

TIGEAR-2 REDUCERS

DODGE[®]



TIGEAR-2 SPEED REDUCERS

ENGINEERING THAT RAISES THE BAR

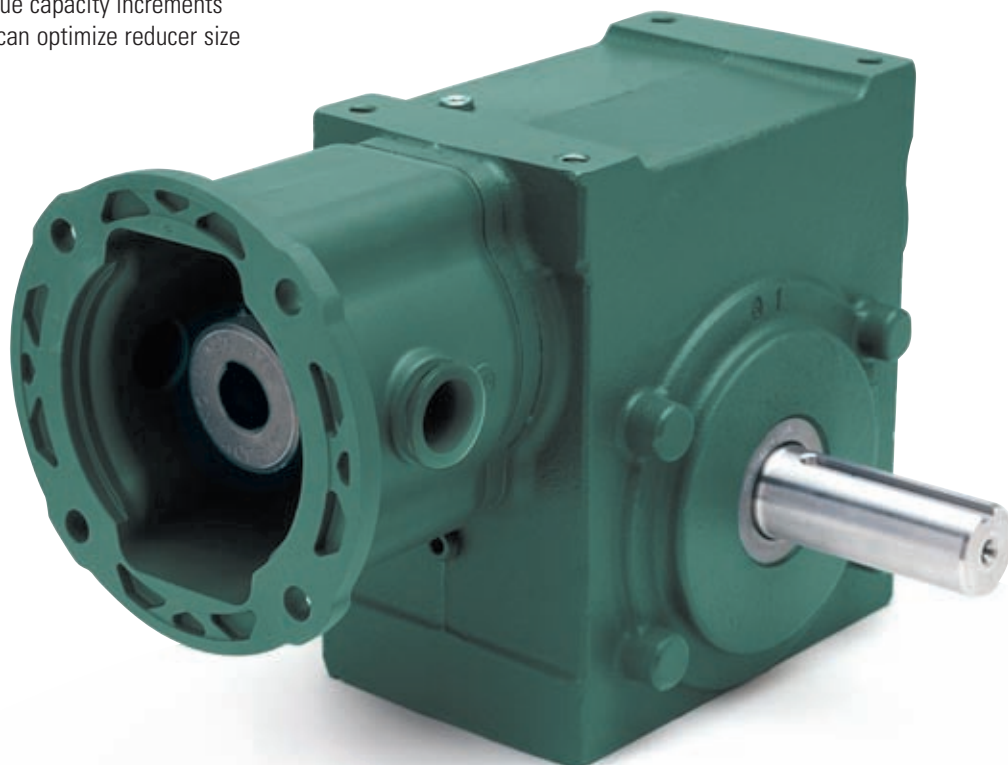
Never before have greater advancements been made in speed reducer technology.

TIGEAR-2 is the only complete line of single-reduction, right-angle worm speed reducers specifically engineered with advanced sealing and bushing system technology that can actually lower your total cost of ownership.

TIGEAR-2 is offered in 10 sizes covering center distances from 1.33" to 4.75". It has a 30% increase on average output torque (up to 6,800 in-lbs.), and because of the consistent torque capacity increments between case sizes, equipment designers can optimize reducer size selections for cost, performance, and life.

The DODGE TIGEAR-2 reducer design has a totally enclosed, ventless sealing system that contains a factory-filled synthetic lubricant that actually runs cooler, as well as eliminates the need for routine oil changes. Its precision-manufactured gear geometry balances multiple gear parameters for dramatic improvements in torque capacity, efficiency, and operating temperatures. TIGEAR-2 is the only worm reducer with the GRIP TIGHT® tapered bushing system.

All combined, TIGEAR-2 raises the bar, offering you innovation and manufacturing expertise that is unmatched in the industry.



TIGEAR-2 SEALING SYSTEM OPERATES EFFECTIVELY WITH NO PRESSURE VENT, NO COMPRESSION CHAMBER

CUSTOM-FORMULATED HNBR WAVE SEAL

Hydrogenated Nitrile Butadiene Rubber (HNBR) material has been proven to be a better all-round choice for oil compatibility, wear, and temperature range. Overall, it provides six times the wear resistance of industry-standard nitrile seals.

SPECIAL HYDRODYNAMIC WAVE SEAL DESIGN

The special wave shape (molded into the seal lip) generates a better hydrodynamic film, which is required between the seal and the shaft for long life. This special wave design generates less drag, less heat, and virtually eliminates shaft grooving created by the single-point wear track, which is common with conventional trimmed lip seal designs. The sinusoidal lip of the wave seal effectively pushes external contaminants away and pumps lubricant back into the oil sump.

SPECIAL LIP CONSTRUCTION

Optimized lip-to-shaft static contact pressures ensure maximum life. In addition, special sealing elements operate under pressure without detrimental effect on service life or sealing performance.

FACTORY-FILLED SYNTHETIC LUBRICANT

The standard synthetic lubricant used in TIGEAR-2 meets H1 food grade requirements and accommodates a wide range of operating temperatures. In extensive laboratory tests, it lowered operating temperatures by 20° F over other popular synthetics. No routine scheduled oil changes are required.

SHAFT SYSTEM ELEMENT

Unique low-speed shaft design minimizes concentrations of stress, thereby increasing the overhung load capacity. Its surface finish and hardness characteristics contribute to reduce seal wear and increase life.

CONFIGURATION OPTIONS

The advanced design concept of the TIGEAR-2 reducer product line provides extreme flexibility for applications that require from 100 to more than 6,500 lb-in of torque. Whether the application requires the compactness of a quill-style input, the durability of a three-piece coupled input, or a separate keyed input shaft for belt-driven equipment, TIGEAR-2 is the answer. With six basic reducer configurations and stock bolt-on accessories, the TIGEAR-2 reducer line is truly a complete line that is full of value.

