F 0 5 4 2 3 2 0 _ N _ _ _ _ . 2 5 B - -	112.8	56C
4.9	351.75	2970	2.04	1779	3 6 0		
4.2	412.85	3492	1.78	1813	4 0 0		
3.9	444.31	3737	1.65	2006	4 5 0		
3.5	489.28	4122	1.49	2006	5 0 0		
3.1	562.80	4741	1.30	2006	5 6 0		
2.8	611.86	5154	1.19	2006	6 3 0		
2.5	694.17	5761	1.09	2000	7 0 0		
2.1	837.03	6936	0.91	2000	8 0 0		
8.6	201.07	1750	3.94	8789	F 0 6 3 2 2 0 0 _ N _ _ _ _ . 2 5 B - -	112.8	56C
7.6	226.56	1970	3.67	8789	2 2 5		
6.5	263.38	2293	3.37	8767	2 8 0		
5.8	298.94	2601	3.11	8744	3 1 5		
5.1	339.84	2949	2.47	8744	3 6 0		

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

#### 0.25 HP

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
4.3	404.18	3427	2.16	8503	F 0 6 4 2 4 0 0 _ N _ _ _ _ . 2 5 B - -	143.7	56C
3.9	445.09	3779	1.96	8503	4 5 0		
3.5	497.98	4216	1.78	8481	5 0 0		
3	571.21	4808	1.56	8481	5 6 0		
2.7	629.02	5303	1.41	8481	6 3 0		
2.4	723.53	6100	1.23	8481	7 0 0		
2.2	786.61	6632	1.13	8481	8 0 0		
1.9	892.42	7403	1.01	8470	9 0 0		
1.8	982.74	8169	0.92	8470	1 0 C		
4.3	404.11	3453	3.82	7206	F 0 7 4 2 4 0 0 _ N _ _ _ _ . 2 5 B - -	190	56C
3.7	464.36	3962	3.33	7199	4 5 0		
3.2	534.13	4553	2.90	7199	5 0 0		
3	580.70	4948	2.67	7199	5 6 0		
2.6	658.49	5597	2.36	7199	6 3 0		
2.4	726.31	6172	2.14	7199	7 0 0		
2.1	831.78	7054	1.87	7199	8 0 0		
1.8	944.37	7925	1.66	7199	9 0 0		
1.7	1039.95	8741	1.51	7199	1 0 C		
1.6	1090.34	9200	1.43	7199	1 1 C		
1.4	1196.20	10053	1.31	7199	1 2 C		
1.3	1350.14	11408	1.16	7199	1 4 C		
1.1	1570.72	13229	1.00	7199	1 6 C		
0.97	1769.83	14892	0.89	7199	1 8 C		
2.1	805.50	6840	3.59	6696	F 0 8 4 2 8 0 0 _ N _ _ _ _ . 2 5 B - -	190	56C
1.9	909.51	7634	3.37	6696	9 0 0		
1.7	1017.59	8536	3.02	6696	1 0 C		
1.6	1084.58	9111	2.83	6696	1 1 C		
1.4	1191.37	9978	2.58	6696	1 2 C		
1.2	1411.94	11833	2.18	6696	1 4 C		
1.1	1594.33	13227	1.95	6696	1 6 C		
0.91	1889.50	15696	1.64	6696	1 8 C		
0.85	2017.40	16767	1.54	6696	2 0 C		
0.75	2292.50	19138	1.35	6696	2 2 C		
0.68	2503.41	20833	1.24	6696	2 5 C		
0.63	2703.33	22578	1.14	6696	2 8 C		
1.5	1177.20	9936	3.52	7133	F 0 9 4 1 1 2 C _ N _ _ _ _ . 2 5 B - -	469.9	56C
1.2	1395.15	11778	2.97	7133	1 4 C		
1.1	1520.27	12798	3.37	7116	1 6 C		
0.95	1801.73	15171	2.84	7116	1 8 C		
0.89	1923.69	16199	2.66	7116	2 0 C		
0.79	2179.69	18394	1.90	7133	2 2 C		
0.72	2387.12	20102	2.14	7116	2 5 C		
0.61	2814.91	23696	1.82	7116	2 8 C		
0.55	3082.28	25939	1.66	7116	3 2 C		
0.47	3656.25	30759	1.14	7133	3 6 C		
0.45	3777.43	31753	1.36	7116	4 0 C		
0.4	4210.26	35378	1.22	7116	4 5 C		
0.36	4721.79	39633	1.09	7116	5 0 C		

#### 0.33 HP

4 POLE

292	5.90	68	7.53	402	F 0 2 2 2 6 . 3 _ N _ _ _ _ . 3 3 B - -	53.1	56C
216	7.97	92	6.49	441	7 . 1		
190	9.07	105	6.09	458	9 . 0		
168	10.27	119	5.69	475	1 0 .		
131	13.14	153	4.93	508	1 2 .		
122	14.16	164	4.73	519	1 4 .		
96	17.88	208	4.05	552	1 6 .		
85	20.27	236	3.72	570	2 0 .		
74	23.16	271	3.39	590	2 2 .		
67	25.77	299	3.16	606	2 5 .		
61	28.41	329	2.95	620	2 8 .		
55	31.26	363	2.77	634	3 2 .		
47	36.63	427	2.53	656	3 6 .		
39	43.94	510	2.24	682	4 0 .		
34	51.22	595	1.92	701	5 0 .		
30	56.91	659	1.73	715	5 6 .		
25	68.54	796	1.43	734	6 3 .		
22	78.56	907	1.10	747	7 1 .		
19	89.28	1034	0.95	757	9 0 .		
19	92.02	1047	1.09	764	F 0 2 3 2 9 0 . _ N _ _ _ _ . 3 3 B - -	55.3	56C
17	101.45	1153	0.99	768	1 0 0		
15	111.65	1272	0.90	770	1 1 2		
24	72.41	841	3.25	1566	F 0 3 2 2 7 1 . _ N _ _ _ _ . 3 3 B - -	68.5	56C
21	82.18	953	2.58	1618	9 0 .		
18	93.43	1078	2.03	1671	1 0 0		

#### NOTE

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering



# SERIES F

## SELECTION TABLES

### GEARED MOTORS

**0.33 HP**

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
17	99.52	1139	2.65	1701	F 0 3 3 2 1 0 0 _ N _ _ _ _ . 3 3 B - -	70.7	56C
16	109.72	1257	2.48	1740	1 1 2		
14	120.75	1385	2.35	1779	1 2 5		
12	141.47	1622	2.01	1844	1 6 0		
10	169.72	1940	1.68	1857	1 8 0		
8.7	197.84	2264	1.44	1792	2 0 0		
7.8	219.82	2509	1.30	1742	2 2 5		
6.5	264.71	3033	1.07	1637	2 8 0		
5.7	303.42	3474	0.94	1548	3 1 5		
5	344.83	3927	0.83	1454	3 6 0		
24	72.41	841	3.25	1566	F 0 4 2 2 7 1 . _ N _ _ _ _ . 3 3 B - -	68.5	56C
21	82.18	953	2.58	1618	9 0 .		
18	93.43	1078	2.03	1671	1 0 0		
17	99.52	1139	2.65	1701	F 0 4 3 2 1 0 0 _ N _ _ _ _ . 3 3 B - -	70.7	56C
16	109.72	1257	2.48	1740	1 1 2		
14	120.75	1385	2.35	1779	1 2 5		
12	141.47	1622	2.01	1844	1 6 0		
10	169.72	1940	1.68	1857	1 8 0		
8.7	197.84	2264	1.44	1792	2 0 0		
7.8	219.82	2509	1.30	1742	2 2 5		
6.5	264.71	3033	1.07	1637	2 8 0		
5.7	303.42	3474	0.94	1548	3 1 5		
5	344.83	3927	0.83	1454	3 6 0		
24	72.92	843	3.82	2214	F 0 5 2 2 7 1 . _ N _ _ _ _ . 3 3 B - -	81.7	56C
17	99.86	1147	3.93	2405	F 0 5 3 2 1 0 0 _ N _ _ _ _ . 3 3 B - -	83.9	56C
16	108.57	1246	3.74	2472	1 1 2		
13	130.34	1497	3.36	2585	1 2 5		
11	156.40	1791	2.99	2717	1 6 0		
10	176.23	2018	2.78	2795	1 8 0		
8.4	204.87	2351	2.55	2847	2 0 0		
7.4	232.53	2661	2.37	2785	2 2 5		
6.5	264.35	3023	1.87	2701	2 8 0		
5.5	314.39	3512	1.64	1729	F 0 5 4 2 3 2 0 _ N _ _ _ _ . 3 3 B - -	114.8	56C
4.9	351.75	3920	1.54	1779	3 6 0		
4.2	412.85	4609	1.35	1813	4 0 0		
3.9	444.31	4933	1.25	2006	4 5 0		
3.5	489.28	5441	1.13	2006	5 0 0		
3.1	562.80	6258	0.98	2006	5 6 0		
2.8	611.86	6803	0.90	2006	6 3 0		
2.5	694.17	7605	0.83	2000	7 0 0		
18	93.75	1087	3.82	8834	F 0 6 2 2 1 0 0 _ N _ _ _ _ . 3 3 B - -	112.6	56C
13	128.39	1478	3.93	8812	F 0 6 3 2 1 2 5 _ N _ _ _ _ . 3 3 B - -	114.8	56C
12	139.58	1606	3.74	8812	1 6 0		
10	167.56	1927	3.36	8790	1 8 0		
8.6	201.07	2310	2.99	8763	2 0 0		
7.6	226.56	2600	2.78	8758	2 2 5		
6.5	263.38	3028	2.55	8731	2 8 0		
5.8	298.94	3434	2.36	8704	3 1 5		
5.1	339.84	3893	1.87	8694	3 6 0		
4.3	404.18	4524	1.64	8503	F 0 6 4 2 7 0 0 _ N _ _ _ _ . 3 3 B - -	145.7	56C
3.9	445.09	4989	1.49	8503	4 5 0		
3.5	497.98	5565	1.35	8481	5 0 0		
3	571.21	6347	1.18	8481	5 6 0		
2.7	629.02	7000	1.07	8481	6 3 0		
2.4	723.53	8052	0.93	8481	7 0 0		
2.2	786.61	8754	0.86	8481	8 0 0		
4.8	359.36	4114	3.79	7306	F 0 7 3 2 3 6 0 _ N _ _ _ _ . 3 3 B - -	176.5	56C
4.3	404.11	4558	2.89	7206	F 0 7 4 2 4 0 0 _ N _ _ _ _ . 3 3 B - -	192	56C
3.7	464.36	5229	2.52	7199	4 5 0		
3.2	534.13	6011	2.19	7199	5 0 0		
3	580.70	6532	2.02	7199	5 6 0		
2.6	658.49	7388	1.78	7199	6 3 0		
2.4	726.31	8147	1.62	7199	7 0 0		
2.1	831.78	9311	1.42	7199	8 0 0		
1.8	944.37	10461	1.26	7199	9 0 0		
1.7	1039.95	11538	1.14	7199	1 0 C		
1.6	1090.34	12144	1.09	7199	1 1 C		
1.4	1196.20	13271	0.99	7199	1 2 C		
1.3	1350.14	15059	0.88	7199	1 4 C		

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

#### 0.33 HP

4 POLE

#### 0.50 HP

4 POLE

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
3	569.96	6389	3.84	6696	F 0 8 4 2 5 6 0 _ N _ _ _ _ . 3 3 B - -	192	56C
2.7	637.69	7141	3.44	6696	6 3 0 0		
2.5	679.67	7619	3.22	6696	7 0 0 0		
2.1	805.50	9028	2.72	6696	8 0 0 0		
1.9	909.51	10077	2.56	6696	9 0 0 0		
1.7	1017.59	11268	2.29	6696	1 0 C		
1.6	1084.58	12026	2.14	6696	1 1 C		
1.4	1191.37	13171	1.96	6696	1 2 C		
1.2	1411.94	15619	1.65	6696	1 4 C		
1.1	1594.33	17460	1.47	6696	1 6 C		
0.91	1889.50	20719	1.24	6696	1 8 C		
0.85	2017.40	22132	1.16	6696	2 0 C		
0.75	2292.50	25262	1.02	6696	2 2 C		
0.68	2503.41	27500	0.94	6696	2 5 C		
0.63	2703.33	29803	0.86	6696	2 8 C		
1.7	1036.86	11604	3.71	7116	F 0 9 4 1 1 0 C _ N _ _ _ _ . 3 3 B - -	471.9	56C
1.6	1105.12	12382	3.48	7116	1 1 C		
1.5	1177.20	13116	2.67	7133	1 2 C		
1.2	1395.15	15547	2.25	7133	1 4 C		
1.1	1520.27	16894	2.55	7116	1 6 C		
0.95	1801.73	20026	2.15	7116	1 8 C		
0.89	1923.69	21383	2.01	7116	2 0 C		
0.8	2179.69	24280	1.44	7133	2 2 C		
0.72	2387.12	26534	1.62	7116	2 5 C		
0.61	2814.91	31279	1.38	7116	2 8 C		
0.55	3082.28	34239	1.26	7116	3 2 C		
0.47	3656.25	40603	0.86	7133	3 6 C		
0.45	3777.43	41914	1.03	7116	4 0 C		
0.4	4210.26	46699	0.92	7116	4 5 C		
0.36	4721.79	52316	0.82	7116	5 0 C		
292	5.90	103	4.97	392	F 0 2 2 2 6 . 3 _ N _ _ _ _ . 5 0 B - -	55.1	56C
216	7.97	140	4.28	427	7 . 1		
190	9.07	159	4.02	443	9 . 0		
168	10.27	181	3.75	457	1 0 .		
131	13.14	233	3.25	487	1 2 .		
122	14.16	249	3.12	495	1 4 .		
96	17.88	316	2.67	522	1 6 .		
85	20.27	358	2.45	537	2 0 .		
74	23.16	411	2.24	552	2 2 .		
67	25.77	453	2.09	564	2 5 .		
61	28.41	499	1.95	573	2 8 .		
55	31.26	551	1.83	582	3 2 .		
47	36.63	647	1.67	596	3 6 .		
39	43.94	773	1.48	610	4 0 .		
34	51.22	901	1.27	616	5 0 .		
30	56.91	999	1.14	621	5 6 .		
25	68.54	1206	0.95	620	6 3 .		
31	55.28	970	3.36	1391	F 0 3 2 2 5 6 . _ N _ _ _ _ . 5 0 B - -	70.5	56C
28	62.29	1093	2.88	1430	6 3 .		
24	72.41	1275	2.14	1479	7 1 .		
21	82.18	1445	1.70	1519	9 0 .		
18	93.43	1634	1.34	1558	1 0 0		
17	99.52	1726	1.75	1582	F 0 3 3 2 1 0 0 _ N _ _ _ _ . 5 0 B - -	72.7	56C
16	109.72	1905	1.64	1609	1 1 2		
14	120.75	2098	1.55	1634	1 2 5		
12	141.47	2458	1.32	1675	1 6 0		
10	169.72	2940	1.11	1655	1 8 0		
8.7	197.84	3431	0.95	1555	2 0 0		
7.8	219.82	3802	0.86	1481	2 2 5		
31	55.28	970	3.36	1391	F 0 4 2 2 5 6 . _ N _ _ _ _ . 5 0 B - -	70.5	56C
28	62.29	1093	2.88	1430	6 3 .		
24	72.41	1275	2.14	1479	7 1 .		
21	82.18	1445	1.70	1519	9 0 .		
18	93.43	1634	1.34	1558	1 0 0		
17	99.52	1726	1.75	1582	F 0 4 3 2 1 0 0 _ N _ _ _ _ . 5 0 B - -	72.7	56C
16	109.72	1905	1.64	1609	1 1 2		
14	120.75	2098	1.55	1634	1 2 5		
12	141.47	2458	1.32	1675	1 6 0		
10	169.72	2940	1.11	1655	1 8 0		
8.7	197.84	3431	0.95	1555	2 0 0		
7.8	219.82	3802	0.86	1481	2 2 5		

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

**0.50 HP**

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
27	65.02	1144	3.65	2061	F 0 5 2 2 6 3 . _ N _ _ _ _ . 5 0 B - -	83.7	56C
24	72.92	1278	2.52	2122	7 1 .		
22	78.84	1371	3.25	2169	F 0 5 3 2 8 0 . _ N _ _ _ _ . 5 0 B - -	85.9	56C
20	86.82	1506	2.86	2219	9 0 .		
17	99.86	1738	2.60	2282	1 0 0		
16	108.57	1888	2.47	2336	1 1 2		
13	130.34	2269	2.22	2423	1 2 5		
11	156.40	2714	1.97	2520	1 6 0		
10	176.23	3058	1.84	2574	1 8 0		
8.4	204.87	3563	1.68	2593	2 0 0		
7.4	232.53	4033	1.56	2497	2 2 5		
6.5	264.35	4580	1.23	2377	2 8 0		
5.5	314.39	5322	1.08	1729	F 0 5 4 2 3 2 0 _ N _ _ _ _ . 5 0 B - -	116.8	56C
4.9	351.75	5940	1.02	1779	3 6 0		
4.2	412.85	6984	0.89	1813	4 0 0		
3.9	444.31	7474	0.82	2006	4 5 0		
21	83.59	1474	3.65	8812	F 0 6 2 2 9 0 . _ N _ _ _ _ . 5 0 B - -	114.6	56C
18	93.75	1647	2.52	8805	1 0 0		
17	101.36	1766	3.25	8790	F 0 6 3 2 1 0 0 _ N _ _ _ _ . 5 0 B - -	116.8	56C
15	111.62	1940	2.86	8790	1 1 2		
13	128.39	2239	2.60	8773	1 2 5		
12	139.58	2433	2.47	8770	1 6 0		
10	167.56	2920	2.22	8738	1 8 0		
8.6	201.07	3500	1.97	8707	2 0 0		
7.6	226.56	3940	1.84	8692	2 2 5		
6.5	263.38	4587	1.68	8655	2 8 0		
5.8	298.94	5203	1.55	8617	3 1 5		
5.1	339.84	5899	1.23	8587	3 6 0		
4.3	404.18	6855	1.08	8503	F 0 6 4 2 4 0 0 _ N _ _ _ _ . 5 0 B - -	147.7	56C
3.9	445.09	7559	0.98	8503	4 5 0		
3.5	497.98	8432	0.89	8481	5 0 0		
9.5	181.67	3156	3.70	7306	F 0 7 3 2 1 8 0 _ N _ _ _ _ . 5 0 B - -	178.5	56C
8.1	214.23	3716	3.36	7306	2 0 0		
7.4	234.58	4072	3.17	7306	2 2 5		
6	287.49	4989	2.80	7289	2 8 0		
5.4	320.43	5568	2.67	7289	3 1 5		
4.8	359.36	6234	2.50	7286	3 6 0		
4.3	404.11	6907	1.91	7206	F 0 7 4 2 4 0 0 _ N _ _ _ _ . 5 0 B - -	194	56C
3.7	464.36	7924	1.66	7199	4 5 0		
3.2	534.13	9107	1.45	7199	5 0 0		
3	580.70	9897	1.33	7199	5 6 0		
2.6	658.49	11195	1.18	7199	6 3 0		
2.4	726.31	12344	1.07	7199	7 0 0		
2.1	831.78	14109	0.93	7199	8 0 0		
1.8	944.37	15851	0.83	7199	9 0 0		
4.4	395.81	6741	3.55	6696	F 0 8 4 2 4 0 0 _ N _ _ _ _ . 5 0 B - -	194	56C
3.7	460.35	7840	3.05	6696	4 5 0		
3.5	490.05	8322	2.95	6696	5 0 0		
3	569.96	9680	2.54	6696	5 6 0		
2.7	637.69	10819	2.27	6696	6 3 0		
2.5	679.67	11545	2.13	6696	7 0 0		
2.1	805.50	13680	1.79	6696	8 0 0		
1.9	909.51	15269	1.69	6696	9 0 0		
1.7	1017.59	17073	1.51	6696	1 0 C		
1.6	1084.58	18222	1.41	6696	1 1 C		
1.4	1191.37	19956	1.29	6696	1 2 C		
1.2	1411.94	23666	1.09	6696	1 4 C		
1.1	1594.33	26455	0.97	6696	1 6 C		
0.91	1889.50	31393	0.82	6696	1 8 C		

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

#### 0.50 HP

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
2.6	664.91	11350	3.73	7116	F 0 9 4 1 6 3 0 _ N _ _ _ _ . 5 0 B - -	473.9	56C
2.4	708.68	12110	3.49	7116	7 0 0		
2.1	839.89	14343	2.95	7116	8 0 0		
1.9	926.74	15731	2.74	7116	9 0 0		
1.7	1036.86	17582	2.45	7116	1 0 C		
1.6	1105.12	18760	2.30	7116	1 1 C		
1.5	1177.20	19873	1.76	7133	1 2 C		
1.2	1395.15	23557	1.49	7133	1 4 C		
1.1	1520.27	25597	1.68	7116	1 6 C		
0.95	1801.73	30343	1.42	7116	1 8 C		
0.89	1923.69	32399	1.33	7116	2 0 C		
0.79	2179.69	36788	0.95	7133	2 2 C		
0.72	2387.12	40204	1.07	7116	2 5 C		
0.61	2814.91	47393	0.91	7116	2 8 C		
0.6	3082.28	51878	0.83	7116	3 2 C		
1.6	1048.72	17674	3.54	8140	F 1 0 4 1 1 0 C _ N _ _ _ _ . 5 0 B - -	734.1	56C
1.5	1156.73	19516	3.21	8140	1 1 C		
1.3	1324.70	22355	2.80	8140	1 2 C		
1.2	1497.76	25274	2.48	8140	1 4 C		
1.1	1564.43	26169	2.43	8140	1 6 C		
0.96	1791.60	29986	2.12	8140	1 8 C		
0.85	2025.66	33913	1.88	8140	2 0 C		
0.7	2348.52	39328	1.62	8140	2 2 C		
0.68	2523.21	42105	1.48	8140	2 5 C		
0.6	2801.18	46914	1.36	8140	2 8 C		
0.56	3067.59	51369	1.24	8140	3 2 C		
0.46	3681.11	61590	1.03	8140	3 6 C		
0.4	4235.26	70862	0.90	8140	4 0 C		
0.37	4550.28	75906	0.82	8140	4 5 C		
0.36	4705.84	78663	0.81	8140	5 0 C		

#### 0.75 HP

4 POLE

292	5.90	155	3.31	378	F 0 2 2 2 6 . 3 _ N _ _ _ _ . 7 5 B - -	58.1	56C
216	7.97	210	2.86	408	7 . 1		
190	9.07	239	2.68	420	9 . 0		
168	10.27	271	2.50	432	1 0 .		
131	13.14	349	2.17	455	1 2 .		
122	14.16	374	2.08	461	1 4 .		
96	17.88	474	1.78	479	1 6 .		
85	20.27	537	1.64	487	2 0 .		
74	23.16	616	1.49	495	2 2 .		
67	25.77	680	1.39	501	2 5 .		
61	28.41	749	1.30	503	2 8 .		
55	31.26	827	1.22	505	3 2 .		
47	36.63	970	1.11	507	3 6 .		
39	43.94	1160	0.98	503	4 0 .		
34	51.22	1352	0.84	492	5 0 .		
49	35.30	933	3.49	1177	F 0 3 2 2 3 6 . _ N _ _ _ _ . 7 5 B - -	73.5	56C
45	38.37	1015	3.21	1200	4 0 .		
37	46.07	1215	2.68	1246	5 0 .		
31	55.28	1455	2.24	1293	5 6 .		
28	62.29	1640	1.92	1319	6 3 .		
24	72.41	1913	1.43	1351	7 1 .		
21	82.18	2167	1.14	1373	9 0 .		
18	93.43	2451	0.89	1393	1 0 0		
17	99.52	2590	1.17	1407	F 0 3 3 2 1 0 0 _ N _ _ _ _ . 7 5 B - -	75.7	56C
16	109.72	2858	1.09	1416	1 1 2		
14	120.75	3148	1.03	1422	1 2 5		
12	141.47	3688	0.88	1427	1 6 0		
49	35.30	933	3.49	1177	F 0 4 2 2 3 6 . _ N _ _ _ _ . 7 5 B - -	73.5	56C
45	38.37	1015	3.21	1200	4 0 .		
37	46.07	1215	2.68	1246	5 0 .		
31	55.28	1455	2.24	1293	5 6 .		
28	62.29	1640	1.92	1319	6 3 .		
24	72.41	1913	1.43	1351	7 1 .		
21	82.18	2167	1.14	1373	9 0 .		
18	93.43	2451	0.89	1393	1 0 0		
17	99.52	2590	1.17	1407	F 0 4 3 2 1 0 0 _ N _ _ _ _ . 7 5 B - -	75.7	56C
16	109.72	2858	1.09	1416	1 1 2		
14	120.75	3148	1.03	1422	1 2 5		
12	141.47	3688	0.88	1427	1 6 0		
30	58.34	1535	3.07	1897	F 0 5 2 2 5 6 . _ N _ _ _ _ . 7 5 B - -	86.7	56C
27	65.02	1717	2.43	1941	6 3 .		
24	72.92	1917	1.68	1988	7 1 .		

#### NOTE

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

**0.75 HP**

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
22	78.84	2057	2.17	2024	F 0 5 3 2 8 0 . _ N _ _ _ _ . 7 5 B - -	88.9	56C
20	86.82	2259	1.90	2059	9 0 .		
17	99.86	2607	1.73	2101	1 0 0		
16	108.57	2833	1.65	2136	1 1 2		
13	130.34	3403	1.48	2186	1 2 5		
11	156.40	4072	1.31	2231	1 6 0		
10	176.23	4587	1.22	2249	1 8 0		
8.4	204.87	5344	1.12	2221	2 0 0		
7.4	232.53	6049	1.04	2072	2 2 5		
6.5	264.35	6870	0.82	1901	2 8 0		
23	75.00	1979	3.07	8789	F 0 6 2 2 7 1 . _ N _ _ _ _ . 7 5 B - -	117.6	56C
21	83.59	2212	2.43	8775	9 0 .		
18	93.75	2471	1.68	8762	1 0 0		
17	101.36	2649	2.17	8745	F 0 6 3 2 1 0 0 _ N _ _ _ _ . 7 5 B - -1	19.8	56C
15	111.62	2910	1.90	8741	1 1 2		
13	128.39	3359	1.73	8715	1 2 5		
12	139.58	3650	1.65	8707	1 6 0		
10	167.56	4380	1.48	8663	1 8 0		
8.6	201.07	5250	1.31	8625	2 0 0		
7.6	226.56	5910	1.22	8595	2 2 5		
6.5	263.38	6881	1.12	8542	2 8 0		
5.8	298.94	7805	1.04	8490	3 1 5		
5.1	339.84	8849	0.82	8430	3 6 0		
17	99.36	2606	3.70	7306	F 0 7 2 2 1 0 0 _ N _ _ _ _ . 7 5 B - -	170.5	56C
16	108.56	2832	3.72	7306	F 0 7 3 2 1 0 0 _ N _ _ _ _ . 7 5 B - -	181.5	56C
15	115.70	3028	3.33	7306	1 1 2		
13	137.12	3578	2.94	7306	1 2 5		
12	146.40	3821	2.80	7295	1 6 0		
9.5	181.67	4734	2.47	7291	1 8 0		
8.1	214.23	5574	2.24	7287	2 0 0		
7.4	234.58	6109	2.12	7287	2 2 5		
6	287.49	7484	1.87	7265	2 8 0		
5.4	320.43	8352	1.78	7265	3 1 5		
4.8	359.36	9352	1.67	7257	3 6 0		
4.7	367.37	9427	1.40	7214	F 0 7 4 2 3 6 0 _ N _ _ _ _ . 7 5 B - -	197	56C
4.3	404.11	10360	1.27	7206	4 0 0		
3.7	464.36	11886	1.11	7199	4 5 0		
3.2	534.13	13661	0.97	7199	5 0 0		
3	580.70	14845	0.89	7199	5 6 0		
5.7	303.60	7917	3.79	6721	F 0 8 3 2 2 8 0 _ N _ _ _ _ . 7 5 B - -	282.9	56C
5.2	331.53	8640	3.47	6721	3 1 5		
4.5	381.76	9926	3.03	6721	3 6 0		
4.4	395.81	10111	2.36	6696	F 0 8 4 2 4 0 0 _ N _ _ _ _ . 7 5 B - -	197	56C
3.7	460.35	11760	2.03	6696	4 5 0		
3.5	490.05	12483	1.97	6696	5 0 0		
3	569.96	14520	1.69	6696	5 6 0		
2.7	637.69	16229	1.51	6696	6 3 0		
2.5	679.67	17317	1.42	6696	7 0 0		
2.1	805.50	20520	1.20	6696	8 0 0		
1.9	909.51	22904	1.12	6696	9 0 0		
1.7	1017.59	25610	1.01	6696	1 0 C		
1.6	1084.58	27333	0.94	6696	1 1 C		
1.4	1191.37	29935	0.86	6696	1 2 C		
4.4	395.66	10179	3.69	7133	F 0 9 4 1 4 0 0 _ N _ _ _ _ . 7 5 B - -	476.9	56C
3.7	460.18	11836	3.17	7133	4 5 0		
3.4	510.96	13103	3.23	7116	5 0 0		
2.9	594.29	15237	2.78	7116	5 6 0		
2.6	664.91	17026	2.48	7116	6 3 0		
2.4	708.68	18165	2.33	7116	7 0 0		
2.1	839.89	21515	1.97	7116	8 0 0		
1.9	926.74	23596	1.83	7116	9 0 0		
1.7	1036.86	26373	1.63	7116	1 0 C		
1.6	1105.12	28141	1.53	7116	1 1 C		
1.5	1177.20	29810	1.17	7133	1 2 C		
1.2	1395.15	35336	0.99	7133	1 4 C		

