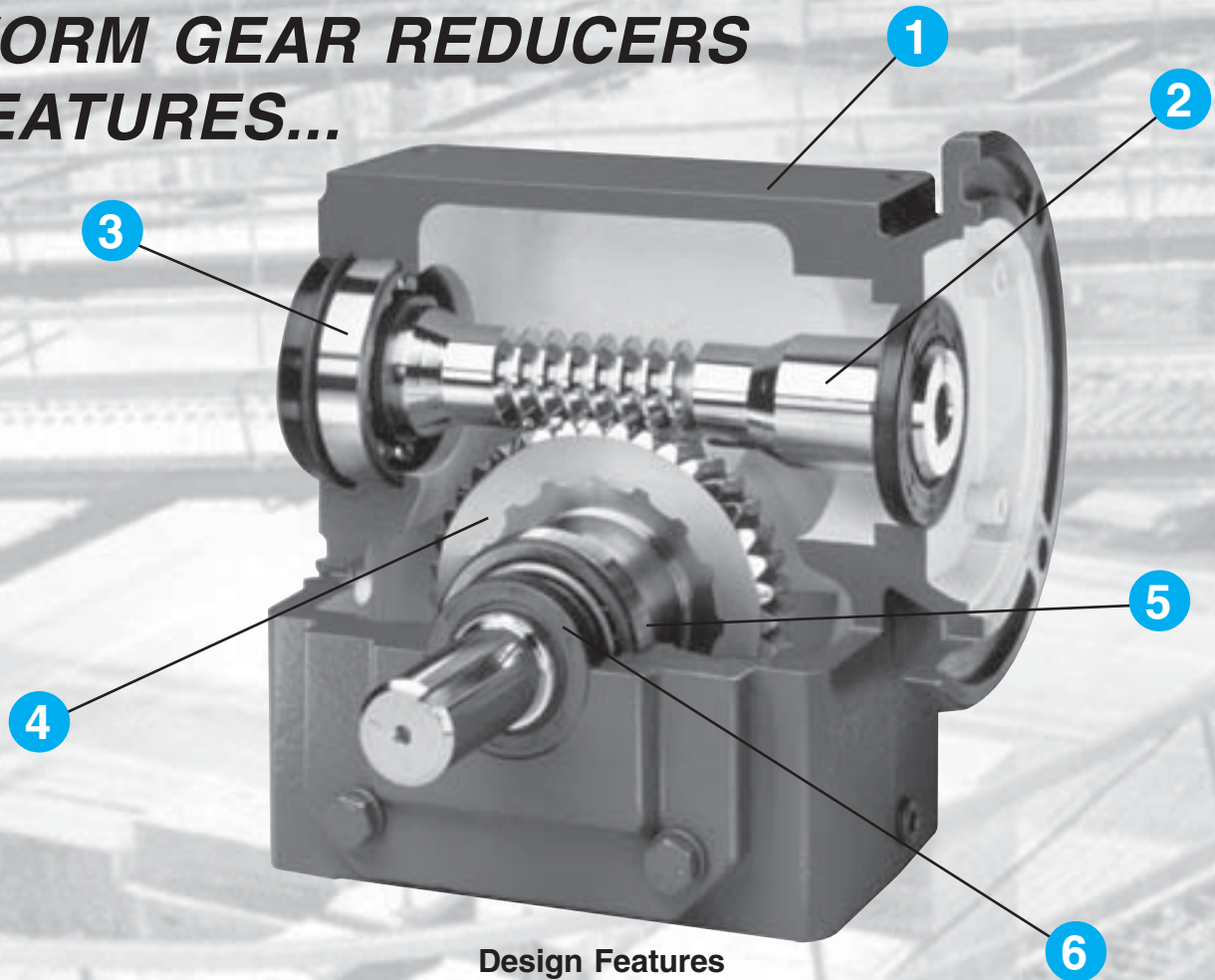


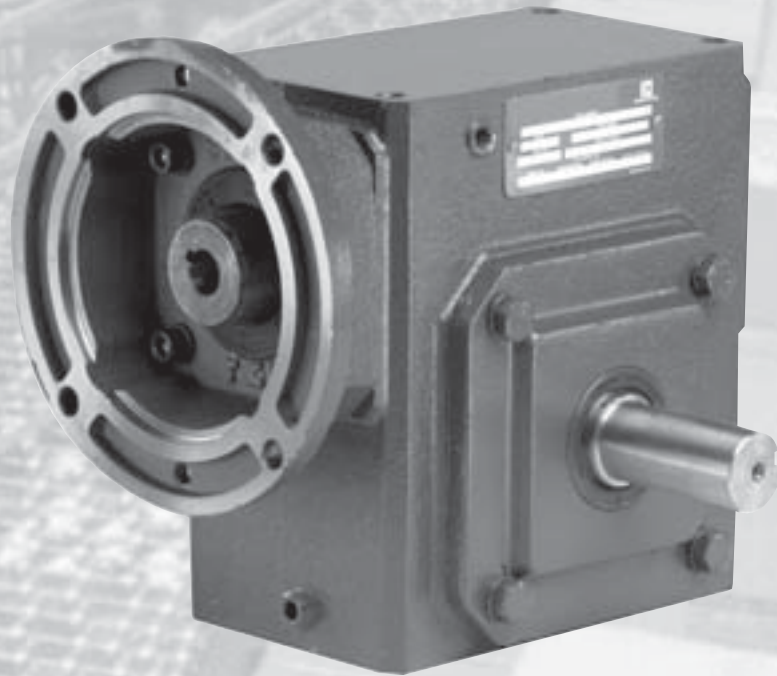
## RAIDER® WORM GEAR REDUCERS FEATURES...



### Design Features

- 1. Rugged Cast Iron Housings** - RAIDER® speed reducers incorporate rugged cast iron single piece construction for all housings, motor adapters, covers and mounting bases, providing maximum strength and dependability.
- 2. Integral Worm and Shaft**, carburized and hardened to 58RC (per AGMA 603 specifications) for extra strength.
- 3. Large, Single Row Ball Bearings** - absorb radial and thrust loads on higher input speeds for increased efficiency. Tapered roller bearings are used in 375, 450, 516 and 600 units.
- 4. Forged Bronze Worm Gears** - provide greater tensile strength than cast bronze, are precision manufactured to AGMA specifications for long, trouble-free operation. Cast iron hubs are used in larger sizes for extra strength.
- 5. Heavy-Duty Tapered Roller Bearings** on all output shafts - effectively handle inherent gear load and provide maximum overhung load capacity.
- 6. Double Lip Seals** on precision plunge ground sealing surfaces - keep contaminants out and lubrication in. Provision for an extra seal on both input and output shafts permits additional protection in highly contaminated applications - an exclusive RAIDER feature.
- 7. All Units Factory Filled With Oil.**

# RAIDER® WORM GEAR REDUCERS

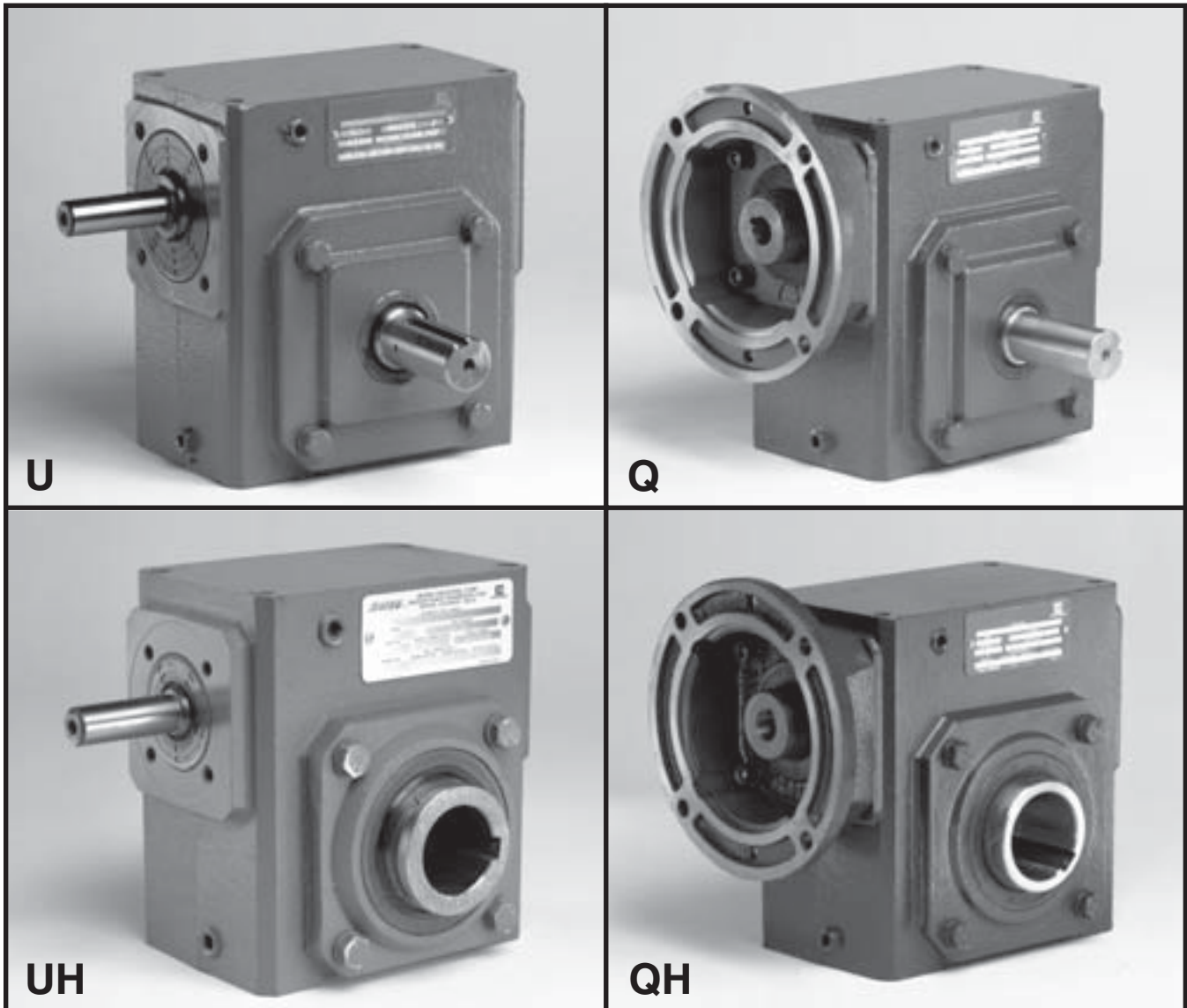


## Table of Contents

<b>RAIDER® Reducers</b>	<b>Page</b>
Features and Benefits .....	24 - 27
Reducer Styles .....	28 - 29
Ordering and Part Number Configuration Information .....	30 - 31
Reducer Selection Procedure .....	32 - 33
AGMA Application Classification .....	34 - 35
Engineering Data .....	36 - 40
Dimensions .....	42 - 85
RAIDER Tack-On Reducer Assemblies .....	87 - 94
Washdown Duty .....	95 - 99



With these 4 basic reducer units and standard component accessories, you can build over 10 million different configurations of RAIDER speed reducers.



Std. Horizontal Base Kit

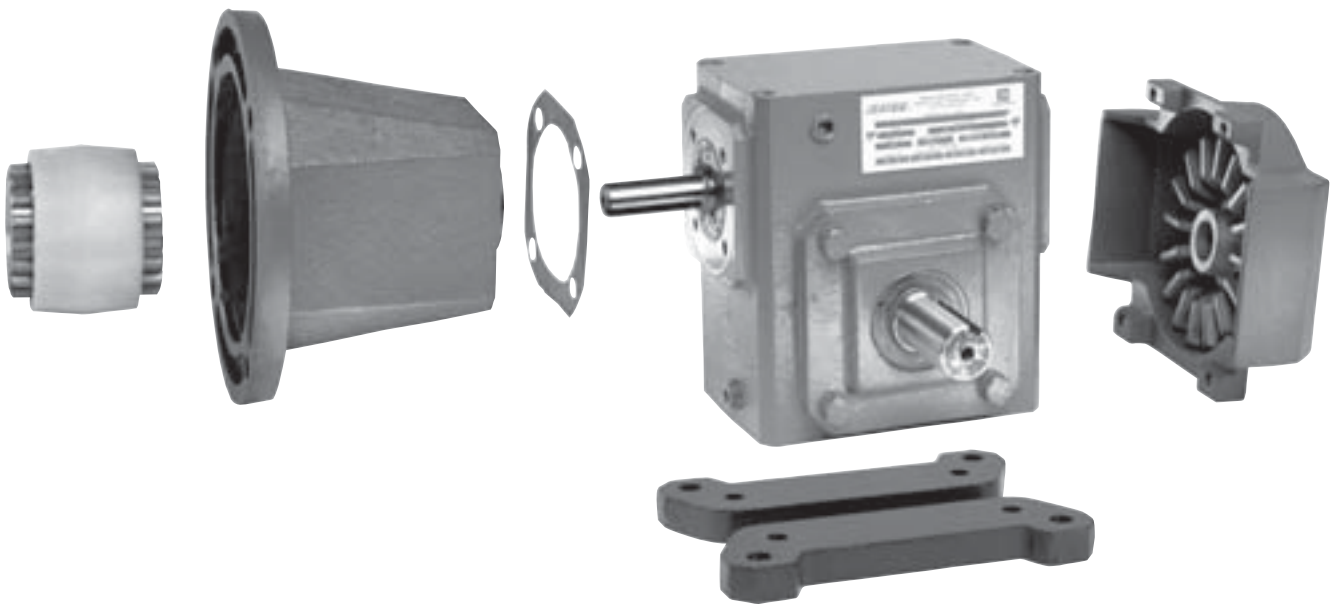
Motor Adapter Kit

Econo Horizontal Base Kit

Torque Arm Kit

Vertical Base Kit

Need a reducer in a hurry? It's never a problem with **RAIDER**® worm gear speed reducers, because you need only four basic units to serve every conceivable application. Any of the **RAIDER** component accessories can be added in just minutes to convert the basic unit to the desired style. That means absolute minimum inventory requirements — at absolute minimum costs!









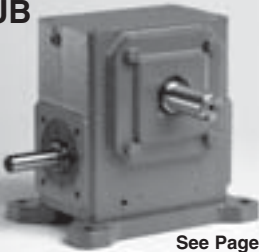


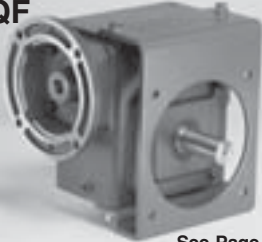
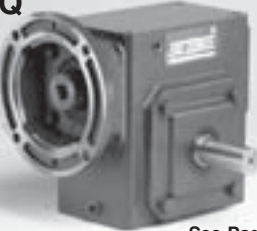




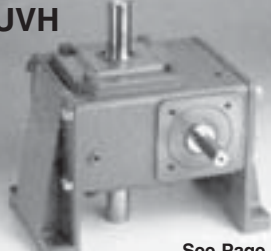








Vertical High Base Kit












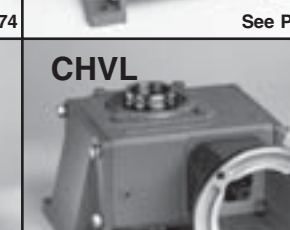



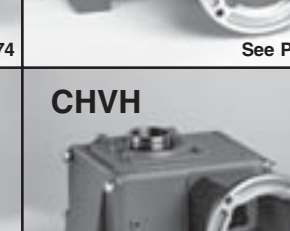

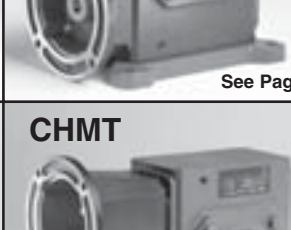

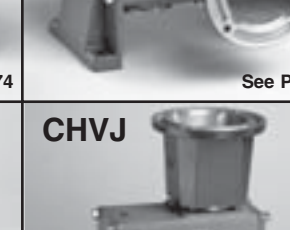
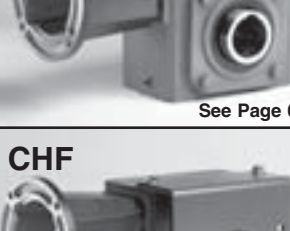
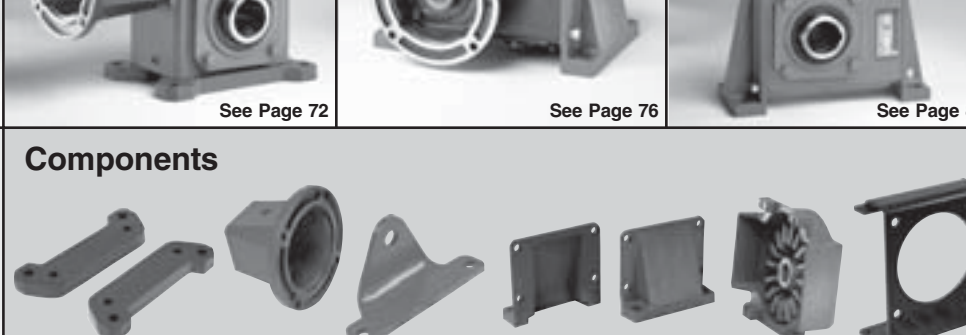
Vertical "J" Base Kit

Fan Kit

Flange Kit

<b>U</b>  See Page 42	<b>C</b>  See Page 46	<b>QVL</b>  See Page 50	<b>UF</b>  See Page 56
<b>UT</b>  See Page 42	<b>CT</b>  See Page 46	<b>QVH</b>  See Page 50	<b>CF</b>  See Page 56
<b>UB</b>  See Page 42	<b>CB</b>  See Page 46	<b>QVJ</b>  See Page 52	<b>QF</b>  See Page 58
<b>Q</b>  See Page 44	<b>UVL</b>  See Page 48	<b>CVL</b>  See Page 54	<b>UH</b>  See Page 60
<b>QT</b>  See Page 44	<b>UVH</b>  See Page 48	<b>CVH</b>  See Page 54	<b>UHT</b>  See Page 60
<b>QB</b>  See Page 44	<b>UVJ</b>  See Page 48	<b>CVJ</b>  See Page 54	<b>UHF</b>  See Page 60



<p><b>QH</b></p>  <p>See Page 62</p>	<p><b>UHMT</b></p>  <p>See Page 68</p>	<p><b>CHMB</b></p>  <p>See Page 72</p>	<p><b>QHVH</b></p>  <p>See Page 76</p>
<p><b>QHT</b></p>  <p>See Page 62</p>	<p><b>UHMB</b></p>  <p>See Page 68</p>	<p><b>UHVH</b></p>  <p>See Page 74</p>	<p><b>QHVJ</b></p>  <p>See Page 78</p>
<p><b>QHF</b></p>  <p>See Page 64</p>	<p><b>QHMT</b></p>  <p>See Page 70</p>	<p><b>UHVH</b></p>  <p>See Page 74</p>	<p><b>CHVL</b></p>  <p>See Page 80</p>
<p><b>CH</b></p>  <p>See Page 66</p>	<p><b>QHMB</b></p>  <p>See Page 70</p>	<p><b>UHVJ</b></p>  <p>See Page 74</p>	<p><b>CHVH</b></p>  <p>See Page 80</p>
<p><b>CHT</b></p>  <p>See Page 66</p>	<p><b>CHMT</b></p>  <p>See Page 72</p>	<p><b>QHVL</b></p>  <p>See Page 76</p>	<p><b>CHVJ</b></p>  <p>See Page 80</p>
<p><b>CHF</b></p>  <p>See Page 66</p>	<p><b>Components</b></p>  <p>See Pages 83 - 85</p>		

The MORSE® Worm Gear Speed Reducer can easily be sized and ordered by following these instructions.

### BASIC UNIT AND COMPONENTS

This method of ordering is used when versatility and modularity are desired. It is especially convenient for distributors and customers that want to stock the various basic units and components, so that an almost unlimited number of configurations can be put together. When ordering by this method, the basic unit and components will not be assembled, but will be shipped in separate cartons.

#### ORDERING STEPS:

1. Find the desired style to be ordered on pages 42 through 81 in this catalog.
2. Go to the dimension table for the specific style desired and find the "Components" section. The basic unit and component part numbers are shaded for easy reference.
3. Complete the basic unit part number by following the foot note instructions.
4. Order the complete basic unit part number along with the indicated component part numbers that will make up the desired RAIDER style.

**EXAMPLE:** A QT Style, 145TC NEMA frame, 30:1 Ratio, 3.25" C.D., with left output shaft. A standard base kit and fan are also required.

#### STEPS:

1. Go to pages 44 and 45 where style QT will be found.
2. Table No. 1 on page 45 shows basic unit numbers and dimensions. Table No. 2 shows components and dimensions for Style QT – with Base – Worm Top.
3. Find the unit size needed which is 325Q140, then complete the Basic Unit part number by adding shaft assembly and ratio symbol to unit size – 325Q140L30.
4. Basic unit part number and component part numbers required are:

Reducer: **325Q140L30**  
Base Kit: **325S-BK**  
Fan: **325 FAN**

For former MORSE Description see cross reference on pages 100 - 106.

Center Distance	Type of Input	C Face Size (if applicable)	O.P. Shaft Arrangement	Ratio
<b>133</b>	<b>Q</b>	<b>56</b>	<b>LR</b>	<b>30</b>
1.00"=100	U = Universal, Shaft In	42CZ/48C = 40	L = Left Output	5
<b>1.33"=133</b>	<b>Q = C Face Quilled</b>	<b>56C = 56</b>	R = Right Output	10
1.54"=154		143/145TC = 140	<b>LR = Left &amp; Right Output</b>	15
1.75"=175		182/184TC = 180	H = Hollow Output	20
2.06"=206		213/215T = 210		25
2.37"=237				<b>30</b>
2.62"=262				40
3.00"=300				50
3.25"=325				60
3.75"=375				
4.50"=450				
5.16"=516				
6.00"=600				

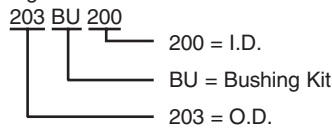
It is recommended to use the above chart to arrive at RAIDER reducer part description.

The above sample part description is 133Q56LR30. This description does NOT include feet or other available mounting accessories that are available for the RAIDER product. These accessories are sold separately using the part descriptions for the appropriate product. Not all ratios are available in each configuration.

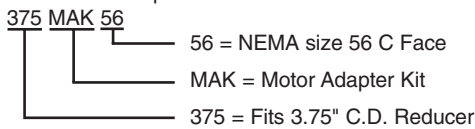
RAIDER units ordered with Hollow Outputs have a stock bore for each C.D. Bushing kits are available to help reducers fit on shafts that are smaller than the stock bore.

### Kit Descriptions

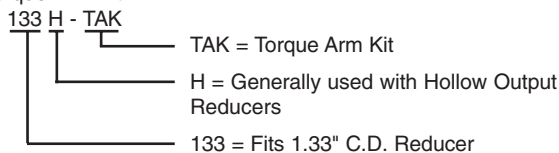
#### Bushing Kits



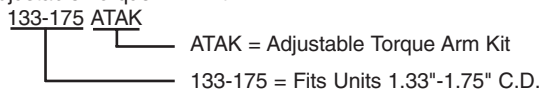
#### NEMA Frame Adapter Kit



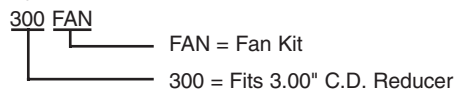
#### Torque Arm Kit



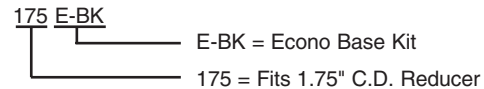
#### Adjustable Torque Arm Kit



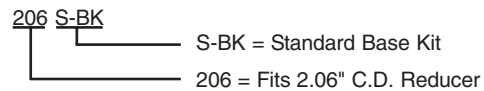
#### Fan Kit



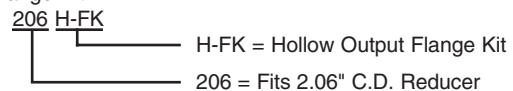
#### Econo Base Kit



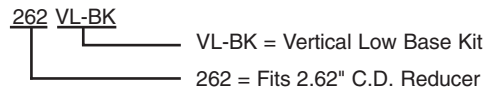
#### Standard Base Kit



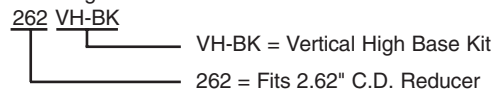
#### Flange Kit



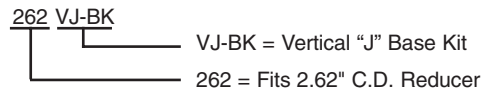
#### Vertical Low Base Kit



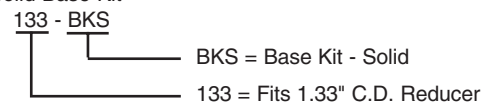
#### Vertical High Base Kit



#### Vertical "J" Base Kit



#### Solid Base Kit





## SELECTION PROCEDURE OF RAIDER® WORM GEAR SPEED REDUCERS

### 1. DETERMINE SERVICE FACTOR

From service factor table no. A-1 on pages 34 and 35 determine service factor for the application.

### 2. DETERMINE THE OVERALL DRIVE RATIO

$$\text{Overall Drive Ratio} = \frac{\text{RPM of driver}}{\text{RPM of driven}}$$

When over-all drive ratio is not one of the stock speed reducer ratios shown in tables on page 42 through 81, a chain, belt, or gear drive with further reduction for either the input or output side will be necessary.

### 3. DETERMINE EQUIVALENT HP OR NORMAL TORQUE

A. HP Method:

$$\text{Equivalent HP} = \text{Actual Motor HP} \times \text{Service Factor (Step \# 1)}$$

B. Torque Method:

$$\text{Normal Torque} = \text{Actual Torque} \times \text{Service Factor (Step \# 1)}$$

### 4. DETERMINE THE SIZE OF SPEED REDUCER REQUIRED

A. HP Method:

Refer to pages 36 through 40 and select a speed reducer having a mechanical input horsepower equal to or slightly greater than the equivalent HP calculated in Step No. 3 above.

B. Torque Method:

Refer to pages 36 to 40 and select a speed reducer having a mechanical output torque rating equal to or slightly greater than the normal torque calculated in Step No. 3 above. If the required input and output speeds are not listed in these tables, the ratings can be determined by straight line interpolation. When the input speed is less than 100 RPM, ratings for 100 RPM must be used.

### 5. CHECK THE THERMAL RATING

The Thermal Rating is the maximum input horsepower or output torque that can be transmitted continuously without exceeding a 100° F temperature rise over ambient. The thermal rating should not be exceeded. Service Factors are not applied to Thermal Ratings.

It is not necessary to check thermal ratings when the reducer does not operate more than 1/2 hour at a time and is shut down for a minimum period equal to the running time.

A. HP Method:

Check the actual motor HP against the thermal input HP ratings (see pages 36 to 40), and if the motor HP is greater, select either a unit with a fan and/or a larger speed reducer so that the thermal rating is greater than the actual HP.

B. Torque Method:

Check the actual torque against the thermal output ratings (see pages 36 to 40), and if the actual torque is greater, select a unit with a fan and/or a larger speed reducer so that the thermal rating is greater than the actual torque.

### 6. DETERMINE THE MOTOR HORSEPOWER

Use the following equation when motor HP is not known:

$$\text{Motor Horsepower} = \frac{\text{Actual Torque} \times \text{Thermal Input HP}}{\text{Thermal Output Torque}}$$

### 7. CHECK THE OVERHUNG LOAD AND THRUST LOADS

Calculate the overhung load for drives to be mounted directly on the reducer shafts by following instructions on page 33. Check this and any existing thrust loads against the load values shown on pages 36 to 40, and if the calculated load is greater than the values in the table, select a larger speed reducer.

**NOTE:** Refer combined overhung and thrust loads to EPT Technical Services.

### EXAMPLE NO. 1 - HP METHOD

Select a worm gear speed reducer for a dough mixer in a bakery. The speed reducer will be driven by a 1.0 HP, 1750 RPM, 56 Frame, C-Face Motor. The left reducer output shaft will be directly coupled to the mixer shaft. The mixer will operate 8 - 10 hours daily and the shaft speed is 58 RPM. The reducer also requires a horizontal mounting base with the worm on top.

#### 1. DETERMINE THE SERVICE FACTOR

From table no. A-1 on page 34, note that the service factor for a dough mixer (Food Industry) operating 3 - 10 hours per day is 1.25.

#### 2. DETERMINE OVERALL DRIVE RATIO

$$\text{Overall Drive Ratio} = \frac{\text{RPM OF DRIVER}}{\text{RPM OF DRIVEN}} = \frac{1750}{58} = 30.17$$

Since there is not an auxiliary input or output drive required, the reducer ratio needed is 30:1.

#### 3. DETERMINE EQUIVALENT HORSEPOWER

$$\text{Equivalent HP} = \text{Actual Motor HP} \times \text{S F} = 1.0 \times 1.25 = 1.25 \text{ HP}$$

#### 4. DETERMINE THE SIZE OF SPEED REDUCER REQUIRED

From page 36 under "1750 RPM Driver -30:1 Ratio - 58.3 RPM Output" and under "Input HP Mechanical" find the rating equal to or greater than the 1.25 equivalent HP calculated in Step No. 3. Note that a 237 reducer has mechanical rating of 1.26 HP. The correct part numbers required are:

Reducer: **237Q56L30**  
Base Kit: **237S-BK**

#### 5. CHECK THE THERMAL RATING

From the rating tables on page 36, read to the right and note the Thermal HP is 1.08 HP, which is greater than the motor horsepower (1.0 HP), therefore, the unit is not thermally limited.

#### 6. DETERMINE THE MOTOR HORSEPOWER

The motor horsepower is already known to be 1.0 HP.

#### 7. CHECK OVERHUNG LOAD AND THRUST LOADS

The unit will be coupling connected on the output shaft. Overhung load does not need to be calculated. There is not any thrust on the output shaft. There is neither thrust nor overhung load on the input shaft because it is mated with a C-Face motor. Therefore, the reducer selected is the proper size.

## EXAMPLE NO. 2 - TORQUE METHOD

Select a worm gear speed reducer for a belt conveyor (general purpose), not uniformly fed. The speed reducer will be driven by a 1750 RPM electric motor directly connected by a coupling, with a 1.23:1 ratio chain drive from the reducer to the head shaft of the conveyor. The pitch diameter of the driver sprocket mounted on the reducer output shaft is 5.032 inches. The conveyor will operate 10 hours per day, and the head shaft speed is 140 RPM. The reducer will also require a horizontal mounting base with the worm on top. Conveyor calculations indicate that 1710 inch pounds of torque is needed at the conveyor head shaft.

### 1. DETERMINE THE SERVICE FACTOR

From table no. A-1 on page 34, note that the service factor for a belt conveyor (general purpose) operating 3 - 10 hours per day is 1.25.

### 2. DETERMINE OVERALL DRIVE RATIO

$$\text{Overall Drive Ratio} = \frac{\text{RPM of Driver}}{\text{RPM of Driven}} = \frac{1750}{140} = 12.5 : 1$$

$$\text{Speed Reducer Ratio} = \frac{\text{Overall Drive Ratio}}{\text{Chain Drive Ratio}} = \frac{12.5}{1.23} = 10.16 : 1$$

### 3. DETERMINE THE NORMAL TORQUE

The normal torque required for reducer selection is the actual torque required at the reducer output shaft. Therefore, we must convert the 1710 inch pounds of actual torque at the conveyor head shaft to the actual required torque at the reducer output shaft, and then multiply by the service factor.

Actual Torque at Reducer Output Shaft =

$$\frac{\text{Actual Torque At Conveyor Head Shaft}}{\text{Chain Drive Ratio}} = \frac{1710}{1.23} = 1,390 \text{ In/lbs.}$$

Normal Torque =

$$\text{Actual Reducer Output Torque} \times \text{S F} = 1,390 \times 1.25 = 1738 \text{ in/lbs.}$$

### 4. DETERMINE SIZE OF SPEED REDUCER REQUIRED

From page 36 under "1750 RPM Driver - 10 to 1 ratio - 175 RPM Driven" and under "Mechanical Output Torque" find the rating equal to or greater than the 1738 inch-pounds normal torque calculated in step no. 3. Note that a 3.00 inch center distance reducer has a mechanical rating of 1743 inch-pounds.

### 5. CHECK THE THERMAL RATING

From the rating table on page 36, read to the right and note the thermal torque for a 3.00 inch C.D. reducer is 1175 inch-pounds, which is less than the actual torque at the reducer output shaft (1,390 inch-pounds) calculated in step no. 3. Therefore, a 3.00 inch C.D. unit with a fan, which has a thermal rating of 1743 inch-pounds, must be used.

The correct part numbers required are:

Reducer: **300ULR10**  
 Base Kit: **300S-BK**  
 Fan: **300FAN**

### 6. DETERMINE THE MOTOR HORSEPOWER

$$\begin{aligned} \text{Motor Horsepower} &= \frac{\text{Actual Torque} \times \text{Thermal Input HP}}{\text{Thermal Output Torque}} \\ &= \frac{1,390 \times 5.25}{1743} \\ &= 4.19 \\ &= \text{Use a 5 horsepower motor.} \end{aligned}$$

### 7. CHECK OVERHUNG AND THRUST LOADS

$$\begin{aligned} \text{OL (See below)} &= \frac{2 \times T \times K}{\text{P.D. of Sprocket}} \\ &= \frac{2 \times 1390 \times 1.0}{5.032} \\ &= 552.50 \text{ Pounds} \end{aligned}$$

From rating table on page 36, note the maximum overhung load for the output shaft of the 300ULR10 reducer is 987 lbs., which is greater than the calculated load on shaft of 553 lbs. There is no thrust on the output shaft. There is neither thrust or overhung load on the input shaft because it is direct couple connected. The reducer selection size is ample.

### OVERHUNG LOADS

When a speed reducer is driven by any belt, chain or gear drive, or when the speed reducer drives a driven unit through a belt, chain or gear drive, overhung loads must not exceed those shown on pages 36 through 40. Use the following formula to calculate the overhung loads:

$$\text{OL} = \frac{2TK}{D}$$

where	OL	=	Overhung Load
	T	=	Actual Shaft Torque (inch-pounds)
	D	=	P. D. of Sprocket, Sheave, Pulley or Gear
	K	=	1.0 for Chain Drive
		=	1.25 for Gear Drive
		=	1.25 for Gearbelt Drive
		=	1.50 for V-Belt Drive
		=	2.50 for Flat Belt Drive

No overhung loads are encountered when the speed reducer is coupling connected to the driver and/or driven machine. However, care should be taken in aligning the shafts to avoid pre-loading bearings in misalignment.

(Service factors shown apply only if electric or hydraulic motors are used. For single or multi-cylinder engines, see Table A-3 for conversion.)

**Table A-1**

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day	APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
AGITATORS (Mixers)				FANS			
Pure Liquids .....	-	1.00	1.25	Centrifugal .....	-	1.00	1.25
Liquids and Solids .....	1.00	1.25	1.50	Cooling Towers .....	Refer To Tech. Service		
Liquids-Variable Density .....	1.00	1.25	1.50	Forced Draft .....	1.25	1.25	1.25
BLOWERS				Induced Draft .....	1.00	1.25	1.50
Centrifugal .....	1.00	1.25	-	Industrial & Mine .....	1.00	1.25	1.50
Lobe .....	1.00	1.25	1.50	FEEDERS			
Vane .....	-	1.00	1.25	Apron .....	-	1.25	1.50
BREWING AND DISTILLING				Belt .....	1.00	1.25	1.50
Bottling Machinery .....	-	1.00	1.25	Disc .....	-	1.00	1.25
Brew Kettles, Continuous Duty .....	-	1.00	1.25	Reciprocating .....	1.25	1.50	1.75
Cookers, Continuous Duty .....	-	1.00	1.25	Screw .....	1.00	1.25	1.50
Mash Tubs, Continuous Duty .....	-	1.00	1.25	FOOD INDUSTRY			
Scale Hopper, Frequent Starts .....	1.00	1.25	1.50	Cereal Cooker .....	-	1.00	1.25
CAN FILLING MACHINES .....	-	1.00	1.25	Dough Mixer .....	1.00	1.25	1.50
CAR DUMPERS .....	1.25	1.50	1.75	Meat Grinders .....	1.00	1.25	1.50
CAR PULLERS .....	1.00	1.25	1.50	Slicers .....	1.00	1.25	1.50
CLARIFIERS .....	-	1.00	1.25	GENERATORS AND EXCITERS .....	-	1.00	1.25
CLASSIFIERS .....	1.00	1.25	1.50	HAMMER MILLS .....	1.50	1.50	1.75
CLAY WORKING MACHINERY				HOISTS			
Brick Press .....	1.25	1.50	1.75	Heavy Duty .....	1.25	1.50	1.75
Briquette Machine .....	1.25	1.50	1.75	Medium Duty .....	1.00	1.25	1.50
Pug Mill .....	1.00	1.25	1.50	Skip Hoist .....	1.00	1.25	1.50
COMPACTORS .....	1.50	1.75	2.00	LAUNDRY TUMBLERS .....	1.00	1.25	1.50
COMPRESSORS				LAUNDRY WASHERS .....	1.25	1.25	1.50
Centrifugal .....	-	1.00	1.25	LUMBER INDUSTRY			
Lobe .....	1.00	1.25	1.50	Barkers			
Reciprocating, Multi-Cylinder .....	1.00	1.25	1.50	-Spindle Feed .....	1.25	1.25	1.25
Reciprocating, Single-Cylinder .....	1.25	1.50	1.75	- Main Drive .....	1.50	1.50	1.50
CONVEYORS - GENERAL PURPOSE				Conveyors			
Uniformly Loaded or Fed .....	-	1.00	1.25	- Burner .....	1.25	1.25	1.50
Not Uniformly Fed .....	1.00	1.25	1.50	- Main or Heavy Duty .....	1.50	1.50	1.50
Reciprocating or Shaker .....	1.25	1.50	1.75	- Main Log .....	1.50	1.50	1.50
CRANES				- Re-saw, Merry-Go-Round .....	1.25	1.25	1.50
Dry Dock				- Slab .....	1.50	1.50	1.75
Main Hoist .....	1.25	1.50	1.75	- Transfer .....	1.25	1.25	1.50
Auxiliary .....	1.25	1.50	1.75	Chains			
Boom Hoist .....	1.25	1.50	1.75	- Floor .....	1.50	1.50	1.50
Slewing Drive .....	1.25	1.50	1.75	- Green .....	1.50	1.50	1.50
Traction Drive .....	1.50	1.50	1.50	Cut-Off Saws			
Container				- Chain .....	1.50	1.50	1.50
Main Hoist .....	Refer To Tech. Service			- Drag .....	1.50	1.50	1.50
Boom Hoist .....	Refer To Tech. Service			Debarking Drums .....	1.50	1.50	1.75
Trolley Drive .....	Refer To Tech. Service			Feeds			
(Gantry Drive)	Refer To Tech. Service			- Edger .....	1.25	1.25	1.50
(Traction Drive) .....	Refer To Tech. Service			- Gang .....	1.50	1.50	1.50
Mill Duty				- Trimmer .....	1.25	1.25	1.50
Main Hoist .....	Refer To Tech. Service			Log Deck .....	1.50	1.50	1.50
Auxiliary .....	Refer To Tech. Service			Log Hauls-Incline-Well Type .....	1.50	1.50	1.50
Bridge and				Log Turning Devices .....	1.50	1.50	1.50
Trolley Travel .....	Refer To Tech. Service			Planer Feed .....	1.25	1.25	1.50
Industrial Duty				Planer Tilting Hoists .....	1.50	1.50	1.50
Main .....	1.00	1.25	1.50	Rolls-Live-off Brg.-Roll Cases .....	1.50	1.50	1.50
Auxiliary .....	Refer To Tech. Service			Sorting Table .....	1.25	1.25	1.50
Bridge and Trolley Travel .....	Refer To Tech. Service			Tipple Hoist .....	1.25	1.25	1.50
CRUSHER				Transfers			
Stone or Ore .....	1.50	1.75	2.00	- Chain .....	1.50	1.50	1.50
DREDGES				- Causeway .....	1.50	1.50	1.50
Cable Reels .....	1.00	1.25	1.50	Tray Drives .....	1.25	1.25	1.50
Conveyors .....	1.00	1.25	1.50	Veneer Lathe Drives .....	Refer To Tech. Service		
Cutter Head Drives .....	1.25	1.50	1.75	METAL MILLS			
Pumps .....	1.00	1.25	1.50	Draw Bench Carriage and Main Drive .....	1.00	1.25	1.50
Screen Drives .....	1.25	1.50	1.75	Runout Table			
Stackers .....	1.00	1.25	1.50	Non-reversing			
Winches .....	1.00	1.25	1.50	Group Drives .....	1.00	1.25	1.50
ELEVATORS				Individual Drives .....	1.50	1.50	1.75
Bucket .....	1.00	1.25	1.50	Reversing .....	1.50	1.50	1.75
Centrifugal Discharge .....	-	1.00	1.25	Slab Pushers .....	1.25	1.25	1.50
Escalators .....	Refer To Tech. Service			Shears .....	1.50	1.50	1.75
Freight .....	Refer To Tech. Service			Wire Drawing .....	1.00	1.25	1.50
Gravity Discharge .....	-	1.00	1.25	Wire Winding Machine .....	1.00	1.25	1.50
EXTRUDERS				METAL STRIP PROCESSING MACHINERY			
General .....	1.25	1.25	1.25	Bridles .....	1.25	1.25	1.50
Plastics				Coilers & Uncoilers .....	1.00	1.00	1.25
(a) Variable Speed Drive .....	1.50	1.50	1.50	Edge Trimmers .....	1.00	1.25	1.50
(b) Fixed Speed Drive .....	1.75	1.75	1.75	Flatteners .....	1.00	1.25	1.50
Rubber				Loopers(Accumulators) .....	1.00	1.00	1.00
(a) Continuous Screw Operation .....	1.50	1.50	1.50	Pinch Rolls .....	1.00	1.25	1.50
(b) Intermittent Screw Operation .....	1.75	1.75	1.75	Scrap Choppers .....	1.00	1.25	1.50
				Shears .....	1.50	1.50	1.75
				Slitters .....	1.00	1.25	1.50





Enclosed Worm Gear Applications

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
MILLS, ROTARY TYPE			
Ball & Rod			
Spur Ring Gear	1.50	1.50	1.75
Helical Ring Gear	1.50	1.50	1.50
Direct Connected	1.50	1.50	1.75
Cement Kilns	1.50	1.50	1.50
Dryers & Coolers	1.50	1.50	1.50
MIXERS, CONCRETE	1.00	1.25	1.50
PAPER MILLS			
Agitator(Mixer)	1.50	1.50	1.50
Agitator for Pure Liquids	1.25	1.25	1.25
Barking Drums	1.75	1.75	1.75
Barkers - Mechanical	1.75	1.75	1.75
Beater	1.50	1.50	1.50
Breaker Stack	1.25	1.25	1.25
❖ Calender	1.25	1.25	1.25
Chipper	1.75	1.75	1.75
Chip Feeder	1.50	1.50	1.50
Coating Rolls	1.25	1.25	1.25
Conveyors			
Chip, Bark, Chemical	1.25	1.25	1.25
Log(Including Slab)	1.75	1.75	1.75
Couch Rolls	1.25	1.25	1.25
Cutter	1.75	1.75	1.75
Cylinder Molds	1.25	1.25	1.25
❖ Dryers			
Paper Machine	1.25	1.25	1.25
Conveyor Type	1.25	1.25	1.25
Embossers	1.25	1.25	1.25
Extruder	1.50	1.50	1.50
Fourdrinier Rolls (Includes Lump Breaker, Dandy Roll, Wire Turning, and Return Rolls)	1.25	1.25	1.25
Jordan	1.25	1.25	1.25
Kiln Drive	1.50	1.50	1.50
Mt. Hope Roll	1.25	1.25	1.25
Paper Rolls	1.25	1.25	1.25
Platter	1.50	1.50	1.50
Presses- Felt & Suction	1.25	1.25	1.25
Pulper	1.50	1.50	1.75
Pumps- Vacuum	1.50	1.50	1.50
Reel (Surface Type)	1.25	1.25	1.50
Screens			
Chip	1.50	1.50	1.50
Rotary	1.50	1.50	1.50
Vibrating	1.75	1.75	1.75
Size Press	1.25	1.25	1.25
Super Calender (See Note)	1.25	1.25	1.25
Thickener			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Washer			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Wind and Unwind Stand	1.00	1.00	1.00
Winders (Surface Type)	1.25	1.25	1.25
❖ Yankee Dryers	1.25	1.25	1.25
PLASTICS INDUSTRY - PRIMARY PROCESSING			
Intensive Internal Mixers			
(a) Batch Mixers	1.75	1.75	1.75
(b) Continuous Mixers	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.25	1.25	1.25
Continuous Feed, Holding & Blend Mill	1.25	1.25	1.25
Compounding Mills	1.25	1.25	1.25
Calenders	1.50	1.50	1.50
PLASTICS INDUSTRY - SECONDARY PROCESSING			
Blow Molders	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Film	1.25	1.25	1.25
Pipe	1.25	1.25	1.25
Pre-Plasticizers	1.50	1.50	1.50
Rods	1.25	1.25	1.25
Sheet	1.25	1.25	1.25
Tubing	1.25	1.25	1.50
PULLERS - BARGE HAUL	1.00	1.50	1.75
PUMPS			
Centrifugal	-	1.00	1.25
Proportioning	1.00	1.25	1.50
Reciprocating			
Single Acting, 3 or More Cylinders	1.00	1.25	1.50
Double Acting, 2 or More Cylinders	1.50	1.00	1.25
Rotary			
- Gear Type	-	1.00	1.50
- Lobe	-	1.00	1.25
- Vane	-	1.00	1.25
RUBBER INDUSTRY			
Intensive Internal Mixers			
(a) Batch Mixers	1.50	1.75	1.75
(b) Continuous Mixers	1.25	1.50	1.50
Mixing Mill - 2 Smooth Rolls - (If corrugated rolls are used, then use the same service factors that are used for a Cracker-Warmer)	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.50	1.50	1.50
Cracker Warmer - 2 Roll: 1 Corrugated Roll	1.75	1.75	1.75
Cracker - 2 Corrugated Rolls	1.75	1.75	1.75
Holding, Feed & Blend Mill - 2 Rolls	1.25	1.25	1.25
Refiner - 2 Rolls	1.50	1.50	1.50
Calenders	1.50	1.50	1.50

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
SAND MILLER	1.00	1.25	1.50
SEWAGE DISPOSAL EQUIPMENT			
Bar Screens	-	1.00	1.25
Chemical Feeders	-	1.00	1.25
SEWAGE DISPOSAL EQUIPMENT (Cont'd.)			
Dewatering Screens	1.00	1.25	1.50
Scum Breakers	1.00	1.25	1.50
Slow Or Rapid Mixers	1.00	1.25	1.50
Sludge Collectors	1.00	1.00	1.25
Thickener	1.00	1.25	1.50
Vacuum Filters	1.00	1.25	1.50
SCREENS			
Air Washing	-	1.00	1.25
Rotary - Stone Or Gravel	1.00	1.25	1.50
Traveling Water Intake	-	1.00	1.25
SUGAR INDUSTRY			
Beet Slicer	1.50	1.50	1.75
Cane Knives	1.50	1.50	1.50
Crushers	1.50	1.50	1.50
Mills (Low Speed End)	1.50	1.50	1.50
TEXTILE INDUSTRY			
Batchers	1.00	1.25	1.50
Calenders	1.00	1.25	1.50
Cards	1.00	1.25	1.50
Dry Cans	1.00	1.25	1.50
Dryers	1.00	1.25	1.50
Dyeing Machinery	1.00	1.25	1.50
Looms	1.00	1.25	1.50
Mangles	1.00	1.25	1.50
Nappers	1.00	1.25	1.50
Pads	1.00	1.25	1.50
Slashers	1.00	1.25	1.50
Soapers	1.00	1.25	1.50
Spinners	1.00	1.25	1.50
Tenter Frames	1.00	1.25	1.50
Washers	1.00	1.25	1.50
Winders	1.00	1.25	1.50

❖ Anti-Friction Bearings Only.

NOTE: A Service Factor Of 1.0 may be applied at the base of a super calender, operating over a speed range where part of the range is constant horsepower and part of the range is constant torque, provided that the constant horsepower part is greater than 1.5 to 1. A service factor of 1.25 is applicable to super calenders operating over the entire speed range at constant torque, or where the constant horsepower speed range is less than 1.5 to 1.

Service Factors for Electric and Hydraulic Motors

(For Service Factors For Single Or Multi-Cylinder Engines, Consult Table A-3)

Table A-2

Duration of Service (Hours Per Day)	Uniform Load	Moderate Shock	Heavy Shock	Extreme Shock
Occasional 1/2 Hour	-	-	1.0	1.25
Less Than 3 Hours	1.0	1.0	1.25	1.50
3 - 10 Hours	1.0	1.25	1.50	1.75
Over 10 Hours	1.25	1.50	1.75	2.00

Conversion Table for Single or Multi-Cylinder Engines to find Equivalent Single or Multi-Cylinder Service Factors

Table A-3

Hydraulic or Electric Motor	Single Cylinder Engines	Multi-Cylinder Engines
1.00	1.50	1.25
1.25	1.75	1.50
1.50	2.00	1.75
1.75	2.25	2.00
2.00	2.50	2.25

Load and operating characteristics of both the driver and driven units must be considered thoroughly when selecting EPT Speed Reducers. It is essential that all speed reducers be selected for maximum load conditions to be encountered. EPT Worm Gear Speed Reducers will safely transmit momentary starting loads as great as 300% of the mechanical input ratings.

## Input Horsepower, Output Torque, Overhung Load and Thrust Load for RAIDER® Single Reduction Worm Gear Speed Reducers

UNIT SIZE ■	MECHANICAL		THERMAL		MAXIMUM OVERHUNG LOAD Lbs. Output Shaft	MAX. THRUST LOAD Lbs. Output Shaft
	Input HP	Output Torque	Input HP	Output Torque		
<b>1750 RPM DRIVER-5:1 RATIO-350 RPM OUTPUT</b>						
100	0.50	82	0.50	82	147	▶
133	1.11	183	1.11	183	458	811
154	1.44	240	1.44	240	388	806
175	2.13	352	1.74	288	663	868
206	3.04	510	2.44	409	913	1265
237	4.44	749	3.46	584	843	1379
262	5.38	909	4.07	687	1295	1596
300	8.23	1395	5.92	1004	987	2692
300 W/Fan	8.23	1395	7.82	1325	987	2692
<b>1750 RPM DRIVER-10:1 RATIO-175 RPM OUTPUT</b>						
100	0.32	102	0.32	102	147	▶
133	0.67	214	0.67	214	458	1001
154	0.92	295	0.92	295	388	1001
175	1.32	429	1.23	399	740	1098
206	1.95	636	1.74	568	1078	1580
237	2.90	952	2.31	757	843	1714
262	3.54	1163	3.02	994	1295	1976
300	5.25	1743	3.54	1175	987	3322
300 W/Fan	5.25	1743	5.25	1743	987	3322
325	6.29	2088	4.75	1575	2401	2964
325 W/Fan	6.29	2088	6.29	2088	2401	2964
375	8.53	2857	7.37	2470	1678	2335
375 W/Fan	8.53	2857	8.38	2807	1678	2335
450	12.85	4331	10.02	3376	1549	4626
450 W/Fan	12.85	4331	12.52	4220	1549	4626
516	17.27	5851	12.99	4400	2531	3889
516 W/Fan	17.27	5851	16.23	5500	2531	3889
600	24.99	8454	18.87	6384	4417	5398
600 W/Fan	24.99	8454	22.47	7600	4417	5398
<b>1750 RPM DRIVER-15:1 RATIO-116.6 RPM OUTPUT</b>						
100	0.23	105	0.23	105	147	▶
133	0.49	225	0.49	225	458	1156
154	0.70	317	0.70	317	388	1146
175	0.99	462	0.96	449	740	1253
206	1.43	680	1.28	607	1078	1820
237	2.19	1036	1.81	857	843	1954
262	2.61	1252	2.17	1041	1295	2296
300	3.97	1910	2.61	1257	987	3410
300 W/Fan	3.97	1910	3.97	1910	987	3410
325	4.71	2273	3.35	1615	2401	3364
325 W/Fan	4.71	2273	4.54	2192	2401	3364
375	6.39	3106	5.11	2485	1678	2655
375 W/Fan	6.39	3106	6.39	3106	1678	2655
450	9.64	4727	7.53	3692	1549	5346
450 W/Fan	9.64	4727	9.41	4315	1549	5346
516	13.05	6453	9.52	4706	2531	4449
516 W/Fan	13.05	6453	11.89	5882	2531	4449
600	18.43	9144	12.89	6396	4417	6198
600 W/Fan	18.43	9144	15.72	7800	4417	6198
<b>1750 RPM DRIVER-20:1 RATIO-87.5 RPM OUTPUT</b>						
100	0.20	117	0.20	117	147	▶
133	0.40	235	0.40	235	458	1241
154	0.56	324	0.56	324	388	1241
175	0.78	473	0.75	452	740	1358
206	1.16	706	1.09	663	1078	1980
237	1.73	1058	1.44	880	843	2179
262	2.09	1296	1.82	1127	1295	2536
300	3.13	1957	2.02	1265	987	3410
300 W/Fan	3.13	1957	3.13	1957	987	3410
325	3.72	2325	2.90	1810	2401	3410
325 W/Fan	3.72	2325	3.70	2315	2401	3410
375	5.23	3310	4.44	2813	1678	2895
375 W/Fan	5.23	3310	5.23	3310	1678	2895
450	7.53	4821	6.33	4050	1549	5906
450 W/Fan	7.53	4821	7.53	4821	1549	5906
516	10.16	6571	8.11	5248	2531	4929
516 W/Fan	10.16	6571	9.66	6248	2531	4929
600	14.36	9301	11.48	7434	4417	6758
600 W/Fan	14.36	9301	13.66	8850	4417	6758

UNIT SIZE ■	MECHANICAL		THERMAL		MAXIMUM OVERHUNG LOAD Lbs. Output Shaft	MAX. THRUST LOAD Lbs. Output Shaft
	Input HP	Output Torque	Input HP	Output Torque		
<b>1750 RPM DRIVER-25:1 RATIO-70 RPM OUTPUT</b>						
133	0.34	234	0.34	234	458	1322
154	0.48	326	0.48	326	388	1322
175	0.66	472	0.63	446	740	1380
206	0.99	706	0.92	662	1078	2143
237	1.42	1054	1.26	898	843	2245
262	1.78	1300	1.55	1129	1295	2748
300	2.71	1974	1.8	1318	987	3410
300 W/Fan	2.71	1974	2.71	1974	987	3410
325	3.22	2370	2.52	1858	2401	3410
325 W/Fan	3.22	2370	3.21	2365	2401	3410
375	4.54	3372	3.88	2883	1678	3133
375 W/Fan	4.54	3372	4.54	3372	1678	3133
450	6.48	4868	5.34	3990	1549	6305
450 W/Fan	6.48	4868	6.48	4868	1549	6305
516	8.74	6654	6.89	5229	2531	5252
516 W/Fan	8.74	6654	8.37	6380	2531	5252
600	12.31	9394	9.9	7563	4417	7281
600 W/Fan	12.31	9394	11.72	8950	4417	7281
<b>1750 RPM DRIVER-30:1 RATIO-58.3 RPM OUTPUT</b>						
100	0.14	120	0.14	120	147	▶
133	0.28	233	0.28	233	458	1399
154	0.41	328	0.41	328	388	1399
175	0.55	472	0.51	441	740	1399
206	0.82	707	0.76	660	1078	2300
237	1.26	1072	1.08	917	843	2305
262	1.48	1303	1.28	1131	1295	2956
300	2.29	1991	1.58	1372	987	3410
300 W/Fan	2.29	1991	2.29	1991	987	3410
325	2.73	2415	2.15	1905	2401	3410
325 W/Fan	2.73	2415	2.73	2415	2401	3410
375	3.85	3434	3.31	2953	1678	3375
375 W/Fan	3.85	3434	3.85	3434	1678	3375
450	5.42	4914	4.34	3931	1549	6706
450 W/Fan	5.42	4914	5.42	4914	1549	6706
516	7.33	6738	5.67	5210	2531	5569
516 W/Fan	7.33	6738	7.09	6513	2531	5569
600	10.26	9488	8.32	7692	4417	7798
600 W/Fan	10.26	9488	9.79	9050	4417	7798
<b>1750 RPM DRIVER-40:1 RATIO-43.7 RPM OUTPUT</b>						
100	0.11	118	0.11	118	147	▶
133	0.23	235	0.23	235	458	1399
154	0.33	323	0.33	323	388	1399
175	0.45	472	0.42	441	740	1399
206	0.66	705	0.62	657	1078	2305
237	0.99	1057	0.83	891	843	2305
262	1.19	1295	1.03	1120	1295	3096
300	1.77	1966	1.20	1334	987	3410
300 W/Fan	1.77	1966	1.77	1966	987	3410
325	2.11	2339	1.64	1820	2401	3410
325 W/Fan	2.11	2339	2.11	2339	2401	3410
375	2.91	3320	2.47	2822	1678	3695
375 W/Fan	2.91	3320	2.91	3320	1678	3695
450	4.31	5000	3.66	4250	1549	6820
450 W/Fan	4.31	5000	4.31	5000	1549	6820
516	5.56	6578	4.67	5525	2531	6209
516 W/Fan	5.56	6578	5.56	6578	2531	6209
600	7.87	9318	6.35	7514	4417	8518
600 W/Fan	7.87	9318	7.55	8945	4417	8518
<b>1750 RPM DRIVER-50:1 RATIO-35 RPM OUTPUT</b>						
100	0.080	105	0.080	105	147	▶
133	0.19	223	0.19	223	458	1399
154	0.27	309	0.27	309	388	1399
175	0.36	452	0.36	452	740	1399
206	0.54	678	0.51	646	1078	2305
237	0.79	1014	0.68	877	843	2305
262	0.96	1250	0.84	1092	1295	3336
300	1.43	1894	1.07	1421	987	3410
300 W/Fan	1.43	1894	1.43	1894	987	3410
325	1.78	2334	1.39	1827	2401	3410

■ Basic Unit Size. See Assembly Drawings, pages 42-81, to determine components needed and complete the part numbers following the directions on that page.  
 Above ratings are not applicable when reducer shafts are subjected to combined overhung and thrust loads.  
 Find ratings for input speeds not shown by straight line interpolation.  
 Maximum overhung loads are at center of keyseats and on one end of output shaft only. Overhung loads applied closer to the reducer housing are desirable, but overhung loads farther out on the shaft and overhung loads on both ends of output shaft should be referred to EPT TECHNICAL SERVICES .

▶ Contact EPT TECHNICAL SERVICES

Contact EPT TECHNICAL SERVICES for the following:

1. High starting torques exceeding 300% of the reducer mechanical rating.
2. Frequent starting or repetitive shock applications.
3. Applications where high energy loads must be absorbed as when stalling.