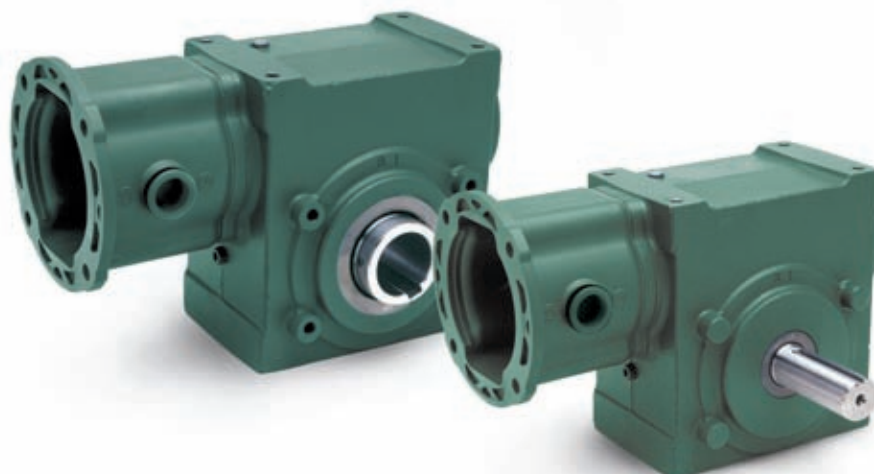
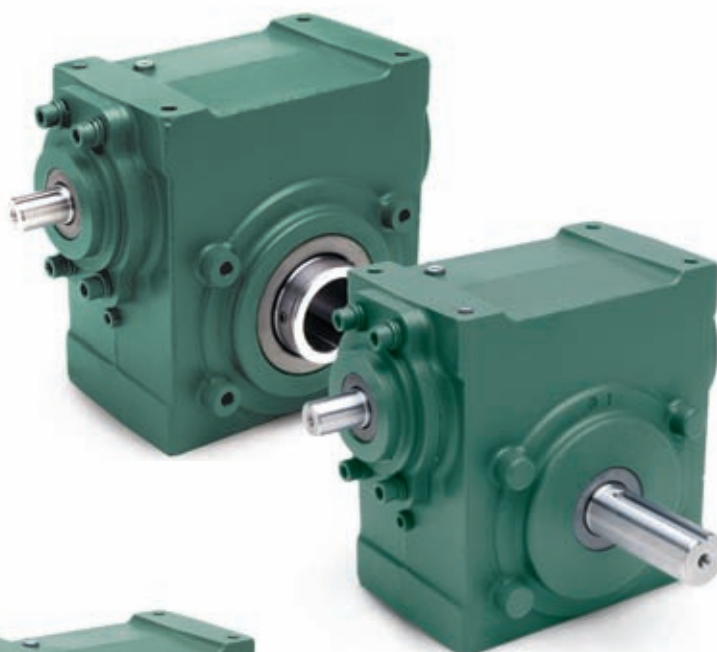


QUILL INPUT

Space-saving quill-style input reducers for NEMA C-face motors in both solid and hollow output designs

SEPARATE INPUT

Separate style input reducers with solid or hollow output shafts are suitable for either belted or direct-coupled motor connections