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

#### 0.75 HP

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
2.7	638.26	16282	3.72	8140	F 1 0 4 1 6 3 0 _ N _ _ _ _ . 7 5 B - -	737.1	56C
2.5	703.99	17974	3.37	8140	7 0 0		
2.1	806.22	20579	2.94	8140	8 0 0		
1.9	924.82	23396	2.68	8140	9 0 0		
1.6	1048.72	26511	2.36	8140	1 0 C		
1.5	1156.73	29275	2.14	8140	1 1 C		
1.3	1324.70	33533	1.87	8140	1 2 C		
1.2	1497.76	37911	1.65	8140	1 4 C		
1.1	1564.43	39253	1.62	8140	1 6 C		
0.96	1791.60	44979	1.41	8140	1 8 C		
0.85	2025.66	50869	1.25	8140	2 0 C		
0.73	2348.52	58992	1.08	8140	2 2 C		
0.68	2523.21	63157	0.99	8140	2 5 C		
0.61	2801.18	70370	0.90	8140	2 8 C		
0.56	3067.59	77053	0.83	8140	3 2 C		

#### 1.00HP

4 POLE

292	5.90	207	2.49	363	F 0 2 2 2 6 . 3 _ N _ _ _ _ 1 . 0 B - -	60.9	143TC
216	7.97	281	2.14	388	7 . 1		
190	9.07	319	2.01	398	9 . 0		
168	10.27	362	1.88	407	1 0 .		
131	13.14	466	1.63	422	1 2 .		
122	14.16	498	1.56	426	1 4 .		
96	17.88	632	1.34	435	1 6 .		
85	20.27	717	1.23	438	2 0 .		
74	23.16	822	1.12	438	2 2 .		
67	25.77	907	1.04	438	2 5 .		
61	28.41	999	0.97	434	2 8 .		
55	31.26	1102	0.91	429	3 2 .		
47	36.63	1294	0.83	418	3 6 .		
70	24.53	867	3.66	1036	F 0 3 2 2 2 5 . _ N _ _ _ _ 1 . 0 B - -	76.3	143TC
62	27.86	984	3.29	1065	2 8 .		
56	30.68	1085	3.00	1085	3 2 .		
49	35.30	1244	2.62	1114	3 6 .		
45	38.37	1353	2.41	1132	4 0 .		
37	46.07	1620	2.01	1165	5 0 .		
31	55.28	1940	1.68	1195	5 6 .		
28	62.29	2186	1.44	1208	6 3 .		
24	72.41	2550	1.07	1223	7 1 .		
21	82.18	2890	0.85	1227	9 0 .		
17	99.52	3453	0.87	1232	F 0 3 3 2 1 0 0 _ N _ _ _ _ 1 . 0 B - -	78.5	143TC
16	109.72	3811	0.82	1223	1 1 2		
70	24.53	867	3.66	1036	F 0 4 2 2 2 5 . _ N _ _ _ _ 1 . 0 B - -	76.3	143TC
62	27.86	984	3.29	1065	2 8 .		
56	30.68	1085	3.00	1085	3 2 .		
49	35.30	1244	2.62	1114	3 6 .		
45	38.37	1353	2.41	1132	4 0 .		
37	46.07	1620	2.01	1165	5 0 .		
31	55.28	1940	1.68	1195	5 6 .		
28	62.29	2186	1.44	1208	6 3 .		
24	72.41	2550	1.07	1223	7 1 .		
21	82.18	2890	0.85	1227	9 0 .		
17	99.52	3453	0.87	1232	F 0 4 3 2 1 0 0 _ N _ _ _ _ 1 . 0 B - -	78.5	143TC
16	109.72	3811	0.82	1223	1 1 2		
40	43.47	1531	3.95	1690	F 0 5 2 2 4 0 . _ N _ _ _ _ 1 . 0 B - -	96.1	143TC
36	47.60	1679	3.64	1722	5 0 .		
30	58.34	2047	2.30	1789	5 6 .		
27	65.02	2289	1.82	1821	6 3 .		
24	72.92	2557	1.26	1853	7 1 .		
22	78.84	2743	1.63	1880	F 0 5 3 2 8 0 . _ N _ _ _ _ 1 . 0 B - -	98.3	143TC
20	86.82	3012	1.43	1899	9 0 .		
17	99.86	3477	1.30	1919	1 0 0		
16	108.57	3777	1.23	1937	1 1 2		
13	130.34	4538	1.11	1949	1 2 5		
11	156.40	5429	0.99	1942	1 6 0		
10	176.23	6117	0.92	1924	1 8 0		
8.4	204.87	7126	0.84	1848	2 0 0		
31	55.89	1977	3.99	8790	F 0 6 2 2 5 6 . _ N _ _ _ _ 1 . 0 B - -	127	143TC
28	61.20	2161	3.64	8767	6 3 .		
23	75.00	2639	2.30	8758	7 1 .		
21	83.59	2949	1.82	8737	9 0 .		
18	93.75	3294	1.26	8719	1 0 0		

#### NOTE

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

**1.00 HP**

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
17	101.36	3532	1.63	8700	F 0 6 3 2 1 0 0 _ N _ _ _ _ _ 1 . 0 B - -	129.2	143TC
15	111.62	3880	1.43	8692	1 1 2		
13	128.39	4479	1.30	8657	1 2 5		
12	139.58	4867	1.23	8645	1 6 0		
10	167.56	5840	1.11	8587	1 8 0		
8.6	201.07	7000	0.99	8542	2 0 0		
7.6	226.56	7880	0.92	8497	2 2 5		
6.5	263.38	9175	0.84	8430	2 8 0		
19	89.42	3132	3.50	7306	F 0 7 2 2 9 0 . _ N _ _ _ _ _ 1 . 0 B - -	175.5	143TC
17	99.36	3475	2.78	7298	1 0 0		
16	108.56	3776	2.79	7298	F 0 7 3 2 1 0 0 _ N _ _ _ _ _ 1 . 0 B - -	186.5	143TC
15	115.70	4038	2.50	7298	1 1 2		
13	137.12	4770	2.21	7292	1 2 5		
12	146.40	5095	2.10	7283	1 6 0		
9.5	181.67	6312	1.85	7276	1 8 0		
8.1	214.23	7433	1.68	7268	2 0 0		
7.4	234.58	8145	1.59	7268	2 2 5		
6	287.49	9979	1.40	7241	2 8 0		
5.4	320.43	11136	1.34	7241	3 1 5		
4.8	359.36	12469	1.25	7229	3 6 0		
4.7	367.37	12570	1.05	7214	F 0 7 4 2 3 6 0 _ N _ _ _ _ _ 1 . 0 B - -	197.5	143TC
4.3	404.11	13814	0.95	7206	4 0 0		
3.7	464.36	15848	0.83	7199	4 5 0		
7.6	225.53	7853	3.82	6721	F 0 8 3 2 2 0 0 _ N _ _ _ _ _ 1 . 0 B - -	287.9	143TC
7	247.74	8597	3.49	6721	2 2 5		
5.7	303.60	10556	2.84	6716	2 8 0		
5.2	331.53	11521	2.60	6716	3 1 5		
4.5	381.76	13234	2.27	6717	3 6 0		
4.4	395.81	13482	1.77	6696	F 0 8 4 2 4 0 0 _ N _ _ _ _ _ 1 . 0 B - -	197.5	143TC
3.7	460.35	15680	1.52	6696	4 5 0		
3.5	490.05	16644	1.47	6696	5 0 0		
3	569.96	19361	1.27	6696	5 6 0		
2.7	637.69	21639	1.13	6696	6 3 0		
2.5	679.67	23090	1.06	6696	7 0 0		
2.1	805.50	27360	0.90	6696	8 0 0		
1.9	909.51	30538	0.84	6696	9 0 0		
6.3	274.63	9558	3.93	7171	F 0 9 3 1 2 8 0 _ N _ _ _ _ _ 1 . 0 B - -	418	143TC
5.5	315.41	10978	3.93	7171	3 1 5		
4.9	354.67	12304	3.50	7171	3 6 0		
4.4	395.66	13572	2.76	7133	F 0 9 4 1 4 0 0 _ N _ _ _ _ _ 1 . 0 B - -	81.9	143TC
3.7	460.18	15781	2.38	7133	4 5 0		
3.4	510.96	17471	2.42	7116	5 0 0		
2.9	594.29	20316	2.08	7116	5 6 0		
2.6	664.91	22701	1.86	7116	6 3 0		
2.4	708.68	24220	1.75	7116	7 0 0		
2.1	839.89	28686	1.47	7116	8 0 0		
1.9	926.74	31462	1.37	7116	9 0 0		
1.7	1036.86	35164	1.23	7116	1 0 C		
1.6	1105.12	37521	1.15	7116	1 1 C		
1.5	1177.20	39747	0.88	7133	1 2 C		
3.9	445.30	15165	3.99	8140	F 1 0 4 1 4 5 0 _ N _ _ _ _ _ 1 . 0 B - -	742.1	143TC
3.5	489.83	16681	3.63	8140	5 0 0		
3.1	562.85	19166	3.16	8140	5 6 0		
2.7	638.26	21709	2.79	8140	6 3 0		
2.5	703.99	23965	2.53	8140	7 0 0		
2.1	806.22	27439	2.21	8140	8 0 0		
1.9	924.82	31195	2.01	8140	9 0 0		
1.6	1048.72	35348	1.77	8140	1 0 C		
1.5	1156.73	39033	1.61	8140	1 1 C		
1.3	1324.70	44711	1.40	8140	1 2 C		
1.2	1497.76	50548	1.24	8140	1 4 C		
1.1	1564.43	52338	1.22	8140	1 6 C		
1.0	1791.60	59972	1.06	8140	1 8 C		
0.85	2025.66	67826	0.94	8140	2 0 C		
0.73	2348.52	78657	0.81	8140	2 2 C		

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

**1.50HP**

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
292	5.90	311	1.66	335	F 0 2 2 2 6 . 3 _ N _ _ _ _ 1 . 5 B - -	64.9	145TC
216	7.97	421	1.43	349	7 . 1		
190	9.07	479	1.34	354	9 . 0		
168	10.27	543	1.25	356	1 0 .		
131	13.14	699	1.08	358	1 2 .		
122	14.16	748	1.04	357	1 4 .		
96	17.88	948	0.89	348	1 6 .		
85	20.27	1075	0.82	339	2 0 .		
124	13.96	742	3.79	854	F 0 3 2 2 1 4 . _ N _ _ _ _ 1 . 5 B - -	80.3	145TC
109	15.86	843	3.53	876	1 6 .		
89	19.46	1034	2.96	912	2 0 .		
80	21.59	1147	2.71	929	2 2 .		
70	24.53	1301	2.44	948	2 5 .		
62	27.86	1476	2.19	965	2 8 .		
56	30.68	1628	2.00	976	3 2 .		
49	35.30	1866	1.74	989	3 6 .		
45	38.37	2030	1.60	995	4 0 .		
37	46.07	2431	1.34	1001	5 0 .		
31	55.28	2910	1.12	998	5 6 .		
28	62.29	3280	0.96	986	6 3 .		
124	13.96	742	3.79	854	F 0 4 2 2 1 4 . _ N _ _ _ _ 1 . 5 B - -	80.3	145TC
109	15.86	843	3.53	876	1 6 .		
89	19.46	1034	2.96	912	2 0 .		
80	21.59	1147	2.71	929	2 2 .		
70	24.53	1301	2.44	948	2 5 .		
62	27.86	1476	2.19	965	2 8 .		
56	30.68	1628	2.00	976	3 2 .		
49	35.30	1866	1.74	989	3 6 .		
45	38.37	2030	1.60	995	4 0 .		
37	46.07	2431	1.34	1001	5 0 .		
31	55.28	2910	1.12	998	5 6 .		
28	62.29	3280	0.96	986	6 3 .		
62	27.83	1476	3.86	1425	F 0 5 2 2 2 8 . _ N _ _ _ _ 1 . 5 B - -	100.1	145TC
58	29.71	1576	3.65	1443	3 2 .		
47	36.87	1953	3.03	1495	3 6 .		
40	43.47	2297	2.64	1529	4 0 .		
36	47.60	2519	2.42	1545	5 0 .		
30	58.34	3070	1.53	1574	5 6 .		
27	65.02	3434	1.22	1581	6 3 .		
24	72.92	3835	0.84	1584	7 1 .		
22	78.84	4115	1.08	1590	F 0 5 3 2 8 0 . _ N _ _ _ _ 1 . 5 B - -	102.3	145TC
20	86.82	4519	0.95	1579	9 0 .		
17	99.86	5215	0.87	1557	1 0 0		
16	108.57	5666	0.82	1537	1 1 2		
45	38.19	2031	3.88	8092	F 0 6 2 2 4 0 . _ N _ _ _ _ 1 . 5 B - -	131	145TC
36	47.40	2516	3.14	8587	5 0 .		
31	55.89	2966	2.66	8686	5 6 .		
28	61.20	3242	2.42	8717	6 3 .		
23	75.00	3959	1.53	8695	7 1 .		
21	83.59	4424	1.22	8662	9 0 .		
18	93.75	4942	0.84	8632	1 0 0		
17	101.36	5299	1.08	8610	F 0 6 3 2 1 0 0 _ N _ _ _ _ 1 . 5 B - -	133.2	145TC
15	111.62	5821	0.95	8595	1 1 2		
13	128.39	6719	0.87	8542	1 2 5		
12	139.58	7300	0.82	8520	1 6 0		
22	77.72	4102	3.32	7306	F 0 7 2 2 7 1 . _ N _ _ _ _ 1 . 5 B - - 1	79.5	145TC
19	89.42	4699	2.34	7289	9 0 .		
17	99.36	5212	1.85	7283	1 0 0		
16	108.56	5664	1.86	7283	F 0 7 3 2 1 0 0 _ N _ _ _ _ 1 . 5 B - -	190.5	145TC
15	115.70	6057	1.67	7283	1 1 2		
13	137.12	7156	1.47	7265	1 2 5		
12	146.40	7642	1.40	7261	1 6 0		
9.5	181.67	9469	1.23	7246	1 8 0		
8.1	214.23	11149	1.12	7231	2 0 0		
7.4	234.58	12218	1.06	7231	2 2 5		
6	287.49	14969	0.93	7193	2 8 0		
5.4	320.43	16705	0.89	7193	3 1 5		
4.8	359.36	18704	0.83	7171	3 6 0		

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering



# SERIES F

## SELECTION TABLES

### GEARED MOTORS

#### 1.50 HP

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
11	159.53	8344	3.60	6721	F 0 8 3 2 1 6 0 _ N _ _ _ _ 1 . 5 B - -	291.9	145TC
8.9	193.39	10102	2.97	6721	1 8 0		
7.6	225.53	11780	2.55	6716	2 0 0		
7	247.74	12895	2.33	6716	2 2 5		
5.7	303.60	15835	1.89	6706	2 8 0		
5.2	331.53	17281	1.74	6706	3 1 5		
4.5	381.76	19852	1.52	6708	3 6 0		
4.4	395.81	20223	1.18	6696	F 0 8 4 2 4 0 0 _ N _ _ _ _ 1 . 5 B - -	201.5	145TC
3.7	460.35	23520	1.02	6696	4 5 0		
3.5	490.05	24966	0.98	6696	5 0 0		
3	569.96	29041	0.85	6696	5 6 0		
8.3	207.69	10844	3.97	7171	F 0 9 3 1 2 0 0 _ N _ _ _ _ 1 . 5 B - -	422	145TC
7.5	229.28	11987	3.60	7171	2 2 5		
7.1	244.23	12787	2.93	7171	2 5 0		
6.3	274.63	14337	2.62	7162	2 8 0		
5.5	315.41	16467	2.62	7160	3 1 5		
4.9	354.67	18456	2.34	7160	3 6 0		
4.4	395.66	20358	1.84	7133	F 0 9 4 1 4 0 0 _ N _ _ _ _ 1 . 5 B - -	485.9	145TC
3.7	460.18	23672	1.59	7133	4 5 0		
3.4	510.96	26207	1.61	7116	5 0 0		
2.9	594.29	30475	1.39	7116	5 6 0		
2.6	664.91	34052	1.24	7116	6 3 0		
2.4	708.68	36330	1.16	7116	7 0 0		
2.1	839.89	43030	0.98	7116	8 0 0		
1.9	926.74	47192	0.91	7116	9 0 0		
1.7	1036.86	52746	0.82	7116	1 0 C		
4.3	400.73	20515	2.99	8140	F 1 0 4 1 4 0 0 _ N _ _ _ _ 1 . 5 B - -	746.1	145TC
3.9	445.30	22747	2.66	8140	4 5 0		
3.5	489.83	25022	2.42	8140	5 0 0		
3.1	562.85	28749	2.10	8140	5 6 0		
2.7	638.26	32564	1.86	8140	6 3 0		
2.5	703.99	35948	1.68	8140	7 0 0		
2.1	806.22	41158	1.47	8140	8 0 0		
1.9	924.82	46792	1.34	8140	9 0 0		
1.6	1048.72	53022	1.18	8140	1 0 C		
1.5	1156.73	58550	1.07	8140	1 1 C		
1.3	1324.70	67066	0.93	8140	1 2 C		
1.2	1497.76	75823	0.83	8140	1 4 C		
1.1	1564.43	78507	0.81	8140	1 6 C		
292	5.90	415	1.24	306	F 0 2 2 2 6 . 3 _ N _ _ _ _ 2 . 0 B - -	71.9	145TC
216	7.97	562	1.07	310	7 . 1		
190	9.07	638	1.00	310	9 . 0		
168	10.27	724	0.94	305	1 0 .		
131	13.14	932	0.81	294	1 2 .		
196	8.78	621	3.60	735	F 0 3 2 2 9 . 0 _ N _ _ _ _ 2 . 0 B - -	87.3	145TC
178	9.68	684	3.44	750	1 0 .		
157	10.99	779	3.23	771	1 2 .		
124	13.96	990	2.84	804	1 4 .		
109	15.86	1124	2.64	819	1 6 .		
89	19.46	1378	2.22	842	2 0 .		
80	21.59	1530	2.04	852	2 2 .		
70	24.53	1735	1.83	860	2 5 .		
62	27.86	1968	1.65	865	2 8 .		
56	30.68	2170	1.50	867	3 2 .		
49	35.30	2488	1.31	863	3 6 .		
45	38.37	2707	1.20	858	4 0 .		
37	46.07	3241	1.00	838	5 0 .		
31	55.28	3880	0.84	802	5 6 .		
196	8.78	621	3.60	735	F 0 4 2 2 9 . 0 _ N _ _ _ _ 2 . 0 B - -	87.3	145TC
178	9.68	684	3.44	750	1 0 .		
157	10.99	779	3.23	771	1 2 .		
124	13.96	990	2.84	804	1 4 .		
109	15.86	1124	2.64	819	1 6 .		
89	19.46	1378	2.22	842	2 0 .		
80	21.59	1530	2.04	852	2 2 .		
70	24.53	1735	1.83	860	2 5 .		
62	27.86	1968	1.65	865	2 8 .		
56	30.68	2170	1.50	867	3 2 .		
49	35.30	2488	1.31	863	3 6 .		
45	38.37	2707	1.20	858	4 0 .		
37	46.07	3241	1.00	838	5 0 .		
31	55.28	3880	0.84	802	5 6 .		

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

**2.00 HP**

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
88	19.69	1393	3.89	1254	F 0 5 2 2 2 0 . _ N _ _ _ _ 2 . 0 B - -	107.1	145TC
78	22.03	1556	3.54	1279	2 2 .		
73	23.48	1661	3.35	1290	2 5 .		
62	27.83	1968	2.90	1321	2 8 .		
58	29.71	2102	2.74	1332	3 2 .		
47	36.87	2604	2.27	1358	3 6 .		
40	43.47	3063	1.98	1368	4 0 .		
36	47.60	3359	1.82	1369	5 0 .		
30	58.34	4094	1.15	1359	5 6 .		
27	65.02	4579	0.91	1341	6 3 .		
22	78.84	5486	0.81	1301	F 0 5 3 2 8 0 . _ N _ _ _ _ 2 . 0 B - -	109.3	145TC
61	28.32	2008	3.87	7373	F 0 6 2 2 2 8 . _ N _ _ _ _ 2 . 0 B - -	138	145TC
57	30.18	2139	3.68	7508	3 2 .		
48	35.77	2537	3.09	7864	3 6 .		
45	38.19	2708	2.91	7993	4 0 .		
36	47.40	3355	2.35	8465	5 0 .		
31	55.89	3955	2.00	8582	5 6 .		
28	61.20	4323	1.82	8666	6 3 .		
23	75.00	5279	1.15	8632	7 1 .		
21	83.59	5899	0.91	8587	9 0 .		
17	101.36	7065	0.81	8520	F 0 6 3 2 1 0 0 _ N _ _ _ _ 2 . 0 B - -	140.2	145TC
29	59.14	4165	3.27	7306	F 0 7 2 2 5 6 . _ N _ _ _ _ 2 . 0 B - -	186.5	145TC
27	64.77	4570	3.02	7283	6 3 .		
22	77.72	5469	2.49	7293	7 1 .		
19	89.42	6265	1.75	7272	9 0 .		
17	99.36	6950	1.39	7268	1 0 0		
16	108.56	7552	1.39	7268	F 0 7 3 2 1 0 0 _ N _ _ _ _ 2 . 0 B - -	197.5	145TC
15	115.70	8076	1.25	7268	1 1 2		
13	137.12	9541	1.10	7238	1 2 5		
12	146.40	10190	1.05	7238	1 6 0		
9.5	181.67	12625	0.93	7216	1 8 0		
8.1	214.23	14866	0.84	7193	2 0 0		
19	91.70	6473	3.79	6721	F 0 8 2 2 9 0 . _ N _ _ _ _ 2 . 0 B - -	294.5	145TC
16	105.59	7429	3.13	6719	1 0 0		
15	114.15	7949	3.77	6721	F 0 8 3 2 1 0 0 _ N _ _ _ _ 2 . 0 B - -	298.9	145TC
14	124.92	8712	3.44	6721	1 1 2		
12	141.33	9846	3.05	6716	1 2 5		
11	159.53	11125	2.70	6718	1 6 0		
8.9	193.39	13469	2.23	6715	1 8 0		
7.6	225.53	15707	1.91	6710	2 0 0		
7	247.74	17194	1.74	6710	2 2 5		
5.7	303.60	21113	1.42	6696	2 8 0		
5.2	331.53	23042	1.30	6696	3 1 5		
4.5	381.76	26469	1.14	6699	3 6 0		
4.4	395.81	26964	0.89	6696	F 0 8 4 2 4 0 0 _ N _ _ _ _ 2 . 0 B - -	208.5	145TC
11	160.82	11220	3.34	7171	F 0 9 3 1 1 6 0 _ N _ _ _ _ 2 . 0 B - -	429	145TC
10	177.54	12396	3.03	7168	1 8 0		
8.3	207.69	14459	2.98	7164	2 0 0		
7.5	229.28	15983	2.70	7164	2 2 5		
7.1	244.23	17049	2.20	7164	2 5 0		
6.3	274.63	19116	1.96	7154	2 8 0		
5.5	315.41	21956	1.96	7148	3 1 5		
4.9	354.67	24608	1.75	7148	3 6 0		
4.4	395.66	27144	1.38	7133	F 0 9 4 1 4 0 0 _ N _ _ _ _ 2 . 0 B - -	492.9	145TC
3.7	460.18	31562	1.19	7133	4 5 0		
3.4	510.96	34943	1.21	7116	5 0 0		
2.9	594.29	40633	1.04	7116	5 6 0		
2.6	664.91	45403	0.93	7116	6 3 0		
2.4	708.68	48440	0.87	7116	7 0 0		
4.3	400.73	27353	2.24	8140	F 1 0 4 1 4 0 0 _ N _ _ _ _ 2 . 0 B - -	753.1	145TC
3.9	445.30	30330	2.00	8140	4 5 0		
3.5	489.83	33363	1.81	8140	5 0 0		
3.1	562.85	38332	1.58	8140	5 6 0		
2.7	638.26	43418	1.39	8140	6 3 0		
2.5	703.99	47931	1.26	8140	7 0 0		
2.1	806.22	54878	1.10	8140	8 0 0		
1.9	924.82	62390	1.00	8140	9 0 0		
1.6	1048.72	70696	0.89	8140	1 0 C		
1.5	1156.73	78067	0.80	8140	1 1 C		

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

**3.00 HP**

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
292	5.90	623	0.83	249	F 0 2 2 2 6 . 3 _ N _ _ _ _ 3 . 0 B - -	91.9	182TC
275	6.26	663	2.78	633	F 0 3 2 2 7 . 1 _ N _ _ _ _ 3 . 0 B - -	107.3	182TC
196	8.78	932	2.40	672	9 . 0		
178	9.68	1027	2.29	681	1 0 .		
157	10.99	1168	2.15	691	1 2 .		
124	13.96	1485	1.89	703	1 4 .		
109	15.86	1687	1.76	706	1 6 .		
89	19.46	2068	1.48	703	2 0 .		
80	21.59	2295	1.36	698	2 2 .		
275	6.26	663	2.78	633	F 0 4 2 2 7 . 1 _ N _ _ _ _ 3 . 0 B - -	107.3	182TC
196	8.78	932	2.40	672	9 . 0		
178	9.68	1027	2.29	681	1 0 .		
157	10.99	1168	2.15	691	1 2 .		
124	13.96	1485	1.89	703	1 4 .		
109	15.86	1687	1.76	706	1 6 .		
89	19.46	2068	1.48	703	2 0 .		
80	21.59	2295	1.36	698	2 2 .		
140	12.33	1310	3.78	1047	F 0 5 2 2 1 2 . _ N _ _ _ _ 3 . 0 B - -	140.4	182TC
117	14.70	1562	3.34	1074	1 4 .		
102	16.93	1801	2.82	1092	1 6 .		
88	19.69	2090	2.60	1107	2 0 .		
78	22.03	2334	2.36	1114	2 2 .		
73	23.48	2491	2.23	1115	2 5 .		
62	27.83	2953	1.93	1114	2 8 .		
58	29.71	3153	1.82	1111	3 2 .		
47	36.87	3906	1.52	1084	3 6 .		
40	43.47	4594	1.32	1046	4 0 .		
36	47.60	5039	1.21	1016	5 0 .		
109	15.85	1688	3.84	6204	F 0 6 2 2 1 6 . _ N _ _ _ _ 3 . 0 B - -	171.2	182TC
91	18.90	2013	3.48	6496	2 0 .		
79	21.76	2318	2.82	6744	2 2 .		
68	25.31	2695	2.75	7021	2 5 .		
61	28.32	3012	2.58	7231	2 8 .		
57	30.18	3209	2.45	7351	3 2 .		
48	35.77	3806	2.06	7678	3 6 .		
45	38.19	4062	1.94	7794	4 0 .		
36	47.40	5032	1.57	8221	5 0 .		
31	55.89	5932	1.33	8374	5 6 .		
28	61.20	6485	1.21	8565	6 3 .		
52	33.03	3504	3.49	7306	F 0 7 2 2 3 2 . _ N _ _ _ _ 3 . 0 B - -	224.1	182TC
46	37.83	4028	3.16	7306	3 6 .		
40	42.77	4529	2.83	7283	4 0 .		
35	49.59	5259	2.51	7283	5 0 .		
29	59.14	6248	2.18	7285	5 6 .		
27	64.77	6856	2.01	7267	6 3 .		
22	77.72	8204	1.66	7267	7 1 .		
19	89.42	9398	1.17	7238	9 0 .		
17	99.36	10425	0.93	7238	1 0 0		
16	108.56	11328	0.93	7238	F 0 7 3 2 1 0 0 _ N _ _ _ _ 3 . 0 B - -	235.2	182TC
15	115.70	12115	0.83	7238	1 1 2		
28	62.38	6611	3.52	6721	F 0 8 2 2 5 6 . _ N _ _ _ _ 3 . 0 B - -	314.5	182TC
25	68.52	7271	3.27	6721	6 3 .		
21	83.97	8894	2.74	6721	7 1 .		
19	91.70	9709	2.52	6716	9 0 .		
16	105.59	11144	2.09	6716	1 0 0		
15	114.15	11924	2.52	6713	F 0 8 3 2 1 0 0 _ N _ _ _ _ 3 . 0 B - -	318.9	182TC
14	124.92	13069	2.30	6713	1 1 2		
12	141.33	14770	2.03	6704	1 2 5		
11	159.53	16688	1.80	6712	1 6 0		
8.9	193.39	20204	1.48	6702	1 8 0		
7.6	225.53	23560	1.27	6699	2 0 0		
7	247.74	25791	1.16	6699	2 2 5		
5.7	303.60	31670	0.95	6676	2 8 0		
5.2	331.53	34563	0.87	6676	3 1 5		
23	76.14	8053	3.71	7171	F 0 9 2 1 8 0 . _ N _ _ _ _ 3 . 0 B - -	415.9	182TC
18	98.32	10388	3.71	7171	1 0 0		

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

### 3.00 HP

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
17	102.48	10752	3.49	7171	F 0 9 3 1 1 0 0 _ N _ _ _ _ 3 . 0 B - -	449	182TC
15	113.85	11944	3.14	7171	1 1 2		
13	132.34	13855	3.11	7171	1 2 5		
12	147.03	15380	2.80	7171	1 4 0		
11	160.82	16830	2.23	7163	1 6 0		
10	177.54	18594	2.02	7161	1 8 0		
8.3	207.69	21689	1.99	7152	2 0 0		
7.5	229.28	23974	1.80	7152	2 2 5		
7.1	244.23	25574	1.47	7152	2 5 0		
6.3	274.63	28674	1.31	7137	2 8 0		
5.5	315.41	32935	1.31	7126	3 1 5		
4.9	354.67	36912	1.17	7126	3 6 0		
4.4	395.66	40716	0.92	7133	F 0 9 4 1 4 0 0 _ N _ _ _ _ 3 . 0 B - -	524	182TC
3.4	510.96	52415	0.81	7116	5 0 0		
11	162.91	17096	3.17	8205	F 1 0 3 1 1 6 0 _ N _ _ _ _ 3 . 0 B - -	629.8	182TC
9.2	187.70	19699	2.75	8205	1 8 0		
8.4	205.21	21468	2.82	8205	2 0 0		
7.3	236.45	24718	2.45	8205	2 2 5		
6.8	253.86	26607	2.04	8205	2 5 0		
6.3	272.75	28520	1.90	8205	2 8 0		
5.4	319.79	33378	1.81	8205	3 1 5		
5	343.57	35818	1.69	8205	3 6 0		
4.3	400.73	41030	1.50	8140	F 1 0 4 1 4 0 0 _ N _ _ _ _ 3 . 0 B - -	773.1	182TC
3.9	445.30	45495	1.33	8140	4 5 0		
3.5	489.83	50044	1.21	8140	5 0 0		
3.1	562.85	57498	1.05	8140	5 6 0		
2.7	638.26	65128	0.93	8140	6 3 0		
2.5	703.99	71896	0.84	8140	7 0 0		

### 5.00HP

4 POLE

275	6.26	1105	1.67	544	F 0 3 2 2 7 . 1 _ N _ _ _ _ 5 . 0 B - -	121.3	184TC
196	8.78	1554	1.44	546	9 . 0		
178	9.68	1712	1.37	541	1 0 .		
157	10.99	1948	1.29	532	1 2 .		
124	13.96	2475	1.14	503	1 4 .		
109	15.86	2812	1.06	478	1 6 .		
89	19.46	3447	0.89	424	2 0 .		
80	21.59	3825	0.81	388	2 2 .		
275	6.26	1105	1.67	544	F 0 4 2 2 7 . 1 _ N _ _ _ _ 5 . 0 B - -	121.3	184TC
196	8.78	1554	1.44	546	9 . 0		
178	9.68	1712	1.37	541	1 0 .		
157	10.99	1948	1.29	532	1 2 .		
124	13.96	2475	1.14	503	1 4 .		
109	15.86	2812	1.06	478	1 6 .		
89	19.46	3447	0.89	424	2 0 .		
80	21.59	3825	0.81	388	2 2 .		
356	4.84	853	3.57	811	F 0 5 2 2 5 . 0 _ N _ _ _ _ 5 . 0 B - -	154.4	184TC
253	6.81	1209	3.07	834	6 . 3		
226	7.63	1354	2.91	845	7 . 1		
201	8.56	1519	2.75	854	9 . 0		
159	10.87	1925	2.43	864	1 0 .		
140	12.33	2183	2.27	863	1 2 .		
117	14.70	2604	2.00	855	1 4 .		
102	16.93	3002	1.69	840	1 6 .		
88	19.69	3484	1.56	813	2 0 .		
78	22.03	3890	1.42	786	2 2 .		
73	23.48	4153	1.34	766	2 5 .		
62	27.83	4922	1.16	701	2 8 .		
58	29.71	5255	1.09	669	3 2 .		
47	36.87	6510	0.91	537	3 6 .		
277	6.22	1106	3.54	4720	F 0 6 2 2 7 . 1 _ N _ _ _ _ 5 . 0 B - -	185.2	184TC
197	8.75	1550	3.09	5170	9 . 0		
176	9.81	1740	2.93	5327	1 0 .		
157	11.01	1954	2.78	5485	1 2 .		
123	13.98	2483	2.46	5845	1 4 .		
109	15.85	2813	2.30	6037	1 6 .		
91	18.90	3356	2.09	6304	2 0 .		
79	21.76	3864	1.69	6519	2 2 .		
68	25.31	4492	1.65	6766	2 5 .		
61	28.32	5021	1.55	6946	2 8 .		
57	30.18	5348	1.47	7036	3 2 .		
48	35.77	6344	1.24	7306	3 6 .		
45	38.19	6771	1.16	7396	4 0 .		
36	47.40	8387	0.94	7733	5 0 .		