## Input Horsepower, Output Torque, Overhung Load and Thrust Load for RAIDER® Single Reduction Worm Gear Speed Reducers

UNIT SIZE ■	MECHANICAL		THERMAL		MAXIMUM OVERHUNG LOAD Lbs.	MAX. THRUST LOAD Lbs.
	Input HP	Output Torque	Input HP	Output Torque	Output Shaft	Output Shaft
<b>1750 RPM DRIVER-50:1 RATIO-35 RPM OUTPUT</b>						
325 W/Fan	1.78	2334	1.78	2334	2401	3410
375	2.45	3320	2.13	2888	1678	4015
375 W/Fan	2.45	3320	2.45	3320	1678	4015
450	3.47	4860	2.91	4082	1549	6820
450 W/Fan	3.47	4860	3.47	4860	1549	6820
516	4.45	6330	3.60	5127	2531	6689
516 W/Fan	4.45	6330	4.45	6330	2531	6689
600	6.15	8894	5.08	7353	4417	9238
600 W/Fan	6.15	8894	5.91	8550	4417	9238
<b>1750 RPM DRIVER-60:1 RATIO-29.1 RPM OUTPUT</b>						
133	0.169	209	0.169	209	458	1399
175	0.30	426	0.30	426	740	1399
206	0.45	641	0.45	641	1078	2305
237	0.66	958	0.60	872	843	2305
262	0.79	1182	0.71	1064	1295	3410
300	1.18	1794	0.91	1391	987	3410
300 W/Fan	1.18	1794	1.18	1794	987	3410
325	1.53	2305	1.18	1776	2401	3410
325 W/Fan	1.53	2305	1.53	2305	2401	3410
375	2.08	3270	1.68	2648	1678	4255
375 W/Fan	2.08	3270	2.08	3270	1678	4255
450	2.95	4760	2.36	3808	1549	6820
450 W/Fan	2.95	4760	2.95	4760	1549	6820
516	3.59	5935	2.91	4807	2531	6820
516 W/Fan	3.59	5935	3.59	5935	2531	6820
600	5.07	8472	4.28	7144	4417	9798
600 W/Fan	5.07	8472	5.03	8405	4417	9798
<b>1160 RPM DRIVER-5:1 RATIO-232 RPM OUTPUT</b>						
100	0.40	90	0.40	90	147	▶
133	0.86	211	0.86	211	458	916
154	1.15	283	1.15	283	388	911
175	1.72	426	1.45	358	740	973
206	2.53	632	2.07	518	1078	1415
237	3.78	948	3.02	758	843	1534
262	4.60	1160	3.59	905	1295	1776
300	6.95	1754	5.14	1298	987	2997
300 W/Fan	6.95	1754	6.67	1683	987	2997
<b>1160 RPM DRIVER-10:1 RATIO-116 RPM OUTPUT</b>						
100	0.27	111	0.27	111	147	▶
133	0.50	235	0.50	235	458	1151
154	0.71	335	0.71	335	388	1141
175	1.01	488	0.99	477	740	1238
206	1.54	746	1.43	693	1078	1740
237	2.34	1137	1.98	960	843	1944
262	2.88	1409	2.70	1319	1295	2216
300	4.37	2154	3.26	1605	987	3410
300 W/Fan	4.37	2154	4.37	2154	987	3410
325	5.38	2644	4.06	1994	2401	3284
325 W/Fan	5.38	2644	5.38	2644	2401	3284
375	7.25	3612	6.31	3142	1678	2575
375 W/Fan	7.25	3612	7.25	3612	1678	2575
450	10.89	5460	8.71	4368	1549	5106
450 W/Fan	10.89	5460	10.57	5300	1549	5106
516	14.49	7309	11.16	5628	2531	4289
516 W/Fan	14.49	7309	13.91	7017	2531	4289
600	20.67	10424	17.78	8965	4417	6038
600 W/Fan	20.67	10424	19.84	10007	4417	6038
<b>1160 RPM DRIVER-15:1 RATIO-77.3 RPM OUTPUT</b>						
100	0.20	115	0.20	115	147	▶
133	0.36	246	0.36	246	458	1311
154	0.54	362	0.54	362	388	1296
175	0.77	526	0.74	503	740	1399
206	1.13	787	1.05	731	1078	2060
237	1.78	1240	1.57	1097	843	2194
262	2.11	1497	1.86	1322	1295	2536
300	3.33	2362	2.53	1796	987	3410
300 W/Fan	3.33	2362	3.33	2362	987	3410
325	3.97	2831	2.90	2067	2401	3410
325 W/Fan	3.97	2831	3.85	2746	2401	3410

UNIT SIZE ■	MECHANICAL		THERMAL		MAXIMUM OVERHUNG LOAD Lbs.	MAX. THRUST LOAD Lbs.
	Input HP	Output Torque	Input HP	Output Torque	Output Shaft	Output Shaft
<b>1160 RPM DRIVER-15:1 RATIO-77.3 RPM OUTPUT</b>						
375	5.50	3951	4.51	3240	1678	2975
375 W/Fan	5.50	3951	5.50	3951	1678	2975
450	8.24	5976	6.59	4781	1549	5906
450 W/Fan	8.24	5976	8.16	5916	1549	5906
516	10.97	8054	8.34	6121	2531	4929
516 W/Fan	10.97	8054	10.09	7410	2531	4929
600	15.25	11231	11.74	8648	4417	6918
600 W/Fan	15.25	11231	13.57	9995	4417	6918
<b>1160 RPM DRIVER-20:1 RATIO-58 RPM OUTPUT</b>						
100	0.18	130	0.18	130	147	▶
133	0.30	257	0.30	257	458	1399
154	0.43	366	0.43	366	388	1399
175	0.60	535	0.60	535	740	1399
206	0.92	818	0.92	818	1078	2220
237	1.39	1253	1.27	1144	843	2305
262	1.71	1561	1.64	1493	1295	2776
300	2.61	2389	1.93	1768	987	3410
300 W/Fan	2.61	2389	2.61	2389	987	3410
325	3.18	2924	2.58	2368	2401	3410
325 W/Fan	3.18	2924	3.18	2924	2401	3410
375	4.30	4017	3.78	3535	1678	3295
375 W/Fan	4.30	4017	4.30	4017	1678	3295
450	6.49	6121	5.58	5264	1549	6546
450 W/Fan	6.49	6121	6.49	6121	1549	6546
516	8.65	8261	7.01	6691	2531	5489
516 W/Fan	8.65	8261	8.30	7931	2531	5489
600	12.03	11533	9.98	9572	4417	7638
600 W/Fan	12.03	11533	11.55	11072	4417	7638
<b>1160 RPM DRIVER-25:1 RATIO-46.4 RPM OUTPUT</b>						
133	0.26	256	0.26	256	458	1399
154	0.37	371	0.37	371	388	1399
175	0.49	533	0.49	533	740	1399
206	0.76	814	0.76	814	1078	2305
237	1.19	1267	1.19	1164	843	2305
262	1.42	1560	1.34	1467	1295	2978
300	2.21	2417	1.71	1863	987	3410
300 W/Fan	2.19	2417	2.19	2417	987	3410
325	2.64	2936	2.13	2364	2401	3410
325 W/Fan	2.64	2936	2.64	2936	2401	3410
375	3.60	4050	3.13	3524	1678	3536
375 W/Fan	3.60	4050	3.60	4050	1678	3536
450	5.41	6162	4.54	5175	1549	6680
450 W/Fan	5.41	6162	5.41	6162	1549	6680
516	7.22	8337	5.82	6709	2531	5891
516 W/Fan	7.22	8337	6.82	7876	2531	5891
600	9.97	11604	8.37	9748	4417	8162
600 W/Fan	9.97	11604	9.40	10964	4417	8162
<b>1160 RPM DRIVER-30:1 RATIO-38.6 RPM OUTPUT</b>						
100	0.13	133	0.13	133	147	▶
133	0.21	254	0.21	254	458	1399
154	0.33	373	0.33	373	388	1399
175	0.43	528	0.43	528	740	1399
206	0.66	813	0.65	813	1078	2305
237	1.04	1281	0.96	1183	843	2305
262	1.21	1554	1.12	1439	1295	3176
300	1.93	2444	1.55	1957	987	3410
300 W/Fan	1.93	2444	1.93	2444	987	3410
325	2.27	2943	1.82	2354	2401	3410
325 W/Fan	2.27	2943	2.27	2943	2401	3410
375	3.15	4091	2.71	3518	1678	3775
375 W/Fan	3.15	4091	3.15	4091	1678	3775
450	4.69	6194	3.85	5080	1549	6820
450 W/Fan	4.69	6194	4.69	6194	1549	6820
516	6.26	8404	5.01	6723	2531	6289
516 W/Fan	6.26	8404	5.82	7816	2531	6289
600	8.61	11666	7.32	9916	4417	8678
600 W/Fan	8.61	11666	8.01	10849	4417	8678

■ Basic Unit Size. See Assembly Drawings, pages 42-81, to determine components needed and complete the part numbers following the directions on that page.  
 Above ratings are not applicable when reducer shafts are subjected to combined overhung and thrust loads.  
 Find ratings for input speeds not shown by straight line interpolation.  
 Maximum overhung loads are at center of keyseats and on one end of output shaft only. Overhung loads applied closer to the reducer housing are desirable, but overhung loads farther out on the shaft and overhung loads on both ends of output shaft should be referred to EPT TECHNICAL SERVICES.

▶ Contact EPT TECHNICAL SERVICES

Contact EPT TECHNICAL SERVICES for the following:

1. High starting torques exceeding 300% of the reducer mechanical rating.
2. Frequent starting or repetitive shock applications.
3. Applications where high energy loads must be absorbed as when stalling.



## Input Horsepower, Output Torque, Overhung Load and Thrust Load for RAIDER® Single Reduction Worm Gear Speed Reducers

UNIT SIZE ■	MECHANICAL		THERMAL		MAXIMUM OVERHUNG LOAD Lbs.	MAX. THRUST LOAD Lbs.
	Input HP	Output Torque	Input HP	Output Torque	Output Shaft	Output Shaft
<b>1160 RPM DRIVER-40:1 RATIO-29 RPM OUTPUT</b>						
100	0.10	129	0.10	129	147	▶
133	0.18	256	0.18	256	458	1399
154	0.26	365	0.26	365	388	1399
175	0.35	535	0.35	535	740	1399
206	0.53	816	0.53	816	1078	2305
237	0.81	1251	0.76	1171	843	2305
262	0.99	1558	0.92	1456	1295	3176
300	1.50	2396	1.20	1917	987	3410
300 W/Fan	1.50	2396	1.50	2396	987	3410
325	1.84	2920	1.47	2336	2401	3410
325 W/Fan	1.84	2920	1.84	2920	2401	3410
375	2.44	4032	2.12	3508	1678	4175
375 W/Fan	2.44	4032	2.44	4032	1678	4175
450	3.66	6149	3.15	5288	1549	6820
450 W/Fan	3.66	6149	3.66	6149	1549	6820
516	4.83	8304	3.91	6726	2531	6820
516 W/Fan	4.83	8304	4.64	7972	2531	6820
600	6.72	11610	5.64	9752	4417	9558
600 W/Fan	6.72	11610	6.45	11146	4417	9558
<b>1160 RPM DRIVER-50:1 RATIO-23.2 RPM OUTPUT</b>						
100	0.080	110	0.080	110	147	▶
133	0.14	244	0.14	244	458	1399
154	0.21	347	0.21	347	388	1399
175	0.29	508	0.29	508	740	1399
206	0.43	780	0.43	780	1078	2305
237	0.65	1184	0.63	1138	843	2305
262	0.80	1485	0.73	1349	1295	3410
300	1.20	2285	0.95	1812	987	3410
300 W/Fan	1.20	2285	1.20	2285	987	3410
325	1.49	2807	1.19	2246	2401	3410
325 W/Fan	1.49	2807	1.49	2807	2401	3410
375	1.98	3869	1.74	3405	1678	4495
375 W/Fan	1.98	3869	1.98	3869	1678	4495
450	2.95	5902	2.54	5076	1549	6820
450 W/Fan	2.95	5902	2.95	5902	1549	6820
516	3.86	8005	3.20	6644	2531	6820
516 W/Fan	3.86	8005	3.86	8005	2531	6820
600	5.34	11150	4.49	9366	4417	10358
600 W/Fan	5.34	11150	5.23	10927	4417	10358
<b>1160 RPM DRIVER-60:1 RATIO-19.3 RPM OUTPUT</b>						
133	0.129	230	0.129	230	458	1399
175	0.24	477	0.24	477	740	1399
206	0.36	734	0.36	734	1078	2305
237	0.54	1122	0.51	1057	843	2305
262	0.66	1403	0.60	1284	1295	3410
300	0.98	2147	0.82	1805	987	3410
300 W/Fan	0.98	2147	0.98	2147	987	3410
325	1.23	2658	0.98	2126	2401	3410
325 W/Fan	1.23	2658	1.23	2658	2401	3410
375	1.62	3655	1.36	3070	1678	4815
375 W/Fan	1.62	3655	1.62	3655	1678	4815
450	2.41	5577	2.00	4629	1549	6820
450 W/Fan	2.41	5577	2.41	5577	1549	6820
516	3.19	7590	2.65	6300	2531	6820
516 W/Fan	3.19	7590	3.19	7590	2531	6820
600	4.42	10582	3.76	9000	4417	10998
600 W/Fan	4.42	10582	4.42	10582	4417	10998
<b>690 RPM DRIVER-5:1 RATIO-138 RPM OUTPUT</b>						
100	0.24	98	0.24	98	147	▶
133	0.59	237	0.59	237	458	1071
154	0.79	323	0.79	323	388	1066
175	1.22	498	1.07	438	740	1118
206	1.84	756	1.58	650	1078	1650
237	2.80	1162	2.35	976	843	1784
262	3.48	1446	2.85	1186	1295	2056
300	5.40	2252	4.21	1757	987	3402
300 W/Fan	5.40	2252	5.40	2252	987	3402
<b>690 RPM DRIVER-10:1 RATIO-69 RPM OUTPUT</b>						
100	0.15	120	0.15	120	147	▶
133	0.33	254	0.33	254	458	1321

UNIT SIZE ■	MECHANICAL		THERMAL		MAXIMUM OVERHUNG LOAD Lbs.	MAX. THRUST LOAD Lbs.
	Input HP	Output Torque	Input HP	Output Torque	Output Shaft	Output Shaft
<b>690 RPM DRIVER-10:1 RATIO-69 RPM OUTPUT</b>						
154	0.48	371	0.48	371	388	1321
175	0.68	539	0.68	539	740	1399
206	1.06	840	1.06	840	1078	2060
237	1.64	1308	1.64	1308	843	2274
262	2.06	1648	2.06	1648	1295	2616
300	3.17	2565	2.57	2077	987	3410
300 W/Fan	3.17	2565	3.17	2565	987	3410
325	4.03	3252	3.00	2424	2401	3410
325 W/Fan	4.03	3252	3.45	2783	2401	3410
375	5.46	4478	4.23	3466	1678	2975
375 W/Fan	5.46	4478	4.47	3670	1678	2975
450	8.45	6985	6.93	5728	1549	5906
450 W/Fan	8.45	6985	8.28	6845	1549	5906
516	11.50	9571	9.20	7657	2531	4929
516 W/Fan	11.50	9571	9.55	7944	2531	4929
600	16.77	13971	14.76	12294	4417	6838
600 W/Fan	16.77	13971	16.43	13691	4417	6838
<b>690 RPM DRIVER-15:1 RATIO-46 RPM OUTPUT</b>						
100	0.11	125	0.11	125	147	▶
133	0.24	264	0.24	264	458	1399
154	0.37	402	0.37	402	388	1399
175	0.52	579	0.52	579	740	1399
206	0.77	878	0.77	878	1078	2305
237	1.27	1433	1.27	1433	843	2305
262	1.49	1723	1.42	1637	1295	2936
300	2.44	2815	2.16	2492	987	3410
300 W/Fan	2.44	2815	2.44	2815	987	3410
325	2.95	3430	2.24	2608	2401	3410
325 W/Fan	2.95	3430	2.34	2718	2401	3410
375	4.17	4909	3.50	4124	1678	3375
375 W/Fan	4.17	4909	3.87	4557	1678	3375
450	6.46	7665	5.30	6285	1549	6786
450 W/Fan	6.46	7665	5.72	6792	1549	6786
516	8.79	10577	6.86	8250	2531	5729
516 W/Fan	8.79	10577	7.05	8484	2531	5729
600	12.54	15102	10.03	12081	4417	7958
600 W/Fan	12.54	15102	10.98	13218	4417	7958
<b>690 RPM DRIVER-20:1 RATIO-34.5 RPM OUTPUT</b>						
100	0.10	136	0.10	136	147	▶
133	0.20	286	0.20	286	458	1399
154	0.30	415	0.30	415	388	1399
175	0.41	586	0.41	586	740	1399
206	0.64	917	0.64	917	1078	2305
237	0.99	1427	0.99	1427	843	2305
262	1.27	1798	1.25	1772	1295	3256
300	1.89	2811	1.65	2448	987	3410
300 W/Fan	1.89	2811	1.89	2811	987	3410
325	2.39	3551	1.98	2947	2401	3410
325 W/Fan	2.39	3551	2.15	3197	2401	3410
375	3.26	4931	2.93	4438	1678	3775
375 W/Fan	3.26	4931	3.26	4937	1678	3775
450	5.01	7701	4.41	6777	1549	6820
450 W/Fan	5.01	7701	4.62	7101	1549	6820
516	6.84	10655	5.61	8737	2531	6289
516 W/Fan	6.84	10655	5.83	9079	2531	6289
600	9.87	15402	8.82	13760	4417	8758
600 W/Fan	9.87	15402	9.18	14324	4417	8758
<b>690 RPM DRIVER-25:1 RATIO-27.6 RPM OUTPUT</b>						
133	0.17	293	0.17	293	458	1399
154	0.25	425	0.25	425	388	1399
175	0.34	586	0.34	586	740	1399
206	0.54	915	0.54	915	1078	2305
237	0.86	1452	0.86	1452	843	2305
262	1.04	1789	1.01	1722	1295	3410
300	1.62	2860	1.45	2567	942	3410
300 W/Fan	1.62	2860	1.62	2860	942	3410
325	1.97	3544	1.64	2922	2401	3410
325 W/Fan	1.97	3544	1.77	3190	2401	3410

■ Basic Unit Size. See Assembly Drawings, pages 42-81, to determine components needed and complete the part numbers following the directions on that page.

Above ratings are not applicable when reducer shafts are subjected to combined overhung and thrust loads.

Find ratings for input speeds not shown by straight line interpolation.

Maximum overhung loads are at center of keyseats and on one end of output shaft only. Overhung loads applied closer to the reducer housing are desirable, but overhung loads farther out on the shaft and overhung loads on both ends of output shaft should be referred to EPT TECHNICAL SERVICES.

▶ Contact EPT TECHNICAL SERVICES

Contact EPT TECHNICAL SERVICES for the following:

1. High starting torques exceeding 300% of the reducer mechanical rating.
2. Frequent starting or repetitive shock applications.
3. Applications where high energy loads must be absorbed as when stalling.

## Input Horsepower, Output Torque, Overhung Load and Thrust Load for RAIDER® Single Reduction Worm Gear Speed Reducers

UNIT SIZE ■	MECHANICAL		THERMAL		MAXIMUM OVERHUNG LOAD Lbs.	MAX. THRUST LOAD Lbs.
	Input HP	Output Torque	Input HP	Output Torque	Output Shaft	Output Shaft
<b>690 RPM DRIVER-25:1 RATIO-27.6 RPM OUTPUT</b>						
375	2.78	5003	2.47	4452	1678	4050
375 W/Fan	2.78	5003	2.78	5003	1678	4050
450	4.25	7812	3.65	6715	1549	6820
450 W/Fan	4.25	7812	4.08	7511	1549	6820
516	5.77	10801	4.49	8401	2531	6820
516 W/Fan	5.77	10801	4.77	8943	2531	6820
600	8.28	15559	7.26	13637	4417	9402
600 W/Fan	8.28	15559	7.53	14173	4417	9402
<b>690 RPM DRIVER-30:1 RATIO-23 RPM OUTPUT</b>						
100	0.070	140	0.070	140	147	▶
133	0.14	296	0.14	296	458	1399
154	0.23	434	0.23	434	388	1399
175	0.29	590	0.29	590	740	1399
206	0.45	903	0.45	903	1078	2305
237	0.76	1474	0.76	1474	843	2305
262	0.87	1779	0.82	1672	1295	3410
300	1.44	2907	1.33	2682	987	3410
300 W/Fan	1.44	2907	1.44	2907	987	3410
325	1.71	3529	1.40	2893	2401	3410
325 W/Fan	1.71	3529	1.54	3176	2401	3410
375	2.45	5072	2.16	4463	1678	4335
375 W/Fan	2.45	5072	2.45	5072	1678	4335
450	3.74	7924	3.14	6656	1549	6820
450 W/Fan	3.74	7924	3.74	7924	1549	6820
516	5.07	10940	3.73	8058	2531	6820
516 W/Fan	5.07	10940	4.07	8784	2531	6820
600	7.23	15710	6.22	13510	4417	10038
600 W/Fan	7.23	15710	6.45	14020	4417	10038
<b>690 RPM DRIVER-40:1 RATIO-17.2 RPM OUTPUT</b>						
100	0.060	138	0.060	138	147	▶
133	0.12	268	0.12	286	458	1399
154	0.18	418	0.18	418	388	1399
175	0.24	584	0.24	584	740	1399
206	0.38	914	0.38	914	1078	2305
237	0.59	1423	0.59	1426	843	2305
262	0.72	1794	0.72	1794	1295	3410
300	1.11	2804	1.08	2737	987	3410
300 W/Fan	1.11	2804	1.11	2804	987	3410
325	1.41	3544	1.14	2870	2401	3410
325 W/Fan	1.41	3544	1.24	3121	2401	3410
375	1.88	4921	1.65	4330	1678	4815
375 W/Fan	1.88	4921	1.88	4921	1678	4815
450	2.87	7686	2.47	6610	1549	6820
450 W/Fan	2.87	7686	2.68	7170	1549	6820
516	3.89	10684	3.15	8654	2531	6820
516 W/Fan	3.89	10684	3.24	8907	2531	6820
600	5.60	15382	4.75	13050	4417	11078
600 W/Fan	5.60	15382	4.95	13600	4417	11078
<b>690 RPM DRIVER-50:1 RATIO-13.8 RPM OUTPUT</b>						
100	0.050	120	0.050	120	147	▶
133	0.096	260	0.096	260	458	1399
154	0.15	380	0.15	380	388	1399
175	0.20	554	0.20	554	740	1399
206	0.31	867	0.31	867	1078	2305
237	0.47	1334	0.47	1334	843	2305
262	0.59	1709	0.59	1709	1295	3410
300	0.89	2655	0.84	2521	987	3410
300 W/Fan	0.89	2655	0.89	2655	987	3410
325	1.15	3398	0.91	2687	2401	3410
325 W/Fan	1.15	3398	1.03	3032	2401	3410
375	1.52	4668	1.34	4108	1678	5215
375 W/Fan	1.52	4668	1.52	4668	1678	5215
450	2.32	7346	2.00	6318	1549	6820
450 W/Fan	2.32	7346	2.32	7346	1549	6820
516	3.10	10137	2.54	8300	2531	6820
516 W/Fan	3.10	10137	2.72	8892	2531	6820
600	4.39	14535	3.64	12056	4417	11958
600 W/Fan	4.39	14535	3.93	13025	4417	11958

UNIT SIZE ■	MECHANICAL		THERMAL		MAXIMUM OVERHUNG LOAD Lbs.	MAX. THRUST LOAD Lbs.
	Input HP	Output Torque	Input HP	Output Torque	Output Shaft	Output Shaft
<b>690 RPM DRIVER-60:1 RATIO-11.5 RPM OUTPUT</b>						
133	0.085	241	0.085	241	458	1399
175	0.17	518	0.17	518	740	1399
206	0.26	815	0.26	815	1078	2305
237	0.39	1259	0.39	1259	843	2305
262	0.49	1606	0.49	1606	1295	3410
300	0.73	2481	0.72	2431	987	3410
300 W/Fan	0.73	2481	0.73	2481	987	3410
325	0.97	3200	0.82	2696	2401	3410
325 W/Fan	0.97	3200	0.92	3033	2401	3410
375	1.25	4380	1.05	3679	1678	5615
375 W/Fan	1.25	4380	1.25	4380	1678	5615
450	1.91	6886	1.59	5715	1549	3820
450 W/Fan	1.91	6886	1.91	6886	1549	6820
516	2.53	9528	2.10	7909	2531	6820
516 W/Fan	2.53	9528	2.38	8976	2531	6820
600	3.66	13794	2.93	11055	4417	12487
600 W/Fan	3.66	13794	3.24	12200	4417	12487
<b>100 RPM DRIVER-5:1 RATIO-20 RPM OUTPUT</b>						
100	0.040	105	0.040	105	147	▶
133	0.10	270	0.10	270	458	1399
154	0.14	376	0.14	376	388	1399
175	0.23	596	0.23	596	740	1399
206	0.35	931	0.35	931	1078	2305
237	0.56	1484	0.56	1484	843	2305
262	0.71	1898	0.71	1898	1295	3410
300	1.15	3080	1.15	3080	987	3410
300 W/Fan	1.15	3080	1.15	3080	987	3410
<b>100 RPM DRIVER-10:1 RATIO-10 RPM OUTPUT</b>						
100	0.027	125	0.027	125	147	▶
133	0.056	278	0.056	278	458	1399
154	0.086	418	0.086	418	388	1399
175	0.12	606	0.12	606	740	1399
206	0.19	969	0.19	969	1078	2305
237	0.30	1542	0.30	1542	843	2305
262	0.39	1981	0.39	1981	1295	3410
300	0.61	3146	0.61	3146	987	3410
300 W/Fan	0.61	3146	0.61	3146	987	3410
325	0.76	3880	0.76	3880	2401	3410
325 W/Fan	0.76	3880	0.76	3880	2401	3410
375	0.98	5100	0.98	5100	1678	5615
375 W/Fan	0.98	5100	0.98	5100	1678	5615
450	1.60	8450	1.60	8450	1549	6820
450 W/Fan	1.60	8450	1.60	8450	1549	6820
516	2.00	10700	2.00	10700	2531	6820
516 W/Fan	2.00	10700	2.00	10700	2531	6820
600	3.49	18470	3.49	18470	4417	12487
600 W/Fan	3.49	18470	3.49	18470	4417	12487
<b>100 RPM DRIVER-15:1 RATIO-6.6 RPM OUTPUT</b>						
100	0.021	140	0.021	140	147	▶
133	0.040	285	0.040	285	458	1399
154	0.068	453	0.068	453	388	1399
175	0.093	650	0.093	650	740	1399
206	0.14	997	0.14	997	1078	2305
237	0.24	1696	0.24	1696	843	2305
262	0.28	2039	0.28	2039	1295	3410
300	0.49	3466	0.49	3466	987	3410
300 W/Fan	0.49	3466	0.49	3466	987	3410
325	0.53	3880	0.53	3880	2401	3410
325 W/Fan	0.53	3880	0.53	3880	2401	3410
375	0.70	5100	0.70	5100	1678	6244
375 W/Fan	0.70	5100	0.70	5100	1678	6244
450	1.14	8450	1.14	8450	1549	6820
450 W/Fan	1.14	8450	1.14	8450	1549	6820
516	1.42	10700	1.42	10700	2531	6820
516 W/Fan	1.42	10700	1.42	10700	2531	6820
600	2.58	19500	2.58	19500	4417	12487
600 W/Fan	2.58	19500	2.58	19500	4417	12487
<b>100 RPM DRIVER-20:1 RATIO-5 RPM OUTPUT</b>						
100	0.018	150	0.018	150	147	▶
133	0.035	300	0.035	300	458	1399

■ Basic Unit Size. See Assembly Drawings, pages 32-81, to determine components needed and complete the part numbers following the directions on that page.

Above ratings are not applicable when reducer shafts are subjected to combined overhung and thrust loads.

Find ratings for input speeds not shown by straight line interpolation.

Maximum overhung loads are at center of keyseats and on one end of output shaft only. Overhung loads applied closer to the reducer housing are desirable, but overhung loads farther out on the shaft and overhung loads on both ends of output shaft should be referred to EPT TECHNICAL SERVICES.

▶ Contact EPT TECHNICAL SERVICES

Contact EPT TECHNICAL SERVICES for the following:

1. High starting torques exceeding 300% of the reducer mechanical rating.
2. Frequent starting or repetitive shock applications.
3. Applications where high energy loads must be absorbed as when stalling.

Input Horsepower, Output Torque, Overhung Load and Thrust Load for  
RAIDER® Single Reduction Worm Gear Speed Reducers

UNIT SIZE ■	MECHANICAL		THERMAL		MAXIMUM OVERHUNG LOAD Lbs.	MAX. THRUST LOAD Lbs.
	Input HP	Output Torque	Input HP	Output Torque		
<b>100 RPM DRIVER-20:1 RATIO-5 RPM OUTPUT</b>						
154	0.055	451	0.055	451	388	1399
175	0.070	654	0.070	654	740	1399
206	0.12	1048	0.12	1048	1078	2305
237	0.19	1664	0.19	1664	843	2305
262	0.24	2144	0.24	2144	1295	3410
300	0.38	3405	0.38	3405	987	3410
300 W/Fan	0.38	3405	0.38	3405	987	3410
325	0.43	3880	0.43	3880	2401	3410
325 W/Fan	0.43	3880	0.43	3880	2401	3410
375	0.55	5100	0.55	5100	1678	6244
375 W/Fan	0.55	5100	0.55	5100	1678	6244
450	0.91	8450	0.91	8450	1549	6820
450 W/Fan	0.91	8450	0.91	8450	1549	6820
516	1.12	10700	1.12	10700	2531	6820
516 W/Fan	1.12	10700	1.12	10700	2531	6820
600	2.08	19800	2.08	19800	4417	12487
600 W/Fan	2.08	19800	2.08	19800	4417	12487
<b>100 RPM DRIVER-25:1 RATIO-4 RPM OUTPUT</b>						
133	0.03	296	0.03	296	458	1399
154	0.05	459	0.05	459	388	1399
175	0.06	646	0.06	646	740	1399
206	0.09	1036	0.09	1036	1078	2305
237	0.18	1700	0.18	1700	843	2305
262	0.21	2119	0.21	2119	1295	3410
300	0.33	3481	0.33	3481	987	3410
300 W/Fan	0.33	3481	0.33	3481	987	3410
325	0.37	3880	0.37	3880	2401	3410
325 W/Fan	0.37	3880	0.37	3880	2401	3410
375	0.46	5100	0.46	5100	1678	6244
375 W/Fan	0.46	5100	0.46	5100	1678	6244
450	0.79	8450	0.79	8450	1549	6820
450 W/Fan	0.79	8450	0.79	8450	1549	6820
516	0.98	10855	0.98	10855	2531	6820
516 W/Fan	0.98	10855	0.98	10855	2531	6820
600	1.81	20151	1.81	20151	4417	12487
600 W/Fan	1.81	20151	1.81	20151	4417	12487
<b>100 RPM DRIVER-30:1 RATIO-3.3 RPM OUTPUT</b>						
100	0.013	152	0.013	152	147	▶
133	0.025	292	0.025	292	458	1399
154	0.045	465	0.045	465	388	1399
175	0.053	636	0.053	636	740	1399
206	0.086	1022	0.086	1022	1078	2305
237	0.15	1738	0.15	1738	843	2305
262	0.17	2090	0.17	2090	1295	3410
300	0.30	3552	0.30	3552	987	3410
300 W/Fan	0.30	3552	0.30	3552	987	3410
325	0.32	3880	0.32	3880	2401	3410
325 W/Fan	0.32	3880	0.32	3880	2401	3410
375	0.42	5100	0.42	5100	1678	6244
375 W/Fan	0.42	5100	0.42	5100	1678	6244
450	0.69	8450	0.69	8450	1549	6820
450 W/Fan	0.69	8450	0.69	8450	1549	6820
516	0.87	11000	0.87	11000	2531	6820
516 W/Fan	0.87	11000	0.87	11000	2531	6820
600	1.62	20500	1.62	20500	4417	12487
600 W/Fan	1.62	20500	1.62	20500	4417	12487

UNIT SIZE ■	MECHANICAL		THERMAL		MAXIMUM OVERHUNG LOAD Lbs.	MAX. THRUST LOAD Lbs.
	Input HP	Output Torque	Input HP	Output Torque		
<b>100 RPM DRIVER-40:1 RATIO-2.5 RPM OUTPUT</b>						
100	0.011	150	0.011	150	147	▶
133	0.023	298	0.023	298	458	1399
154	0.037	448	0.037	448	388	1399
175	0.048	650	0.048	650	740	1399
206	0.076	1042	0.076	1042	1078	2305
237	0.12	1659	0.12	1659	843	2305
262	0.15	2131	0.15	2131	1295	3410
300	0.24	3384	0.24	3384	987	3410
300 W/Fan	0.24	3384	0.24	3384	987	3410
325	0.28	3880	0.28	3880	2401	3410
325 W/Fan	0.28	3880	0.28	3880	2401	3410
375	0.35	5100	0.35	5100	1678	6244
375 W/Fan	0.35	5100	0.35	5100	1678	6244
450	0.56	8450	0.56	8450	1549	6820
450 W/Fan	0.56	8450	0.56	8450	1549	6820
516	0.69	10700	0.69	10700	2531	6820
516 W/Fan	0.69	10700	0.69	10700	2531	6820
600	1.23	19000	1.23	19000	4417	12487
600 W/Fan	1.23	19000	1.23	19000	4417	12487
<b>100 RPM DRIVER-50:1 RATIO-2 RPM OUTPUT</b>						
100	0.008	130	0.008	130	147	▶
133	0.019	281	0.019	281	458	1399
154	0.031	423	0.031	423	388	1399
175	0.039	613	0.039	613	740	1399
206	0.063	984	0.063	984	1078	2305
237	0.097	1538	0.097	1538	843	2305
262	0.13	2015	0.13	2015	1295	3410
300	0.19	3166	0.19	3166	987	3410
300 W/Fan	0.19	3166	0.19	3166	987	3410
325	0.24	3880	0.24	3880	2401	3410
325 W/Fan	0.24	3880	0.24	3880	2401	3410
375	0.30	5100	0.30	5100	1678	6244
375 W/Fan	0.30	5100	0.30	5100	1678	6244
450	0.49	8450	0.49	8450	1549	6820
450 W/Fan	0.49	8450	0.49	8450	1549	6820
516	0.59	10700	0.59	10700	2531	6820
516 W/Fan	0.59	10700	0.59	10700	2531	6820
600	0.98	18000	0.98	18000	4417	12487
600 W/Fan	0.98	18000	0.98	18000	4417	12487
<b>100 RPM DRIVER-60:1 RATIO-1.6 RPM OUTPUT</b>						
133	0.016	263	0.016	263	458	1399
175	0.032	574	0.032	574	740	1399
206	0.051	923	0.051	923	1078	2305
237	0.079	1446	0.079	1446	843	2305
262	0.11	1887	0.11	1887	1295	3410
300	0.16	2937	0.16	2937	987	3410
300 W/Fan	0.16	2937	0.16	2937	987	3410
325	0.20	3660	0.20	3660	2401	3410
325 W/Fan	0.20	3660	0.20	3660	2401	3410
375	0.26	5100	0.26	5100	1678	6244
375 W/Fan	0.26	5100	0.26	5100	1678	6244
450	0.41	8450	0.41	8450	1549	6820
450 W/Fan	0.41	8450	0.41	8450	1549	6820
516	0.50	10700	0.50	10700	2531	6820
516 W/Fan	0.50	10700	0.50	10700	2531	6820
600	0.80	17000	0.80	17000	4417	12487
600 W/Fan	0.80	17000	0.80	17000	4417	12487

■ Basic Unit Size. See Assembly Drawings, pages 42-81, to determine components needed and complete the part numbers following the directions on that page.

Above ratings are not applicable when reducer shafts are subjected to combined overhung and thrust loads.

Find ratings for input speeds not shown by straight line interpolation.

Maximum overhung loads are at center of keyseats and on one end of output shaft only. Overhung loads applied closer to the reducer housing are desirable, but overhung loads farther out on the shaft and overhung loads on both ends of output shaft should be referred to EPT TECHNICAL SERVICES.

▶ Contact EPT TECHNICAL SERVICES

Contact the EPT TECHNICAL SERVICES for the following:

1. High starting torques exceeding 300% of the reducer mechanical rating.
2. Frequent starting or repetitive shock applications.
3. Applications where high energy loads must be absorbed as when stalling.

For former MORSE Description see cross reference on pages 100 - 106.



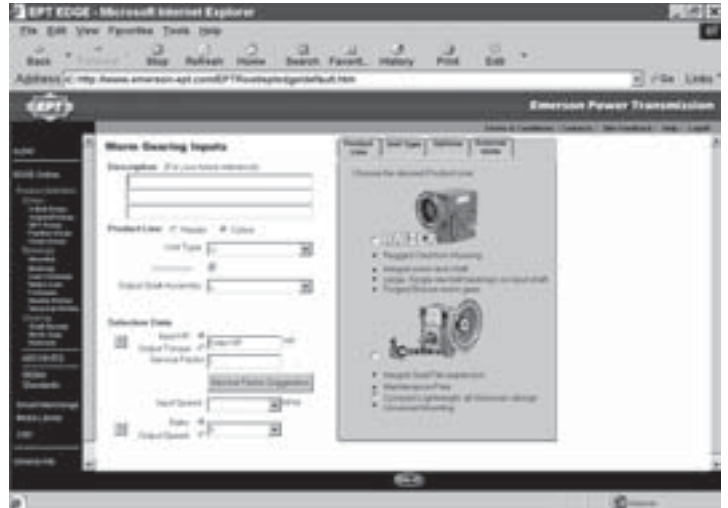
# Experience the Power of EPT EDGE® ONLINE

**EPT EDGE® Online is the Web site's  
technical support center**

Also available "24-7-365," these electronic tools provide for efficient drive design and product selection:

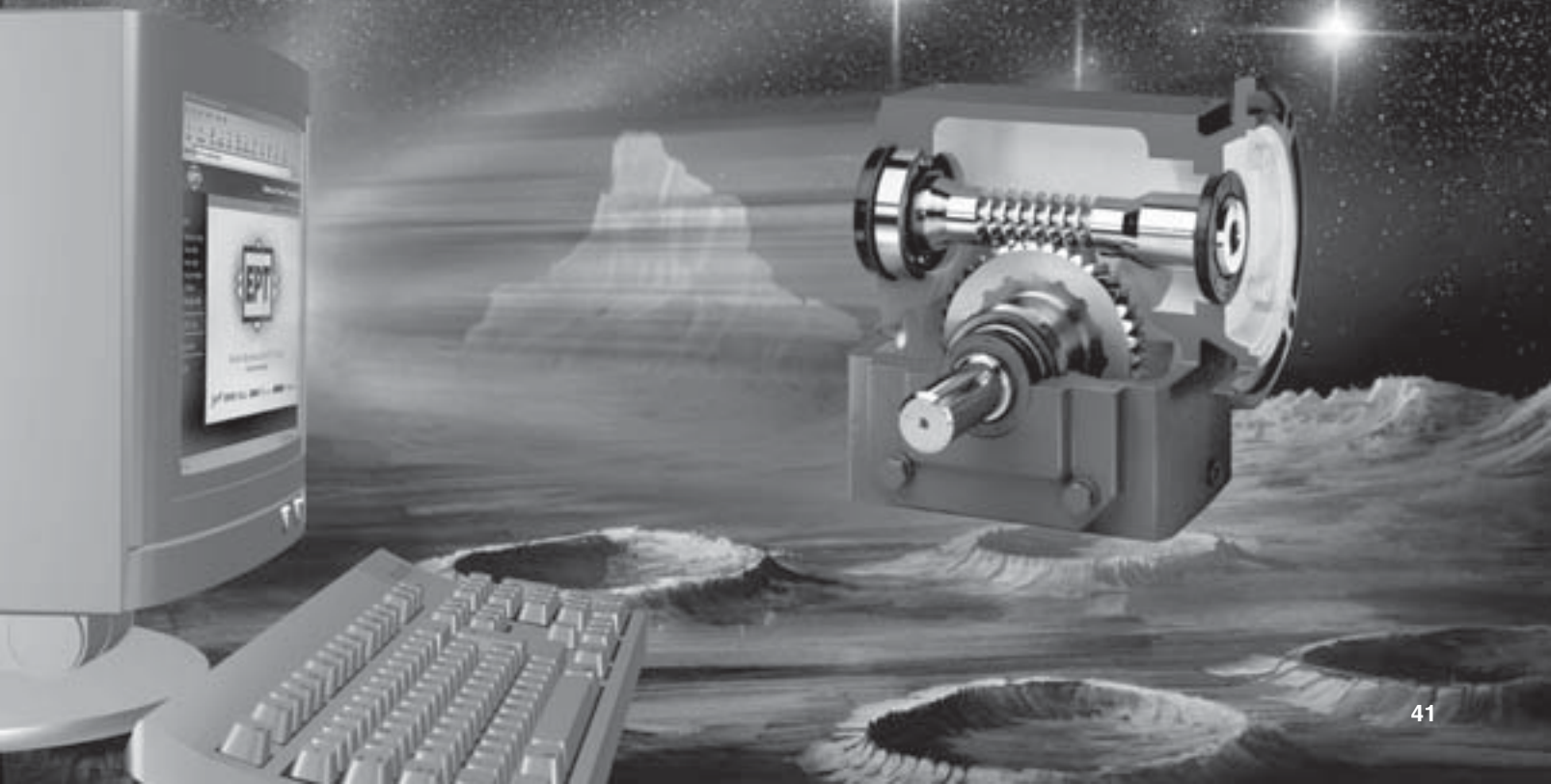
- **eCatalog (an industry first)** - an interactive, robust electronic "database" with over 100,000 part numbers
- **Product Selection (an industry first)** - selection tools with extensive engineering efficiency benefits
- **Smart Interchange** - a dynamic tool that provides an intelligent interchange for competitive parts
- **Media Library** - electronically (PDF) viewable version of paper catalogs and documents, and downloadable installation and maintenance instructions
- **CAD** - an online service that allows users to view and upload a 2D or 3D CAD template drawing in a number of customer-compatible formats to be integrated into users' AutoCAD® drawing (version 12-14)

AutoCAD® is a registered trademark of Autodesk, Inc., which is not affiliated with Emerson Power Transmission.



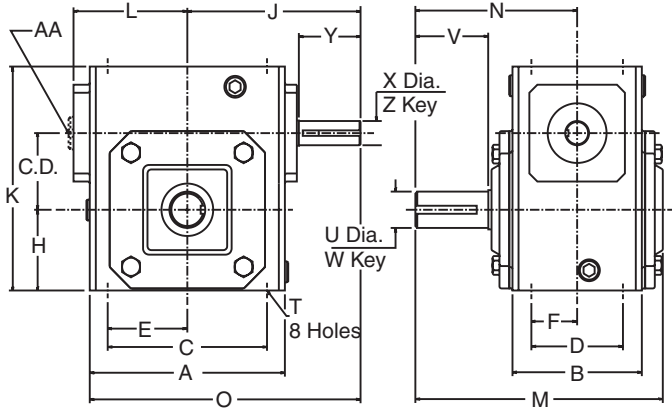
## [www.emerson-ept.com](http://www.emerson-ept.com)

Connect here to experience "the power of EPT"

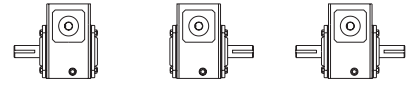


**Style U**

Universal —Basic Unit



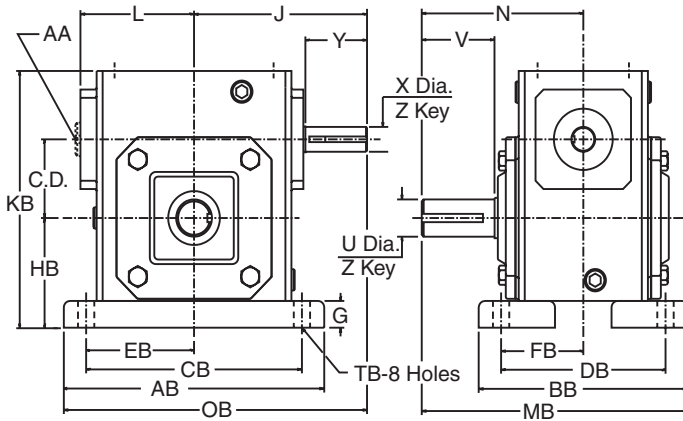
Assembly Drawing and Sample of Components



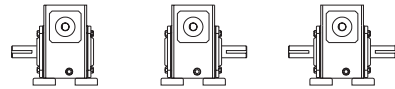
133UL10    133UR10    133ULR10

**Style UT**

Universal Worm Top



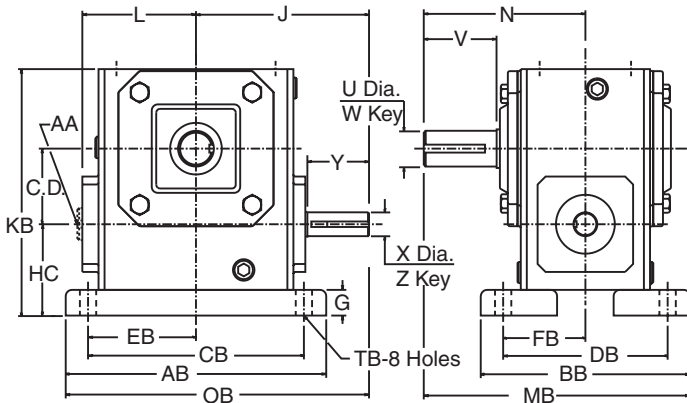
Assembly Drawing and Sample of Components



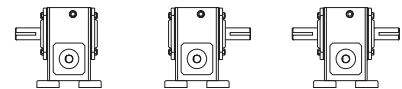
133UL10    133UR10    133ULR10  
133S-BK    133S-BK    133S-BK

**Style UB**

Universal Worm Bottom



Assembly Drawing and Sample of Components



133UR10    133UL10    133ULR10  
133S-BK    133S-BK    133S-BK

**For former MORSE Description see cross reference on pages 100 - 106.**

**Table 1** Dimensions (Inches) for Style "U"

C.D.	Basic Unit ★	A	B	C	D	E	F	H	J	K	L	M	N	O
1.00	100U	3.30	2.50	2.63	1.69	1.31	.84	1.31	3.00	3.63	1.71	4.40	2.88	4.65
1.33	133U	4.00	2.88	3.25	2.00	1.63	1.00	1.72	4.03	4.66	2.12	6.03	4.00	6.03
1.54	154U	5.13	3.69	4.19	2.75	2.09	1.38	1.91	4.69	5.38	2.75	6.76	4.31	7.25
1.75	175U	4.81	3.38	4.19	2.75	2.09	1.38	2.06	4.68	5.75	2.75	6.75	4.31	7.09
2.06	206U	5.50	3.75	5.00	2.88	2.50	1.44	2.28	5.06	6.38	3.00	7.25	4.69	7.73
2.37	237U	6.13	4.06	5.00	2.88	2.50	1.44	2.50	5.44	6.94	3.56	7.78	5.08	8.51
2.62	262U	7.12	4.44	6.38	3.38	3.19	1.69	2.94	6.23	8.00	3.69	8.50	5.63	9.79
3.00	300U	8.50	5.50	7.00	4.00	3.50	2.00	3.25	7.00	8.88	4.50	10.25	6.75	11.25
3.25	325U	8.50	5.00	7.50	4.00	3.75	2.00	3.50	7.06	9.38	4.50	10.60	7.06	11.31
3.75	375U	9.50	6.38	8.50	4.75	4.25	2.38	3.88	8.38	10.44	5.74	11.88	7.75	13.13
4.50	450U	10.88	7.38	9.56	5.81	4.78	2.91	4.50	9.59	11.94	6.42	13.16	8.44	15.09
5.16	516U	12.50	7.38	11.00	5.81	5.50	2.91	5.31	10.69	13.75	7.42	13.91	9.06	16.94
6.00	600U	14.50	8.13	12.75	6.38	6.38	3.19	6.50	11.75	16.50	8.25	15.31	10.00	19.00

C.D.	T		OUTPUT SHAFT				INPUT SHAFT				Stock Ratios marked "x"								Wt. Lbs.	
			U +.000 -.001	V	W Key		X +.000 -.001	Y	Z Key		5	10	15	20	25	30	40	50		60
					Sq.	Lgth.			Sq.	Lgth.										
1.00	1/4-20	.44	.500	1.25	.125	.88	.375	1.23	.094	.75	x	x	x	x	-	x	x	x	-	6.0
1.33	5/16-18	.50	.625	2.00	.188	1.31	.500	1.81	.125	1.38	x	x	x	x	x	x	x	x	x	11.0
1.54	5/16-18	.50	.750	1.78	.188	1.25	.625	1.69	.188	.94	x	x	x	x	x	x	x	x	-	18.0
1.75	5/16-18	.61	.875	1.88	.188	1.38	.625	1.81	.188	1.50	x	x	x	x	x	x	x	x	x	20.0
2.06	3/8-16	.61	1.000	2.00	.250	1.75	.625	1.81	.188	1.50	x	x	x	x	x	x	x	x	x	25.0
2.37	3/8-16	.60	1.125	2.37	.250	1.75	.750	1.94	.188	1.31	x	x	x	x	x	x	x	x	x	31.0
2.62	3/8-16	.58	1.125	2.50	.250	2.00	.750	2.31	.188	1.88	x	x	x	x	x	x	x	x	x	43.0
3.00	7/16-14	.80	1.250	3.25	.250	2.25	.875	2.26	.188	1.31	x	x	x	x	x	x	x	x	x	57.0
3.25	7/16-14	.80	1.375	3.25	.313	2.88	.875	2.31	.188	1.63	-	x	x	x	x	x	x	x	x	72.0
3.75	1/2-13	1.00	1.625	3.50	.375	2.81	1.000	2.91	.250	1.75	-	x	x	x	x	x	x	x	x	105.0
4.50	5/8-11	1.00	1.625	3.38	.375	2.50	1.125	3.48	.250	2.50	-	x	x	x	x	x	x	x	x	151.0
5.16	5/8-11	1.00	2.000	4.16	.500	2.81	1.250	3.75	.250	2.56	-	x	x	x	x	x	x	x	x	198.0
6.00	5/8-11	1.00	2.250	4.56	.500	3.50	1.500	3.75	.375	2.94	x	x	x	x	x	x	x	x	x	240.0

**Table 2** Dimensions (Inches) for Style "UT" - With Base - Worm Top

Components ◆		AB	BB	CB	DB	EB	FB	G	HB	KB	MB	OB	TB	Wt. Lbs.
Basic Unit ★	Base Kit ▲ Standard													
100U	100S-BK	4.37	3.50	3.75	2.88	1.88	1.44	.38	1.75	4.07	4.63	5.19	.344	6.5
133U	133S-BK	5.38	4.19	4.38	3.31	2.19	1.66	.47	2.25	5.19	6.09	6.72	.344	11.5
154U	154S-BK	6.44	5.44	5.25	4.31	2.63	2.16	.59	2.50	5.97	7.03	7.91	.406	18.8
175U	175S-BK	7.00	5.56	5.75	4.50	2.88	2.25	.69	2.75	6.44	7.09	8.18	.406	21.0
206U	206S-BK	7.69	5.76	6.38	4.69	3.19	2.34	.72	3.00	7.09	7.57	8.90	.469	26.5
237U	237S-BK	8.50	6.19	7.06	4.88	3.53	2.44	.75	3.25	7.69	8.18	9.69	.469	32.8
262U	262S-BK	9.25	6.50	8.00	5.25	4.00	2.63	.75	3.69	8.75	8.88	10.86	.531	45.0
300U	300S-BK	10.17	7.38	8.44	5.88	4.22	2.94	.88	4.13	9.75	10.44	12.08	.531	59.5
325U	325S-BK	11.12	7.75	9.50	6.13	4.75	3.06	.88	4.38	10.25	10.94	12.63	.531	75.0
375U	375S-BK	12.00	8.63	10.38	7.00	5.19	3.50	.94	4.81	11.38	12.06	14.38	.594	115.0
450U	450S-BK	13.88	9.31	12.13	7.63	6.06	3.81	1.13	5.63	13.06	13.13	16.53	.656	168.0
516U	516S-BK	16.38	10.38	14.13	8.38	7.06	4.19	1.13	6.44	14.88	14.25	18.88	.781	224.0
600U	600S-BK	19.00	12.00	16.50	9.50	8.25	4.75	1.25	7.75	17.75	16.00	21.25	.906	283.0

**Table 3** Dimensions (Inches) for Style "UB"

Components ◆		HC
Basic Unit ★	Base Kit ▲ Standard	
100U	100S-BK	1.75
133U	133S-BK	2.14
154U	154S-BK	2.50
175U	175S-BK	2.63
206U	206S-BK	2.75
237U	237S-BK	2.81
262U	262S-BK	3.19
300U	300S-BK	3.50
325U	325S-BK	3.50
375U	375S-BK	3.75
450U	450S-BK	4.06
516U	516S-BK	4.40
600U	600S-BK	5.25

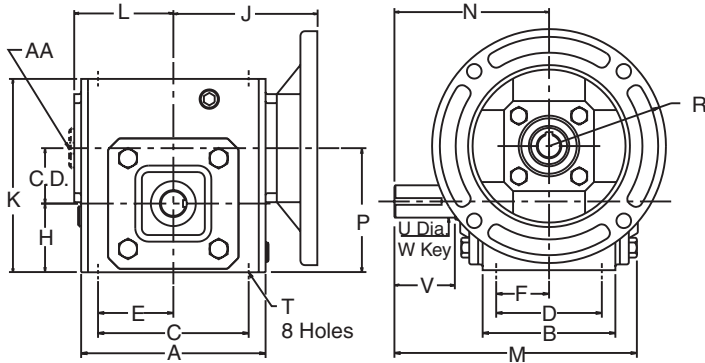
**Table 4** Fan Kit

Basic Unit ★	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
300U	300 FAN	3/8-24	3/4	5.93	1.6
325U	325 FAN	3/8-24	3/4	6.04	1.6
375U	375 FAN	3/8-24	3/4	7.66	2.8
450U	450 FAN	3/8-24	3/4	8.36	2.8
516U	516 FAN	3/8-24	3/4	9.18	2.8
600U	600 FAN	3/8-24	3/4	10.70	4.2

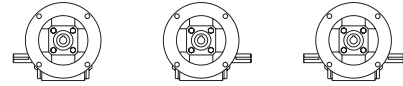
★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133ULR10.  
 ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 4.  
 ▲ Select either Standard Base Kit (S-BK) or Econo Base Kit (E-BK) or Solid Base Kit (BKS); base kits are shown on page 84.  
 Consult factory for ratios not shown as standard.

**Style Q**

C-Face Quilled – Basic Unit



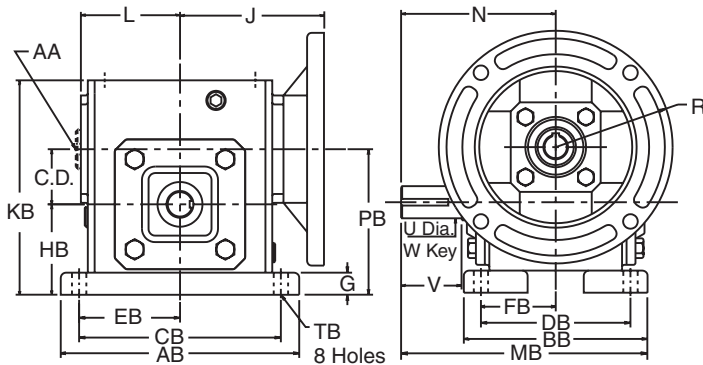
Assembly Drawing and Sample of Components



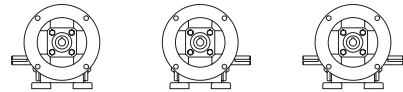
133Q56L10 133Q56R10 133Q56LR10

**Style QT**

Worm Top



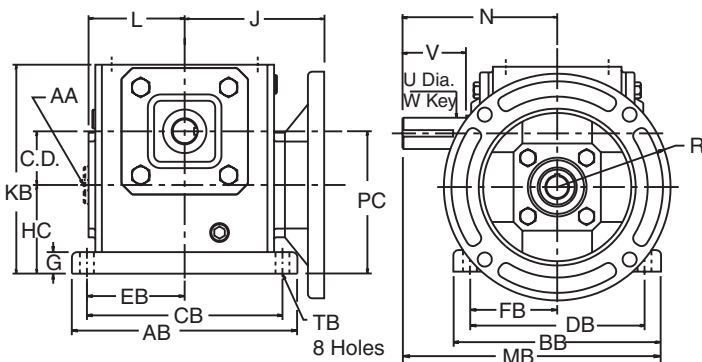
Assembly Drawing and Sample of Components



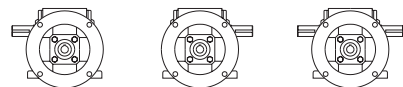
133Q56L10 133Q56R10 133Q56LR10  
133S-BK 133S-BK 133S-BK

**Style QB**

Worm Bottom



Assembly Drawing and Sample of Components



133Q56R10 133Q56L10 133Q56LR10  
133S-BK 133S-BK 133S-BK

NOTE: When mounting Style "QB", interference may occur; consult EPT Technical Services.