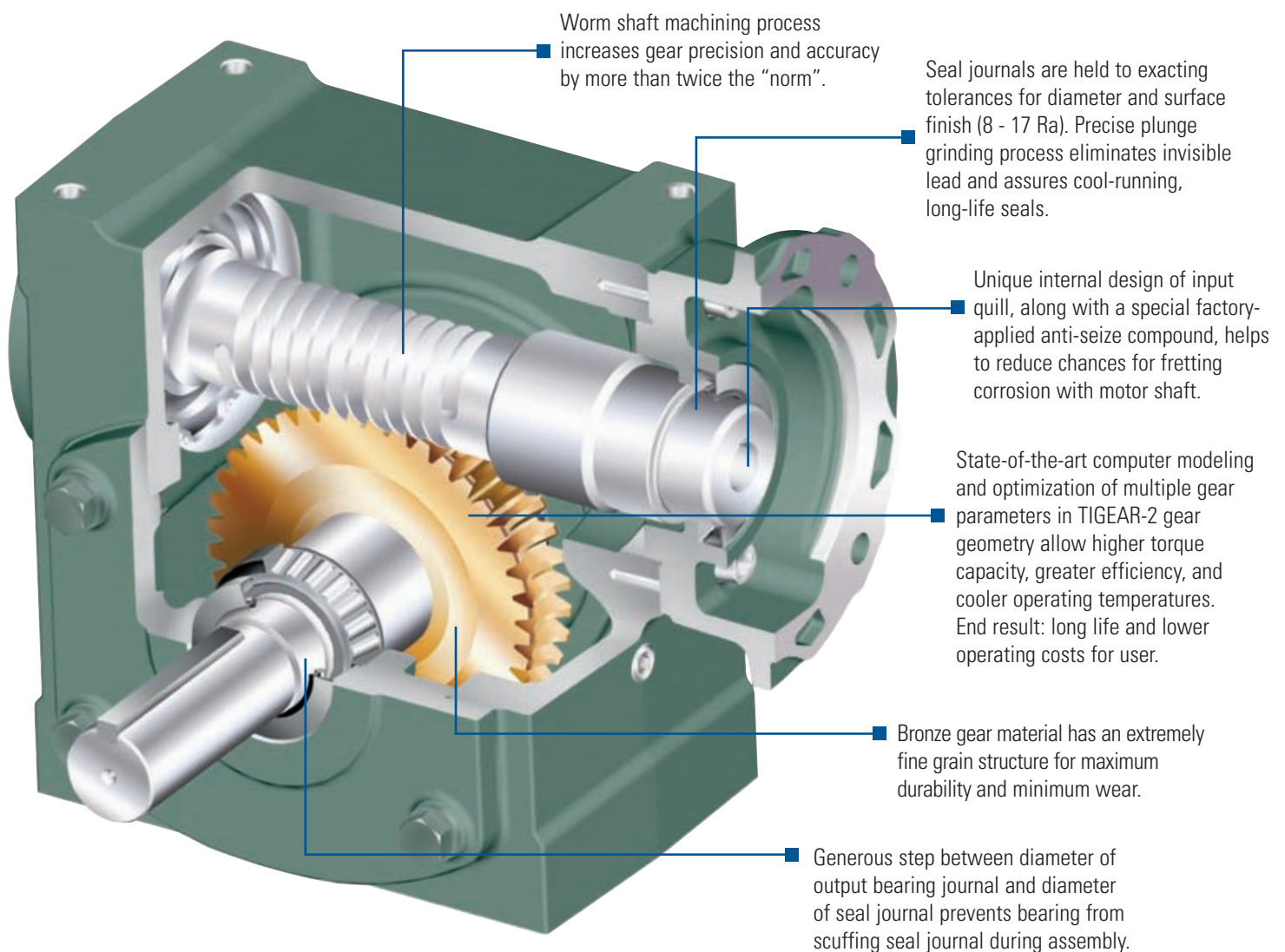


3-PIECE COUPLED INPUT

Attaching a stock, 3-piece coupled motor adapter kit to a separate style reducer creates a durable drive package that facilitates easy motor removal and provides protection against shock loads and other unpredictable vibrations.

MAINTENANCE-FREE DESIGN

- On average, the gear geometry delivers 30% more torque than competitive, same-sized models. Permits downsizing and helps reduce total cost of ownership.
- TIGEAR-2 reducers are dimensionally interchangeable with most original TIGEAR reducers, as well as many competitive models.



WASHDOWN APPLICATIONS

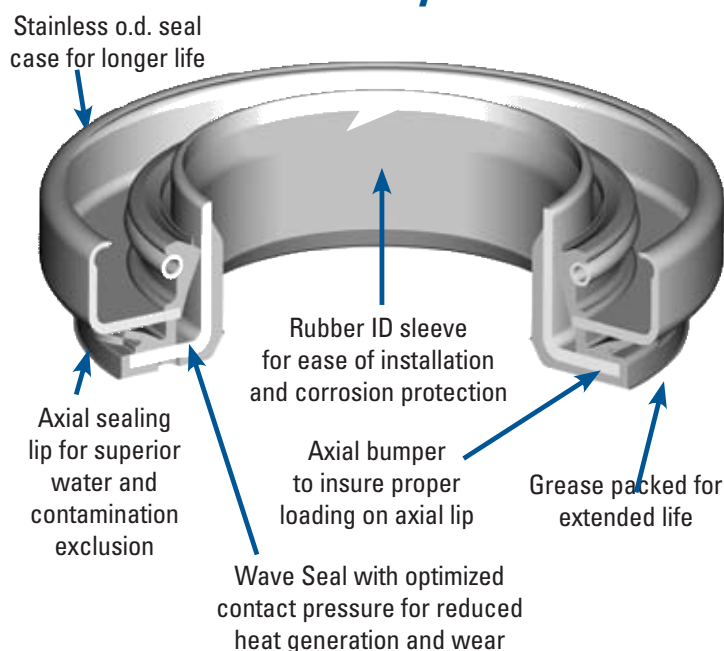
E-Z KLEEN and ULTRA KLEEN reducers are the best choice for food and beverage industries.

For maximum washdown protection, E-Z KLEEN and ULTRA KLEEN reducers include premium features the competition doesn't offer.

E-Z KLEEN reducers are manufactured with a 13-step coating system that provides more than three times the corrosion resistance of standard epoxy-painted units. For "paint free" specifications, ULTRA KLEEN stainless steel reducers provide ultimate washdown protection.

And, to ensure that their interior is as protected as their exterior, E-Z KLEEN and ULTRA KLEEN reducers have a two-piece, harsh-duty sealing system that protects against high-pressure sprays and sanitizing solutions. The totally enclosed ventless sealing system contains a factory filled H1 Food Grade synthetic lubricant that eliminates the need for routine oil changes.

XT Harsh Duty Seal



E-Z KLEEN STANDARD FEATURES

- A 13-step coating system
- Stainless color top coat – White finish also available
- 300 series Stainless Steel solid and hollow output shafts and stainless hardware
- Two-piece harsh duty output seals
- Factory filled H1 food grade synthetic lubrication
- Offered in sizes 13 through 35 in Quill and 3-Piece Coupled input with solid or hollow output configurations

E-Z KLEEN ACCESSORIES

- Stainless steel Straight Bore bushings
- Stainless steel GRIP TIGHT® bushings (as available)
- E-Z KLEEN bolt-on base kit
- E-Z KLEEN riser block kit
- E-Z KLEEN J-mount kit
- E-Z KLEEN output flange kit

ULTRA KLEEN STANDARD FEATURES

- Premium 316 stainless steel housings
- Available in solid and hollow output shafts
- 300 series Stainless Steel solid and hollow output shafts and stainless hardware
- Two-piece harsh duty output seals
- Factory filled H1 food grade synthetic lubrication
- Input/Output Configurations:
 - Quill input and solid or hollow output configurations in sizes 17, 21, 23, 26 and 30
 - 3-piece coupled input available in sizes 17, 23, and 30

ULTRA KLEEN ACCESSORIES

- Stainless-steel Straight Bore bushings
- Stainless steel GRIP TIGHT® bushings (as available)
- Stainless steel bolt-on base kit
- Stainless steel output flange kit



GRIP TIGHT TAPERED BUSHING SYSTEM

LOCKING SYSTEM

The GRIP TIGHT® tapered bushing system in TIGEAR-2 uses concepts that have proven to be effective in the locking mechanism of the DODGE IMPERIAL™ bearing to simplify installation and removal and prevent fretting corrosion problems. There are no loose fasteners to misplace during installation, and the locking nut creates a positive means for easy removal.