#### NOTE

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

**5.00 HP**

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
114	15.13	2663	3.62	7306	F 0 7 2 2 1 4 . _ N _ _ _ _ 5 . 0 B - -	238.1	184TC
100	17.21	3055	3.33	7306	1 6 .		
83	20.89	3706	2.96	7306	2 0 .		
75	22.98	4049	2.78	7306	2 2 .		
65	26.41	4680	2.48	7283	2 5 .		
58	29.95	5316	2.30	7283	2 8 .		
52	33.03	5840	2.09	7287	3 2 .		
46	37.83	6713	1.90	7280	3 6 .		
40	42.77	7549	1.70	7258	4 0 .		
35	49.59	8766	1.50	7251	5 0 .		
29	59.14	10414	1.31	7244	5 6 .		
27	64.77	11427	1.21	7234	6 3 .		
22	77.72	13674	1.00	7216	7 1 .		
50	34.55	6128	3.44	6721	F 0 8 2 2 3 2 . _ N _ _ _ _ 5 . 0 B - -	328.5	184TC
44	39.09	6920	3.15	6721	3 6 .		
39	44.13	7811	2.86	6721	4 0 .		
32	53.49	9443	2.41	6721	5 0 .		
28	62.38	11019	2.11	6714	5 6 .		
25	68.52	12119	1.96	6715	6 3 .		
21	83.97	14824	1.64	6708	7 1 .		
19	91.70	16183	1.51	6704	9 0 .		
16	105.59	18574	1.25	6708	1 0 0		
15	114.15	19874	1.51	6696	F 0 8 3 2 1 0 0 _ N _ _ _ _ 5 . 0 B - -	332.9	184TC
14	124.92	21782	1.38	6697	1 1 2		
12	141.33	24617	1.22	6682	1 2 5		
11	159.53	27814	1.08	6699	1 6 0		
8.9	193.39	33674	0.89	6676	1 8 0		
27	63.56	11211	3.33	7171	F 0 9 2 1 6 3 . _ N _ _ _ _ 5 . 0 B - -	429.9	184TC
25	67.71	11960	2.50	7171	7 1 .		
23	76.14	13422	2.23	7163	8 0 .		
20	87.44	15428	2.50	7171	9 0 .		
18	98.32	17313	2.23	7160	1 0 0		
17	102.48	17921	2.09	7171	F 0 9 3 1 1 0 0 _ N _ _ _ _ 5 . 0 B - -	463	184TC
15	113.85	19907	1.89	7171	1 1 2		
13	132.34	23092	1.87	7171	1 2 5		
12	147.03	25633	1.68	7171	1 4 0		
11	160.82	28051	1.34	7148	1 6 0		
10	177.54	30991	1.21	7148	1 8 0		
8.3	207.69	36148	1.19	7126	2 0 0		
7.5	229.28	39958	1.08	7126	2 2 5		
7.1	244.23	42624	0.88	7126	2 5 0		
23	74.39	13133	3.78	8205	F 1 0 2 1 8 0 . _ N _ _ _ _ 5 . 0 B - -	601.9	184TC
18	93.70	16480	3.78	8205	1 0 0		
17	102.80	17971	3.01	8205	F 1 0 3 1 1 0 0 _ N _ _ _ _ 5 . 0 B - -	643.8	184TC
15	114.24	19890	2.72	8205	1 1 2		
13	129.50	22637	2.67	8205	1 2 5		
12	143.90	25070	2.41	8190	1 4 0		
11	162.91	28494	1.90	8192	1 6 0		
9.2	187.70	32832	1.65	8186	1 8 0		
8.4	205.21	35781	1.69	8186	2 0 0		
7.3	236.45	41196	1.47	8175	2 2 5		
6.8	253.86	44345	1.22	8175	2 5 0		
6.3	272.75	47534	1.14	8175	2 8 0		
5.4	319.79	55630	1.09	8160	3 1 5		
5	343.57	59697	1.01	8160	3 6 0		
4.3	400.73	68384	0.90	8140	F 1 0 4 1 4 0 0 _ N _ _ _ _ 5 . 0 B - -	787.1	184TC

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

**7.50 HP**

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
356	4.84	1279	2.38	720	F 0 5 2 2 5 . 0 _ N _ _ _ _ 7 . 5 B - -	200.2	213TC
253	6.81	1813	2.04	706	6 . 3		
226	7.63	2031	1.94	702	7 . 1		
201	8.56	2278	1.83	694	9 . 0		
159	10.87	2888	1.62	661	1 0 .		
140	12.33	3275	1.51	634	1 2 .		
117	14.70	3907	1.33	581	1 4 .		
277	6.22	1660	2.36	4631	F 0 6 2 2 7 . 1 _ N _ _ _ _ 7 . 5 B - -	231	213TC
197	8.75	2326	2.06	5058	9 . 0		
176	9.81	2610	1.96	5204	1 0 .		
157	11.01	2931	1.85	5350	1 2 .		
123	13.98	3725	1.64	5665	1 4 .		
109	15.85	4220	1.54	5828	1 6 .		
91	18.90	5034	1.39	6063	2 0 .		
255	6.77	1789	2.78	5777	F 0 7 2 2 7 . 1 _ N _ _ _ _ 7 . 5 B - -	288.3	213TC
184	9.38	2485	2.78	6317	9 . 0		
164	10.54	2793	2.78	6519	1 0 .		
149	11.59	3073	2.78	6676	1 2 .		
114	15.13	3995	2.41	7141	1 4 .		
100	17.21	4583	2.22	7163	1 6 .		
83	20.89	5559	1.97	7283	2 0 .		
75	22.98	6073	1.85	7283	2 2 .		
65	26.41	7020	1.65	7272	2 5 .		
58	29.95	7974	1.53	7261	2 8 .		
52	33.03	8760	1.39	7262	3 2 .		
46	37.83	10070	1.27	7248	3 6 .		
40	42.77	11323	1.13	7225	4 0 .		
35	49.59	13149	1.00	7211	5 0 .		
29	59.14	15622	0.87	7193	5 6 .		
27	64.77	17141	0.81	7193	6 3 .		
97	17.70	4689	3.74	6721	F 0 8 2 2 1 6 . _ N _ _ _ _ 7 . 5 B - -	387.6	213TC
79	21.70	5754	3.26	6721	2 0 .		
71	24.45	6515	2.96	6721	2 2 .		
61	28.46	7565	2.68	6721	2 5 .		
55	31.57	8404	2.49	6721	2 8 .		
50	34.55	9193	2.29	6718	3 2 .		
44	39.09	10380	2.10	6718	3 6 .		
39	44.13	11716	1.90	6714	4 0 .		
32	53.49	14165	1.61	6716	5 0 .		
28	62.38	16528	1.41	6704	5 6 .		
25	68.52	18179	1.31	6707	6 3 .		
21	83.97	22236	1.09	6692	7 1 .		
19	91.70	24274	1.01	6690	9 0 .		
16	105.59	27861	0.84	6699	1 0 0		
15	114.15	29812	1.01	6675	F 0 8 3 2 1 0 0 _ N _ _ _ _ 7 . 5 B - -	392	213TC
14	124.92	32673	0.92	6676	1 1 2		
12	141.33	36925	0.81	6654	1 2 5		
42	40.76	10838	3.90	7171	F 0 9 2 1 4 0 . _ N _ _ _ _ 7 . 5 B - -	477.9	213TC
39	44.58	11828	3.17	7171	4 5 .		
35	49.22	13061	2.87	7171	5 0 .		
30	57.58	15284	2.41	7171	5 6 .		
27	63.56	16817	2.22	7163	6 3 .		
25	67.71	17941	1.67	7160	7 1 .		
23	76.14	20133	1.49	7154	8 0 .		
20	87.44	23143	1.67	7154	9 0 .		
18	98.32	25970	1.49	7146	1 0 0		
34	51.19	13629	3.95	8205	F 1 0 2 1 5 0 . _ N _ _ _ _ 7 . 5 B - -	649.9	213TC
27	64.49	17092	3.67	8205	6 3 .		
25	69.24	18401	2.94	8205	7 1 .		
23	74.39	19699	2.52	8198	8 0 .		
20	87.21	23143	2.75	8205	9 0 .		
18	93.70	24720	2.52	8194	1 0 0		
17	102.80	26957	2.01	8194	F 1 0 3 1 1 0 0 _ N _ _ _ _ 7 . 5 B - -	691.8	213TC
15	114.24	29836	1.82	8194	1 1 2		
13	129.50	33956	1.78	8188	1 2 5		
12	143.90	37605	1.61	8171	1 4 0		
11	162.91	42741	1.27	8176	1 6 0		
9.2	187.70	49248	1.10	8162	1 8 0		
8.4	205.21	53672	1.13	8162	2 0 0		
7.3	236.45	61795	0.98	8138	2 2 5		
6.8	253.86	66517	0.81	8138	2 5 0		

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

**10.00 HP**

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
356	4.84	1706	1.78	629	F 0 5 2 2 5 . 0 _ N _ _ _ _ 1 0 . B - -	215.2	215TC
253	6.81	2418	1.53	579	6 . 3		
226	7.63	2708	1.45	559	7 . 1		
201	8.56	3038	1.37	534	9 . 0		
159	10.87	3850	1.21	458	1 0 .		
140	12.33	4367	1.13	404	1 2 .		
117	14.70	5209	1.00	307	1 4 .		
277	6.22	2213	1.77	4541	F 0 6 2 2 7 . 1 _ N _ _ _ _ 1 0 . B - -	246	215TC
197	8.75	3101	1.55	4945	9 . 0		
176	9.81	3480	1.47	5080	1 0 .		
157	11.01	3908	1.39	5215	1 2 .		
123	13.98	4967	1.23	5485	1 4 .		
109	15.85	5626	1.15	5620	1 6 .		
91	18.90	6712	1.04	5822	2 0 .		
255	6.77	2385	2.09	5705	F 0 7 2 2 7 . 1 _ N _ _ _ _ 1 0 . B - -	303.3	215TC
184	9.38	3313	2.09	6213	9 . 0		
164	10.54	3724	2.09	6402	1 0 .		
149	11.59	4097	2.09	6550	1 2 .		
114	15.13	5326	1.81	6976	1 4 .		
100	17.21	6110	1.67	7021	1 6 .		
83	20.89	7412	1.48	7261	2 0 .		
75	22.98	8098	1.39	7261	2 2 .		
65	26.41	9360	1.24	7261	2 5 .		
58	29.95	10632	1.15	7238	2 8 .		
52	33.03	11680	1.05	7238	3 2 .		
46	37.83	13427	0.95	7216	3 6 .		
40	42.77	15098	0.85	7193	4 0 .		
175	9.87	3495	3.90	6721	F 0 8 2 2 9 . 0 _ N _ _ _ _ 1 0 . B - -	402.6	215TC
157	10.96	3873	3.70	6721	1 0 .		
142	12.19	4311	3.49	6721	1 2 .		
109	15.76	5603	3.00	6721	1 4 .		
97	17.70	6253	2.80	6721	1 6 .		
79	21.70	7672	2.45	6721	2 0 .		
71	24.45	8687	2.22	6717	2 2 .		
61	28.46	10086	2.01	6717	2 5 .		
55	31.57	11206	1.86	6717	2 8 .		
50	34.55	12257	1.72	6714	3 2 .		
44	39.09	13840	1.57	6714	3 6 .		
39	44.13	15622	1.43	6706	4 0 .		
32	53.49	18887	1.20	6710	5 0 .		
28	62.38	22038	1.06	6695	5 6 .		
25	68.52	24239	0.98	6699	6 3 .		
21	83.97	29648	0.82	6676	7 1 .		
61	28.41	10104	3.61	7171	F 0 9 2 1 2 8 . _ N _ _ _ _ 1 0 . B - -	492.9	215TC
55	31.56	11220	3.34	7171	3 2 .		
47	36.69	13023	3.13	7171	3 6 .		
42	40.76	14450	2.92	7166	4 0 .		
39	44.58	15771	2.38	7164	4 5 .		
35	49.22	17415	2.15	7164	5 0 .		
30	57.58	20379	1.81	7161	5 6 .		
27	63.56	22423	1.67	7156	6 3 .		
25	67.71	23921	1.25	7148	7 1 .		
23	76.14	26844	1.11	7145	8 0 .		
20	87.44	30857	1.25	7137	9 0 .		
18	98.32	34627	1.11	7132	1 0 0		
39	44.43	15796	3.38	8205	F 1 0 2 1 4 5 . _ N _ _ _ _ 1 0 . B - -	664.9	215TC
34	51.19	18172	2.96	8198	5 0 .		
31	55.97	19832	3.15	8205	5 6 .		
27	64.49	22789	2.75	8198	6 3 .		
25	69.24	24535	2.21	8195	7 1 .		
23	74.39	26266	1.89	8190	8 0 .		
20	87.21	30858	2.06	8192	9 0 .		
18	93.70	32961	1.89	8183	1 0 0		
17	102.80	35942	1.51	8183	F 1 0 3 1 1 0 0 _ N _ _ _ _ 1 0 . B - -	706.8	215TC
15	114.24	39781	1.36	8183	1 1 2		
13	129.50	45275	1.34	8171	1 2 5		
12	143.90	50141	1.21	8153	1 4 0		
11	162.91	56988	0.95	8160	1 6 0		
9.2	187.70	65665	0.82	8138	1 8 0		
8.4	205.21	71562	0.84	8138	2 0 0		

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

**15.00 HP**

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
260	6.77	3507	1.42	5561	F 0 7 2 2 7 . 1 _ N _ _ _ _ 1 5 . B - -	405.3	254TC
188	9.38	4871	1.42	6006	9 . 0		
167	10.54	5476	1.42	6168	1 0 .		
152	11.59	6024	1.42	6299	1 2 .		
116	15.13	7831	1.23	6646	1 4 .		
102	17.21	8983	1.13	6736	1 6 .		
253	6.96	3601	2.85	6609	F 0 8 2 2 7 . 1 _ N _ _ _ _ 1 5 . B - -	504.5	254TC
178	9.87	5138	2.65	6721	9 . 0		
161	10.96	5694	2.52	6721	1 0 .		
144	12.19	6338	2.37	6721	1 2 .		
112	15.76	8238	2.04	6721	1 4 .		
99	17.70	9193	1.91	6721	1 6 .		
81	21.70	11279	1.66	6721	2 0 .		
72	24.45	12772	1.51	6708	2 2 .		
62	28.46	14829	1.37	6708	2 5 .		
56	31.57	16475	1.27	6708	2 8 .		
51	34.55	18020	1.17	6706	3 2 .		
45	39.09	20348	1.07	6706	3 6 .		
40	44.13	22967	0.97	6691	4 0 .		
33	53.49	27768	0.82	6699	5 0 .		
139	12.68	6606	3.97	7171	F 0 9 2 1 1 2 . _ N _ _ _ _ 1 5 . B - -	621.4	254TC
120	14.66	7626	3.71	7171	1 4 .		
107	16.37	8520	3.48	7171	1 6 .		
100	17.58	9170	3.29	7171	1 8 .		
88	20.04	10483	3.04	7171	2 0 .		
78	22.70	11811	2.88	7171	2 2 .		
68	25.88	13513	2.65	7171	2 5 .		
62	28.41	14854	2.45	7163	2 8 .		
56	31.56	16496	2.27	7165	3 2 .		
48	36.69	19146	2.13	7160	3 6 .		
43	40.76	21245	1.99	7156	4 0 .		
39	44.58	23186	1.62	7152	4 5 .		
36	49.22	25604	1.47	7152	5 0 .		
31	57.58	29960	1.23	7142	5 6 .		
28	63.56	32966	1.13	7141	6 3 .		
26	67.71	35169	0.85	7126	7 1 .		
20	87.44	45366	0.85	7103	9 0 .		
77	22.76	11862	3.86	8205	F 1 0 2 1 2 2 . _ N _ _ _ _ 1 5 . B - -	797.7	254TC
68	25.77	13438	3.57	8205	2 5 .		
63	28.04	14658	3.33	8205	2 8 .		
56	31.16	16244	3.11	8205	3 2 .		
50	35.32	18391	2.94	8205	3 6 .		
45	39.25	20428	2.74	8205	4 0 .		
40	44.43	23223	2.30	8194	4 5 .		
34	51.19	26717	2.01	8184	5 0 .		
31	55.97	29157	2.14	8190	5 6 .		
27	64.49	33504	1.87	8183	6 3 .		
25	69.24	36071	1.50	8175	7 1 .		
24	74.39	38615	1.29	8175	8 0 .		
20	87.21	45366	1.40	8166	9 0 .		
19	93.70	48458	1.29	8160	1 0 0		
17	102.80	52842	1.03	8160	F 1 0 3 1 1 0 0 _ N _ _ _ _ 1 5 . B - -	835.2	254TC
15	114.24	58485	0.93	8160	1 1 2		
14	129.50	66563	0.91	8138	1 2 5		
12	143.90	73715	0.82	8115	1 4 0		

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering



# SERIES F

## SELECTION TABLES

### GEARED MOTORS

**20.00 HP**

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	
260	6.77	4676	1.07	5417	F 0 7 2 2 7 . 1 _ N _ _ _ _ 2 0 . B - -	432.3	256TC
188	9.38	6495	1.07	5800	9 . 0		
167	10.54	7301	1.07	5934	1 0 .		
152	11.59	8032	1.07	6047	1 2 .		
116	15.13	10441	0.92	6317	1 4 .		
102	17.21	11978	0.85	6452	1 6 .		
253	6.96	4802	2.14	6496	F 0 8 2 2 7 . 1 _ N _ _ _ _ 2 0 . B - -	531.5	256TC
178	9.87	6851	1.99	6721	9 . 0		
161	10.96	7593	1.89	6721	1 0 .		
144	12.19	8451	1.78	6721	1 2 .		
112	15.76	10985	1.53	6721	1 4 .		
99	17.70	12257	1.43	6721	1 6 .		
81	21.70	15039	1.25	6721	2 0 .		
72	24.45	17030	1.13	6699	2 2 .		
62	28.46	19772	1.03	6699	2 5 .		
56	31.57	21966	0.95	6699	2 8 .		
51	34.55	24027	0.88	6699	3 2 .		
45	39.09	27130	0.80	6699	3 6 .		
224	7.85	5449	3.82	7171	F 0 9 2 1 8 . 0 _ N _ _ _ _ 2 0 . B - -	648.4	256TC
200	8.81	6144	3.60	7171	9 . 0		
174	10.13	7032	3.39	7171	1 0 .		
155	11.35	7919	3.16	7171	1 1 .		
139	12.68	8809	2.97	7171	1 2 .		
120	14.66	10168	2.79	7171	1 4 .		
107	16.37	11360	2.61	7168	1 6 .		
100	17.58	12227	2.47	7168	1 8 .		
88	20.04	13978	2.28	7164	2 0 .		
78	22.70	15749	2.16	7164	2 2 .		
68	25.88	18018	1.99	7161	2 5 .		
62	28.41	19806	1.84	7156	2 8 .		
56	31.56	21994	1.71	7160	3 2 .		
48	36.69	25528	1.60	7148	3 6 .		
43	40.76	28326	1.49	7146	4 0 .		
39	44.58	30914	1.21	7139	4 5 .		
36	49.22	34139	1.10	7139	5 0 .		
31	57.58	39947	0.92	7123	5 6 .		
28	63.56	43955	0.85	7126	6 3 .		
122	14.46	10030	3.78	8205	F 1 0 2 1 1 4 . _ N _ _ _ _ 2 0 . B - -	824.7	256TC
113	15.61	10842	3.61	8205	1 6 .		
97	18.07	12609	3.26	8205	1 8 .		
86	20.46	14266	3.02	8205	2 0 .		
77	22.76	15816	2.89	8202	2 2 .		
68	25.77	17917	2.68	8202	2 5 .		
63	28.04	19544	2.50	8199	2 8 .		
56	31.16	21658	2.33	8199	3 2 .		
50	35.32	24522	2.21	8195	3 6 .		
45	39.25	27238	2.06	8195	4 0 .		
40	44.43	30964	1.73	8183	4 5 .		
34	51.19	35622	1.51	8170	5 0 .		
31	55.97	38876	1.61	8175	5 6 .		
27	64.49	44672	1.40	8168	6 3 .		
25	69.24	48095	1.13	8155	7 1 .		
24	74.39	51487	0.96	8160	8 0 .		
20	87.21	60489	1.05	8141	9 0 .		
19	93.70	64611	0.96	8138	1 0 0		

**25.00HP**

4 POLE

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

346	5.08	4404	3.72	7171	F 0 9 2 1 5 . 0 _ N _ _ _ _ 2 5 . B - -	769	284TC
268	6.57	5707	3.33	7171	6 . 3		
251	7.00	6100	3.22	7171	7 . 1		
224	7.85	6811	3.05	7171	8 . 0		
200	8.81	7680	2.88	7171	9 . 0		
174	10.13	8790	2.71	7171	1 0 .		
155	11.35	9899	2.53	7171	1 1 .		
139	12.68	11011	2.38	7171	1 2 .		
120	14.66	12711	2.23	7171	1 4 .		
107	16.37	14200	2.09	7164	1 6 .		
100	17.58	15284	1.97	7164	1 8 .		
88	20.04	17473	1.82	7158	2 0 .		
78	22.70	19686	1.73	7158	2 2 .		
68	25.88	22522	1.59	7152	2 5 .		
62	28.41	24758	1.47	7148	2 8 .		
56	31.56	27493	1.36	7154	3 2 .		
48	36.69	31910	1.28	7137	3 6 .		
43	40.76	35408	1.19	7136	4 0 .		
39	44.58	38643	0.97	7126	4 5 .		
36	49.22	42673	0.88	7126	5 0 .		

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

#### 25.00 HP

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <span style="border: 1px solid black; padding: 0 2px;">1</span> Through <span style="border: 1px solid black; padding: 0 2px;">20</span> Spaces to be filled when entering order	Weight of base mount unit	Motor Size
200	8.81	7667	3.89	8205	F 1 0 2 1 9 . 0 _ N _ _ _ _ 2 5 . B - -	940.9	284TC
180	9.77	8487	3.72	8205	1 0 .		
153	11.48	9979	3.39	8205	1 1 .		
142	12.39	10772	3.24	8205	1 2 .		
122	14.46	12538	3.02	8205	1 4 .		
113	15.61	13553	2.89	8205	1 6 .		
97	18.07	15761	2.61	8205	1 8 .		
86	20.46	17833	2.42	8205	2 0 .		
77	22.76	19770	2.31	8199	2 2 .		
68	25.77	22397	2.14	8199	2 5 .		
63	28.04	24430	2.00	8192	2 8 .		
56	31.16	27073	1.87	8192	3 2 .		
50	35.32	30653	1.76	8186	3 6 .		
45	39.25	34047	1.65	8186	4 0 .		
40	44.43	38706	1.38	8171	4 5 .		
34	51.19	44528	1.21	8157	5 0 .		
31	55.97	48595	1.28	8160	5 6 .		
27	64.49	55841	1.12	8153	6 3 .		
25	69.24	60119	0.90	8135	7 1 .		
20	87.21	75611	0.84	8115	9 0 .		

#### 30.00HP

4 POLE

346	5.08	5285	3.10	7166	F 0 9 2 1 5 . 0 _ N _ _ _ _ 3 0 . B - -	763	286TC
268	6.57	6848	2.78	7171	6 . 3		
251	7.00	7320	2.68	7171	7 . 1		
224	7.85	8173	2.54	7171	8 . 0		
200	8.81	9216	2.40	7171	9 . 0		
174	10.13	10549	2.26	7171	1 0 .		
155	11.35	11878	2.11	7171	1 1 .		
139	12.68	13213	1.98	7171	1 2 .		
120	14.66	15253	1.86	7171	1 4 .		
107	16.37	17041	1.74	7161	1 6 .		
100	17.58	18341	1.65	7161	1 8 .		
88	20.04	20967	1.52	7152	2 0 .		
78	22.70	23623	1.44	7152	2 2 .		
68	25.88	27027	1.33	7142	2 5 .		
62	28.41	29709	1.23	7141	2 8 .		
56	31.56	32992	1.14	7148	3 2 .		
48	36.69	38292	1.07	7126	3 6 .		
43	40.76	42490	0.99	7126	4 0 .		
274	6.43	6694	3.78	8205	F 1 0 2 1 6 . 3 _ N _ _ _ _ 3 0 . B - -	934.9	286TC
247	7.13	7440	3.59	8205	7 . 1		
227	7.76	8100	3.45	8205	8 . 0		
200	8.81	9201	3.24	8205	9 . 0		
180	9.77	10185	3.10	8205	1 0 .		
153	11.48	11974	2.82	8205	1 1 .		
142	12.39	12927	2.70	8205	1 2 .		
122	14.46	15045	2.52	8205	1 4 .		
113	15.61	16264	2.41	8205	1 6 .		
97	18.07	18913	2.18	8205	1 8 .		
86	20.46	21400	2.01	8205	2 0 .		
77	22.76	23724	1.93	8195	2 2 .		
68	25.77	26876	1.78	8195	2 5 .		
63	28.04	29316	1.66	8186	2 8 .		
56	31.16	32488	1.56	8186	3 2 .		
50	35.32	36783	1.47	8176	3 6 .		
45	39.25	40857	1.37	8176	4 0 .		
40	44.43	46447	1.15	8160	4 5 .		
34	51.19	53434	1.01	8143	5 0 .		
31	55.97	58314	1.07	8145	5 6 .		
27	64.49	67009	0.94	8138	6 3 .		