**For former MORSE Description see cross reference on pages 100 - 106.**



**Table 1** Dimensions (Inches) for Style "Q"

C.D.	Basic Unit ★	N.E.M.A. Frame	A	B	C	D	E	F	H	J	K	L	M	N	P	R
1.00	100Q40	42CZ/48C	3.30	2.50	2.63	1.69	1.31	.84	1.31	3.16	3.63	1.71	4.40	2.88	2.31	2.13
1.00	100Q56	56C	3.30	2.50	2.63	1.69	1.31	.84	1.31	3.53	3.63	1.71	4.40	2.88	2.31	3.25
1.33	133Q56	56C	4.00	2.88	3.25	2.00	1.63	1.00	1.72	3.94	4.66	2.12	6.03	4.00	3.05	3.25
1.54	154Q56	56C	5.13	3.69	4.19	2.75	2.09	1.38	1.91	4.52	5.38	2.75	6.76	4.31	3.45	3.25
1.54	154Q140	143/145TC	5.13	3.69	4.19	2.75	2.09	1.38	1.91	4.52	5.38	2.75	6.76	4.31	3.45	3.25
1.75	175Q56	56C	4.81	3.38	4.19	2.75	2.09	1.38	2.06	4.38	5.75	2.75	6.75	4.31	3.81	3.25
1.75	175Q140	143/145TC	4.81	3.38	4.19	2.75	2.09	1.38	2.06	4.38	5.75	2.75	6.75	4.31	3.81	3.25
2.06	206Q56	56C	5.50	3.75	5.00	2.88	2.50	1.44	2.28	4.75	6.38	3.00	7.25	4.69	4.34	3.25
2.06	206Q140	143/145TC	5.50	3.75	5.00	2.88	2.50	1.44	2.28	4.75	6.38	3.00	7.25	4.69	4.34	3.25
2.37	237Q56	56C	6.13	4.06	5.00	2.88	2.50	1.44	2.50	5.06	6.94	3.56	7.78	5.08	4.88	3.25
2.37	237Q140	143/145TC	6.13	4.06	5.00	2.88	2.50	1.44	2.50	5.06	6.94	3.56	7.78	5.08	4.88	3.25
2.62	262Q56	56C	7.12	4.44	6.38	3.38	3.19	1.69	2.94	5.69	8.00	3.69	8.50	5.63	5.57	3.25
2.62	262Q140	143/145TC	7.12	4.44	6.38	3.38	3.19	1.69	2.94	5.69	8.00	3.69	8.50	5.63	5.57	3.25
2.62	262Q180	182/184TC	7.12	4.44	6.38	3.38	3.19	1.69	2.94	6.13	8.00	3.69	8.50	5.63	5.57	4.50
3.00	300Q56	56C	8.50	5.50	7.00	4.00	3.50	2.00	3.25	5.67	8.88	4.50	10.25	6.75	6.25	3.25
3.00	300Q140	143/145TC	8.50	5.50	7.00	4.00	3.50	2.00	3.25	5.67	8.88	4.50	10.25	6.75	6.25	3.25
3.00	300Q180	182/184TC	8.50	5.50	7.00	4.00	3.50	2.00	3.25	6.45	8.88	4.50	10.25	6.75	6.25	4.50
3.25	325Q56	56C	8.50	5.00	7.50	4.00	3.75	2.00	3.50	6.56	9.38	4.50	10.60	7.06	6.75	3.25
3.25	325Q140	143/145TC	8.50	5.00	7.50	4.00	3.75	2.00	3.50	6.56	9.38	4.50	10.60	7.06	6.75	3.25
3.25	325Q180	182/184TC	8.50	5.00	7.50	4.00	3.75	2.00	3.50	7.00	9.38	4.50	10.60	7.06	6.75	4.50
3.75	375Q56	56C	9.50	6.38	8.50	4.75	4.25	2.38	3.88	6.01	10.44	5.74	11.88	7.75	7.63	3.38
3.75	375Q140	143/145TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	6.01	10.44	5.74	11.88	7.75	7.63	3.38
3.75	375Q180	182/184TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	7.29	10.44	5.74	11.88	7.75	7.63	4.50
3.75	375Q210	213/215TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	7.29	10.44	5.74	11.88	7.75	7.63	4.50
4.50	450Q140	143/145TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	6.69	11.94	6.42	13.16	8.44	9.00	3.38
4.50	450Q180	182/184TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	7.97	11.94	6.42	13.16	8.44	9.00	4.50
4.50	450Q210	213/215TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	7.97	11.94	6.42	13.16	8.44	9.00	4.50
5.16	516Q180	182/184TC	12.50	7.38	11.00	5.81	5.50	2.91	5.31	8.78	13.75	7.42	13.91	9.06	10.47	4.50
5.16	516Q210	213/215TC	12.50	7.38	11.00	5.81	5.50	2.91	5.31	8.78	13.75	7.42	13.91	9.06	10.47	4.50
6.00	600Q180	213/215TC	14.50	8.13	12.75	6.38	6.38	3.19	6.50	9.68	16.50	8.25	15.31	10.00	12.50	4.50
6.00	600Q210	213/215TC	14.50	8.13	12.75	6.38	6.38	3.19	6.50	9.68	16.50	8.25	15.31	10.00	12.50	4.50

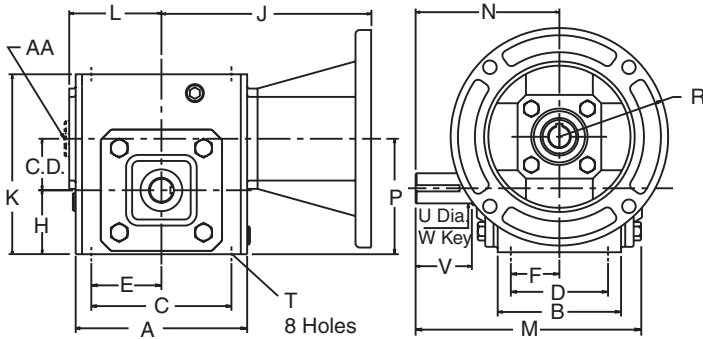
C.D.	N.E.M.A. Frame	T		INPUT		OUTPUT SHAFT				Stock Ratios marked "x"								Wt. Lbs.	
		Size	Deep	Bore	Keyway	U +.000 -.001	V	W Key		5	10	15	20	25	30	40	50		60
								Sq.	Lgth.										
1.00	42CZ/48C	1/4-20	.44	.500	1/8 X 1/16	.500	1.25	.125	.88	x	x	x	x	-	x	x	x	-	9.0
1.00	56C	1/4-20	.44	.625	3/16 X 3/32	.500	1.25	.125	.88	x	x	x	x	-	x	x	x	-	9.0
1.33	56C	5/16-18	.50	.625	3/16 X 3/32	.625	2.00	.188	1.31	x	x	x	x	-	x	x	x	-	17.0
1.54	56C	5/16-18	.50	.625	3/16 X 3/32	.750	1.78	.188	1.25	x	x	x	x	-	x	x	x	-	24.0
1.54	143/145TC	5/16-18	.50	.875	3/16 X 3/32	.750	1.78	.188	1.25	x	x	x	x	-	-	-	-	-	24.0
1.75	56C	5/16-18	.61	.625	3/16 X 3/32	.875	1.88	.188	1.38	x	x	x	x	-	x	x	x	-	27.0
1.75	143/145TC	5/16-18	.61	.875	3/16 X 3/32	.875	1.88	.188	1.38	x	x	x	x	-	-	-	-	-	27.0
2.06	56C	3/8-16	.61	.625	3/16 X 3/32	1.000	2.00	.250	1.75	x	x	x	x	-	x	x	x	-	32.0
2.06	143/145TC	3/8-16	.61	.875	3/16 X 3/32	1.000	2.00	.250	1.75	x	x	x	x	-	-	-	-	-	32.0
2.37	56C	3/8-16	.60	.625	3/16 X 3/32	1.125	2.37	.250	1.75	-	x	x	x	-	x	x	x	-	38.0
2.37	143/145TC	3/8-16	.60	.875	3/16 X 3/32	1.125	2.37	.250	1.75	x	x	x	x	-	-	-	-	-	38.0
2.62	56C	3/8-16	.58	.625	3/16 X 3/32	1.125	2.50	.250	2.00	-	x	x	x	-	x	x	x	-	50.0
2.62	143/145TC	3/8-16	.58	.875	3/16 X 3/32	1.125	2.50	.250	2.00	-	x	x	x	-	x	x	x	-	50.0
2.62	182/184TC	3/8-16	.58	1.125	1/4 X 1/8	1.125	2.50	.250	2.00	x	x	-	-	-	-	-	-	-	50.0
3.00	56C	7/16-14	.80	.625	3/16 X 3/32	1.250	3.25	.250	2.25	-	x	x	x	-	x	x	x	-	68.0
3.00	143/145TC	7/16-14	.80	.875	3/16 X 3/32	1.250	3.25	.250	2.25	-	x	x	x	-	x	x	x	-	68.0
3.00	182/184TC	7/16-14	.80	1.125	1/4 X 1/8	1.250	3.25	.250	2.25	-	x	x	x	-	x	x	x	-	68.0
3.25	56C	7/16-14	.80	.625	3/16 X 3/32	1.375	3.25	.313	2.88	-	x	x	x	-	x	x	x	-	87.0
3.25	143/145TC	7/16-14	.80	.875	3/16 X 3/32	1.375	3.25	.313	2.88	-	x	x	x	-	x	x	x	-	87.0
3.25	182/184TC	7/16-14	.80	1.125	1/4 X 1/8	1.375	3.25	.313	2.88	-	x	x	x	-	x	x	x	-	87.0
3.75	56C	1/2-13	1.00	.625	3/16 X 3/32	1.625	3.50	.375	2.81	-	-	NA	NA	-	-	x	x	-	120.0
3.75	143/145TC	1/2-13	1.00	.875	3/16 X 3/32	1.625	3.50	.375	2.81	-	x	x	x	-	x	x	x	-	120.0
3.75	182/184TC	1/2-13	1.00	1.125	1/4 X 1/8	1.625	3.50	.375	2.81	-	x	x	x	-	x	x	x	-	120.0
3.75	213/215TC	1/2-13	1.00	1.375	5/16 X 5/32	1.625	3.50	.375	2.81	-	x	x	NA	-	-	-	-	-	120.0
4.50	143/145TC	5/8-11	1.00	.875	3/16 X 3/32	1.625	3.38	.375	2.50	-	-	-	-	-	x	x	x	-	170.0
4.50	182/184TC	5/8-11	1.00	1.125	1/4 X 1/8	1.625	3.38	.375	2.50	-	-	-	-	-	x	x	x	-	170.0
4.50	213/215TC	5/8-11	1.00	1.375	5/16 X 5/32	1.625	3.38	.375	2.50	-	-	-	-	-	x	x	x	-	170.0
5.16	182/184TC	5/8-11	1.00	1.125	1/4 X 1/8	2.000	4.16	.500	2.81	-	-	-	-	-	-	x	x	-	221.0
5.16	213/215TC	5/8-11	1.00	1.375	5/16 X 5/32	2.000	4.16	.500	2.81	-	-	-	-	-	-	x	x	-	221.0
6.00	182/184TC	5/8-11	1.00	1.375	5/16 X 5/32	2.250	4.56	.500	3.50	-	-	-	-	-	-	x	x	-	270.0
6.00	213/215TC	5/8-11	1.00	1.375	5/16 X 5/32	2.250	4.56	.500	3.50	-	-	-	-	-	-	x	x	-	270.0

**Table 2** Dimensions (Inches) for Style "QT" - Worm Top

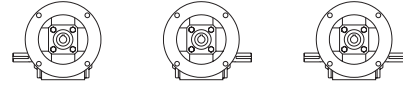
Ref. No.	Components Standard Base Kit ▲	AB	BB	CB	DB	EB	FB	G	HB	KB	MB	PB	TB	Wt. Lbs.
133Q	133S-BK	5.38	4.19	4.38	3.31	2.19	1.66	.47	2.25	5.19	6.09	3.58	.344	17.5
154Q	154S-BK	6.44	5.44	5.25	4.31	2.63	2.16	.59	2.50	5.97	7.03	4.04	.406	24.8
175Q	175S-BK	7.00	5.56	5.75	4.50	2.88	2.25	.69	2.75	6.44	7.09	4.50	.406	28.0
206Q	206S-BK	7.69	5.76	6.38	4.69	3.19	2.34	.72	3.00	7.09	7.57	5.06	.469	33.5
237Q	237S-BK	8.50	6.19	7.06	4.88	3.53	2.44	.75	3.25	7.69	8.18	5.62	.469	39.8
262Q	262S-BK	9.25	6.50	8.00	5.25	4.00	2.63	.75	3.69	8.75	8.88	6.31	.531	52.0
300Q	300S-BK	10.17	7.38	8.44	5.88	4.22	2.94	.88	4.13	9.75	10.44	7.13	.531	70.5
325Q	325S-BK	11.12	7.75	9.50	6.13	4.75	3.06	.88	4.38	10.25	10.94	7.63	.531	90.0
375Q	375S-BK	12.00	8.63	10.38	7.00	5.19	3.50	.94	4.81	11.38	12.06	8.56	.594	130.0
450Q	450S-BK													

**Style C**

C-Face Coupled



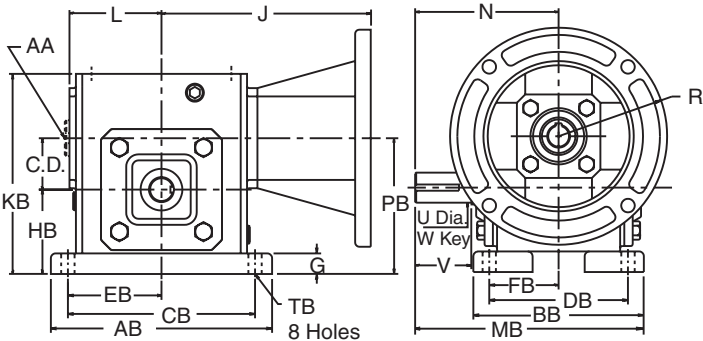
Assembly Drawing and Sample of Components



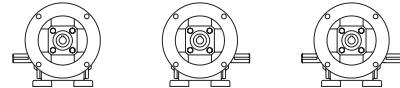
- |          |          |          |
|----------|----------|----------|
| 133UL10  | 133UR10  | 133ULR10 |
| 133MAK56 | 133MAK56 | 133MAK56 |

**Style CT**

C Face Coupled Worm Top



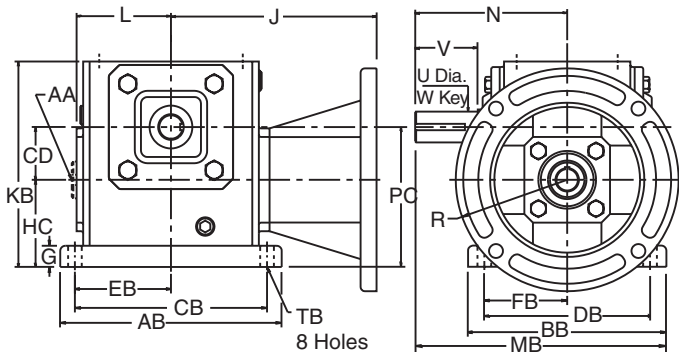
Assembly Drawing and Sample of Components



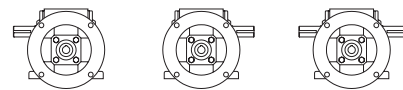
- |          |          |          |
|----------|----------|----------|
| 133UL10  | 133UR10  | 133ULR10 |
| 133MAK56 | 133MAK56 | 133MAK56 |
| 133S-BK  | 133S-BK  | 133S-BK  |

**Style CB**

C Face Coupled Worm Bottom



Assembly Drawing and Sample of Components



- |          |          |          |
|----------|----------|----------|
| 133UR10  | 133UL10  | 133ULR10 |
| 133MAK56 | 133MAK56 | 133MAK56 |
| 133S-BK  | 133S-BK  | 133S-BK  |

**For former MORSE Description see cross reference on pages 100 - 106.**

**Table 1** Dimensions (Inches) for Style "C"

C.D.	Components ◆		A	B	C	D	E	F	H	K	L	M	N	P	T	
	Basic Unit ★	Adapter Kit													Size	Deep
1.33	133U	See Table No. 5	4.00	2.88	3.25	2.00	1.63	1.00	1.72	4.66	2.12	6.03	4.00	3.05	5/16-18	.50
1.54	154U		5.13	3.69	4.19	2.75	2.09	1.38	1.91	5.38	2.75	6.76	4.31	3.45	5/16-18	.50
1.75	175U		4.81	3.38	4.19	2.75	2.09	1.38	2.06	5.75	2.75	6.75	4.31	3.81	5/16-18	.61
2.06	206U		5.50	3.75	5.00	2.88	2.50	1.44	2.28	6.38	3.00	7.25	4.69	4.34	3/8-16	.61
2.37	237U		6.13	4.06	5.00	2.88	2.50	1.44	2.50	6.94	3.56	7.78	5.08	4.88	3/8-16	.60
2.62	262U		7.12	4.44	6.38	3.38	3.19	1.69	2.94	8.00	3.69	8.50	5.63	5.57	3/8-16	.58
3.00	300U		8.50	5.50	7.00	4.00	3.50	2.00	3.25	8.88	4.50	10.25	6.75	6.25	7/16-14	.80
3.25	325U		8.50	5.00	7.50	4.00	3.75	2.00	3.50	9.38	4.50	10.60	7.06	6.75	7/16-14	.80
3.75	375U		9.50	6.38	8.50	4.75	4.25	2.38	3.88	10.44	5.74	11.88	7.75	7.63	1/2-13	1.00
4.50	450U		10.88	7.38	9.56	5.81	4.78	2.91	4.50	11.94	6.42	13.16	8.44	9.00	5/8-11	1.00
5.16	516U		12.50	7.38	11.00	5.81	5.50	2.91	5.31	13.75	7.42	13.91	9.06	10.47	5/8-11	1.00
6.00	600U		14.50	8.13	12.75	6.38	6.38	3.19	6.50	16.50	8.25	15.31	10.00	12.50	5/8-11	1.00

C.D.	OUTPUT SHAFT		Stock Ratios marked "x"												Wt. Lbs.
	U +.000 -.001	V	W Key		05	10	15	20	25	30	40	50	60		
			Sq.	Lgth.											
1.33	.625	2.00	.188	1.31	x	x	x	x	x	x	x	x	x	18.0	
1.54	.750	1.78	.188	1.25	x	x	x	x	x	x	x	x	x	25.0	
1.75	.875	1.88	.188	1.38	x	x	x	x	x	x	x	x	x	27.0	
2.06	1.000	2.00	.250	1.75	x	x	x	x	x	x	x	x	x	32.0	
2.37	1.125	2.37	.250	1.75	x	x	x	x	x	x	x	x	x	39.0	
2.62	1.125	2.50	.250	2.00	x	x	x	x	x	x	x	x	x	54.0	
3.00	1.250	3.25	.250	2.25	x	x	x	x	x	x	x	x	x	68.0	
3.25	1.375	3.25	.313	2.88	-	x	x	x	x	x	x	x	x	83.0	
3.75	1.625	3.50	.375	2.81	-	x	x	x	x	x	x	x	x	117.5	
4.50	1.625	3.38	.375	2.50	-	x	x	x	x	x	x	x	x	167.0	
5.16	2.000	4.16	.500	2.81	-	x	x	x	x	x	x	x	x	216.0	
6.00	2.250	4.56	.500	3.50	x	x	x	x	x	x	x	x	x	270.0	

**Table 2** Dimensions (Inches) for Style "CT" - With Base - Worm Top

C.D.	Components ◆			AB	BB	CB	DB	EB	FB	G	HB	KB	MB	PB	TB	Wt. Lbs.
	Basic Unit ★	Adapter Kit	Standard Base Kit ▲													
133U	See Table No. 5	133S-BK	5.38	4.19	4.38	3.31	2.19	1.66	.47	2.25	5.19	6.09	3.58	.344	18.5	
154U		154S-BK	6.44	5.44	5.25	4.31	2.63	2.16	.59	2.50	5.97	7.03	4.04	.406	25.8	
175U		175S-BK	7.00	5.56	5.75	4.50	2.88	2.25	.69	2.75	6.44	7.09	4.50	.406	28.0	
206U		206S-BK	7.69	5.76	6.38	4.69	3.19	2.34	.72	3.00	7.09	7.57	5.06	.469	33.5	
237U		237S-BK	8.50	6.19	7.06	4.88	3.53	2.44	.75	3.25	7.69	8.18	5.62	.469	40.8	
262U		262S-BK	9.25	6.50	8.00	5.25	4.00	2.63	.75	3.69	8.75	8.88	6.31	.531	56.0	
300U		300S-BK	10.17	7.38	8.44	5.88	4.22	2.94	.88	4.13	9.75	10.44	7.13	.531	70.5	
325U		325S-BK	11.12	7.75	9.50	6.13	4.75	3.06	.88	4.38	10.25	10.94	7.63	.531	86.0	
375U		375S-BK	12.00	8.63	10.38	7.00	5.19	3.50	.94	4.81	11.38	12.06	8.56	.594	127.5	
450U		450S-BK	13.88	9.31	12.13	7.63	6.06	3.81	1.13	5.63	13.06	13.13	10.19	.656	184.0	
516U		516S-BK	16.38	10.38	14.13	8.38	7.06	4.19	1.13	6.44	14.88	14.25	11.60	.781	242.0	
600U		600S-BK	19.00	12.00	16.50	9.50	8.52	4.75	1.25	7.75	17.75	16.00	13.75	.906	313.0	

**Table 3** Dimensions (Inches) for Style "CB"

C.D.	Components ◆			HC	PC
	Basic Unit ★	Adapter Kit	Standard Base Kit ▲		
133U	See Table No. 5	133S-BK	2.14	3.47	
154U		154S-BK	2.50	4.04	
175U		175S-BK	2.63	4.38	
206U		206S-BK	2.75	4.81	
237U		237S-BK	2.81	5.19	
262U		262S-BK	3.19	5.81	
300U		300S-BK	3.50	6.50	
325U		325S-BK	3.50	6.75	
375U		375S-BK	3.75	7.50	
450U		450S-BK	4.06	8.63	
516U		516S-BK	4.40	9.56	
600U		600S-BK	5.25	11.25	

**Table 4** Fan Kit

Basic Unit ★	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
300U	300 FAN	3/8-24	3/4	5.93	1.6
325U	325 FAN	3/8-24	3/4	6.04	1.6
375U	375 FAN	3/8-24	3/4	7.66	2.8
450U	450 FAN	3/8-24	3/4	8.36	2.8
516U	516 FAN	3/8-24	3/4	9.18	2.8
600U	600 FAN	3/8-24	3/4	10.70	4.2

**Table 5** N.E.M.A. Frame Adapter Kits and Dimensions

C.D.	56C		143/145TC			182/184TC			213/215TC			254/256TC			
	Input: .625 Kw.: 3/16 x 3/32		Input: .875 Kw.: 3/16 x 3/32			Input: 1.125 Kw.: 1/4 x 1/8			Input: 1.375 Kw.: 5/16 x 5/32			Input: 1.625 Kw.: 3/8 x 3/16			
	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R
1.33	133MAK56	6.38	3.25	133MAK140											
1.54	154-206MAK56	7.13	3.25	154-206MAK140	7.13	3.25									
1.75	154-206MAK56	7.00	3.25	154-206MAK140	7.00	3.25									
2.06	154-206MAK56	7.37	3.25	154-206MAK140	7.37	3.25									
2.37	237MAK56	7.69	3.25	237MAK140	7.69	3.25									
2.62	262MAK56	8.50	3.25	262MAK140	8.50	3.25									
3.00	300-325MAK56	9.35	3.25	300-325MAK140	9.35	3.25									
3.25	300-325MAK56	9.37	3.25	300-325MAK140	9.37	3.25	262MAK180	9.72	4.50						
3.75	375MAK56	11.47	3.38	375MAK140	11.47	3.38	300-325MAK180	10.57	4.50						
4.50				450MAK140	12.15	3.38	300-325MAK180	10.59	4.50	325MAK210					
5.16							375MAK180	12.92	4.50	375MAK210	12.92	4.50			
6.00							450MAK180	13.60	4.50	450MAK210	13.60	4.50			
							516MAK180	14.40	4.50	516MAK210	14.40	4.50			
							600MAK180	16.97	4.50	600MAK210	16.97	4.50	600MAK250	16.97	4.50

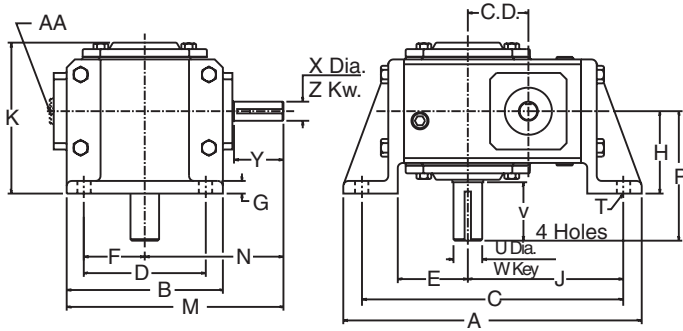
★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133ULR10.

◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 4.

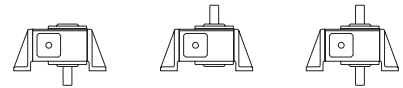
▲ Select either Standard Base Kit (S-BK) or Econo Base Kit (E-BK) or Solid Base Kit (BK); base kits are shown on page 84. Consult factory for ratios not shown as standard.

**Style UVL**

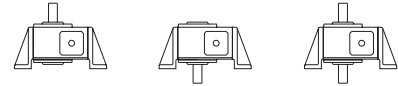
Vertical Low Base



Assembly Drawing and Sample of Components



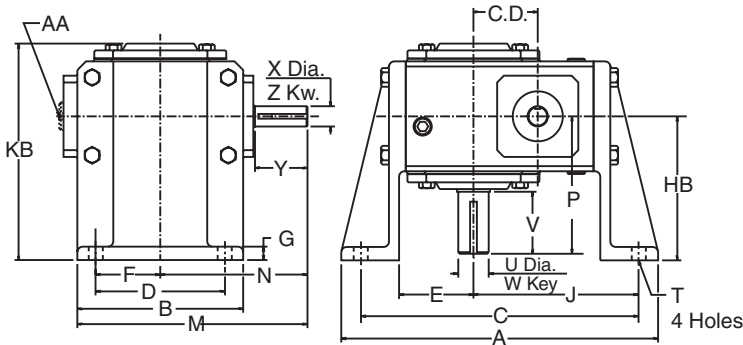
133UL10 133UR10 133ULR10  
133VL-BK 133VL-BK 133VL-BK



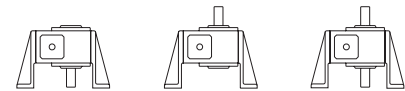
133UL10 133UR10 133ULR10  
133VL-BK 133VL-BK 133VL-BK

**Style UVH**

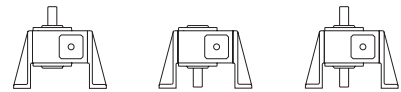
Vertical High Base



Assembly Drawing and Sample of Components



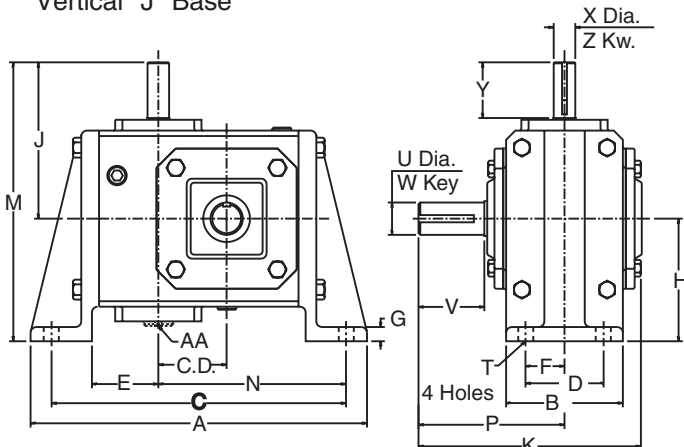
133UL10 133UR10 133ULR10  
133VH-BK 133VH-BK 133VH-BK



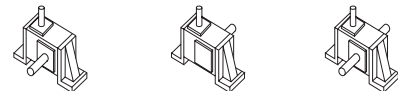
133UL10 133UR10 133ULR10  
133VH-BK 133VH-BK 133VH-BK

**Style UVJ**

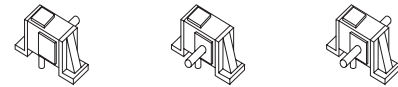
Vertical "J" Base



Assembly Drawing and Sample of Components



133UL10 133UR10 133ULR10  
133VJ-BK 133VJ-BK 133VJ-BK



133UL10 133UR10 133ULR10  
133VJ-BK 133VJ-BK 133VJ-BK

NOTE: If mounting a fan unit with input up, fan extends beyond "H" dimension.

**For former MORSE Description see cross reference on pages 100 - 106.**



**Table 1 Dimensions (Inches) for Style "UVL" - With Vertical Low Base**

C.D.	Components ◆		A	B	C	D	E	F	G	H	J	K	M	N	P	T
	Basic Unit ★	Base Kit														
1.00	100U	100VL-BK	5.75	3.30	5.13	2.31	1.31	1.15	.13	1.83	3.06	3.46	4.65	3.00	2.88	.342
1.33	133U	133VL-BK	7.10	4.00	6.16	3.25	1.81	1.63	.53	2.31	3.69	4.31	6.03	4.03	4.00	.344
1.54	154U	154VL-BK	8.06	5.12	7.00	4.00	1.97	2.00	.69	3.00	4.28	5.50	7.25	4.69	4.31	.406
1.75	175U	175VL-BK	8.44	4.81	7.38	4.00	2.12	2.00	.69	3.00	4.50	5.41	7.09	4.68	4.31	.406
2.06	206U	206VL-BK	9.50	5.63	8.38	4.88	2.34	2.44	.72	3.13	5.09	5.73	7.87	5.06	4.69	.469
2.37	237U	237VL-BK	10.06	6.12	8.94	4.88	2.56	2.44	.75	3.38	5.44	6.08	8.50	5.44	5.08	.469
2.62	262U	262VL-BK	11.25	7.13	10.13	5.75	3.00	2.88	.75	3.63	6.13	6.50	9.79	6.23	5.63	.531
3.00	300U	300VL-BK	12.88	8.50	11.38	6.13	3.31	3.06	.81	4.69	6.88	8.19	11.25	7.00	6.75	.531
3.25	325U	325VL-BK	13.38	8.50	11.88	6.13	3.56	3.06	.81	4.69	7.13	8.37	11.31	7.06	7.06	.531
3.75	375U	375VL-BK	15.69	9.50	13.94	8.00	3.44	4.00	.88	5.25	8.31	9.58	13.13	8.38	7.75	.594
4.50	450U	450VL-BK	16.94	10.88	14.94	9.56	4.63	4.78	.88	5.06	8.94	9.78	15.09	9.59	8.44	.688
5.16	516U	516VL-BK	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	10.56	11.25	16.93	10.69	9.06	.781
6.00	600U	600VL-BK	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	12.19	12.63	19.13	11.75	10.00	.906

C.D.	OUTPUT SHAFT				INPUT SHAFT				Stock Ratios marked "x"								Wt. Lbs.	
	U +.000 -.001	V	W Key		X +.000 -.001	Y	Z Key		5	10	15	20	25	30	40	50		60
			Sq.	Lgth.			Sq.	Lgth.										
1.00	.500	1.25	.125	.88	.375	1.23	.094	.75	x	x	x	x	x	x	x	x	-	7.8
1.33	.625	2.00	.188	1.31	.500	1.81	.125	1.38	x	x	x	x	x	x	x	x	x	13.3
1.54	.750	1.78	.188	1.25	.625	1.69	.188	.94	x	x	x	x	x	x	x	x	-	21.4
1.75	.875	1.88	.188	1.38	.625	1.81	.188	1.50	x	x	x	x	x	x	x	x	x	24.5
2.06	1.000	2.00	.250	1.75	.625	1.81	.188	1.50	x	x	x	x	x	x	x	x	x	32.0
2.37	1.125	2.37	.250	1.75	.750	1.94	.188	1.31	x	x	x	x	x	x	x	x	x	39.0
2.62	1.125	2.50	.250	2.00	.750	2.31	.188	1.88	x	x	x	x	x	x	x	x	x	52.0
3.00	1.250	3.25	.250	2.25	.875	2.26	.188	1.31	x	x	x	x	x	x	x	x	x	69.5
3.25	1.375	3.25	.313	2.88	.875	2.31	.188	1.63	-	x	x	x	x	x	x	x	x	88.0
3.75	1.625	3.50	.375	2.81	1.000	2.91	.250	1.75	-	x	x	x	x	x	x	x	x	130.0
4.50	1.625	3.38	.375	2.50	1.125	3.48	.250	2.50	-	x	x	x	x	x	x	x	x	184.0
5.16	2.000	4.16	.500	2.81	1.250	3.75	.250	2.56	-	x	x	x	x	x	x	x	x	246.0
6.00	2.250	4.56	.500	3.50	1.500	3.75	.375	2.94	x	x	x	x	x	x	x	x	x	316.0

**Table 2 Dimensions (Inches) for Style "UVH"**

Components ◆		HB	KB	Wt. Lbs.
Basic Unit ★	Base Kit			
100U	100VH-BK	2.96	4.59	7.8
133U	133VH-BK	3.56	5.56	14.3
154U	154VH-BK	4.38	6.88	22.4
175U	175VH-BK	4.38	6.78	25.5
206U	206VH-BK	4.88	7.48	33.0
237U	237VH-BK	5.25	7.96	41.5
262U	262VH-BK	5.60	8.47	56.0
300U	300VH-BK	6.25	9.75	73.0
325U	325VH-BK	6.25	9.93	91.0
375U	375VH-BK	7.00	11.33	133.5
450U	450VH-BK	8.56	13.28	192.0
516U	516VH-BK	8.63	13.50	258.0
600U	600VH-BK	9.63	14.94	331.0

**Table 4 Fan Kit**

Basic Unit ★	Fan Kit	AA		Wt. Lbs.
		Tap	Deep	
300U	300 FAN	3/8-24	3/4	1.6
325U	325 FAN	3/8-24	3/4	1.6
375U	375 FAN	3/8-24	3/4	2.8
450U	450 FAN	3/8-24	3/4	2.8
516U	516 FAN	3/8-24	3/4	2.8
600U	600 FAN	3/8-24	3/4	4.2

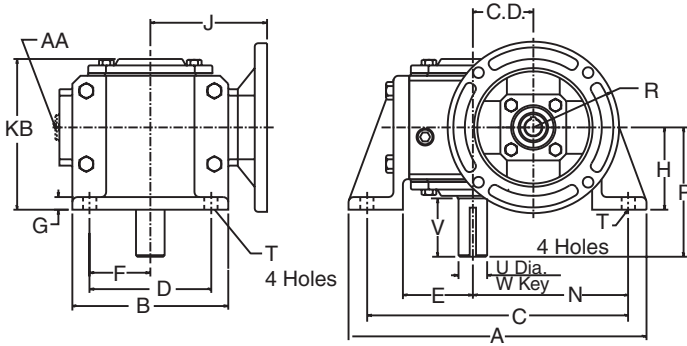
**Table 5 Dimensions (Inches) for Style "UVJ" - With Vertical "J" Base**

Components ◆		A	B	C	D	E	F	G	H	J	K	M	N	P	T	Wt. Lbs.
Base Unit ★	Base Kit															
133U	133VJ-BK	7.28	2.88	6.42	2.00	1.66	1.00	.53	2.94	4.03	5.31	6.97	3.93	2.66	.344	15.0
154U	154VJ-BK	8.25	3.69	7.25	2.50	1.98	1.25	.69	3.50	4.69	6.44	8.19	4.39	3.22	.406	22.0
175U	175VJ-BK	8.63	3.38	7.63	2.50	2.00	1.25	.69	3.50	4.68	5.70	8.18	4.75	2.85	.406	25.0
206U	206VJ-BK	9.75	3.75	8.62	2.62	2.09	1.31	.72	3.94	5.06	6.44	9.00	5.46	3.22	.469	31.0
237U	237VJ-BK	10.30	4.06	9.19	2.88	2.12	1.44	.75	4.06	5.44	6.31	9.50	6.00	3.16	.469	47.0
262U	262VJ-BK	11.75	4.44	10.38	3.13	2.50	1.56	.75	4.75	6.23	6.88	10.98	6.75	3.44	.531	58.0
300U	300VJ-BK	13.50	5.00	12.25	4.00	2.69	2.00	.81	5.94	7.00	8.38	12.94	7.94	4.19	.531	82.0
325U	325VJ-BK	14.00	5.00	12.75	4.00	2.69	2.00	.81	5.69	7.06	8.50	12.75	8.44	4.25	.531	85.0
375U	375VJ-BK	15.06	6.25	13.31	4.75	2.94	2.38	.88	6.00	8.38	9.63	14.38	9.06	4.81	.594	117.5
450U	450VJ-BK	16.94	7.38	14.94	5.81	3.06	2.91	.88	7.38	9.59	11.13	16.96	8.94	5.56	.688	151.0
516U	516VJ-BK	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	10.69	11.31	18.44	12.35	5.66	.781	240.0
600U	600VJ-BK	22.00	8.13	20.00	6.38	4.12	3.19	1.13	8.50	11.75	12.63	20.25	14.25	6.31	.906	342.0

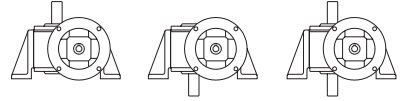
★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133ULR10.  
 ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 4.  
 ▲ Select either Standard Base Kit (S-BK) or Econo Base Kit (E-BK) or Solid Base Kit (BKS); base kits are shown on page 84.  
 Consult factory for ratios not shown as standard.

**Style QVL**

Vertical Low Base



Assembly Drawing and Sample of Components



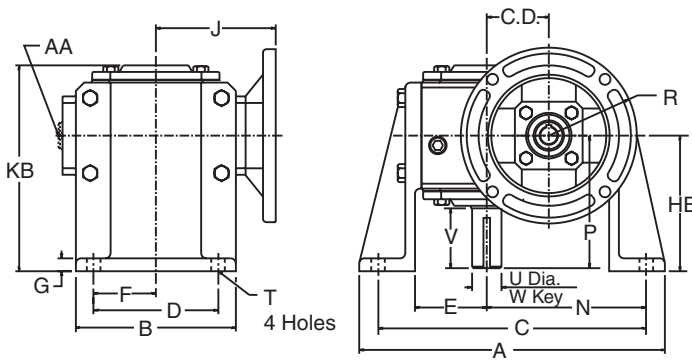
133Q56L10 133Q56R10 133Q56LR10  
133VL-BK 133VL-BK 133VL-BK



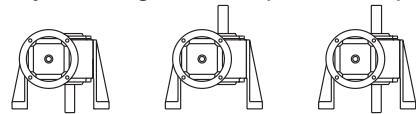
133Q56L10 133Q56R10 133Q56LR10  
133VL-BK 133VL-BK 133VL-BK

**Style QVH**

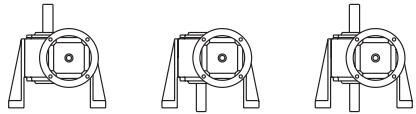
Vertical High Base



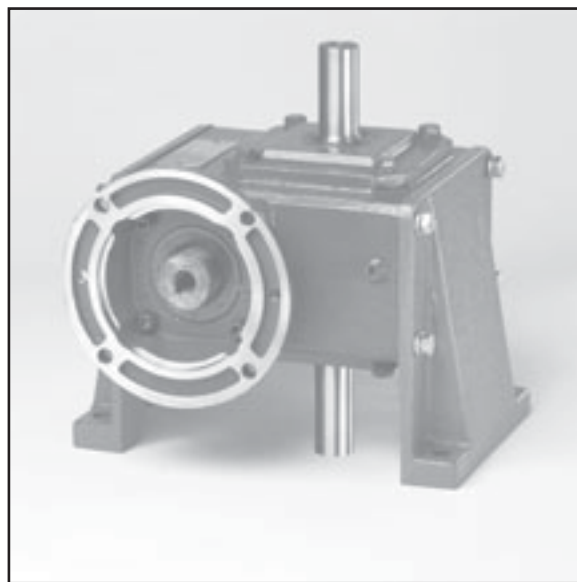
Assembly Drawing and Sample of Components



133Q56L10 133Q56R10 133Q56LR10  
133VH-BK 133VH-BK 133VH-BK



133Q56L10 133Q56R10 133Q56LR10  
133VH-BK 133VH-BK 133VH-BK



**For former MORSE Description see cross reference on pages 100 - 106.**

**Table 1** Dimensions (Inches) for Style "QVL" - With Vertical Low Base

C.D.	Components		N.E.M.A. Frame	A	B	C	D	E	F	G	H	J	K	N	P
	Part No. ★	Base Kit													
1.00	100Q40	100VL-BK	42CZ/48C	5.75	3.30	5.13	2.31	1.31	1.15	.13	1.83	3.16	3.46	3.06	2.88
1.00	100Q56	100VL-BK	56C	5.75	3.30	5.13	2.31	1.31	1.15	.13	1.83	3.53	3.46	3.06	2.88
1.33	133Q56	133VL-BK	56C	7.38	4.00	6.16	3.25	1.81	1.63	.53	2.31	3.94	4.31	3.69	4.00
1.54	154Q56	154VL-BK	56C	8.06	5.12	7.00	4.00	1.97	2.00	.69	3.00	4.52	5.50	4.28	4.31
1.54	154Q140	154VL-BK	143/145TC	8.06	5.12	7.00	4.00	1.97	2.00	.69	3.00	4.52	5.50	4.28	4.31
1.75	175Q56	175VL-BK	56C	8.44	4.81	7.38	4.00	2.12	2.00	.69	3.00	4.38	5.41	4.50	4.31
1.75	175Q140	175VL-BK	143/145TC	8.44	4.81	7.38	4.00	2.12	2.00	.69	3.00	4.38	5.41	4.50	4.31
2.06	206Q56	206VL-BK	56C	9.50	5.63	8.38	4.88	2.34	2.44	.72	3.13	4.75	5.73	5.09	4.69
2.06	206Q140	206VL-BK	143/145TC	9.50	5.63	8.38	4.88	2.34	2.44	.72	3.13	4.75	5.73	5.09	4.69
2.37	237Q56	237VL-BK	56C	10.06	6.12	8.94	4.88	2.56	2.44	.75	3.38	5.06	6.08	5.44	5.08
2.37	237Q140	237VL-BK	143/145TC	10.06	6.12	8.94	4.88	2.56	2.44	.75	3.38	5.06	6.08	5.44	5.08
2.62	262Q56	262VL-BK	56C	11.25	7.13	10.13	5.75	3.00	2.88	.75	3.63	5.69	6.50	6.13	5.63
2.62	262Q140	262VL-BK	143/145TC	11.25	7.13	10.13	5.75	3.00	2.88	.75	3.63	5.69	6.50	6.13	5.63
2.62	262Q180	262VL-BK	182/184TC	11.25	7.13	10.13	5.75	3.00	2.88	.75	3.63	5.69	6.50	6.13	5.63
3.00	300Q56	300VL-BK	56C	12.88	8.50	11.38	6.13	3.31	3.06	.81	4.69	5.67	8.19	6.88	6.75
3.00	300Q140	300VL-BK	143/145TC	12.88	8.50	11.38	6.13	3.31	3.06	.81	4.69	5.67	8.19	6.88	6.75
3.00	300Q180	300VL-BK	182/184TC	12.88	8.50	11.38	6.13	3.31	3.06	.81	4.69	5.67	8.19	6.88	6.75
3.25	325Q56	325VL-BK	56C	13.38	8.50	11.88	6.13	3.56	3.06	.81	4.69	6.56	8.37	7.13	7.06
3.25	325Q140	325VL-BK	143/145TC	13.38	8.50	11.88	6.13	3.56	3.06	.81	4.69	6.56	8.37	7.13	7.06
3.25	325Q180	325VL-BK	182/184TC	13.38	8.50	11.88	6.13	3.56	3.06	.81	4.69	7.00	8.37	7.13	7.06
3.75	375Q56	375VL-BK	56C	15.69	9.50	13.94	8.00	3.44	4.00	.88	5.25	6.01	9.58	8.31	7.75
3.75	375Q140	375VL-BK	143/145TC	15.69	9.50	13.94	8.00	3.44	4.00	.88	5.25	6.01	9.58	8.31	7.75
3.75	375Q180	375VL-BK	182/184TC	15.69	9.50	13.94	8.00	3.44	4.00	.88	5.25	7.29	9.58	8.31	7.75
3.75	375Q210	375VL-BK	213/215TC	15.69	9.50	13.94	8.00	3.44	4.00	.88	5.25	7.29	9.58	8.31	7.75
4.50	450Q140	450VL-BK	143/145TC	16.94	10.88	14.94	9.56	4.63	4.78	.88	5.06	6.69	9.78	8.94	8.44
4.50	450Q180	450VL-BK	182/184TC	16.94	10.88	14.94	9.56	4.63	4.78	.88	5.06	7.97	9.78	8.94	8.44
4.50	450Q210	450VL-BK	213/215TC	16.94	10.88	14.94	9.56	4.63	4.78	.88	5.06	7.97	9.78	8.94	8.44
5.16	516Q180	516VL-BK	182/184TC	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	8.78	11.25	10.56	9.06
5.16	516Q210	516VL-BK	213/215TC	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	8.78	11.25	10.56	9.06
6.00	600Q180	600VL-BK	213/215TC	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	9.68	12.63	12.19	10.00
6.00	600Q210	600VL-BK	213/215TC	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	9.68	12.63	12.19	10.00

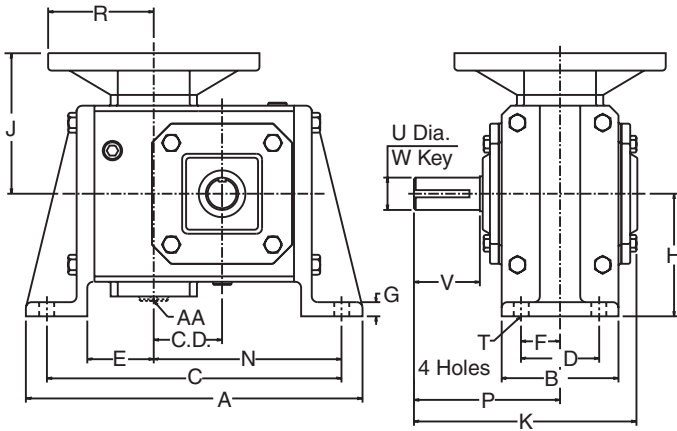
C.D.	N.E.M.A. Frame	R	T	INPUT		OUTPUT SHAFT				Stock Ratios marked "x"								Wt. Lbs.	
				Bore	Keyway	U +.000 / -.001	V	W Key		5	10	15	20	25	30	40	50		60
								Sq.	Lgth.										
1.00	42CZ/48C	2.13	.320	.500	1/8 X 1/16	.500	1.25	.125	.88	x	x	x	x	-	x	x	x	-	10.8
1.00	56C	3.25	.320	.625	3/16 X 3/32	.625	1.25	.125	.88	x	x	x	x	-	x	x	x	-	10.8
1.33	56C	3.25	.344	.625	3/16 X 3/32	.625	2.00	.188	1.31	x	x	x	x	x	x	x	x	x	19.3
1.54	56C	3.25	.406	.625	3/16 X 3/32	.750	1.78	.188	1.25	x	x	x	x	x	x	x	x	-	27.4
1.54	143/145TC	3.25	.406	.875	3/16 X 3/32	.750	1.78	.188	1.25	x	x	x	-	-	-	-	-	-	27.4
1.75	56C	3.25	.406	.625	3/16 X 3/32	.875	1.88	.188	1.38	x	x	x	x	x	x	x	x	x	31.5
1.75	143/145TC	3.25	.406	.875	3/16 X 3/32	.875	1.88	.188	1.38	x	x	x	-	-	-	-	-	-	31.5
2.06	56C	3.25	.469	.625	3/16 X 3/32	1.000	2.00	.250	1.75	x	x	x	x	x	x	x	x	x	39.0
2.06	143/145TC	3.25	.469	.875	3/16 X 3/32	1.000	2.00	.250	1.75	x	x	x	x	x	-	-	-	-	39.0
2.37	56C	3.25	.469	.625	3/16 X 3/32	1.125	2.37	.250	1.75	-	x	x	x	x	x	x	x	x	46.0
2.37	143/145TC	3.25	.469	.875	3/16 X 3/32	1.125	2.37	.250	1.75	x	x	x	x	x	-	-	-	-	46.0
2.62	56C	3.25	.531	.625	3/16 X 3/32	1.125	2.50	.250	2.00	-	x	x	x	x	x	x	x	x	59.0
2.62	143/145TC	3.25	.531	.875	3/16 X 3/32	1.125	2.50	.250	2.00	-	x	x	x	x	x	x	x	x	59.0
2.62	182/184TC	4.50	.531	1.125	1/4 X 1/8	1.125	2.50	.250	2.00	x	x	-	-	-	-	-	-	-	59.0
3.00	56C	3.25	.531	.625	3/16 X 3/32	1.250	3.25	.250	2.25	-	-	x	x	x	x	x	x	x	80.5
3.00	143/145TC	3.25	.531	.875	3/16 X 3/32	1.250	3.25	.250	2.25	-	x	x	x	x	x	x	x	x	80.5
3.00	182/184TC	4.50	.531	1.125	1/4 X 1/8	1.250	3.25	.250	2.25	-	x	x	x	x	x	x	x	x	80.5
3.25	56C	3.25	.531	.625	3/16 X 3/32	1.375	3.25	.313	2.88	-	x	x	x	x	x	x	x	x	103.0
3.25	143/145TC	3.25	.531	.875	3/16 X 3/32	1.375	3.25	.313	2.88	-	x	x	x	x	x	x	x	x	103.0
3.25	182/184TC	4.50	.531	1.125	1/4 X 1/8	1.375	3.25	.313	2.88	-	x	x	x	x	x	x	x	x	103.0
3.75	56C	3.38	.594	.625	3/16 X 3/32	1.625	3.50	.375	2.81	-	-	-	-	-	-	-	-	-	145.0
3.75	143/145TC	3.38	.594	.875	3/16 X 3/32	1.625	3.50	.375	2.81	-	x	x	x	x	x	x	x	x	145.0
3.75	182/184TC	4.50	.594	1.125	1/4 X 1/8	1.625	3.50	.375	2.81	-	x	x	x	x	x	x	x	x	145.0
3.75	213/215TC	4.50	.594	1.375	5/16 X 5/32	1.625	3.50	.375	2.81	-	x	x	NA	-	-	-	-	-	145.0
4.50	143/145TC	3.38	.688	.875	3/16 X 3/32	1.625	3.38	.375	2.50	-	-	-	-	-	-	-	-	-	203.0
4.50	182/184TC	4.50	.688	1.125	1/4 X 1/8	1.625	3.38	.375	2.50	-	-	-	-	-	-	-	-	-	203.0
4.50	213/215TC	4.50	.688	1.375	5/16 X 5/32	1.625	3.38	.375	2.50	-	-	-	-	-	-	-	-	-	203.0
5.16	182/184TC	4.50	.781	1.125	1/4 X 1/8	2.000	4.16	.500	2.81	-	-	-	-	-	-	-	-	-	269.0
5.16	213/215TC	4.50	.781	1.375	5/16 X 5/32	2.000	4.16	.500	2.81	-	x	x	x	x	x	-	-	-	269.0
6.00	182/184TC	4.50	.906	1.375	5/16 X 5/32	2.250	4.56	.500	3.50	-	-	-	-	-	-	-	-	-	346.0
6.00	213/215TC	4.50	.906	1.375	5/16 X 5/32	2.250	4.56	.500	3.50	-	-	-	-	-	-	-	-	-	346.0

**Table 2** Dimensions (Inches) for Style "QVH" - With Vertical High Base

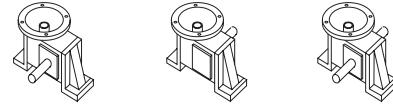
C.D.	Components		N.E.M.A. Frame	HB	KB	Wt. Lbs.	C.D.	Components		N.E.M.A. Frame	HB	KB	Wt. Lbs.
	Basic Unit ★	Base Kit						Basic Unit ★	Base Kit				
1.00	100Q40	100VH-BK	42CZ/48C	2.96	4.59	10.8	3.25	325Q56	325VH-BK	56C	6.25	9.93	106.0
1.00	100Q56	100VH-BK	56C	2.96	4.59	10.8	3.25	325Q140	325VH-BK	143/145TC	6.25	9.93	106.0
1.33	133Q56	133VH-BK	56C	3.56	5.56	20.3	3.25	325Q180	325VH-BK	182/184TC	6.25	9.93	106.0
1.54	154Q56	154VH-BK	56C	4.38	6.88	28.4							
1.54	154Q140	154VH-BK	143/145TC	4.38	6.88	28.4	3.75	375Q56	375VH-BK	56C	7.00	11.33	148.5
1.75	175Q56	175VH-BK	56C	4.38	6.78	32.5	3.75	375Q180	375VH-BK	182/184TC	7.00	11.33	148.5
1.75	175Q140	175VH-BK	143/145TC	4.38	6.78	32.5	3.75	375Q210	375VH-BK	213/215TC	7.00	11.33	148.5
2.06	206Q56	206VH-BK	56C	4.88	7.48	40.0							
2.06	206Q140	206VH-BK	143/145TC	4.88	7.48	40.0	4.50	450Q140	450VH-BK	143/145TC	8.56	13.28	211.0
2.37	237Q56	237VH-BK	56C	5.25	7.96	48.5	4.50	450Q180	450VH-BK	182/184TC	8.56	13.28	211.0
2.37	237Q140	237VH-BK	143/145TC	5.25	7.96	48.5	4.50	450Q210	450VH-BK	213/215TC	8.56	13.28	211.0
2.62	262Q56	262VH-BK	56C	5.60	8.47	63.0	5.16	516Q180	516VH-BK	182			

**Style QVJ**

Vertical "J" Base



Assembly Drawing and Sample of Components



133Q56L10 133Q56R10 133Q56LR10  
 133VJ-BK 133VJ-BK 133VJ-BK

NOTE: If mounting a fan unit, fan extends beyond "H" dimension.



For former MORSE Description see cross reference on pages 100 - 106.



**Table 1** Dimensions (Inches) for Style "QVJ" - With Vertical "J" Base

C.D.	Components		N.E.M.A. Frame	A	B	C	D	E	F	G	H	J	K	N	P
	Part No. ★	Base Kit													
1.00	100Q40	100VJ-BK	42CZ/48C	5.88	2.50	5.13	1.69	1.32	.85	.13	2.31	3.16	4.50	3.06	2.88
1.00	100Q56	100VJ-BK	56C	5.88	2.50	5.13	1.69	1.32	.85	.13	2.31	3.53	4.50	3.06	2.88
1.33	133Q56	133VJ-BK	56C	7.28	2.88	6.42	2.00	1.66	1.00	.53	2.94	3.94	6.03	3.93	4.00
1.54	154Q56	154VJ-BK	56C	8.25	3.69	7.25	2.50	1.98	1.25	.69	3.50	4.52	6.76	4.39	4.31
1.54	154Q140	154VJ-BK	143/145TC	8.25	3.69	7.25	2.50	1.98	1.25	.69	3.50	4.52	6.76	4.39	4.31
1.75	175Q56	175VJ-BK	56C	8.63	3.38	7.63	2.50	2.00	1.25	.69	3.50	4.38	6.75	4.75	4.31
1.75	175Q140	175VJ-BK	143/145TC	8.63	3.38	7.63	2.50	2.00	1.25	.69	3.50	4.38	6.75	4.75	4.31
2.06	206Q56	206VJ-BK	56C	9.75	3.75	8.62	2.62	2.09	1.31	.72	3.94	4.75	7.25	5.46	4.69
2.06	206Q140	206VJ-BK	143/145TC	9.75	3.75	8.62	2.62	2.09	1.31	.72	3.94	4.75	7.25	5.46	4.69
2.37	237Q56	237VJ-BK	56C	10.30	4.06	9.19	2.88	2.12	1.44	.75	4.06	5.06	7.78	6.00	5.08
2.37	237Q140	237VJ-BK	143/145TC	10.30	4.06	9.19	2.88	2.12	1.44	.75	4.06	5.06	7.78	6.00	5.08
2.62	262Q56	262VJ-BK	56C	11.75	4.44	10.38	3.13	2.50	1.56	.75	4.75	5.69	8.50	6.75	5.63
2.62	262Q140	262VJ-BK	143/145TC	11.75	4.44	10.38	3.13	2.50	1.56	.75	4.75	5.69	8.50	6.75	5.63
2.62	262Q180	262VJ-BK	182/184TC	11.75	4.44	10.38	3.13	2.50	1.56	.75	4.75	6.13	8.50	6.75	5.63
3.00	300Q56	300VJ-BK	56C	13.50	5.00	12.25	4.00	2.69	2.00	.81	5.94	5.67	10.25	7.94	6.75
3.00	300Q140	300VJ-BK	143/145TC	13.50	5.00	12.25	4.00	2.69	2.00	.81	5.94	5.67	10.25	7.94	6.75
3.00	300Q180	300VJ-BK	182/184TC	13.50	5.00	12.25	4.00	2.69	2.00	.81	5.94	6.45	10.25	7.94	6.75
3.25	325Q56	325VJ-BK	56C	14.00	5.00	12.75	4.00	2.69	2.00	.81	5.69	6.56	10.60	8.44	7.06
3.25	325Q140	325VJ-BK	143/145TC	14.00	5.00	12.75	4.00	2.69	2.00	.81	5.69	6.56	10.60	8.44	7.06
3.25	325Q180	325VJ-BK	182/184TC	14.00	5.00	12.75	4.00	2.69	2.00	.81	5.69	7.00	10.60	8.44	7.06
3.75	375Q56	375VJ-BK	56C	15.06	6.25	13.31	4.75	2.94	2.38	.88	6.00	6.01	11.88	9.06	7.75
3.75	375Q140	375VJ-BK	143/145TC	15.06	6.25	13.31	4.75	2.94	2.38	.88	6.00	6.01	11.88	9.06	7.75
3.75	375Q180	375VJ-BK	182/184TC	15.06	6.25	13.31	4.75	2.94	2.38	.88	6.00	7.29	11.88	9.06	7.75
3.75	375Q210	375VJ-BK	213/215TC	15.06	6.25	13.31	4.75	2.94	2.38	.88	6.00	7.29	11.88	9.06	7.75
4.50	450Q140	450VJ-BK	143/145TC	16.94	7.38	14.94	5.81	3.06	2.91	.88	7.38	6.69	13.16	10.50	8.44
4.50	450Q180	450VJ-BK	182/184TC	16.94	7.38	14.94	5.81	3.06	2.91	.88	7.38	7.97	13.16	10.50	8.44
4.50	450Q210	450VJ-BK	213/215TC	16.94	7.38	14.94	5.81	3.06	2.91	.88	7.38	7.97	13.16	10.50	8.44
5.16	516Q180	516VJ-BK	182/184TC	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	8.78	13.91	12.35	9.06
5.16	516Q210	516VJ-BK	213/215TC	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	8.78	13.91	12.35	9.06
6.00	600Q180	600VJ-BK	182/184TC	22.00	8.13	20.00	6.38	4.12	3.19	1.13	8.50	9.68	15.31	14.25	10.00
6.00	600Q210	600VJ-BK	213/215TC	22.00	8.13	20.00	6.38	4.12	3.19	1.13	8.50	9.68	15.31	14.25	10.00

C.D.	N.E.M.A. Frame	R	T	INPUT		OUTPUT SHAFT				Stock Ratios marked "x"								Wt. Lbs.	
				Bore	Keyway	U + .000 - .001	V	W Key		5	10	15	20	25	30	40	50		60
								Sq.	Lgth.										
1.00	42CZ/48C	2.13	.320	.500	1/8 X 1/16	.500	1.25	.125	.88	x	x	x	x	-	x	x	x	-	9.8
1.00	56C	3.25	.320	.625	3/16 X 3/32	.500	1.25	.125	.88	x	x	x	x	-	x	x	x	-	9.8
1.33	56C	3.25	.344	.625	3/16 X 3/32	.625	2.00	.188	1.31	x	x	x	x	x	x	x	-	x	18.0
1.54	56C	3.25	.406	.625	3/16 X 3/32	.750	1.78	.188	1.25	x	x	x	x	x	x	x	-	x	26.0
1.54	143/145TC	3.25	.406	.875	3/16 X 3/32	.750	1.78	.188	1.25	x	x	x	-	-	-	-	-	-	26.0
1.75	56C	3.25	.406	.625	3/16 X 3/32	.875	1.88	.188	1.38	x	x	x	x	x	x	x	x	-	29.0
1.75	143/145TC	3.25	.406	.875	3/16 X 3/32	.875	1.88	.188	1.38	x	x	x	-	-	-	-	-	-	29.0
2.06	56C	3.25	.469	.625	3/16 X 3/32	1.000	2.00	.250	1.75	x	x	x	x	x	x	x	x	-	35.0
2.06	143/145TC	3.25	.469	.875	3/16 X 3/32	1.000	2.00	.250	1.75	x	x	x	x	-	-	-	-	-	35.0
2.37	56C	3.25	.469	.625	3/16 X 3/32	1.125	2.37	.250	1.75	-	x	x	x	x	x	x	x	-	41.0
2.37	143/145TC	3.25	.469	.875	3/16 X 3/32	1.125	2.37	.250	1.75	x	x	x	x	x	x	-	-	-	41.0
2.62	56C	3.25	.531	.625	3/16 X 3/32	1.125	2.50	.250	2.00	-	x	x	x	x	x	x	x	-	54.0
2.62	143/145TC	3.25	.531	.875	3/16 X 3/32	1.125	2.50	.250	2.00	-	x	x	x	x	x	x	x	-	54.0
2.62	182/184TC	4.50	.531	1.125	1/4 X 1/8	1.125	2.50	.250	2.00	x	x	-	-	-	-	-	-	-	54.0
3.00	56C	3.25	.531	.625	3/16 X 3/32	1.250	3.25	.250	2.25	-	-	x	x	x	x	x	x	-	74.0
3.00	143/145TC	3.25	.531	.875	3/16 X 3/32	1.250	3.25	.250	2.25	-	x	x	x	x	x	x	x	-	74.0
3.00	182/184TC	4.50	.531	1.125	1/4 X 1/8	1.250	3.25	.250	2.25	-	x	x	x	x	x	x	x	-	74.0
3.25	56C	3.25	.531	.625	3/16 X 3/32	1.375	3.25	.313	2.88	-	x	x	x	x	x	x	x	-	93.0
3.25	143/145TC	3.25	.531	.875	3/16 X 3/32	1.375	3.25	.313	2.88	-	x	x	x	x	x	x	x	-	93.0
3.25	182/184TC	4.50	.531	1.125	1/4 X 1/8	1.375	3.25	.313	2.88	-	x	x	x	x	x	x	x	-	93.0
3.75	56C	3.38	.594	.625	3/16 X 3/32	1.625	3.50	.375	2.81	-	-	NA	NA	-	-	x	x	-	128.5
3.75	143/145TC	3.38	.594	.875	3/16 X 3/32	1.625	3.50	.375	2.81	-	x	x	x	x	x	x	x	-	128.5
3.75	182/184TC	4.50	.594	1.125	1/4 X 1/8	1.625	3.50	.375	2.81	-	x	x	x	x	x	x	x	-	128.5
3.75	213/215TC	4.50	.594	1.375	5/16 X 5/32	1.625	3.50	.375	2.81	-	x	x	NA	-	-	-	-	-	128.5
4.50	143/145TC	3.38	.688	.875	3/16 X 3/32	1.625	3.38	.375	2.50	-	-	-	-	-	-	x	x	-	181.0
4.50	182/184TC	4.50	.688	1.125	1/4 X 1/8	1.625	3.38	.375	2.50	-	-	x	x	x	x	x	x	-	181.0
4.50	213/215TC	4.50	.688	1.375	5/16 X 5/32	1.625	3.38	.375	2.50	-	x	x	x	-	-	-	-	-	181.0
5.16	182/184TC	4.50	.781	1.125	1/4 X 1/8	2.000	4.16	.500	2.81	-	-	-	-	-	-	-	x	x	239.0
5.16	213/215TC	4.50	.781	1.375	5/16 X 5/32	2.000	4.16	.500	2.81	-	x	x	x	-	-	-	-	-	239.0
6.00	182/184TC	4.50	.906	1.375	5/16 X 5/32	2.250	4.56	.500	3.50	-	-	-	x	x	x	x	x	-	291.0
6.00	213/215TC	4.50	.906	1.375	5/16 X 5/32	2.250	4.56	.500	3.50	-	-	-	-	x	x	x	x	-	291.0

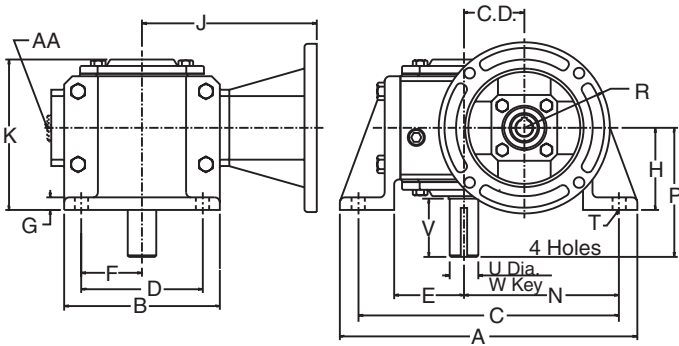
**Table 2** Fan Kit

Ref. No.	Fan Kit	AA		Wt. Lbs.
		Tap	Deep	
300Q	300 FAN	3/8-24	3/4	1.6
325Q	325 FAN	3/8-24	3/4	1.6
375Q	375 FAN	3/8-24	3/4	2.8
450Q	450 FAN	3/8-24	3/4	2.8
516Q	516 FAN	3/8-24	3/4	2.8
600Q	600 FAN	3/8-24	3/4	4.2

- ★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133Q56LR10.
  - ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 2.
  - ▲ Select either Standard Base Kit (S-BK) or Econo Base Kit (E-BK) or Solid Base Kit (BKS); base kits are shown on page 84.
- Consult factory for ratios not shown as standard.