MINIMUM SHAFT LENGTH

The system's tapered bushings allow for mounting in some of the tightest places on almost any size shaft. (Driven shafts need not protrude completely through the reducer bore.)

BUSHING OPTIONS

When used in pairs, the tapered bushings can be used without output keys. Stainless options are available for severe washdown applications.



EASY BUSHING INSTALLATION



Slide bushing and reducer onto shaft.



Tighten locking nut by hand to remove clearances.



Complete locking procedure with hammer and drift

ADDITIONAL OPTIONAL ACCESSORIES

- Bolt-on base kit
- Riser block kit
- J-mount base kit
- Output flange kit
- Tie rod kit
- Tapered bushing kit
- Straight bore bushing kit
- Output bracket kit
- Plug-in output shaft kit
- Special paint options for washdown applications
- Low temperature lubrication
- Output shaft reversal kit
- Hollow output safety covers

TIGEAR-2 HELICAL ATTACHMENT

A double NEMA 56 and 140 C-face helical gear attachment for TIGEAR-2 reducers expands the ratio range from 75:1 to 300:1. The helical attachment has a quill input coupling for quick and easy motor attachment. It easily attaches to a TIGEAR-2 reducer with 56C and 140TC quill or 3-piece coupled input.

- Available with NEMA 56 and 140 C-face input and output
- Available in 4:1 and 5:1 ratios
- Factory filled with food grade synthetic lubricant
- Lubed for life
- No breather
- Suitable for all mounting positions right out of the box
- Cast iron construction



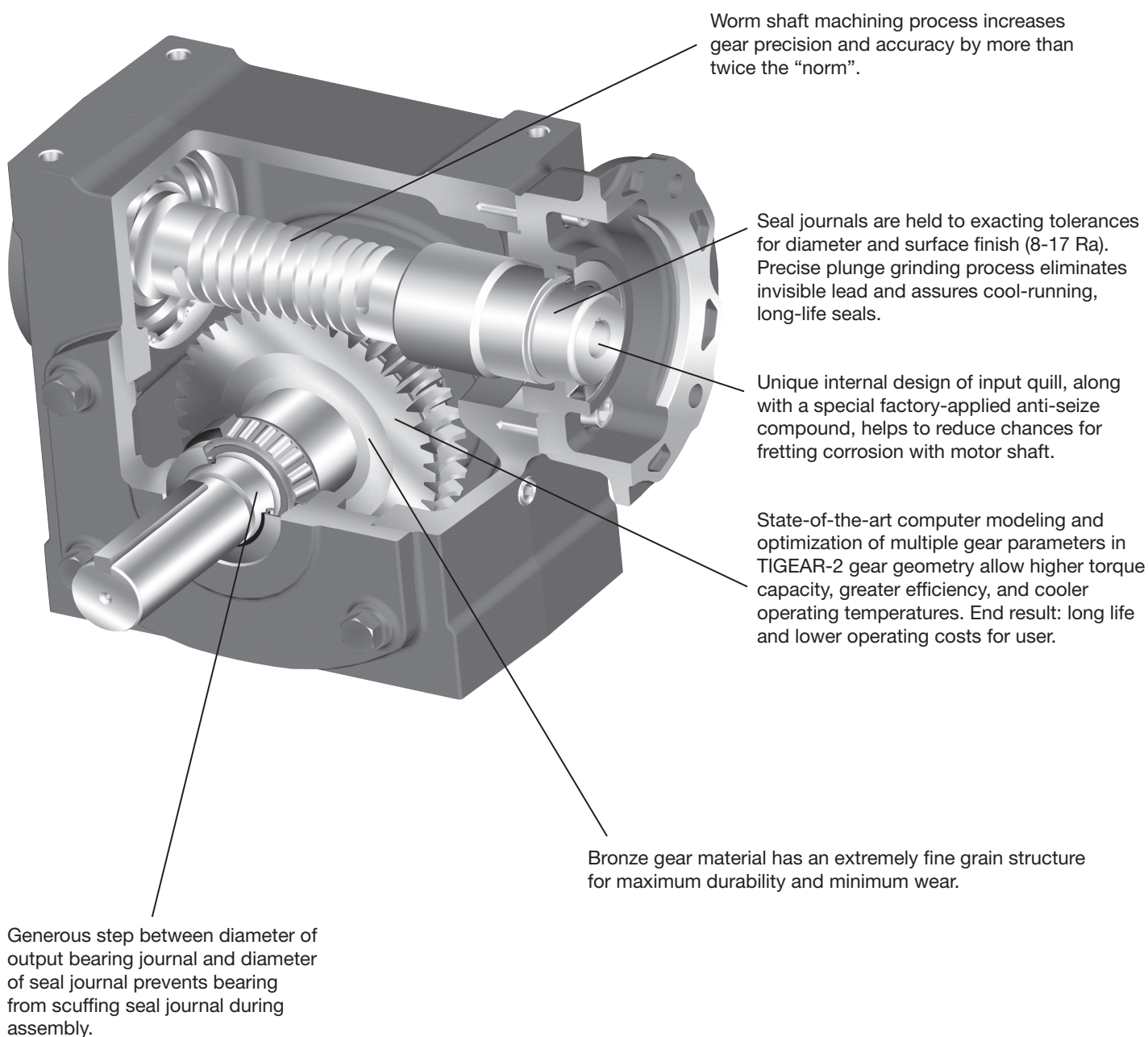
FEATURES/BENEFITS

TIGEAR-2 Speed Reducers

- 10 Case Sizes
- 1.33" to 4.75" Center Distances
- 5:1 to 60:1 Reductions
- Quill Input
- Separate Input
- 3-Piece Coupled Input
- Solid Output
- Hollow Output

On average, TIGEAR-2 delivers more torque than competitive, same-sized models. This permits downsizing and helps reduce total cost of ownership.