**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## SELECTION TABLES

### GEARED MOTORS

**40.00 HP**

4 POLE

N2 R/MIN	i	lb.in	Fm	lb	Unit Designation	lb	Motor Size
Output Speed	Ratio	Output Torque	Service Factor	Overhung Load	Column Entry <input type="text" value="1"/> Through <input type="text" value="20"/> Spaces to be filled when entering order	Weight of base mount unit	
346	5.08	7047	2.32	7157	F 0 9 2 1 5 . 0 _ N _ _ _ _ 4 0 . B - -	876.2	324TC
268	6.57	9131	2.08	7171	6 . 3		
251	7.00	9760	2.01	7171	7 . 1		
224	7.85	10898	1.91	7171	8 . 0		
200	8.81	12288	1.80	7171	9 . 0		
174	10.13	14065	1.69	7171	1 0 .		
155	11.35	15838	1.58	7171	1 1 .		
139	12.68	17618	1.49	7171	1 2 .		
120	14.66	20337	1.39	7171	1 4 .		
107	16.37	22721	1.30	7155	1 6 .		
100	17.58	24455	1.23	7155	1 8 .		
88	20.04	27956	1.14	7139	2 0 .		
78	22.70	31498	1.08	7139	2 2 .		
68	25.88	36036	0.99	7123	2 5 .		
62	28.41	39613	0.92	7126	2 8 .		
345	5.11	7086	3.12	8205	F 1 0 2 1 5 . 0 _ N _ _ _ _ 4 0 . B - -	1050.4	324TC
274	6.43	8926	2.84	8205	6 . 3		
247	7.13	9921	2.69	8205	7 . 1		
227	7.76	10800	2.59	8205	8 . 0		
200	8.81	12268	2.43	8205	9 . 0		
180	9.77	13580	2.33	8205	1 0 .		
153	11.48	15966	2.12	8205	1 1 .		
142	12.39	17236	2.02	8205	1 2 .		
122	14.46	20061	1.89	8205	1 4 .		
113	15.61	21685	1.80	8205	1 6 .		
97	18.07	25218	1.63	8205	1 8 .		
86	20.46	28533	1.51	8205	2 0 .		
77	22.76	31632	1.45	8189	2 2 .		
68	25.77	35835	1.34	8189	2 5 .		
63	28.04	39088	1.25	8173	2 8 .		
56	31.16	43317	1.17	8173	3 2 .		
50	35.32	49045	1.10	8157	3 6 .		
45	39.25	54476	1.03	8157	4 0 .		
40	44.43	61929	0.86	8138	4 5 .		
31	55.97	77752	0.80	8115	5 6 .		

**50.00HP**

4 POLE

346	5.08	8809	1.86	7148	F 0 9 2 1 5 . 0 _ N _ _ _ _ 5 0 . B - -	1029.2	326TC
268	6.57	11414	1.67	7171	6 . 3		
251	7.00	12200	1.61	7171	7 . 1		
224	7.85	13622	1.53	7171	8 . 0		
200	8.81	15360	1.44	7171	9 0 .		
174	10.13	17581	1.35	7171	1 0 .		
155	11.35	19798	1.27	7171	1 1 .		
139	12.68	22022	1.19	7171	1 2 .		
120	14.66	25422	1.11	7171	1 4 .		
107	16.37	28401	1.04	7148	1 6 .		
100	17.58	30569	0.99	7148	1 8 .		
88	20.04	34946	0.91	7126	2 0 .		
78	22.70	39372	0.86	7126	2 2 .		
345	5.11	8858	2.50	8205	F 1 0 2 1 5 . 0 _ N _ _ _ _ 5 0 . B - -	1203.4	326TC
274	6.43	11157	2.27	8205	6 . 3		
247	7.13	12401	2.16	8205	7 . 1		
227	7.76	13500	2.07	8205	8 . 0		
200	8.81	15335	1.94	8205	9 . 0		
180	9.77	16975	1.86	8205	1 0 .		
153	11.48	19958	1.69	8205	1 1 .		
142	12.39	21545	1.62	8205	1 2 .		
122	14.46	25076	1.51	8205	1 4 .		
113	15.61	27107	1.44	8205	1 6 .		
97	18.07	31522	1.31	8205	1 8 .		
86	20.46	35666	1.21	8205	2 0 .		
77	22.76	39540	1.16	8183	2 2 .		
68	25.77	44794	1.07	8183	2 5 .		
63	28.04	48861	1.00	8160	2 8 .		
56	31.16	54146	0.93	8160	3 2 .		
50	35.32	61306	0.88	8138	3 6 .		
45	39.25	68095	0.82	8138	4 0 .		

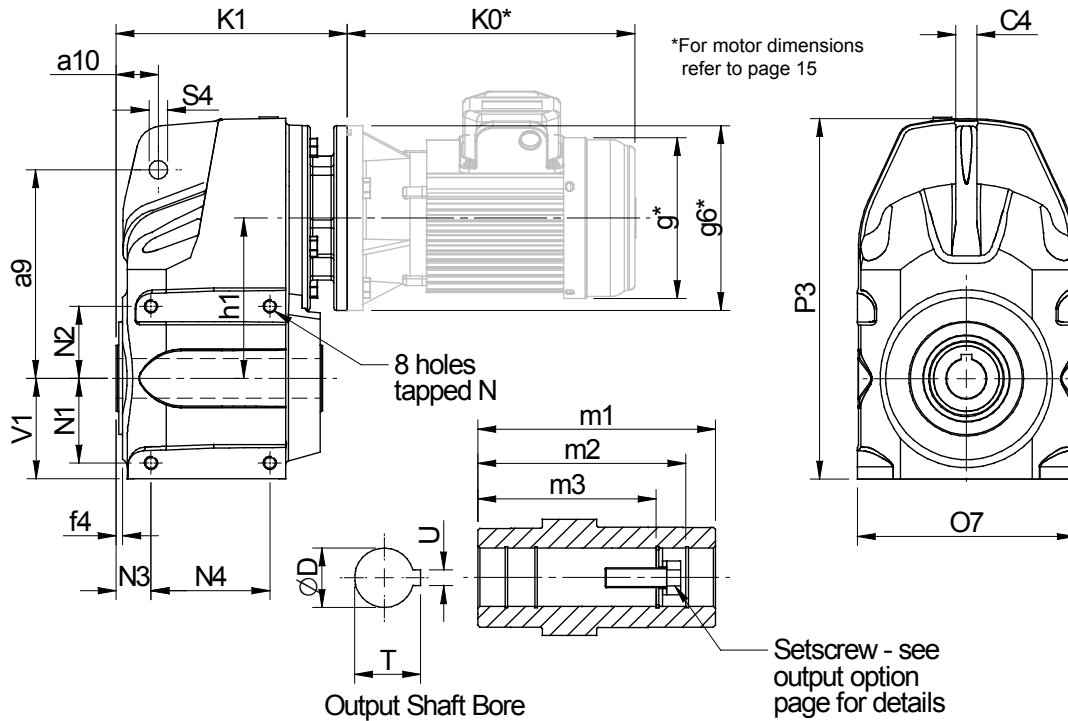
**NOTE**

Other output speeds are available using 6 and 8 pole motors - Consult Application Engineering

# SERIES F

## DIMENSIONS

### MOTORIZED



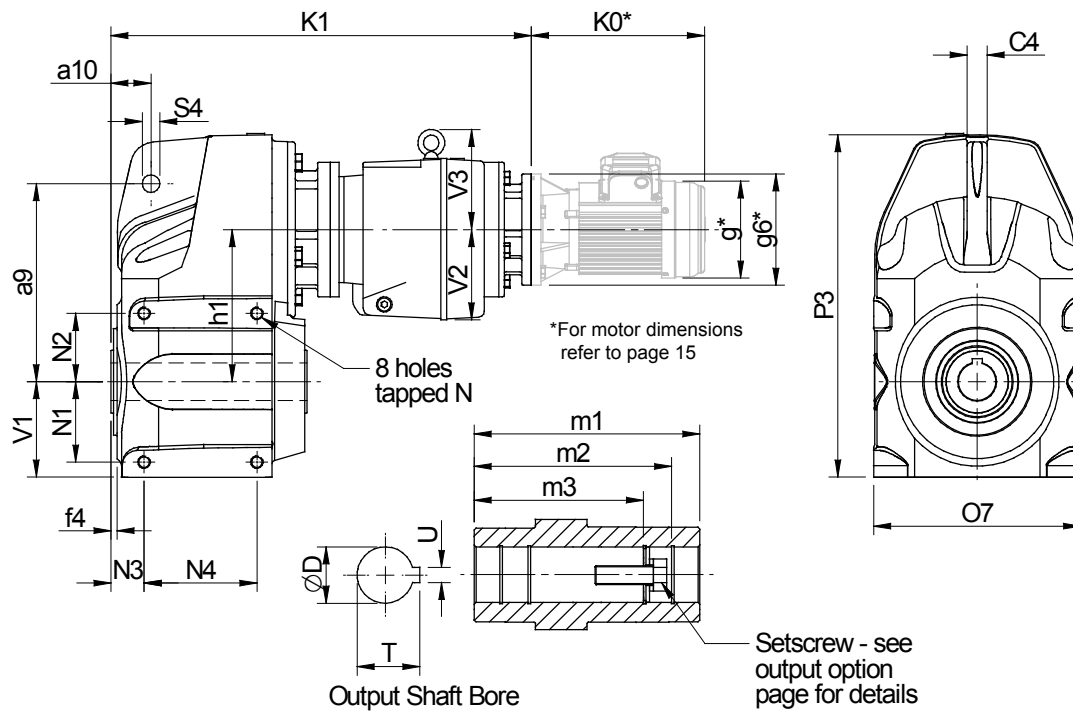
UNIT SIZE	a9	a10	C4	f4	h1	N	N1	N2	N3	N4	O7	P3	S4	V1	Hollow Output Bore					
															D	m1	m2	m3	T	U
F0222 F0232	5.51	0.98	0.59	0.20	3.77	M8 x 1.25p 0.39 deep	1.89	1.50	0.96	2.68	5.67	8.82	0.59	2.32	1.00	4.63	4.13	3.50	1.11	0.25
F0322 F0332	6.22	1.26	0.63	0.20	4.78	M10 x 1.50p 0.59 deep	2.52	2.09	0.96	3.58	6.50	10.75	0.59	2.99	1.25	6.16	4.80	4.13	1.37	0.25
F0422 F0432	6.69	1.26	0.63	0.20	4.78	M10 x 1.50p 0.59 deep	2.52	2.09	0.96	3.58	6.50	10.75	0.59	2.99	1.38	6.16	5.20	4.80	1.53	0.31
F0522 F0532	7.80	1.61	0.63	0.20	5.69	M10 x 1.50p 0.63 deep	2.56	2.95	1.08	4.59	7.87	12.52	0.59	3.15	1.50	7.05	6.85	5.59	1.67	0.38
F0622 F0632	8.58	1.61	0.63	0.24	6.51	M12 x 1.75p 0.67 deep	3.37	3.52	1.34	4.72	8.87	14.37	0.59	3.98	1.50	8.07	6.85	6.14	1.67	0.38
F0722 F0732	10.94	1.97	0.79	0.28	7.87	M16 x 2.00p 0.79 deep	4.31	3.64	1.42	5.75	10.87	17.40	0.94	5.00	2.00	9.19	7.80	7.20	2.23	0.50
F0822 F0832	13.62	2.44	1.02	0.12	9.57	M16 x 2.00p 0.79 deep	5.22	4.63	1.75	6.61	13.39	21.10	0.94	6.14	2.38	10.63	9.06	8.27	2.66	0.63
F0921 F0931	15.55	2.76	1.18	0.20	10.77	M16 x 2.00p 0.94 deep	4.92	8.86	1.50	8.46	15.75	24.09	1.06	6.89	2.75	12.99	10.63	-	3.04	0.63
F1021 F1031	19.09	3.46	1.42	0.22	13.05	M20 x 2.50p 1.06 deep	6.22	10.71	1.63	9.84	18.48	29.45	1.06	8.50	3.25	14.57	12.32	-	3.59	0.75

MOTOR FRAME SIZE	F0222	F0232	F0322 F0422	F0332 F0432	F0522	F0532	F0622	F0632	F0722	F0732	F0822	F0832	F0921	F0931	F1021	F1031
	K1	K1	K1	K1	K1	K1	K1	K1	K1	K1	K1	K1	K1	K1	K1	K1
56c	7.28	7.87	8.11	8.62	8.94	9.84	9.37	10.28	10.79	11.34	13.66	13.39	-	15.24	-	-
143 - 145TC	7.28	7.87	8.11	8.62	8.94	9.84	9.37	10.28	10.79	11.34	13.66	13.39	-	15.24	-	-
182 - 184TC	6.97	7.65	7.8	8.31	9.92	9.53	10.35	9.96	11.14	12.32	13.66	13.74	14.17	15.24	15.87	17.60
213 - 215TC	-	-	-	-	9.92	-	10.35	-	11.06	12.32	13.66	13.74	14.17	-	15.87	17.60
254 - 256TC	-	-	-	-	-	-	-	-	-	-	13.66	-	15.55	-	17.05	18.98
284 - 286TC	-	-	-	-	-	-	-	-	-	-	13.66	-	15.67	-	17.17	-
324 - 326TC	-	-	-	-	-	-	-	-	-	-	-	-	16.34	-	17.80	-

# SERIES F

## DIMENSIONS

### MOTORIZED QUAD



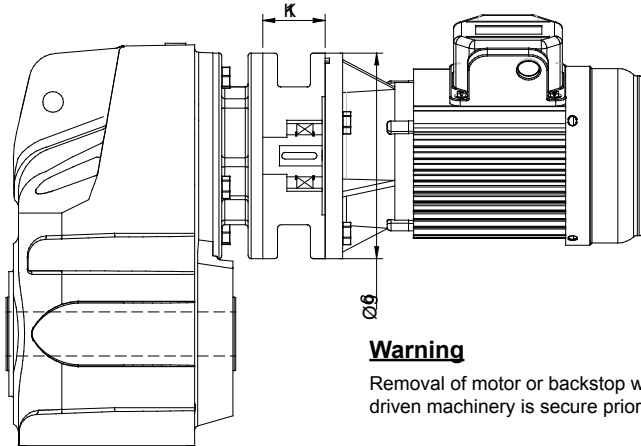
UNIT SIZE	a9	a10	C4	f4	h1	N	N1	N2	N3	N4	O7	P3	S4	V1	V2	V3	Hollow Output Bore					
																	D	m1	m2	m3	T	U
F0342	6.22	1.26	0.63	0.20	4.78	M10 x 1.50p 0.59 deep	2.52	2.09	0.96	3.58	6.50	10.75	0.59	2.99	2.99	2.91	1.25	6.16	4.80	4.13	1.37	0.25
F0442	6.69	1.26	0.63	0.20	4.78	M10 x 1.50p 0.59 deep	2.52	2.09	0.96	3.58	6.50	10.75	0.59	2.99	2.99	2.91	1.38	6.16	5.20	4.80	1.53	0.31
F0542	7.80	1.61	0.63	0.20	5.69	M10 x 1.50p 0.63 deep	2.56	2.95	1.08	4.59	7.83	12.52	0.59	3.15	3.58	3.54	1.50	7.05	6.85	5.59	1.67	0.38
F0642	8.58	1.61	0.63	0.24	6.51	M12 x 1.75p 0.67 deep	3.37	3.52	1.34	4.72	8.87	14.37	0.59	3.98	3.58	3.54	1.50	8.07	6.85	6.14	1.67	0.38
F0742	10.94	1.97	0.79	0.28	7.87	M16 x 2.00p 0.79 deep	4.31	3.64	1.42	5.75	10.87	17.40	0.94	5.00	3.58	3.54	2.00	9.19	7.80	7.20	2.23	0.50
F0842	13.62	2.44	1.02	0.12	9.57	M16 x 2.00p 0.79 deep	5.22	4.63	1.75	6.61	13.39	21.10	0.94	6.14	4.53	3.66	2.38	10.63	9.06	8.27	2.66	0.63
F0941	15.55	2.76	1.18	0.20	10.77	M16 x 2.00p 0.94 deep	4.92	8.86	1.50	8.46	15.75	24.09	1.06	6.89	4.53	3.66	2.75	12.99	10.63	-	3.04	0.63
F1041	19.09	3.46	1.42	0.22	13.05	M20 x 2.50p 1.06 deep	6.22	10.71	1.63	9.84	18.48	29.45	1.06	8.50	5.51	6.10	3.25	14.57	12.32	-	3.59	0.75

MOTOR FRAME SIZE	F0342	F0442	F0542	F0642	F0742	F0842	F0941	F1041
	K1	K1	K1	K1	K1	K1	K1	K1
56C	15.43	15.43	17.48	17.91	19.29	21.77	23.70	27.03
143-145TC	15.43	15.43	17.48	17.91	19.29	21.77	23.70	27.03
182-184TC	15.12	15.12	17.17	17.60	18.98	22.76	24.69	27.38
213-215TC	-	-	-	-	-	22.76	24.69	27.38

# SERIES F MOTORIZED BACKSTOP MODULE

Motorized backstop modules can be fitted between the gear unit and motor. The backstop device incorporates high quality centrifugal lift off sprags which are wear free above the lift off speed (n min).  
To ensure correct operation motor speed must exceed lift off speed.

Suitable for ambient temperature -40°F to + 122°F (-40°C to + 50°C)



### Warning

Removal of motor or backstop will release the drive. Ensure all driven machinery is secure prior to any maintenance work.

### NEMA C FLANGE

Motor Frame Size	Lift off Speed ('n' min) (rev/min)	Rated Locking Torque ('T max') (at motor) (lb. in.)	øg6	K1
182TC / 184TC	670	2655	8.976	3.75
213TC / 215TC	670	2655	8.976	3.75
254TC / 256TC	620	8320	8.976	4.75
284TC / 286TC	620	8320	11.02	5.374
324TC / 326TC	550	11150	12.99	6

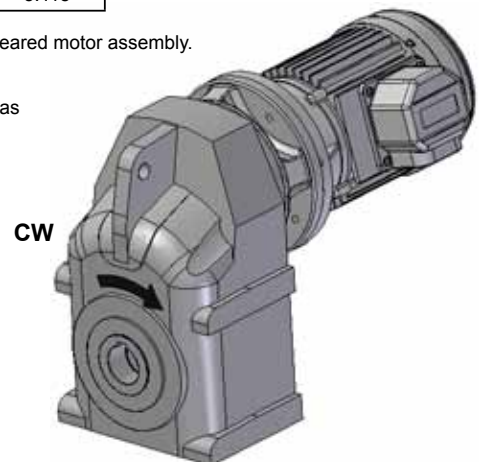
### IEC B5 FLANGE

Motor Frame Size	Lift off Speed ('n' min) (rev/min)	Rated Locking Torque ('T max') (at motor) (lb. in.)	øg6	K1
100	670	1505	9.84	2.756
112	670	1505	9.84	2.756
132	620	8320	11.81	3.740
160	620	8320	13.78	5.118
180	620	8320	13.78	5.118
200	550	11150	15.75	5.118

When a backstop module is fitted, dimension K1 should be added to the overall length of the geared motor assembly.

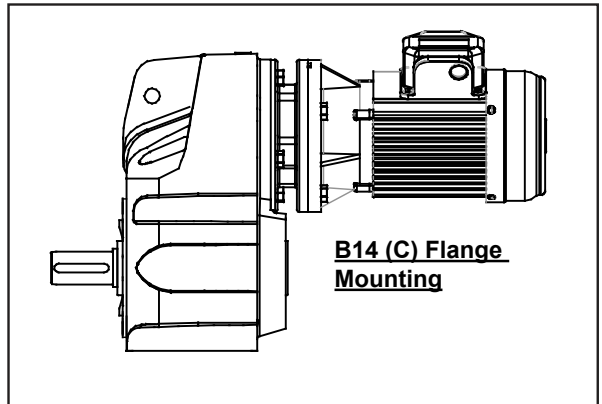
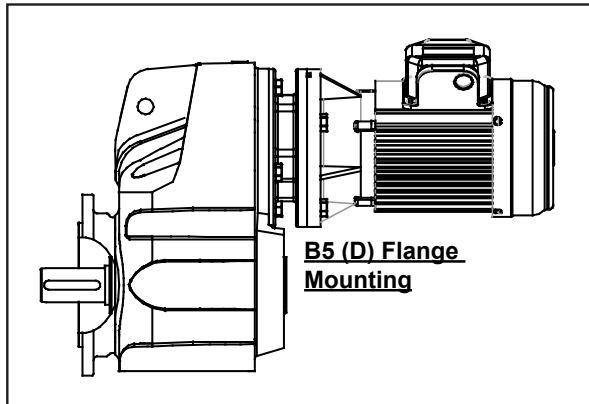
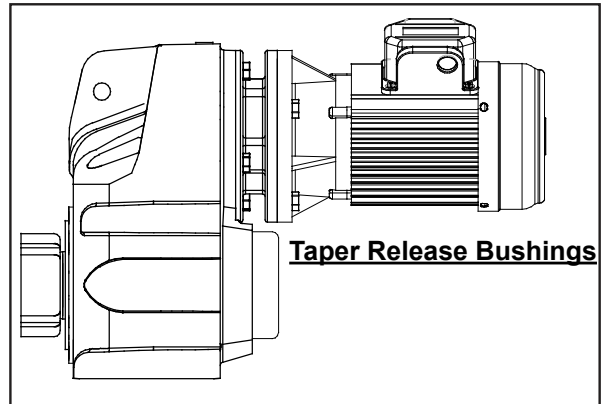
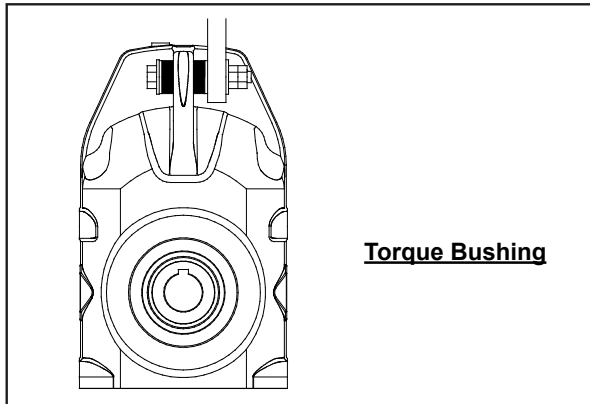
Rotation of output shaft must be specified when ordering as viewed from the output shaft end (as shown in the diagram) see page 17 for column 20 entry

CW	-	Free Rotation	-	Clockwise
		Locked	-	Counterclockwise
CCW	-	Free Rotation	-	Counterclockwise
		Locked	-	Clockwise



# SERIES F

## OUTPUT OPTIONS



**SERIES F**  
**NOTES**

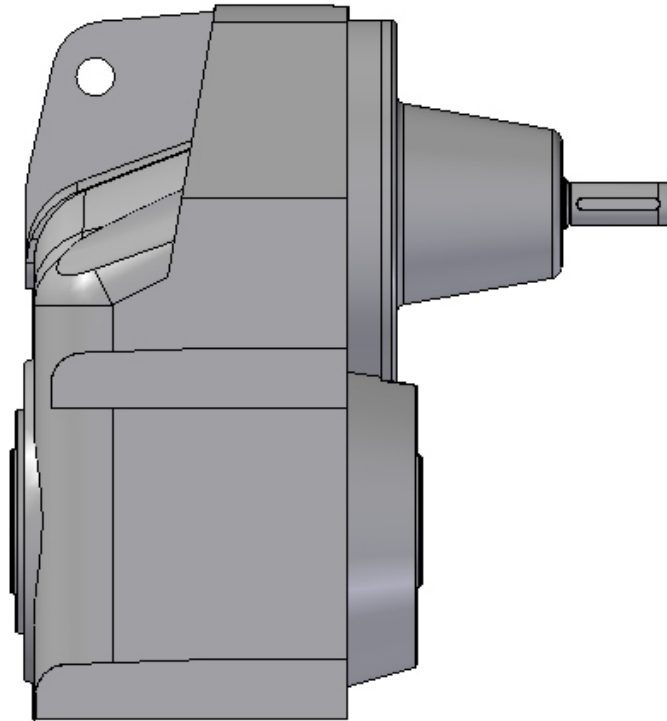
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**SERIES F**

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**REDUCER**  
**SERIES F**

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# SERIES F

## OVERHUNG & AXIAL LOADS (POUNDS) ON SHAFTS

### Maximum Permissible Overhung Loads

When a sprocket, gear, etc. is mounted on the shaft a calculation, as below, must be made to determine the overhung load on the shaft, and the results compared to the maximum permissible overhung loads tabulated. Overhung loads can be reduced by increasing the diameter of the sprocket, gear, etc. If the maximum permissible overhung load is exceeded, the sprocket, gear, etc. should be mounted on a separate shaft, flexibly coupled and supported in its own bearings, or the gear unit shaft should be extended to run in an outboard bearing. Alternatively, a larger gear is often a less expensive solution.

Permissible overhung loads vary according to the direction of rotation. The values tabulated are for the most unfavorable direction with the unit transmitting full rated power and the load P applied midway along the shaft extension. Hence, they can sometimes be increased for a more favorable direction of rotation, or if the power transmitted is less than the rated capacity of the gear unit, or if the load is applied nearer to the gear unit case. Refer to Application Engineering for further details. In any event, the sprocket, gear, etc. should be positioned as close as possible to the gear unit case in order to reduce bearing loads and shaft stresses, and to prolong life.

All units will accept 100% momentary overload on stated capacities.

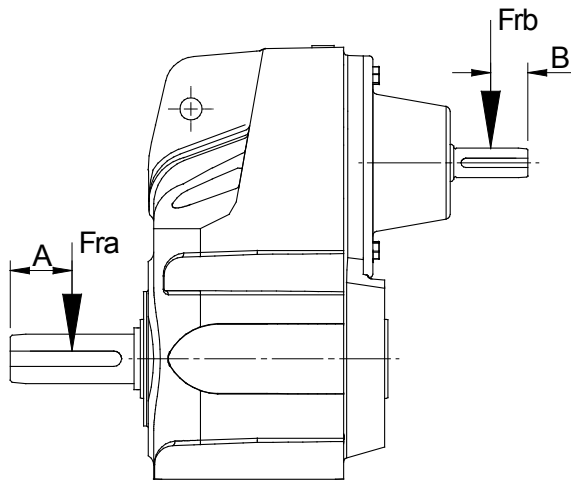
### Overhung load (lbf)

$$P = \frac{HP \times 126,000 \times K}{N \times D}$$

Where

- P = equivalent overhung load (lbf)  
 HP = power transmitted by the shaft (Horse Power)  
 N = speed of shaft (rev/min)  
 R = pitch radius of sprocket, etc. (inches)  
 K = factor

Note: 1 lbf = 4.4484 Newtons.



### Input shaft Overhung Loads, Frb (Lb) 1750 rpm

Two, Three and Four Stage Units

	F02	F03	F04	F05	F06	F07	F08	F09	F10
<b>2 Stage</b>	315	325	325	230	190	345	315	315	535
<b>3 Stage</b>	345	365	365	315	315	380	470	785	880
<b>4 Stage</b>	-	315	315	315	315	315	365	365	470

For output overhung load Fra consult ratings tables

### Axial Thrust Capacities (Pounds)

No check or calculation is required for axial loads ( $F_A$ ) towards or away from the unit up to 50% of the permissible overhung load. If the axial thrust considerably exceeds these values or if there is a combination of axial thrust loads and overhung loads please contact Application Engineering.

### Overhung Member K (factor)

Chain sprocket*	1.00
Spur or helical pinion	1.25
Vee belt sheave	1.50
Flat belt pulley	2.00

\* If multistrand chain drives are equally loaded and the outer strand is further than dimension A output or B input, refer to Application Engineering.

### Distance Midway Along the Shaft Extension

Size of unit	NO of Reductions	Dimensions A (in)	Dimensions B (in)
F02	2	-	0.79
	3	-	0.79
	4	-	-
F03	2	0.93	0.79
	3	0.93	0.79
	4	-	0.79
F04	2	1.10	0.79
	3	1.10	0.79
	4	1.10	0.79
F05	2	1.30	0.79
	3	1.30	0.79
	4	1.26	0.79
F06	2	1.50	0.79
	3	1.50	0.79
	4	1.50	0.79
F07	2	1.87	0.98
	3	1.87	0.79
	4	1.87	0.79
F08	2	2.17	1.18
	3	2.17	0.98
	4	2.17	0.79
F09	2	2.68	1.57
	3	2.56	1.18
	4	2.56	0.79
F10	2	3.35	1.38
	3	3.35	1.57
	4	3.35	0.98

# SERIES F THERMAL RATINGS

## Thermal Ratings (HP)

Thermal ratings are a measure of the units ability to dissipate heat. If they are exceeded, the lubricant may break down resulting in premature gear failure.

Thermal ratings are based on an ambient temperature of 68°F (20°C), where units are to operate in other ambient temperatures thermal ratings must be adjusted by the following factors.