**Style CVL**

Vertical Low Base

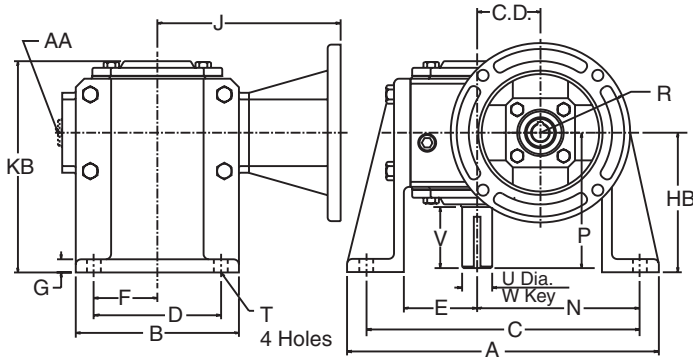


Assembly Drawing and Sample of Components

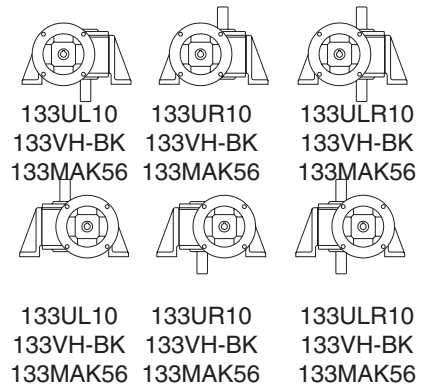


**Style CVH**

Vertical High Base

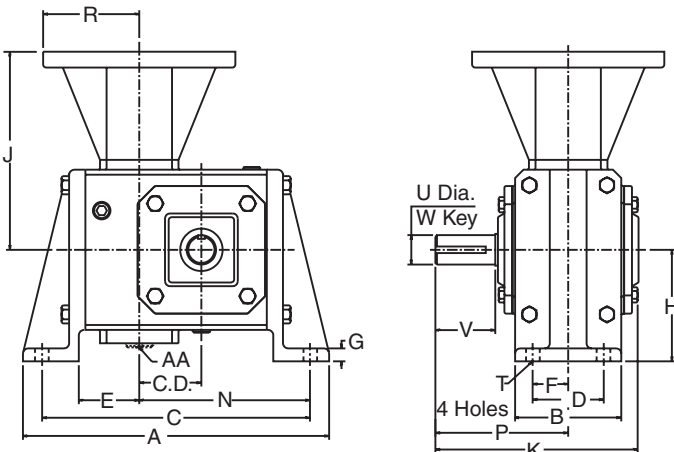


Assembly Drawing and Sample of Components

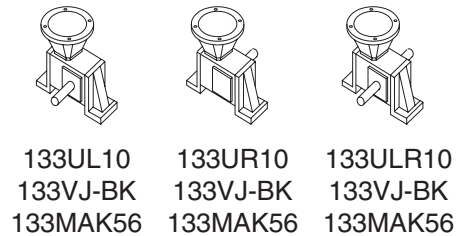


**Style CVJ**

Vertical "J" Base



Assembly Drawing and Sample of Components



NOTE: If mounting a fan unit, fan extends beyond "H" dimension.

**For former MORSE Description see cross reference on pages 100 - 106.**

**Table 1** Dimensions (Inches) for Style "CVL" - With Vertical Low Base

C.D.	Components			A	B	C	D	E	F	G	H	K	N	P	T
	Base Unit. ★	Adapter Kit	Base Kit												
1.33	133U	See Table No. 5	133VL-BK	7.10	4.00	6.16	3.25	1.81	1.63	.53	2.31	4.31	3.69	4.00	.344
1.54	154U		154VL-BK	8.06	5.12	7.00	4.00	1.97	2.00	.69	3.00	5.50	4.28	4.31	.406
1.75	175U		175VL-BK	8.44	4.81	7.38	4.00	2.12	2.00	.69	3.00	5.41	4.50	4.31	.406
2.06	206U		206VL-BK	9.50	5.63	8.38	4.88	2.34	2.44	.72	3.13	5.73	5.09	4.69	.469
2.37	237U		237VL-BK	10.06	6.12	8.94	4.88	2.56	2.44	.75	3.38	6.08	5.44	5.08	.469
2.62	262U		262VL-BK	11.25	7.13	10.13	5.75	3.00	2.88	.75	3.63	6.50	6.13	5.63	.531
3.00	300U		300VL-BK	12.88	8.50	11.38	6.13	3.31	3.06	.81	4.69	8.19	6.88	6.75	.531
3.25	325U		325VL-BK	13.38	8.50	11.88	6.13	3.56	3.06	.81	4.69	8.37	7.13	7.06	.531
3.75	375U		375VL-BK	15.69	9.50	13.94	8.00	3.44	4.00	.88	5.25	9.58	8.31	7.75	.594
4.50	450U		450VL-BK	16.94	10.88	14.94	9.56	4.63	4.78	.88	5.06	9.78	10.56	8.44	.688
5.16	516U	516VL-BK	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	11.25	10.56	9.06	.781	
6.00	600U	600VL-BK	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	12.63	12.19	10.00	.906	

C.D.	OUTPUT SHAFT				Stock Ratios marked "x"										Wt. Lbs.
	U +.000 -.001	V	W Key		05	10	15	20	25	30	40	50	60		
			Sq.	Lgth.											
1.33	.625	2.00	.188	1.31	x	x	x	x	x	x	x	x	x	20.3	
1.54	.750	1.78	.188	1.25	x	x	x	x	x	x	x	x	x	28.4	
1.75	.875	1.88	.188	1.38	x	x	x	x	x	x	x	x	x	31.5	
2.06	1.000	2.00	.250	1.75	x	x	x	x	x	x	x	x	x	39.0	
2.37	1.125	2.37	.250	1.75	x	x	x	x	x	x	x	x	x	47.0	
2.62	1.125	2.50	.250	2.00	x	x	x	x	x	x	x	x	x	63.0	
3.00	1.250	3.25	.250	2.25	x	x	x	x	x	x	x	x	x	80.5	
3.25	1.375	3.25	.313	2.88	-	x	x	x	x	x	x	x	x	99.0	
3.75	1.625	3.50	.375	2.81	-	x	x	x	x	x	x	x	x	142.5	
4.50	1.625	3.38	.375	2.50	-	x	x	x	x	x	x	x	x	200.0	
5.16	2.000	4.16	.500	2.81	-	x	x	x	x	x	x	x	x	264.0	
6.00	2.250	4.56	.500	3.50	x	x	x	x	x	x	x	x	x	356.0	

**Table 2** Dimensions (Inches) for Style "CVH"

C.D.	Components			HB	KB	Wt. Lbs.
	Base Unit. ★	Adapter Kit	Base Kit			
133U	See Table No. 5	133VH-BK	3.56	5.56	21.3	
154U		154VH-BK	4.38	6.88	29.4	
175U		175VH-BK	4.38	6.78	32.5	
206U		206VH-BK	4.88	7.48	40.0	
237U		237VH-BK	5.25	7.96	49.5	
262U		262VH-BK	5.60	8.47	67.0	
300U		300VH-BK	6.25	9.75	84.0	
325U		325VH-BK	6.25	9.93	102.0	
375U		375VH-BK	7.00	11.33	146.0	
450U		450VH-BK	8.56	13.28	208.0	
516U	516VH-BK	8.63	13.50	276.0		
600U	600VH-BK	9.63	14.94	361.0		

**Table 3** Fan Kit

Basic Unit ★	Fan Kit	AA		Wt. Lbs.
		Tap	Deep	
300U	300 FAN	3/8-24	3/4	1.6
325U	325 FAN	3/8-24	3/4	1.6
375U	375 FAN	3/8-24	3/4	2.8
450U	450 FAN	3/8-24	3/4	2.8
516U	516 FAN	3/8-24	3/4	2.8
600U	600 FAN	3/8-24	3/4	4.2

**Table 4** Dimensions (Inches) for Style "CVJ" - Vertical "J" Base

C.D.	Components			A	B	C	D	E	F	G	H	K	N	P	T	Wt. Lbs.
	Base Unit. ★	Adapter Kit	Base Kit													
133U	See Table No. 5	133VJ-BK	7.28	2.88	6.42	2.00	1.66	1.00	.53	2.94	6.03	3.93	4.00	.344	19.0	
154U		154VJ-BK	8.25	3.69	7.25	2.50	1.98	1.25	.69	3.50	6.76	4.39	4.31	.406	27.0	
175U		175VJ-BK	8.63	3.38	7.63	2.50	2.00	1.25	.69	3.50	6.75	4.75	4.31	.406	29.0	
206U		206VJ-BK	9.75	3.75	8.62	2.62	2.09	1.31	.72	3.94	7.25	5.46	4.69	.469	35.0	
237U		237VJ-BK	10.30	4.06	9.19	2.88	2.12	1.44	.75	4.06	7.78	6.00	5.08	.469	42.0	
262U		262VJ-BK	11.75	4.44	10.38	3.13	2.50	1.56	.75	4.75	8.50	6.75	5.63	.531	58.0	
300U		300VJ-BK	13.50	5.00	12.25	4.00	2.69	2.00	.81	5.94	10.25	7.94	6.75	.531	74.0	
325U		325VJ-BK	14.00	5.00	12.75	4.00	2.69	2.00	.81	5.69	10.60	8.44	7.06	.531	89.0	
375U		375VJ-BK	15.06	6.25	13.31	4.75	2.94	2.38	.88	6.00	11.88	9.06	7.75	.594	126.0	
450U		450VJ-BK	16.94	7.38	14.94	5.81	3.06	2.91	.88	7.38	13.16	8.94	8.44	.688	178.0	
516U	516VJ-BK	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	13.91	12.35	9.06	.781	234.0		
600U	600VJ-BK	22.00	8.13	20.00	6.38	4.12	3.19	1.13	8.50	15.31	14.25	10.00	.906	291.0		

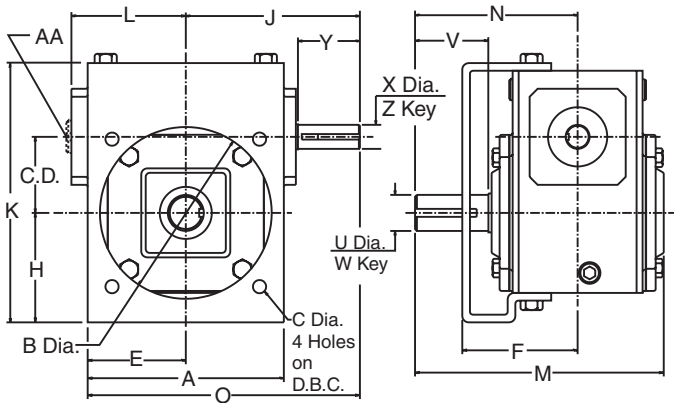
**Table 5** N.E.M.A. Frame Adapter Kits and Dimensions

C.D.	56C		143/145TC			182/184TC			213/215TC			254/256TC			
	Input: .625 Kw.: 3/16 x 3/32		Input: .875 Kw.: 3/16 x 3/32			Input: 1.125 Kw.: 1/4 x 1/8			Input: 1.375 Kw.: 5/16 x 5/32			Input: 1.625 Kw.: 3/8 x 3/16			
	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R
1.33	133MAK56	6.38	3.25	133MAK140											
1.54	154-206MAK56	7.13	3.25	154-206MAK140	7.13	3.25									
1.75	154-206MAK56	7.00	3.25	154-206MAK140	7.00	3.25									
2.06	154-206MAK56	7.37	3.25	154-206MAK140	7.37	3.25									
2.37	237MAK56	7.69	3.25	237MAK140	7.69	3.25									
2.62	262MAK56	8.50	3.25	262MAK140	8.50	3.25	262MAK180	9.72	4.50						
3.00	300-325MAK56	9.35	3.25	300-325MAK140	9.35	3.25	300-325MAK180	10.57	4.50						
3.25	300-325MAK56	9.37	3.25	300-325MAK140	9.37	3.25	300-325MAK180	10.59	4.50	325MAK210					
3.75	375MAK56	11.47	3.38	375MAK140	11.47	3.38	375MAK180	12.92	4.50	375MAK210	12.92	4.50			
4.50				450MAK140	12.15	3.38	450MAK180	13.60	4.50	450MAK210	13.60	4.50			
5.16							516MAK180	14.40	4.50	516MAK210	14.40	4.50			
6.00							600MAK180	16.97	4.50	600MAK210	16.97	4.50	600MAK250	16.97	4.50

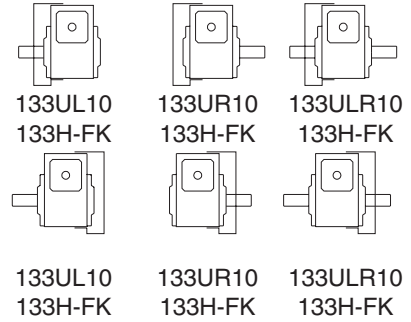
★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133ULR10.  
 ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 3.  
 ▲ Select either Standard Base Kit (S-BK) or Econo Base Kit (E-BK) or Solid Base Kit (BKS); base kits are shown on page 84.  
 Consult factory for ratios not shown as standard.

**Style UF**

Flange Bracket

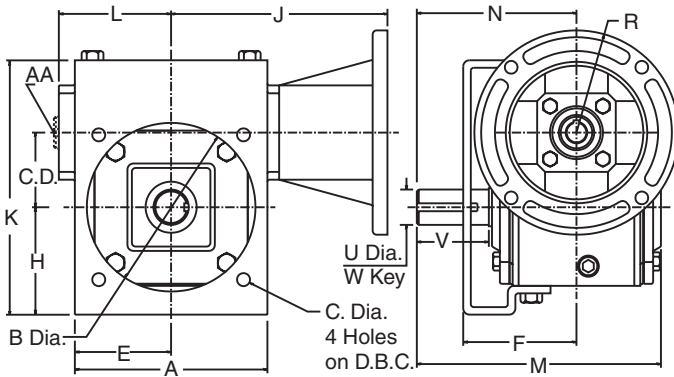


Assembly Drawing and Sample of Components

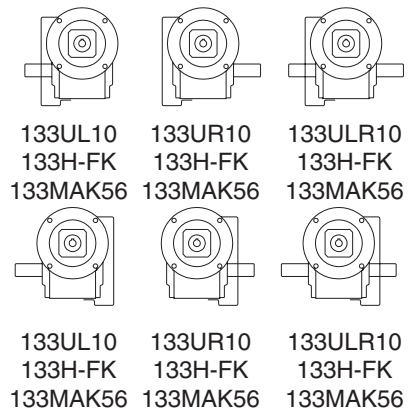


**Style CF**

Flange Bracket



Assembly Drawing and Sample of Components



For former MORSE Description see cross reference on pages 100 - 106.

**Table 1 Dimensions (Inches) for Style "UF" - With Flange**

C.D.	Components ◆		A	B	C	D	E	F	H	J	K	L	M	N	O
	Basic Unit ★	Flange Kit													
1.33	133U	133H-FK	4.25	3.63	.344	5.000	2.13	3.00	2.44	4.03	5.57	2.12	6.03	4.00	6.16
1.54	154U	154H-FK	4.75	3.63	.344	5.000	2.38	3.56	2.54	4.69	6.20	2.75	6.76	4.31	7.07
1.75	175U	175H-FK	4.81	4.06	.344	5.875	2.41	3.50	2.78	4.68	6.66	2.75	6.75	4.31	7.09
2.06	206U	206H-FK	5.75	4.50	.406	6.500	2.88	3.75	3.14	5.06	7.43	3.00	7.25	4.69	7.94
2.37	237U	237H-FK	6.13	5.00	.406	7.500	3.06	3.72	3.61	5.44	8.24	3.56	7.78	5.08	8.51
2.62	262U	262H-FK	7.18	6.00	.406	8.000	3.59	4.06	3.94	6.23	9.25	3.69	8.50	5.63	9.82
3.00	300U	300H-FK	8.50	7.00	.406	9.000	4.25	4.50	4.14	7.00	10.02	4.50	10.25	6.75	11.25
3.25	325U	325H-FK	8.50	7.00	.563	10.000	4.25	5.25	4.75	7.06	10.89	4.50	10.60	7.06	11.31
3.75	375U	375H-FK	9.54	8.00	.563	11.500	4.77	5.46	5.04	8.38	11.85	5.74	11.88	7.75	13.13
4.50	450U	450H-FK	10.88	9.00	.563	11.500	5.44	6.88	5.34	9.59	13.10	6.42	13.16	8.44	15.09
5.16	516U	516H-FK	12.50	10.00	.688	14.000	6.25	6.58	6.57	10.69	15.33	7.42	13.91	9.06	16.94
6.00	600U	600H-FK	14.50	12.00	.688	15.560	7.25	7.22	7.85	11.75	18.22	8.25	15.31	10.00	19.00

C.D.	OUTPUT SHAFT				INPUT SHAFT				Stock Ratios marked "x"								Wt. Lbs.	
	U + .000 - .000	V	W Key		X + .001 - .001	Y	Z Key		5	10	15	20	25	30	40	50		60
			Sq.	Lgth.			Sq.	Lgth.										
1.33	.625	2.00	.188	1.31	.500	1.81	.125	1.38	x	x	x	x	x	x	x	x	x	13.7
1.54	.750	1.78	.188	1.25	.625	1.69	.188	.94	x	x	x	x	x	x	x	x	-	21.3
1.75	.875	1.88	.188	1.38	.625	1.81	.188	1.50	x	x	x	x	x	x	x	x	x	23.4
2.06	1.000	2.00	.250	1.75	.625	1.81	.188	1.50	x	x	x	x	x	x	x	x	x	29.6
2.37	1.125	2.37	.250	1.75	.750	1.94	.188	1.31	x	x	x	x	x	x	x	x	x	36.1
2.62	1.125	2.50	.250	2.00	.750	2.31	.188	1.88	x	x	x	x	x	x	x	x	x	51.4
3.00	1.250	3.25	.250	2.25	.875	2.26	.188	1.31	x	x	x	x	x	x	x	x	x	67.1
3.25	1.375	3.25	.313	2.88	.875	2.31	.188	1.63	-	x	x	x	x	x	x	x	x	83.9
3.75	1.625	3.50	.375	2.81	1.000	2.91	.250	1.75	-	x	x	x	x	x	x	x	x	118.3
4.50	1.625	3.38	.375	2.50	1.125	3.48	.250	2.50	-	x	x	x	x	x	x	x	x	172.8
5.16	2.000	4.16	.500	2.81	1.250	3.75	.250	2.56	-	x	x	x	x	x	x	x	x	224.9
6.00	2.250	4.56	.500	3.50	1.500	3.75	.375	2.94	x	x	x	x	x	x	x	x	x	284.7

**Table 2 Dimensions (Inches) for Style "CF"**

C.D.	Components ◆			Wt. Lbs.
	Basic Unit ★	Adapter Kit	Flange Kit	
133U			133H-FK	20.7
154U			154H-FK	28.3
175U			175H-FK	30.4
206U			206H-FK	36.6
237U		See Table No. 4	237H-FK	44.1
262U			262H-FK	62.4
300U			300H-FK	78.1
325U			325H-FK	94.9
375U			375H-FK	130.8
450U		450H-FK	188.8	
516U		516H-FK	242.9	
600U		600H-FK	314.7	

**Table 3 Fan Kit**

Basic Unit ★	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
300U	300 FAN	3/8-24	3/4	5.93	1.6
325U	325 FAN	3/8-24	3/4	6.04	1.6
375U	375 FAN	3/8-24	3/4	7.66	2.8
450U	450 FAN	3/8-24	3/4	8.36	2.8
516U	516 FAN	3/8-24	3/4	9.18	2.8
600U	600 FAN	3/8-24	3/4	10.70	4.2

**Table 4 N.E.M.A. Frame Adapter Kits and Dimensions**

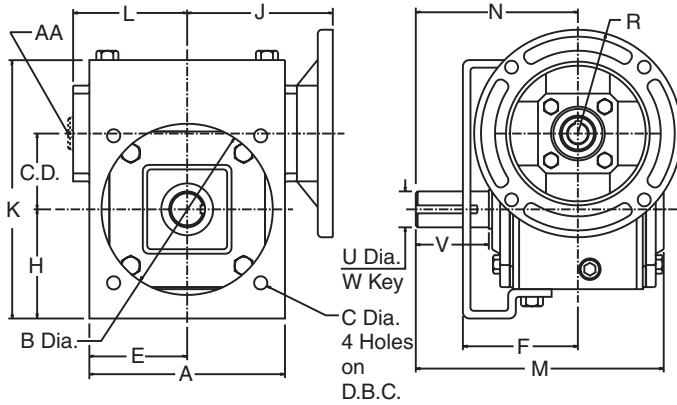
C.D.	56C			143/145TC			182/184TC			213/215TC			254/256TC		
	Input: .625 Kw.: 3/16 x 3/32			Input: .875 Kw.: 3/16 x 3/32			Input: 1.125 Kw.: 1/4 x 1/8			Input: 1.375 Kw.: 5/16 x 5/32			Input: 1.625 Kw.: 3/8 x 3/16		
	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R
1.33	133MAK56	6.38	3.25	133MAK140											
1.54	154-206MAK56	7.13	3.25	154-206MAK140	7.13	3.25									
1.75	154-206MAK56	7.00	3.25	154-206MAK140	7.00	3.25									
2.06	154-206MAK56	7.37	3.25	154-206MAK140	7.37	3.25									
2.37	237MAK56	7.69	3.25	237MAK140	7.69	3.25									
2.62	262MAK56	8.50	3.25	262MAK140	8.50	3.25	262MAK180	9.72	4.50						
3.00	300-325MAK56	9.35	3.25	300-325MAK140	9.35	3.25	300-325MAK180	10.57	4.50						
3.25	300-325MAK56	9.37	3.25	300-325MAK140	9.37	3.25	300-325MAK180	10.59	4.50						
3.75	375MAK56	11.47	3.38	375MAK140	11.47	3.38	375MAK180	12.92	4.50	375MAK210	12.92	4.50			
4.50				450MAK140	12.15	3.38	450MAK180	13.60	4.50	450MAK210	13.60	4.50			
5.16							516MAK180	14.40	4.50	516MAK210	14.40	4.50			
6.00							600MAK180	16.97	4.50	600MAK210	16.97	4.50	600MAK250	16.97	4.50

★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133ULR10.  
 ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 3.  
 ▲ Select either Standard Base Kit (S-BK) or Econo Base Kit (E-BK) or Solid Base Kit (BKS); base kits are shown on page 84.  
 Consult factory for ratios not shown as standard.

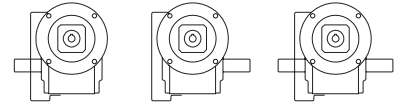


**Style QF**

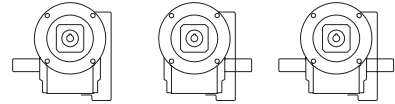
Flange Bracket



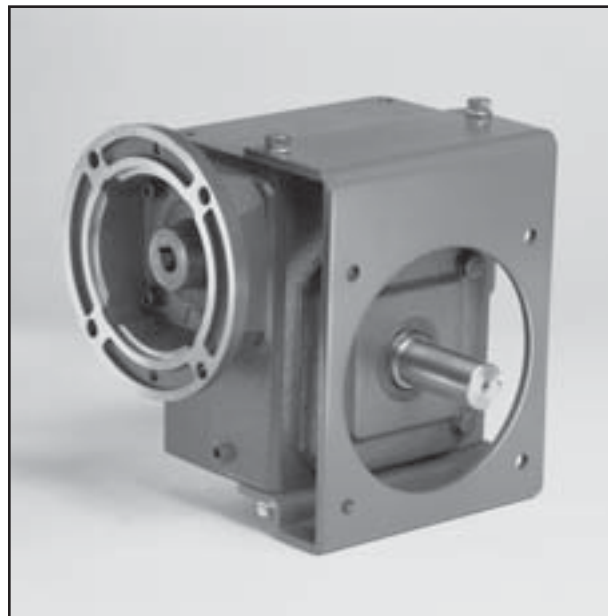
Assembly Drawing and Sample of Components



133Q56L10 133Q56R10 133Q56LR10  
133H-FK 133H-FK 133H-FK



133Q56L10 133Q56R10 133Q56LR10  
133H-FK 133H-FK 133H-FK



For former MORSE Description see cross reference on pages 100 - 106.

**Table 1** Dimensions (Inches) for Style "QF" - With Flange

C.D.	Components ♦		N.E.M.A. Frame	A	B	C	D	E	F	H	J	K	L	M
	Part No. ★	Flange Kit												
1.33	133Q56	133H-FK	56C	4.25	3.63	.344	5.000	2.13	3.00	2.44	3.94	5.57	2.12	6.03
1.54	154Q56	154H-FK	56C	4.75	3.63	.344	5.000	2.38	3.56	2.54	4.52	6.20	2.75	6.76
1.54	154Q140	154H-FK	143/145TC	4.75	3.63	.344	5.000	2.38	3.56	2.54	4.52	6.20	2.75	6.76
1.75	175Q56	175H-FK	56C	4.81	4.06	.344	5.875	2.41	3.50	2.78	4.38	6.66	2.75	6.75
1.75	175Q140	175H-FK	143/145TC	4.81	4.06	.344	5.875	2.41	3.50	2.78	4.38	6.66	2.75	6.75
2.06	206Q56	206H-FK	56C	5.75	4.50	.406	6.500	2.88	3.75	3.14	4.75	7.43	3.00	7.25
2.06	206Q140	206H-FK	143/145TC	5.75	4.50	.406	6.500	2.88	3.75	3.14	4.75	7.43	3.00	7.25
2.37	237Q56	237H-FK	56C	6.13	5.00	.406	7.500	3.06	3.72	3.61	5.06	8.24	3.56	7.78
2.37	237Q140	237H-FK	143/145TC	6.13	5.00	.406	7.500	3.06	3.72	3.61	5.06	8.24	3.56	7.78
2.62	262Q56	262H-FK	56C	7.18	6.00	.406	8.000	3.59	4.06	3.94	5.69	9.25	3.69	8.50
2.62	262Q140	262H-FK	143/145TC	7.18	6.00	.406	8.000	3.59	4.06	3.94	5.69	9.25	3.69	8.50
2.62	262Q180	262H-FK	182/184TC	7.18	6.00	.406	8.000	3.59	4.06	3.94	6.13	9.25	3.69	8.50
3.00	300Q56	300H-FK	56C	8.50	7.00	.406	9.000	4.25	4.50	4.14	5.67	10.02	4.50	10.25
3.00	300Q140	300H-FK	143/145TC	8.50	7.00	.406	9.000	4.25	4.50	4.14	5.67	10.02	4.50	10.25
3.00	300Q180	300H-FK	182/184TC	8.50	7.00	.406	9.000	4.25	4.50	4.14	6.45	10.02	4.50	10.25
3.25	325Q56	325H-FK	56C	8.50	7.00	.563	10.000	4.25	5.25	4.75	6.56	10.89	4.50	10.60
3.25	325Q140	325H-FK	143/145TC	8.50	7.00	.563	10.000	4.25	5.25	4.75	6.56	10.89	4.50	10.60
3.25	325Q180	325H-FK	182/184TC	8.50	7.00	.563	10.000	4.25	5.25	4.75	7.00	10.89	4.50	10.60
3.75	375Q56	375H-FK	56C	9.54	8.00	.563	11.500	4.77	5.46	5.04	6.01	11.85	5.74	11.88
3.75	375Q140	375H-FK	143/145TC	9.54	8.00	.563	11.500	4.77	5.46	5.04	6.01	11.85	5.74	11.88
3.75	375Q180	375H-FK	182/184TC	9.54	8.00	.563	11.500	4.77	5.46	5.04	7.29	11.85	5.75	11.88
3.75	375Q210	375H-FK	213/215TC	9.54	8.00	.563	11.500	4.77	5.46	5.04	7.29	11.85	5.74	11.88
4.50	450Q140	450H-FK	143/145TC	10.88	9.00	.563	11.500	5.44	6.88	5.34	6.69	13.10	6.42	13.16
4.50	450Q180	450H-FK	182/184TC	10.88	9.00	.563	11.500	5.44	6.88	5.34	7.97	13.10	6.42	13.16
4.50	450Q210	450H-FK	213/215TC	10.88	9.00	.563	14.000	5.44	6.88	5.34	7.97	13.10	6.42	13.16
5.16	516Q180	516H-FK	182/184TC	12.50	10.00	.688	14.000	6.25	6.58	6.57	8.78	15.33	7.42	13.91
5.16	516Q210	516H-FK	213/215TC	12.50	10.00	.688	14.000	6.25	6.58	6.57	8.78	15.33	7.42	13.91
6.00	600Q180	600H-FK	182/184TC	14.50	12.00	.688	15.560	7.25	7.22	7.85	9.68	18.22	8.25	15.31
6.00	600Q210	600H-FK	213/215TC	14.50	12.00	.688	15.560	7.25	7.22	7.85	9.68	18.22	8.25	15.31

C.D.	N.E.M.A. Frame	N	R	INPUT		OUTPUT SHAFT				Stock Ratios marked "x"								Wt. Lbs.	
				Bore	Keyway	U +.000 -.001	V	W Key		5	10	15	20	25	30	40	50		60
								Sq.	Lgth.										
1.33	56C	4.00	3.25	.625	3/16 X 3/32	.625	2.00	.188	1.31	x	x	x	x	x	x	x	x	x	19.7
1.54	56C	4.31	3.25	.625	3/16 X 3/32	.750	1.78	.188	1.25	x	x	x	x	x	x	x	x	-	27.3
1.54	143/145TC	4.31	3.25	.875	3/16 X 3/32	.750	1.78	.188	1.25	x	x	x	-	-	-	-	-	-	27.3
1.75	56C	4.31	3.25	.625	3/16 X 3/32	.875	1.88	.188	1.38	x	x	x	x	x	x	x	x	x	30.4
1.75	143/145TC	4.31	3.25	.875	3/16 X 3/32	.875	1.88	.188	1.38	x	x	x	-	-	-	-	-	-	30.4
2.06	56C	4.69	3.25	.625	3/16 X 3/32	1.000	2.00	.250	1.75	x	x	x	x	x	x	x	x	x	36.6
2.06	143/145TC	4.69	3.25	.875	3/16 X 3/32	1.000	2.00	.250	1.75	x	x	x	x	x	-	-	-	-	36.6
2.37	56C	5.08	3.25	.625	3/16 X 3/32	1.125	2.37	.250	1.75	-	x	x	x	x	x	x	x	x	43.1
2.37	143/145TC	5.08	3.25	.875	3/16 X 3/32	1.125	2.37	.250	1.75	x	x	x	x	x	x	-	-	-	43.1
2.62	56C	5.63	3.25	.625	3/16 X 3/32	1.125	2.50	.250	2.00	-	x	x	x	x	x	x	x	x	58.4
2.62	143/145TC	5.63	3.25	.875	3/16 X 3/32	1.125	2.50	.250	2.00	-	x	x	x	x	x	x	x	x	58.4
2.62	182/184TC	5.63	4.50	1.125	1/4 X 1/8	1.125	2.50	.250	2.00	x	x	-	-	-	-	-	-	-	58.4
3.00	56C	6.75	3.25	.625	3/16 X 3/32	1.250	3.25	.250	2.25	-	-	x	x	x	x	x	x	x	78.1
3.00	143/145TC	6.75	3.25	.875	3/16 X 3/32	1.250	3.25	.250	2.25	-	x	x	x	x	x	x	x	x	78.1
3.00	182/184TC	6.75	4.50	1.125	1/4 X 1/8	1.250	3.25	.250	2.25	-	x	x	x	x	x	x	x	x	78.1
3.25	56C	7.06	3.25	.625	3/16 X 3/32	1.375	3.25	.313	2.88	-	x	x	x	x	x	x	x	x	98.9
3.25	143/145TC	7.06	3.25	.875	3/16 X 3/32	1.375	3.25	.313	2.88	-	x	x	x	x	x	x	x	x	98.9
3.25	182/184TC	7.06	4.50	1.125	1/4 X 1/8	1.375	3.25	.313	2.88	-	x	x	x	x	x	x	x	x	98.9
3.75	56C	7.75	3.38	.625	3/16 X 3/32	1.625	3.50	.375	2.81	-	-	-	-	-	-	x	x	x	133.3
3.75	143/145TC	7.75	3.38	.875	3/16 X 3/32	1.625	3.50	.375	2.81	-	x	x	x	x	x	x	x	x	133.3
3.75	182/184TC	7.75	4.50	1.125	1/4 X 1/8	1.625	3.50	.375	2.81	-	x	x	x	x	x	x	x	-	133.3
3.75	213/215TC	7.75	4.50	1.375	5/16 X 5/32	1.625	3.50	.375	2.81	-	x	x	-	-	-	-	-	-	133.3
4.50	143/145TC	8.44	3.38	.875	3/16 X 3/32	1.625	3.38	.375	2.50	-	-	-	-	-	-	x	x	x	191.8
4.50	182/184TC	8.44	4.50	1.125	1/4 X 1/8	1.625	3.38	.375	2.50	-	-	x	x	x	x	x	x	x	191.8
4.50	213/215TC	8.44	4.50	1.375	5/16 X 5/32	1.625	3.38	.375	2.50	-	x	x	x	x	-	-	-	-	191.8
5.16	182/184TC	9.06	4.50	1.125	1/4 X 1/8	2.000	4.16	.500	2.81	-	-	-	-	-	-	x	x	x	247.9
5.16	213/215TC	9.06	4.50	1.375	5/16 X 5/32	2.000	4.16	.500	2.81	-	x	x	x	x	-	-	-	-	247.9
6.00	182/184TC	10.00	4.50	1.375	5/16 X 5/32	2.250	4.56	.500	3.50	-	-	-	-	x	x	x	x	x	314.7
6.00	213/215TC	10.00	4.50	1.375	5/16 X 5/32	2.250	4.56	.500	3.50	-	-	-	-	x	x	x	x	x	314.7

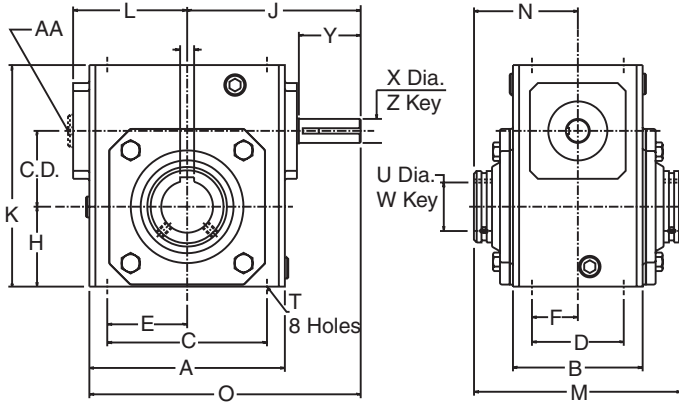
**Table 2** Fan Kit

Ref. No.	Fan Kit	AA		Wt. Lbs.
		Tap	Deep	
300Q	300 FAN	3/8-24	3/4	1.6
325Q	325 FAN	3/8-24	3/4	1.6
375Q	375 FAN	3/8-24	3/4	2.8
450Q	450 FAN	3/8-24	3/4	2.8
516Q	516 FAN	3/8-24	3/4	2.8
600Q	600 FAN	3/8-24	3/4	4.2

- ★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133Q56LR10.
  - ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 2.
  - ▲ Select either Standard Base Kit (S-BK) or Econo Base Kit (E-BK) or Solid Base Kit (BKS); base kits are shown on page 84.
- Consult factory for ratios not shown as standard.

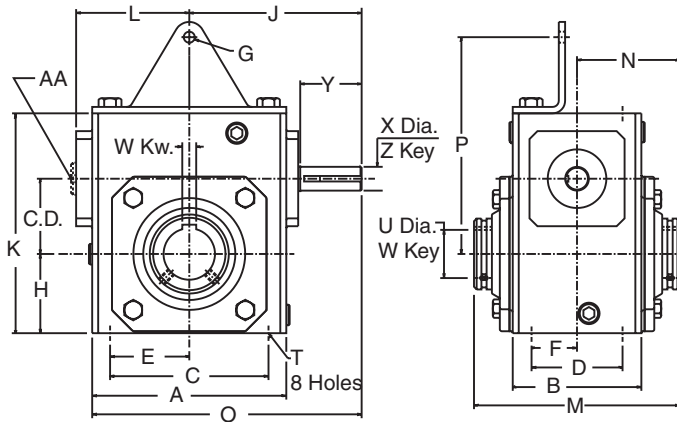
**Style UH**

Hollow – Basic Unit

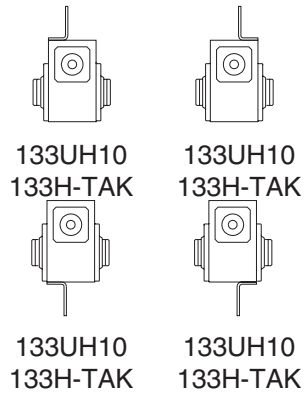


**Style UHT**

Torque Arm

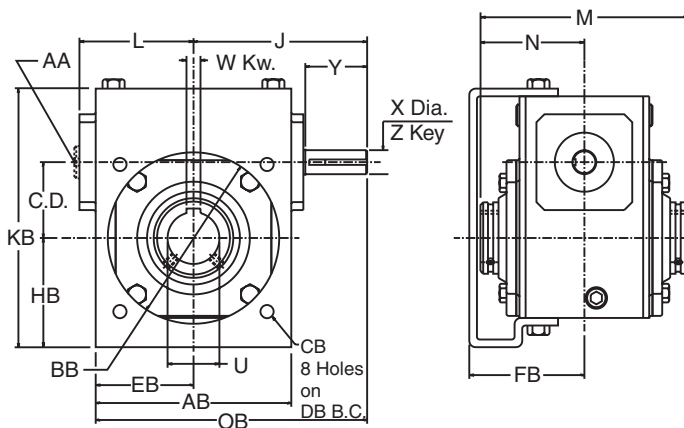


Assembly Drawing and Sample of Components

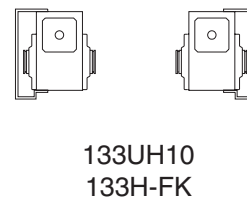


**Style UHF**

Flange Bracket



Assembly Drawing and Sample of Components



**For former MORSE Description see cross reference on pages 100 - 106.**

**Table 1** Dimensions (Inches) for Style "UH"

C.D.	Basic Unit ★	A	B	C	D	E	F	H	J	K	L	M	N	O
1.33	133UH	4.00	2.88	3.25	2.00	1.63	1.00	1.72	4.03	4.66	2.12	5.31	2.66	6.03
1.54	154UH	5.13	3.69	4.19	2.75	2.09	1.38	1.91	4.69	5.38	2.75	6.44	3.22	7.25
1.75	175UH	4.81	3.38	4.19	2.75	2.09	1.38	2.06	4.68	5.75	2.75	5.70	2.85	7.09
2.06	206UH	5.50	3.75	5.00	2.88	2.50	1.44	2.28	5.06	6.38	3.00	6.44	3.22	7.73
2.37	237UH	6.13	4.06	5.00	2.88	2.50	1.44	2.50	5.44	6.94	3.56	6.31	3.16	8.51
2.62	262UH	7.12	4.44	6.38	3.38	3.19	1.69	2.94	6.23	8.00	3.69	6.88	3.44	9.79
3.00	300UH	8.50	5.50	7.00	4.00	3.50	2.00	3.25	7.00	8.88	4.50	8.38	4.19	11.25
3.25	325UH	8.50	5.00	7.50	4.00	3.75	2.00	3.50	7.06	9.38	4.50	8.50	4.25	11.31
3.75	375UH	9.50	6.38	8.50	4.75	4.25	2.38	3.88	8.38	10.44	5.74	9.63	4.81	13.13
4.50	450UH	10.88	7.38	9.56	5.81	4.78	2.91	4.50	9.59	11.94	6.42	11.13	5.56	15.09
5.16	516UH	12.50	7.38	11.00	5.81	5.50	2.91	5.31	10.69	13.75	7.42	11.31	5.66	16.94
6.00	600UH	14.50	8.13	12.75	6.38	6.38	3.19	6.50	11.75	16.50	8.25	12.63	6.31	19.00

C.D.	T		OUTPUT BORE †		INPUT SHAFT			Stock Ratios marked "x"										Wt. Lbs.	
			U	W Keyway	X	Y	Z Key		5	10	15	20	25	30	40	50	60		
	+0.0015 -0.0000		+0.0015 -0.001		Sq.	Lgth.													
1.33	5/16-18	.50	.6250	3/16 x 3/32	.500	1.81	.125	1.38	x	x	x	x	x	x	x	x	x	x	14.0
1.54	5/16-18	.50	1.0000	1/4 x 1/8	.625	1.69	.188	1.25	x	x	x	x	x	x	x	x	x	-	20.0
1.75	5/16-18	.61	1.0000	1/4 x 1/8	.625	1.81	.188	1.50	x	x	x	x	x	x	x	x	x	x	23.0
2.06	3/8-16	.61	1.4375	3/8 x 1/8	.625	1.81	.188	1.50	x	x	x	x	x	x	x	x	x	x	28.0
2.37	3/8-16	.60	1.4375	3/8 x 1/8	.750	1.94	.188	1.31	x	x	x	x	x	x	x	x	x	x	44.0
2.62	3/5-16	.58	1.9375	1/2 x 1/8	.750	2.31	.188	1.88	x	x	x	x	x	x	x	x	x	x	54.0
3.00	7/16-14	.80	2.1875	1/2 x 3/16	.875	2.26	.188	1.31	x	x	x	x	x	x	x	x	x	x	76.0
3.25	7/16-14	.80	2.1875	1/2 x 3/16	.875	2.31	.188	1.63	-	x	x	x	x	x	x	x	x	x	79.0
3.75	1/2-13	1.00	2.4375	5/8 x 3/16	1.000	2.91	.250	1.75	-	x	x	x	x	x	x	x	x	x	109.0
4.50	5/8-11	1.00	2.9375	3/4 x 1/4	1.125	3.48	.250	2.50	-	x	x	x	x	x	x	x	x	x	140.0
5.16	5/8-11	1.00	3.4375	7/8 x 1/4	1.250	3.75	.250	2.56	-	x	x	x	x	x	x	x	x	x	222.0
6.00	5/8-11	1.00	3.9375	1 x 1/4	1.500	3.75	.375	2.94	x	x	x	x	x	x	x	x	x	x	321.0

**Table 2** Dimensions (Inches) for Style "UHT" - With Torque Arm

Components ◆		G	P	Wt. Lbs.
Basic Unit ★	Torque Arm Kit			
133UH	133H-TAK	.53	4.16	14.6
154UH	154H-TAK	.53	4.55	20.7
175UH	175H-TAK	.53	5.06	23.9
206UH	206H-TAK	.53	6.07	29.0
237UH	237H-TAK	.53	6.69	45.2
262UH	262H-TAK	.53	7.44	55.4
300UH	300H-TAK	.53	8.25	77.7
325UH	325H-TAK	.53	9.06	81.0
375UH	375H-TAK	.53	9.56	111.6
450UH	450H-TAK	.81	10.94	143.4
516UH	516H-TAK	.81	12.45	227.5
600UH	600H-TAK	.81	14.63	327.9

**Table 3** Fan Kit

Basic Unit ★	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
300UH	300 FAN	3/8-24	3/4	5.93	1.6
325UH	325 FAN	3/8-24	3/4	6.04	1.6
375UH	375 FAN	3/8-24	3/4	7.66	2.8
450UH	450 FAN	3/8-24	3/4	8.36	2.8
516UH	516 FAN	3/8-24	3/4	9.18	2.8
600UH	600 FAN	3/8-24	3/4	10.70	4.2

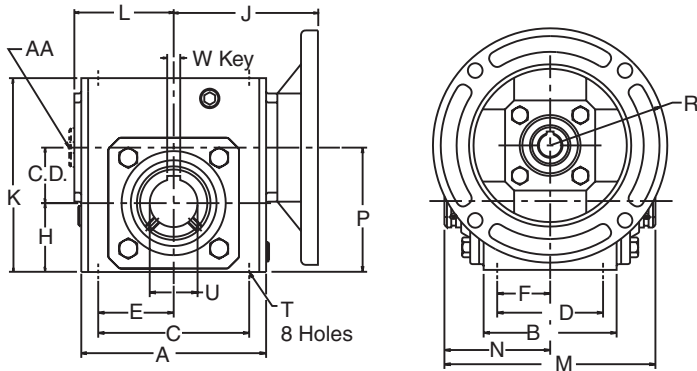
**Table 4** Dimensions (Inches) for Style "UHF" - With Flange

Components ◆		AB	BB	CB	DB	EB	FB	HB	J	KB	L	M	N	OB	Wt. Lbs.
Basic Unit ★	Flange Kit														
133UH	133H-FK	4.25	3.63	.344	5.000	2.13	3.00	2.44	4.03	5.57	2.12	5.31	2.66	6.16	16.7
154UH	154H-FK	4.75	3.63	.344	5.000	2.38	3.56	2.54	4.69	6.20	2.75	6.44	3.22	7.07	23.3
175UH	175H-FK	4.81	4.06	.344	5.875	2.41	3.50	2.78	4.68	6.66	2.75	5.70	2.85	7.09	26.4
206UH	206H-FK	5.75	4.50	.406	6.500	2.88	3.75	3.14	5.06	7.43	3.00	6.44	3.22	7.94	32.6
237UH	237H-FK	6.13	5.00	.406	7.500	3.06	3.72	3.61	5.44	8.24	3.56	6.31	3.16	8.51	49.1
262UH	262H-FK	7.18	6.00	.406	8.000	3.59	4.06	3.94	6.23	9.25	3.69	6.88	3.44	9.82	62.4
300UH	300H-FK	8.50	7.00	.406	9.000	4.25	4.50	4.14	7.00	10.02	4.50	8.38	4.19	11.25	86.1
325UH	325H-FK	8.50	7.00	.563	10.000	4.25	5.25	4.75	7.06	10.89	4.50	8.50	4.25	11.31	90.9
375UH	375H-FK	9.54	8.00	.563	11.500	4.77	5.46	5.04	8.38	11.85	5.74	9.63	4.81	13.13	122.3
450UH	450H-FK	10.88	9.00	.563	11.500	5.44	6.88	5.34	9.59	13.10	6.42	11.13	5.56	15.09	161.8
516UH	516H-FK	12.50	10.00	.688	14.000	6.25	6.58	6.57	10.69	15.33	7.42	11.31	5.66	16.94	248.9
600UH	600H-FK	14.50	12.00	.688	15.560	7.25	7.22	7.85	11.75	18.22	8.25	12.63	6.31	19.00	365.7

★ To complete Part No. add ratio symbol to size - for example 133UH10.  
 ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 3.  
 ▲ Select either Standard Base Kit (S-BK) or Econo Base Kit (E-BK) or Solid Base Kit (BKS); base kits are shown on page 84.  
 † For adapting reducers to shafts smaller than output bore, use Bushing Kits, see Table 1, page 82.  
 Consult factory for ratios not shown as standard.

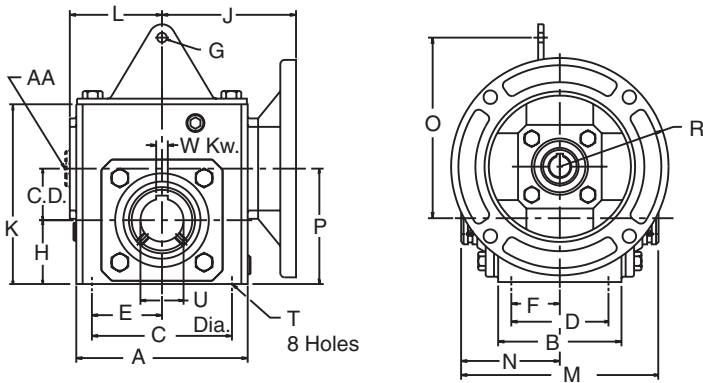
**Style QH**

C-Face Quilled-Hollow

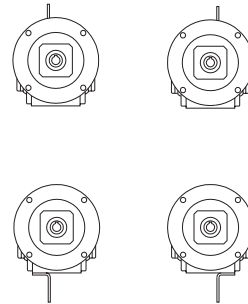


**Style QHT**

Torque Arm



Assembly Drawing and Sample of Components



133Q56H10  
133H-TAK



For former MORSE Description see cross reference on pages 100 - 106.