TIGEAR-2 reducers share the same footprint and most critical mounting dimensions with original TIGEAR and many competitive models.



FEATURES/BENEFITS

TIGEAR-2 Reducers

TIGEAR-2 Sealing System

The totally enclosed, ventless sealing system operates effectively with no pressure vent, no compression chamber. TIGEAR-2 contains a factory-filled synthetic lubricant that actually runs cooler, as well as eliminates the need for routine oil changes. All reducers are filled with the proper amount of lubricant for any approved mounting position. Simply install it, then forget it.

Custom-Formulated HNBR Wave Seal

Hydrogenated Nitrile Butadiene Rubber (HNBR) material has been proven to be a better all-round choice for oil compatibility, wear, and temperature range. Overall, it provides up to 6 times greater wear resistance than industry standard nitrile seals.

Special Hydrodynamic Wave Seal Design

The special wave shape (molded into the seal lip) generates a better hydrodynamic film, which is required between the seal and the shaft for long life. This special wave design generates less drag, less heat, and virtually eliminates shaft grooving created by the single-point wear track, which is common with conventional trimmed lip seal designs. The sinusoidal lip of the

wave seal effectively pushes external contaminants away and pumps lubricant back into the oil sump.

Special Lip Construction

Optimized lip-to-shaft contact pressures ensure maximum life. In addition, special sealing elements operate under pressure without detrimental effect on service life or sealing performance.

Factory-Filled Synthetic Lubricant

The standard synthetic lubricant used in TIGEAR-2 meets H1 food grade requirements and accommodates a wide range of operating temperatures. In extensive laboratory test, it lowered operating temperatures by 20°F over other popular synthetics. No routine scheduled oil changes are required.

GRIP TIGHT™ TAPERED Adapter Bushing System **Eliminates Hop and Wobble**



Locking System

The TIGEAR-2 reducer's GRIP TIGHT tapered bushing system uses concepts that have proven to be effective in the locking mechanism of the DODGE GRIP TIGHT bearing to simplify installation and removal and prevent fretting corrosion problems. There are no loose fasteners to misplace during installation, and the locking nut creates a positive means for easy removal.

Minimum Shaft Length

The system's tapered bushings allow for mounting in some of the tightest places on almost any size shaft. (Driven shafts need not protrude completely through the reducer bore.)

Bushing Options

When used in pairs, the tapered bushings can be used without output keys. Corrosion resistant options are available for severe washdown applications.

HOW TO ORDER / NOMENCLATURE

HOW TO ORDER TIGEAR-2 Reducers

All TIGEAR-2 reducers and accessories have a part number. Reducer part numbers are found in the ratings/dimensions tables and accessories are listed in the modification/accessories section. When placing an order specify the reducer part number and part number(s) of selected accessories.

Part Number Example:

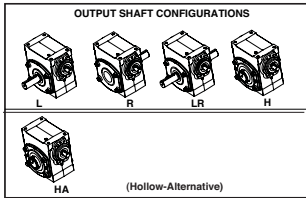
30Q15L14 Size-30, Quill input, 15:1 ratio, left hand output, 140TC input

30BASE Size-30 Bolt-on base kit

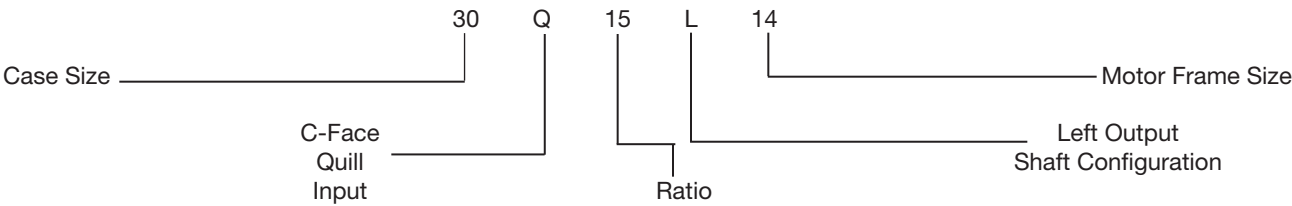
REDUCER NOMENCLATURE AND PART NUMBER

Size	Input Style	Washdown Option	Ratio	Output	Motor Frame
13 = 1.33 c.d. 15 = 1.50 c.d. 17 = 1.75 c.d. 20 = 2.00 c.d. 21* = 2.06 c.d. 23 = 2.31 c.d. 26 = 2.62 c.d. 30 = 3.00 c.d. 35 = 3.50 c.d. 40 = 4.00 c.d. 47 = 4.75 c.d.	Q Quill S Separate A 3-Piece Coupled	Z E-Z KLEEN S ULTRA KLEEN	05 07 10 12 15 18 20 25 30 40 50 60	L R LR H HA ...	56 = 56C 14 = 140TC 18 = 180TC 21 = 210TC 25 = 250TC

* ULTRA KLEEN only



EXAMPLE



SELECTION PROCEDURES

TIGEAR-2 Reducers

Selection Using Rating Tables

Because the efficiency of worm gear speed reducers varies from approximately 60 to 95%, it is important to consider the horsepower/torque conditions at both input and output in a given application. In a situation where motor horsepower is known (e.g., competitive interchange or when a particular motor is available), selection can be done based on input ratings. Where a gearbox is being selected by a designer who knows driven equipment loads, the reducer is selected from the output torque capacity.