## Thermal Power (HP)

	Ambient Temperature							
Deg F	-4	14	32	50	68	86	104	122
Deg C	-20	-10	0	10	20	30	40	50
Adj. Factor	1.57	1.43	1.29	1.14	1	0.86	0.71	0.5

i Ratio	N1 (rpm)	F0222	F0322 F0422	F0522	F0622	F0722	F0822	F0921	F1021	F1121	F1221
Up To 16	2900	-	-	-	-	-	-	-	-	-	-
	1750	7.7	12	21	27	40	63	88	132	152	232
	1450	6.8	11	19	24	36	57	79	118	138	212
	960	6.2	8.1	14	18	27	43	59	89	103	160
20	2900	9.6	11	21	26	37	65	83	117	135	206
	1750	7.0	10	19	24	34	58	73	103	122	188
	1450	6.2	9.1	17	21	31	52	67	93	110	170
	960	5.6	6.8	12	16	23	39	49	69	82	127
22	2900	6.0	10	19	23	35	55	74	105	127	188
	1750	6.4	9.1	17	20	31	49	66	94	113	167
	1450	5.5	8.2	15	19	28	43	60	85	100	151
	960	5.0	6.0	11	14	21	33	44	63	76	114
25	2900	4.2	9.6	18	21	32	51	68	96	117	173
	1750	5.9	8.4	16	18	28	44	60	85	103	155
	1450	5.2	7.5	15	16	25	40	53	77	92	139
	960	4.6	5.5	11	12	19	29	40	57	69	102
28	2900	3.7	8.8	16	19	29	45	65	92	107	156
	1750	5.5	7.5	14	17	25	39	56	81	93	137
	1450	4.7	6.8	12	15	23	35	49	71	83	123
	960	4.2	5.0	9.3	11	17	26	37	53	63	90
32	2900	3.4	8.2	15	19	28	42	60	85	98	150
	1750	5.2	7.1	13	16	24	36	51	74	86	127
	1450	4.4	6.3	12	14	21	32	46	66	76	113
	960	3.9	4.6	8.9	11	16	24	34	49	57	85
36	2900	3.7	7.4	14	17	26	41	55	81	95	140
	1750	4.7	6.3	12	14	22	35	47	68	82	119
	1450	3.9	5.6	10	13	19	31	42	61	72	103
	960	3.5	4.1	7.6	9.3	14	22	31	44	53	77
40	2900	3.4	7.1	12	16	24	35	51	75	89	132
	1750	4.2	5.9	10	13	20	29	43	62	73	110
	1450	3.4	5.3	8.9	12	18	26	38	56	66	98
	960	3.0	3.9	6.5	8.8	13	19	28	41	48	73
50	2900	2.6	6.4	12	14	22	31	46	66	76	117
	1750	3.8	5.2	10	12	18	25	38	52	63	95
	1450	3.1	4.6	8.4	10	16	22	33	47	55	84
	960	2.7	3.4	6.1	7.5	12	16	24	34	40	62

Note: When checking thermal capacities use actual load required to be transmitted, not rating of prime mover.

# SERIES F

## DOUBLE REDUCTION RATINGS

### SIZES F02 - F05

Note: Input Power, Pm may exceed thermal limit, Check thermal power page 48

Column Entry			input speed N1 (rpm)	F02					F03					F04					F05										
				N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)	N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)	N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)	N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)						
6	7	8	3500																										
			1750																					723	4.841	2470	29.5	508	
			1160																					361		3050	18.1	339	
			875																					239		3450	13.5	375	
			3500	592																				180		3500	10.3	475	
6		3	1750	296	5.903	434	4.27	308																514	6.806	3010	25.5	403	
			1160	196		517	2.52	319																257		3710	15.6	295	
			875	148		569	1.83	373																170		4200	11.7	350	
			3500	438		612	1.48	413																128		4570	9.58	394	
7		1	1750	219	7.974	515	3.74	266	558	6.262	1500	13.8	497	558	6.262	1500	13.8	497	458						458	7.628	3190	24.1	345
			1160	145		602	2.17	344	279		1840	8.45	467	279		1840	8.45	467	229						229		3940	14.8	288
			875	109		669	1.59	401	185		2090	6.33	541	185		2090	6.33	541	152						152		4460	11.1	343
			3500	385		712	1.28	447	139		2270	5.19	599	139		2270	5.19	599	114						114		4850	9.08	387
9		0	1750	192	9.069	547	3.49	271	398	8.784	1820	11.9	390	398	8.784	1820	11.9	390	408						408	8.563	3390	22.8	286
			1160	127		642	2.03	355	199		2240	7.31	487	199		2240	7.31	487	204						204		4170	14	282
			875	96		712	1.49	415	132		2530	5.47	566	132		2530	5.47	566	135						135		4720	10.4	337
			3500	340		755	1.19	463	99		2760	4.49	627	99		2760	4.49	627	102						102		4940	8.23	424
1	0		1750	170	10.27	578	3.25	281	361	9.68	1910	11.4	383	361	9.68	1910	11.4	383	321						321	10.87	3800	20.1	197
			1160	112		680	1.9	368	180		2360	6.98	494	180		2360	6.98	494	160						160		4680	12.3	272
			875	85		749	1.38	430	119		2670	5.23	574	119		2670	5.23	574	106						106		5290	9.22	327
			3500	266		795	1.11	480	90		2900	4.28	638	90		2900	4.28	638	80						80		5450	7.15	438
1	2		1750	133	13.14	640	2.81	302	318	10.99	2040	10.7	391	318	10.99	2040	10.7	391	283						283	12.33	4020	18.7	194
			1160	88		758	1.66	393	159		2510	6.54	505	159		2510	6.54	505	141						141		4950	11.5	268
			875	66		827	1.19	463	105		2840	4.9	587	105		2840	4.9	587	94						94		5390	8.28	370
			3500	247		878	0.955	517	79		2920	3.79	687	79		2920	3.79	687	70						70		5580	6.46	479
1	4		1750	123	14.16	657	2.68	309	250	13.96	2280	9.41	408	250	13.96	2280	9.41	408	238						238	14.7	4330	16.9	190
			1160	81		778	1.58	403	125		2810	5.77	528	125		2810	5.77	528	119						119		5220	10.2	291
			875	61		849	1.14	475	83		2990	4.06	655	83		2990	4.06	655	78						78		5520	7.11	433
			3500	195		901	0.91	530	62		2990	3.06	780	62		2990	3.06	780	59						59		5730	5.57	546
1	6		1750	97	17.88	717	2.31	332	220	15.86	2420	8.79	418	220	15.86	2420	8.79	418	206						206	16.93	4590	15.6	188
			1160	64		844	1.35	435	110		2970	5.36	544	110		2970	5.36	544	103						103		5090	8.6	387
			875	48		921	0.978	512	73		3130	3.74	680	73		3130	3.74	680	68						68		5090	5.7	602
			3500	172		1000	0.801	566	55		3130	2.82	811	55		3130	2.82	811	51						51		5090	4.3	767
2	0		1750	86	20.27	751	2.14	345	179	19.46	2660	7.85	434	179	19.46	2660	7.85	434	177						177		4880	14.2	188
			1160	57		879	1.25	454	89		3060	4.51	606	89		3060	4.51	606	88						88		5430	7.89	390
			875	43		963	0.903	533	59		3260	3.18	748	59		3260	3.18	748	58						58		5750	5.54	548
			3500	151		1060	0.748	586	44		3260	2.39	887	44		3260	2.39	887	44						44		5750	4.18	722
2	2		1750	75	23.16	789	1.96	360	162	21.59	2770	7.38	446	162	21.59	2770	7.38	446	158						158		5020	13.1	205
			1160	50		917	1.14	475	81		3110	4.13	639	81		3110	4.13	639	79						79		5520	7.18	430
			875	37		1020	0.838	563	53		3260	2.86	797	53		3260	2.86	797	52						52		5840	5.04	596
			3500	135		1120	0.694	608	40		3260	2.16	942	40		3260	2.16	942	39						39		6050	3.93	734
2	5		1750	67	25.77	818	1.83	373	142	24.53	2850	6.67	475	142	24.53	2850	6.67	475	149						149		5070	12.4	222
			1160	45		947	1.06	493	71		3180	3.71	682	71		3180	3.71	682	74						74		5570	6.79	454
			875	33		1070	0.79	570	47		3260	2.52	861	47		3260	2.52	861	49						49		5890	4.76	625
			3500	123		1140	0.636	636	35		3260	1.9	1010	35		3260	1.9	1010	37						37		6130	3.74	760
2	8		1750	61	28.41	844	1.71	385	125	27.86	2910	6.01	508	125	27.86	2910	6.01	508	125						125		5180	10.7	275
			1160	40		977	0.988	510	62		3240	3.34	727	62		3240	3.34	727	62						62		5700	5.87	521
			875	30		1120	0.747	586	41		3260	2.22	927	41		3260	2.22	927	41						41		6030	4.11	706
			3500	111		1140	0.576	667	31		3260	1.68	1080	31		3260	1.68	1080	31						31		6160	3.17	874
3	2		1750	55	31.26	866	1.6	399	114	30.68	2950	5.53	535	114	30.68	2950	5.53	535	117						117		5230	10.1	294
			1160	37		1010	0.928	526	57		3260	3.05	769	57		3260	3.05	769	58						58		5750	5.55	549
			875	27		1140	0.694	608	37		3260	2.02	979	37		3260	2.02	979	39						39		6090	3.89	737
			3500	95		1140	0.524	699	28		3260	1.52	1140	28		3260	1.52	1140	29						29		6180	2.98	917
3	6		1750	47	36.63	907	1.43																						

# SERIES F

## DOUBLE REDUCTION RATINGS

### SIZES F02 - F05

Note: Input Power, Pm may exceed thermal limit, Check thermal power page 48

Column Entry			input speed N1 (rpm)	F02					F03					F04					F05				
				N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)	N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)	N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)	N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)
6	7	8	3500	44		1000	0.737	592	48		2550	2.03	995	48		2550	2.03	995	47		3220	2.56	1210
7	1	.	1750	22	78.56	1000	0.369	818	24	72.41	2730	1.09	1350	24	72.41	2730	1.09	1350	23	72.92	3220	1.28	1700
			1160	14		1000	0.244	850	16		2850	0.751	1600	16		2850	0.751	1600	15		3220	0.847	2060
			875	11		1000	0.184	850	12		2930	0.583	1600	12		2930	0.583	1600	11		3220	0.639	2060
			3500	39		916	0.594	654	42		2290	1.61	1110	42		2290	1.61	1110					
9	0	.	1750	19	89.28	981	0.318	850	21	82.18	2460	0.863	1490	21	82.18	2460	0.863	1490					
			1160	12		987	0.212	850	14		2560	0.596	1600	14		2560	0.596	1600					
			875	9		987	0.16	850	10		2630	0.462	1600	10		2630	0.462	1600					
			3500						37		2050	1.27	1230	37		2050	1.27	1230					
1	0	0	1750						18	93.43	2190	0.678	1600	18	93.43	2190	0.678	1600					
			1160						12		2280	0.468	1600	12		2280	0.468	1600					
			875						9		2350	0.363	1600	9		2350	0.363	1600					

# SERIES F

## DOUBLE REDUCTION RATINGS

### SIZES F06 - F08

Note: Input Power, Pm may exceed thermal limit, Check thermal power page 48

Column Entry			input speed N1 (rpm)	F06					F07					F08				
				N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)	N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)	N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)
5	.	0	3500															
			1750															
			1160															
			875															
6	.	3	3500															
			1750															
			1160															
			875															
7	.	1	3500	562	6.224	3170	29.4	2540	516	6.772	4950	42.3	3820	502	6.959	7880	65.7	4430
			1750	281		3920	18	2540	258		4980	21.2	3820	251		7940	32.9	4430
			1160	186		4430	13.5	2540	171		4990	14	3820	166		7960	21.8	4430
			875	140		4500	10.3	2540	129		5000	10.6	3820	125		7980	16.4	4430
9	.	0	3500	400	8.75	3890	25.6	2540	373	9.38	6450	39.6	3820	354	9.865	11200	65.7	4430
			1750	200		4800	15.7	2540	186		6920	21.2	3820	177		11300	32.9	4430
			1160	132		5430	11.7	2540	123		6930	14	3820	117		11300	21.8	4430
			875	100		5880	9.59	2540	93		6940	10.6	3820	88		11300	16.4	4430
1	0	.	3500	356	9.807	4140	24.3	2540	332	10.54	6870	37.6	3820	319	10.96	12200	64.3	4430
			1750	178		5100	14.9	2540	166		7780	21.2	3820	159		12600	32.9	4430
			1160	118		5780	11.1	2540	110		7790	14	3820	105		12600	21.8	4430
			875	89		6290	9.14	2540	83		7800	10.6	3820	79		12600	16.4	4430
1	2	.	3500	317	11.01	4400	23	2540	302	11.59	7240	36	3820	287	12.19	12900	61	4430
			1750	158		5420	14.1	2540	151		8560	21.2	3820	143		14000	32.9	4430
			1160	105		6140	10.5	2540	100		8570	14	3820	95		14000	21.8	4430
			875	79		6360	8.23	2540	75		8580	10.6	3820	71		14000	16.4	4430
1	4	.	3500	250	13.98	4960	20.3	2540	231	15.13	8240	31.3	3820	222	15.76	14600	53.4	4430
			1750	125		6110	12.5	2540	115		10200	19.2	3820	111		18000	32.7	4430
			1160	82		6910	9.35	2540	76		11200	14	3820	73		18100	21.8	4430
			875	62		7150	7.29	2540	57		11200	10.6	3820	55		18100	16.4	4430
1	6	.	3500	220	15.85	5260	19	2540	203	17.21	8750	29.2	3820	197	17.7	15400	50.2	4430
			1750	110		6480	11.7	2540	101		10800	17.9	3820	98		19000	30.7	4430
			1160	73		7300	8.71	2540	67		12200	13.4	3820	65		20400	21.8	4430
			875	55		7300	6.57	2540	50		12700	10.6	3820	49		20400	16.4	4430
2	0	.	3500	185	18.9	5690	17.3	2540	167	20.89	9560	26.3	3820	161	21.7	16900	44.7	4430
			1750	92		7010	10.6	2540	83		11800	16.1	3820	80		20800	27.4	4430
			1160	61		7450	7.46	2540	55		13300	12.1	3820	53		23500	20.5	4430
			875	46		7450	5.62	2540	41		13500	9.22	3820	40		25000	16.4	4430
2	2	.	3500	160	21.76	6050	15.9	2540	152	22.98	9960	24.9	3820	143	24.45	17700	41.6	4430
			1750	80		6550	8.6	2540	76		12300	15.3	3820	71		21800	25.5	4430
			1160	53		6560	5.7	2540	50		13900	11.4	3820	47		24700	19.1	4430
			875	40		6560	4.3	2540	38		14000	8.72	3820	35		25800	15	4430
2	5	.	3500	138	25.31	6440	14.6	2540	132	26.41	10500	22.9	3820	122	28.46	18900	38.1	4430
			1750	69		7400	8.36	2540	66		13000	14	3820	61		23300	23.4	4430
			1160	45		7410	5.54	2540	43		14700	10.5	3820	40		25800	17.1	4430
			875	34		7410	4.18	2540	33		14800	7.99	3820	30		25800	12.9	4430
2	8	.	3500	123	28.32	6680	13.5	2540	116	29.95	11000	21.1	3820	110	31.57	19400	35.4	4430
			1750	61		7780	7.86	2540	58		13600	13	3820	55		23800	21.6	4430
			1160	40		7790	5.21	2540	38		14800	9.36	3820	36		23900	14.3	4430
			875	30		7790	3.93	2540	29		14800	7.06	3820	27		23900	10.8	4430
3	2	.	3500	115	30.18	6930	13.1	2540	105	33.03	11500	20	3820	101	34.55	19600	32.7	4430
			1750	57		7880	7.46	2540	52		14200	12.3	3820	50		22800	18.9	4430
			1160	38		7890	4.95	2540	35		14800	8.48	3820	33		22900	12.5	4430
			875	28		7900	3.74	2540	26		14800	6.4	3820	25		22900	9.46	4430
3	6	.	3500	97	35.77	7350	11.8	2540	92	37.83	12100	18.4	3820	89	39.09	20400	29.9	4430
			1750	48		7850	6.28	2540	46		14800	11.2	3820	44		24500	17.9	4430
			1160	32		7850	4.16	2540	30		14800	7.41	3820	29		24500	11.9	4430
			875	24		7850	3.14	2540	23		14800	5.59	3820	22		24500	8.97	4430
4	0	.	3500	91	38.19	7440	11.2	2540	81	42.77	12700	17	3820	79	44.13	20800	27.1	4430
			1750	45		7880	5.9	2540	40		14800	9.9	3820	39		25700	16.7	4430
			1160	30		7880	3.91	2540	27		14800	6.56	3820	26		25800	11.1	4430
			875	22		7880	2.95	2540	20		14800	4.95	3820	19		25800	8.35	4430
5	0	.	3500	73	47.4	7710	9.34	2540	70	49.59	13000	15.1	3820	65	53.49	21300	22.9	4430
			1750	36		7890	4.77	2540	35		14800	8.55	3820	32		25800	13.8	4430
			1160	24		7900	3.16	2540	23		14800	5.66	3820	21		25800	9.15	4430
			875	18		7900	2.39	2540	17		14800	4.27	3820	16		25800	6.9	4430
5	6	.	3500	62	55.89	7880	8.1	2540	59	59.14	13500	13.1	3820	56	62.38	21700	20.1	4430
			1750	31		7890	4.05	2540	29		14800	7.18	3820	28		25800	11.9	4430
			1160	20		7900	2.69	2540	19		14800	4.76	3820	18		25800	7.85	4430
			875	15		7900	2.03	2540	14		14800	3.59	3820	14		25800	5.92	4430

# SERIES F

## DOUBLE REDUCTION RATINGS

### SIZES F06 - F08

Note: Input Power, Pm may exceed thermal limit, Check thermal power page 48

Column Entry			input speed N1 (rpm)	F06					F07					F08				
				N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)	N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)	N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)
6	7	8	3500	57	61.2	7670	7.21	2540	54	64.77	13600	12.1	3820	51	68.52	22200	18.7	4430
6	3	.	1750	28		7860	3.69	2540	27		14800	6.56	3820	25		25800	10.8	4430
			1160	18		7900	2.46	2540	17		14800	4.35	3820	16		25800	7.15	4430
			875	14		7900	1.85	2540	13		14800	3.28	3820	12		25800	5.39	4430
			3500	46	75	5960	4.59	2540	45	77.72	13400	9.92	3820	41	83.97	22700	15.6	4430
7	1	.	1750	23		6070	2.33	2540	22		13600	5.05	3820	20		25800	8.81	4430
			1160	15		6330	1.61	2540	14		14600	3.58	3820	13		25800	5.84	4430
			875	11		6510	1.25	2540	11		14600	2.7	3820	10		25800	4.4	4430
			3500	41	83.59	5280	3.65	2540	39	89.42	10800	6.99	3820	38	91.7	22900	14.4	4430
9	0	.	1750	20		5380	1.85	2540	19		11000	3.55	3820	19		25800	8.08	4430
			1160	13		5600	1.28	2540	12		11400	2.44	3820	12		25800	5.35	4430
			875	10		5760	0.993	2540	9		11400	1.84	3820	9		25800	4.03	4430
			3500	37	93.75	4140	2.56	2540	35	99.36	9510	5.54	3820	33	105.6	23100	12.6	4430
1	0	0	1750	18		4150	1.28	2540	17		9670	2.81	3820	16		23200	6.35	4430
			1160	12		4150	0.847	2540	11		9720	1.87	3820	10		24900	4.51	4430
			875	9		4150	0.639	2540	8		9720	1.41	3820	8		25800	3.52	4430

# SERIES F

## TRIPLE REDUCTION RATINGS

### SIZES F02 - F05

Note: Input Power, Pm may exceed thermal limit, Check thermal power page 48

Column Entry			input speed N1 (rpm)	F02					F03					F04					F05							
				N2	i	M2	Pm	fra	N2	i	M2	Pm	fra	N2	i	M2	Pm	fra	N2	i	M2	Pm	fra			
6	7	8	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	(rpm)	(:1)	(lb.in)	(HP)	(lbf)				
8	0	.	3500																44	78.84	3800	2.82	1140			
			1750																		22	4460	1.65	1510		
			1160																			14	5090	1.24	1730	
			875																			11	5650	1.04	1890	
9	0	.	3500	38	92.02	1060	0.687	633												40	86.82	3670	2.47	1230		
			1750	19		1140	0.365	839														20	4300	1.44	1620	
			1160	12		1150	0.244	850															13	4990	1.11	1840
			875	9		1170	0.185	850															10	5540	0.927	2010
1	0	0	3500	34	101.5	1100	0.642	642	35	99.52	2560	1.51	1160	35	99.52	2560	1.51	1160	35	99.86	3790	2.22	1300			
			1750	17		1140	0.331	850	17		3020	0.887	1510	17		3020	0.887	1510	17		4510	1.32	1690			
			1160	11		1170	0.223	850	11		3260	0.633	1600	11		3260	0.633	1600	11		5260	1.01	1930			
			875	8		1170	0.168	850	8		3260	0.477	1600	8		3260	0.477	1600	8		5850	0.851	2060			
1	1	2	3500	31	111.6	1140	0.602	663	31	109.7	2620	1.4	1210	31	109.7	2620	1.4	1210	31	108.6	3880	2.09	1340			
			1750	15		1140	0.3	850	15		3130	0.831	1550	15		3130	0.831	1550	15		4670	1.25	1740			
			1160	10		1170	0.203	850	10		3260	0.573	1600	10		3260	0.573	1600	10		5440	0.966	1970			
			875	7		1170	0.144	850	7		3260	0.432	1600	7		3260	0.432	1600	7		6060	0.811	2060			
1	2	5	3500	26	130.8	1140	0.516	715	28	120.7	2700	1.31	1240	28	120.7	2700	1.31	1240	28	130.3	4070	1.83	1440			
			1750	13		1140	0.257	850	14		3260	0.787	1580	14		3260	0.787	1580	13		5020	1.12	1830			
			1160	8		1170	0.173	850	9		3260	0.521	1600	9		3260	0.521	1600	8		5860	0.868	2060			
			875	6		1170	0.13	850	7		3260	0.393	1600	7		3260	0.393	1600	6		6300	0.704	2060			
1	6	0	3500	22	156.9	1140	0.431	779	24	141.5	2810	1.16	1320	24	141.5	2810	1.16	1320	22	156.4	4230	1.58	1550			
			1750	11		1170	0.218	850	12		3260	0.672	1600	12		3260	0.672	1600	11		5360	1	1940			
			1160	7		1170	0.144	850	8		3260	0.445	1600	8		3260	0.445	1600	7		6260	0.774	2060			
			875	5		1170	0.109	850	6		3260	0.336	1600	6		3260	0.336	1600	5		6300	0.587	2060			
1	8	0	3500	19	182.9	1140	0.369	830	20	169.7	2940	1.01	1410	20	169.7	2940	1.01	1410	19	176.2	4360	1.45	1620			
			1750	9		1170	0.187	850	10		3260	0.561	1600	10		3260	0.561	1600	9		5620	0.932	2010			
			1160	6		1170	0.124	850	6		3260	0.372	1600	6		3260	0.372	1600	6		6300	0.692	2060			
			875	4		1170	0.093	850	5		3260	0.28	1600	5		3260	0.28	1600	4		6300	0.522	2060			
2	0	0	3500	17	203.3	1140	0.333	850	17	197.8	3100	0.92	1490	17	197.8	3100	0.92	1490	17	204.9	4630	1.32	1690			
			1750	8		1170	0.169	850	8		3260	0.482	1600	8		3260	0.482	1600	8		6000	0.854	2060			
			1160	5		1170	0.112	850	5		3260	0.319	1600	5		3260	0.319	1600	5		6300	0.595	2060			
			875	4		1170	0.084	850	4		3260	0.241	1600	4		3260	0.241	1600	4		6300	0.448	2060			
2	2	5	3500	14	244.8	1140	0.276	850	15	219.8	3210	0.859	1540	15	219.8	3210	0.859	1540	15	232.5	4880	1.23	1750			
			1750	7		1170	0.14	850	7		3260	0.434	1600	7		3260	0.434	1600	7		6300	0.792	2060			
			1160	4		1170	0.093	850	5		3260	0.288	1600	5		3260	0.288	1600	4		6300	0.525	2060			
			875	3		1170	0.07	850	3		3260	0.217	1600	3		3260	0.217	1600	3		6300	0.396	2060			
2	8	0	3500	12	280.6	1150	0.243	850	13	264.7	3260	0.721	1580	13	264.7	3260	0.721	1580	13	264.3	5120	1.14	1820			
			1750	6		1170	0.122	850	6		3260	0.36	1600	6		3260	0.36	1600	6		5660	0.626	2060			
			1160	4		1170	0.081	850	4		3260	0.238	1600	4		3260	0.238	1600	4		5900	0.433	2060			
			875	3		1170	0.061	850	3		3260	0.18	1600	3		3260	0.18	1600	3		6070	0.336	2060			
3	1	5	3500	10	318.8	1170	0.216	850	11	303.4	3260	0.63	1600	11	303.4	3260	0.63	1600								
			1750	5		1170	0.108	850	5		3260	0.314	1600	5		3260	0.314	1600								
			1160	3		1170	0.071	850	3		3260	0.208	1600	3		3260	0.208	1600								
			875	2		1170	0.054	850	2		3260	0.157	1600	2		3260	0.157	1600								
3	6	0	3500						10		3260	0.555	1600	10		3260	0.555	1600								
			1750					5	344.8		3260	0.277	1600	5		344.8	3260	0.277	1600							
			1160					3			3260	0.184	1600	3			3260	0.184	1600							
			875					2			3260	0.138	1600	2			3260	0.138	1600							



# SERIES F

## TRIPLE REDUCTION RATINGS

### SIZES F06 - F08

Note: Input Power, Pm may exceed thermal limit, Check thermal power page 48

Column Entry				input speed N1 (rpm)	F06					F07					F08				
					N2	i	M2	Pm	fra	N2	i	M2	Pm	fra	N2	i	M2	Pm	fra
6	7	8		(rpm)	(:1)	(lb.in)	(HP)	(lb)	(rpm)	(:1)	(lb.in)	(HP)	(lb)	(rpm)	(:1)	(lb.in)	(HP)	(lb)	
				3500															
8	0	.		1750															
				1160															
				875															
				3500															
9	0	.		1750															
				1160															
				875															
				3500	34		4890	2.82	2540	32		8910	4.81	3820	30		26600	13.7	4430
1	0	0		1750	17	101.4	5740	1.65	2540	16	108.6	10500	2.83	3820	15	114.2	30000	7.65	4430
				1160	11		6560	1.24	2540	10		11800	2.09	3820	10		30000	5.06	4430
				875	8		7140	1.04	2540	8		13100	1.75	3820	7		30000	3.82	4430
				3500	31		4720	2.47	2540	30		8550	4.33	3820	28		25500	12	4430
1	1	2		1750	15	111.6	5540	1.44	2540	15	115.7	10100	2.54	3820	14	124.9	30000	6.99	4430
				1160	10		6420	1.11	2540	10		11400	1.89	3820	9		30000	4.62	4430
				875	7		7140	0.927	2540	7		12600	1.58	3820	7		30000	3.48	4430
				3500	27		4880	2.22	2540	25		8950	3.82	3820	24		26300	10.9	4430
1	2	5		1750	13	128.4	5810	1.32	2540	12	137.1	10500	2.23	3820	12	141.3	30000	6.18	4430
				1160	9		6770	1.01	2540	8		12200	1.71	3820	8		30000	4.09	4430
				875	6		7540	0.851	2540	6		13500	1.43	3820	6		30000	3.08	4430
				3500	25		4990	2.09	2540	23		9120	3.65	3820	21		27200	9.99	4430
1	6	0		1750	12	139.6	6010	1.25	2540	11	146.4	10700	2.13	3820	10	159.5	30000	5.48	4430
				1160	8		7010	0.966	2540	7		12500	1.64	3820	7		30000	3.62	4430
				875	6		7800	0.811	2540	5		13900	1.37	3820	5		30000	2.73	4430
				3500	20		5240	1.83	2540	19		9660	3.11	3820	18		28600	8.65	4430
1	8	0		1750	10	167.6	6470	1.12	2540	9	181.7	11700	1.87	3820	9	193.4	30000	4.52	4430
				1160	6		7550	0.868	2540	6		13600	1.44	3820	5		30000	2.99	4430
				875	5		8120	0.704	2540	4		15100	1.21	3820	4		30100	2.26	4430
				3500	17		5440	1.58	2540	16		10100	2.75	3820	15		29800	7.73	4430
2	0	0		1750	8	201.1	6900	1	2540	8	214.2	12500	1.7	3820	7	225.5	30000	3.88	4430
				1160	5		8060	0.774	2540	5		14500	1.31	3820	5		30000	2.57	4430
				875	4		8120	0.587	2540	4		16200	1.1	3820	3		30100	1.94	4430
				3500	15		5610	1.45	2540	14		10300	2.57	3820	14		30000	7.09	4430
2	2	5		1750	7	226.6	7240	0.932	2540	7	234.6	12900	1.61	3820	7	247.7	30000	3.53	4430
				1160	5		8120	0.692	2540	4		15100	1.24	3820	4		30100	2.34	4430
				875	3		8120	0.522	2540	3		16800	1.04	3820	3		30100	1.77	4430
				3500	13		5960	1.32	2540	12		10800	2.21	3820	11		30000	5.78	4430
2	8	0		1750	6	263.4	7730	0.854	2540	6	287.5	14000	1.42	3820	5	303.6	30000	2.88	4430
				1160	4		8120	0.595	2540	4		16300	1.1	3820	3		30100	1.91	4430
				875	3		8120	0.448	2540	3		18200	0.923	3820	2		30100	1.44	4430
				3500	11		6280	1.23	2540	10		11500	2.11	3820	10		30000	5.3	4430
3	1	5		1750	5	298.9	8090	0.789	2540	5	320.4	14900	1.36	3820	5	331.5	30000	2.64	4430
				1160	3		8120	0.525	2540	3		17400	1.05	3820	3		30100	1.75	4430
				875	2		8120	0.396	2540	2		18700	0.853	3820	2		30100	1.32	4430
				3500	10		6600	1.14	2540	9		12000	1.97	3820	9		30000	4.62	4430
3	6	0		1750	5	339.8	7280	0.626	2540	4	359.4	15600	1.27	3820	4	381.8	30100	2.31	4430
				1160	3		7590	0.433	2540	3		15700	0.847	3820	3		30100	1.53	4430
				875	2		7820	0.336	2540	2		15700	0.639	3820	2		30100	1.15	4430