**Table 1**
**Dimensions (Inches) for Style "QH"**

C.D.	Basic Unit ★	N.E.M.A. Frame	A	B	C	D	E	F	H	J	K	L	M	N	P	R
1.33	133Q56H	56C	4.00	2.88	3.25	2.00	1.63	1.00	1.72	3.94	4.66	2.12	5.31	2.66	3.05	3.25
1.54	154Q56H	56C	5.13	3.69	4.19	2.75	2.09	1.38	1.91	4.52	5.38	2.75	6.44	3.22	3.45	3.25
1.54	154Q140H	143/145TC	5.13	3.69	4.19	2.75	2.09	1.38	1.91	4.52	5.38	2.75	6.44	3.22	3.45	3.25
1.75	175Q56H	56C	4.81	3.38	4.19	2.75	2.09	1.38	2.06	4.38	5.75	2.75	5.70	2.85	3.81	3.25
1.75	175Q140H	143/145TC	4.81	3.38	4.19	2.75	2.09	1.38	2.06	4.38	5.75	2.75	5.70	2.85	3.81	3.25
2.06	206Q56H	56C	5.50	3.75	5.00	2.88	2.50	1.44	2.28	4.75	6.38	3.00	6.44	3.22	4.34	3.25
2.06	206Q140H	143/145TC	5.50	3.75	5.00	2.88	2.50	1.44	2.28	4.75	6.38	3.00	6.44	3.22	4.34	3.25
2.37	237Q56H	56C	6.13	4.06	5.00	2.88	2.50	1.44	2.50	5.06	6.94	3.56	6.31	3.16	4.88	3.25
2.37	237Q140H	143/145TC	6.13	4.06	5.00	2.88	2.50	1.44	2.50	5.06	6.94	3.56	6.31	3.16	4.88	3.25
2.62	262Q56H	56C	7.12	4.44	6.38	3.38	3.19	1.69	2.94	5.69	8.00	3.69	6.88	3.44	5.57	3.25
2.62	262Q140H	143/145TC	7.12	4.44	6.38	3.38	3.19	1.69	2.94	5.69	8.00	3.69	6.88	3.44	5.57	3.25
2.62	262Q180H	182/184TC	7.12	4.44	6.38	3.38	3.19	1.69	2.94	6.13	8.00	3.69	6.88	3.44	5.57	4.50
3.00	300Q56H	56C	8.50	5.50	7.00	4.00	3.50	2.00	3.25	5.67	8.88	4.50	8.38	4.19	6.25	3.25
3.00	300Q140H	143/145TC	8.50	5.50	7.00	4.00	3.50	2.00	3.25	5.67	8.88	4.50	8.38	4.19	6.25	3.25
3.00	300Q180H	182/184TC	8.50	5.50	7.00	4.00	3.50	2.00	3.25	6.45	8.88	4.50	8.38	4.19	6.25	4.50
3.25	325Q56H	56C	8.50	5.00	7.50	4.00	3.75	2.00	3.50	6.56	9.38	4.50	8.50	4.25	6.75	3.25
3.25	325Q140H	143/145TC	8.50	5.00	7.50	4.00	3.75	2.00	3.50	6.56	9.38	4.50	8.50	4.25	6.75	3.25
3.25	325Q180H	182/184TC	8.50	5.00	7.50	4.00	3.75	2.00	3.50	7.00	9.38	4.50	8.50	4.25	6.75	4.50
3.75	375Q56H	56C	9.50	6.38	8.50	4.75	4.25	2.38	3.88	6.01	10.44	4.93	9.63	4.81	7.63	3.38
3.75	375Q140H	143/145TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	6.01	10.44	4.93	9.63	4.81	7.63	3.38
3.75	375Q180H	182/184TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	7.29	10.44	4.93	9.63	4.81	7.63	4.50
3.75	375Q210H	213/215TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	7.29	10.44	4.93	9.63	4.81	7.63	4.50
4.50	450Q140H	143/145TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	6.69	11.94	6.42	11.13	5.56	9.00	3.38
4.50	450Q180H	182/184TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	7.97	11.94	6.42	11.31	5.66	9.00	4.50
4.50	450Q210H	213/215TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	7.97	11.94	6.42	11.31	5.66	9.00	4.50
5.16	516Q180H	182/184TC	12.50	7.38	11.00	5.81	5.50	2.91	5.31	8.78	13.75	7.42	11.31	5.66	10.47	4.50
5.16	516Q210H	213/215TC	12.50	7.38	11.00	5.81	5.50	2.91	5.31	8.78	13.75	7.42	11.31	5.66	10.47	4.50
6.00	600Q180H	182/184TC	14.50	8.13	12.75	6.38	6.38	3.19	6.50	9.68	16.50	8.25	12.63	6.31	12.50	4.50
6.00	600Q210H	213/215TC	14.50	8.13	12.75	6.38	6.38	3.19	6.50	9.68	16.50	8.25	12.63	6.31	12.50	4.50

C.D.	N.E.M.A. Frame	T		INPUT		OUTPUT BORE +		Stock Ratios marked "x"								Wt. Lbs.	
								Size	Deep	Bore	Keyway	U +.0015 -.0000	W Keyway	Stock Ratios marked "x"			
		5	10	15	20	25	30							40	50		60
1.33	56C	5/16-18	.50	.625	3/16 x 3/32	.6250	3/16 x 3/32	x	x	x	x	x	x	x	x	x	17.0
1.54	56C	5/16-18	.50	.625	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	-	22.0
1.54	143/145TC	5/16-18	.50	.875	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	-	-	-	-	-	-	-	22.0
1.75	56C	5/16-18	.61	.625	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	25.0
1.75	143/145TC	5/16-18	.61	.875	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	x	-	-	-	-	-	-	25.0
2.06	56C	3/8-16	.61	.625	3/16 x 3/32	1.4375	3/8 x 1/8	-	x	x	x	x	x	x	x	x	33.0
2.06	143/145TC	3/8-16	.61	.875	3/16 x 3/32	1.4375	3/8 x 1/8	x	x	x	x	x	-	-	-	-	33.0
2.37	56C	3/8-16	.60	.625	3/16 x 3/32	1.4375	3/8 x 1/8	-	x	x	x	x	x	x	x	x	47.0
2.37	143/145TC	3/8-16	.60	.875	3/16 x 3/32	1.4375	3/8 x 1/8	x	x	x	x	x	-	-	-	-	47.0
2.62	56C	3/8-16	.58	.625	3/16 x 3/32	1.9375	1/2 x 1/8	-	x	x	x	x	x	x	x	x	57.0
2.62	143/145TC	3/8-16	.58	.875	3/16 x 3/32	1.9375	1/2 x 1/8	-	x	x	x	x	x	x	x	x	57.0
2.62	182/184TC	3/8-16	.58	1.125	1/4 x 1/8	1.9375	1/2 x 1/8	x	x	-	-	-	-	-	-	-	57.0
3.00	56C	7/16-14	.80	.625	3/16 x 3/32	2.1875	1/2 x 3/16	-	-	x	x	x	x	x	x	x	80.0
3.00	143/145TC	7/16-14	.80	.875	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	80.0
3.00	182/184TC	7/16-14	.80	1.125	1/4 x 1/8	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	80.0
3.25	56C	7/16-14	.80	.625	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	83.0
3.25	143/145TC	7/16-14	.80	.875	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	83.0
3.25	182/184TC	7/16-14	.80	1.125	1/4 x 1/8	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	83.0
3.75	56C	1/2-13	1.00	.625	3/16 x 3/32	2.4375	5/8 x 3/16	-	-	NA	NA	-	-	x	x	x	116.0
3.75	143/145TC	1/2-13	1.00	.875	3/16 x 3/32	2.4375	5/8 x 3/16	-	x	x	x	x	x	x	x	x	116.0
3.75	182/184TC	1/2-13	1.00	1.125	1/4 x 1/8	2.4375	5/8 x 3/16	-	x	x	x	x	x	x	x	-	116.0
3.75	213/215TC	1/2-13	1.00	1.375	3/16 x 3/32	2.4375	5/8 x 3/16	-	x	x	-	-	-	-	-	-	116.0
4.50	143/145TC	5/8-11	1.00	.875	3/16 x 3/32	2.9375	3/4 x 1/4	-	-	-	-	-	-	x	x	x	150.0
4.50	182/184TC	5/8-11	1.00	1.125	1/4 x 1/8	2.9375	3/4 x 1/4	-	-	x	x	x	x	x	x	x	150.0
4.50	213/215TC	5/8-11	1.00	1.375	5/16 x 5/32	2.9375	3/4 x 1/4	-	x	x	x	-	-	-	-	-	150.0
5.16	182/184TC	5/8-11	1.00	1.125	1/4 x 1/8	3.4375	7/8 x 1/4	-	-	-	-	-	-	x	x	x	230.0
5.16	213/215TC	5/8-11	1.00	1.375	5/16 x 5/32	3.4375	7/8 x 1/4	-	x	x	x	x	-	-	-	-	230.0
6.00	182/184TC	5/8-11	1.00	1.375	5/16 x 5/32	3.9375	1 x 1/4	-	-	-	x	x	x	x	x	x	344.0
6.00	213/215TC	5/8-11	1.00	1.375	5/16 x 5/32	3.9375	1 x 1/4	-	-	-	-	x	x	x	x	x	344.0

**Table 2 Dimensions (Inches) for Style "QHT"**

Components ◆		G	O	Wt. Lbs.
Ref. No.	Torque Arm Kit			
133QH	133H-TAK	.53	4.16	17.6
154QH	154H-TAK	.53	4.55	22.7
175QH	175H-TAK	.53	5.06	25.9
206QH	206H-TAK	.53	6.07	34.0
237QH	237H-TAK	.53	6.69	48.2
262QH	262H-TAK	.53	7.44	58.4
300QH	300H-TAK	.53	8.25	81.7
325QH	325H-TAK	.53	9.06	85.0
375QH	375H-TAK	.53	9.56	118.6
450QH	450H-TAK	.81	10.94	153.4
516QH	516H-TAK	.81	12.45	235.5
600QH	600H-TAK	.81	14.63	350.9

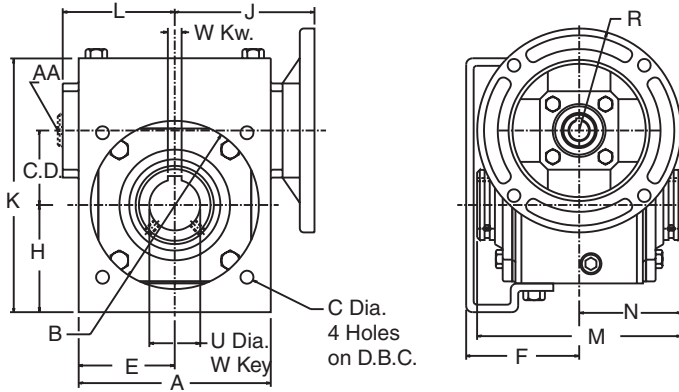
**Table 3 Fan Kit**

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
300QH	300 FAN	3/8-24	3/4	5.93	1.6
325QH	325 FAN	3/8-24	3/4	6.04	1.6
375QH	375 FAN	3/8-24	3/4	7.66	2.8
450QH	450 FAN	3/8-24	3/4	8.36	2.8
516QH	516 FAN	3/8-24	3/4	9.18	2.8
600QH	600 FAN	3/8-24	3/4	10.70	4.2

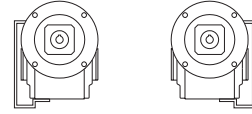
- ★ To complete Part No. add ratio symbol to size - for example 133Q56H10.
- ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 3.
- ▲ Select either Standard Base Kit (S-BK) or Econo Base Kit (E-BK) or Solid Base Kit (BKS); base kits are shown on page 84.
- + For adapting reducers to shafts smaller than output bore, use Bushing Kits, see Table 1, page 82. Consult factory for ratios not shown as standard.

**Style QHF**

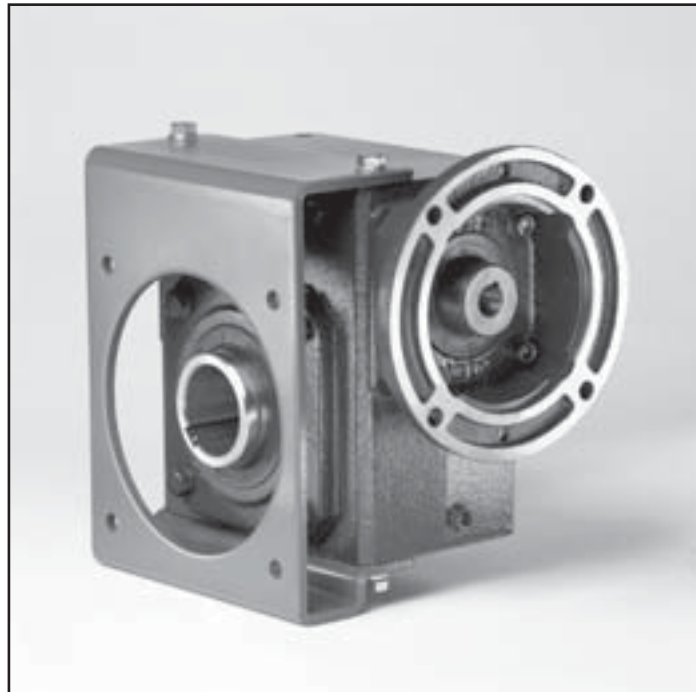
Flange Bracket



Assembly Drawing and Sample of Components



133Q56H10  
133H-FK



For former MORSE Description see cross reference on pages 100 - 106.

**Table 1** Dimensions (Inches) for Style "QHF" - With Flange

C.D.	Components ♦		N.E.M.A. Frame	A	B	C	D	E	F	H	J	K	L	M
	Part No. ★	Flange Kit												
1.33	133Q56H	133H-FK	56C	4.25	3.63	.344	5.000	2.13	3.00	2.44	3.94	5.57	2.12	5.31
1.54	154Q56H	154H-FK	56C	4.75	3.63	.344	5.000	2.38	3.56	2.54	4.52	6.20	2.75	6.44
1.54	154Q140H	154H-FK	143/145TC	4.75	3.63	.344	5.000	2.38	3.56	2.54	4.52	6.20	2.75	6.44
1.75	175Q56H	175H-FK	56C	4.81	4.06	.344	5.875	2.41	3.50	2.78	4.38	6.66	2.75	5.70
1.75	175Q140H	175H-FK	143/145TC	4.81	4.06	.344	5.875	2.41	3.50	2.78	4.38	6.66	2.75	5.70
2.06	206Q56H	206H-FK	56C	5.75	4.50	.406	6.500	2.88	3.75	3.14	4.75	7.43	3.00	6.44
2.06	206Q140H	206H-FK	143/145TC	5.75	4.50	.406	6.500	2.88	3.75	3.14	4.75	7.43	3.00	6.44
2.37	237Q56H	237H-FK	56C	6.13	5.00	.406	7.500	3.06	3.72	3.61	5.06	8.24	3.56	6.31
2.37	237Q140H	237H-FK	143/145TC	6.13	5.00	.406	7.500	3.06	3.72	3.61	5.06	8.24	3.56	6.31
2.62	262Q56H	262H-FK	56C	7.18	6.00	.406	8.000	3.59	4.06	3.94	5.69	9.25	3.69	6.88
2.62	262Q140H	262H-FK	143/145TC	7.18	6.00	.406	8.000	3.59	4.06	3.94	5.69	9.25	3.69	6.88
2.62	262Q180H	262H-FK	182/184TC	7.18	6.00	.406	8.000	3.59	4.06	3.94	6.13	9.25	3.69	6.88
3.00	300Q56H	300H-FK	56C	8.50	7.00	.406	9.000	4.25	4.50	4.14	5.67	10.02	4.50	8.38
3.00	300Q140H	300H-FK	143/145TC	8.50	7.00	.406	9.000	4.25	4.50	4.14	5.67	10.02	4.50	8.38
3.00	300Q180H	300H-FK	182/184TC	8.50	7.00	.406	9.000	4.25	4.50	4.14	6.45	10.02	4.50	8.38
3.25	325Q56H	325H-FK	56C	8.50	7.00	.563	10.000	4.25	5.25	4.75	6.56	10.89	4.50	8.50
3.25	325Q140H	325H-FK	143/145TC	8.50	7.00	.563	10.000	4.25	5.25	4.75	6.56	10.89	4.50	8.50
3.25	325Q180H	325H-FK	182/184TC	8.50	7.00	.563	10.000	4.25	5.25	4.75	7.00	10.89	4.50	8.50
3.75	375Q56H	375H-FK	56C	9.54	8.00	.563	11.500	4.77	5.46	5.04	6.01	11.85	4.93	9.63
3.75	375Q140H	375H-FK	143/145TC	9.54	8.00	.563	11.500	4.77	5.46	5.04	6.01	11.85	4.93	9.63
3.75	375Q180H	375H-FK	182/184TC	9.54	8.00	.563	11.500	4.77	5.46	5.04	7.29	11.85	4.93	9.63
3.75	375Q210H	375H-FK	213/215TC	9.54	8.00	.563	11.500	4.77	5.46	5.04	7.29	11.85	4.93	9.63
4.50	450Q140H	450H-FK	143/145TC	10.88	9.00	.563	11.500	5.44	6.88	5.34	6.69	13.10	6.42	11.13
4.50	450Q180H	450H-FK	182/184TC	10.88	9.00	.563	11.500	5.44	6.88	5.34	7.97	13.10	6.42	11.13
4.50	450Q210H	450H-FK	213/215TC	10.88	9.00	.563	14.000	5.44	6.88	5.34	7.97	13.10	6.42	11.13
5.16	516Q180H	516H-FK	182/184TC	12.50	10.00	.688	14.000	6.25	6.58	6.57	8.78	15.33	7.42	11.13
5.16	516Q210H	516H-FK	213/215TC	12.50	10.00	.688	14.000	6.25	6.58	6.57	8.78	15.33	7.42	11.13
6.00	600Q180H	600H-FK	182/184TC	14.50	12.00	.688	15.560	7.25	7.22	7.85	9.68	18.22	8.25	12.63
6.00	600Q210H	600H-FK	213/215TC	14.50	12.00	.688	15.560	7.25	7.22	7.85	9.68	18.22	8.25	12.63

C.D.	N.E.M.A. Frame	N	R	INPUT		OUTPUT BORE +		Stock Ratios marked "x"									Wt. Lbs.	
				Bore	Keyway	U + .0015 -.0000	W Keyway	5	10	15	20	25	30	40	50	60		
																		3/16 x 3/32
1.33	56C	2.66	3.25	.625	3/16 x 3/32	.6250	3/16 x 3/32	x	x	x	x	x	x	x	x	x	x	19.7
1.54	56C	3.22	3.25	.625	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	-	25.3
1.54	143/145TC	3.22	3.25	.875	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	-	-	-	-	-	-	-	-	25.3
1.75	56C	2.85	3.25	.625	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	x	28.4
1.75	143/145TC	2.85	3.25	.875	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	x	-	-	-	-	-	-	-	28.4
2.06	56C	3.22	3.25	.625	3/16 x 3/32	1.4375	3/8 x 1/8	x	x	x	x	x	x	x	x	x	x	37.6
2.06	143/145TC	3.22	3.25	.875	3/16 x 3/32	1.4375	3/8 x 1/8	x	x	x	x	x	-	-	-	-	-	37.6
2.37	56C	3.16	3.25	.625	3/16 x 3/32	1.4375	3/8 x 1/8	-	x	x	x	x	x	x	x	x	x	52.1
2.37	143/145TC	3.16	3.25	.875	3/16 x 3/32	1.4375	3/8 x 1/8	x	x	x	x	x	x	-	-	-	-	52.1
2.62	56C	3.44	3.25	.625	3/16 x 3/32	1.9375	1/2 x 1/8	-	x	x	x	x	x	x	x	x	x	65.4
2.62	143/145TC	3.44	3.25	.875	3/16 x 3/32	1.9375	1/2 x 1/8	-	x	x	x	x	x	x	x	x	x	65.4
2.62	182/184TC	3.44	4.50	1.125	1/4 x 1/8	1.9375	1/2 x 1/8	x	x	-	-	-	-	-	-	-	-	65.4
3.00	56C	4.19	3.25	.625	3/16 x 3/32	2.1875	1/2 x 3/16	-	-	x	x	x	x	x	x	x	x	90.1
3.00	143/145TC	4.19	3.25	.875	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	90.1
3.00	182/184TC	4.19	4.50	1.125	1/4 x 1/8	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	90.1
3.25	56C	4.25	3.25	.625	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	94.9
3.25	143/145TC	4.25	3.25	.875	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	94.9
3.25	182/184TC	4.25	4.50	1.125	1/4 x 1/8	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	94.9
3.75	56C	4.81	3.38	.625	3/16 x 3/32	2.4375	5/8 x 3/16	-	-	NA	NA	-	-	x	x	x	x	129.3
3.75	143/145TC	4.81	3.38	.875	3/16 x 3/32	2.4375	5/8 x 3/16	-	x	x	x	x	x	x	x	x	x	129.3
3.75	182/184TC	4.81	4.50	1.125	1/4 x 1/8	2.4375	5/8 x 3/16	-	x	x	x	x	x	x	x	x	-	129.3
3.75	213/215TC	4.81	4.50	1.375	5/16 x 5/32	2.4375	5/8 x 3/16	-	x	x	NA	-	-	-	-	-	-	129.3
4.50	143/145TC	5.56	3.38	.875	3/16 x 3/32	2.9375	3/4 x 1/4	-	-	-	-	-	x	x	x	x	x	171.8
4.50	182/184TC	5.56	4.50	1.125	1/4 x 1/8	2.9375	3/4 x 1/4	-	-	x	x	x	x	x	x	x	x	171.8
4.50	213/215TC	5.56	4.50	1.375	5/16 x 5/32	2.9375	3/4 x 1/4	-	x	x	x	x	-	-	-	-	-	171.8
5.16	182/184TC	5.56	4.50	1.125	1/4 x 1/8	3.4375	7/8 x 1/4	-	-	-	-	-	-	x	x	x	x	256.9
5.16	213/215TC	5.56	4.50	1.375	5/16 x 5/32	3.4375	7/8 x 1/4	-	x	x	x	x	-	-	-	-	-	256.9
6.00	182/184TC	6.31	4.50	1.375	5/16 x 5/32	3.9375	1 x 1/4	-	-	-	x	x	x	x	x	x	x	388.7
6.00	213/215TC	6.31	4.50	1.375	5/16 x 5/32	3.9375	1 x 1/4	-	-	-	-	-	x	x	x	x	x	388.7

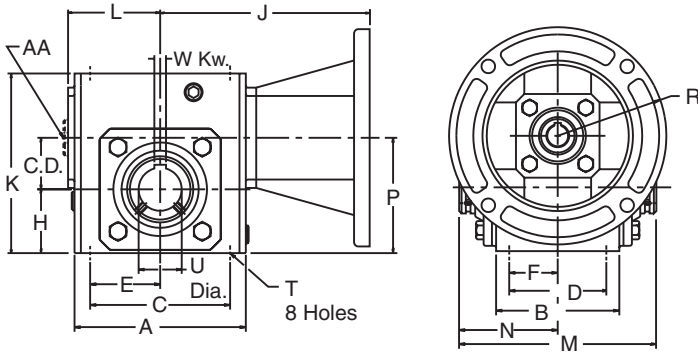
**Table 2** Fan Kit

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
300QH	300 FAN	3/8-24	3/4	5.93	1.6
325QH	325 FAN	3/8-24	3/4	6.04	1.6
375QH	375 FAN	3/8-24	3/4	7.66	2.8
450QH	450 FAN	3/8-24	3/4	8.36	2.8
516QH	516 FAN	3/8-24	3/4	9.18	2.8
600QH	600 FAN	3/8-24	3/4	10.70	4.2

- ★ To complete Part No. ratio symbol to size - for example 133Q56H10.
  - ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 2.
  - ▲ Select either Standard Base Kit (S-BK) or Econo Base Kit (E-BK) or Solid Base Kit (BKS); base kits are shown on page 84.
  - ✦ For adapting reducers to shafts smaller than output bore, use Bushing Kits, see Table 1, page 82.
- Consult factory for ratios not shown as standard.

**Style CH**

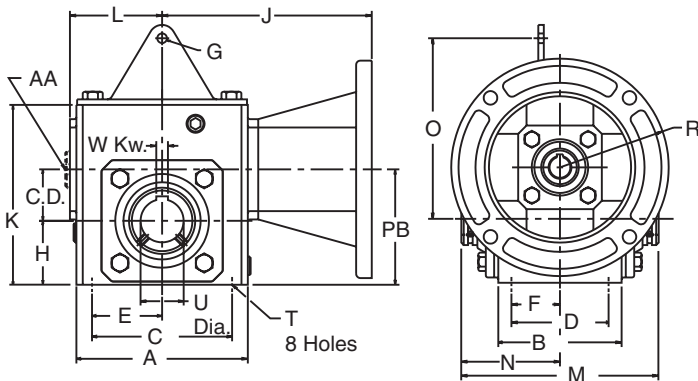
C-Face Coupled-Hollow



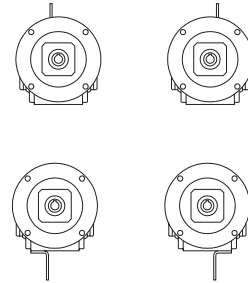
Sample of Components  
133UH10  
133MAK56

**Style CHT**

Torque Arm



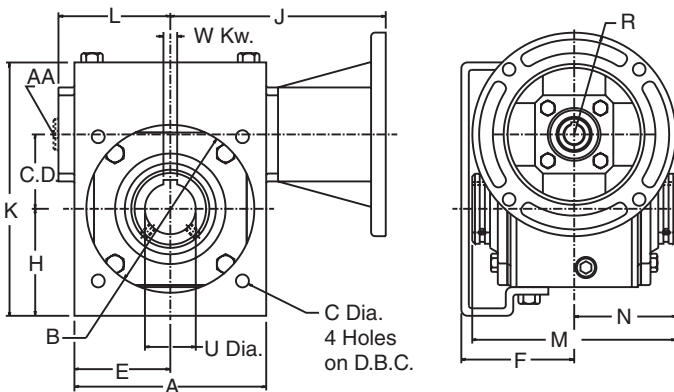
Assembly Drawing and Sample of Components



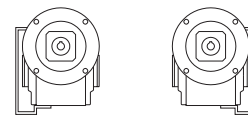
133UH10  
133H-TAK  
133MAK56

**Style CHF**

Flange Bracket



Assembly Drawing and Sample of Components



133UH10  
133H-FK  
133MAK56

For former MORSE Description see cross reference on pages 100 - 106.

**Table 1** Dimensions (Inches) for Style "CH"

C.D.	Components ◆		A	B	C	D	E	F	H	K	L	M	N	P	T	
	Basic Unit ★	Adapter Kit													Size	Deep
1.33	133UH	See Table No. 5	4.00	2.88	3.25	2.00	1.63	1.00	1.72	4.66	2.12	5.31	2.66	3.05	5/16-18	.50
1.54	154UH		5.13	3.69	4.19	2.75	2.09	1.38	1.91	5.38	2.75	6.44	3.22	3.45	5/16-18	.50
1.75	175UH		4.81	3.38	4.19	2.75	2.09	1.38	2.06	5.75	2.75	5.70	2.85	3.81	5/16-18	.61
2.06	206UH		5.50	3.75	5.00	2.88	2.50	1.44	2.28	6.38	3.00	6.44	3.22	4.34	3/8-16	.61
2.37	237UH		6.13	4.06	5.00	2.88	2.50	1.44	2.50	6.94	3.56	6.31	3.16	4.88	3/8-16	.60
2.62	262UH		7.12	4.44	6.38	3.38	3.19	1.69	2.94	8.00	3.69	6.88	3.44	5.57	3/8-16	.58
3.00	300UH		8.50	5.50	7.00	4.00	3.50	2.00	3.25	8.88	4.50	8.38	4.19	6.25	7/16-14	.80
3.25	325UH		8.50	5.00	7.50	4.00	3.75	2.00	3.50	9.38	4.50	8.50	4.25	6.75	7/16-14	.80
3.75	375UH		9.50	6.38	8.50	4.75	4.25	2.38	3.88	10.44	4.93	9.63	4.81	7.63	1/2-13	1.00
4.50	450UH		10.88	7.38	9.56	5.81	4.78	2.91	4.50	11.94	6.42	11.13	5.56	9.00	5/8-11	1.00
5.16	516UH	12.50	7.38	11.00	5.81	5.50	2.91	5.31	13.75	7.42	11.31	5.66	10.47	5/8-11	1.00	
6.00	600UH	14.50	8.13	12.75	6.38	6.38	3.19	6.50	16.50	8.25	12.63	6.31	12.50	5/8-11	1.00	

C.D.	OUTPUT BORE †		Stock Ratios marked "x"										Wt. Lbs.		
	U +.0015 -.0000	W Keyway	5	10	15	20	25	30	40	50	60				
1.33	.6250	3/16 x 3/32	x	x	x	x	x	x	x	x	x	x	x	-	21.0
1.54	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	x	x	-	27.0
1.75	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	x	x	-	30.0
2.06	1.4375	3/8 x 1/8	x	x	x	x	x	x	x	x	x	x	x	-	35.0
2.37	1.4375	3/8 x 1/8	x	x	x	x	x	x	x	x	x	x	x	-	52.0
2.62	1.9375	1/2 x 1/8	x	x	x	x	x	x	x	x	x	x	x	-	65.0
3.00	2.1875	1/2 x 3/16	x	x	x	x	x	x	x	x	x	x	x	-	87.0
3.25	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	x	-	90.0
3.75	2.4375	5/8 x 3/16	-	x	x	x	x	x	x	x	x	x	x	-	121.5
4.50	2.9375	3/4 x 1/4	-	x	x	x	x	x	x	x	x	x	x	-	156.0
5.16	3.4375	7/8 x 1/4	-	x	x	x	x	x	x	x	x	x	x	-	240.0
6.00	3.9375	1 x 1/4	-	x	x	x	x	x	x	x	x	x	x	-	351.0

**Table 2** Dimensions (Inches) for Style "CHT"

Components ◆			G	O	Wt. Lbs.
Basic Unit ★	Adapter Kit	Torque Arm Kit			
133UH	See Table No. 5	133H-TAK	.53	4.16	21.6
154UH		154H-TAK	.53	4.55	27.7
175UH		175H-TAK	.53	5.06	30.9
206UH		206H-TAK	.53	6.07	36.0
237UH		237H-TAK	.53	6.69	53.2
262UH		262H-TAK	.53	7.44	66.4
300UH		300H-TAK	.53	8.25	88.7
325UH		325H-TAK	.53	9.06	92.0
375UH		375H-TAK	.53	9.56	124.1
450UH		450H-TAK	.81	10.94	159.4
516UH	516H-TAK	.81	12.45	245.5	
600UH	600H-TAK	.81	14.63	357.9	

**Table 3** Fan Kit

Basic Unit ★	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
300UH	300 FAN	3/8-24	3/4	5.93	1.6
325UH	325 FAN	3/8-24	3/4	6.04	1.6
375UH	375 FAN	3/8-24	3/4	7.66	2.8
450UH	450 FAN	3/8-24	3/4	8.36	2.8
516UH	516 FAN	3/8-24	3/4	9.18	2.8
600UH	600 FAN	3/8-24	3/4	10.70	4.2

**Table 4** Dimensions (Inches) for Style "CHF" - With Flange

Components ◆			A	B	C	D	E	F	H	K	L	M	N	Wt. Lbs.
Basic Unit ★	Adapter	Flange Kit												
133UH	See Table No. 5	133H-FK	4.25	3.63	.344	5.000	2.13	3.00	2.44	5.57	2.12	5.31	2.66	23.7
154UH		154H-FK	4.75	3.63	.344	5.000	2.38	3.56	2.54	6.20	2.75	6.44	3.22	30.3
175UH		175H-FK	4.81	4.06	.344	5.875	2.41	3.50	2.78	6.66	2.75	5.70	2.85	33.4
206UH		206H-FK	5.75	4.50	.406	6.500	2.88	3.75	3.14	7.43	3.00	6.44	3.22	39.6
237UH		237H-FK	6.13	5.00	.406	7.500	3.06	3.72	3.61	8.24	3.56	6.31	3.16	57.1
262UH		262H-FK	7.18	6.00	.406	8.000	3.59	4.06	3.94	9.25	3.69	6.88	3.44	73.4
300UH		300H-FK	8.50	7.00	.406	9.000	4.25	4.50	4.14	10.02	4.50	8.38	4.19	97.1
325UH		325H-FK	8.50	7.00	.563	10.000	4.25	5.25	4.75	10.89	4.50	8.50	4.25	101.9
375UH		375H-FK	9.54	8.00	.563	11.500	4.77	5.46	5.04	11.85	4.93	9.63	4.81	134.8
450UH		450H-FK	10.88	9.00	.563	11.500	5.44	6.88	5.34	13.10	6.42	11.13	5.56	177.8
516UH	516H-FK	12.50	10.00	.688	14.000	6.25	6.58	6.57	15.33	7.42	11.31	5.66	266.9	
600UH	600H-FK	14.50	12.00	.688	15.560	7.25	7.22	7.85	18.22	8.25	12.63	6.31	395.7	

**Table 5** N.E.M.A. Frame Adapter Kits and Dimensions

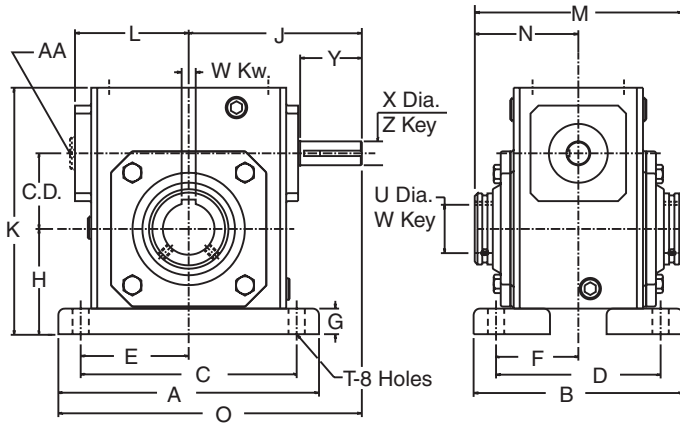
C.D.	56C		143/145TC			182/184TC			213/215TC			254/256TC			
	Input: .625		Input: .875			Input: 1.125			Input: 1.375			Input: 1.625			
	Kw.: 3/16 x 3/32		Kw.: 3/16 x 3/32			Kw.: 1/4 x 1/8			Kw.: 5/16 x 5/32			Kw.: 3/8 x 3/16			
	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R
1.33	133MAK56	6.38	3.25	133MAK140											
1.54	154-206MAK56	7.13	3.25	154-206MAK140	7.13	3.25									
1.75	154-206MAK56	7.00	3.25	154-206MAK140	7.00	3.25									
2.06	154-206MAK56	7.37	3.25	154-206MAK140	7.37	3.25									
2.37	237MAK56	7.69	3.25	237MAK140	7.69	3.25									
2.62	262MAK56	8.50	3.25	262MAK140	8.50	3.25	262MAK180	9.72	4.50						
3.00	300-325MAK56	9.35	3.25	300-325MAK140	9.35	3.25	300-325MAK180	10.57	4.50						
3.25	300-325MAK56	9.37	3.25	300-325MAK140	9.37	3.25	300-325MAK180	10.59	4.50	325MAK210					
3.75	375MAK56	11.47	3.38	375MAK140	11.47	3.38	375MAK180	12.92	4.50	375MAK210	12.92	4.50			
4.50				450MAK140	12.15	3.38	450MAK180	13.60	4.50	450MAK210	13.60	4.50			
5.16							516MAK180	14.40	4.50	516MAK210	14.40	4.50			
6.00							600MAK180	16.97	4.50	600MAK210	16.97	4.50	600MAK250	16.97	4.50

- ★ To complete Part No. add ratio symbol to size - for example 133UH10.
- ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 3.
- ▲ Select either Standard Base Kit (S-BK) or Econo Base Kit (E-BK) or Solid Base Kit (BKS); base kits are shown on page 84.
- † For adapting reducers to shafts smaller than output bore, use Bushing Kits; see Table 1, page 82. Consult factory for ratios not shown as standard.



**Style UHMT**

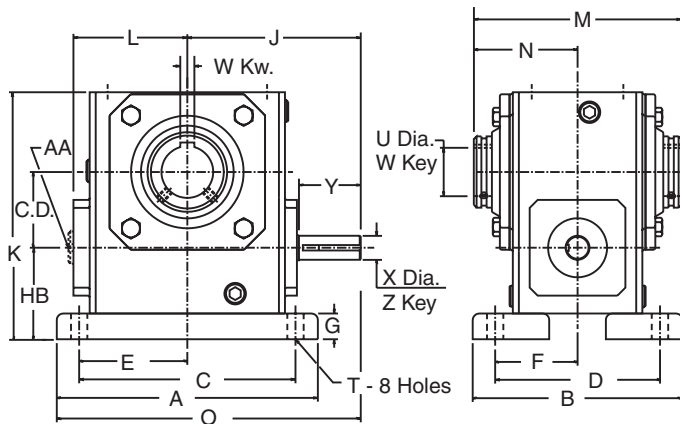
Worm Top



Sample of Components  
133UH10  
133S-BK

**Style UHMB**

Worm Bottom



Sample of Components  
133UH10  
133S-BK



For former MORSE Description see cross reference on pages 100 - 106.

**Table 1** Dimensions (Inches) for Style "UHMT" - With Base - Worm Top

C.D.	Components ◆		A	B	C	D	E	F	G	H	J	K	L	M	N
	Basic Unit ★	Base Kits Standard													
1.33	133UH	133S-BK	5.38	4.19	4.38	3.31	2.19	1.66	.47	2.25	4.03	5.19	2.12	5.31	2.66
1.54	154UH	154S-BK	6.44	5.44	5.25	4.31	2.63	2.16	.59	2.50	4.69	5.97	2.75	6.44	3.22
1.75	175UH	175S-BK	7.00	5.56	5.75	4.50	2.88	2.25	.69	2.75	4.68	6.44	2.75	5.70	2.85
2.06	206UH	206S-BK	7.69	5.76	6.38	4.69	3.19	2.34	.72	3.00	5.06	7.09	2.75	6.44	3.22
2.37	237UH	237S-BK	8.50	6.19	7.06	4.88	3.53	2.44	.75	3.25	5.44	7.69	3.56	6.31	3.16
2.62	262UH	262S-BK	9.25	6.50	8.00	5.25	4.00	2.63	.75	3.69	6.23	8.75	3.69	6.88	3.44
3.00	300UH	300S-BK	10.17	7.38	8.44	5.88	4.22	2.94	.88	4.13	7.00	9.75	4.50	8.38	4.19
3.25	325UH	325S-BK	11.12	7.75	9.50	6.13	4.75	3.06	.88	4.38	7.06	10.25	4.50	8.50	4.25
3.75	375UH	375S-BK	12.00	8.63	10.38	7.00	5.19	3.50	.94	4.81	8.38	11.38	4.93	9.63	4.81
4.50	450UH	450S-BK	13.88	9.33	12.13	7.63	6.06	4.22	1.19	5.69	9.59	13.13	6.42	11.13	5.56
5.16	516UH	516S-BK	16.38	10.38	14.13	8.38	7.06	4.19	1.13	6.44	10.69	14.88	7.42	11.31	5.66
6.00	600UH	600S-BK	19.00	12.00	16.50	9.50	8.25	4.75	1.25	7.75	11.75	17.75	8.25	12.63	6.31

C.D.	O	T	OUTPUT BORE †		INPUT SHAFT			Stock Ratios marked "x"										Wt. Lbs.	
			U +.0015 -.0000	W Keyway	X +.000 -.001	Y	Z Key		5	10	15	20	25	30	40	50	60		
							Sq.	Lgth.											
1.33	6.72	.344	.6250	3/16 x 3/32	.500	1.81	.125	1.38	x	x	x	x	x	x	x	x	x	x	14.5
1.54	7.91	.406	1.0000	1/4 x 1/8	.625	1.69	.188	1.25	x	x	x	x	x	x	x	x	x	-	20.8
1.75	8.18	.406	1.0000	1/4 x 1/8	.625	1.81	.188	1.50	x	x	x	x	x	x	x	x	x	x	24.0
2.06	8.90	.469	1.4375	3/8 x 1/8	.625	1.81	.188	1.50	x	x	x	x	x	x	x	x	x	x	29.5
2.37	9.69	.469	1.4375	3/8 x 1/8	.750	1.94	.188	1.31	x	x	x	x	x	x	x	x	x	x	45.8
2.62	10.86	.531	1.9375	1/2 x 1/8	.750	2.31	.188	1.88	x	x	x	x	x	x	x	x	x	x	56.0
3.00	12.08	.531	2.1875	1/2 x 3/16	.875	2.26	.188	1.31	x	x	x	x	x	x	x	x	x	x	78.5
3.25	12.63	.531	2.1875	1/2 x 3/16	.875	2.31	.188	1.63	-	x	x	x	x	x	x	x	x	x	82.0
3.75	14.38	.594	2.4375	5/8 x 3/16	1.000	2.91	.250	1.75	-	x	x	x	x	x	x	x	x	x	119.0
4.50	16.53	.656	2.9375	3/4 x 1/4	1.125	3.48	.250	2.50	-	x	x	x	x	x	x	x	x	x	157.0
5.16	18.88	.781	3.4375	7/8 x 1/4	1.250	3.75	.250	2.56	-	x	x	x	x	x	x	x	x	x	248.0
6.00	21.25	.906	3.9375	1 x 1/4	1.500	3.75	.375	2.94	-	x	x	x	x	x	x	x	x	x	364.0

**Table 2** Dimensions (Inches) for Style "UHMB"

Components ◆		HB
Basic Unit ★	Base Kits Standard	
133UH	133S-BK	2.14
154UH	154S-BK	2.50
175UH	175S-BK	2.63
206UH	206S-BK	2.75
237UH	237S-BK	2.81
262UH	262S-BK	3.19
300UH	300S-BK	3.50
325UH	325S-BK	3.50
375UH	375S-BK	3.75
450UH	450S-BK	4.06
516UH	516S-BK	4.40
600UH	600S-BK	5.25

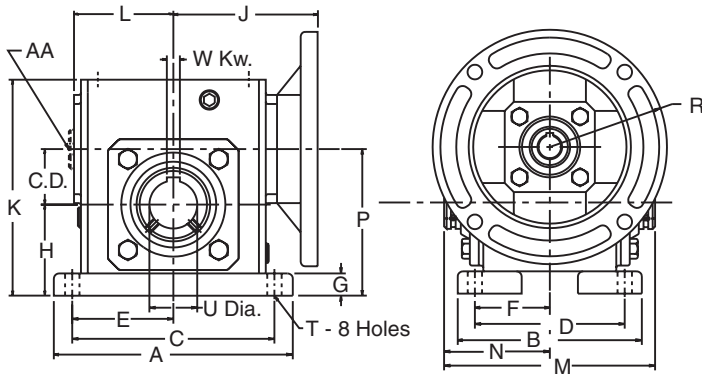
**Table 3** Fan Kit

Basic Unit ★	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
300UH	300 FAN	3/8-24	3/4	5.93	1.6
325UH	325 FAN	3/8-24	3/4	6.04	1.6
375UH	375 FAN	3/8-24	3/4	7.66	2.8
450UH	450 FAN	3/8-24	3/4	8.36	2.8
516UH	516 FAN	3/8-24	3/4	9.18	2.8
600UH	600 FAN	3/8-24	3/4	10.70	4.2

- ★ To complete Part No. ratio symbol to size - for example 133UH10.
- ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 3.
- ▲ Select either Standard Base Kit (S-BK) or Econo Base Kit (E-BK) or Solid Base Kit (BKS); base kits are shown on page 84.
- † For adapting reducers to shafts smaller than output bore, use Bushing Kits; see Table 1, page 82. Consult factory for ratios not shown as standard.

**Style QHMT**

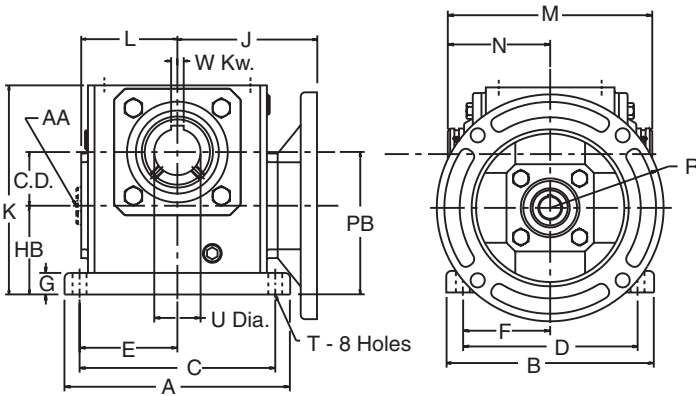
Worm Top



Sample of Components  
133Q56H10  
133S-BK

**Style QHMB**

Worm Bottom



Sample of Components  
133Q56H10  
133S-BK

NOTE: When mounting Style "QHMB", interference may occur; consult EPT Engineering.



For former MORSE Description see cross reference on pages 100 - 106.

**Table 1** Dimensions (Inches) for Style "QHMT" With Base - Worm Top

C.D.	Components ◆		N.E.M.A. Frame	A	B	C	D	E	F	G	H	J	K	L	M	N
	Basic Unit ★	Standard Base Kit ▲														
1.33	133Q56H	133S-BK	56C	5.38	4.19	4.38	3.31	2.19	1.66	.47	2.25	3.94	5.19	2.12	5.31	2.66
1.54	154Q56H	154S-BK	56C	6.44	5.44	5.25	4.31	2.63	2.16	.59	2.50	4.52	5.97	2.75	6.44	3.22
1.54	154Q140H	154S-BK	143/145TC	6.44	5.44	5.25	4.31	2.63	2.16	.59	2.50	4.52	5.97	2.75	6.44	3.22
1.75	175Q56H	175S-BK	56C	7.00	5.56	5.75	4.50	2.88	2.25	.69	2.75	4.38	6.44	2.75	5.70	2.85
1.75	175Q140H	175S-BK	143/145TC	7.00	5.56	5.75	4.50	2.88	2.25	.69	2.75	4.38	6.44	2.75	5.70	2.85
2.06	206Q56H	206S-BK	56C	7.69	5.76	6.38	4.69	3.19	2.34	.72	3.00	4.75	7.09	3.00	6.44	3.22
2.06	206Q140H	206S-BK	143/145TC	7.69	5.76	6.38	4.69	3.19	2.34	.72	3.00	4.75	7.09	3.00	6.44	3.22
2.37	237Q56H	237S-BK	56C	8.50	6.19	7.06	4.88	3.53	2.44	.75	3.25	5.06	7.69	3.56	6.31	3.16
2.37	237Q140H	237S-BK	143/145TC	8.50	6.19	7.06	4.88	3.53	2.44	.75	3.25	5.06	7.69	3.56	6.31	3.16
2.62	262Q56H	262S-BK	56C	9.25	6.50	8.00	5.25	4.00	2.63	.75	3.69	5.69	8.75	3.69	6.88	3.44
2.62	262Q140H	262S-BK	143/145TC	9.25	6.50	8.00	5.25	4.00	2.63	.75	3.69	5.69	8.75	3.69	6.88	3.44
2.62	262Q180H	262S-BK	182/184TC	9.25	6.50	8.00	5.25	4.00	2.63	.75	3.69	6.13	8.75	3.69	6.88	3.44
3.00	300Q56H	300S-BK	56C	10.17	7.38	8.44	5.88	4.22	2.94	.88	4.13	5.67	9.75	4.50	8.38	4.19
3.00	300Q140H	300S-BK	143/145TC	10.17	7.38	8.44	5.88	4.22	2.94	.88	4.13	5.67	9.75	4.50	8.38	4.19
3.00	300Q180H	300S-BK	182/184TC	10.17	7.38	8.44	5.88	4.22	2.94	.88	4.13	6.45	9.75	4.50	8.38	4.19
3.25	325Q56H	325S-BK	56C	11.12	7.75	9.50	6.13	4.75	3.06	.88	4.38	6.56	10.25	4.50	8.50	4.25
3.25	325Q140H	325S-BK	143/145TC	11.12	7.75	9.50	6.13	4.75	3.06	.88	4.38	6.56	10.25	4.50	8.50	4.25
3.25	325Q180H	325S-BK	182/184TC	11.12	7.75	9.50	6.13	4.75	3.06	.88	4.38	7.00	10.25	4.50	8.50	4.25
3.75	375Q56H	375S-BK	56C	12.00	8.63	10.38	7.00	5.19	3.50	.94	4.81	6.01	11.38	4.93	9.63	4.81
3.75	375Q140H	375S-BK	143/145TC	12.00	8.63	10.38	7.00	5.19	3.50	.94	4.81	6.01	11.38	4.93	9.63	4.81
3.75	375Q180H	375S-BK	182/184TC	12.00	8.63	10.38	7.00	5.19	3.50	.94	4.81	7.29	11.38	4.93	9.63	4.81
3.75	375Q210H	375S-BK	213/215TC	12.00	8.63	10.38	7.00	5.19	3.50	.94	4.81	7.29	11.38	4.93	9.63	4.81
4.50	450Q140H	450S-BK	143/145TC	13.88	9.33	12.13	7.63	6.06	4.22	1.19	5.69	6.69	13.13	6.42	11.13	5.56
4.50	450Q180H	450S-BK	182/184TC	13.88	9.33	12.13	7.63	6.06	4.22	1.19	5.69	7.97	13.13	6.42	11.13	5.56
4.50	450Q210H	450S-BK	213/215TC	13.88	9.33	12.13	7.63	6.06	4.22	1.19	5.69	7.97	13.13	6.42	11.13	5.56
5.16	516Q180H	516S-BK	182/184TC	16.38	10.38	14.13	8.38	7.06	4.19	1.13	6.44	8.78	14.88	7.42	11.31	5.66
5.16	516Q210H	516S-BK	213/215TC	16.38	10.38	14.13	8.38	7.06	4.19	1.13	6.44	8.78	14.88	7.42	11.31	5.66
6.00	600Q180H	600S-BK	182/184TC	19.00	12.00	16.50	9.50	8.25	4.75	1.25	7.75	9.68	17.75	8.25	12.63	6.31
6.00	600Q210H	600S-BK	213/215TC	19.00	12.00	16.50	9.50	8.25	4.75	1.25	7.75	9.68	17.75	8.25	12.63	6.31

C.D.	N.E.M.A. Frame	P	R	T	INPUT		OUTPUT BORE +		Stock Ratios marked "x"								Wt. Lbs.		
					Bore	Keyway	U +.0015 -.0000	W Keyway	5	10	15	20	25	30	40	50		60	
																			3/16 x 3/32
1.33	56C	3.58	3.25	.344	.625	3/16 x 3/32	.6250	3/16 x 3/32	x	x	x	x	x	x	x	x	x	x	17.5
1.54	56C	4.04	3.25	.406	.625	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	x	22.8
1.54	143/145TC	4.04	3.25	.406	.875	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	-	-	-	-	-	-	-	-	22.8
1.75	56C	4.50	3.25	.406	.625	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	x	26.0
1.75	143/145TC	4.50	3.25	.406	.875	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	x	26.0
2.06	56C	5.06	3.25	.469	.625	3/16 x 3/32	1.4375	3/8 x 1/8	-	x	x	x	x	x	x	x	x	x	34.5
2.06	143/145TC	5.06	3.25	.469	.875	3/16 x 3/32	1.4375	3/8 x 1/8	x	x	x	x	x	-	-	-	-	-	34.5
2.37	56C	5.62	3.25	.469	.625	3/16 x 3/32	1.4375	3/8 x 1/8	-	x	x	x	x	x	x	x	x	x	48.8
2.37	143/145TC	5.62	3.25	.469	.875	3/16 x 3/32	1.4375	3/8 x 1/8	x	x	x	x	x	x	x	x	x	x	48.8
2.62	56C	6.31	3.25	.469	.625	3/16 x 3/32	1.9375	1/2 x 1/8	-	x	x	x	x	x	x	x	x	x	59.0
2.62	143/145TC	6.31	3.25	.469	.875	3/16 x 3/32	1.9375	1/2 x 1/8	-	x	x	x	x	x	x	x	x	x	59.0
2.62	182/184TC	6.31	4.50	.469	1.125	1/4 x 1/8	1.9375	1/2 x 1/8	x	x	-	-	-	-	-	-	-	-	59.0
3.00	56C	7.13	3.25	.469	.625	3/16 x 3/32	2.1875	1/2 x 3/16	-	-	-	x	x	x	x	x	x	x	82.5
3.00	143/145TC	7.13	3.25	.469	.875	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	82.5
3.00	182/184TC	7.13	4.50	.469	1.125	1/4 x 1/8	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	82.5
3.25	56C	7.63	3.25	.469	.625	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	86.0
3.25	143/145TC	7.63	3.25	.469	.875	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	86.0
3.25	182/184TC	7.93	4.50	.469	1.125	1/4 x 1/8	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	86.0
3.75	56C	8.56	3.38	.594	.625	3/16 x 3/32	2.4375	5/8 x 3/16	-	-	NA	NA	-	-	-	-	-	-	126.0
3.75	143/145TC	8.56	3.38	.594	.875	3/16 x 3/32	2.4375	5/8 x 3/16	-	x	x	x	x	x	x	x	x	x	126.0
3.75	182/184TC	8.56	4.50	.594	1.125	1/4 x 1/8	2.4375	5/8 x 3/16	-	x	x	x	x	x	x	x	x	x	126.0
3.75	213/215TC	8.56	4.50	.594	1.375	5/16 x 5/32	2.4375	5/8 x 3/16	-	x	x	NA	-	-	-	-	-	-	126.0
4.50	143/145TC	10.19	3.38	.656	.875	3/16 x 3/32	2.9375	3/4 x 1/4	-	-	x	x	-	-	-	-	-	-	167.0
4.50	182/184TC	10.19	4.50	.656	1.125	1/4 x 1/8	2.9375	3/4 x 1/4	-	-	x	x	x	x	x	x	x	x	167.0
4.50	213/215TC	10.19	4.50	.656	1.375	5/16 x 5/32	2.9375	3/4 x 1/4	-	x	x	x	x	x	x	x	x	x	167.0
5.16	182/184TC	11.60	4.50	.781	1.125	1/4 x 1/8	3.4375	7/8 x 1/4	-	-	-	-	-	-	-	-	-	-	256.0
5.16	213/215TC	11.60	4.50	.781	1.375	5/16 x 5/32	3.4375	7/8 x 1/4	-	x	x	x	x	x	x	x	x	x	256.0
6.00	182/184TC	13.75	4.50	.906	1.375	5/16 x 5/32	3.9375	1 x 1/4	-	-	-	-	-	-	-	-	-	-	367.0
6.00	213/215TC	13.75	4.50	.906	1.375	5/16 x 5/32	3.9375	1 x 1/4	-	-	-	-	-	-	-	-	-	-	367.0

**Table 2** Dimensions (Inches) for Style "QHMB"

Components ◆		HB	PB
Ref. No.	Base Kits Standard		
133QH	133S-BK	2.14	3.47
154QH	154S-BK	2.50	4.04
175QH	175S-BK	2.63	4.38
206QH	206S-BK	2.75	4.81
237QH	237S-BK	2.81	5.19
262QH	262S-BK	3.19	5.81
300QH	300S-BK	3.50	6.50
325QH	325S-BK	3.50	6.75
375QH	375S-BK	3.75	7.50
450QH	450S-BK	4.06	8.63
516QH	516S-BK	4.40	9.56
600QH	600S-BK	5.25	11.25

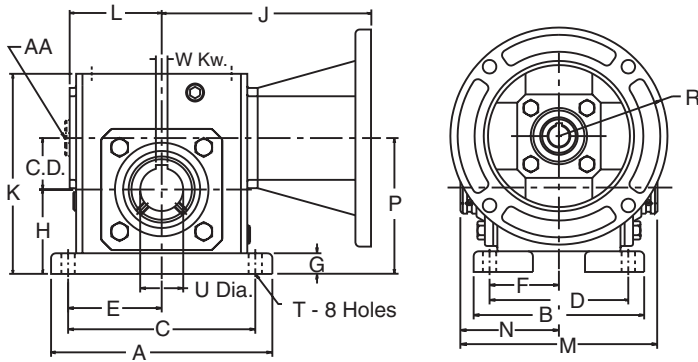
**Table 3** Fan Kit

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
300QH	300 FAN	3/8-24	3/4	5.93	1.6
325QH	325 FAN	3/8-24	3/4	6.04	1.6
375QH	375 FAN	3/8-24	3/4	7.66	2.8
450QH	450 FAN	3/8-24	3/4	8.36	2.8
516QH	516 FAN	3/8-24	3/4	9.18	2.8
600QH	600 FAN	3/8-24	3/4	10.70	4.2

★ To complete Part No. add ratio symbol to size - for example 133Q56H10.  
 ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 3.  
 ▲ Select either Standard Base Kit (S-BK) or Econo Base Kit (E-BK) or Solid Base Kit (BKS); base kits are shown on page 84.  
 + For adapting reducers to shafts smaller than output bore, use Bushing Kits; see Table 1, page 82.  
 Consult factory for ratios not shown as standard.

**Style CHMT**

Worm Top



Sample of Components

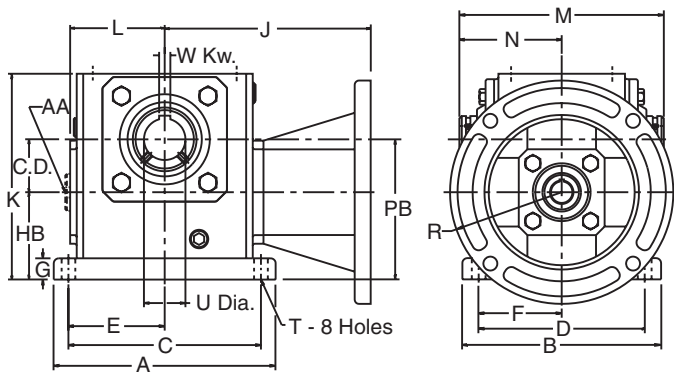
133UH10

133S-BK

133MAK56

**Style CHMB**

Worm Bottom



Sample of Components

133UH10

133S-BK

133MAK56



For former MORSE Description see cross reference on pages 100 - 106.



**Table 1** Dimensions (Inches) for Style "CHMT" - With Base - Worm Top

C.D.	Components ◆			A	B	C	D	E	F	G	H	K	L	M	N
	Basic Unit ★	Adapter	Base Kit ▲ Standard												
1.33	133UH	See Table No. 4	133S-BK	5.38	4.19	4.38	3.31	2.19	1.66	.47	2.25	5.19	2.12	5.31	2.66
1.54	154UH		154S-BK	6.44	5.44	5.25	4.31	2.63	2.16	.59	2.50	5.97	2.75	6.44	3.22
1.75	175UH		175S-BK	7.00	5.56	5.75	4.50	2.88	2.25	.69	2.75	6.44	2.75	5.70	2.85
2.06	206UH		206S-BK	7.69	5.76	6.38	4.69	3.19	2.34	.72	3.00	7.09	3.00	6.44	3.22
2.37	237UH		237S-BK	8.50	6.19	7.06	4.88	3.53	2.44	.75	3.25	7.69	3.56	6.31	3.16
2.62	262UH		262S-BK	9.25	6.50	8.00	5.25	4.00	2.63	.75	3.69	8.75	3.69	6.88	3.44
3.00	300UH		300S-BK	10.17	7.38	8.44	5.88	4.22	2.94	.88	4.13	9.75	4.50	8.38	4.19
3.25	325UH		325S-BK	11.12	7.75	9.50	6.13	4.75	3.06	.88	4.38	10.25	4.50	8.50	4.25
3.75	375UH		375S-BK	12.00	8.63	10.38	7.00	5.19	3.50	.94	4.81	11.38	4.93	9.63	4.81
4.50	450UH		450S-BK	13.88	9.33	12.13	7.63	6.06	4.22	1.19	5.69	13.13	6.42	11.13	5.56
5.16	516UH		516S-BK	16.38	10.38	14.13	8.38	7.06	4.19	1.13	6.44	14.88	7.42	11.31	5.66
6.00	600UH		600S-BK	19.00	12.00	16.50	9.50	8.52	4.75	1.25	7.75	17.75	8.25	12.63	6.31

C.D.	P	T	OUTPUT BORE †		Stock Ratios marked "x"								Wt. Lbs.	
			U +.0015 -0.0000	W Keyway	5	10	15	20	25	30	40	50		60
1.33	3.58	.344	.6250	3/16 x 3/32	x	x	x	x	x	x	x	x	x	21.5
1.54	4.04	.406	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	-	27.8
1.75	4.50	.406	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	31.0
2.06	5.06	.469	1.4375	3/8 x 1/8	x	x	x	x	x	x	x	x	x	36.5
2.37	5.62	.469	1.4375	3/8 x 1/8	x	x	x	x	x	x	x	x	x	53.8
2.62	6.31	.531	1.9375	1/2 x 1/8	x	x	x	x	x	x	x	x	x	67.0
3.00	7.13	.531	2.1875	1/2 x 3/16	x	x	x	x	x	x	x	x	x	89.5
3.25	7.63	.531	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	93.0
3.75	8.56	.594	2.4375	5/8 x 3/16	-	x	x	x	x	x	x	x	x	131.5
4.50	10.19	.656	2.9375	3/4 x 1/4	-	x	x	x	x	x	x	x	x	173.0
5.16	11.60	.781	3.4375	7/8 x 1/4	-	x	x	x	x	x	x	x	x	266.0
6.00	13.75	.906	3.9375	1 x 1/4	-	x	x	x	x	x	x	x	x	394.0

**Table 2** Dimensions (Inches) for Style "CHMB"

Basic Unit ★	Adapter Kit	Base Kit ▲ Standard	HB	PB
133UH	See Table No. 4	133S-BK	2.14	3.47
154UH		154S-BK	2.50	4.04
175UH		175S-BK	2.63	4.38
206UH		206S-BK	2.75	4.81
237UH		237S-BK	2.81	5.19
262UH		262S-BK	3.19	5.81
300UH		300S-BK	3.50	6.50
325UH		325S-BK	3.50	6.75
375UH		375S-BK	3.75	7.50
450UH		450S-BK	4.06	8.63
516UH		516S-BK	4.40	9.56
600UH		600S-BK	5.25	11.25

**Table 3** Fan Kit

Basic Unit ★	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
300UH	300 FAN	3/8-24	3/4	5.93	1.6
325UH	325 FAN	3/8-24	3/4	6.04	1.6
375UH	375 FAN	3/8-24	3/4	7.66	2.8
450UH	450 FAN	3/8-24	3/4	8.36	2.8
516UH	516 FAN	3/8-24	3/4	9.18	2.8
600UH	600 FAN	3/8-24	3/4	10.70	4.2

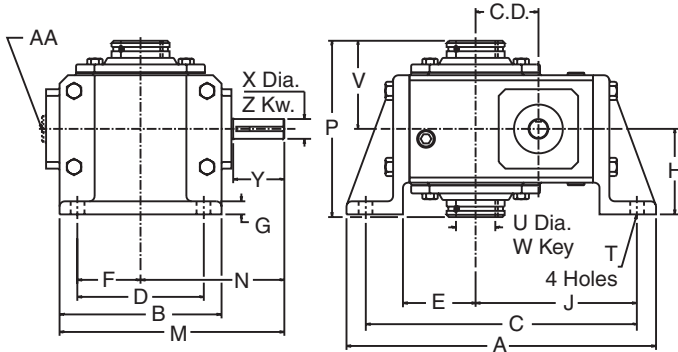
**Table 4** N.E.M.A. Frame Adapter Kits and Dimensions

C.D.	56C			143/145TC			182/184TC			213/215TC			254/256TC		
	Input: .625 Kw.: 3/16 x 3/32			Input: .875 Kw.: 3/16 x 3/32			Input: 1.125 KW.: 1/4 x 1/8			Input: 1.375 Kw.: 5/16 x 5/32			Input: 1.625 Kw.: 3/8 x 3/16		
	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R
1.33	133MAK56	6.38	3.25	133MAK140											
1.54	154-206MAK56	7.13	3.25	154-206MAK140	7.13	3.25									
1.75	154-206MAK56	7.00	3.25	154-206MAK140	7.00	3.25									
2.06	154-206MAK56	7.37	3.25	154-206MAK140	7.37	3.25									
2.37	237MAK56	7.69	3.25	237MAK140	7.69	3.25									
2.62	262MAK56	8.50	3.25	262MAK140	8.50	3.25	262MAK180	9.72	4.50						
3.00	300-325MAK56	9.35	3.25	300-325MAK140	9.35	3.25	300-325MAK180	10.57	4.50						
3.25	300-325MAK56	9.37	3.25	300-325MAK140	9.37	3.25	300-325MAK180	10.59	4.50	325MAK210					
3.75	375MAK56	11.47	3.38	375MAK140	11.47	3.38	375MAK180	12.92	4.50	375MAK210	12.92	4.50			
4.50				450MAK140	12.15	3.38	450MAK180	13.60	4.50	450MAK210	13.60	4.50			
5.16							516MAK180	14.40	4.50	516MAK210	14.40	4.50			
6.00							600MAK180	16.97	4.50	600MAK210	16.97	4.50	600MAK250	16.97	4.50

★ To complete Part No. ratio symbol to size - for example 133UH10.  
 ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 3.  
 ▲ Select either Standard Base Kit (S-BK) or Econo Base Kit (E-BK) or Solid Base Kit (BKS); base kits are shown on page 84.  
 † For adapting reducers to shafts smaller than output bore, use Bushing Kits; see Table 1, page 82.  
 Consult factory for ratios not shown as standard.