NOTE: Although many customers successfully use quill style reducers for the application listed below, we strongly recommend using 3-piece coupled reducers. This will minimize any unusual noise conditions or aggravated wear in the input quill, which makes motor removal difficult.

- Use of single phase motors
- Frequent starts and stops, more than 10 per hour
- Brakemotor applications
- Variable speed motors
- Clutch/Brake units always require 3-piece coupled reducers

Prime Mover	Duration of Service Per Day	Driven Machine Load Classification		
		Uniform	Medium Shock	Heavy Shock
Electric Motor	Occasional 1/2 hour	Note (1)	Note (1)	1
	Less than 3 hours	1.00	1.00	1.25
	3 - 10 hours	1.00	1.25	1.50
	Over 10 hours	1.25	1.50	1.75
Electric Motor With Up To 10 Starts And Stops Per Hour	Occasional 1/2 hour	Note (1)	1.00	1.25
	Less than 3 hours	1.00	1.25	1.50
	3 - 10 hours	1.25	1.50	1.75
	Over 10 hours	1.50	1.75	2.00

NOTE (1) - Unspecified service factors should be 1.00 or as agreed upon by user and manufacturer.

NOTE (2) - Frequent Start and Stop applications, more than 10 Starts and Stops per hour, require special consideration in selecting a service factor. Contact DODGE Application Engineering for proper selection of TIGEAR-2 Reducers. The brake torque should be limited to two times the normal operating Motor torque.

Overhung Load

To determine overhung load, divide the torque required by the pitch radius of the sprocket, sheave, etc. and multiply by the appropriate factor as follows:

Chain drive	1.00
Synchronous Belt Drive	1.30
Spur or Helical Gear	1.25
V-Belt	1.50
Flat Belt	2.50

The calculated overhung load must not exceed the output overhung load rating.

For loads acting at more than one shaft diameter from the seal face use the following conversion factors:

Distance in Shaft Diameters from Output Seal Face	Multiply Overhung Load Capacity by this Factor
1D	1.00
2D	0.62
3D	0.42
4D	0.32
5D	0.26

Thermal Rating	
Ambient Temp, degree F	Derating Factor
75	1.00
90	.87
100	.79
110	.71
120	.62

The thermal ratings listed on selection pages are based on the gear unit continuously operating in an ambient temperature of 75° F. For the ambient condition above 75° F, the derating factor needs to be applied to the thermal rating, or contact DODGE Application Engineering.

CAUTION: Always refer to the Installation, Operation & Maintenance Manual before operating the reducer

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SELECTION PROCEDURES

TIGEAR-2 Reducers

Horsepower Method Of Selection

- Step 1: **Determine Service Factor** Referring to the reducer service factor table, determine the appropriate service factor.
- Step 2: **Determine Equivalent Horsepower** Multiply the motor horsepower by the service factor obtained in Step 1.
- Step 3: **Calculate Required Ratio** Divide the motor shaft rpm by the reducer output shaft rpm.
- Step 4: **Determine Unit Size** Refer to the rating tables and read across from ratio row and down from motor rpm column to select a unit whose mechanical input horsepower rating meets or exceeds the equivalent horsepower.
- Step 5: **Check Thermal Rating** Compare the thermal input horsepower rating of the reducer selected to the motor horsepower. Thermal rating should always equal or exceed applied motor horsepower. For continuous duty operation in ambient temperature above 75°F derate the thermal rating per table on page G4-8 or contact DODGE Engineering. Contact DODGE Engineering for use with non-ventilated motors.

Torque Method Of Selection

- Step 1: **Determine Service Factor** Referring to the reducer service factor table, determine the appropriate service factor.
- Step 2: **Determine Equivalent Torque** Multiply the torque required to drive the load at the output of the reducer by the service factor obtained in Step 1. (If drive components, e.g. chain or belt drives are used between reducer and driven equipment be sure to account for them when calculating output torque at the reducer).
- Step 3: **Calculate Required Ratio** Divide the motor shaft rpm by the reducer output shaft rpm.
- Step 4: **Determine Unit Size** Refer to the rating tables and read across from ratio row and down from motor rpm column to select a unit whose mechanical output torque rating meets or exceeds the equivalent torque.

- Step 5: **Determine Required Motor Horsepower** First, calculate the output horsepower using the following equation where output torque is the torque required to drive the load at the output of the reducer.

$$\text{Output HP} = \frac{\text{Output Speed} \times \text{Output Torque}}{63025}$$

Then calculate the required motor horsepower using the following equation to account for reducer efficiency:

$$\text{Required Motor Horsepower} = \frac{\text{Output Hp} \times \text{Rated Input Hp of Reducer}}{\text{Rated Output HP of Reducer}}$$

- Step 6: **Select Motor Hp** From available motors, select a horsepower that is equal to or greater than the value from Step 5: When the nearest motor horsepower is greater, check service factor at input by dividing rated input of reducer horsepower by actual motor horsepower. If the service factor is less than the value from Step 1, a larger reducer may be required.
- Step 7: **Check Thermal Rating** Compare the thermal input horsepower rating of the reducer selected to the motor horsepower. Thermal rating should always equal or exceed applied motor horsepower. For continuous duty operation in ambient temperatures above 75°F contact DODGE Engineering. Contact DODGE Engineering for use with non-ventilated motors.