# SERIES F

## TRIPLE REDUCTION RATINGS

### SIZES F09 - F10

Note: Input Power, Pm may exceed thermal limit, Check thermal power page 48

Column Entry			input rpm	F09					F10				
6	7	8		N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)	N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)
			3500	688		13300	151	5910	685		18000	203	8660
5	.	0	1750	344	5.085	16400	92.4	6440	342	5.107	22200	124	9470
			1160	228		18600	69.2	6890	227		22600	83.9	9700
			875	172		20200	56.7	7170	171		22600	63.3	9700
6	.	3	3500	533	6.567	15400	135	6020	544	6.433	20500	184	8890
			1750	266		19000	82.9	6660	272		25300	113	9700
			1160	176		21500	62.1	7110	180		28500	83.9	9700
			875	133		23400	50.9	7200	136		28500	63.3	9700
7	.	1	3500	500	7	15900	131	5990	490	7.133	21700	175	8890
			1750	250		19600	80.1	6640	245		26800	107	9700
			1160	165		22200	60	7090	162		30300	80.3	9700
			875	125		24200	49.2	7200	122		31700	63.3	9700
8	.	0	3500	446	7.846	16900	124	6020	451	7.758	22700	168	8940
			1750	223		20800	75.9	6710	225		28000	103	9700
			1160	147		23600	56.8	7160	149		31600	77.1	9700
			875	111		25700	46.6	7200	112		34400	63.3	9700
9	.	0	3500	397	8.807	17900	117	6090	397	8.812	24200	158	9020
			1750	198		22100	71.7	6790	198		29800	96.7	9700
			1160	131		25000	53.7	7160	131		33800	72.4	9700
			875	99		27200	44	7200	99		36700	59.4	9700
1	0	.	3500	345	10.13	19300	110	6230	358	9.772	25600	151	9200
			1750	172		23800	67.3	6940	179		31600	92.6	9700
			1160	114		26900	50.4	7200	118		35700	69.3	9700
			875	86		29300	41.3	7200	89		38900	56.9	9700
1	1	.	3500	308	11.35	20300	103	6250	304	11.48	27400	137	9330
			1750	154		25000	63	6950	152		33800	84.2	9700
			1160	102		28300	47.1	7200	101		38300	63	9700
			875	77		30800	38.7	7200	76		41700	51.7	9700
1	2	.	3500	276	12.68	21200	96	6330	282	12.39	28300	131	9430
			1750	138		26200	59.1	7100	141		34900	80.5	9700
			1160	91		29700	44.2	7200	93		39500	60.3	9700
			875	69		32300	36.3	7200	70		43000	49.4	9700
1	4	.	3500	238	14.66	23000	90.3	6470	242	14.46	30800	122	9690
			1750	119		28400	55.4	7150	121		37900	75.1	9700
			1160	79		32100	41.5	7200	80		42900	56.2	9700
			875	59		34900	34	7200	60		46700	46.1	9700
1	6	.	3500	213	16.37	24100	84.6	6560	224	15.61	31700	117	9700
			1750	106		29700	51.9	7200	112		39100	71.7	9700
			1160	70		33600	38.8	7200	74		44200	53.7	9700
			875	53		36500	31.9	7200	56		48100	44	9700
1	8	.	3500	199	17.58	23800	77.6	6630	193	18.07	33400	106	9700
			1750	99		30100	48.9	7200	96		41100	64.9	9700
			1160	65		34200	36.7	7200	64		46500	48.6	9700
			875	49		37100	30	7200	48		50000	39.4	9700
2	0	.	3500	174	20.04	24700	70.5	7130	171	20.46	35000	98	9700
			1750	87		31200	44.4	7200	85		43100	60.1	9700
			1160	57		35800	33.8	7200	56		48800	45	9700
			875	43		37500	26.7	7200	42		49500	34.5	9700
2	2	.	3500	154	22.7	27600	69.9	7200	153	22.76	37200	93.8	9700
			1750	77		34000	42.9	7200	76		45800	57.5	9700
			1160	51		38500	32.1	7200	50		51800	43.1	9700
			875	38		41600	26.2	7200	38		56400	35.4	9700
2	5	.	3500	135	25.88	29100	64.5	7200	135	25.77	38900	86.8	9700
			1750	67		35800	39.6	7200	67		47900	53.2	9700
			1160	44		40500	29.6	7200	45		54200	39.9	9700
			875	33		42000	23.2	7200	33		59000	32.7	9700
2	8	.	3500	123	28.41	26700	53.9	7200	124	28.04	39600	80.8	9700
			1750	61		33800	34	7200	62		48700	49.6	9700
			1160	40		37500	25	7200	41		52100	35.1	9700
			875	30		37500	18.8	7200	31		52100	26.5	9700
3	2	.	3500	110	31.56	27000	49	7200	112	31.16	41100	75.5	9700
			1750	55		34100	30.9	7200	56		50600	46.4	9700
			1160	36		37500	22.5	7200	37		51300	31.1	9700
			875	27		37500	17	7200	28		51300	23.5	9700
3	6	.	3500	95	36.69	33100	51.8	7200	99	35.32	43900	71.4	9700
			1750	47		40800	31.8	7200	49		54000	43.8	9700
			1160	31		42900	22.1	7200	32		61100	32.8	9700
			875	23		42900	16.7	7200	24		61400	24.8	9700

Column Entry			input speed N1 (rpm)	F09					F10				
6	7	8		N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)	N2 (rpm)	i (:1)	M2 (lb.in)	Pm (HP)	fra (lbf)
			3500	85		34300	48.3	7200	89		45500	66.6	9700
4	0	.	1750	42	40.76	42300	29.7	7200	44	39.25	56000	40.9	9700
			1160	28		42300	19.7	7200	29		60500	29.2	9700
			875	21		42300	14.8	7200	22		60500	22.1	9700
4	5	.	3500	78	44.58	28700	37	7200	78	44.43	46700	60.1	9700
			1750	39		36300	23.3	7200	39		53500	34.4	9700
			1160	26		37500	16	7200	26		53500	22.8	9700
			875	19		37500	12	7200	19		53500	17.2	9700
5	0	.	3500	71	49.22	29100	33.9	7200	68	51.19	49000	54.8	9700
			1750	35		36700	21.3	7200	34		53800	30.1	9700
			1160	23		37500	14.5	7200	22		53800	19.9	9700
			875	17		37500	10.9	7200	17		53800	15	9700
5	6	.	3500	60	57.58	37100	37	7200	62	55.97	51600	52.9	9700
			1750	30		43100	21.5	7200	31		62400	31.9	9700
			1160	20		43100	14.2	7200	20		62400	21.2	9700
			875	15		43100	10.7	7200	15		62400	16	9700
6	3	.	3500	55	63.56	37500	33.9	7200	54	64.49	54100	48.2	9700
			1750	27		43100	19.4	7200	27		62600	27.9	9700
			1160	18		43100	12.9	7200	17		62600	18.5	9700
			875	13		43100	9.71	7200	13		62600	13.9	9700
7	1	.	3500	51	67.71	30000	25.5	7200	50	69.24	53700	44.6	9700
			1750	25		35000	14.8	7200	25		54100	22.4	9700
			1160	17		35000	9.82	7200	16		54100	14.9	9700
			875	12		35000	7.41	7200	12		54100	11.2	9700
8	0	.	3500	45	76.14	30000	22.7	7200	47	74.39	49600	38.3	9700
			1750	22		32400	12.2	7200	23		49600	19.2	9700
			1160	15		32400	8.11	7200	15		49600	12.7	9700
	</												

# SERIES F

## TRIPLE REDUCTION RATINGS

### SIZES F09 - F10

Note: Input Power, Pm may exceed thermal limit, Check thermal power page 48

Column Entry			input rpm	F09					F10				
				N2	i	M2	Pm	fra	N2	i	M2	Pm	fra
6	7	8	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	
			3500	34		36900	21	7200	34		47600	27.1	9700
1	0	0	1750	17	102.5	37500	10.6	7200	17	102.8	54100	15.3	9700
			1160	11		37500	7.03	7200	11		54100	10.1	9700
			875	8		37500	5.29	7200	8		54100	7.61	9700
			3500	30		37500	19.2	7200	30		48600	24.9	9700
1	1	2	1750	15	113.9	37500	9.57	7200	15	114.2	54100	13.7	9700
			1160	10		37500	6.33	7200	10		54100	9.09	9700
			875	7		37500	4.77	7200	7		54100	6.85	9700
			3500	26		43100	19.1	7200	27		59900	27.1	9700
1	2	5	1750	13	132.3	43100	9.47	7200	13	129.5	60500	13.6	9700
			1160	8		43100	6.26	7200	8		60500	8.98	9700
			875	6		43100	4.72	7200	6		60500	6.77	9700
			3500	23		43100	17.2	7200	24		60400	24.6	9700
1	4	0	1750	11	147	43100	8.53	7200	12	143.9	60500	12.2	9700
			1160	7		43100	5.64	7200	8		60500	8.09	9700
			875	5		43100	4.25	7200	6		60500	6.09	9700
			3500	21		37500	13.6	7200	21		53500	19.1	9700
1	6	0	1750	10	160.8	37500	6.78	7200	10	162.9	54100	9.64	9700
			1160	7		37500	4.49	7200	7		54100	6.38	9700
			875	5		37500	3.38	7200	5		54100	4.81	9700
			3500	19		37500	12.3	7200	18		54100	16.8	9700
1	8	0	1750	9	177.5	37500	6.14	7200	9	187.7	54100	8.37	9700
			1160	6		37500	4.06	7200	6		54100	5.54	9700
			875	4		37500	3.06	7200	4		54100	4.18	9700
			3500	16		43100	12.1	7200	17		60400	17.2	9700
2	0	0	1750	8	207.7	43100	6.04	7200	8	205.2	60500	8.57	9700
			1160	5		43100	4	7200	5		60500	5.67	9700
			875	4		43100	3.01	7200	4		60500	4.27	9700
			3500	15		43100	11	7200	14		60500	15	9700
2	2	5	1750	7	229.3	43100	5.47	7200	7	236.4	60500	7.45	9700
			1160	5		43100	3.62	7200	4		60500	4.93	9700
			875	3		43100	2.73	7200	3		60500	3.71	9700
			3500	14		37500	8.97	7200	13		54100	12.4	9700
2	5	0	1750	7	244.2	37500	4.47	7200	6	253.9	54100	6.2	9700
			1160	4		37500	2.96	7200	4		54100	4.11	9700
			875	3		37500	2.23	7200	3		54100	3.09	9700
			3500	12		37500	7.99	7200	12		54100	11.6	9700
2	8	0	1750	6	274.6	37500	3.98	7200	6	272.7	54100	5.78	9700
			1160	4		37500	2.64	7200	4		54100	3.83	9700
			875	3		37500	1.99	7200	3		54100	2.89	9700
			3500	11		43100	8	7200	10		60500	11.1	9700
3	1	5	1750	5	315.4	43100	3.98	7200	5	319.8	60500	5.52	9700
			1160	3		43100	2.64	7200	3		60500	3.65	9700
			875	2		43100	1.99	7200	2		60500	2.75	9700
			3500	9		43100	7.13	7200	10		60500	10.3	9700
3	6	0	1750	4	354.7	43100	3.55	7200	5	343.6	60500	5.14	9700
			1160	3		43100	2.35	7200	3		60500	3.4	9700
			875	2		43100	1.77	7200	2		60500	2.57	9700



# SERIES F

## QUADRUPLE REDUCTION RATINGS

### SIZES F03 - F06

Note: Input Power, Pm may exceed thermal limit, Check thermal power page 48

Column Entry			Input Speed N1 (rpm)	F0342					F0442					F0542					F0642				
				N2	i	M2	Pm	fra	N2	i	M2	Pm	fra	N2	i	M2	Pm	fra	N2	i	M2	Pm	fra
6	7	8	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	
			3500	1.45		3558	0.09		1.45		3558	0.09		1.45		5974	0.14		1.38		8027	0.18	
2	5	C	1750	0.73	2407	3558	0.04	1600	0.73	2407	3558	0.04	1600	0.72	2421	5974	0.07	2060	0.69	2539	8027	0.09	2540
			1160	0.48		3558	0.03		0.48		3558	0.03		0.48		5974	0.05		0.46		8027	0.06	
			875	0.36		3558	0.02		0.36		3558	0.02		0.36		5974	0.04		0.34		8027	0.05	
			3500	1.27		3558	0.08		1.27		3558	0.08		1.27		5974	0.13		1.21		8027	0.16	
2	8	C	1750	0.63	2759	3558	0.04	1600	0.63	2759	3558	0.04	1600	0.64	2747	5974	0.06	2060	0.61	2882	8027	0.08	2540
			1160	0.42		3558	0.02		0.42		3558	0.02		0.42		5974	0.04		0.40		8027	0.05	
			875	0.32		3558	0.02		0.32		3558	0.02		0.32		5974	0.03		0.30		8027	0.04	
			3500	1.11		3336	0.06		1.11		3336	0.06		1.12		5974	0.11		1.12		7691	0.14	
3	2	C	1750	0.56	3153	3336	0.03	1600	0.49	3153	3336	0.03	1600	0.56	3123	5974	0.06	2060	0.56	3112	7691	0.07	2540
			1160	0.37		3336	0.02		0.32		3336	0.02		0.37		5974	0.04		0.37		7691	0.05	
			875	0.28		3336	0.02		0.24		3336	0.01		0.28		5974	0.03		0.28		7691	0.04	
			3500	0.98		3000	0.05		0.98		3000	0.05		1.01		4531	0.08		0.99		7691	0.13	
3	6	C	1750	0.49	3578	3000	0.02	1600	0.49	3578	3000	0.02	1600	0.50	3481	4531	0.04	2060	0.50	3532	7691	0.06	2540
			1160	0.32		3000	0.02		0.32		3000	0.02		0.33		4531	0.03		0.33		7691	0.04	
			875	0.24		3000	0.01		0.24		3000	0.01		0.25		4531	0.02		0.25		7691	0.03	
			3500	0.85		3000	0.04		0.85		3000	0.04		0.90		3230	0.05		0.89		5841	0.09	
4	0	C	1750	0.43	4102	3000	0.02	1600	0.43	4102	3000	0.02	1600	0.45	3904	3230	0.02	2060	0.44	3937	5841	0.04	2540
			1160	0.28		3000	0.01		0.28		3000	0.01		0.30		3230	0.02		0.29		5841	0.03	
			875	0.21		3000	0.01		0.21		3000	0.01		0.22		3230	0.01		0.22		5841	0.02	
			3500	0.75		2673	0.03		0.75		2673	0.03							0.79		4160	0.06	
4	5	C	1750	0.38	4663	2673	0.02	1600	0.38	4663	2673	0.02	1600						0.40	4415	4160	0.03	2540
			1160	0.25		2673	0.01		0.25		2673	0.01							0.26		4160	0.02	
			875	0.19		2673	0.01		0.19		2673	0.01							0.20		4160	0.01	
			3500	0.66		2673	0.03		0.66		2673	0.03							0.70		4160	0.05	
5	0	C	1750	0.33	5299	2673	0.01	1600	0.33	5299	2673	0.01	1600						0.35	5019	4160	0.02	2540
			1160	0.22		2673	0.01		0.22		2673	0.01							0.23		4160	0.02	
			875	0.17		2673	0.01		0.17		2673	0.01							0.17		4160	0.01	
			3500																				
5	6	C	1750																				
			1160																				
			875																				

# SERIES F

## QUADRUPLE REDUCTION RATINGS

### SIZES F07 - F10

Note: Input Power, Pm may exceed thermal limit, Check thermal power page 48

Column Entry			Input Speed N1 (rpm)	F0742					F0842					F0941					F1041				
				N2	i	M2	Pm	fra	N2	i	M2	Pm	fra	N2	i	M2	Pm	fra	N2	i	M2	Pm	fra
6	7	8	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	
			3500																				
3	2	0	1750																				
			1160																				
			875																				
			3500																				
3	6	0	1750																				
			1160																				
			875																				
			3500	8.66	404	14072	2.04	3800	8.84	396	23895	3.53	4430	8.85	396	4230	3.42	7200	8.73	401	4230	3.42	9700
4	0	0	1750	4.33		14072	1.02	3800	4.42		23895	1.76	4430	4.42		4230	1.71	7200	4.37		4230	1.71	9700
			1160	2.87		14072	0.67		2.93		23895	1.17		2.93		4230	1.13		2.89		4230	1.13	
			875	2.17		14072	0.51		2.21		23895	0.88		2.21		4230	0.85		2.18		4230	0.85	
			3500	7.54	464	15222	1.92	3800	7.60	460	23895	3.03	4430	7.61	460	4230	2.94	7200	7.86	445	4230	2.94	9700
4	5	0	1750	3.77		15222	0.96	3800	3.80		23895	1.52	4430	3.80		4230	1.47	7200	3.93		4230	1.47	9700
			1160	2.50		15222	0.64		2.52		23895	1.01		2.52		4230	0.97		2.61		4230	0.97	
			875	1.88		15222	0.48		1.90		23895	0.76		1.90		4230	0.73		1.96		4230	0.73	
			3500	6.55	534	15222	1.67	3800	7.14	490	24515	2.92	4430	6.85	511	4230	2.65	7200	7.15	490	4230	2.65	9700
5	0	0	1750	3.28		15222	0.83	3800	3.57		24515	1.46	4430	3.42		4230	1.32	7200	3.57		4230	1.32	9700
			1160	2.17		15222	0.55		2.37		24515	0.97		2.27		4230	0.88		2.37		4230	0.88	
			875	1.64		15222	0.42		1.79		24515	0.73		1.71		4230	0.66		1.79		4230	0.66	
			3500	6.03	581	15222	1.53	3800	6.14	570	24515	2.51	4430	5.89	594	4230	2.28	7200	6.22	563	4230	2.28	9700
5	6	0	1750	3.01		15222	0.77	3800	3.07		24515	1.26	4430	2.94		4230	1.14	7200	3.11		4230	1.14	9700
			1160	2.00		15222	0.51		2.04		24515	0.83		1.95		4230	0.75		2.06		4230	0.75	
			875	1.51		15222	0.38		1.54		24515	0.63		1.47		4230	0.56		1.55		4230	0.56	
			3500	5.32	658	16461	1.46	3800	5.49	638	24515	2.25	4430	5.26	665	4230	2.03	7200	5.48	638	4230	2.03	9700
6	3	0	1750	2.66		16461	0.73	3800	2.74		24515	1.12	4430	2.63		4230	1.02	7200	2.74		4230	1.02	9700
			1160	1.76		16461	0.48		1.82		24515	0.74		1.74		4230	0.67		1.82		4230	0.67	
			875	1.33		16461	0.37		1.37		24515	0.56		1.32		4230	0.50		1.37		4230	0.50	
			3500	4.82	726	16727	1.35	3800	5.15	680	24515	2.11	4430	4.94	709	4230	1.91	7200	4.97	704	4230	1.91	9700
7	0	0	1750	2.41		16727	0.67	3800	2.57		24515	1.05	4430	2.47		4230	0.95	7200	2.49		4230	0.95	9700
			1160	1.60		16727	0.45		1.71		24515	0.70		1.64		4230	0.63		1.65		4230	0.63	
			875	1.20		16727	0.34		1.29		24515	0.53		1.23		4230	0.47		1.24		4230	0.47	
			3500	4.21	832	16727	1.18	3800	4.35	806	24515	1.78	4430	4.17	840	4230	1.61	7200	4.34	806	4230	1.61	9700
8	0	0	1750	2.10		16727	0.59	3800	2.17		24515	0.89	4430	2.08		4230	0.80	7200	2.17		4230	0.80	9700
			1160	1.39		16727	0.39		1.44		24515	0.59		1.38		4230	0.53		1.44		4230	0.53	
			875	1.05		16727	0.29		1.09		24515	0.44		1.04		4230	0.40		1.09		4230	0.40	
			3500	3.71	944	16727	1.04	3800	3.85	910	28320	1.82	4430	3.78	927	4230	1.46	7200	3.78	925	4230	1.46	9700
9	0	0	1750	1.85		16727	0.52	3800	1.92		28320	0.91	4430	1.89		4230	0.73	7200	1.89		4230	0.73	9700
			1160	1.23		16727	0.34		1.28		28320	0.60		1.25		4230	0.48		1.25		4230	0.48	
			875	0.93		16727	0.26		0.96		28320	0.46		0.94		4230	0.36		0.95		4230	0.36	
			3500	3.37	1040	16727	0.94	3800	3.44	1018	28320	1.63	4430	3.38	1037	4230	1.30	7200	3.34	1049	4230	1.30	9700
1	0	C	1750	1.68		16727	0.47	3800	1.72		28320	0.81	4430	1.69		4230	0.65	7200	1.67		4230	0.65	9700
			1160	1.12		16727	0.31		1.14		28320	0.54		1.12		4230	0.43		1.11		4230	0.43	
			875	0.84		16727	0.24		0.86		28320	0.41		0.84		4230	0.32		0.83		4230	0.32	
			3500	3.21	1090	16727	0.90	3800	3.23	1085	28320	1.53	4430	3.17	1105	4230	1.22	7200	3.03	1157	4230	1.22	9700
1	1	C	1750	1.61		16727	0.45	3800	1.61		28320	0.76	4430	1.58		4230	0.61	7200	1.51		4230	0.61	9700
			1160	1.06		16727	0.30		1.07		28320	0.51		1.05		4230	0.41		1.00		4230	0.41	
			875	0.80		16727	0.22		0.81		28320	0.38		0.79		4230	0.30		0.76		4230	0.30	
			3500	2.93	1196	16727	0.82	3800	2.94	1191	28320	1.39	4430	2.97	1177	4230	1.15	7200	2.64	1325	4230	1.15	9700
1	2	C	1750	1.46		16727	0.41	3800	1.47		28320	0.69	4430	1.49		4230	0.57	7200	1.32		4230	0.57	9700
			1160	0.97		16727	0.27		0.97		28320	0.46		0.99		4230	0.38		0.88		4230	0.38	
			875	0.73		16727	0.20		0.73		28320	0.35		0.74		4230	0.29		0.66		4230	0.29	
			3500	2.59	1350	16727	0.72	3800	2.48	1412	28320	1.17	4430	2.51	1395	4230	0.97	7200	2.34	1498	4230	0.97	9700
1	4	C	1750	1.30		16727	0.36	3800	1.24		28320	0.59	4430	1.25		4230	0.48	7200	1.17		4230	0.48	9700
			1160	0.86		16727	0.24		0.82		28320	0.39		0.83		4230	0.32		0.77		4230	0.32	
			875	0.65		16727	0.18		0.62		28320	0.29		0.63		4230	0.24		0.58		4230	0.24	
			3500	2.23	1571	16727	0.62	3800	2.20	1594	28320	1.04	4430	2.30	1520	4230	0.89	7200	2.24	1564	4230	0.89	9700
1	6	C	1750	1.11		16727	0.31	3800	1.10		28320	0.52	4430	1.15		4230	0.44	7200	1.12		4230	0.44	9700
			1160	0.74		16727	0.21		0.73		28320	0.34		0.76		4230	0.29		0.74		4230	0.29	
			875	0.56		16727	0.16		0.55		28320	0.26		0.58		4230	0.22		0.56		4230	0.22	
			3500	1.98	1770	16727	0.55	3800	1.85	1890	28320	0.88	4430	1.94	1802	4230	0.75	7200	1.95	1792	4230	0.75	9700
1	8	C	1750	0.99		16727	0.28	3800	0.93		28320	0.44	4430	0.97		4230	0.38	7200	0.98		4230	0.38	9700
			1160	0.66		16727	0.18		0.61		28320	0.29		0.64		4230	0.25		0.65		4230	0.25	
			875	0.49		16727	0.14		0.46		28320	0.22		0.49		4230	0.19		0.49		4230	0.19	
			3500	1.71	2052	16727	0.48	3800	1.73	2017	28320	0.82	4430	1.82	1924	4230	0.70	7200	1.73	2026	4230	0.70	9700
2	0	C	1750	0.85		16727	0.24	3800	0.87		28320	0.41	4430	0.91		4230	0.35	7200	0.86		4230	0.35	9700
			1160	0.57		16727	0.16		0.57		28320	0.27		0.60		4230	0.23		0.57		4230	0.23	
			875	0.43		167																	

# SERIES F

## QUADRUPLE REDUCTION RATINGS

### SIZES F07 - F10

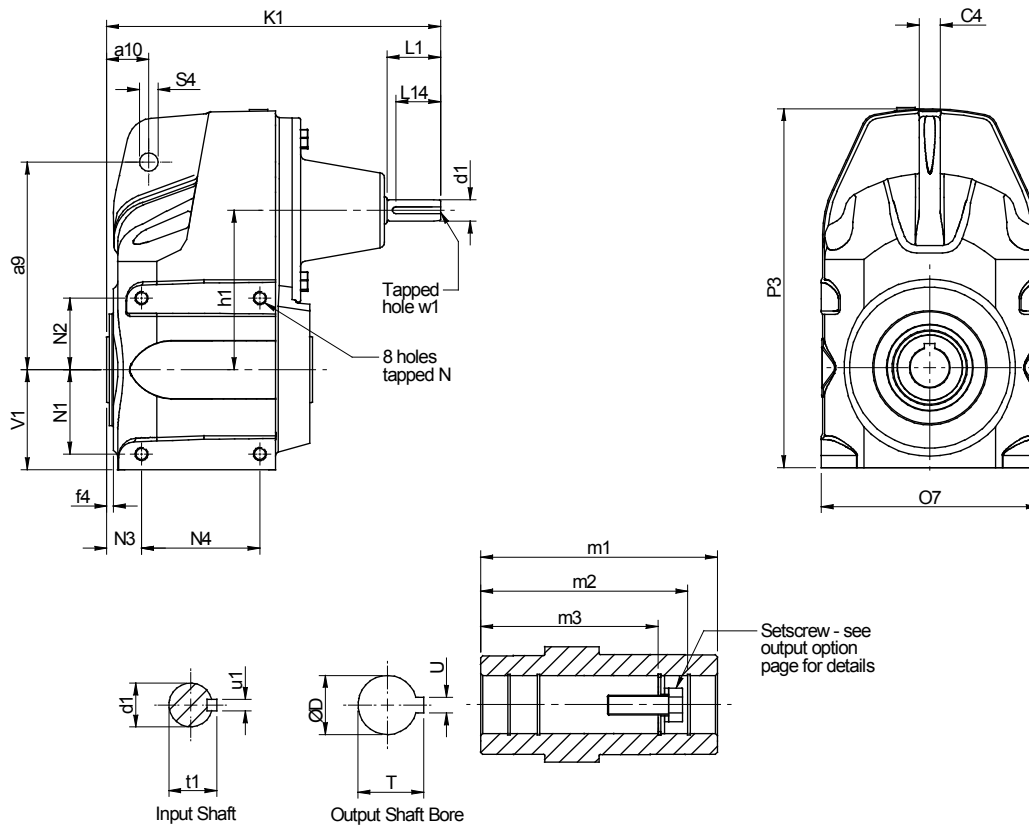
Note: Input Power, Pm may exceed thermal limit, Check thermal power page 48