**Style UHVL**

Vertical Low Base



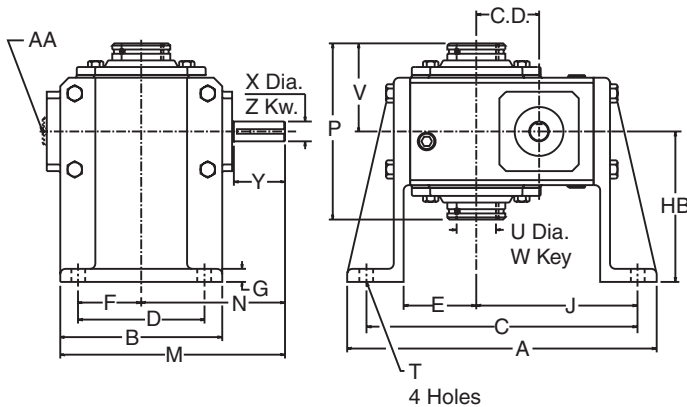
Assembly Drawing and Sample of Components



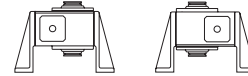
133UH10  
133VL-BK

**Style UHVH**

Vertical High Base



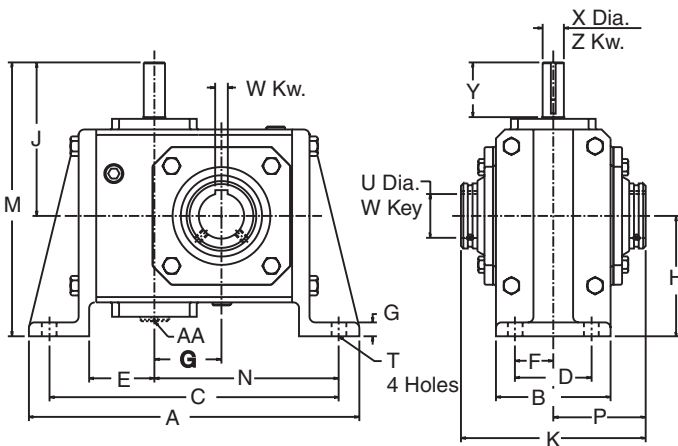
Assembly Drawing and Sample of Components



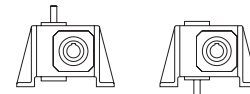
133UH10  
133VH-BK

**Style UHVJ**

Vertical "J" Base



Assembly Drawing and Sample of Components



133UH10  
133VJ-BK

NOTE: If mounting a fan unit, fan extends beyond "H" dimension.

For former MORSE Description see cross reference on pages 100 - 106.

**Table 1** Dimensions (Inches) for Style "UHV" - With Vertical Low Base

C.D.	Components ◆		A	B	C	D	E	F	G	H	J	M	N	P	T	V
	Basic Unit ★	Base Kit														
1.33	133UH	133VL-BK	7.10	4.00	6.16	3.25	1.81	1.63	.53	2.31	3.69	6.03	4.03	5.31	.344	2.66
1.54	154UH	154VL-BK	8.06	5.12	7.00	4.00	1.97	2.00	.69	3.00	4.28	7.25	4.69	6.44	.406	3.22
1.75	175UH	175VL-BK	8.44	4.81	7.38	4.00	2.12	2.00	.69	3.00	4.50	7.09	4.68	5.70	.406	2.85
2.06	206UH	206VL-BK	9.50	5.63	8.38	4.88	2.34	2.44	.72	3.13	5.09	7.87	5.06	6.44	.469	3.22
2.37	237UH	237VL-BK	10.06	6.12	8.94	4.88	2.56	2.44	.75	3.38	5.44	8.50	5.44	6.31	.469	3.16
2.62	262UH	262VL-BK	11.25	7.13	10.13	5.75	3.00	2.88	.75	3.63	6.13	9.79	6.23	6.88	.531	3.44
3.00	300UH	300VL-BK	12.88	8.50	11.38	6.13	3.31	3.06	.81	4.69	6.88	11.25	7.00	8.38	.531	4.19
3.25	325UH	325VL-BK	13.38	8.50	11.88	6.13	3.56	3.06	.81	4.69	7.13	11.31	7.06	8.50	.531	4.25
3.75	375UH	375VL-BK	15.69	10.50	13.94	8.00	3.44	4.00	.88	5.25	8.31	13.13	8.38	9.63	.594	4.81
4.50	450UH	450VL-BK	16.94	10.88	14.94	9.56	4.63	4.78	.88	5.06	8.94	15.09	9.59	11.13	.688	5.56
5.16	516UH	516VL-BK	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	10.56	16.93	10.69	11.31	.781	5.66
6.00	600UH	600VL-BK	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	12.19	19.13	11.75	12.63	.906	6.31

C.D.	OUTPUT BORE +		INPUT SHAFT				Stock Ratios marked "x"										Wt. Lbs.
	U +.0015 -.0000	W Keyway	X +.000 -.001	Y	Z Key		5	10	15	20	25	30	40	50	60		
					Sq.	Lgth.											
1.33	.6250	3/16 x 3/32	.500	1.81	.125	1.38	x	x	x	x	x	x	x	x	x	16.3	
1.54	1.0000	1/4 x 1/8	.625	1.69	.188	.94	x	x	x	x	x	x	x	x	x	23.4	
1.75	1.0000	1/4 x 1/8	.625	1.81	.188	1.50	x	x	x	x	x	x	x	x	x	27.5	
2.06	1.4375	3/8 x 1/8	.625	1.81	.188	1.50	x	x	x	x	x	x	x	x	x	35.0	
2.37	1.4375	3/8 x 1/8	.750	1.94	.188	1.31	x	x	x	x	x	x	x	x	x	52.0	
2.62	1.9375	1/2 x 1/8	.750	2.31	.188	1.88	x	x	x	x	x	x	x	x	x	63.0	
3.00	2.1875	1/2 x 3/16	.875	2.26	.188	1.31	x	x	x	x	x	x	x	x	x	88.5	
3.25	2.1875	1/2 x 3/16	.875	2.31	.188	1.63	-	x	x	x	x	x	x	x	x	95.0	
3.75	2.4375	5/8 x 3/16	1.000	2.91	.250	1.75	-	x	x	x	x	x	x	x	x	134.0	
4.50	2.9375	3/4 x 1/4	1.125	3.48	.250	2.50	-	x	x	x	x	x	x	x	x	173.0	
5.16	3.4375	7/8 x 1/4	1.250	3.75	.250	2.56	-	x	x	x	x	x	x	x	x	270.0	
6.00	3.9375	1 x 1/4	1.500	3.75	.375	2.94	-	x	x	x	x	x	x	x	x	397.0	

**Table 2** Dimensions (Inches) for Style "UHVH"

Components ◆		HB	Wt. Lbs.
Basic Unit ★	Base Kit		
133UH	133VH-BK	3.56	17.3
154UH	154VH-BK	4.38	24.4
175UH	175VH-BK	4.38	28.5
206UH	206VH-BK	4.38	36.0
237UH	237VH-BK	5.25	54.5
262UH	262VH-BK	5.60	67.0
300UH	300VH-BK	6.25	92.0
325UH	325VH-BK	6.25	98.0
375UH	375VH-BK	7.00	137.5
450UH	450VH-BK	8.56	181.0
516UH	516VH-BK	8.63	282.0
600UH	600VH-BK	9.63	412.0

**Table 3** Fan Kit

Basic Unit ★	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
300UH	300 FAN	3/8-24	3/4	5.93	1.6
325UH	325 FAN	3/8-24	3/4	6.04	1.6
375UH	375 FAN	3/8-24	3/4	7.66	2.8
450UH	450 FAN	3/8-24	3/4	8.36	2.8
516UH	516 FAN	3/8-24	3/4	9.18	2.8
600UH	600 FAN	3/8-24	3/4	10.70	4.2

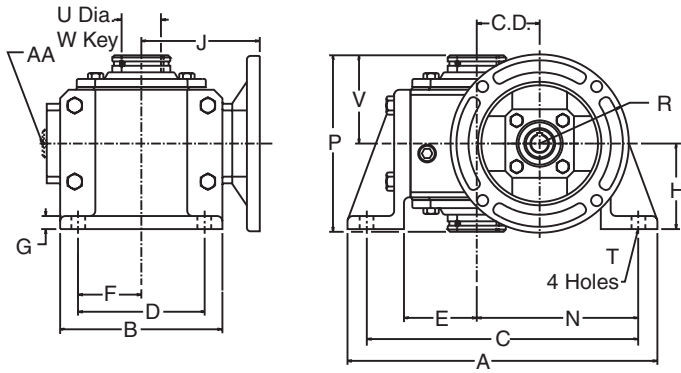
**Table 4** Dimensions (Inches) for Style "UHVJ" - With Vertical "J" Base

Components ◆		A	B	C	D	E	F	G	H	J	K	M	N	P	T	Wt. Lbs.
Base Unit ★	Base Kit															
133U	133VJ-BK	7.28	2.88	6.42	2.00	1.66	1.00	.53	2.94	4.03	5.31	6.97	3.93	2.66	.344	15.0
154U	154VJ-BK	8.25	3.69	7.25	2.50	1.98	1.25	.69	3.50	4.69	6.44	8.19	4.39	3.22	.406	22.0
175U	175VJ-BK	8.63	3.38	7.63	2.50	2.00	1.25	.69	3.50	4.68	5.70	8.18	4.75	2.85	.406	25.0
206U	206VJ-BK	9.75	3.75	8.62	2.62	2.09	1.31	.72	3.94	5.06	6.44	9.00	5.46	3.22	.469	31.0
237U	237VJ-BK	10.30	4.06	9.19	2.88	2.12	1.44	.75	4.06	5.44	6.31	9.50	6.00	3.16	.469	47.0
262U	262VJ-BK	11.75	4.44	10.38	3.13	2.50	1.56	.75	4.75	6.23	6.88	10.98	6.75	3.44	.531	58.0
300U	300VJ-BK	13.50	5.00	12.25	4.00	2.69	2.00	.81	5.94	7.00	8.38	12.94	7.94	4.19	.531	82.0
325U	325VJ-BK	14.00	5.00	12.75	4.00	2.69	2.00	.81	5.69	7.06	8.50	12.75	8.44	4.25	.531	85.0
375U	375VJ-BK	15.06	6.25	13.31	4.75	2.94	2.38	.88	6.00	8.38	9.63	14.38	9.06	4.81	.594	117.5
450U	450VJ-BK	16.94	7.38	14.94	5.81	3.06	2.91	.88	7.38	9.59	11.13	16.96	10.50	5.56	.688	151.0
516U	516VJ-BK	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	10.69	11.31	18.44	12.35	5.66	.781	240.0
600U	600VJ-BK	22.00	8.13	20.00	6.38	4.12	3.19	1.13	8.50	11.75	12.63	20.25	14.25	6.31	.906	342.0

- ★ To complete Part No. ratio symbol to size - for example 133UH10.
- ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 3.
- ▲ Select either Standard Base Kit (S-BK) or Econo Base Kit (E-BK) or Solid Base Kit (BKS); base kits are shown on page 84.
- ✦ For adapting reducers to shafts smaller than output bore, use Bushing Kits; see Table 1, page 82. Consult factory for ratios not shown as standard.

**Style QHVL**

Vertical Low Base



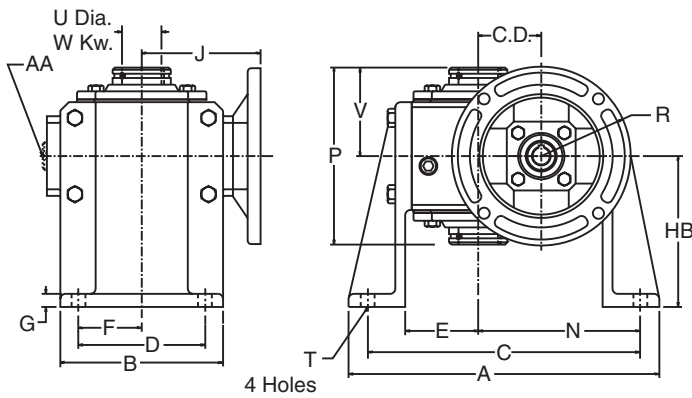
Assembly Drawing and Sample of Components



133Q56H10  
133VL-BK

**Style QH VH**

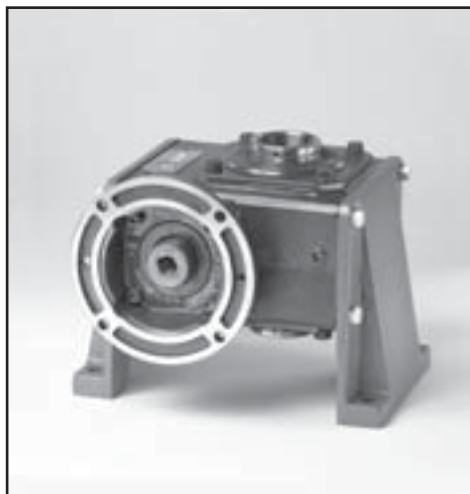
Vertical High Base



Assembly Drawing and Sample of Components



133Q56H10  
133VH-BK



For former MORSE Description see cross reference on pages 100 - 106.

**Table 1** Dimensions (Inches) for Style "QHVL" - With Vertical Low Base

C.D.	Components ◆		N.E.M.A. Frame	A	B	C	D	E	F	G	H	J	N	P	R
	Part No. ★	Base Kit													
1.33	133QH56	133VL-BK	56C	7.10	4.00	6.16	3.25	1.81	1.63	.53	2.31	3.94	3.69	5.31	3.25
1.54	154QH56	154VL-BK	56C	8.06	5.12	7.00	4.00	1.97	2.00	.69	3.00	4.52	4.28	6.44	3.25
1.54	154QH140	154VL-BK	143/145TC	8.06	5.12	7.00	4.00	1.97	2.00	.69	3.00	4.52	4.28	6.44	3.25
1.75	175QH56	175VL-BK	56C	8.44	4.81	7.38	4.00	2.12	2.00	.69	3.00	4.38	4.50	5.70	3.25
1.75	175QH140	175VL-BK	143/145TC	8.44	4.81	7.38	4.00	2.12	2.00	.69	3.00	4.38	4.50	5.70	3.25
2.06	206QH56	206VL-BK	56C	9.50	5.63	8.38	4.88	2.34	2.44	.72	3.13	4.75	5.09	6.44	3.25
2.06	206QH140	206VL-BK	143/145TC	9.50	5.63	8.38	4.88	2.34	2.44	.72	3.13	4.75	5.09	6.44	3.25
2.37	237QH56	237VL-BK	56C	10.06	6.12	8.94	4.88	2.56	2.44	.75	3.38	5.06	5.44	6.31	3.25
2.37	237QH140	237VL-BK	143/145TC	10.06	6.12	8.94	4.88	2.56	2.44	.75	3.38	5.06	5.44	6.31	3.25
2.62	262QH56	262VL-BK	56C	11.25	7.13	10.13	5.75	3.00	2.88	.75	3.63	5.69	6.13	6.88	3.25
2.62	262QH140	262VL-BK	143/145TC	11.25	7.13	10.13	5.75	3.00	2.88	.75	3.63	5.69	6.13	6.88	3.25
2.62	262QH180	262VL-BK	182/184TC	11.25	7.13	10.13	5.75	3.00	2.88	.75	3.63	6.13	6.13	6.88	4.50
3.00	300QH56	300VL-BK	56C	12.88	8.50	11.38	6.13	3.31	3.06	.81	4.69	5.67	6.88	8.38	3.25
3.00	300QH140	300VL-BK	143/145TC	12.88	8.50	11.38	6.13	3.31	3.06	.81	4.69	5.67	6.88	8.38	3.25
3.00	300QH180	300VL-BK	182/184TC	12.88	8.50	11.38	6.13	3.31	3.06	.81	4.69	6.45	6.88	8.38	4.50
3.25	325QH56	325VL-BK	56C	13.38	8.50	11.88	6.13	3.56	3.06	.81	4.69	6.56	7.13	8.50	3.25
3.25	325QH140	325VL-BK	143/145TC	13.38	8.50	11.88	6.13	3.56	3.06	.81	4.69	6.56	7.13	8.50	3.25
3.25	325QH180	325VL-BK	182/184TC	13.38	8.50	11.88	6.13	3.56	3.06	.81	4.69	7.00	7.13	8.50	4.50
3.75	375QH56	375VL-BK	56C	15.69	10.50	13.94	8.00	3.44	4.00	.88	5.25	6.01	8.31	9.63	3.38
3.75	375QH140	375VL-BK	143/145TC	15.69	10.50	13.94	8.00	3.44	4.00	.88	5.25	6.01	8.31	9.63	3.38
3.75	375QH180	375VL-BK	182/184TC	15.69	10.50	13.94	8.00	3.44	4.00	.88	5.25	7.29	8.31	9.63	4.50
3.75	375QH210	375VL-BK	213/215TC	15.69	10.50	13.94	8.00	3.44	4.00	.88	5.25	7.29	8.31	9.63	4.50
4.50	450QH140	450VL-BK	143/145TC	16.94	10.88	14.94	9.56	4.63	4.78	.88	5.06	6.69	8.94	11.13	3.38
4.50	450QH180	450VL-BK	182/184TC	16.94	10.88	14.94	9.56	4.63	4.78	.88	5.06	7.97	8.94	11.13	4.50
4.50	450QH210	450VL-BK	213/215TC	16.94	10.88	14.94	9.56	4.63	4.78	.88	5.06	7.97	8.94	11.13	4.50
5.16	516QH180	516VL-BK	182/184TC	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	8.78	10.56	11.31	4.50
5.16	516QH210	516VL-BK	213/215TC	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	8.78	10.56	11.31	4.50
6.00	600QH180	600VL-BK	182/184TC	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	9.68	12.19	12.63	4.50
6.00	600QH210	600VL-BK	213/215TC	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	9.68	12.19	12.63	4.50

C.D.	N.E.M.A. Frame	T	V	INPUT		OUTPUT BORE +		Stock Ratios marked "x"								Wt. Lbs.		
				Bore	Keyway	U +.0015 -.0000	W Keyway	5	10	15	20	25	30	40	50		60	
																		3/16 x 3/32
1.33	56C	.344	2.66	.625	3/16 x 3/32	.6250	3/16 x 3/32	x	x	x	x	x	x	x	x	x	x	19.3
1.54	56C	.406	3.22	.625	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	x	25.4
1.54	143/145TC	.406	3.22	.875	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	-	-	-	-	-	-	-	-	25.4
1.75	56C	.406	2.85	.625	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	x	29.5
1.75	143/145TC	.406	2.85	.875	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	x	29.5
2.06	56C	.469	3.22	.625	3/16 x 3/32	1.4375	3/8 x 1/8	-	x	x	x	x	x	x	x	x	x	40.0
2.06	143/145TC	.469	3.22	.875	3/16 x 3/32	1.4375	3/8 x 1/8	x	x	x	x	x	x	x	x	x	x	40.0
2.37	56C	.469	3.16	.625	3/16 x 3/32	1.4375	3/8 x 1/8	-	x	x	x	x	x	x	x	x	x	55.0
2.37	143/145TC	.469	3.16	.875	3/16 x 3/32	1.4375	3/8 x 1/8	x	x	x	x	x	x	x	x	x	x	55.0
2.62	56C	.531	3.44	.625	3/16 x 3/32	1.9375	1/2 x 1/8	-	x	x	x	x	x	x	x	x	x	66.0
2.62	143/145TC	.531	3.44	.875	3/16 x 3/32	1.9375	1/2 x 1/8	-	x	x	x	x	x	x	x	x	x	66.0
2.62	182/184TC	.531	3.44	1.125	1/4 x 1/8	1.9375	1/2 x 1/8	x	x	-	-	-	-	-	-	-	-	66.0
3.00	56C	.531	4.19	.625	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	92.5
3.00	143/145TC	.531	4.19	.875	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	92.5
3.00	182/184TC	.531	4.19	1.125	1/4 x 1/8	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	92.5
3.25	56C	.531	4.25	.625	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	99.0
3.25	143/145TC	.531	4.25	.875	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	99.0
3.25	182/184TC	.531	4.25	1.125	1/4 x 1/8	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	99.0
3.75	56C	.594	4.81	.625	3/16 x 3/32	2.4375	5/8 x 3/16	-	-	-	-	-	-	-	-	-	-	141.0
3.75	143/145TC	.594	4.81	.875	3/16 x 3/32	2.4375	5/8 x 3/16	-	x	x	x	x	x	x	x	x	x	141.0
3.75	182/184TC	.594	4.81	1.125	1/4 x 1/8	2.4375	5/8 x 3/16	-	x	x	x	x	x	x	x	x	x	141.0
3.75	213/215TC	.594	4.81	1.375	5/16 x 5/32	2.4375	5/8 x 3/16	-	x	x	x	x	x	x	x	x	x	141.0
4.50	143/145TC	.656	5.56	.875	3/16 x 3/32	2.9375	3/4 x 1/4	-	-	-	-	-	-	-	-	-	-	183.0
4.50	182/184TC	.656	5.56	1.125	1/4 x 1/8	2.9375	3/4 x 1/4	-	-	-	-	-	-	-	-	-	-	183.0
4.50	213/215TC	.656	5.56	1.375	5/16 x 5/32	2.9375	3/4 x 1/4	-	x	x	x	x	x	x	x	x	x	183.0
5.16	182/184TC	.781	5.56	1.125	1/4 x 1/8	3.4375	7/8 x 1/4	-	-	-	-	-	-	-	-	-	-	278.0
5.16	213/215TC	.781	5.56	1.375	5/16 x 5/32	3.4375	7/8 x 1/4	-	x	x	x	x	x	x	x	x	x	278.0
6.00	182/184TC	.906	6.31	1.375	5/16 x 5/32	3.9375	1 x 1/4	-	-	-	-	-	-	-	-	-	-	420.0
6.00	213/215TC	.906	6.31	1.375	5/16 x 5/32	3.9375	1 x 1/4	-	-	-	-	-	-	-	-	-	-	420.0

**Table 2** Dimensions (Inches) for Style "QHVH" - With Vertical High Base

C.D.	Components ◆		N.E.M.A. Frame	HB	Wt. Lbs.	C.D.	Components ◆		N.E.M.A. Frame	HB	Wt. Lbs.
	Basic Unit ★	Base Kit					Basic Unit ★	Base Kit			
1.33	133Q56H	133VH-BK	56C	3.56	20.3	3.25	325Q56H	325VH-BK	56C	6.25	102.0
1.54	154Q56H	154VH-BK	56C	4.38	26.4	3.25	325Q140H	325VH-BK	143/145TC	6.25	102.0
1.54	154Q140H	154VH-BK	143/145TC	4.38	26.4	3.25	325Q180H	325VH-BK	182/184TC	6.25	102.0
1.75	175Q56H	175VH-BK	56C	4.38	30.5	3.75	375Q56H	375VH-BK	56C	7.00	144.5
1.75	175Q140H	175VH-BK	143/145TC	4.38	30.5	3.75	375Q140H	375VH-BK	143/145TC	7.00	144.5
2.06	206Q56H	206VH-BK	56C	4.88	41.0	3.75	375Q180H	375VH-BK	182/184TC	7.00	144.5
2.06	206Q140H	206VH-BK	143/145TC	4.88	41.0	3.75	375Q210H	375VH-BK	213/215TC	7.00	144.5
2.37	237Q56H	237VH-BK	56C	5.25	57.5	4.50	450Q140H	450VH-BK	143/145TC	8.56	191.0
2.37	237Q140H	237VH-BK	143/145TC	5.25	57.5	4.50	450Q180H	450VH-BK	182/184TC	8.56	191.0
2.62	262Q56H	262VH-BK	56C	5.60	70.0	4.50	450Q210H	450VH-BK	213/215TC	8.56	191.0
2.62	262Q140H	262VH-BK	143/145TC	5.60	70.0	5.16	516Q180H	516VH-BK	182/184TC	8.63	290.0
2.62	262Q180H	262VH-BK	182/184TC	5.60	70.0	5.16	516Q210H	516VH-BK	213/215TC	8.63	290.0
3.00	300Q56H	300VH-BK	56C	6.25	96.0	6.00	600Q210H	600VH-BK	213/215TC	9.63	435.0
3.00	300Q140H	300VH-BK	143/145TC	6.25	96.0						
3.00	300Q180H	300VH-BK	182/184TC	6.25	96.0						

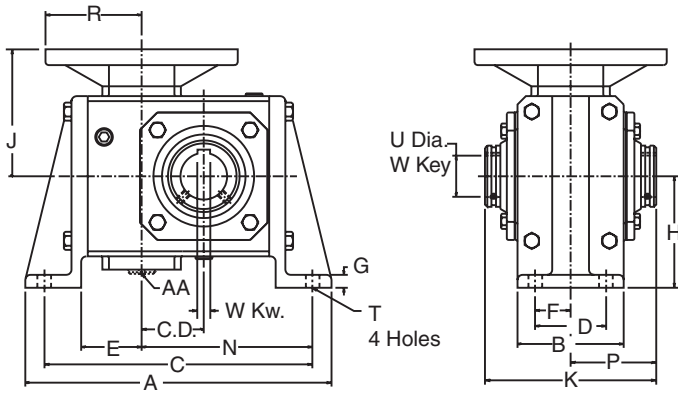
**Table 3** Fan Kit

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
300QH	300 FAN	3/8-24	3/4	5.93	1.6
325QH	325 FAN	3/8-24	3/4	6.04	1.6
375QH	375 FAN	3/8-24	3/4	7.66	2.8
450QH	450 FAN	3/8-24	3/4	8.36	2.8



**Style QHVJ**

Vertical "J" Base



Sample of Components

133Q56H10  
133VJ-BK

NOTE: If mounting fan unit, fan extends beyond "H" dimension.



For former MORSE Description see cross reference on pages 100 - 106.

**Table 1** Dimensions (Inches) for Style "QHVJ" - With Vertical "J" Base

C.D.	Components ◆		N.E.M.A. Frame	A	B	C	D	E	F	G	H	J	K	N	P
	Part No. ★	Base Kit													
1.33	133Q56H	133VJ-BK	56C	7.25	2.88	6.42	2.00	1.66	1.00	.53	2.94	3.94	5.31	3.93	2.66
1.54	154Q56H	154VJ-BK	56C	8.25	3.69	7.25	2.50	1.98	1.25	.69	3.50	4.52	6.44	4.39	3.22
1.54	154Q140H	154VJ-BK	143/145TC	8.25	3.69	7.25	2.50	1.98	1.25	.69	3.50	4.52	6.44	4.39	3.22
1.75	175Q56H	175VJ-BK	56C	8.63	3.38	7.63	2.50	2.00	1.25	.69	3.50	4.38	5.70	4.75	2.85
1.75	175Q140H	175VJ-BK	143/145TC	8.63	3.38	7.63	2.50	2.00	1.25	.69	3.50	4.38	5.70	4.75	2.85
2.06	206Q56H	206VJ-BK	56C	9.75	3.75	8.62	2.62	2.09	1.31	.72	3.94	4.75	6.44	5.46	3.22
2.06	206Q140H	206VJ-BK	143/145TC	9.75	3.75	8.62	2.62	2.09	1.31	.72	3.94	4.75	6.44	5.46	3.22
2.37	237Q56H	237VJ-BK	56C	10.30	4.06	9.19	2.88	2.12	1.44	.75	4.06	5.06	6.31	6.00	3.16
2.37	237Q140H	237VJ-BK	143/145TC	10.30	4.06	9.19	2.88	2.12	1.44	.75	4.06	5.06	6.31	6.00	3.16
2.62	262Q56H	262VJ-BK	56C	11.75	4.44	10.38	3.13	2.50	1.56	.75	4.75	5.69	6.88	6.75	3.44
2.62	262Q140H	262VJ-BK	143/145TC	11.75	4.44	10.38	3.13	2.50	1.56	.75	4.75	5.69	6.88	6.75	3.44
2.62	262Q180H	262VJ-BK	182/184TC	11.75	4.44	10.38	3.13	2.50	1.56	.75	4.75	6.13	6.88	6.75	3.44
3.00	300Q56H	300VJ-BK	56C	13.50	5.00	12.25	4.00	2.69	2.00	.81	5.94	5.67	8.38	7.94	4.19
3.00	300Q140H	300VJ-BK	143/145TC	13.50	5.00	12.25	4.00	2.69	2.00	.81	5.94	5.67	8.38	7.94	4.19
3.00	300Q180H	300VJ-BK	182/184TC	13.50	5.00	12.25	4.00	2.69	2.00	.81	5.94	6.45	8.38	7.94	4.19
3.25	325Q56H	325VJ-BK	56C	14.00	5.00	12.75	4.00	2.69	2.00	.81	5.69	6.56	8.50	8.44	4.25
3.25	325Q140H	325VJ-BK	143/145TC	14.00	5.00	12.75	4.00	2.69	2.00	.81	5.69	6.56	8.50	8.44	4.25
3.25	325Q180H	325VJ-BK	182/184TC	14.00	5.00	12.75	4.00	2.69	2.00	.81	5.69	7.00	8.50	8.44	4.25
3.75	375Q56H	375VJ-BK	56C	15.06	6.25	13.31	4.75	2.94	2.38	.88	6.00	6.01	9.63	9.06	4.81
3.75	375Q140H	375VJ-BK	143/145TC	15.06	6.25	13.31	4.75	2.94	2.38	.88	6.00	6.01	9.63	9.06	4.81
3.75	375Q180H	375VJ-BK	182/184TC	15.06	6.25	13.31	4.75	2.94	2.38	.88	6.00	7.29	9.63	9.06	4.81
3.75	375Q210H	375VJ-BK	213/215TC	15.06	6.25	13.31	4.75	2.94	2.38	.88	6.00	7.29	9.63	9.06	4.81
4.50	450Q140H	450VJ-BK	143/145TC	16.94	7.38	14.94	5.81	3.06	2.91	.88	7.38	6.69	11.13	10.50	5.56
4.50	450Q180H	450VJ-BK	182/184TC	16.94	7.38	14.94	5.81	3.06	2.91	.88	7.38	7.97	11.13	10.50	5.56
4.50	450Q210H	450VJ-BK	213/215TC	16.94	7.38	14.94	5.81	3.06	2.91	.88	7.38	7.97	11.13	10.50	5.56
5.16	516Q180H	516VJ-BK	182/184TC	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	8.78	11.13	12.35	5.66
5.16	516Q210H	516VJ-BK	213/215TC	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	8.78	11.13	12.35	5.66
6.00	600Q180H	600VJ-BK	182/184TC	22.00	8.13	20.00	6.38	4.12	3.19	1.13	8.50	9.68	12.63	14.25	6.31
6.00	600Q210H	600VJ-BK	213/215TC	22.00	8.13	20.00	6.38	4.12	3.19	1.13	8.50	9.68	12.63	14.25	6.31

C.D.	N.E.M.A. Frame	R	T	INPUT		OUTPUT BORE +		Stock Ratios marked "x"								Wt. Lbs.		
				Bore	Keyway	U +.0015 -.0000	W Keyway	5	10	15	20	25	30	40	50		60	
1.33	56C	3.25	.344	.625	3/16 x 3/32	.6250	3/16 x 3/32	x	x	x	x	x	x	x	x	x	x	18.30
1.54	56C	3.25	.406	.625	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	x	24.0
1.54	143/145TC	3.25	.406	.875	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	-	-	-	-	-	-	-	-	24.0
1.75	56C	3.25	.406	.625	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	x	27.0
1.75	143/145TC	3.25	.406	.875	3/16 x 3/32	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	x	27.0
2.06	56C	3.25	.469	.625	3/16 x 3/32	1.4375	3/8 x 1/8	-	x	x	x	x	x	x	x	x	x	36.0
2.06	143/145TC	3.25	.469	.875	3/16 x 3/32	1.4375	3/8 x 1/8	x	x	x	x	x	x	x	x	x	x	36.0
2.37	56C	3.25	.469	.625	3/16 x 3/32	1.4375	3/8 x 1/8	-	x	x	x	x	x	x	x	x	x	50.0
2.37	143/145TC	3.25	.469	.875	3/16 x 3/32	1.4375	3/8 x 1/8	x	x	x	x	x	x	x	x	x	x	50.0
2.62	56C	3.25	.531	.625	3/16 x 3/32	1.9375	1/2 x 1/8	-	x	x	x	x	x	x	x	x	x	61.0
2.62	143/145TC	3.25	.531	.875	3/16 x 3/32	1.9375	1/2 x 1/8	-	x	x	x	x	x	x	x	x	x	61.0
2.62	182/184TC	4.50	.531	1.125	1/4 x 1/8	1.9375	1/2 x 1/8	x	x	-	-	-	-	-	-	-	-	61.0
3.00	56C	3.25	.531	.625	3/16 x 3/32	2.1875	1/2 x 3/16	-	-	x	x	x	x	x	x	x	x	86.0
3.00	143/145TC	3.25	.531	.875	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	86.0
3.00	182/184TC	4.50	.531	1.125	1/4 x 1/8	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	86.0
3.25	56C	3.25	.531	.625	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	89.0
3.25	143/145TC	3.25	.531	.875	3/16 x 3/32	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	89.0
3.25	182/184TC	4.50	.531	1.125	1/4 x 1/8	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	89.0
3.75	56C	3.38	.594	.625	3/16 x 3/32	2.4375	5/8 x 3/16	-	-	NA	NA	-	-	-	-	-	-	124.5
3.75	143/145TC	3.38	.594	.875	3/16 x 3/32	2.4375	5/8 x 3/16	-	x	x	x	x	x	x	x	x	x	124.5
3.75	182/184TC	4.50	.594	1.125	1/4 x 1/8	2.4375	5/8 x 3/16	-	x	x	x	x	x	x	x	x	x	124.5
3.75	213/215TC	4.50	.594	1.375	5/16 x 5/32	2.4375	5/8 x 3/16	-	x	x	NA	-	-	-	-	-	-	124.5
4.50	143/145TC	3.38	.656	.875	3/16 x 3/32	2.9375	3/4 x 1/4	-	-	-	-	-	-	-	x	x	x	161.0
4.50	182/184TC	4.50	.656	1.125	1/4 x 1/8	2.9375	3/4 x 1/4	-	-	x	x	x	x	x	x	x	x	161.0
4.50	213/215TC	4.50	.656	1.375	5/16 x 5/32	2.9375	3/4 x 1/4	-	x	x	x	x	x	x	x	x	x	161.0
5.16	182/184TC	4.50	.781	1.125	1/4 x 1/8	3.4375	7/8 x 1/4	-	-	-	-	-	-	-	x	x	x	248.0
5.16	213/215TC	4.50	.781	1.375	5/16 x 5/32	3.4375	7/8 x 1/4	-	x	x	x	x	x	x	-	-	-	248.0
6.00	182/184TC	4.50	.906	1.375	5/16 x 5/32	3.9375	1 x 1/4	-	-	-	-	-	-	-	x	x	x	365.0
6.00	213/215TC	4.50	.906	1.375	5/16 x 5/32	3.9375	1 x 1/4	-	-	-	-	-	-	-	x	x	x	365.0

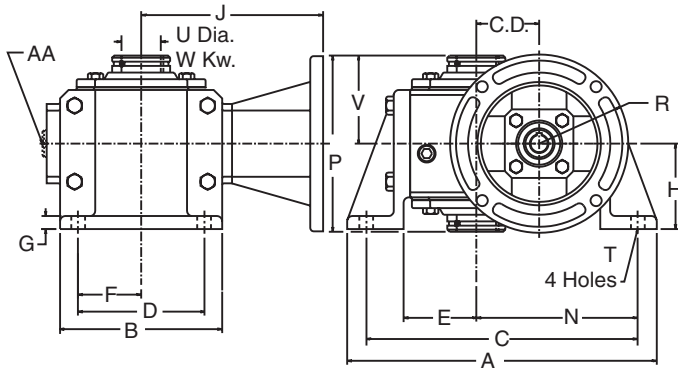
**Table 2** Fan Kit

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
300QH	300 FAN	3/8-24	3/4	5.93	1.6
325QH	325 FAN	3/8-24	3/4	6.04	1.6
375QH	375 FAN	3/8-24	3/4	7.66	2.8
450QH	450 FAN	3/8-24	3/4	8.36	2.8
516QH	516 FAN	3/8-24	3/4	9.18	2.8
600QH	600 FAN	3/8-24	3/4	10.70	4.2

- ★ To complete Part No. add ratio symbol to size - for example 133Q56H10.
- ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 2.
- ✦ For adapting reducers to shafts smaller than output bore, use Bushing Kits; see Table 1, page 82. Consult factory for ratios not shown as standard.

**Style CHVL**

Vertical Low Base



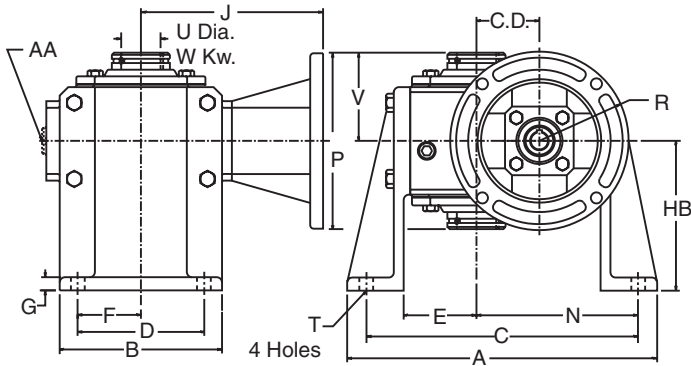
Assembly Drawing and Sample of Components



133UH10  
133VL-BK  
133MAK56

**Style CHVH**

Vertical High Base



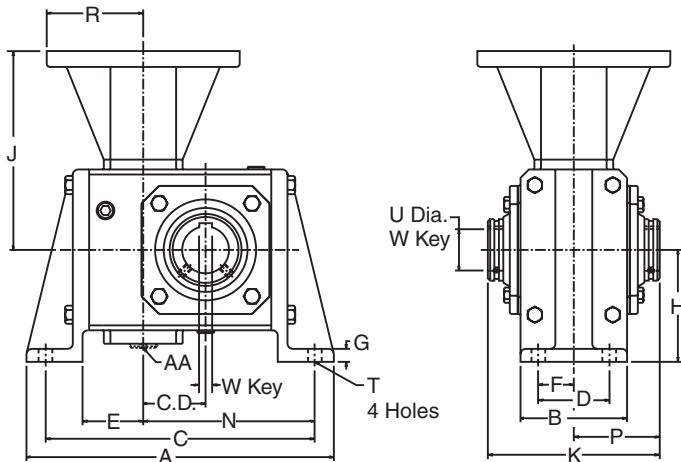
Assembly Drawing and Sample of Components



133UH10  
133VH-BK  
133MAK56

**Style CHVJ**

Vertical "J" Base



Sample of Components

133UH10  
133VJ-BK  
133MAK56

NOTE: If mounting fan unit, fan extends beyond "H" dimension.

**For former MORSE Description see cross reference on pages 100 - 106.**

**Table 1** Dimensions (Inches) for Style "CHVL" - Vertical Low Base

C.D.	Components ◆			A	B	C	D	E	F	G	H	N	P	T	V
	Basic Unit ★	Adapter Kit	Base Kit												
1.33	133UH	See Table No. 5	133VL-BK	7.10	4.00	6.16	3.25	1.81	1.63	.53	2.31	3.69	5.31	.344	2.66
1.54	154UH		154VL-BK	8.06	5.12	7.00	4.00	1.97	2.00	.69	3.00	4.28	6.44	.406	3.22
1.75	175UH		175VL-BK	8.44	4.81	7.38	4.00	2.12	2.00	.69	3.00	4.50	5.70	.406	2.85
2.06	206UH		206VL-BK	9.50	5.63	8.38	4.88	2.34	2.44	.72	3.13	5.09	6.44	.469	3.22
2.37	237UH		237VL-BK	10.06	6.12	8.94	4.88	2.56	2.44	.75	3.38	5.44	6.31	.469	3.16
2.62	262UH		262VL-BK	11.25	7.13	10.13	5.75	3.00	2.88	.75	3.63	6.13	6.88	.531	3.44
3.00	300UH		300VL-BK	12.88	8.50	11.38	6.13	3.31	3.06	.81	4.69	6.88	8.38	.531	4.19
3.25	325UH		325VL-BK	13.38	8.50	11.88	6.13	3.56	3.06	.81	4.69	7.13	8.50	.531	4.25
3.75	375UH		375VL-BK	15.69	10.50	13.94	8.00	3.44	4.00	.88	5.25	8.31	9.63	.594	4.81
4.50	450UH		450VL-BK	16.94	10.88	14.94	9.56	4.63	4.78	.88	5.06	8.94	11.13	.688	5.56
5.16	516UH		516VL-BK	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	10.56	11.31	.781	5.66
6.00	600UH		600VL-BK	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	12.19	12.63	.906	6.31

C.D.	OUTPUT BORE †		Stock Ratios marked "x"										Wt. Lbs.	
	U + .0015 - .0000	W Keyway	5	10	15	20	25	30	40	50	60			
1.33	.6250	3/16 x 3/32	x	x	x	x	x	x	x	x	x	x	x	23.3
1.54	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	x	-	30.4
1.75	1.0000	1/4 x 1/8	x	x	x	x	x	x	x	x	x	x	x	34.5
2.06	1.4375	3/8 x 1/8	x	x	x	x	x	x	x	x	x	x	x	42.0
2.37	1.4375	3/8 x 1/8	x	x	x	x	x	x	x	x	x	x	x	60.0
2.62	1.9375	1/2 x 1/8	x	x	x	x	x	x	x	x	x	x	x	74.0
3.00	2.1875	1/2 x 3/16	x	x	x	x	x	x	x	x	x	x	x	99.5
3.25	2.1875	1/2 x 3/16	-	x	x	x	x	x	x	x	x	x	x	106.0
3.75	2.4375	5/8 x 3/16	-	x	x	x	x	x	x	x	x	x	x	146.5
4.50	2.9375	3/4 x 1/4	-	x	x	x	x	x	x	x	x	x	x	189.0
5.16	3.4375	7/8 x 1/4	-	x	x	x	x	x	x	x	x	x	x	288.0
6.00	3.9375	1 x 1/4	x	x	x	x	x	x	x	x	x	x	x	427.0

**Table 2** Dimensions (Inches) for Style "CHVH"

C.D.	Components ◆			HB	Wt. Lbs.
	Base Unit ★	Adapter Kit	Base Kit		
133UH	See Table No. 5	133VH-BK	3.56	24.3	
154UH		154VH-BK	4.38	31.4	
175UH		175VH-BK	4.38	35.5	
206UH		206VH-BK	4.88	43.0	
237UH		237VH-BK	5.25	62.5	
262UH		262VH-BK	5.60	78.0	
300UH		300VH-BK	6.25	103.0	
325UH		325VH-BK	6.25	109.0	
375UH		375VH-BK	7.00	150.0	
450UH		450VH-BK	8.56	197.0	
516UH		516VH-BK	8.63	300.0	
600UH		600VH-BK	9.63	442.0	

**Table 3** Fan Kit

Basic Unit ★	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
300UH	300 FAN	3/8-24	3/4	5.93	1.6
325UH	325 FAN	3/8-24	3/4	6.04	1.6
375UH	375 FAN	3/8-24	3/4	7.66	2.8
450UH	450 FAN	3/8-24	3/4	8.36	2.8
516UH	516 FAN	3/8-24	3/4	9.18	2.8
600UH	600 FAN	3/8-24	3/4	10.70	4.2

**Table 4** Dimensions (Inches) for Style "CHVJ" - Vertical "J" Base

C.D.	Components ◆			A	B	C	D	E	F	G	H	K	N	P	T	Wt. Lbs.
	Base Unit ★	Adapter Kit	Base Kit													
133UH	See Table No. 5	133VJ-BK	7.28	2.88	6.42	2.00	1.66	1.00	.53	2.94	5.31	3.93	2.66	.344	22.0	
154UH		154VJ-BK	8.25	3.69	7.25	2.50	1.98	1.25	.69	3.50	6.44	4.39	3.22	.406	29.0	
175UH		175VJ-BK	8.63	3.38	7.63	2.50	2.00	1.25	.69	3.50	5.70	4.75	2.85	.406	32.0	
206UH		206VJ-BK	9.75	3.75	8.62	2.62	2.09	1.31	.72	3.94	6.44	5.46	3.22	.469	38.0	
237UH		237VJ-BK	10.30	4.06	9.19	2.88	2.12	1.44	.75	4.06	6.31	6.00	3.16	.469	55.0	
262UH		262VJ-BK	11.75	4.44	10.38	3.13	2.50	1.56	.75	4.75	6.88	6.75	3.44	.531	69.0	
300UH		300VJ-BK	13.50	5.00	12.25	4.00	2.69	2.00	.81	5.94	8.38	7.94	4.19	.531	93.0	
325UH		325VJ-BK	14.00	5.00	12.75	4.00	2.69	2.00	.81	5.69	8.50	8.44	4.25	.531	96.0	
375UH		375VJ-BK	15.06	6.25	13.31	4.75	2.94	2.38	.88	6.00	9.63	9.06	4.81	.594	130.0	
450UH		450VJ-BK	16.94	7.38	14.94	5.81	3.06	2.91	.88	7.38	11.13	10.50	5.56	.688	167.0	
516UH		516VJ-BK	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	11.31	12.35	5.66	.781	258.0	
600UH		600VJ-BK	22.00	8.13	20.00	6.38	4.12	3.19	1.13	8.50	12.63	14.25	6.31	.906	372.0	

**Table 5** N.E.M.A. Frame Adapter Kits and Dimensions

C.D.	56C		143/145TC			182/184TC			213/215TC			254/256TC				
	Input: .625 Kw.: 3/16 x 3/32		Input: .875 Kw.: 3/16 x 3/32			Input: 1.125 Kw.: 1/4 x 1/8			Input: 1.375 Kw.: 5/16 x 5/32			Input: 1.625 Kw.: 3/8 x 3/16				
	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	
1.33	133MAK56	6.38	3.25	133MAK140												
1.54	154-206MAK56	7.13	3.25	154-206MAK140	7.13	3.25										
1.75	154-206MAK56	7.00	3.25	154-206MAK140	7.00	3.25										
2.06	154-206MAK56	7.37	3.25	154-206MAK140	7.37	3.25										
2.37	237MAK56	7.69	3.25	237MAK140	7.69	3.25										
2.62	262MAK56	8.50	3.25	262MAK140	8.50	3.25	262MAK180	9.72	4.50							
3.00	300-325MAK56	9.35	3.25	300-325MAK140	9.35	3.25	300-325MAK180	10.57	4.50							
3.25	300-325MAK56	9.37	3.25	300-325MAK140	9.37	3.25	300-325MAK180	10.59	4.50	325MAK210						
3.75	375MAK56	11.47	3.38	375MAK140	11.47	3.38	375MAK180	12.92	4.50	375MAK210	12.92	4.50				
4.50				450MAK140	12.15	3.38	450MAK180	13.60	4.50	450MAK210	13.60	4.50				
5.16							516MAK180	14.40	4.50	516MAK210	14.40	4.50				
6.00							600MAK180	16.97	4.50	600MAK210	16.97	4.50	600MAK250	16.97	4.50	

★ To complete Part No. add ratio symbol to size - for example 133UH10.  
 ◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see Table 3.  
 † For adapting reducers to shafts smaller than output bore, use Bushing Kits; see Table 1, page 82.  
 Consult factory for ratios not shown as standard.



**Table 1 Bushings for Raider Hollow Shaft Reducers**

Reducer C.D.	Shaft Dia.	Shaft Keyseat	Bushing Kit No.	Wt. Lbs.	Reducer C.D.	Shaft Dia.	Shaft Keyseat	Bushing Kit No.	Wt. Lbs.	
1.54 & 1.75	3/4	3/16 x 3/32 x 1 1/8	100BU012	.3	3.75	1 3/8	5/16 x 5/32 x 3 1/2	207BU106	6.4	
	7/8	3/16 x 3/32 x 1 1/8	100BU014	.1		1 7/16	3/8 x 3/16 x 3 1/2	207BU107	6.1	
	15/16	1/4 x 1/8 x 1 1/8	100BU015	.1		1 1/2	3/8 x 3/16 x 3 1/2	207BU108	5.8	
2.06 & 2.37	3/4	3/16 x 3/32 x 2	107BU012	1.4	4.50	1 5/8	3/8 x 3/16 x 3 1/2	207BU110	5.2	
	7/8	3/16 x 3/32 x 2	107BU014	1.2		1 11/16	3/8 x 3/16 x 3 1/2	207BU111	4.9	
	15/16	1/4 x 1/8 x 2	107BU015	1.1		1 3/4	3/8 x 3/16 x 3 1/2	207BU112	4.5	
	1	1/4 x 1/8 x 2	107BU100	1.0		1 7/8	1/2 x 1/4 x 3 1/2	207BU114	3.8	
	1 1/16	1/4 x 1/8 x 2	107BU101	.9		1 15/16	1/2 x 1/4 x 3 1/2	207BU115	3.5	
	1 1/8	1/4 x 1/8 x 2	107BU102	.8		2	1/2 x 1/4 x 3 1/2	207BU200	3.1	
	1 3/16	1/4 x 1/8 x 2	107BU103	.6		2 1/8	1/2 x 1/4 x 3 1/2	207BU202	2.3	
	1 1/4	1/4 x 1/8 x 2	107BU104	.5		2 3/16	1/2 x 1/4 x 3 1/2	207BU203	1.8	
	1 5/16	5/16 x 5/32 x 2	107BU105	.4		2 1/4	1/2 x 1/4 x 3 1/2	207BU204	1.4	
	2.62	15/16	1/4 x 1/8 x 2 1/2	115BU015		3.2	5.16	1 7/16	3/8 x 3/16 x 4	215BU107
1		1/4 x 1/8 x 2 1/2	115BU100	3.1	1 1/2	3/8 x 3/16 x 4		215BU108	11.4	
1 1/6		1/4 x 1/8 x 2 1/2	115BU101	3.0	1 11/16	3/8 x 3/16 x 4		215BU111	10.3	
1 1/8		1/4 x 1/8 x 2 1/2	115BU102	2.8	1 3/4	3/8 x 3/16 x 4		215BU112	9.9	
1 3/16		1/4 x 1/8 x 2 1/2	115BU103	2.7	1 7/8	1/2 x 1/4 x 4		215BU114	9.1	
1 1/4		1/4 x 1/8 x 2 1/2	115BU104	2.5	1 15/16	1/2 x 1/4 x 4		215BU115	8.7	
1 5/16		5/16 x 5/32 x 2 1/2	115BU105	2.3	2	1/2 x 1/4 x 4		215BU200	8.3	
1 3/8		5/16 x 5/32 x 2 1/2	115BU106	2.1	2 3/16	1/2 x 1/4 x 4		215BU203	6.9	
1 7/16		3/8 x 3/16 x 2 1/2	115BU107	1.9	2 1/4	1/2 x 1/4 x 4		215BU204	6.4	
1 1/2		3/8 x 3/16 x 2 1/2	115BU108	1.7	2 7/16	5/8 x 5/16 x 4		215BU207	4.8	
1 5/8		3/8 x 3/16 x 2 1/2	115BU110	1.3	2 1/2	5/8 x 5/16 x 4		215BU208	4.3	
1 11/16		3/8 x 3/16 x 2 1/2	115BU111	1.1	2 11/16	5/8 x 5/16 x 4		215BU211	2.5	
3.00 & 3.25	1 3/4	3/8 x 3/16 x 2 1/2	115BU112	.8	6.00	1 15/16	1/2 x 1/4 x 4 1/2	307BU115	16.2	
	1 3/16	1/4 x 1/8 x 2 1/2	203BU103	3.8		2	1/2 x 1/4 x 4 1/2	307BU200	15.7	
	1 1/4	1/4 x 1/8 x 2 1/2	203BU104	3.6		2 3/16	1/2 x 1/4 x 4 1/2	307BU203	14.1	
	1 5/16	5/16 x 5/32 x 2 1/2	203BU105	3.5		2 1/4	1/2 x 1/4 x 4 1/2	307BU204	13.6	
	1 3/8	5/16 x 5/32 x 2 1/2	203BU106	3.4		2 7/16	5/8 x 5/16 x 4 1/2	307BU207	11.8	
	1 7/16	3/8 x 3/16 x 2 1/2	203BU107	3.1		2 1/2	5/8 x 5/16 x 4 1/2	307BU208	11.2	
	1 1/2	3/8 x 3/16 x 2 1/2	203BU108	2.9		2 11/16	5/8 x 5/16 x 4 1/2	307BU211	9.3	
	1 5/8	3/8 x 3/16 x 2 1/2	203BU110	2.4		2 7/8	3/4 x 3/8 x 4 1/2	307BU214	7.1	
	1 11/16	3/8 x 3/16 x 2 1/2	203BU111	2.2		2 15/16	3/4 x 3/8 x 4 1/2	307BU215	6.4	
	1 3/4	3/8 x 3/16 x 2 1/2	203BU112	2.0		6.00	2 7/16	5/8 x 5/16 x 4 1/2	315BU207	19.2
	1 7/8	1/2 x 1/4 x 2 1/2	203BU114	1.5			2 1/2	5/8 x 5/16 x 4 1/2	315BU208	18.6
	1 15/16	1/2 x 1/4 x 2 1/2	203BU115	1.2			2 11/16	5/8 x 5/16 x 4 1/2	315BU211	16.6
	2	1/2 x 1/4 x 2 1/2	203BU200	.9			2 13/16	3/4 x 3/8 x 4 1/2	315BU213	15.2
							2 7/8	3/4 x 3/8 x 4 1/2	315BU214	14.5
							2 15/16	3/4 x 3/8 x 4 1/2	315BU215	13.8
				3	3/4 x 3/8 x 4 1/2		315BU300	13.1		
				3 3/16	3/4 x 3/8 x 4 1/2		315BU303	10.7		
				3 7/16	7/8 x 7/16 x 4 1/2	315BU307	7.4			



**Table 2 Fan Kit**

Fan Kit	Wt. Lbs.
300 Fan Kit	1.6
325 Fan Kit	1.6
375 Fan Kit	2.8
450 Fan Kit	2.8
516 Fan Kit	2.8
600 Fan Kit	4.2

For former MORSE Description see cross reference on pages 100 - 106.



**Table 1 N.E.M.A. Frame Adapter Kit**

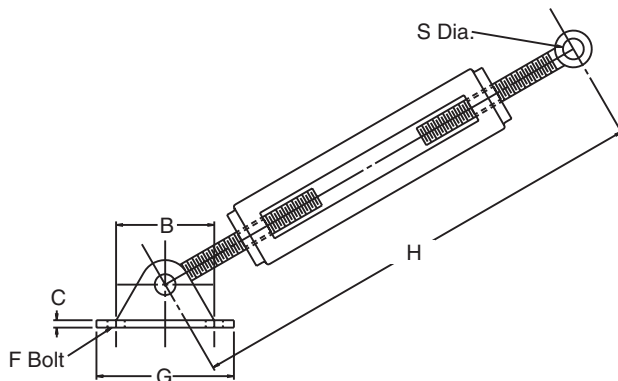
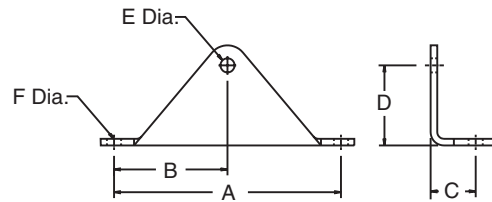
Kit Part No.	Frame Size	Wt./Lbs.	Motor Cplg Half Part No.*	Reducer Cplg Half Part No.*	Sleeve Part No.*
133MAK56	56C	7.0	FA0522	FA0521	FA0531
154-206MAK56	56C	7.0	FA0522	FA0522	FA0531
154-206MAK140	143/145TC	7.0	FA0529	FA0522	FA0531
237MAK56	56C	8.0	FA0522	FA0523	FA0531
237MAK140	143/145TC	8.0	FA0529	FA0523	FA0531
262MAK56	56C	8.0	FA0522	FA0523	FA0531
262MAK140	143/145TC	8.0	FA0529	FA0523	FA0531
262MAK180	182/184TC	11.0	FA0530	FA0533	FA0532
300-325MAK56	56C	11.0	FA0522	FA0524	FA0531
300-325MAK140	143/145TC	11.0	FA0529	FA0524	FA0531
300-325MAK180	182/184TC	11.0	FA0530	FA0534	FA0532
325MAK210	213/215TC	11.0	FA0540	FA0534	FA0532
375MAK56	56C	12.5	FA0539	FA0525	FA0532
375MAK140	143/145TC	12.5	FA0534	FA0525	FA0532
375MAK180	182/184TC	12.5	FA0535	FA0525	FA0532
375MAK210	213/215TC	12.5	FA0540	FA0525	FA0532
450MAK140	143/145TC	14.0	FA0534	FA0536	FA0532
450MAK180	182/184TC	16.0	FA0535	FA0536	FA0532
450MAK210	213/215TC	16.0	FA0540	FA0536	FA0532
516MAK180	182/184TC	18.0	FA0535	FA0538	FA0532
516MAK210	213/215TC	18.0	FA0540	FA0538	FA0532
600MAK180	182/184TC	22.0	FA0543	FA0542	FA0546
600MAK210	213/215TC	22.0	FA0544	FA0542	FA0546
600MAK250	254/256TC	30.0	FA0545	FA0542	FA0546



\* These numbers are shown for reference only. The parts are included in the "Motor Adapter Kit". They can be ordered separately for replacement purposes.