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SELECTION TABLES BY HORSE-POWER AND SERVICE FACTOR



TIGEAR-2 Selection Table 1.00 Reducer Service Factor

1750 RPM Input

Output Rpm	Ratio		Motor Horsepower												
			0.25	0.33	0.50	0.75	1.00	1.50	2.00	3.00	5.00	7.50	10.00	15.00	20.00
350	5	SIZE	13	13	13	13	13	15	17	20	23	30	30	35	40
		Torque	42	55	83	125	166	250	332	502	840	1279	1706	2563	3408
		OHL	650	650	650	650	650	710	1050	1380	1330	1330	1330	2120	2860
233	7.5	SIZE	13	13	13	13	13	17	17	23	26	30	35	40	47
		Torque	60	79	120	180	240	364	485	736	1231	1863	2495	3727	4969
		OHL	650	650	650	650	650	1190	1190	1520	1520	1540	2430	3280	5600
175	10	SIZE	13	13	13	13	15	17	20	23	30	35	35	47	
		Torque	80	105	160	240	321	480	644	972	1650	2498	3331	4973	
		OHL	650	650	650	650	710	1190	1560	1610	1720	2700	2700	5600	
117	15	SIZE	13	13	13	15	17	20	23	26	30	40	40		
		Torque	114	150	227	343	459	701	935	1417	2391	3599	4799		
		OHL	650	650	650	710	1190	1560	1610	1610	2300	4190	4190		
88	20	SIZE	13	13	13	17	17	23	23	30	35	40	47		
		Torque	143	189	286	438	583	898	1198	1845	3125	4665	6156		
		OHL	650	650	650	1190	1190	1610	1610	2300	2760	4300	5600		
70	25	SIZE	13	13	15	17	20	23	26	30	40	47			
		Torque	169	223	341	517	707	1074	1485	2245	3719	5489			
		OHL	650	650	710	1190	1560	1610	1610	2300	4300	5600			
58	30	SIZE	13	13	15	17	23	26	26	35	40				
		Torque	200	264	404	607	847	1312	1750	2662	4365				
		OHL	650	650	710	1190	1610	1610	1610	2760	4300				
44	40	SIZE	13	15	17	20	23	26	30	35	47				
		Torque	249	333	520	793	1071	1630	2224	3361	5350				
		OHL	650	710	1190	1560	1610	1610	2300	2760	5600				
35	50	SIZE	13	15	17	23	26	30	35	40					
		Torque	289	388	600	929	1262	1940	2637	3767					
		OHL	650	710	1190	1610	1610	2300	2760	4300					
29	60	SIZE	15	17	20	23	26	30	35	40					
		Torque	329	442	691	1037	1432	2179	2923	4234					
		OHL	710	1190	1560	1610	1610	2300	2760	4300					

Torque = Actual output torque in lb. - in

OHL - Maximum OHL capacity in lbs

SELECTION TABLES BY HORSE-POWER AND SERVICE FACTOR



TIGEAR-2 Selection Table 1.25 Reducer Service Factor



1750 RPM Input

Output Rpm	Ratio		Motor Horsepower												
			0.25	0.33	0.50	0.75	1.00	1.50	2.00	3.00	5.00	7.50	10.00	15.00	20.00
350	5	SIZE	13	13	13	13	13	17	17	23	26	30	35	40	47
		Torque	42	55	83	125	166	249	332	504	846	1279	1709	2556	3397
		OHL	520	520	520	520	520	840	840	1064	1064	1064	1696	2288	4080
233	7.5	SIZE	13	13	13	13	15	17	20	23	30	35	40	47	
		Torque	60	79	120	180	241	364	489	736	1242	1871	2485	3727	
		OHL	520	520	520	520	568	952	1248	1216	1232	1944	2624	4480	
175	10	SIZE	13	13	13	15	17	20	23	26	30	35	40	47	
		Torque	80	105	160	241	320	483	648	979	1650	2498	3315	4973	
		OHL	520	520	520	568	952	1248	1288	1288	1376	2160	2912	4480	
117	15	SIZE	13	13	13	17	17	23	23	30	35	40	47		
		Torque	114	150	227	345	459	701	935	1434	2418	3599	4796		
		OHL	520	520	520	952	952	1288	1288	1840	2208	3352	4480		
88	20	SIZE	13	13	15	17	20	23	26	30	40	47			
		Torque	143	189	292	438	596	898	1236	1845	3110	4617			
		OHL	520	520	568	952	1248	1288	1288	1840	3440	4480			
70	25	SIZE	13	13	17	20	23	26	30	35	40				
		Torque	169	223	345	530	716	1114	1497	2279	3719				
		OHL	520	520	952	1248	1288	1288	1840	2208	3440				
58	30	SIZE	13	150	17	20	23	26	30	35	47				
		Torque	200	267	404	625	847	1312	1766	2662	4308				
		OHL	520	568	952	1248	1288	1288	1840	2208	4480				
44	40	SIZE	13	150	20	23	26	30	35	40					
		Torque	249	333	529	803	1087	1668	2241	3253					
		OHL	520	568	1248	1288	1288	1840	2208	3440					
35	50	SIZE	150	17	20	23	26	35	35	47					
		Torque	294	396	617	929	1262	1978	2637	3705					
		OHL	568	952	1248	1288	1288	2208	2208	4480					
29	60	SIZE	17	17	23	26	30	35	40	47					
		Torque	335	442	692	1074	1453	2192	2822	4143					
		OHL	952	952	1288	1288	1840	2208	3440	4480					