Column Entry			Input Speed N1 (rpm)	F0742					F0842					F0941					F1041				
				N2	i	M2	Pm	fra	N2	i	M2	Pm	fra	N2	i	M2	Pm	fra	N2	i	M2	Pm	fra
6	7	8	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	(rpm)	(:1)	(lb.in)	(HP)	(lbf)	
			3500	1.43		1.40		1.40		28320	0.66		1.47		4230	0.57		1.39		4230	0.57		
2	5	C	1750	0.71	2454	16727	0.20	3800	0.70	2503	28320	0.33	4430	0.73	2387	4230	0.28	7200	0.69	2523	4230	0.28	9700
			1160	0.47		16727	0.13		0.46		28320	0.22		0.49		4230	0.19		0.46		4230	0.19	
			875	0.36		16727	0.10		0.35		28320	0.17		0.37		4230	0.14		0.35		4230	0.14	
			3500	1.26		16727	0.35		1.29		28320	0.61		1.24		4230	0.48		1.25		4230	0.48	
2	8	C	1750	0.63	2785	16727	0.18	3800	0.65	2703	28320	0.31	4430	0.62	2815	4230	0.24	7200	0.62	2801	4230	0.24	9700
			1160	0.42		16727	0.12		0.43		28320	0.20		0.41		4230	0.16		0.41		4230	0.16	
			875	0.31		16727	0.09		0.32		28320	0.15		0.31		4230	0.12		0.31		4230	0.12	
			3500	1.09		14603	0.26		1.08		28320	0.51		1.14		4230	0.44		1.14		4230	0.44	
3	2	C	1750	0.54	3225	14603	0.13	3800	0.54	3232	28320	0.26	4430	0.57	3082	4230	0.22	7200	0.57	3068	4230	0.22	9700
			1160	0.36		14603	0.09		0.36		28320	0.17		0.38		4230	0.15		0.38		4230	0.15	
			875	0.27		14603	0.07		0.27		28320	0.13		0.28		4230	0.11		0.29		4230	0.11	
			3500	0.96		14603	0.23		0.96		28320	0.46		0.96		4230	0.37		0.95		4230	0.37	
3	6	C	1750	0.48	3660	14603	0.12	3800	0.48	3628	28320	0.23	4430	0.48	3656	4230	0.18	7200	0.48	3681	4230	0.18	9700
			1160	0.32		14603	0.08		0.32		28320	0.15		0.32		4230	0.12		0.32		4230	0.12	
			875	0.24		14603	0.06		0.24		28320	0.11		0.24		4230	0.092		0.24		4230	0.092	
			3500	0.84		14603	0.21		0.88		28320	0.42		0.93		4230	0.36		0.83		4230	0.36	
4	0	C	1750	0.42	4161	14603	0.10	3800	0.44	3961	28320	0.21	4430	0.46	3777	4230	0.18	7200	0.41	4235	4230	0.18	9700
			1160	0.28		14603	0.07		0.29		28320	0.14		0.31		4230	0.12		0.27		4230	0.12	
			875	0.21		14603	0.05		0.22		28320	0.10		0.23		4230	0.089		0.21		4230	0.089	
			3500	0.75		11417	0.14		0.79		28320	0.37		0.83		4230	0.32		0.77		4230	0.32	
4	5	C	1750	0.37	4679	11417	0.07	3800	0.40	4415	28320	0.19	4430	0.42	4210	4230	0.16	7200	0.38	4550	4230	0.16	9700
			1160	0.25		11417	0.05		0.26		28320	0.12		0.28		4230	0.11		0.25		4230	0.11	
			875	0.19		11417	0.04		0.20		28320	0.09		0.21		4230	0.080		0.19		4230	0.080	
			3500	0.66		9735	0.11		0.71		28320	0.33		0.74		4230	0.29		0.74		4230	0.29	
5	0	C	1750	0.33	5319	9735	0.05	3800	0.35	4952	28320	0.17	4430	0.37	4722	4230	0.14	7200	0.37	4706	4230	0.14	9700
			1160	0.22		9735	0.04		0.23		28320	0.11		0.25		4230	0.095		0.25		4230	0.095	
			875	0.16		9735	0.03		0.18		28320	0.08		0.19		4230	0.071		0.19		4230	0.071	
			3500						0.61		26019	0.27		0.66		4220	0.25		0.69		4220	0.25	
5	6	C	1750						0.31	5702	26019	0.13	4430	0.33	5310	4220	0.13	7200	0.35	5056	4220	0.13	9700
			1160						0.20		26019	0.09		0.22		4220	0.084		0.23		4220	0.084	
			875						0.15		26019	0.07		0.16		4220	0.063		0.17		4220	0.063	

# SERIES F

## DIMENSIONS

### REDUCER



UNIT SIZE	a9	a10	C4	f4	h1	K1	N	N1	N2	N3	N4	O7	P3	S4	V1
F0222 F0232	5.51	0.98	0.59	0.20	3.77	9.09 9.69	M8 x 1.25p 0.39 deep	1.89	1.50	0.96	2.68	5.67	8.82	0.59	2.32
F0322 F0332	6.22	1.26	0.63	0.20	4.78	9.92 10.43	M10 x 1.50p 0.59 deep	2.52	2.09	0.96	3.58	6.50	10.75	0.59	2.99
F0422 F0432	6.69	1.26	0.63	0.20	4.78	9.92 10.43	M10 x 1.50p 0.59 deep	2.52	2.09	0.96	3.58	6.50	10.75	0.59	2.99
F0522 F0532	7.80	1.61	0.63	0.20	5.69	11.34 11.65	M10 x 1.50p 0.63 deep	2.56	2.95	1.08	4.59	7.88	12.52	0.59	3.15
F0622 F0632	8.58	1.61	0.63	0.24	6.51	11.77 12.09	M12 x 1.75p 0.67 deep	3.37	3.52	1.34	4.72	8.86	14.37	0.59	3.98
F0722 F0732	10.94	1.97	0.79	0.28	7.87	13.27 13.74	M16 x 2.00p 0.79 deep	4.31	3.64	1.42	5.75	10.87	17.40	0.94	5.00
F0822 F0832	13.62	2.44	1.02	0.12	9.57	16.46 15.87	M16 x 2.00p 0.79 deep	5.22	4.63	1.75	6.61	13.39	21.10	0.94	6.14
F0921 F0931	15.55	2.76	1.18	0.20	10.77	19.33 19.41	M16 x 2.00p 0.94 deep	4.92	8.86	1.50	8.46	15.75	24.09	1.06	6.89
F1021 F1031	19.09	3.46	1.42	0.22	13.05	22.68 22.76	M20 x 2.50p 1.06 deep	6.22	10.71	1.63	9.84	18.48	29.45	1.06	8.50



# SERIES F

## DIMENSIONS

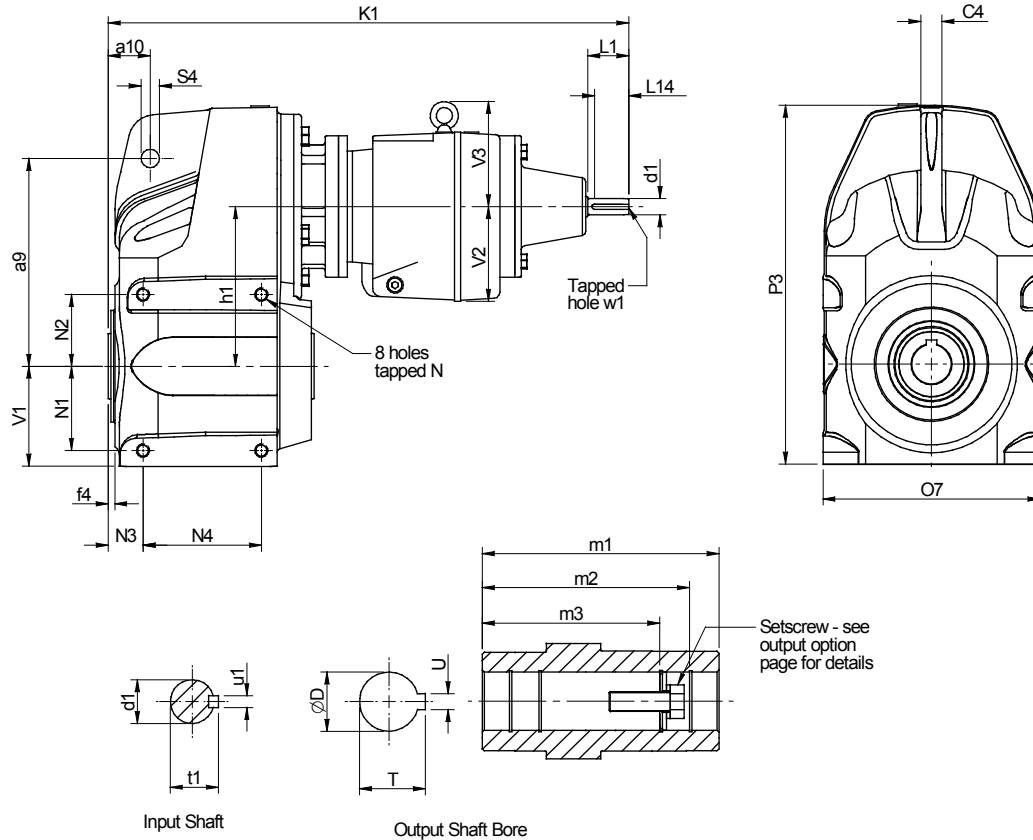
### REDUCER

UNIT SIZE	Input Shaft						Hollow Output Bore					
	d1	L1	L14	t1	u1	w1	D	m1	m2	m3	T	U
F0222 F0232	0.625	1.57	1.28	0.71	0.2	0.25UNF	1	4.63	4.13	3.5	1.11	0.25
	0.625	1.57	1.28	0.71	0.2	0.25UNF						
F0322 F0332	0.625	1.57	1.28	0.71	0.2	0.25UNF	1.25	6.16	4.8	4.13	1.37	0.25
	0.625	1.57	1.28	0.71	0.2	0.25UNF						
F0422 F0432	0.625	1.57	1.28	0.71	0.2	0.25UNF	1.38	6.16	5.2	4.8	1.53	0.31
	0.625	1.57	1.28	0.71	0.2	0.25UNF						
F0522 F0532	0.75	1.57	1.28	0.85	0.24	0.25UNF	1.5	7.05	6.85	5.59	1.67	0.38
	0.625	1.57	1.28	0.71	0.2	0.25UNF						
F0622 F0632	0.75	1.57	1.28	0.85	0.24	0.25UNF	1.5	8.07	6.85	6.14	1.67	0.38
	0.625	1.57	1.28	0.71	0.2	0.25UNF						
F0722 F0732	0.875	1.97	1.28	1.06	0.31	0.312UNF	2	9.19	7.8	7.2	2.23	0.5
	0.75	1.57	1.28	0.85	0.24	0.25UNF						
F0822 F0832	1.125	2.36	2	1.22	0.31	0.375UNF	2.38	10.63	9.06	8.27	2.66	0.63
	0.875	1.97	1.28	1.06	0.31	0.312UNF						
F0921 F0931	1.375	3.15	2.4	1.51	0.31	0.50UNF	2.75	12.99	10.63	-	3.04	0.63
	1.125	2.36	2	1.22	0.31	0.375UNF						
F1021 F1031	1.625	4.33	3.69	1.79	0.38	0.625UNF	3.25	14.57	12.32	-	3.59	0.75
	1.375	3.15	3.15	1.51	0.31	0.50UNF						

# SERIES F

## DIMENSIONS

### REDUCER QUAD



UNIT SIZE	a9	a10	C4	f4	h1	K1	N	N1	N2	N3	N4	O7	P3	S4	V1
F0342	6.22	1.26	0.63	0.20	4.78	17.24	M10 x 1.50p 0.59 deep	2.52	2.09	0.96	3.58	6.50	10.75	0.59	2.99
F0442	6.69	1.26	0.63	0.20	4.78	17.24	M10 x 1.50p 0.59 deep	2.52	2.09	0.96	3.58	6.50	10.75	0.59	2.99
F0542	7.80	1.61	0.63	0.20	5.69	19.29	M10 x 1.50p 0.63 deep	2.56	2.95	1.08	4.59	7.87	12.52	0.59	3.15
F0642	8.58	1.61	0.63	0.24	6.51	19.72	M12 x 1.75p 0.67 deep	3.37	3.52	1.34	4.72	8.87	14.37	0.59	3.98
F0742	10.94	1.97	0.79	0.28	7.87	21.10	M16 x 2.00p 0.79 deep	4.31	3.64	1.42	5.75	10.87	17.40	0.94	5.00
F0842	13.62	2.44	1.02	0.12	9.57	24.17	M16 x 2.00p 0.79 deep	5.22	4.63	1.75	6.61	13.39	21.10	0.94	6.14
F0941	15.55	2.76	1.18	0.20	10.77	26.10	M16 x 2.00p 0.94 deep	4.92	8.86	1.50	8.46	15.75	24.09	1.06	6.89
F1041	19.09	3.46	1.42	0.22	13.05	29.53	M20 x 2.50p 1.06 deep	6.22	10.71	1.63	9.84	18.48	29.45	1.06	8.50

UNIT SIZE	Input Shaft						Hollow Output Bore					
	d1	L1	L14	t1	u1	w1	D	m1	m2	m3	T	U
F0342	0.625	1.57	1.28	0.71	0.20	0.25UNF	1.25	6.16	4.80	4.13	1.37	0.25
F0442	0.625	1.57	1.28	0.71	0.20	0.25UNF	1.38	6.16	5.20	4.80	1.53	0.31
F0542	0.625	1.57	1.28	0.71	0.20	0.25UNF	1.50	7.05	6.85	5.59	1.67	0.38
F0642	0.625	1.57	1.28	0.71	0.20	0.25UNF	1.50	8.07	6.85	6.14	1.67	0.38
F0742	0.625	1.57	1.28	0.71	0.20	0.25UNF	2.00	9.19	7.80	7.20	2.23	0.50
F0842	0.750	1.57	1.28	0.85	0.24	0.25UNF	2.38	10.63	9.06	8.27	2.66	0.63
F0941	0.750	1.57	1.28	0.85	0.24	0.25UNF	2.75	12.99	10.63	-	3.04	0.63
F1041	0.875	1.57	1.28	1.06	0.31	0.312UNF	3.25	14.57	12.32	-	3.59	0.75

# SERIES F

## FAN COOLED UNITS

### Column 10 Entry

For reducer fan kit modules enter **S** in column 10

or if used in conjunction with a reducer backstop module kit

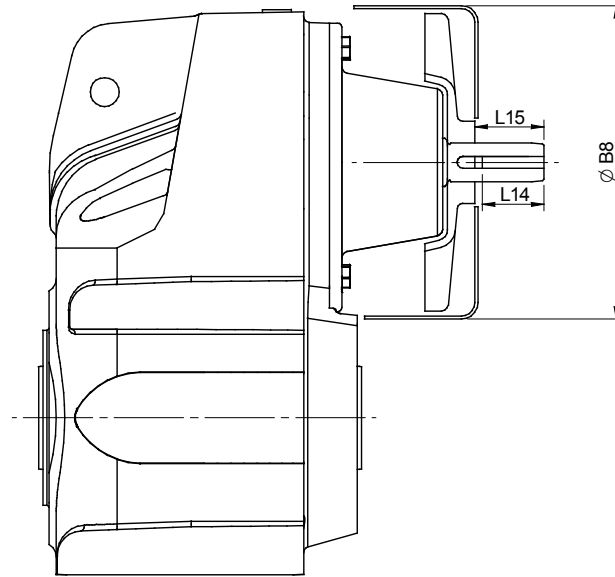
**Y**

CW rotation

**Z**

CCW rotation

### Dimensions of Fan Cooled Units



UNIT SIZE	ØB8	L14	L15
<b>F0722</b>	8.86	1.28	1.38
<b>F0822</b>	10.43	2.0	1.77
<b>F0921</b>	12.60	2.40	2.56
<b>F1021</b>	14.96	3.69	3.74

# SERIES F REDUCER BACKSTOP MODULE

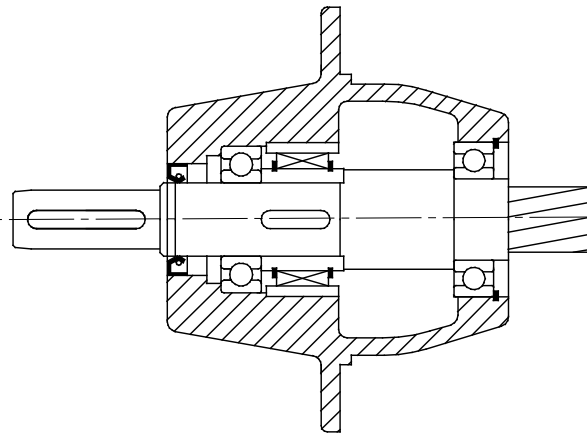
The reducer units listed below can be fitted with an internal backstop, this has no effect of the external unit size. The backstop device incorporates high quality centrifugal lift off sprags which are wear free above the lift off speed (n min). To ensure correct operation input speed must exceed lift off speed.

Suitable for ambient temperature -40°F to + 122°F (-40°C to + 50°C)

## Column 10 Entry

For reducer backstop modules enter

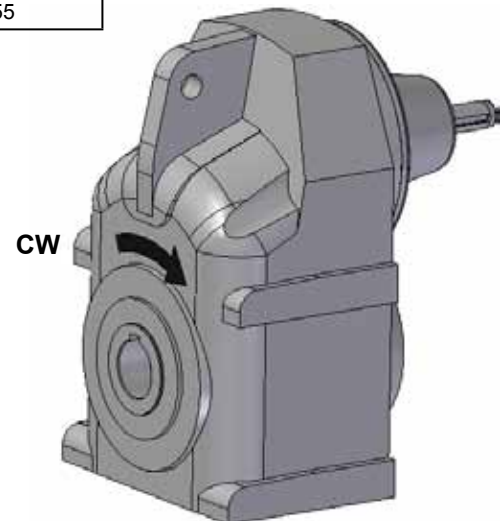
W for CCW rotation      (or Z if used in conjunction with a fan kit)  
X for CW rotation      (or Y if used in conjunction with a fan kit)



Unit Size	Lift Off Speed ('n' min) (at inputshaft) (rev/min)	Rated Locking Torque ('T max') (at input shaft) (lb. in.)
F05	800	885
F06	800	885
F07	670	1505
F08	670	1505
F09	670	2655
F10	670	2655

Rotation of output shaft must be specified when ordering as viewed from the output shaft end (as shown in the diagram)

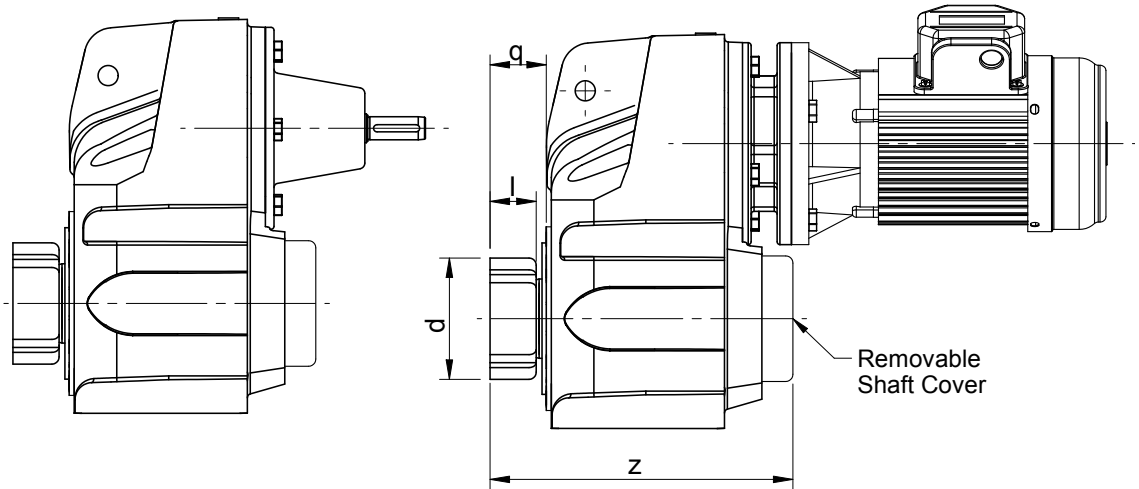
CW	-	Free Rotation	-	Clockwise
		Locked		Counterclockwise
CCW	-	Free Rotation	-	Counterclockwise
		Locked		Clockwise



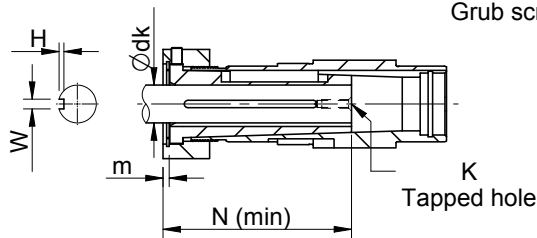
# SERIES F

## DIMENSIONS (INCHES)

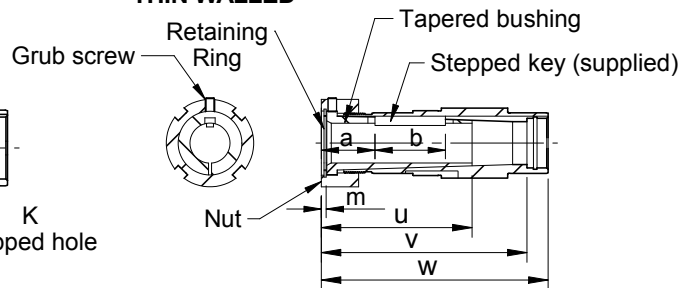
### TAPER RELEASE BUSHING



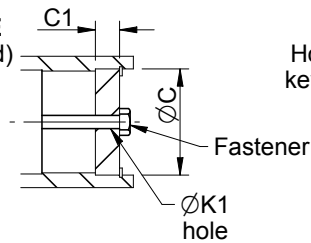
#### DRIVEN SHAFT



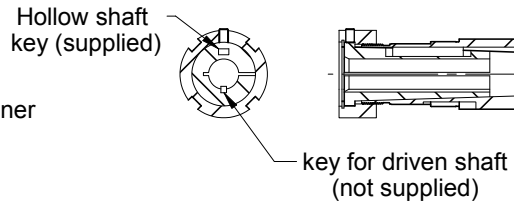
#### THIN WALLED



#### END PLATE (not supplied)



#### THICK WALLED



SIZE	Key		Bush			Nut			Gear Unit	
	a	b	u	v	w	d	l	m	q	z
F04 (107)TR	1.90	2.50	5.00	7.15	7.85	3.31	1.26	0.27	1.89	9.20
F05 (107)TR	1.90	2.50	5.00	7.09	8.74	3.31	1.26	0.27	1.89	10.40
F06 (115)TR	2.10	2.75	5.55	7.89	9.90	4.06	1.46	0.30	2.06	11.50
F07 (203)TR	1.55	3.25	5.55	8.73	10.88	4.31	1.46	0.30	1.97	12.50
F08 (207)TR	1.24	4.25	6.52	10.18	12.53	4.81	1.46	0.30	2.03	14.60
F09 (215)TR	2.09	3.50	7.08	13.00	15.00	5.68	1.76	0.38	2.24	17.60
F10 (307)TR	1.59	5.00	7.39	14.38	16.75	6.06	1.76	0.38	2.41	19.30

- Consult standard unit selection tables for power and torque ratings.
- All other gear unit dimensions may be obtained from the standard unit dimension pages.

# SERIES F

## DIMENSIONS (INCHES)

### TAPER RELEASE BUSHING

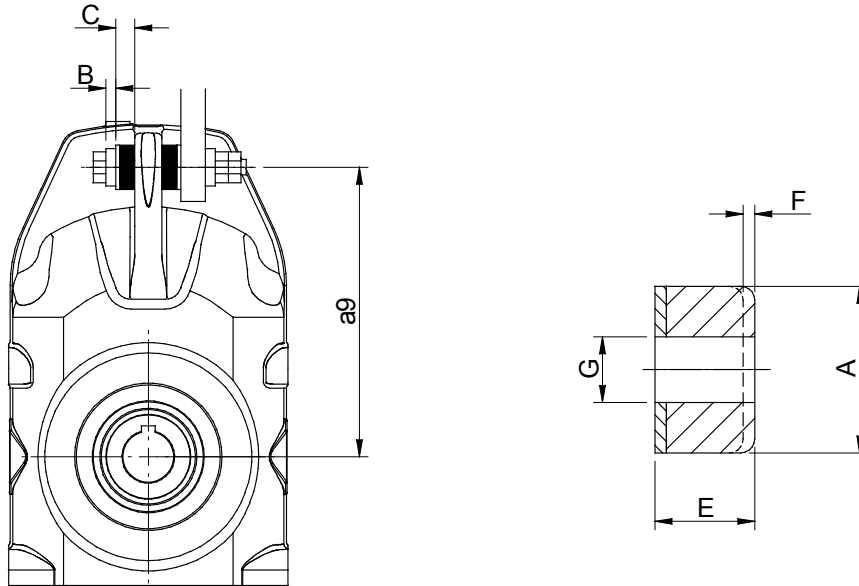
SIZE	Driven shaft diameter * (Ødk)	bushing style	driven shaft keyway			driven shaft			end plate			circlip	bushing weight (lbs)
			width (W)	depth (H)	min length ** (b1)	a1	K	N (min)	ØC	C1	K1		
F04 (107)TR & F05 (107)TR	1.000 / 0.996	Thick	1/4	1/8	2.75	-	1/2 UNC	5	1.64	0.3	5/8 UNC	N1300-0162	2.1
	1.125 / 1.121	Thick	1/4	1/8	2.75	-	1/2 UNC	5	1.64	0.3	5/8 UNC	N1300-0162	1.8
	1.188 / 1.184	Thick	1/4	1/8	2.75	-	1/2 UNC	5	1.64	0.3	5/8 UNC	N1300-0162	1.6
	1.250 / 1.246	Thin	1/4	1/8	2.5	1.89	1/2 UNC	5	1.64	0.3	5/8 UNC	N1300-0162	1.5
	1.438 / 1.434	Thin	3/8	3/16	2.5	1.89	1/2 UNC	5	1.64	0.3	5/8 UNC	N1300-0162	1
F06 (115)TR	1.188 / 1/184	Thick	1/4	1/8	2.75	-	1/2 UNC	5.55	2.25	0.37	5/8 UNC	N1300-0225	4.3
	1.250 / 1.246	Thick	1/4	1/8	2.75	-	1/2 UNC	5.55	2.25	0.37	5/8 UNC	N1300-0225	4.1
	1.438 / 1.434	Thick	3/8	3/16	2.5	-	1/2 UNC	5.55	2.25	0.37	5/8 UNC	N1300-0225	3.5
	1.500 / 1.496	Thick	3/8	3/16	2.5	-	1/2 UNC	5.55	2.25	0.37	5/8 UNC	N1300-0225	3.3
	1.625 / 1.620	Thin	3/8	3/16	2.75	2.1	1/2 UNC	5.55	2.25	0.37	5/8 UNC	N1300-0225	2.9
	1.688 / 1.683	Thin	3/8	3/16	2.75	2.1	1/2 UNC	5.55	2.25	0.37	5/8 UNC	N1300-0225	2.7
	1.750 / 1.745	Thin	3/8	3/16	2.75	2.1	1/2 UNC	5.55	2.25	0.37	5/8 UNC	N1300-0225	2.4
1.938 / 1.933	Thin	1/2	1/4	2.75	2.1	1/2 UNC	5.55	2.25	0.37	5/8 UNC	N1300-0225	1.7	
F07 (203)TR	1.438 / 1.434	Thick	3/8	3/16	2.75	-	5/8 UNC	5.55	2.43	0.43	3/4 UNC	N1300-0244	5
	1.500 / 1.496	Thick	3/8	3/16	2.75	-	5/8 UNC	5.55	2.43	0.43	3/4 UNC	N1300-0244	5.1
	1.625 / 1.620	Thick	3/8	3/16	2.75	-	5/8 UNC	5.55	2.43	0.43	3/4 UNC	N1300-0244	4.6
	1.688 / 1/683	Thick	3/8	3/16	2.75	-	5/8 UNC	5.55	2.43	0.43	3/4 UNC	N1300-0244	4.4
	1.750 / 1.745	Thick	3/8	3/16	2.75	-	5/8 UNC	5.55	2.43	0.43	3/4 UNC	N1300-0244	4.4
	1.875 / 1.870	Thin	1/2	1/4	3.25	1.56	5/8 UNC	5.55	2.43	0.43	3/4 UNC	N1300-0244	3.6
	1.938 / 1.933	Thin	1/2	1/4	3.25	1.56	5/8 UNC	5.55	2.43	0.43	3/4 UNC	N1300-0244	3.3
	2.000 / 1.995	Thin	1/2	1/4	3.25	1.56	5/8 UNC	5.55	2.43	0.43	3/4 UNC	N1300-0244	3
2.188 / 2.183	Thin	1/2	1/4	3.25	1.56	5/8 UNC	5.55	2.43	0.43	3/4 UNC	N1300-0244	3	
F08 (207)TR	1.375 / 1.371	Thick	3/16	5/32	4.75	-	5/8 UNC	6.11	2.83	0.43	3/4 UNC	N1300-0281	7.6
	1.438 / 1.434	Thick	3/8	3/16	3.25	-	5/8 UNC	6.11	2.83	0.43	3/4 UNC	N1300-0281	7.3
	1.500 / 1.496	Thick	3/8	3/16	3.25	-	5/8 UNC	6.11	2.83	0.43	3/4 UNC	N1300-0281	7.1
	1.625 / 1.620	Thick	3/8	3/16	3.25	-	5/8 UNC	6.11	2.83	0.43	3/4 UNC	N1300-0281	6.7
	1.688 / 1/683	Thick	3/8	3/16	3.25	-	5/8 UNC	6.11	2.83	0.43	3/4 UNC	N1300-0281	6.4
	1.750 / 1.745	Thick	3/8	3/16	3.25	-	5/8 UNC	6.11	2.83	0.43	3/4 UNC	N1300-0281	6.1
	1.875 / 1.870	Thick	1/2	1/4	3.25	-	5/8 UNC	6.11	2.83	0.43	3/4 UNC	N1300-0281	5.6
	1.938 / 1.933	Thin	1/2	1/4	4.25	1.24	5/8 UNC	6.11	2.83	0.43	3/4 UNC	N1300-0281	5.3
	2.000 / 1.995	Thin	1/2	1/4	4.25	1.24	5/8 UNC	6.11	2.83	0.43	3/4 UNC	N1300-0281	5
	2.188 / 2.183	Thin	1/2	1/4	4.25	1.24	5/8 UNC	6.11	2.83	0.43	3/4 UNC	N1300-0281	4.4
	2.250 / 2.245	Thin	1/2	1/4	4.25	1.24	5/8 UNC	6.11	2.83	0.43	3/4 UNC	N1300-0281	3.7
	2.438 / 2.433	Thin	5/8	5/16	4.25	1.24	5/8 UNC	6.11	2.83	0.43	3/4 UNC	N1300-0281	2.6
F09 (215)TR	1.938 / 1.933	Thick	1/2	1/4	5.25	-	7/8 UNC	7.08	3.33	0.50	1 UNC	N1300-0334	11.4
	2.000 / 1.995	Thick	1/2	1/4	5.25	-	7/8 UNC	7.08	3.33	0.50	1 UNC	N1300-0334	11.1
	2.188 / 2.183	Thick	1/2	1/4	5.25	-	7/8 UNC	7.08	3.33	0.50	1 UNC	N1300-0334	9.9
	2.250 / 2.245	Thick	1/2	1/4	5.25	-	7/8 UNC	7.08	3.33	0.50	1 UNC	N1300-0334	9.5
	2.438 / 2.433	Thin	5/8	5/16	3.50	2.09	7/8 UNC	7.08	3.33	0.50	1 UNC	N1300-0334	8.3
	2.500 / 2.495	Thin	5/8	5/16	3.50	2.09	7/8 UNC	7.08	3.33	0.50	1 UNC	N1300-0334	7.8
	2.688 / 2.682	Thin	5/8	5/16	3.50	2.09	7/8 UNC	7.08	3.33	0.50	1 UNC	N1300-0334	6.5
	2.938 / 2.932	Thin	3/4	3/8	3.50	2.09	7/8 UNC	7.08	3.33	0.50	1 UNC	N1300-0334	4.5
F10 (307)TR	2.000 / 1.995	Thick	1/2	1/4	5.25	-	1 UNC	7.39	3.74	0.56	1 1/8 UNC	N1300-0375	17.8
	2.188 / 2.183	Thick	1/2	1/4	5.25	-	1 UNC	7.39	3.74	0.56	1 1/8 UNC	N1300-0375	16.6
	2.250 / 2.245	Thick	1/2	1/4	5.25	-	1 UNC	7.39	3.74	0.56	1 1/8 UNC	N1300-0375	16.2
	2.438 / 2.433	Thick	5/8	5/16	5.25	-	1 UNC	7.39	3.74	0.56	1 1/8 UNC	N1300-0375	14.9
	2.500 / 2.495	Thick	5/8	5/16	5.25	-	1 UNC	7.39	3.74	0.56	1 1/8 UNC	N1300-0375	14.4
	2.688 / 2.682	Thin	5/8	5/16	5.00	1.59	1 UNC	7.39	3.74	0.56	1 1/8 UNC	N1300-0375	13.0
	2.938 / 2.932	Thin	3/4	3/8	5.00	1.59	1 UNC	7.39	3.74	0.56	1 1/8 UNC	N1300-0375	10.9
	3.000 / 2.994	Thin	3/4	3/8	5.00	1.59	1 UNC	7.39	3.74	0.56	1 1/8 UNC	N1300-0375	10.3
	3.188 / 3.182	Thin	3/4	3/8	5.00	1.59	1 UNC	7.39	3.74	0.56	1 1/8 UNC	N1300-0375	8.6
	3.438 / 3.432	Thin	7/8	7/16	5.00	1.59	1 UNC	7.39	3.74	0.56	1 1/8 UNC	N1300-0375	6.1