**Table 2 Dimensions (Inches) for Torque Arm Kit**

Part No.	A	B	C	D	E	F	Wt./Lbs.
133H-TAK	3.25	1.63	.75	1.22	.53	.344	.6
154H-TAK	4.19	2.09	.82	1.08	.53	.344	.7
175H-TAK	4.19	2.09	.95	1.38	.53	.344	.9
206H-TAK	5.00	2.50	1.28	1.97	.53	.406	1.0
237H-TAK	5.00	2.50	1.28	2.25	.53	.406	1.2
262H-TAK	6.38	3.19	1.31	2.38	.53	.406	1.4
300H-TAK	7.00	3.50	1.44	2.62	.53	.468	1.7
325H-TAK	7.50	3.75	1.35	3.19	.53	.468	2.0
375H-TAK	8.50	4.25	1.68	3.00	.53	.531	2.5
450H-TAK	9.56	4.78	1.94	3.50	.81	.687	3.4
516H-TAK	11.00	5.50	1.75	4.00	.81	.687	5.5
600H-TAK	12.75	6.38	1.75	4.63	.81	.687	6.9

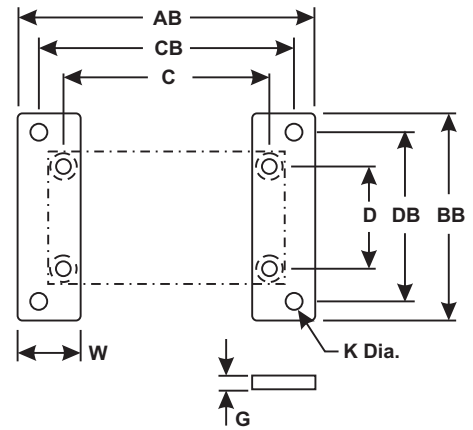


**Table 3 Dimensions (Inches) for Adjustable Torque Arm Kit**

Part No.	B	C	F	G	H	S	Wt./Lbs.
133-175ATAK	2.50	.18	.375	3.50	9-15	.53	2.0
206-375ATAK	2.50	.18	.375	3.50	24-30	.53	3.8
450-600ATAK	3.00	.18	.438	4.25	27-33	.81	6.3

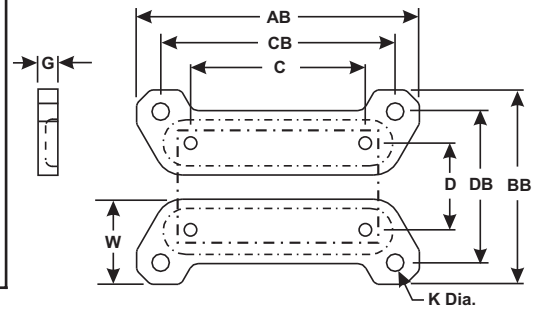
**Table 1 Dimensions (Inches) for Horizontal Econo Base Kit**

Part No.	AB	BB	C	CB	D	DB	G	K	W	Wt./Lbs.
100E-BK	4.37	3.50	2.63	3.75	1.69	2.88	0.25	0.344	1.25	0.8
133E-BK	5.37	4.19	3.25	4.37	2.00	3.31	0.25	0.344	1.50	1.1
154E-BK	6.31	5.38	4.19	5.25	2.75	4.31	0.25	0.406	1.50	1.3
175E-BK	6.81	5.50	4.19	5.75	2.75	4.50	0.25	0.406	1.81	1.7
206E-BK	7.56	5.75	5.00	6.38	2.88	4.69	0.25	0.469	1.75	1.9
237E-BK	8.30	6.12	5.00	7.06	2.88	4.88	0.38	0.469	2.25	4.0
262E-BK	9.00	6.25	6.38	8.00	3.38	5.25	0.38	0.531	1.94	3.8
300E-BK	9.76	7.12	7.00	8.44	4.00	5.88	0.38	0.531	2.00	4.2
325E-BK	10.50	7.12	7.50	9.50	4.00	6.12	0.38	0.531	2.00	4.5



**Table 2 Dimensions (Inches) for Horizontal Standard Base Kit**

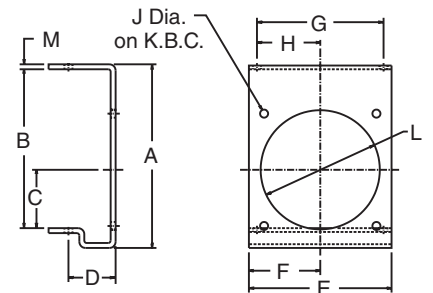
Part No.	AB	BB	C	CB	D	DB	G	K	W	Wt./Lbs.
100S-BK	4.37	3.50	2.63	3.75	1.69	2.88	0.38	0.344	N/A *	0.9
133S-BK	5.38	4.19	3.25	4.38	2.00	3.31	0.47	0.344	N/A *	1.3
154S-BK	6.44	5.44	4.19	5.25	2.75	4.31	0.59	0.406	2.04	1.5
175S-BK	7.00	5.56	4.19	5.75	2.75	4.50	0.69	0.406	2.18	2.0
206S-BK	7.69	5.76	5.00	6.38	2.88	4.69	0.72	0.469	2.31	2.2
237S-BK	8.50	6.19	5.00	7.06	2.88	4.88	0.75	0.469	2.47	4.4
262S-BK	9.25	6.50	6.38	8.00	3.38	5.25	0.75	0.531	2.50	4.6
300S-BK	10.17	7.38	7.00	8.44	4.00	5.88	0.88	0.531	2.62	4.8
325S-BK	11.12	7.75	7.50	9.50	4.00	6.13	0.88	0.531	2.81	5.2
375S-BK	12.00	8.63	8.50	10.38	4.75	7.00	0.94	0.594	2.88	10.0
450S-BK	13.88	9.33	9.56	12.12	5.81	7.63	1.12	0.656	2.88	17.0
516S-BK	16.38	10.37	11.00	14.13	5.81	8.37	1.12	0.781	3.47	26.0
600S-BK	19.00	12.00	12.75	16.50	6.38	9.50	1.25	0.906	4.00	43.0



\*One-piece Base

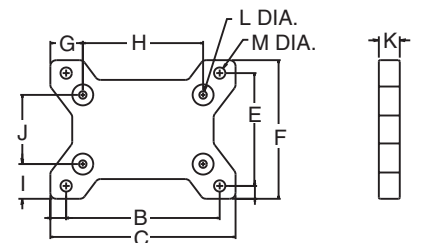
**Table 3 Dimensions (Inches) for Flange Kit**

Part No.	A	B	C	D	E	F	G	H	J	K	L	M	Wt./Lbs.
133H-FK	5.56	4.66	1.72	2.00	4.25	2.13	3.25	1.63	.344	5.000	3.63	.19	2.7
154H-FK	6.19	5.38	1.91	2.19	4.75	2.38	4.19	2.09	.344	5.000	3.63	.19	3.3
175H-FK	6.66	5.75	2.06	2.13	4.81	2.41	4.19	2.09	.344	5.875	4.06	.19	3.4
206H-FK	7.43	6.38	2.28	2.31	5.75	2.88	5.00	2.50	.406	6.500	4.50	.19	4.6
237H-FK	8.24	6.94	2.50	2.28	6.13	3.06	5.00	2.50	.406	7.500	5.00	.19	5.1
262H-FK	9.25	8.00	2.94	2.37	7.18	3.59	6.38	3.19	.406	8.000	6.00	.25	8.4
300H-FK	10.02	8.88	3.25	2.50	8.50	4.25	7.00	3.50	.406	9.000	7.00	.25	10.1
325H-FK	10.89	9.38	3.50	3.25	8.50	4.25	7.50	3.75	.563	10.000	7.00	.25	11.9
375H-FK	11.85	10.44	3.88	3.08	9.54	4.77	8.50	4.25	.563	11.500	8.00	.25	13.3
450H-FK	13.10	11.94	4.50	3.96	10.88	5.44	9.56	4.78	.563	11.500	9.00	.31	21.8
516H-FK	15.33	13.75	5.31	3.67	12.50	6.25	11.00	5.50	.687	14.000	10.00	.31	26.9
600H-FK	18.22	16.50	6.50	4.03	14.50	7.25	12.75	6.38	.687	15.563	12.00	.38	44.7

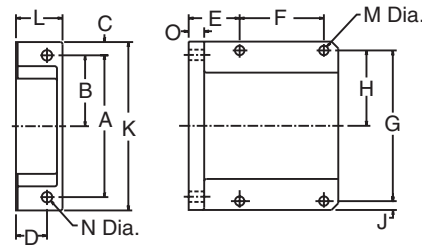


**Table 4 Dimensions (Inches) for Solid Horizontal One Piece Base**

Part No.	A	B	C	D	E	F	G	H	I	J	K	L Dia.	M Dia.
133-BKS	.50	4.38	5.38	.44	3.31	4.19	1.06	3.25	1.10	2.00	.53	.38	.38
154-BKS	.60	5.25	6.44	.57	4.32	5.46	1.13	4.19	1.35	2.75	.59	.38	.44
175-BKS	.62	5.75	7.00	.53	4.50	5.56	1.41	4.19	1.40	2.75	.69	.38	.44
206-BKS	.66	6.38	7.69	.53	4.69	5.76	1.35	5.00	1.44	2.88	.72	.44	.50
237-BKS	.72	7.06	8.50	.66	4.88	6.20	1.75	5.00	1.66	2.88	.75	.44	.50
262-BKS	.63	8.00	9.25	.62	5.25	6.50	1.44	6.38	1.56	3.38	.75	.44	.56
300-BKS	.86	8.44	10.16	.74	5.88	7.36	1.58	7.00	1.68	4.00	.88	.50	.56
325-BKS	.82	9.50	11.13	.81	6.13	7.75	1.82	7.50	1.88	4.00	.88	.50	.56

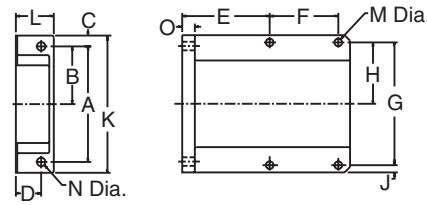


For former MORSE Description see cross reference on pages 100 - 106.



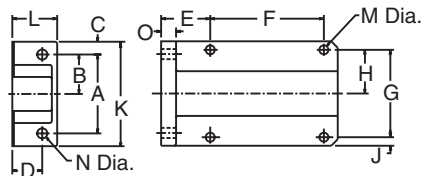
**Table 1** Dimensions (Inches) for Vertical Low Base Kit

Part No.	A	B	C	D	E	F	G	H	J	K	L	M	N	O	Wt./Lbs.
100VL-BK	2.31	1.16	.49	.75	1.00	1.69	2.62	1.31	.34	3.30	1.06	.320	.288	.13	1.8
133VL-BK	3.25	1.62	.38	.75	1.31	2.00	3.25	1.62	.38	4.00	1.22	.344	.344	.53	2.3
154VL-BK	4.00	2.00	.56	.81	1.63	2.75	4.19	2.09	.47	5.12	1.34	.344	.406	.69	3.4
175VL-BK	4.00	2.00	.41	.81	1.63	2.75	4.19	2.09	.31	4.81	1.34	.344	.406	.69	4.5
206VL-BK	4.88	2.44	.38	1.00	1.69	2.88	5.00	2.50	.31	5.63	1.56	.406	.469	.72	7.0
237VL-BK	4.88	2.44	.63	1.00	1.94	2.88	5.00	2.50	.56	6.12	1.56	.406	.469	.75	8.0
262VL-BK	5.75	2.88	.69	1.06	1.94	3.38	6.38	3.19	.38	7.12	1.63	.406	.531	.75	9.0
300VL-BK	6.13	3.06	1.19	1.25	2.69	4.00	7.00	3.50	.75	8.50	2.00	.469	.531	.81	12.5
325VL-BK	6.13	3.06	1.19	1.25	2.69	4.00	7.50	3.75	.50	8.50	2.00	.469	.531	.81	16.0
375VL-BK	8.00	4.00	.75	1.75	2.88	4.75	8.50	4.25	.50	9.50	2.63	.531	.594	.88	25.0
450VL-BK	9.56	4.78	.66	1.50	2.16	5.81	9.56	4.78	.66	10.88	2.50	.687	.687	.88	33.0
516VL-BK	10.00	5.00	1.25	2.13	3.47	5.82	11.00	5.50	.75	12.50	3.44	.687	.781	1.00	48.0
600VL-BK	11.75	5.88	1.50	2.19	3.94	6.38	12.75	6.38	1.00	14.75	3.38	.687	.906	1.13	76.0



**Table 2** Dimensions (Inches) for Vertical High Base Kit

Part No.	A	B	C	D	E	F	G	H	J	K	L	M	N	O	Wt./Lbs.
100VH-BK	2.31	1.16	.49	.75	2.13	1.69	2.62	1.31	.34	3.30	1.06	.320	.288	.13	1.8
133VH-BK	3.25	1.62	.38	.75	2.56	2.00	3.25	1.62	.38	4.00	1.22	.344	.344	.53	3.3
154VH-BK	4.00	2.00	.56	.81	3.01	2.75	4.19	2.09	.47	5.12	1.34	.344	.406	.69	4.4
175VH-BK	4.00	2.00	.41	.81	3.01	2.75	4.19	2.09	.31	4.81	1.34	.344	.406	.69	5.5
206VH-BK	4.88	2.44	.38	1.00	3.44	2.88	5.00	2.50	.31	5.63	1.56	.406	.469	.72	8.0
237VH-BK	4.88	2.44	.63	1.00	3.81	2.88	5.00	2.50	.56	6.12	1.56	.406	.469	.75	10.5
262VH-BK	5.75	2.88	.69	1.06	3.91	3.38	6.38	3.19	.38	7.12	1.63	.406	.531	.75	13.0
300VH-BK	6.13	3.06	1.19	1.25	4.25	4.00	7.00	3.50	.75	8.50	2.00	.469	.531	.81	16.0
325VH-BK	6.13	3.06	1.19	1.25	5.00	4.00	7.50	3.75	.50	8.50	2.00	.469	.531	.81	19.0
375VH-BK	8.00	4.00	.75	1.75	4.63	4.75	8.50	4.25	.50	9.50	2.63	.531	.594	.88	28.5
450VH-BK	9.56	4.78	.66	1.50	5.66	5.81	9.56	4.78	.66	10.88	2.50	.687	.687	.88	41.0
516VH-BK	10.00	5.00	1.25	2.13	5.72	5.82	11.00	5.50	.75	12.50	3.44	.687	.781	1.00	60.0
600VH-BK	11.75	5.88	1.50	2.19	6.26	6.38	12.75	6.38	1.00	14.75	3.38	.687	.906	1.13	91.0



**Table 3** Dimensions (Inches) for Vertical "J" Base Kit

Part No.	A	B	C	D	E	F	G	H	J	K	L	M	N	O	Wt./Lbs.
100VJ-BK	1.69	.85	.41	.75	1.00	2.62	1.69	.85	.41	2.50	1.12	.320	.288	.13	.8
133VJ-BK	2.00	1.00	.44	.88	.85	3.25	2.00	1.00	.44	2.88	1.31	.344	.344	.53	1.0
154VJ-BK	2.50	1.25	.60	.94	1.41	4.19	2.75	1.38	.47	3.69	1.44	.344	.406	.69	2.0
175VJ-BK	2.50	1.25	.44	.94	1.41	4.19	2.75	1.38	.31	3.38	1.44	.344	.406	.69	2.0
206VJ-BK	2.62	1.31	.57	1.12	1.44	5.00	2.88	1.44	.44	3.75	1.69	.406	.469	.72	3.0
237VJ-BK	2.88	1.44	.59	1.12	1.56	5.00	2.88	1.44	.59	4.06	1.69	.406	.469	.75	3.0
262VJ-BK	3.13	1.56	.66	1.19	1.56	6.38	3.38	1.69	.53	4.44	1.88	.406	.531	.75	4.0
300VJ-BK	4.00	2.00	.50	1.69	2.44	7.00	4.00	2.00	.50	5.00	2.31	.469	.531	.81	6.0
325VJ-BK	4.00	2.00	.50	1.69	1.94	7.50	4.00	2.00	.50	5.00	2.31	.469	.531	.81	6.0
375VJ-BK	4.75	2.38	.75	1.44	1.75	8.50	4.75	2.38	.75	6.25	2.31	.531	.594	.88	8.5
450VJ-BK	5.81	2.91	.79	1.50	2.60	9.56	5.81	2.91	.79	7.38	2.50	.687	.687	.88	11.0
516VJ-BK	5.81	2.91	.79	1.88	2.25	11.00	5.82	2.91	.78	7.38	2.81	.687	.781	1.00	18.0
600VJ-BK	6.38	3.19	.88	1.75	2.12	12.75	6.38	3.19	.88	8.13	2.75	.687	.906	1.13	21.0

# Emerson Power Transmission

[www.emerson-ept.com](http://www.emerson-ept.com)



## *EPT, Growing In A Variety of Ways...*

Emerson Power Transmission has experienced steady growth through the skillful positioning of its various branded product lines in the marketplace, development of innovative new products, packaging its family of branded products into integrated solutions, and timely acquisitions.

### *EPT's Renowned Brand Name Products Empower Industry Around The World...*

The principal Emerson Power Transmission product brand names are shown below. These well respected brands represent the world's top-of-the-line in the various product groups, with over 600 years of accumulated experience and exposure in the marketplace.

**Browning**<sup>®</sup>

Market-leading V-Belt drives, also broad spectrum of other products...Helical Speed Reducers and Gearmotors, Mounted Bearings including Corrosion **RES**istant, Bushings and Sprockets. Originated in Maysville, Ky. in 1886.

**Morse**<sup>®</sup>

Performance-proven Roller Chain including Corrosion **RES**istant, Inverted Tooth Chain drives, also Clutches, Conveying Components, Worm Gear Speed Reducers and Gearmotors. Originated near Ithaca, N.Y. in 1880.

**KOP-FLEX**<sup>®</sup>

Globally recognized Heavy-Duty Shaft Couplings and technology, with over 25,000 combinations for Petrochemical, Pulp & Paper, Metal Rolling Mills, etc. Started in Baltimore, MD. in 1920.

**SEALMASTER**<sup>®</sup>

Widely specified as the world's premium quality Mounted Bearings, in Ball, Roller, Rod Ends and Spherical Bearing designs. Extensive specials capability. Expanding Corrosion **RES**istant offering. Originated in Aurora, Ill. in 1935.

**McGILL**<sup>®</sup>

Precision Bearings including market-leading Cam Follower Bearings, over 1,400 combinations, and SPHERE-ROL<sup>®</sup> Spherical Roller Bearings. Originated in Valparaiso, Ind. in 1937.

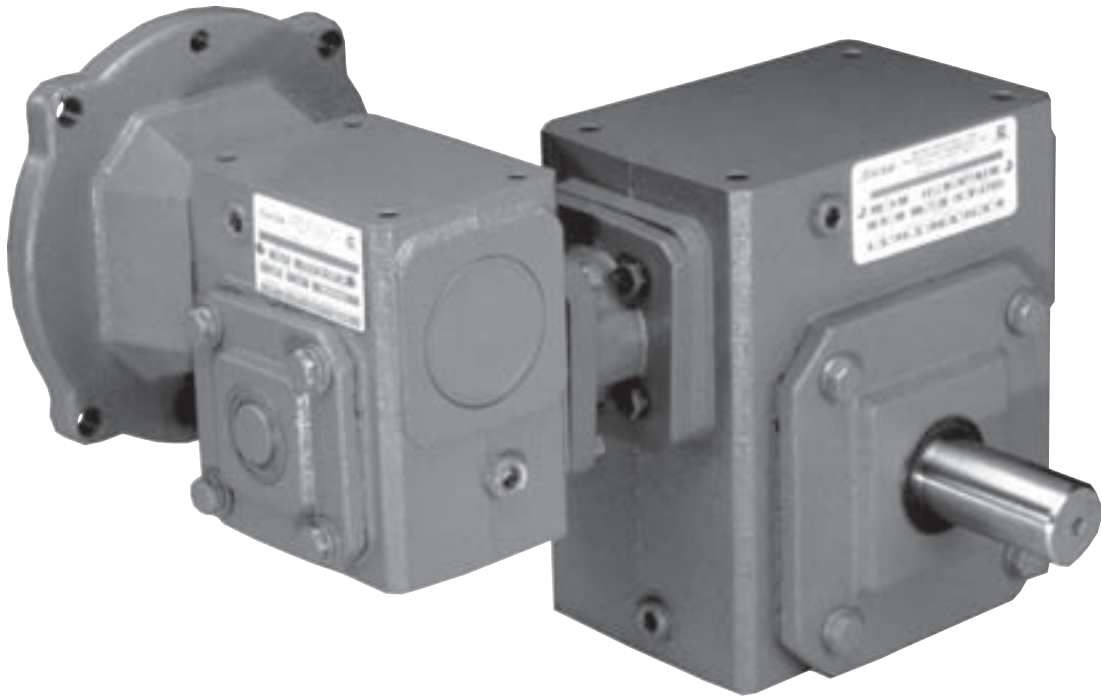
**R**ROLLWAY<sup>®</sup>

Over 2,000 different types of Cylindrical Roller and Tapered Roller Thrust Bearings. Utilized widely in Gearboxes, Helicopter Transmissions, Large Hydraulic Pumps, etc. Originated in Syracuse, N.Y. in 1908.



US GEARMOTORS<sup>™</sup> offers a broadline of Gearing Products with more Gearmotor options and 90 years of custom Gearmotor experience. Added into EPT's product portfolio September 1, 2000.

Off the shelf Tack-On Adapter Kits can be used to combine standard RAIDER® reducers to achieve ratios to 3600:1. See page 89 for assembly options.





Select a speed reducer drive for a belt conveyor which is not uniformly fed. The speed reducer will be driven by a 1750 RPM electric motor, C-Flange connected. Conveyor head shaft speed is 3.5 RPM and conveyor operates 8 to 10 hours daily. Conveyor calculations indicate that 2200 inch-pounds torque is needed at the head shaft.

## 1. DETERMINE THE SERVICE FACTOR

From Table No. A-1 on page 34, note that the service factor for a conveyor, not uniformly loaded, operating 8 - 10 hours per day is 1.25.

## 2. DETERMINE OVERALL DRIVE RATIO

$$\text{Overall Drive Ratio} = \frac{1750 \text{ RPM of Driver}}{3.5 \text{ RPM of Driven}} = 500 : 1$$

## 3. CALCULATE THE NORMAL TORQUE

The normal torque required for reducer selection is the actual torque at the reducer output shaft multiplied by the service factor.

$$\text{Normal Torque} = 2200 \times 1.25 = 2750 \text{ inch-pounds}$$

## 4. DETERMINE THE PRIMARY AND SECONDARY SPEED REDUCER RATIOS

From page 91 note that for an overall ratio of 500:1, all possible reducer combinations consist of a 10:1 primary and a 50:1 secondary.

## 5. DETERMINE THE SIZE OF THE SECONDARY SPEED REDUCER REQUIRED

From the 500:1 ratio portion of the tables on page 91 note that a 325-50 with a minimum allowable output torque of 4090 in-lbs. is required. Referring to pages 44 and 45, the secondary unit basic size is 325Q56. The complete part number would be 325Q56LR50.

## 6. DETERMINE THE SIZE OF THE PRIMARY SPEED REDUCER REQUIRED

From the tables for a 500:1 ratio on page 91, and using a 325-50 as the secondary unit, the primary unit is a 133-10. Referring to pages 44 and 45, the primary unit basic size is 133Q56. The complete part number would be 133Q56LR10.

## 7. SELECT THE ADAPTER

From the tables on page 94, note that a 133TAD262-325 adapter is required.

## 8. CHECK THE TACK-ON ASSEMBLY

From the Tack-On Assembly drawings on page 89, select the assembly which will give the desired position and direction of projection of the input and output shafts. Assuming that Output Shaft Bottom and Input Vertical with Motor UP is desired, note that an "L2" assembly is the correct one. Tack-On assemblies must be checked for non-stock reducers and/or appropriate base kit requirements.

## 9. DETERMINE THE MOTOR HORSEPOWER

From the 500:1 Ratio Table on page 91, note that .563 input HP is required for the selected reducer combination.

Use a 1/2 HP Motor. If the selected motor horsepower is more than the reducer combination required horsepower then a torque limiting device must be used on the output of the secondary reducer.

## 10. CHECK THE OVERHUNG LOADS

From page 33

$$\text{Overhung Load} = \frac{2 \times T \times K}{\text{P.D. of Sprocket}}$$

Note that since the input is C-Flanged, there is no input overhung load. Output overhung load is dependent upon the size and type of the Output drive.

## 11. LIST DRIVE COMPONENTS

See Motor Catalog for Motor Selection

133Q56LR10

Primary Reducer

325Q56LR50

Secondary Reducer

133TAD262-325 Kit

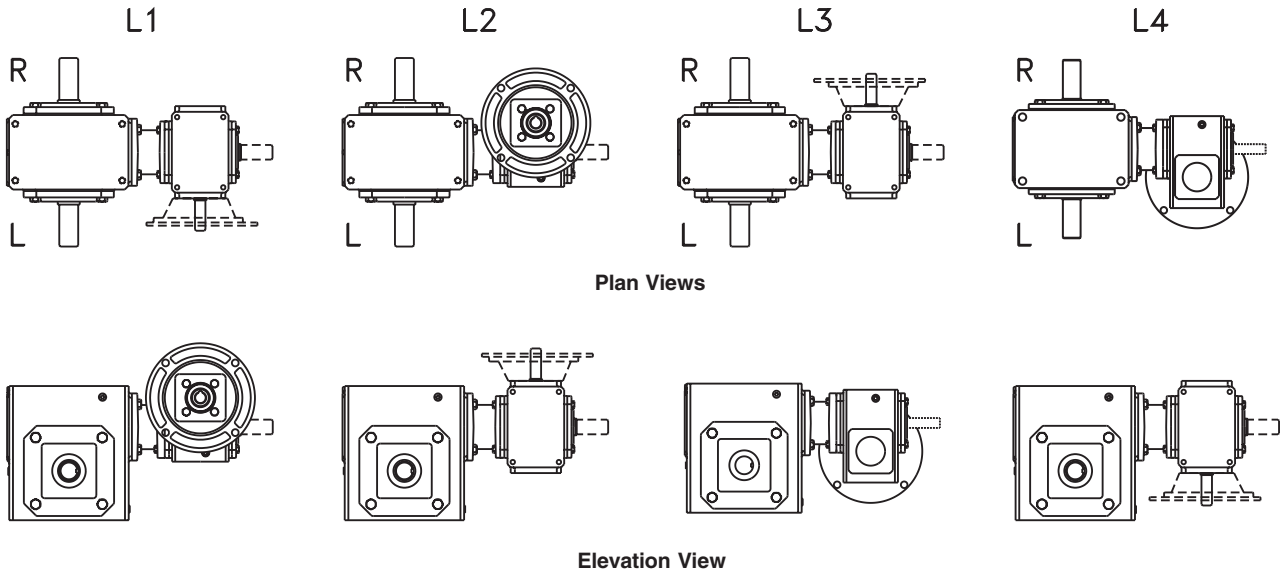
Adapter



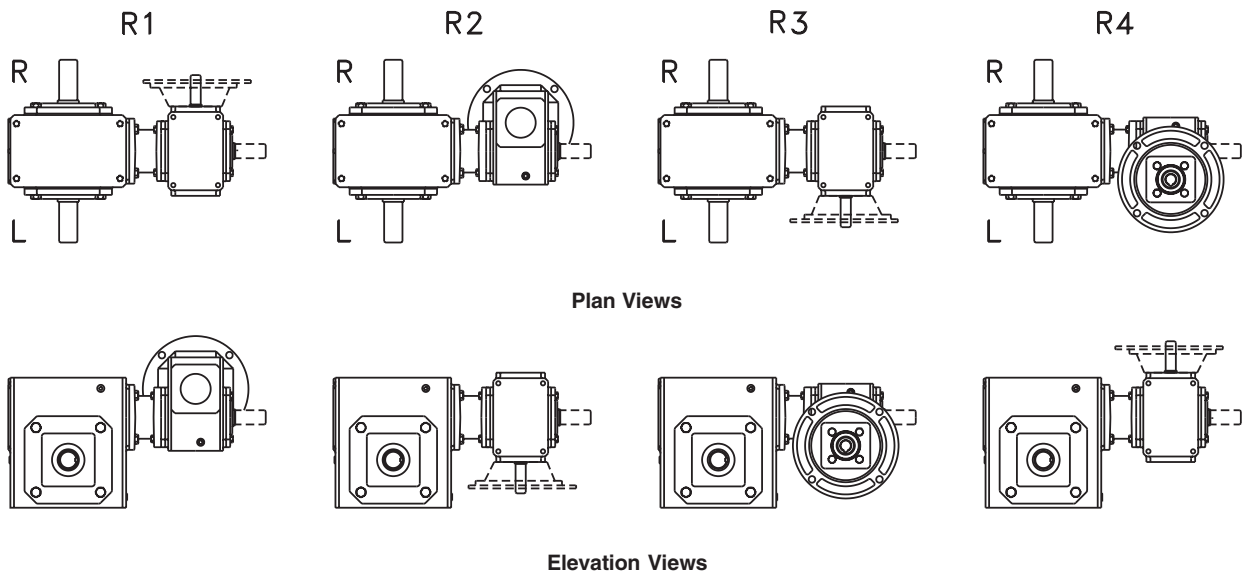
## Floor Mount Tack-On Reducer Assemblies

All Arrangements Show Secondary Reducer in Standard Position,  
Worm-Over and Input to Right

### Primary Unit Using Left Output Extension to Secondary Input



### Primary Unit Using Right Output Extension to Secondary Input



#### NOTES:

Primary Unit can be C-Flanged or Universal Style Input and L, R, or LR Output Style.

Secondary Unit must be C-Flanged Style Input - Any Output Style can be used.

All possible combinations are shown, as the Secondary Unit may not be floor-mounted. In it's installed location neither unit should be mounted with the worm vertical, and input up.

The oil level in each unit should be adjusted for the actual orientation of the unit.

## Input Horsepower and Output Torque for Coupled RAIDER® Single Reduction Worm Gear Speed Reducers (1750 RPM Driver – 1.0 Service Factor)

Reducers ■		Primary	Secondary
PRIMARY	SECONDARY	Input H.P.	Output Torque (In.-Lbs.)

### 25:1 RATIO — 70 RPM OUTPUT

133-5	133-5	.341	203
133-5	154-5	.525	315
133-5	175-5	.709	427

### 50:1 RATIO — 35 RPM OUTPUT

133-5	133-10	.210	241
133-5	154-10	.344	390
133-5	175-10	.451	524
133-5	206-10	.746	869
133-5	237-10	1.151	1349
175-5	262-10	1.573	1871
262-5	375-10	4.210	5171

### 75:1 RATIO — 23.3 RPM OUTPUT

133-5	133-15	.152	248
133-5	154-15	.271	422
133-5	175-15	.326	540
133-5	206-15	.542	899
133-5	237-15	.902	1480
133-5	262-15	1.151	1938
175-5	262-15	1.14	1938
175-5	300-15	1.881	3174
237-5	375-15	3.294	5701
262-5	375-15	3.284	5701
325-5	450-15	5.183	9164
325-5	516-15	7.137	12798

### 100:1 RATIO — 17.5 RPM OUTPUT

133-5	133-20	.128	261
133-5	154-20	.215	421
133-5	175-20	.273	568
133-5	206-20	.453	943
133-5	237-20	.701	1463
133-5	262-20	.956	2029
175-5	262-20	.947	2029
175-5	300-20	1.454	3140
175-5	325-20	1.893	4056
237-5	375-20	2.536	5631
237-5	450-20	4.030	9070
262-5	375-20	2.528	5631
262-5	450-20	4.018	9070
133-10	133-10	.114	247
133-10	154-10	.189	403
133-10	175-10	.247	543
133-10	206-10	.412	906
133-10	237-10	.640	1415
175-10	262-10	.875	1973
175-10	300-10	1.343	3061
237-10	375-10	2.380	5559
262-10	375-10	2.370	5559
325-10	375-10	2.350	5559
325-10	450-10	3.807	9076
325-10	516-10	5.258	12661

### 150:1 RATIO — 11.67 RPM OUTPUT

133-5	133-30	.098	255
133-5	154-30	.172	433
133-5	175-30	.194	555
133-5	206-30	.324	923
133-5	237-30	.552	1521
133-5	262-30	.682	1988
133-5	300-30	1.148	3264
175-5	262-30	.676	1988
175-5	300-30	1.137	3264
175-5	325-30	1.360	3999
237-5	375-30	1.972	5859
237-5	450-30	3.113	9434
262-5	375-30	1.966	5859
262-5	450-30	3.104	9434
262-5	516-30	4.236	13195
133-10	133-15	.083	254
133-10	154-15	.151	437
133-10	175-15	.178	557
133-10	206-15	.299	934
133-10	237-15	.508	1554
133-10	262-15	.645	2033

Reducers ■		Primary	Secondary
PRIMARY	SECONDARY	Input H.P.	Output Torque (In.-Lbs.)

### 150:1 RATIO — 11.67 RPM OUTPUT

175-10	262-15	.636	2033
175-10	300-15	1.061	3371
175-10	325-15	1.292	4141
237-10	375-15	1.878	6139
262-10	375-15	1.870	6139
262-10	450-15	3.023	10033
325-10	450-15	2.998	10033
325-10	516-15	4.168	14162

### 200:1 RATIO — 8.75 RPM OUTPUT

133-5	133-40	.080	259
133-5	154-40	.137	419
133-5	175-40	.167	565
133-5	206-40	.277	938
133-5	237-40	.429	1457
133-5	262-40	.581	2020
133-5	300-40	.885	3124
133-5	325-40	1.160	4036
175-5	262-40	.575	2020
175-5	300-40	.876	3124
175-5	325-40	1.149	4036
237-5	375-40	1.516	5614
237-5	450-40	2.390	9048
237-5	516-40	3.220	12548
262-5	375-40	1.512	5614
262-5	450-40	2.382	9048
262-5	516-40	3.210	12548
133-10	133-20	.071	267
133-10	154-20	.121	436
133-10	175-20	.151	587
133-10	206-20	.252	980
133-10	237-20	.395	1532
133-10	262-20	.542	2132
175-10	262-20	.535	2132
175-10	300-20	.822	3315
175-10	325-20	1.081	4330
237-10	375-20	1.445	6025
237-10	450-20	2.330	9846
262-10	375-20	1.438	6025
262-10	450-20	2.320	9846
325-10	450-20	2.301	9846
325-10	516-20	3.158	13764

### 225:1 RATIO — 7.78 RPM OUTPUT

133-15	133-15	.059	256
133-15	154-15	.108	443
133-15	175-15	.127	563
133-15	206-15	.212	944
133-15	237-15	.363	1579
133-15	262-15	.459	2065
175-15	262-15	.452	2065
175-15	300-15	.759	3438
175-15	325-15	.925	4226
237-15	375-15	1.348	6287
262-15	375-15	1.336	6287
325-15	450-15	2.142	10320
325-15	516-15	2.988	14616

### 250:1 RATIO — 7 RPM OUTPUT

133-5	133-50	.066	246
133-5	154-50	.112	397
133-5	175-50	.137	535
133-5	206-50	.227	888
133-5	237-50	.341	1357
133-5	262-50	.475	1916
133-5	300-50	.707	2933
133-5	325-50	.951	3842
175-5	262-50	.470	1916
175-5	300-50	.701	2933
175-5	325-50	.942	3842
237-5	375-50	1.226	5311
237-5	450-50	1.929	8562
237-5	516-50	2.567	11814
262-5	375-50	1.222	5311
262-5	450-50	1.923	8562
262-5	516-50	2.560	11814

Reducers ■		Primary	Secondary
PRIMARY	SECONDARY	Input HP	Output Torque (In.-Lbs.)

### 300:1 RATIO — 5.83 RPM OUTPUT

133-5	175-60	.115	501
133-5	206-60	.191	834
133-5	237-60	.288	1278
133-5	262-60	.398	1798
133-5	300-60	.583	2728
133-5	325-60	.800	3616
175-5	262-60	.394	1798
175-5	300-60	.578	2728
175-5	325-60	.792	3616
237-5	450-60	1.584	7981
237-5	516-60	2.102	10989
262-5	450-60	1.579	7981
262-5	516-60	2.096	10989
133-10	133-30	.051	261
133-10	154-30	.098	449
133-10	175-30	.109	571
133-10	206-30	.182	958
133-10	237-30	.318	1595
133-10	262-30	.390	2085
133-10	300-30	.664	3457
175-10	262-30	.385	2085
175-10	300-30	.665	3457
175-10	325-30	.783	4254
237-10	375-30	1.148	6299
237-10	450-30	1.843	10303
262-10	375-30	1.143	6299
262-10	450-30	1.835	10303
325-10	516-30	2.505	14541
325-10	600-30	3.740	21674
133-15	133-20	.050	269
133-15	154-20	.086	440
133-15	175-20	.108	593
133-15	206-20	.181	993
133-15	237-20	.281	1553
133-15	262-20	.388	2167
175-15	262-20	.381	2167
175-15	300-20	.588	3378
175-15	325-20	.780	4423
237-15	375-20	1.040	6163
237-15	450-20	1.682	10118
262-15	375-20	1.031	6163
262-15	450-20	1.667	10118
325-15	450-20	1.650	10118
325-15	516-20	2.262	14159

### 400:1 RATIO — 4.37 RPM OUTPUT

133-10	133-40	.044	266
133-10	154-40	.079	433
133-10	175-40	.095	583
133-10	206-40	.158	974
133-10	237-40	.248	1523
133-10	262-40	.337	2122
133-10	300-40	.516	3299
133-10	325-40	.682	4309
175-10	262-40	.332	2122
175-10	300-40	.509	3299
175-10	325-40	.674	4309
237-10	375-40	.883	5995
237-10	450-40	1.416	9809
237-10	516-40	1.916	13699
262-10	375-40	.879	5995
262-10	450-40	1.410	9809
262-10	516-40	1.908	13699
325-10	600-40	2.879	20719
133-20	133-20	.040	271
133-20	154-20	.068	443
133-20	175-20	.085	596
133-20	206-20	.144	999
133-20	237-20	.225	1564
133-20	262-20	.308	2185
175-20	262-20	.302	2185
175-20	300-20	.466	3405
175-20	325-20	.617	4470
237-20	375-20	.820	6224
237-20	450-20	1.332	10249
262-20	375-20	.811	6224
262-20	450-20	1.318	10249
262-20	516-20	1.812	14367



## Input Horsepower and Output Torque for Coupled RAIDER® Single Reduction Worm Gear Speed Reducers (1750 RPM Driver – 1.0 Service Factor)

Reducers ■		Primary	Secondary
PRIMARY	SECONDARY	Input H.P.	Output Torque (In.-Lbs.)
<b>400:1 RATIO — 4.37 RPM OUTPUT</b>			
325-20	450-20	1.301	10249
325-20	516-20	1.788	14367
<b>450:1 RATIO — 3.89 RPM OUTPUT</b>			
133-15	133-30	.037	263
133-15	154-30	.070	454
133-15	175-30	.079	577
133-15	206-30	.131	969
133-15	237-30	.230	1620
133-15	262-30	.280	2118
133-15	300-30	.483	3524
175-15	262-30	.275	2118
175-15	300-30	.475	3524
175-15	325-30	.568	4337
237-15	375-30	.835	6449
237-15	450-30	1.345	10602
262-15	375-30	.828	6449
262-15	450-30	1.333	10602
325-15	516-30	1.817	15010
325-15	600-30	2.742	22523
<b>500:1 RATIO — 3.5 RPM OUTPUT</b>			
133-10	133-50	.038	251
133-10	154-50	.064	410
133-10	175-50	.078	551
133-10	206-50	.130	923
133-10	237-50	.197	1415
133-10	262-50	.278	2010
133-10	300-50	.414	3086
133-10	325-50	.563	4090
175-10	262-50	.274	2010
175-10	300-50	.409	3086
175-10	325-50	.556	4090
237-10	375-50	.717	5657
237-10	450-50	1.144	9237
237-10	516-50	1.531	12840
262-10	375-50	.714	5657
262-10	450-50	1.139	9237
262-10	516-50	1.524	12840
325-10	516-50	1.512	12840
325-10	600-50	2.168	18688
<b>600:1 RATIO — 2.92 RPM OUTPUT</b>			
133-10	175-60	.066	516
133-10	206-60	.110	865
133-10	237-60	.168	1332
133-10	262-60	.233	1884
133-10	300-60	.343	2867
133-10	325-60	.475	3842
175-10	262-60	.230	1884
175-10	300-60	.339	2867
175-10	325-60	.468	3842
237-10	450-60	.942	8579
237-10	516-60	1.259	11917
262-10	450-60	.938	8579
262-10	516-60	1.254	11917
325-10	600-60	1.845	17737
133-15	133-40	.032	268
133-15	154-40	.057	438
133-15	175-40	.069	589
133-15	206-40	.114	987
133-15	237-40	.179	1544
133-15	262-40	.244	2156
133-15	300-40	.375	3357
133-15	325-40	.502	4400
175-15	262-40	.240	2156
175-15	300-40	.369	3357
175-15	325-40	.494	4400

Reducers ■		Primary	Secondary
PRIMARY	SECONDARY	Input H.P.	Output Torque (In.-Lbs.)
<b>600:1 RATIO — 2.92 RPM OUTPUT</b>			
237-15	375-40	.645	6126
237-15	450-40	1.034	10057
237-15	516-40	1.401	14098
262-15	375-40	.639	6126
262-15	450-40	1.025	10057
262-15	516-40	1.389	14098
325-15	600-40	2.116	21457
133-20	133-20	.028	264
133-20	154-30	.057	456
133-20	175-30	.063	580
133-20	206-30	.105	975
133-20	237-30	.185	1632
133-20	262-30	.225	2135
133-20	300-30	.387	3560
175-20	262-30	.220	2135
175-20	300-30	.378	3560
175-20	325-30	.451	4379
237-20	375-30	.664	6523
237-20	450-30	1.074	10743
262-20	375-30	.657	6523
262-20	450-30	1.063	10743
325-20	516-30	1.449	15232
325-20	600-30	2.187	22948
<b>750:1 RATIO — 2.33 RPM OUTPUT</b>			
133-15	133-50	.026	253
133-15	154-50	.47	414
133-15	175-50	.057	557
133-15	206-50	.095	933
133-15	237-50	.143	1434
133-15	262-50	.201	2042
133-15	300-50	.302	3136
133-15	325-50	.415	4171
175-15	262-50	.198	2042
175-15	300-50	.297	3136
175-15	325-50	.408	4171
237-15	375-50	.526	5774
237-15	450-50	.840	9468
237-15	516-50	1.123	13188
262-15	375-50	.521	5774
262-15	450-50	.833	9468
262-15	516-50	1.113	13188
325-15	600-50	1.588	19301
<b>800:1 RATIO — 2.18 RPM OUTPUT</b>			
133-20	133-40	.026	269
133-20	154-40	.045	440
133-20	175-40	.055	592
133-20	206-40	.092	993
133-20	237-40	.145	1555
133-20	262-40	.196	2173
133-20	300-40	.301	3386
133-20	325-40	.404	4446
175-20	262-40	.192	2173
175-20	300-40	.295	3386
175-20	325-40	.395	4446
237-20	375-40	.512	6191
237-20	450-40	.827	10187
237-20	516-40	1.123	14295
262-20	375-40	.507	6191
262-20	450-40	.818	10187
262-20	516-40	1.112	14295
325-20	600-40	1.695	21850
<b>900:1 RATIO — 1.94 RPM OUTPUT</b>			
133-15	133-60	.022	237
133-15	154-60	.041	390
133-15	175-60	.048	521

Reducers ■		Primary	Secondary
PRIMARY	SECONDARY	Input HP	Output Torque (In.-Lbs.)
<b>900:1 RATIO — 1.94 RPM OUTPUT</b>			
133-15	206-60	.080	875
133-15	237-60	.123	1349
133-15	262-60	.170	1912
133-15	300-60	.250	2912
133-15	325-60	.352	3918
175-15	262-60	.167	1912
175-15	300-60	.245	2912
175-15	325-60	.346	3918
237-15	450-60	.693	8792
237-15	516-60	.925	12218
262-15	450-60	.687	8792
262-15	516-60	.917	12218
325-15	450-60	.680	8792
325-15	516-20	.907	12218
325-15	600-60	1.356	18321
133-30	133-30	.021	265
133-30	154-30	.041	459
133-30	175-30	.045	583
133-30	206-30	.075	981
133-30	237-30	.134	1645
133-30	262-30	.162	2151
133-30	300-30	.282	3592
175-30	262-30	.158	2151
175-30	300-30	.274	3592
175-30	325-30	.327	4428
237-30	375-30	.483	6605
237-30	450-30	.781	10898
262-30	450-30	.764	10898
325-30	516-30	1.035	15470
325-30	600-30	1.579	23396
<b>1000:1 RATIO — 1.75 RPM OUTPUT</b>			
133-20	133-50	.021	254
133-20	154-50	.038	416
133-20	175-50	.045	560
133-20	206-50	.077	939
133-20	237-50	.115	1445
133-20	262-50	.163	2057
133-20	300-50	.243	3161
133-20	325-50	.334	4216
175-20	262-50	.160	2057
175-20	300-50	.238	3161
175-20	325-50	.327	4216
237-20	375-50	.418	5839
237-20	450-50	.674	9592
237-20	516-50	.900	13360
262-20	375-50	.414	5839
262-20	450-50	.667	9592
262-20	516-50	.891	13360
325-20	600-50	1.274	19603
<b>1200:1 RATIO — 1.46 RPM OUTPUT</b>			
133-20	175-60	.038	524
133-20	206-60	.065	881
133-20	237-60	.098	1359
133-20	262-60	.138	1928
133-20	300-60	.202	2935
133-20	325-60	.283	3955
175-20	262-60	.135	1928
175-20	300-60	.197	2935
175-20	325-60	.277	3955
237-20	450-60	.556	8891
237-20	516-60	.743	12373
262-20	450-60	.550	8891
262-20	516-60	.736	12373
325-20	450-60	.543	8891
325-20	516-60	.726	12373
325-20	600-60	1.093	18604

■ Basic Unit Size. See Assembly Drawings to determine RAIDER Assembled Part No. and complete the Part No. following the directions on that page.

Above ratings are not applicable when reducer shafts are subjected to combined overhung and thrust loads.

See pages 36 - 40 for overhung loads. Maximum overhung loads are at center of keyseats and on one end of output shaft only. Overhung loads applied closer to the reducer housing are desirable, but overhung loads farther out on the shaft and overhung loads on both ends of output shaft should be referred to EPT Technical Services.

Contact EPT Technical Services for the following:

1. High starting torques exceeding 300% of the reducer mechanical rating.
2. Frequent starting or repetitive shock applications.
3. Applications where high energy loads must be absorbed as when stalling.



# Tack-On Reducer Assemblies



## Input Horsepower and Output Torque for Coupled RAIDER® Single Reduction Worm Gear Speed Reducers (1750 RPM Driver – 1.0 Service Factor)

Reducers ■		Primary	Secondary
PRIMARY	SECONDARY	Input H.P.	Output Torque (In.-Lbs.)

### 1200:1 RATIO — 1.46 RPM OUTPUT

133-30	133-40	.018	270
133-30	154-40	.033	443
133-30	175-40	.039	595
133-30	206-40	.068	1000
133-30	237-40	.105	1567
133-30	262-40	.144	2191
133-30	300-40	.221	3416
133-30	325-40	.296	4493
175-30	262-40	.140	2191
175-30	300-40	.215	3416
175-30	325-40	.288	4493
237-30	375-40	.374	6260
237-30	450-40	.604	10317
237-30	516-40	.818	14501
262-30	375-40	.366	6260
262-30	450-40	.591	10317
262-30	516-40	.800	14501
325-30	600-40	1.224	22230

### 1500:1 RATIO — 1.17 RPM OUTPUT

133-30	133-50	.015	225
133-30	154-50	.027	418
133-30	175-50	.033	562
133-30	206-50	.056	945
133-30	237-50	.084	1454
133-30	262-50	.119	2073
133-30	300-50	.179	3188
133-30	325-50	.246	4261
175-30	262-50	.115	2073
175-30	300-50	.174	3188
175-30	325-50	.239	4261
237-30	375-50	.306	5899
237-30	450-50	.493	9708
237-30	516-50	.658	13542
262-30	375-50	.300	5899
262-30	450-50	.482	9708
262-30	516-50	.644	13542
262-30	600-50	.934	19919
325-30	375-50	.294	5899
325-30	450-50	.474	9708
325-30	516-50	.633	13542

### 1600:1 RATIO — 1.09 RPM OUTPUT

133-40	133-40	.016	270
133-40	154-40	.027	444
133-40	175-40	.034	597
133-40	206-40	.056	1002
133-40	237-40	.086	1572
133-40	262-40	.120	2201
133-40	300-40	.184	3430
133-40	325-40	.248	4515
175-40	262-40	.115	2201
175-40	300-40	.177	3430
175-40	325-40	.239	4515
237-40	375-40	.304	6291
237-40	450-40	.491	10382
237-40	516-40	.666	14595
262-40	375-40	.299	6291
262-40	450-40	.482	10382
262-40	516-40	.653	14595
325-40	600-40	.996	22416

Reducers ■		Primary	Secondary
PRIMARY	SECONDARY	Input H.P.	Output Torque (In.-Lbs.)

### 1800:1 RATIO — .97 RPM OUTPUT

133-30	175-60	.029	526
133-30	206-60	.047	886
133-30	237-60	.072	1367
133-30	262-60	.102	1943
133-30	300-60	.149	2960
133-30	325-60	.210	3998
175-30	262-60	.099	1943
175-30	300-60	.145	2960
175-30	325-60	.204	3998
237-30	450-60	.408	9001
237-30	516-60	.545	12531
262-30	375-60	.249	5473
262-30	450-60	.399	9001
262-30	516-60	.533	12531
325-30	600-60	.790	18904

### 2000:1 RATIO — .87 RPM OUTPUT

133-40	133-50	.013	256
133-40	154-50	.022	419
133-40	175-50	.027	564
133-40	206-50	.046	947
133-40	237-50	.070	1459
133-40	262-50	.099	2081
133-40	300-50	.149	3203
133-40	325-50	.206	4281
175-40	262-50	.095	2081
175-40	300-50	.143	3203
175-40	325-50	.199	4281
237-40	375-50	.249	5927
237-40	450-50	.401	9766
237-40	516-50	.536	13630
262-40	375-50	.245	5927
262-40	450-50	.394	9766
262-40	516-50	.526	13630
325-40	600-50	.749	20072

### 2400:1 RATIO — .73 RPM OUTPUT

133-40	175-60	.022	528
133-40	206-60	.038	887
133-40	237-60	.059	1372
133-40	262-60	.085	1949
133-40	300-60	.123	2973
133-40	325-60	.176	4017
175-40	262-60	.082	1949
175-40	300-60	.119	2973
175-40	325-60	.169	4017
237-40	450-60	.333	9047
237-40	516-60	.445	12610
262-40	450-60	.327	9047
262-40	516-60	.437	12610
325-40	450-60	.319	9047
325-40	516-60	.426	12610
325-40	600-60	.647	19050

Reducers ■		Primary	Secondary
PRIMARY	SECONDARY	Input H.P.	Output Torque (In.-Lbs.)

### 2500:1 RATIO — .70 RPM OUTPUT

133-50	133-50	.010	256
133-50	154-50	.020	419
133-50	175-50	.024	564
133-50	206-50	.039	949
133-50	237-50	.061	1461
133-50	262-50	.084	2084
133-50	300-50	.126	3210
133-50	325-50	.176	4295
175-50	262-50	.080	2084
175-50	300-50	.121	3210
175-50	325-50	.169	4295
237-50	375-50	.211	5947
237-50	450-50	.341	9803
237-50	516-50	.454	13678
262-50	375-50	.207	5947
262-50	450-50	.334	9803
262-50	516-50	.445	13678
325-50	600-50	.633	20158

### 3000:1 RATIO — .58 RPM OUTPUT

133-50	175-60	.020	528
133-50	206-60	.034	890
133-50	237-60	.052	1374
133-50	262-60	.072	1952
133-50	300-60	.106	2978
133-50	325-60	.151	4030
175-50	262-60	.069	1952
175-50	300-60	.101	2978
175-50	325-60	.145	4030
237-50	450-60	.282	9075
237-50	516-60	.378	12665
262-50	450-60	.277	9075
262-50	516-60	.371	12665
325-50	450-60	.269	9075
325-50	516-60	.361	12665
325-50	600-60	.547	19132

### 3600:1 RATIO — .49 RPM OUTPUT

175-60	262-60	.042	2088
175-60	300-60	.089	2982
175-60	325-60	.128	4036
237-60	450-60	.248	9103
237-60	516-60	.331	12697
262-60	450-60	.242	9103
262-60	516-60	.324	12697
325-60	600-60	.479	19196

■ Basic Unit Size. See Assembly Drawings to determine RAIDER Assembled Part No. and complete the Part No. following the directions on that page.

Above ratings are not applicable when reducer shafts are subjected to combined overhung and thrust loads.

See pages 36 - 40 for overhung loads. Maximum overhung loads are at center of keyseats and on one end of output shaft only. Overhung loads applied closer to the reducer housing are desirable, but overhung loads farther out on the shaft and overhung loads on both ends of output shaft should be referred to EPT Technical Services.

Contact EPT Technical Services for the following:

1. High starting torques exceeding 300% of the reducer mechanical rating.
2. Frequent starting or repetitive shock applications.
3. Applications where high energy loads must be absorbed as when stalling.



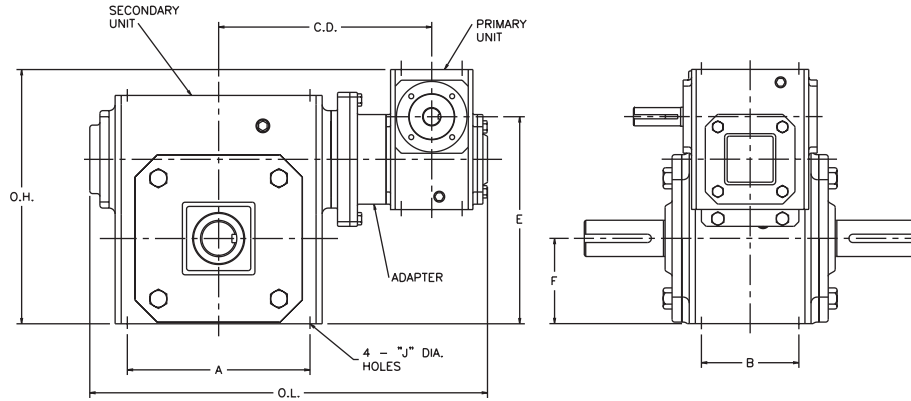


Table 1

		U-Style Input				Dimensions (inches)			
SECONDARY UNIT *	PRIMARY UNIT **	A	B	E	F	J	CD	OL	OH
133Q56	133U	3.25	2.00	4.39	1.72	5/16-18	5.92	10.07	5.99
154Q56	133U	4.19	2.75	4.78	1.91	5/16-18	6.68	11.46	6.39
175Q56	133U	4.19	2.75	5.14	2.06	5/16-18	6.55	11.33	6.75
206Q56	133U	5.00	2.88	5.67	2.28	3/8-16	6.92	11.95	7.28
237Q56	133U	5.00	2.88	6.21	2.50	3/8-16	7.24	12.83	7.81
262Q56	133U	6.38	3.38	6.89	2.94	3/8-16	7.75	13.47	8.50
262Q140	175U	6.38	3.38	7.31	2.94	3/8-16	8.18	14.32	9.25
300Q56	133U	7.00	4.00	7.58	3.25	7/16-14	7.91	14.35	9.19
300Q140	175U	7.00	4.00	8.00	3.25	7/16-14	8.50	15.30	9.34
325Q56	133U	7.50	4.00	8.08	3.50	7/16-14	8.63	15.16	9.69
325Q140	175U	7.50	4.00	8.50	3.50	7/16-14	9.06	16.01	10.44
375Q180	237U	8.50	4.75	10.01	3.88	1/2-13	9.46	17.91	12.07
375Q180	262U	8.50	4.75	10.25	3.88	1/2-13	10.01	18.63	12.69
375Q210	325U	8.50	4.75	10.88	3.88	1/2-13	10.49	19.68	13.51
450Q180	237U	9.56	5.81	11.38	4.50	5/8-11	10.16	18.49	13.44
450Q180	262U	9.56	5.81	11.62	4.50	5/8-11	10.71	19.21	14.06
450Q210	325U	9.56	5.81	12.25	4.50	5/8-11	11.19	20.26	14.88
516Q180	237U	11.00	5.81	12.86	5.31	5/8-11	10.96	20.10	14.92
516Q180	262U	11.00	5.81	13.10	5.31	5/8-11	11.51	20.82	15.54
516Q210	325U	11.00	5.81	13.73	5.31	5/8-11	11.99	21.87	16.36
600Q210	325U	12.75	6.38	15.75	6.50	5/8-11	12.90	23.78	18.38

Table 2

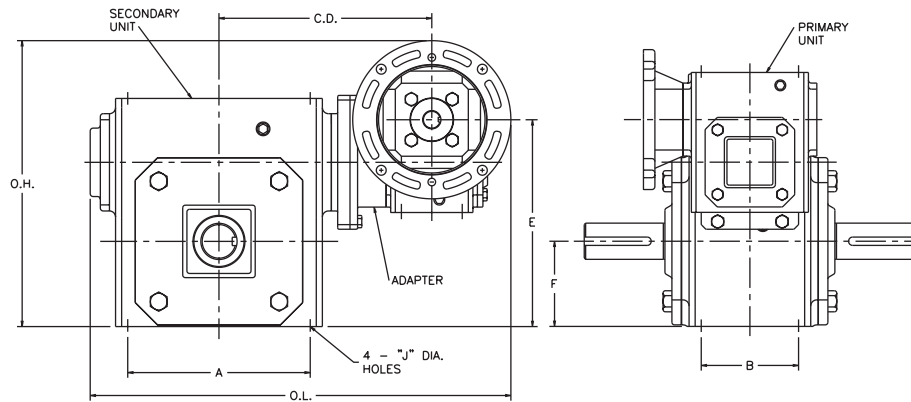
		U-Style Input				Dimensions (inches)				
SECONDARY UNIT *	PRIMARY UNIT **	ADAPTER KIT	SECONDARY OUTPUT SHAFT				PRIMARY INPUT SHAFT			
			DIA +.000 -.001	LENGTH	KEY		DIA +.000 -.001	LENGTH	KEY	
					SQ	LENGTH			SQ	LENGTH
133Q56	133U	133TAD133-237KIT	0.625	2.00	0.188	1.31	0.500	1.81	0.125	1.38
154Q56	133U	133TAD133-237KIT	0.750	1.78	0.188	1.25	0.500	1.81	0.125	1.38
175Q56	133U	133TAD133-237KIT	0.875	1.88	0.188	1.38	0.500	1.81	0.125	1.38
206Q56	133U	133TAD133-237KIT	1.000	2.00	0.250	1.75	0.500	1.81	0.125	1.38
237Q56	133U	133TAD133-237KIT	1.125	2.37	0.250	1.75	0.500	1.81	0.125	1.38
262Q56	133U	133TAD262-325KIT	1.125	2.50	0.250	2.00	0.500	1.81	0.125	1.38
262Q140	175U	175TAD262-325KIT	1.125	2.50	0.250	2.00	0.625	1.81	0.188	1.50
300Q56	133U	133TAD300KIT	1.250	3.25	0.250	2.25	0.500	2.26	0.125	1.38
300Q140	175U	175TAD300KIT	1.250	3.25	0.250	2.25	0.625	2.26	0.188	1.50
325Q56	133U	133TAD262-325KIT	1.375	3.25	0.313	2.88	0.500	1.81	0.125	1.38
325Q140	175U	175TAD262-325KIT	1.375	3.25	0.313	2.88	0.625	1.81	0.188	1.50
375Q180	237U	237TAD375-516KIT	1.625	3.50	0.375	2.81	0.750	1.94	0.188	1.31
375Q180	262U	262TAD375-516KIT	1.625	3.50	0.375	2.81	0.750	2.31	0.188	1.88
375Q210	325U	325TAD375-516KIT	1.625	3.50	0.375	2.81	0.875	2.31	0.188	1.63
450Q180	237U	237TAD375-516KIT	1.625	3.38	0.375	2.50	0.750	1.94	0.188	1.31
450Q180	262U	262TAD375-516KIT	1.625	3.38	0.375	2.50	0.750	2.31	0.188	1.88
450Q210	325U	325TAD375-516KIT	1.625	3.38	0.375	2.50	0.875	2.31	0.188	1.63
516Q180	237U	237TAD375-516KIT	2.000	4.16	0.500	2.81	0.750	1.94	0.188	1.31
516Q180	262U	262TAD375-516KIT	2.000	4.16	0.500	2.81	0.750	2.31	0.188	1.88
516Q210	325U	325TAD375-516KIT	2.000	4.16	0.500	2.81	0.875	2.31	0.188	1.63
600Q210	325U	325TAD600KIT	2.250	4.56	0.500	3.50	0.875	2.31	0.188	1.63

\* To complete part number, add shaft assembly code and ratio to size - for example, 133Q56LR10.