\* Check strength of driven shaft

\*\* Check strength and length of key (when key not supplied - i.e. thick wall bushing)

# SERIES F TORQUE BUSHINGS

## RUBBER BUSHINGS FOR TORQUE ARM



UNIT SIZE	A	B	C	a9	E	F	G
F02	1.57	0.08	0.73	5.51	0.79	0.06	0.51/0.49
F03	1.57	0.08	0.71	6.22	0.79	0.08	0.51/0.49
F04	1.57	0.08	0.71	6.69	0.79	0.08	0.51/0.49
F05	1.57	0.08	0.71	7.80	0.79	0.08	0.51/0.49
F06	1.57	0.08	0.71	8.58	0.79	0.08	0.51/0.49
F07	2.44	0.39	1.18	10.94	1.30	0.12	0.90/0.84
F08	2.44	0.39	1.14	13.62	1.30	0.16	0.90/0.84
F09	3.23	0.47	1.57	15.55	1.73	0.16	1.00/0.98
F10	3.23	0.47	1.50	19.09	1.73	0.20	1.00/0.98

# SERIES F DIMENSIONS D (B5) FLANGE

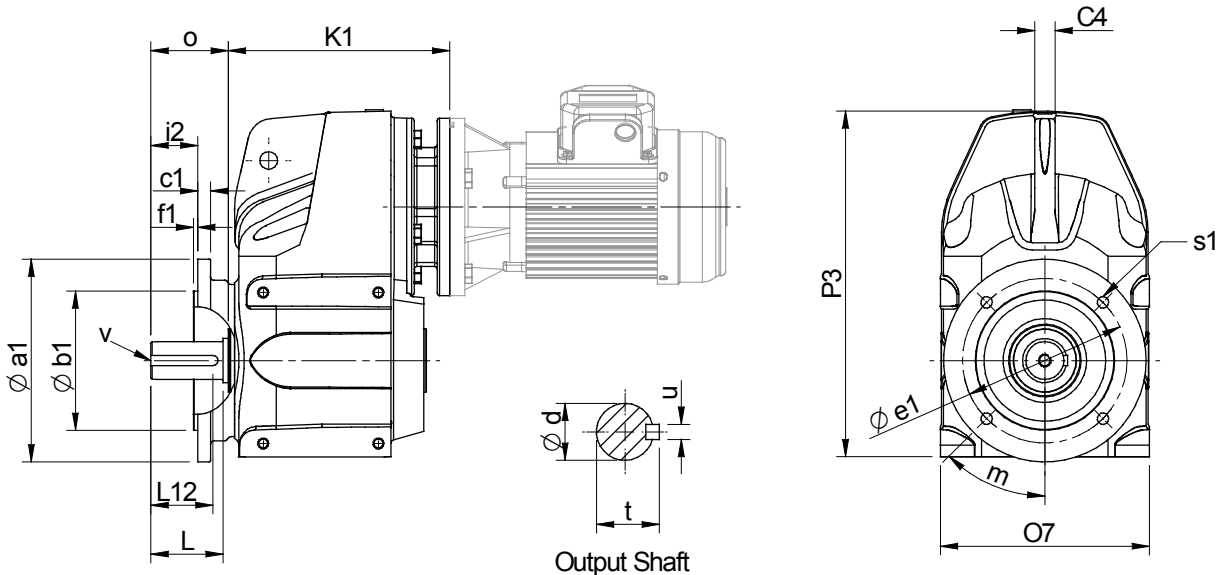
**Column 9 Entry**

**F** B5 (D) Output Flange

**Column 11 Entry**

**N** with Inch Shaft

**A** without Shaft



UNIT SIZE	a1	b1	c1	C4	e1	f1	K1	m	o	O7	P3	s1	Output Shaft						
													d	i2	L	L12	t	u	v
F02	6.30	4.33 (110 j6)	0.39	0.59	5.12	0.14	See Motorized or Reducer Dimension Pages	45	-	5.67	8.82	4x0.35	-	-	-	-	-	-	
F03	6.30	4.33 (110 j6)	0.39	0.63	5.12	0.14		45	1.97	6.50	10.75	4x0.35	1.00	1.02	1.85	1.57	1.11	0.250	3/8 UNFx0.75
F04	6.30	4.33 (110 j6)	0.39	0.63	5.12	0.14		45	2.36	6.50	10.75	4x0.35	1.25	1.42	2.20	2.00	1.36	0.250	1/2 UNFx1.13
F05	9.84	7.09 (180 j6)	0.63	0.63	8.46	0.16		45	2.76	7.87	12.52	4x0.55	13.75	1.73	2.60	2.38	1.51	0.313	5/8 UNFx1,5
F06	9.84	7.09 (180 j6)	0.71	0.63	8.46	0.16		45	3.19	8.87	14.37	4x0.55	1.625	1.57	2.99	2.38	1.78	0.375	5/8 UNFx1.5
F07	11.81	9.06 (230 j6)	0.71	0.79	10.43	0.16		45	3.98	10.87	17.40	4x0.55	2.00	2.40	3.74	2.75	2.23	0.500	5/8 UNFx1.5
F08	13.78	9.84 (250 h6)	0.71	1.02	11.81	0.20		45	4.72	13.37	21.10	4x0.71	2.375	2.87	4.49	3.69	2.65	0.625	3/4 UNFx1.65
F09	17.72	13.78 (350 h6)	0.79	1.18	15.75	0.20		22.5	5.55	15.75	24.09	8x0.71	2.875	3.54	5.32	4.63	3.20	0.750	3/4 UNFx1.65
F10	17.72	13.78 (350 h6)	.87	1.42	15.75	0.20		22.5	6.77	18.50	29.45	8x0.71	3.625	4.41	6.77	5.94	4.01	0.875	3/4 UNFx1.65



# SERIES F DIMENSIONS C (B14) FLANGE

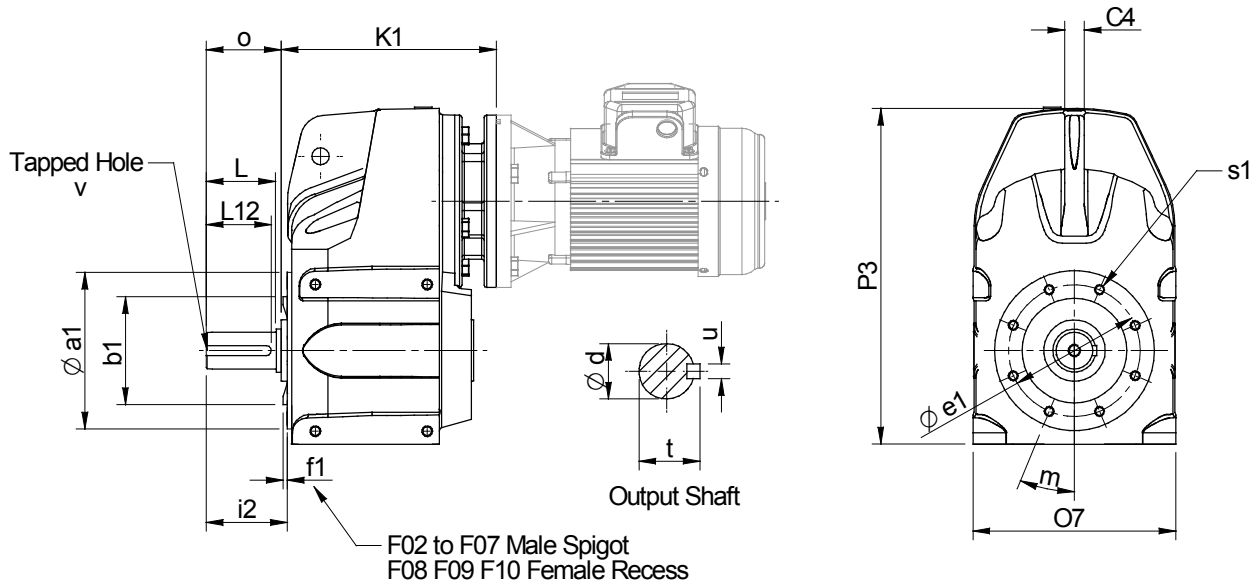
## Column 9 Entry

**T** or **W** B14 (C) Flange (see page 2 for further details).

## Column 11 Entry

**N** with Inch Shaft

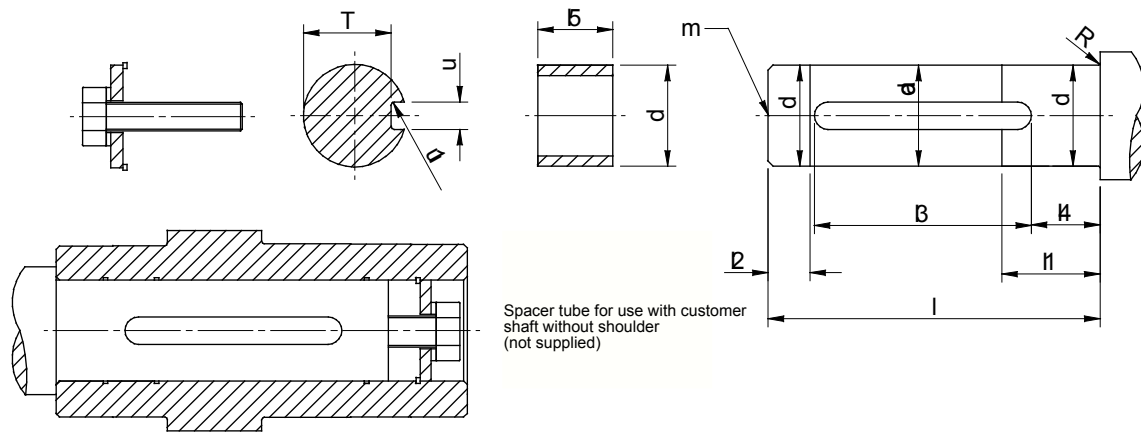
**A** without Shaft



UNIT SIZE	a1	b1	C4	e1	f1 Male	F1	K1	m	o	O7	P3	s1	Output Shaft						
													d	i2	L	L12	t	u	v
F02	4.61	3.35 (85 i6)	0.59	4.21	0.12	-	See Motorized or Reducer Dimension Pages	67.5	-	5.91	8.82	4 - M8x0.47	-	-	-	-	-		
F03	4.69	3.35 (85 i6)	0.63	4.21	0.12	-		22.5	1.97	6.73	10.75	4 - M8x0.47	1.00	2.16	1.85	1.57	1.11	0.250	3/8 UNFx0.75
F04	4.69	3.35 (85 i6)	0.47	4.21	0.12	-		22.5	2.36	6.73	10.75	4 - M8x0.47	1.25	2.56	2.20	2.00	1.36	0.250	1/2 UNFx1.13
F05	5.59	4.13 (105 i6)	0.63	4.92	0.12	-		30	2.76	8.11	12.52	6 - M10x0.67	1.375	2.95	2.60	2.38	1.51	0.313	5/8 UNFx1.5
F06	7.13	5.12 (130 i6)	0.63	5.91	0.16	-		0	3.19	9.09	14.37	8 - M10x0.79	1.625	3.43	2.99	2.38	1.78	0.375	5/8 UNFx1.5
F07	7.13	5.12 (130 i6)	0.79	5.91	0.16	-		0	3.98	11.10	17.40	8 - M10x0.79	2.00	4.25	3.74	2.75	2.23	0.500	5/8 UNFx1.5
F08	8.90	5.91 (150 H7)	1.02	7.68	-	-0.20		22.5	4.72	13.62	21.10	8 - M12x0.79	2.375	4.84	4.49	3.69	2.65	0.625	3/4 UNFx1.65
F09	11.02	7.09 (180 H7)	1.18	9.06	-	-0.24		0	5.55	15.75	24.09	6 - M16x1.06	2.875	5.75	5.31	4.63	3.20	0.750	3/4 UNFx1.65
F10	12.20	8.27 (210 H7)	1.42	11.02	-	-0.28		0	6.77	18.50	29.45	10 - M16x1.06	3.625	6.99	6.77	5.94	4.01	0.875	3/4 UNFx1.65

# SERIES F DIMENSIONS STANDARD BORE ASSEMBLY

## ASSEMBLY ONTO SHAFT - CUSTOMER SHAFT DETAIL



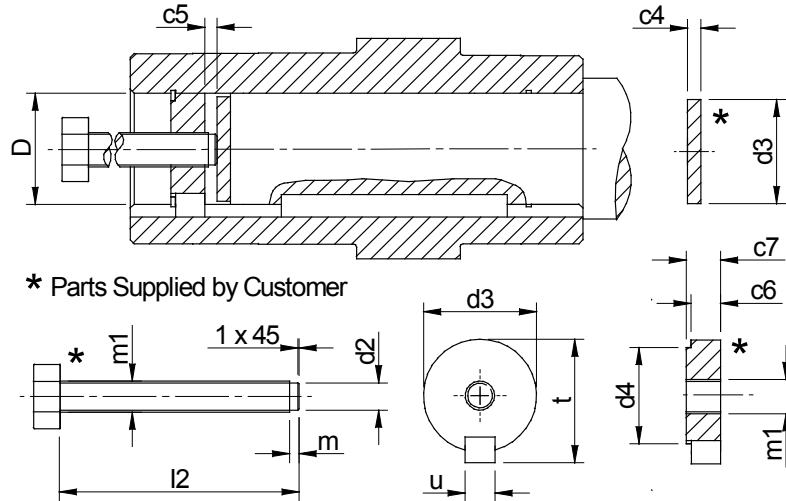
Size	d	da	l	l1	l2	l3	l4	l5	m	N	R	T	u	u1
F02	0.9996 / 0.9990	0.98	3.23	1.57	0.51	3.00	0.12	0.91	3/8 x UNF 0.875 deep	12 lb.ft	0.03	0.859 0.853	0.2520 / 0.2500	0.010
F03	1.2496 / 1.2490	1.23	3.23	1.77	0.59	3.00	0.12	0.91	3/8 x UNF 0.875 deep	12 lb.ft	0.03	1.112 1.106	0.2520 / 0.2500	0.010
F04	1.3746 / 1.3740	1.36	4.29	2.36	0.79	3.56	0.12	0.91	1/2 x UNF 1.25 deep	15 lb.ft	0.03	1.201 1.195	0.3145 / 0.3125	0.010
F05	1.4996 / 1.4990	1.48	4.41	2.36	0.79	3.63	0.12	1.18	5/8 x UNF 1.42 deep	35 lb.ft	0.03	1.289 1.283	0.3770 / 0.3750	0.010
F06	1.4996 / 1.4990	1.48	4.96	2.95	0.98	4.00	0.12	1.18	5/8 x UNF 1.42 deep	35 lb.ft	0.03	1.289 1.283	0.3770 / 0.3750	0.010
F07	1.9996 / 1.9990	1.98	6.02	3.54	1.18	5.00	0.12	1.18	5/8 x UNF 1.42 deep	35 lb.ft	0.03	1.718 1.712	0.5020 / 0.5000	0.020
F08	2.3746 / 2.3739	2.36	6.81	3.54	1.18	5.00	0.12	1.45	3/4 x UNF 1.65 deep	60 lb.ft	0.03	2.021 2.006	0.6270 / 0.6250	0.020
F09	2.7496 / 2.7489	2.73	9.13	4.13	1.38	5.35	0.12	1.50	3/4 x UNF 1.65 deep	60 lb.ft	0.03	2.402 2.387	0.6270 / 0.6250	0.020
F10	3.2495 / 3.2486	3.23	10.83	4.72	1.57	6.75	0.20	1.45	3/4 x UNF 1.65 deep	60 lb.ft	0.03	2.831 2.816	0.7520 / 0.7500	0.020

### Assembly Instructions

1. Spray the hollow shaft bore and mating diameter of the output shaft with Rocol DFSM or equivalent anti-scuffing spray.
2. Fit key into shaft.
3. Fit the circlip into the output sleeve.
4. Fit the spacer tube only if the output shaft has no shoulder, then fit the output shaft into the output sleeve.
5. Secure in place with the washer and bolt. Torque tighten to the values stated in column N of the above table.
6. Fit plastic protective cover.

# SERIES F DIMENSIONS STANDARD BORE DISASSEMBLY

## DISASSEMBLY METHOD FROM SHAFT



Size	c4	c5	c6	c7	D	d2	d3	d4	l2	m	m1	t (max)	u (max)
F02	0.20	0.12	0.60	0.65	1.000	0.38	0.995	0.65	5.00	0.20	1/2"x 20 UNF	1.09	0.250
F03	0.20	0.12	0.60	0.65	1.250	0.50	1.245	0.88	6.00	0.20	5/8"x 18 UNF	1.35	0.250
F04	0.20	0.12	0.60	0.65	1.375	0.50	1.370	1.000	6.00	0.20	5/8"x 18 UNF	1.50	0.3125
F05	0.20	0.16	0.80	0.90	1.500	0.85	1.495	1.13	7.00	0.20	1"x 12 UNF	1.65	0.375
F06	0.20	0.16	0.80	0.90	1.500	0.85	1.495	1.13	7.00	0.20	1"x 12 UNF	1.65	0.375
F07	0.20	0.16	0.80	0.90	2.000	0.81	1.995	1.59	8.50	0.20	1"x 12 UNF	2.20	0.500
F08	0.31	0.20	1.0	1.10	2.375	1.05	2.370	1.90	10.00	0.20	1 1/4"x 12 UNF	2.63	0.625
F09	0.31	0.24	1.0	1.10	2.750	1.05	2.745	2.18	12.50	0.20	1 1/4"x 12 UNF	3.01	0.625
F10	0.31	0.24	1.0	1.10	3.250	1.05	3.245	2.65	14.00	0.20	1 1/4"x 12 UNF	3.57	0.750

# SERIES F

## SHIPPING SPECIFICATION

### SHIPPING WEIGHT (LBS.)

UNIT SIZE & NO. OF REDUCTIONS		F0222	F0232	F0322	F0332	F0342	F0422	F0432	F0442	F0522	F0532	F0542	
REDUCER VERSION		29	31	44	46	66	46	49	68	68	68	37	
OUTPUT SHAFT		N/A	N/A	1.8	1.8	1.8	2.6	2.6	2.6	3.1	3.1	3.1	
OUTPUT FLANGE		3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.3	3.3	3.3	
MOTORIZED	56C	Without Motor	31	34	47	49	69	47	49	69	63	66	32
		With Motor	56	59	72	74	34	72	74	34	88	91	117
	143TC	Without Motor	31	34	47	49	69	47	49	69	63	66	32
		With Motor	61	64	77	79	99	77	79	99	93	96	122
	145TC	Without Motor	31	34	47	49	69	47	49	69	63	66	32
		With Motor	71	74	87	89	103	87	89	103	103	106	132
	182TC	Without Motor	33		49			52			68		
		With Motor	88		104			107			123		
	184TC	Without Motor	33		49			52			68		
		With Motor	110		126			129			145		
	213TC	Without Motor									68		
		With Motor									184		
	215TC	Without Motor									68		
		With Motor									225		
	254TC	Without Motor											
		With Motor											
	256TC	Without Motor											
		With Motor											
	284TC	Without Motor											
		With Motor											
	286TC	Without Motor											
		With Motor											
	324TC	Without Motor											
		With Motor											
326TC	Without Motor												
	With Motor												

# SERIES F

## SHIPPING SPECIFICATION

### SHIPPING WEIGHT (LBS.)

UNIT SIZE & No OF REDUCTIONS		F0622	F0632	F0642	F0722	F0732	F0742	F0822	F0832	F0842	
REDUCER VERSION		99	99	123	154	170	258	254	267	295	
OUTPUT SHAFT		4.2	4.2	4.2	8.2	8.2	8.2	15	15	15	
OUTPUT FLANGE		12	12	12	16	16	16	29	29	29	
MOTORIZED	56C	Without Motor	96	99	122	142	153	164	235	239	332
		With Motor	121	124	147	167	178	189	260	264	357
	143TC	Without Motor	96	99	122	142	153	164	235	239	332
		With Motor	126	129	152	172	183	194	265	269	362
	145TC	Without Motor	96	99	122	142	153	164	235	239	332
		With Motor	136	139	162	182	193	204	275	279	372
	182TC	Without Motor	111			155	166		235	239	332
		With Motor	166			210	221		290	294	387
	213TC	Without Motor	111			155	166		235	239	332
		With Motor	188			232	243		312	316	409
	215TC	Without Motor	111			155			235	239	
		With Motor	227			271			351	355	
	254TC	Without Motor	111			155			235	239	
		With Motor	268			312			392	396	
	256TC	Without Motor				155			235		
		With Motor				438			518		
	284TC	Without Motor				155			235		
		With Motor				461			541		
	286TC	Without Motor									
		With Motor									
324TC	Without Motor										
	With Motor										
326TC	Without Motor										
	With Motor										

UNIT SIZE & NO. OF REDUCTIONS		F0921	F0931	F0941	F1021	F1031	F1041	
REDUCER VERSION		377	397	481	576	595	732	
OUTPUT SHAFT		24	24	24	41	41	41	
OUTPUT FLANGE		33	33	33	57	57	57	
MOTORIZED	56C	Without Motor		378	443		665	
		With Motor		403	468		690	
	143TC	Without Motor		378	443		665	
		With Motor		408	473		695	
	145TC	Without Motor		378	443		665	
		With Motor		418	483		705	
	182TC	Without Motor	346	378	443	509	550	665
		With Motor	401	433	498	564	605	720
	184TC	Without Motor	346	378	443	509	550	665
		With Motor	423	455	520	586	627	742
	213TC	Without Motor	346			509	550	665
		With Motor	462			625	666	781
	215TC	Without Motor	346			509	550	665
		With Motor	503			666	707	822
	254TC	Without Motor	362			528	567	
		With Motor	645			811	850	
	256TC	Without Motor	362			528	567	
		With Motor	668			834	873	
	284TC	Without Motor	368			532	572	
		With Motor	797			961	1001	
286TC	Without Motor	368			532	572		
	With Motor	814			978	1018		
324TC	Without Motor	371			536	576		
	With Motor	894			1059	1099		
326TC	Without Motor	371			536	576		
	With Motor	1021			1186	1226		

## Product Safety Information

**General** - The following information is important in ensuring safety. It **must** be brought to the attention of personnel involved in the selection of transmission equipment, those responsible for the design of the machinery in which it is to be incorporated and those involved in its installation, use and maintenance.

This equipment will operate safely provided it is selected, installed, used and maintained properly. As with any power transmission equipment **proper precautions must** be taken as indicated in the following paragraphs, to ensure safety.

**Potential Hazards** - these are **not** necessarily listed in any order of severity as the degree of danger varies in individual circumstances. It is important therefore that the list is studied in its entirety.

- 1) Fire/Explosion -
  - (a) Oil mists and vapor are generated within gear units. It is therefore dangerous to use naked lights in the proximity of gearbox openings, due to the risk of fire or explosion.
  - (b) In the event of fire or serious overheating (over 300 °C), certain materials (rubber, plastics, etc.) may decompose and produce fumes. Care should be taken to avoid exposure to the fumes, and the remains of burned or overheated plastic/rubber materials should be handled with rubber gloves.
- 2) Guards - Rotating shafts and couplings must be guarded to eliminate the possibility of physical contact or entanglement of clothing. It should be of rigid construction and firmly secured.
- 3) Noise - High speed gearboxes and gearbox driven machinery may produce noise levels which are damaging to the hearing with prolonged exposure. Ear defenders should be provided for personnel in these circumstances. Reference should be made to the Department of Employment Code of Practice for reducing exposure of employed persons to noise.
- 4) Lifting - Where provided (on larger units) only the lifting points or eyebolts must be used for lifting operations (see maintenance manual or general arrangement drawing for lifting point positions). Failure to use the lifting points provided may result in personal injury and/or damage to the product or surrounding equipment. Keep clear of raised equipment.
- 5) Lubricants and Lubrication
  - (a) Prolonged contact with lubricants can be detrimental to the skin. The manufacturer's instructions must be followed when handling lubricants.
  - (b) The lubrication status of the equipment must be checked before commissioning. Read and carry out all instructions on the lubricant plate and in the installation and maintenance literature. Heed all warning tags. Failure to do so could result in mechanical damage and in extreme cases risk of injury to personnel.
- 6) Electrical Equipment - Observe hazard warnings on electrical equipment and isolate power before working on the gearbox or associated equipment, in order to prevent the machinery being started.
- 7) Installation, Maintenance and Storage
  - (a) In the event that equipment is to be held in storage, for a period exceeding 6 months, prior to installation or commissioning, local engineering staff must be consulted regarding special preservation requirements. Unless otherwise agreed, equipment must be stored in a building protected from extremes of temperature and humidity to prevent deterioration.  
The rotating components (gears and shafts) must be turned a few revolutions once a month (to prevent bearings brinelling).
  - (b) External gearbox components may be supplied with preservative materials applied, in the form of a "waxed" tape overwrap or wax film preservative. Gloves should be worn when removing these materials. The former can be removed manually, the latter using white spirit as a solvent.  
  
Preservatives applied to the internal parts of the gear units do not require removal prior to operation.
  - (c) Installation must be performed in accordance with the manufacturer's instructions and be undertaken by suitably qualified personnel.
  - (d) Before working on a gearbox or associated equipment, ensure that the load has been removed from the system to eliminate the possibility of any movement of the machinery and isolate power supply. Where necessary, provide mechanical means to ensure the machinery cannot move or rotate. Ensure removal of such devices after work is complete.
  - (e) Ensure the proper maintenance of gearboxes in operation. Use only the correct tools and Textron Fluid & Power approved spare parts for repair and maintenance. Consult the Maintenance Manual before dismantling or performing maintenance work.
- 8) Hot Surfaces and Lubricants
  - (a) During operation, gear units may become sufficiently hot to cause skin burns. Care must be taken to avoid accidental contact.
  - (b) After extended running the lubricant in gear units and lubrication systems may reach temperatures sufficient to cause burns. Allow equipment to cool before servicing or performing adjustments.
- 9) Selection and Design
  - (a) Where gear units provide a backstop facility, ensure that back-up systems are provided if failure of the backstop device would endanger personnel or result in damage.
  - (b) The driving and driven equipment must be correctly selected to ensure that the complete machinery installation will perform satisfactorily, avoiding system critical speeds, system torsional vibration, etc.
  - (c) The equipment must not be operated in an environment or at speeds, powers, torques or with external loads beyond those for which it was designed.
  - (d) As improvements in design are being made continually the contents of this catalog are not to be regarded as binding in detail, and drawings and capacities are subject to alterations without notice.

The above guidance is based on the current state of knowledge and our best assessment of the potential hazards in the operation of the gear units.

Any further information or clarification required may be obtained by contacting an Application Engineer.

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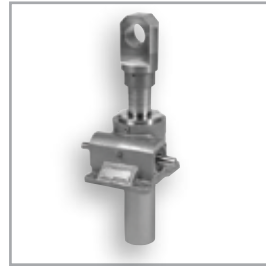
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