\* Style QH can be substituted for the secondary unit.

\*\* To complete part number, add shaft assembly code and ratio to size, for example 133ULR10.

**For former Morse Description see cross reference on pages 100 - 106.**



**Table 1** Q-Style Input **Dimensions (inches)**

SECONDARY UNIT	PRIMARY UNIT	A	B	E	F	J	CD	OL	OH
133Q56	133Q	3.25	2.00	4.39	1.72	5/16-18	5.92	11.29	7.64
154Q56	133Q	4.19	2.75	4.78	1.91	5/16-18	6.68	12.68	8.03
175Q56	133Q	4.19	2.75	5.14	2.06	5/16-18	6.55	12.55	8.39
206Q56	133Q	5.00	2.88	5.67	2.28	3/8-16	6.92	13.17	8.92
237Q56	133Q	5.00	2.88	6.21	2.50	3/8-16	7.24	14.05	9.46
262Q56	133Q	6.38	3.38	6.89	2.94	3/8-16	7.75	14.69	10.14
262Q140	175Q	6.38	3.38	7.31	2.94	3/8-16	8.18	15.12	10.56
300Q56	133Q	7.00	4.00	7.58	3.25	7/16-14	7.91	14.35	10.83
300Q140	175Q	7.00	4.00	8.00	3.25	7/16-14	8.50	15.30	11.25
325Q56	133Q	7.50	4.00	8.08	3.50	7/16-14	8.63	16.38	11.33
325Q140	175Q	7.50	4.00	8.50	3.50	7/16-14	9.06	16.81	11.75
375Q180	237Q	8.50	4.75	10.01	3.88	1/2-13	9.46	19.71	14.51
375Q180	262Q	8.50	4.75	10.25	3.88	1/2-13	10.01	20.26	14.75
375Q210	325Q	8.50	4.75	10.88	3.88	1/2-13	10.49	20.74	15.38
450Q180	237Q	9.56	5.81	11.38	4.50	5/8-11	10.16	20.29	15.88
450Q180	262Q	9.56	5.81	11.62	4.50	5/8-11	10.71	20.84	16.12
450Q210	325Q	9.56	5.81	12.25	4.50	5/8-11	11.19	21.32	16.75
516Q180	237Q	11.00	5.81	12.86	5.31	5/8-11	10.96	21.90	17.36
516Q180	262Q	11.00	5.81	13.10	5.31	5/8-11	11.51	22.45	17.60
516Q210	325Q	11.00	5.81	13.73	5.31	5/8-11	11.99	22.93	18.23
600Q210	325Q	12.75	6.38	15.75	6.50	5/8-11	12.90	24.84	20.25

**Table 2** Q-Style Input **Dimensions (inches)**

SECONDARY UNIT *	PRIMARY UNIT * *	ADAPTER KIT	SECONDARY OUTPUT SHAFT			
			DIA +.000 -.001	LENGTH	KEY	
					SQ	LENGTH
133Q23	133Q	133TAD133-237KIT	0.625	2.00	0.188	1.31
154Q56	133Q	133TAD133-237KIT	0.750	1.78	0.188	1.25
175Q56	133Q	133TAD133-237KIT	0.875	1.88	0.188	1.38
206Q56	133Q	133TAD133-237KIT	1.000	2.00	0.250	1.75
237Q56	133Q	133TAD133-237KIT	1.125	2.37	0.250	1.75
262Q56	133Q	133TAD262-325KIT	1.125	2.50	0.250	2.00
262Q140	175Q	175TAD262-325KIT	1.125	2.50	0.250	2.00
300Q56	133Q	133TAD300KIT	1.250	3.25	0.250	2.25
300Q140	175Q	175TAD300KIT	1.250	3.25	0.250	2.25
325Q56	133Q	133TAD262-325KIT	1.375	3.25	0.313	2.88
325Q140	175Q	175TAD262-325KIT	1.375	3.25	0.313	2.88
375Q180	237Q	237TAD375-516KIT	1.625	3.50	0.375	2.81
375Q180	262Q	262TAD375-516KIT	1.625	3.50	0.375	2.81
375Q210	325Q	325TAD375-516KIT	1.625	3.50	0.375	2.81
450Q180	237Q	237TAD375-516KIT	1.625	3.38	0.375	2.50
450Q180	262Q	262TAD375-516KIT	1.625	3.38	0.375	2.50
450Q210	325Q	325TAD375-516KIT	1.625	3.38	0.375	2.50
516Q180	237Q	237TAD375-516KIT	2.000	4.16	0.500	2.81
516Q180	262Q	262TAD375-516KIT	2.000	4.16	0.500	2.81
516Q210	325Q	325TAD375-516KIT	2.000	4.16	0.500	2.81
600Q210	325Q	325TAD600KIT	2.250	4.56	0.500	3.50

\* To complete part number, add shaft assembly code and ratio to size - for example, 133Q56LR10.  
 \* Style QH can be substituted for the secondary unit.  
 \* To complete part number, add motor frame size, shaft assembly code and ratio to size, for example 133Q56LR10.

New Part No.	Former Morse Description	New Part No.	Former Morse Description	New Part No.	Former Morse Description
100Q40LR10	FI10 10 42CZ LR	133Q56LR25	FI13 25 56C LR	154Q56H5	SFI15 05 56C
100Q40LR15	FI10 15 42CZ LR	133Q56LR30	FI13 30 56C LR	154Q56H50	SFI15 50 56C
100Q40LR20	FI10 20 42CZ LR	133Q56LR40	FI13 40 56C LR	154Q56LR10	FI15 10 56C LR
100Q40LR30	FI10 30 42CZ LR	133Q56LR5	FI13 05 56C LR	154Q56LR15	FI15 15 56C LR
100Q40LR40	FI10 40 42CZ LR	133Q56LR50	FI13 50 56C LR	154Q56LR20	FI15 20 56C LR
100Q40LR5	FI10 5 42CZ LR	133Q56L10	FI13 10 56C L	154Q56LR25	FI15 25 56C LR
100Q40LR50	FI10 50 42CZ LR	133Q56L15	FI13 15 56C L	154Q56LR30	FI15 30 56C LR
100Q40L10	FI10 10 42CZ L	133Q56L20	FI13 20 56C L	154Q56LR40	FI15 40 56C LR
100Q40L15	FI10 15 42CZ L	133Q56L25	FI13 25 56C L	154Q56LR5	FI15 05 56C LR
100Q40L20	FI10 20 42CZ L	133Q56L30	FI13 30 56C L	154Q56LR50	FI15 50 56C LR
100Q40L30	FI10 30 42CZ L	133Q56L40	FI13 40 56C L	154Q56L10	FI15 10 56C L
100Q40L40	FI10 40 42CZ L	133Q56L5	FI13 05 56C L	154Q56L15	FI15 15 56C L
100Q40L5	FI10 5 42CZ L	133Q56L50	FI13 50 56C L	154Q56L20	FI15 20 56C L
100Q40L50	FI10 50 42CZ L	133Q56R10	FI13 10 56C R	154Q56L25	FI15 25 56C L
100Q40R10	FI10 10 42CZ R	133Q56R15	FI13 15 56C R	154Q56L30	FI15 30 56C L
100Q40R15	FI10 15 42CZ R	133Q56R20	FI13 20 56C R	154Q56L40	FI15 40 56C L
100Q40R20	FI10 20 42CZ R	133Q56R25	FI13 25 56C R	154Q56L5	FI15 05 56C L
100Q40R30	FI10 30 42CZ R	133Q56R30	FI13 30 56C R	154Q56L50	FI15 50 56C L
100Q40R40	FI10 40 42CZ R	133Q56R40	FI13 40 56C R	154Q56R10	FI15 10 56C R
100Q40R5	FI10 5 42CZ R	133Q56R5	FI13 05 56C R	154Q56R15	FI15 15 56C R
100Q40R50	FI10 50 42CZ R	133Q56R50	FI13 50 56C R	154Q56R20	FI15 20 56C R
100Q56LR10	FI10 10 56C LR	133UH10	SI13 10	154Q56R25	FI15 25 56C R
100Q56LR15	FI10 15 56C LR	133UH15	SI13 15	154Q56R30	FI15 30 56C R
100Q56LR20	FI10 20 56C LR	133UH20	SI13 20	154Q56R40	FI15 40 56C R
100Q56LR30	FI10 30 56C LR	133UH25	SI 13 25	154Q56R5	FI15 05 56C R
100Q56LR40	FI10 40 56C LR	133UH30	SI13 30	154Q56R50	FI15 50 56C R
100Q56LR5	FI10 5 56C LR	133UH40	SI13 40	154UH10	SI15 10
100Q56L10	FI10 10 56C L	133UH5	SI13 05	154UH15	SI15 15
100Q56L30	FI10 30 56C L	133UH50	SI13 50	154UH20	SI15 20
100Q56R10	FI10 10 56C R	133ULR10	I13 10 LR	154UH25	SI15 25
100Q56R15	FI10 15 56C R	133ULR15	I13 15 LR	154UH30	SI15 30
100Q56R20	FI10 20 56C R	133ULR20	I13 20 LR	154UH40	SI15 40
100Q56R30	FI10 30 56C R	133ULR25	I13 25 LR	154UH5	SI15 05
100Q56R40	FI10 40 56C R	133ULR30	I13 30 LR	154UH50	SI15 50
100Q56R5	FI10 5 56C R	133ULR40	I13 40 LR	154ULR10	I15 10 LR
100ULR10	I10 10 LR	133ULR5	I13 05 LR	154ULR15	I15 15 LR
100ULR15	I10 15 LR	133ULR50	I13 50 LR	154ULR20	I15 20 LR
100ULR20	I10 20 LR	133UL10	I13 10 L	154ULR25	I15 25 LR
100ULR30	I10 30 LR	133UL15	I13 15 L	154ULR30	I15 30 LR
100ULR40	I10 40 LR	133UL20	I13 20 L	154ULR40	I15 40 LR
100ULR5	I10 5 LR	133UL25	I13 25 L	154ULR5	I15 05 LR
100ULR50	I10 50 LR	133UL30	I13 30 L	154ULR50	I15 50 LR
100UL10	I10 10 L	133UL40	I13 40 L	154UL10	I15 10 L
100UL15	I10 15 L	133UL5	I13 05 L	154UL15	I15 15 L
100UL20	I10 20 L	133UL50	I13 50 L	154UL20	I15 20 L
100UL30	I10 30 L	133UR10	I13 10 R	154UL25	I15 25 L
100UL40	I10 40 L	133UR15	I13 15 R	154UL30	I15 30 L
100UL5	I10 5 L	133UR20	I13 20 R	154UL40	I15 40 L
100UL50	I10 50 L	133UR25	I13 25 R	154UL5	I15 05 L
100UR10	I10 10 R	133UR30	I13 30 R	154UL50	I15 50 L
100UR15	I10 15 R	133UR40	I13 40 R	154UR10	I15 10 R
100UR20	I10 20 R	133UR5	I13 05 R	154UR15	I15 15 R
100UR30	I10 30 R	133UR50	I13 50 R	154UR20	I15 20 R
100UR40	I10 40 R	154Q140H10	SFI15 10 145TC	154UR25	I15 25 R
100UR5	I10 5 R	154Q140H5	SFI15 05 145TC	154UR30	I15 30 R
100UR50	I10 50 R	154Q140LR10	FI15 10 145TC LR	154UR40	I15 40 R
133Q56H10	SFI13 10 56C	154Q140LR5	FI15 5 145TC LR	154UR5	I15 05 R
133Q56H15	SFI13 15 56C	154Q140L10	FI15 10 145TC L	154UR50	I15 50 R
133Q56H20	SFI13 20 56C	154Q140L5	FI15 05 145TC L	175Q140H10	SFI18 10 145TC
133Q56H25	SFI13 25 56C	154Q140R10	FI15 10 145TC R	175Q140H15	SFI18 15 145TC
133Q56H30	SFI13 30 56C	154Q140R5	FI15 05 145TC R	175Q140H5	SFI18 05 145TC
133Q56H40	SFI13 40 56C	154Q56H10	SFI15 10 56C	175Q140LR10	FI18 10 145TC LR
133Q56H5	SFI13 05 56C	154Q56H15	SFI15 15 56C	175Q140LR15	FI18 15 145TC LR
133Q56H50	SFI13 50 56C	154Q56H20	SFI15 20 56C	175Q140LR5	FI18 05 145TC LR
133Q56LR10	FI13 10 56C LR	154Q56H25	SFI15 25 56C	175Q140L10	FI18 10 145TC L
133Q56LR15	FI13 15 56C LR	154Q56H30	SFI15 30 56C	175Q140L15	FI18 15 145TC L
133Q56LR20	FI13 20 56C LR	154Q56H40	SFI15 40 56C	175Q140L5	FI18 05 145TC L

<b>New Part No.</b>	<b>Former Morse Description</b>	<b>New Part No.</b>	<b>Former Morse Description</b>	<b>New Part No.</b>	<b>Former Morse Description</b>
175Q140R10	FI18 10 145TC R	175UR15	I18 15 R	206UH60	SI21 60
175Q140R15	FI18 15 145TC R	175UR20	I18 20 R	206ULR10	I21 10 LR
175Q140R5	FI18 05 145TC R	175UR25	I18 25 R	206ULR15	I21 15 LR
175Q56H10	SFI18 10 56C	175UR30	I18 30 R	206ULR20	I21 20 LR
175Q56H15	SFI18 15 56C	175UR40	I18 40 R	206ULR25	I21 25 LR
175Q56H20	SFI18 20 56C	175UR5	I18 05 R	206ULR30	I21 30 LR
175Q56H25	SFI18 25 56C	175UR50	I18 50 R	206ULR40	I21 40 LR
175Q56H30	SFI18 30 56C	175UR60	I18 60 R	206ULR5	I21 05 LR
175Q56H40	SFI18 40 56C	206Q140H10	SFI21 10 145TC	206ULR50	I21 50 LR
175Q56H5	SFI18 05 56C	206Q140H15	SFI21 15 145TC	206ULR60	I21 60 LR
175Q56H50	SFI18 50 56C	206Q140H20	SFI21 20 145TC	206UL10	I21 10 L
175Q56H60	SFI18 60 56C	206Q140H5	SFI21 05 145TC	206UL15	I21 15 L
175Q56LR10	FI18 10 56C LR	206Q140LR10	FI21 10 145TC LR	206UL20	I21 20 L
175Q56LR15	FI18 15 56C LR	206Q140LR15	FI21 15 145TC LR	206UL25	I21 25 L
175Q56LR20	FI18 20 56C LR	206Q140LR20	FI21 20 145TC LR	206UL30	I21 30 L
175Q56LR25	FI18 25 56C LR	206Q140LR25	FI21 25 145TC LR	206UL40	I21 40 L
175Q56LR30	FI18 30 56C LR	206Q140LR5	FI21 05 145TC LR	206UL5	I21 05 L
175Q56LR40	FI18 40 56C LR	206Q140L10	FI21 10 145TC L	206UL50	I21 50 L
175Q56LR5	FI18 05 56C LR	206Q140L15	FI21 15 145TC L	206UL60	I21 60 L
175Q56LR50	FI18 50 56C LR	206Q140L20	FI21 20 145TC L	206UR10	I21 10 R
175Q56LR60	FI18 60 56C LR	206Q140L25	FI21 25 145TC L	206UR15	I21 15 R
175Q56L10	FI18 10 56C L	206Q140L5	FI21 05 145TC L	206UR20	I21 20 R
175Q56L15	FI18 15 56C L	206Q140R10	FI21 10 145TC R	206UR25	I21 25 R
175Q56L20	FI18 20 56C L	206Q140R15	FI21 15 145TC R	206UR30	I21 30 R
175Q56L25	FI18 25 56C L	206Q140R20	FI21 20 145TC R	206UR40	I21 40 R
175Q56L30	FI18 30 56C L	206Q140R25	FI21 25 145TC R	206UR5	I21 05 R
175Q56L40	FI18 40 56C L	206Q140R5	FI21 05 145TC R	206UR50	I21 50 R
175Q56L5	FI18 05 56C L	206Q56H10	SFI21 10 56C	206UR60	I21 60 R
175Q56L50	FI18 50 56C L	206Q56H15	SFI21 15 56C	237Q140H10	SFI24 10 145TC
175Q56L60	FI18 60 56C L	206Q56H20	SFI21 20 56C	237Q140H15	SFI24 15 145TC
175Q56R10	FI18 10 56C R	206Q56H25	SFI21 25 56C	237Q140H20	SFI24 20 145TC
175Q56R15	FI18 15 56C R	206Q56H30	SFI21 30 56C	237Q140H25	SFI24 25 145TC
175Q56R20	FI18 20 56C R	206Q56H40	SFI21 40 56C	237Q140H30	SFI24 30 145TC
175Q56R25	FI18 25 56C R	206Q56H50	SFI21 50 56C	237Q140H5	SFI24 05 145TC
175Q56R30	FI18 30 56C R	206Q56H60	SFI21 60 56C	237Q140LR10	FI24 10 145TC LR
175Q56R40	FI18 40 56C R	206Q56LR10	FI21 10 56C LR	237Q140LR15	FI24 15 145TC LR
175Q56R5	FI18 05 56C R	206Q56LR15	FI21 15 56C LR	237Q140LR20	FI24 20 145TC LR
175Q56R50	FI18 50 56C R	206Q56LR20	FI21 20 56C LR	237Q140LR25	FI24 25 145TC LR
175Q56R60	FI18 60 56C R	206Q56LR25	FI21 25 56C LR	237Q140LR30	FI24 30 145TC LR
175UH10	SI18 10	206Q56LR30	FI21 30 56C LR	237Q140L10	FI24 10 145TC L
175UH15	SI18 15	206Q56LR40	FI21 40 56C LR	237Q140L15	FI24 15 145TC L
175UH20	SI18 20	206Q56LR50	FI21 50 56C LR	237Q140L20	FI24 20 145TC L
175UH25	SI 18 25	206Q56LR60	FI21 60 56C LR	237Q140L25	FI24 25 145TC L
175UH30	SI18 30	206Q56L10	FI21 10 56C L	237Q140L30	FI24 30 145TC L
175UH40	SI18 40	206Q56L15	FI21 15 56C L	237Q140R10	FI24 10 145TC R
175UH5	SI18 05	206Q56L20	FI21 20 56C L	237Q140R15	FI24 15 145TC R
175UH50	SI18 50	206Q56L25	FI21 25 56C L	237Q140R20	FI26 20 145TC R
175UH60	SI18 60	206Q56L30	FI21 30 56C L	237Q140R25	FI24 25 145TC R
175ULR10	I18 10 LR	206Q56L40	FI21 40 56C L	237Q140R30	FI24 30 145TC R
175ULR15	I18 15 LR	206Q56L50	FI21 50 56C L	237Q56H10	SFI24 10 56C
175ULR20	I18 20 LR	206Q56L60	FI21 60 56C L	237Q56H15	SFI24 15 56C
175ULR25	I18 25 LR	206Q56R10	FI21 10 56C R	237Q56H20	SFI24 20 56C
175ULR30	I18 30 LR	206Q56R15	FI21 15 56C R	237Q56H25	SFI24 25 56C
175ULR40	I18 40 LR	206Q56R20	FI21 20 56C R	237Q56H30	SFI24 30 56C
175ULR5	I18 05 LR	206Q56R25	FI21 25 56C R	237Q56H40	SFI24 40 56C
175ULR50	I18 50 LR	206Q56R30	FI21 30 56C R	237Q56H50	SFI24 50 56C
175ULR60	I18 60 LR	206Q56R40	FI21 40 56C R	237Q56H60	SFI24 60 56C
175UL10	I18 10 L	206Q56R50	FI21 50 56C R	237Q56LR10	FI24 10 56C LR
175UL15	I18 15 L	206Q56R60	FI21 60 56C R	237Q56LR15	FI24 15 56C LR
175UL20	I18 20 L	206UH10	SI21 10	237Q56LR20	FI24 20 56C LR
175UL25	I18 25 L	206UH15	SI21 15	237Q56LR25	FI24 25 56C LR
175UL30	I18 30 L	206UH20	SI21 20	237Q56LR30	FI24 30 56C LR
175UL40	I18 40 L	206UH25	SI21 25	237Q56LR40	FI24 40 56C LR
175UL5	I18 05 L	206UH30	SI21 30	237Q56LR50	FI24 50 56C LR
175UL50	I18 50 L	206UH40	SI21 40	237Q56LR60	FI24 60 56C LR
175UL60	I18 60 L	206UH5	SI21 05	237Q56L10	FI24 10 56C L
175UR10	I18 10 R	206UH50	SI21 50	237Q56L15	FI24 15 56C L

New Part No.	Former Morse Description	New Part No.	Former Morse Description	New Part No.	Former Morse Description
237Q56L20	FI24 20 56C L	262Q140L15	FI26 15 145TC L	262ULR30	I26 30 LR
237Q56L25	FI24 25 56C L	262Q140L20	FI26 20 145TC L	262ULR40	I26 40 LR
237Q56L30	FI24 30 56C L	262Q140L25	FI26 25 145TC L	262ULR50	I26 05 LR
237Q56L40	FI24 40 56C L	262Q140L30	FI26 30 145TC L	262ULR60	I26 50 LR
237Q56L50	FI24 50 56C L	262Q140L40	FI26 40 145TC L	262ULR10	I26 10 L
237Q56L60	FI24 60 56C L	262Q140L50	FI26 50 145TC L	262UL15	I26 15 L
237Q56R10	FI24 10 56C R	262Q140L60	FI26 60 145TC L	262UL20	I26 20 L
237Q56R15	FI24 15 56C R	262Q140R10	FI26 10 145TC R	262UL25	I26 25 L
237Q56R20	FI24 20 56C R	262Q140R15	FI26 15 145TC R	262UL30	I26 30 L
237Q56R25	FI24 25 56C R	262Q140R20	FI26 20 145TC R	262UL40	I26 40 L
237Q56R30	FI24 30 56C R	262Q140R25	FI26 25 145TC R	262UL5	I26 05 L
237Q56R40	FI24 40 56C R	262Q140R30	FI26 30 145TC R	262UL50	I26 50 L
237Q56R50	FI24 50 56C R	262Q140R40	FI26 40 145TC R	262UL60	I26 60 L
237Q56R60	FI24 60 56C R	262Q140R50	FI26 50 145TC R	262UR10	I26 10 R
237UH10	SI24 10	262Q140R60	FI26 60 145TC R	262UR15	I26 15 R
237UH15	SI24 15	262Q180H10	SFI26 10 184TC	262UR20	I26 20 R
237UH20	SI24 20	262Q180H5	SFI26 05 184TC	262UR25	I26 25 R
237UH25	SI24 25	262Q180LR10	FI26 10 184TC L	262UR30	I26 30 R
237UH30	SI24 30	262Q180LR5	FI26 5 184TC LR	262UR40	I26 40 R
237UH40	SI24 40	262Q180L5	FI26 5 184TC L	262UR5	I26 05 R
237UH5	SI24 05	262Q180R10	FI26 10 184TC R	262UR50	I26 50 R
237UH50	SI24 50	262Q180R5	FI26 5 184TC R	262UR60	I26 60 R
237UH60	SI24 60	262Q56H10	SFI26 10 56C	300Q140H10	SFI30 10 145TC
237ULR10	I24 10 LR	262Q56H15	SFI26 15 56C	300Q140H15	SFI30 15 145TC
237ULR15	I24 15 LR	262Q56H20	SFI26 20 56C	300Q140H20	SFI30 20 145TC
237ULR20	I24 20 LR	262Q56H25	SFI26 25 56C	300Q140H25	SFI30 25 145TC
237ULR25	I24 25 LR	262Q56H30	SFI26 30 56C	300Q140H30	SFI30 30 145TC
237ULR30	I24 30 LR	262Q56H40	SFI26 40 56C	300Q140H40	SFI30 40 145TC
237ULR40	I24 40 LR	262Q56H50	SFI26 50 56C	300Q140H50	SFI30 50 145TC
237ULR5	I24 05 LR	262Q56H60	SFI26 60 56C	300Q140H60	SFI30 60 145TC
237ULR50	I24 50 LR	262Q56LR10	FI26 10 56C LR	300Q140LR10	FI30 10 145TC LR
237ULR60	I24 60 LR	262Q56LR15	FI26 15 56C LR	300Q140LR15	FI30 15 145TC LR
237UL10	I24 10 L	262Q56LR20	FI26 20 56C LR	300Q140LR20	FI30 20 145TC LR
237UL15	I24 15 L	262Q56LR25	FI26 25 56C LR	300Q140LR25	FI30 25 145TC LR
237UL20	I24 20 L	262Q56LR30	FI26 30 56C LR	300Q140LR30	FI30 30 145TC LR
237UL25	I24 25 L	262Q56LR40	FI26 40 56C LR	300Q140LR40	FI30 40 145TC LR
237UL30	I24 30 L	262Q56LR50	FI26 50 56C LR	300Q140LR50	FI30 50 145TC LR
237UL40	I24 40 L	262Q56LR60	FI26 60 56C LR	300Q140LR60	FI30 60 145TC LR
237UL5	I24 05 L	262Q56L10	FI26 10 56C L	300Q140L10	FI30 10 145TC L
237UL50	I24 50 L	262Q56L15	FI26 15 56C L	300Q140L15	FI30 15 145TC L
237UL60	I24 60 L	262Q56L20	FI26 20 56C L	300Q140L20	FI30 20 145TC L
237UR10	I24 10 R	262Q56L25	FI26 25 56C L	300Q140L25	FI30 25 145TC L
237UR15	I24 15 R	262Q56L30	FI26 30 56C L	300Q140L30	FI30 30 145TC L
237UR20	I24 20 R	262Q56L40	FI26 40 56C L	300Q140L40	FI30 40 145TC L
237UR25	I24 25 R	262Q56L50	FI26 50 56C L	300Q140L50	FI30 50 145TC L
237UR30	I24 30 R	262Q56L60	FI26 60 56C L	300Q140L60	FI30 60 145TC L
237UR40	I24 40 R	262Q56R10	FI26 10 56C R	300Q140R10	FI30 10 145TC R
237UR5	I24 05 R	262Q56R15	FI26 15 56C R	300Q140R15	FI30 15 145TC R
237UR50	I24 50 R	262Q56R20	FI26 20 56C R	300Q140R20	FI30 20 145TC R
237UR60	I24 60 R	262Q56R25	FI26 25 56C R	300Q140R25	FI30 25 145TC R
262Q140H10	SFI26 10 145TC	262Q56R30	FI26 30 56C R	300Q140R30	FI30 30 145TC R
262Q140H15	SFI26 15 145TC	262Q56R40	FI26 40 56C R	300Q140R40	FI30 40 145TC R
262Q140H20	SFI26 20 145TC	262Q56R50	FI26 50 56C R	300Q140R50	FI30 50 145TC R
262Q140H25	SFI26 25 145TC	262Q56R60	FI26 60 56C R	300Q140R60	FI30 60 145TC R
262Q140H30	SFI26 30 145TC	262UH10	SI26 10	300Q180H10	SFI30 10 184TC
262Q140H40	SFI26 40 145TC	262UH15	SI26 15	300Q180H15	SFI30 15 184TC
262Q140H50	SFI26 50 145TC	262UH20	SI26 20	300Q180H20	SFI30 20 184TC
262Q140H60	SFI26 60 145TC	262UH25	SI26 25	300Q180H25	SFI30 25 184TC
262Q140LR10	FI26 10 145TC LR	262UH30	SI26 30	300Q180H30	SFI30 30 184TC
262Q140LR15	FI26 15 145TC LR	262UH40	SI26 40	300Q180H40	SFI30 40 184TC
262Q140LR20	FI26 20 145TC LR	262UH5	SI26 5	300Q180H50	SFI30 50 184TC
262Q140LR25	FI26 25 145TC LR	262UH50	SI26 50	300Q180H60	SFI30 60 184TC
262Q140LR30	FI26 30 145TC LR	262UH60	SI26 60	300Q180LR10	FI30 10 184TC LR
262Q140LR40	FI26 40 145TC LR	262ULR10	I26 10 LR	300Q180LR15	FI30 15 184TC LR
262Q140LR50	FI26 50 145TC LR	262ULR15	I26 15 LR	300Q180LR20	FI30 20 184TC LR
262Q140LR60	FI26 60 145TC LR	262ULR20	I26 20 LR	300Q180LR25	FI30 25 184TC LR
262Q140L10	FI26 10 145TC L	262ULR25	I26 25LR		



<b>New</b>	<b>Former</b>	<b>New</b>	<b>Former</b>	<b>New</b>	<b>Former</b>
<b>Part No.</b>	<b>Morse Description</b>	<b>Part No.</b>	<b>Morse Description</b>	<b>Part No.</b>	<b>Morse Description</b>
300Q180LR30	FI30 30 184TC LR	300UL15	I30 15 L	325Q180L20	FI32 20 184TC L
300Q180LR40	FI30 40 184TC LR	300UL20	I30 20 L	325Q180L25	FI32 25 184TC L
300Q180LR50	FI30 50 184TC LR	300UL25	I30 25 L	325Q180L30	FI32 30 184TC L
300Q180LR60	FI30 60 184TC LR	300UL30	I30 30 L	325Q180L40	FI32 40 184TC L
300Q180L10	FI30 10 184TC L	300UL40	I30 40 L	325Q180L50	FI32 50 184TC L
300Q180L15	FI30 15 184TC L	300UL5	I30 05 L	325Q180L60	FI32 60 184TC L
300Q180L20	FI30 20 184TC L	300UL50	I30 50 L	325Q180R10	FI32 10 184TC R
300Q180L25	FI30 25 184TC L	300UL60	I30 60 L	325Q180R15	FI32 15 184TC R
300Q180L30	FI30 30 184TC L	300UR10	I30 10 R	325Q180R20	FI32 20 184TC R
300Q180L40	FI30 40 184TC L	300UR15	I30 15 R	325Q180R25	FI32 25 184TC R
300Q180L50	FI30 50 184TC L	300UR20	I30 20 R	325Q180R30	FI32 30 184TC R
300Q180L60	FI30 60 184TC L	300UR25	I30 25 R	325Q180R40	FI32 40 184TC R
300Q180R10	FI30 10 184TC R	300UR30	I30 30 R	325Q180R50	FI32 50 184TC R
300Q180R15	FI30 15 184TC R	300UR40	I30 40 R	325Q180R60	FI32 60 184TC R
300Q180R20	FI30 20 184TC R	300UR5	I30 05 R	325Q56H10	SFI32 10 56C
300Q180R25	FI30 25 184TC R	300UR50	I30 50 R	325Q56H15	SFI32 15 56C
300Q180R30	FI30 30 184TC R	300UR60	I30 60 R	325Q56H20	SFI32 20 56C
300Q180R40	FI30 40 184TC R	325Q140H10	SFI32 10 145TC	325Q56H25	SFI32 25 56C
300Q180R50	FI30 50 184TC R	325Q140H15	SFI32 15 145TC	325Q56H30	SFI32 30 56C
300Q180R60	FI30 60 184TC R	325Q140H20	SFI32 20 145TC	325Q56H40	SFI32 40 56C
300Q56H15	SFI30 15 56C	325Q140H25	SFI32 25 145TC	325Q56H50	SFI32 50 56C
300Q56H20	SFI30 20 56C	325Q140H30	SFI32 30 145TC	325Q56H60	SFI32 60 56C
300Q56H25	SFI30 25 56C	325Q140H40	SFI32 40 145TC	325Q56LR10	FI32 10 56C LR
300Q56H30	SFI30 30 56C	325Q140H50	SFI32 50 145TC	325Q56LR15	FI32 15 56C LR
300Q56H40	SFI30 40 56C	325Q140H60	SFI32 60 145TC	325Q56LR20	FI32 20 56C LR
300Q56H50	SFI30 50 56C	325Q140LR10	FI32 10 145TC LR	325Q56LR25	FI32 25 56C LR
300Q56H60	SFI30 60 56C	325Q140LR15	FI32 15 145TC LR	325Q56LR30	FI32 30 56C LR
300Q56LR15	FI30 15 56C LR	325Q140LR20	FI32 20 145TC LR	325Q56LR40	FI32 40 56C LR
300Q56LR20	FI30 20 56C LR	325Q140LR25	FI32 25 145TC LR	325Q56LR50	FI32 50 56C LR
300Q56LR25	FI30 25 56C LR	325Q140LR30	FI32 30 145TC LR	325Q56LR60	FI32 60 56C LR
300Q56LR30	FI30 30 56C LR	325Q140LR40	FI32 40 145TC LR	325Q56L10	FI32 10 56C L
300Q56LR40	FI30 40 56C LR	325Q140LR50	FI32 50 145TC LR	325Q56L15	FI32 15 56C L
300Q56LR50	FI30 50 56C LR	325Q140LR60	FI32 60 145TC LR	325Q56L20	FI32 20 56C L
300Q56LR60	FI30 60 56C LR	325Q140L10	FI32 10 145TC L	325Q56L25	FI32 25 56C L
300Q56L15	FI30 15 56C L	325Q140L15	FI32 15 145TC L	325Q56L30	FI32 30 56C L
300Q56L20	FI30 20 56C L	325Q140L20	FI32 20 145TC L	325Q56L40	FI32 40 56C L
300Q56L25	FI30 25 56C L	325Q140L25	FI32 25 145TC L	325Q56L50	FI32 50 56C L
300Q56L30	FI30 30 56C L	325Q140L30	FI32 30 145TC L	325Q56L60	FI32 60 56C L
300Q56L40	FI30 40 56C L	325Q140L40	FI32 40 145TC L	325Q56R10	FI32 10 56C R
300Q56L50	FI30 50 56C L	325Q140L50	FI32 50 145TC L	325Q56R15	FI32 15 56C R
300Q56L60	FI30 60 56C L	325Q140L60	FI32 60 145TC L	325Q56R20	FI32 20 56C R
300Q56R15	FI30 15 56C R	325Q140R10	FI32 10 145TC R	325Q56R25	FI32 25 56C R
300Q56R20	FI30 20 56C R	325Q140R15	FI32 15 145TC R	325Q56R30	FI32 30 56C R
300Q56R25	FI30 25 56C R	325Q140R20	FI32 20 145TC R	325Q56R40	FI32 40 56C R
300Q56R30	FI30 30 56C R	325Q140R25	FI32 25 145TC R	325Q56R50	FI32 50 56C R
300Q56R40	FI30 40 56C R	325Q140R30	FI32 30 145TC R	325Q56R60	FI32 60 56C R
300Q56R50	FI30 50 56C R	325Q140R40	FI32 40 145TC R	325UH10	SI32 10
300Q56R60	FI30 60 56C R	325Q140R50	FI32 50 145TC R	325UH15	SI32 15
300UH10	SI30 10	325Q140R60	FI32 60 145TC R	325UH20	SI32 20
300UH15	SI30 15	325Q180H10	SFI32 10 184TC	325UH25	SI32 25
300UH20	SI30 20	325Q180H15	SFI32 15 184TC	325UH30	SI32 30
300UH25	SI30 25	325Q180H20	SFI32 20 184TC	325UH40	SI32 40
300UH30	SI30 30	325Q180H25	SFI32 25 184TC	325UH50	SI32 50
300UH40	SI30 40	325Q180H30	SFI32 30 184TC	325UH60	SI32 60
300UH5	SI30 05	325Q180H40	SFI32 40 184TC	325ULR10	I32 10 LR
300UH50	SI30 50	325Q180H50	SFI32 50 184TC	325ULR15	I32 15 LR
300UH60	SI30 60	325Q180H60	SFI32 60 184TC	325ULR20	I32 20 LR
300ULR10	I30 10 L	325Q180LR10	FI32 10 184TC LR	325ULR25	I32 25 LR
300ULR15	I30 15 L	325Q180LR15	FI32 15 184TC LR	325ULR30	I32 30 LR
300ULR20	I30 20 L	325Q180LR20	FI32 20 184TC LR	325ULR40	I32 40 LR
300ULR25	I30 25 LR	325Q180LR25	FI32 25 184TC LR	325ULR50	I32 50 LR
300ULR30	I30 30 L	325Q180LR30	FI32 30 184TC LR	325ULR60	I32 60 LR
300ULR40	I30 40 L	325Q180LR40	FI32 40 184TC LR	325UL10	I32 10 L
300ULR5	I30 05 L	325Q180LR50	FI32 50 184TC LR	325UL15	I32 15 L
300ULR50	I30 50 L	325Q180LR60	FI32 60 184TC LR	325UL20	I32 20 L
300ULR60	I30 60 L	325Q180L10	FI32 10 184TC L	325UL25	I32 25 L
300UL10	I30 10 L	325Q180L15	FI32 15 184TC L	325UL30	I32 30 L

New		Former		New		Former		New		Former	
Part No.	Morse Description	Part No.	Morse Description	Part No.	Morse Description	Part No.	Morse Description	Part No.	Morse Description	Part No.	Morse Description
325UL40	I32 40 L	375Q56H50	SFI38 50 56C	450Q180LR40	FI45 40 184TC LR						
325UL50	I32 50 L	375Q56H60	SFI38 60 56C	450Q180LR50	FI45 50 184TC LR						
325UL60	I32 60 L	375Q56LR40	FI38 40 56C LR	450Q180LR60	FI45 60 184TC LR						
325UR10	I32 10 R	375Q56LR50	FI38 50 56C LR	450Q180L15	FI45 15 184TC L						
325UR15	I32 15 R	375Q56LR60	FI38 60 56C LR	450Q180L20	FI45 20 184TC L						
325UR20	I32 20 R	375Q56L40	FI38 40 56C L	450Q180L25	FI45 25 184TC L						
325UR25	I32 25 R	375Q56L50	FI38 50 56C L	450Q180L30	FI45 30 184TC L						
325UR30	I32 30 R	375Q56L60	FI38 60 56C L	450Q180L40	FI45 40 184TC L						
325UR40	I32 40 R	375Q56R40	FI38 40 56C R	450Q180L50	FI45 50 184TC L						
325UR50	I32 50 R	375Q56R50	FI38 50 56C R	450Q180L60	FI45 60 184TC L						
325UR60	I32 60 R	375Q56R60	FI38 60 56C R	450Q180R15	FI45 15 184TC R						
375Q140H25	SFI38 25 145TC	375UH10	SI38 10	450Q180R20	FI45 20 184TC R						
375Q140H50	SFI38 50 145TC	375UH15	SI38 15	450Q180R25	FI45 25 184TC R						
375Q140H60	SFI38 60 145TC	375UH20	SI38 20	450Q180R30	FI45 30 184TC R						
375Q140LR10	FI38 10 145TC LR	375UH25	SI38 25	450Q180R40	FI45 40 184TC R						
375Q140LR25	FI38 25 145TC LR	375UH30	SI38 30	450Q180R50	FI45 50 184TC R						
375Q140LR30	FI38 30 145TC LR	375UH40	SI38 40	450Q180R60	FI45 60 184TC R						
375Q140LR40	FI38 40 145TC LR	375UH50	SI38 50	450Q210H10	SFI45 10 215TC						
375Q140LR50	FI38 50 145TC LR	375UH60	SI38 60	450Q210H15	SFI45 15 215TC						
375Q140LR60	FI38 60 145TC LR	375ULR10	I38 10 LR	450Q210H20	SFI45 20 215TC						
375Q140L10	FI38 10 145TC L	375ULR15	I38 15 LR	450Q210H25	SFI45 25 215TC						
375Q140L25	FI38 25 145TC L	375ULR20	I38 20 LR	450Q210LR10	FI45 10 215TC LR						
375Q140L30	FI38 30 145TC L	375ULR25	I38 25 LR	450Q210LR15	FI45 15 215TC LR						
375Q140L40	FI38 40 145TC L	375ULR30	I38 30 LR	450Q210LR20	FI45 20 215TC LR						
375Q140L50	FI38 50 145TC L	375ULR40	I38 40 LR	450Q210LR25	FI45 25 215TC LR						
375Q140L60	FI38 60 145TC L	375ULR50	I38 50 LR	450Q210L10	FI45 10 215TC L						
375Q140R10	FI38 10 145TC R	375ULR60	I38 60 LR	450Q210L15	FI45 15 215TC L						
375Q140R25	FI38 25 145TC R	375UL10	I38 10 L	450Q210L20	FI45 20 215TC L						
375Q140R30	FI38 30 145TC R	375UL15	I38 15 L	450Q210L25	FI45 25 215TC L						
375Q140R40	FI38 40 145TC R	375UL20	I38 20 L	450Q210R10	FI45 10 215TC R						
375Q140R50	FI38 50 145TC R	375UL25	I38 25 L	450Q210R15	FI45 15 215TC R						
375Q140R60	FI38 60 145TC R	375UL30	I38 30 L	450Q210R20	FI45 20 215TC R						
375Q180H10	SFI38 10 184TC	375UL40	I38 40 L	450Q210R25	FI45 25 215 TC R						
375Q180H15	SFI38 15 184TC	375UL50	I38 50 L	450UH10	SI45 10						
375Q180H20	SFI38 20 184TC	375UL60	I38 60 L	450UH15	SI45 15						
375Q180H25	SFI38 25 184TC	375UR10	I38 10 R	450UH20	SI45 20						
375Q180H30	SFI38 30 184TC	375UR15	I38 15 R	450UH25	SI45 25						
375Q180H40	SFI38 40 184TC	375UR20	I38 20 R	450UH30	SI45 30						
375Q180H50	SFI38 50 184TC	375UR25	I38 25 R	450UH40	SI45 40						
375Q180LR10	FI38 10 184TC LR	375UR30	I38 30 R	450UH50	SI45 50						
375Q180LR15	FI38 15 184TC LR	375UR40	I38 40 R	450UH60	SI45 60						
375Q180LR20	FI38 20 184TC LR	375UR50	I38 50 R	450ULR10	I45 10 LR						
375Q180LR25	FI38 25 184TC LR	375UR60	I38 60 R	450ULR15	I45 15 LR						
375Q180LR30	FI38 30 184TC LR	450Q140H40	SFI45 40 145TC	450ULR20	I45 20 LR						
375Q180LR40	FI38 40 184TC LR	450Q140H50	SFI45 50 145TC	450ULR25	I45 25 LR						
375Q180LR50	FI38 50 184TC LR	450Q140H60	SFI45 60 145TC	450ULR30	I45 30 LR						
375Q180L10	FI38 10 184TC L	450Q140LR40	FI45 40 145TC LR	450ULR40	I45 40 LR						
375Q180L15	FI38 15 184TC L	450Q140LR50	FI45 50 145TC LR	450ULR50	I45 50 LR						
375Q180L20	FI38 20 184TC L	450Q140LR60	FI45 60 145TC LR	450ULR60	I45 60 LR						
375Q180L25	FI38 25 184TC L	450Q140L40	FI45 30 145TC L	450UL10	I45 10 L						
375Q180L30	FI38 30 184TC L	450Q140L50	FI45 50 145TC L	450UL15	I45 15 L						
375Q180L40	FI38 40 184TC L	450Q140L60	FI45 60 145TC L	450UL20	I45 20 L						
375Q180L50	FI38 50 184TC L	450Q140R40	FI45 40 145TC R	450UL25	I45 25 L						
375Q180R10	FI38 10 184TC R	450Q140R50	FI45 50 145TC R	450UL30	I45 30 L						
375Q180R15	FI38 15 184TC R	450Q140R60	FI45 60 145TC R	450UL40	I45 40 L						
375Q180R20	FI38 20 184TC R	450Q180H15	SFI45 15 184TC	450UL50	I45 50 L						
375Q180R25	FI38 25 184TC R	450Q180H20	SFI45 20 184TC	450UL60	I45 60 L						
375Q180R30	FI38 30 184TC R	450Q180H25	SFI45 25 184TC	450UR10	I45 10 R						
375Q180R40	FI38 40 184TC R	450Q180H30	SFI45 30 184TC	450UR15	I45 15 R						
375Q180R50	FI38 50 184TC R	450Q180H40	SFI45 40 184TC	450UR20	I45 20 R						
375Q210H10	SFI38 10 215TC	450Q180H50	SFI45 50 184TC	450UR25	I45 25 R						
375Q210H60	SFI38 60 215TC	450Q180H60	SFI45 60 184TC	450UR30	I45 30 R						
375Q210LR10	FI38 10 215TC LR	450Q180H60	SFI45 60 184TC	450UR40	I45 40 R						
375Q210L10	FI38 10 215TC L	450Q180LR15	FI45 15 184TC LR	450UR50	I45 50 R						
375Q210R10	FI38 10 215TC R	450Q180LR20	FI45 20 184TC LR	450UR60	I45 60 R						
375Q56H40	SFI38 40 56C	450Q180LR25	FI45 25 184TC LR	516Q180H40	SFI52 40 184TC						
		450Q180LR30	FI45 30 184TC LR								

<b>New</b>	<b>Former</b>	<b>New</b>	<b>Former</b>	<b>New</b>	<b>Former</b>
<b>Part No.</b>	<b>Morse Description</b>	<b>Part No.</b>	<b>Morse Description</b>	<b>Part No.</b>	<b>Morse Description</b>
516Q180H50	SFI52 50 184TC	600Q210H50	SFI60 50 215TC	115BU107	115BU107
516Q180H60	SFI52 60 184TC	600Q210H60	SFI60 60 215TC	115BU108	115BU108
516Q180LR40	FI52 40 184TC LR	600Q210LR25	FI60 25 215TC LR	115BU110	115BU110
516Q180LR50	FI52 50 184TC LR	600Q210LR30	FI60 30 215TC LR	115BU111	115BU111
516Q180LR60	FI52 60 184TC LR	600Q210LR40	FI60 40 215TC LR	115BU112	115BU112
516Q180L40	FI52 40 184TC L	600Q210LR50	FI60 50 215TC LR	203BU103	203BU103
516Q180L50	FI52 50 184TC L	600Q210LR60	FI60 60 215TC LR	203BU104	203BU104
516Q180L60	FI52 60 184TC L	600Q210L25	FI60 25 215TC L	203BU105	203BU105
516Q180R40	FI52 40 184TC R	600Q210L30	FI60 30 215TC L	203BU106	203BU106
516Q180R50	FI52 50 184TC R	600Q210L40	FI60 40 215TC L	203BU107	203BU107
516Q180R60	FI52 60 184TC R	600Q210L50	FI60 50 215TC L	203BU108	203BU108
516Q210H10	SFI52 10 215TC	600Q210L60	FI60 60 215TC L	203BU110	203BU110
516Q210H15	SFI52 15 215TC	600Q210R25	FI60 25 215TC R	203BU111	203BU111
516Q210H20	SFI52 20 215TC	600Q210R30	FI60 30 215TC R	203BU112	203BU112
516Q210H30	SFI52 30 215TC	600Q210R40	FI60 40 215TC R	203BU114	203BU114
516Q210LR10	FI52 10 215TC LR	600Q210R50	FI60 50 215TC R	203BU115	203BU115
516Q210LR15	FI52 15 215TC LR	600Q210R60	FI60 60 215TC R	203BU200	203BU200
516Q210LR20	FI52 20 215TC LR	600UH10	SI60 10	207BU106	207BU106
516Q210LR25	FI52 25 215TC LR	600UH15	SI60 15	207BU107	207BU107
516Q210LR30	FI52 30 215TC LR	600UH20	SI60 20	207BU108	207BU108
516Q210L10	FI52 10 184TC L	600UH25	SI60 25	207BU110	207BU110
516Q210L15	FI52 15 184TC L	600UH30	SI60 30	207BU111	207BU111
516Q210L20	FI52 20 184TC L	600UH40	SI60 40	207BU112	207BU112
516Q210L25	FI52 25 215TC L	600UH50	SI60 50	207BU114	207BU114
516Q210L30	FI52 30 184TC L	600UH60	SI60 60	207BU115	207BU115
516Q210R10	FI52 10 215TC R	600ULR10	I60 10 LR	207BU200	207BU200
516Q210R15	FI52 15 215TC R	600ULR15	I60 15 LR	207BU202	207BU202
516Q210R20	FI52 20 215TC R	600ULR20	I60 20 LR	207BU203	207BU203
516Q210R25	FI52 25 215TC R	600ULR25	I60 25 LR	207BU204	207BU204
516Q210R30	FI52 30 215TC R	600ULR30	I60 30 LR	215BU107	215BU107
516UH10	SI52 10	600ULR40	I60 40 LR	215BU108	215BU108
516UH15	SI52 15	600ULR50	I60 50 LR	215BU111	215BU111
516UH25	SI52 25	600ULR60	I60 60 LR	215BU112	215BU112
516UH30	SI52 30	600UL10	I60 10 L	215BU114	215BU114
516UH40	SI52 40	600UL15	I60 15 L	215BU115	215BU115
516UH50	SI52 50	600UL20	I60 20 L	215BU200	215BU200
516UH60	SI52 60	600UL25	I60 25 L	215BU203	215BU203
516ULR10	I52 10 LR	600UL30	I60 30 L	215BU204	215BU204
516ULR15	I52 15 LR	600UL40	I60 40 L	215BU207	215BU207
516ULR20	I52 20 LR	600UL50	I60 50 L	215BU208	215BU208
516ULR25	I52 25 LR	600UL60	I60 60 L	215BU211	215BU211
516ULR30	I52 30 LR	600UR10	I60 10 R	307BU115	307BU115
516ULR40	I52 40 LR	600UR15	I60 15 R	307BU200	307BU200
516ULR50	I52 50 LR	600UR20	I60 20 R	307BU203	307BU203
516ULR60	I52 60 LR	600UR25	I60 25 R	307BU204	307BU204
516UL10	I52 10 L	600UR30	I60 30 R	307BU207	307BU207
516UL15	I52 15 L	600UR40	I60 40 R	307BU208	307BU208
516UL20	I52 20 L	600UR50	I60 50 R	307BU211	307BU211
516UL25	I52 25 L	600UR60	I60 60 R	307BU214	307BU214
516UL30	I52 30 L	107BU012	107BU012	307BU215	307BU215
516UL40	I52 40 L	107BU014	107BU014	315BU207	315BU207
516UL50	I52 50 L	107BU015	107BU015	315BU208	315BU208
516UL60	I52 60 L	107BU100	107BU100	315BU211	315BU211
516UR10	I52 10 R	107BU101	107BU101	315BU213	315BU213
516UR15	I52 15 R	107BU102	107BU102	315BU214	315BU214
516UR20	I52 20 R	107BU103	107BU103	315BU215	315BU215
516UR25	I52 25 R	107BU104	107BU104	315BU300	315BU300
516UR30	I52 30 R	107BU105	107BU105	315BU303	315BU303
516UR40	I52 40 R	115BU015	115BU015	315BU307	315BU307
516UR50	I52 50 R	115BU100	115BU100	100S-BK	I10C-BK
516UR60	I52 60 R	115BU101	115BU101	133S-BK	I13C-BK
600Q210H15	SFI60 15 215TC	115BU102	115BU102	154S-BK	I15C-BK
600Q210H20	SFI60 20 215TC	115BU103	115BU103	175S-BK	I18C-BK
600Q210H25	SFI60 25 215TC	115BU104	115BU104	206S-BK	I21C-BK
600Q210H30	SFI60 30 215TC	115BU105	115BU105	237S-BK	I24C-BK
600Q210H40	SFI60 40 215TC	115BU106	115BU106	262S-BK	I26C-BK

<b>New</b>	<b>Former</b>	<b>New</b>	<b>Former</b>	<b>New</b>	<b>Former</b>
<b>Part No.</b>	<b>Morse Description</b>	<b>Part No.</b>	<b>Morse Description</b>	<b>Part No.</b>	<b>Morse Description</b>
300S-BK	I30C-BK	237MAK56	RFI24MAK56	300FAN	I30FAN
325S-BK	I32C-BK	237MAK140	RFI24MAK140	325FAN	I32FAN
375S-BK	I38C-BK	262MAK56	RFI26MAK56	375FAN	I38 FAN
450S-BK	I45C-BK	262MAK140	RFI26MAK140	450FAN	I45 FAN
516S-BK	I52C-BK	262MAK180	RFI26MAK180	516FAN	I52 FAN
600S-BK	I60C-BK	300-325MAK56	RFI30-I32MAK56	600FAN	I60FAN
100E-BK	NEW	300-325MAK140	RFI30-I32MAK140	100RCP	1.00CD OUTPUT BORE PLG
133E-BK	NEW	300-325MAK180	RFI30-I32MAK180	133-154RCP	1.33-1.54CD BORE PLUG
154E-BK	NEW	325MAK210	RFI32MAK210	175RCP	1.75CD OUTPUT BORE PLG
175E-BK	NEW	375MAK56	RFI38MAK56	206RCP	2.06CD OUTPUT BORE PLG
206E-BK	NEW	375MAK140	RFI38MAK140	237RCP	2.37CD OUTPUT BORE PLG
237E-BK	NEW	375MAK180	RFI38MAK180	262-300RCP	2.62/300 OUT BORE PLG
262E-BK	NEW	375MAK210	RFI38MAK210	325RCP	3.25CD OUTPUT BORE PLG
300E-BK	NEW	450MAK140	RFI45MAK140	375RCP	3.75 OUTPUT BORE PLG
325E-BK	NEW	450MAK140	RFI45MAK140	450RCP	4.50CD OUTPUT BORE PLG
100VL-BK	I10VL-BK	450MAK180	RFI45MAK180	516RCP	5.16CD OUTPUT BORE PLG
133VL-BK	I13VL-BK	450MAK210	RFI45MAK210	600RCP	6.00CD OUTPUT BORE PLG
154VL-BK	I15VL-BK	516MAK180	RFI52MAK180	133-BKS	NEW
175VL-BK	I18VL-BK	516MAK210	RFI52MAK210	154-BKS	NEW
206VL-BK	I21VL-BK	600MAK180	RFI60MAK180	175-BKS	NEW
237VL-BK	I24VL-BK	600MAK210	RFI60MAK210	206-BKS	NEW
262VL-BK	I26VL-BK	600MAK250	RFI60MAK250	237-BKS	NEW
300VL-BK	I30VL-BK	133H-TAK	I13S-TAK	262-BKS	NEW
325VL-BK	I32VL-BK	154H-TAK	I15S-TAK	300-BKS	NEW
375VL-BK	I38VL-BK	175H-TAK	I18S-TAK	325-BKS	NEW
133VL-BK	I13VL-BK	206H-TAK	I21S-TAK	133TAD133-237KIT	NEW
154VL-BK	I15VL-BK	237H-TAK	I24S-TAK	133TAD262-325KIT	NEW
175VL-BK	I18VL-BK	262H-TAK	I26S-TAK	133TAD300KIT	NEW
206VL-BK	I21VL-BK	300H-TAK	I30S-TAK	175TAD262-325KIT	NEW
237VL-BK	I24VL-BK	325H-TAK	I32S-TAK	175TAD300KIT	NEW
262VL-BK	I26VL-BK	375H-TAK	I38S-TAK	237TAD375-516KIT	NEW
300VL-BK	I30VL-BK	450H-TAK	I45S-TAK	262TAD375-516KIT	NEW
325VL-BK	I32VL-BK	516H-TAK	I52S-TAK	325TAD375-516KIT	NEW
375VL-BK	I38VL-BK	600H-TAK	I60S-TAK	325TAD600KIT	NEW
450VL-BK	I45VL-BK	133TAD133	I13TADI13		
516VL-BK	I52VL-BK	133TAD154-237	NEW		
600VL-BK	I60VL-BK	133TAD262	I13TADI26		
100VH-BK	I10VH-BK	133TAD325	I13TADI32		
133VH-BK	I13VH-BK	175TAD262	I18TADI26		
154VH-BK	I15VH-BK	237TAD375-516	I24TADI38-I52		
175VH-BK	I18VH-BK	262TAD375-516	I26TADI38-I52		
206VH-BK	I21VH-BK	262TAD600	I26TADI60		
237VH-BK	I24VH-BK	325TAD375-516	I32TADI38-I52		
262VH-BK	I26VH-BK	325TAD600	I32TADI60		
300VH-BK	I30VH-BK	133TAD154-206	I13TADI15-I21		
325VH-BK	I32VH-BK	133-175ATAK	I13-I18ATAK		
375VH-BK	I38VH-BK	206-375ATAK	I21-I38ATAK		
450VH-BK	I45VH-BK	450-600ATAK	450-600 ATAK		
516VH-BK	I52VH-BK	133TAD237	I13TADI24		
600VH-BK	I60VH-BK	133TAD300	I13TADI30		
100VJ-BK	I10VJ-BK	175TAD300	I18TADI30		
133VJ-BK	I13VJ-BK	175TAD325	I18TADI32		
154VJ-BK	I15VJ-BK	133H-FK	I13S-FK		
175VJ-BK	I18VJ-BK	154H-FK	I15S-FK		
206VJ-BK	I21VJ-BK	175H-FK	I18S-FK		
237VJ-BK	I24VJ-BK	206H-FK	I21S-FK		
262VJ-BK	I26VJ-BK	237H-FK	I24S-FK		
300VJ-BK	I30VJ-BK	262H-FK	I26S-FK		
325VJ-BK	I32VJ-BK	300H-FK	I30S-FK		
375VJ-BK	I38VJ-BK	237H-FK	I24S-FK		
450VJ-BK	I45VJ-BK	262H-FK	I26S-FK		
516VJ-BK	I52VJ-BK	300H-FK	I30S-FK		
600VJ-BK	I60VJ-BK	325H-FK	I32S-FK		
133MAK56	RFI13MAK56	375H-FK	I38S-FK		
133MAK140	NON STOCK	450H-FK	I45S-FK		
154-206MAK56	RFI15 MAK56	516H-FK	I52S-FK		
154-206MAK140	RFI15 MAK140	600H-FK	I60S-FK		