Torque = Actual output torque in lb. - in

OHL - Maximum OHL capacity in lbs

SELECTION TABLES BY HORSE-POWER AND SERVICE FACTOR



TIGEAR-2 Selection Table 1.50 Reducer Service Factor

1750 RPM Input

Output Rpm	Ratio		Motor Horsepower												
			0.25	0.33	0.50	0.75	1.00	1.50	2.00	3.00	5.00	7.50	10.00	15.00	20.00
350	5	SIZE	13	13	13	13	15	17	20	23	30	35	35	47	
		Torque	42	55	83	125	167	249	335	504	853	1281	1709	2548	
		OHL	433	433	433	433	473	700	700	887	887	1413	1413	3400	
233	7.5	SIZE	13	13	13	15	17	20	23	26	30	35	40	47	
		Torque	60	79	120	181	243	367	491	739	1242	1871	2485	3727	
		OHL	433	433	433	473	793	1040	1013	1013	1027	1620	2187	3733	
175	10	SIZE	13	13	13	15	17	20	23	26	35	40	47		
		Torque	80	105	160	241	320	483	648	979	1666	2486	3315		
		OHL	433	433	433	473	793	1040	1073	1073	1800	2427	3733		
117	15	SIZE	13	13	15	17	20	23	26	30	40	47			
		Torque	114	150	228	345	467	701	944	1434	2400	3597			
		OHL	433	433	473	793	1040	1073	1073	1533	2793	3733			
88	20	SIZE	13	13	17	20	23	26	30	35	40				
		Torque	143	189	292	447	599	927	1230	1875	3110				
		OHL	433	433	793	1040	1073	1073	1533	1840	2867				
70	25	SIZE	13	15	17	23	23	26	30	35	47				
		Torque	169	225	345	537	716	1114	1497	2279	3659				
		OHL	433	473	793	1073	1073	1073	1533	1840	3733				
58	30	SIZE	13	15	17	23	26	30	35	40	47				
		Torque	200	267	404	635	875	1324	1775	2619	4308				
		OHL	433	473	793	1073	1073	1533	1840	2867	3733				
44	40	SIZE	15	17	20	26	26	35	35	47					
		Torque	252	343	529	815	1087	1680	2241	3210					
		OHL	473	793	1040	1073	1073	1840	1840	3733					
35	50	SIZE	17	17	23	26	30	35	40	47					
		Torque	300	396	619	947	1293	1978	2511	3705					
		OHL	793	793	1073	1073	1533	1840	2867	3733					
29	60	SIZE	17	20	23	30	30	40	40						
		Torque	335	456	692	1090	1453	2117	2822						
		OHL	793	1040	1073	1533	1533	2867	2867						

Torque = Actual output torque in lb. - in

OHL - Maximum OHL capacity in lbs



RATINGS/DIMENSIONS

TIGEAR-2 Reducers With Quill Input - Size 13

Ratio	Output RPM	Rating Data 1750 Input RPM		Part Number 56C	Shaft Position
5	350	Mechanical Input Hp	1.32	13Q05L56	L
		Thermal Input Hp	2.94	13Q05R56	R
		Output Torque (lb in.)	219	13Q05LR56	LR
		Mechanical Output Hp	1.22	13Q05H56	HOLLOW
		Output OHL (lbs.)	650		
7.5	233	Mechanical Input Hp	1.04	13Q07L56	L
		Thermal Input Hp	2.27	13Q07R56	R
		Output Torque (lb in.)	251	13Q07LR56	LR
		Mechanical Output Hp	0.94	13Q07H56	HOLLOW
		Output OHL (lbs.)	650		
10	175	Mechanical Input Hp	0.85	13Q10L56	L
		Thermal Input Hp	1.96	13Q10R56	R
		Output Torque (lb in.)	270	13Q10LR56	LR
		Mechanical Output Hp	0.75	13Q10H56	HOLLOW
		Output OHL (lbs.)	650		
15	117	Mechanical Input Hp	0.64	13Q15L56	L
		Thermal Input Hp	1.38	13Q15R56	R
		Output Torque (lb in.)	293	13Q15LR56	LR
		Mechanical Output Hp	0.54	13Q15H56	HOLLOW
		Output OHL (lbs.)	650		
20	88	Mechanical Input Hp	0.53	13Q20L56	L
		Thermal Input Hp	1.06	13Q20R56	R
		Output Torque (lb in.)	304	13Q20LR56	LR
		Mechanical Output Hp	0.42	13Q20H56	HOLLOW
		Output OHL (lbs.)	650		
25	70	Mechanical Input Hp	0.46	13Q25L56	L
		Thermal Input Hp	0.86	13Q25R56	R
		Output Torque (lb in.)	311	13Q25LR56	LR
		Mechanical Output Hp	0.35	13Q25H56	HOLLOW
		Output OHL (lbs.)	650		
30	58	Mechanical Input Hp	0.39	13Q30L56	L
		Thermal Input Hp	0.85	13Q30R56	R
		Output Torque (lb in.)	314	13Q30LR56	LR
		Mechanical Output Hp	0.29	13Q30H56	HOLLOW
		Output OHL (lbs.)	650		
40	44	Mechanical Input Hp	0.32	13Q40L56	L
		Thermal Input Hp	0.7	13Q40R56	R
		Output Torque (lb in.)	319	13Q40LR56	LR
		Mechanical Output Hp	0.22	13Q40H56	HOLLOW
		Output OHL (lbs.)	650		
50	35	Mechanical Input Hp	0.27	13Q50L56	L
		Thermal Input Hp	0.61	13Q50R56	R
		Output Torque (lb in.)	313	13Q50LR56	LR
		Mechanical Output Hp	0.17	13Q50H56	HOLLOW
		Output OHL (lbs.)	650		
60	29	Mechanical Input Hp	0.23	13Q60L56	L
		Thermal Input Hp	0.54	13Q60R56	R
		Output Torque (lb in.)	298	13Q60LR56	LR
		Mechanical Output Hp	0.14	13Q60H56	HOLLOW
		Output OHL (lbs.)	650		

Note: Reducers are shipped without a mounting base. Order bolt-on base kit **13BASE** if required.
Refer to page G4-118 for hollow bore bushing selections

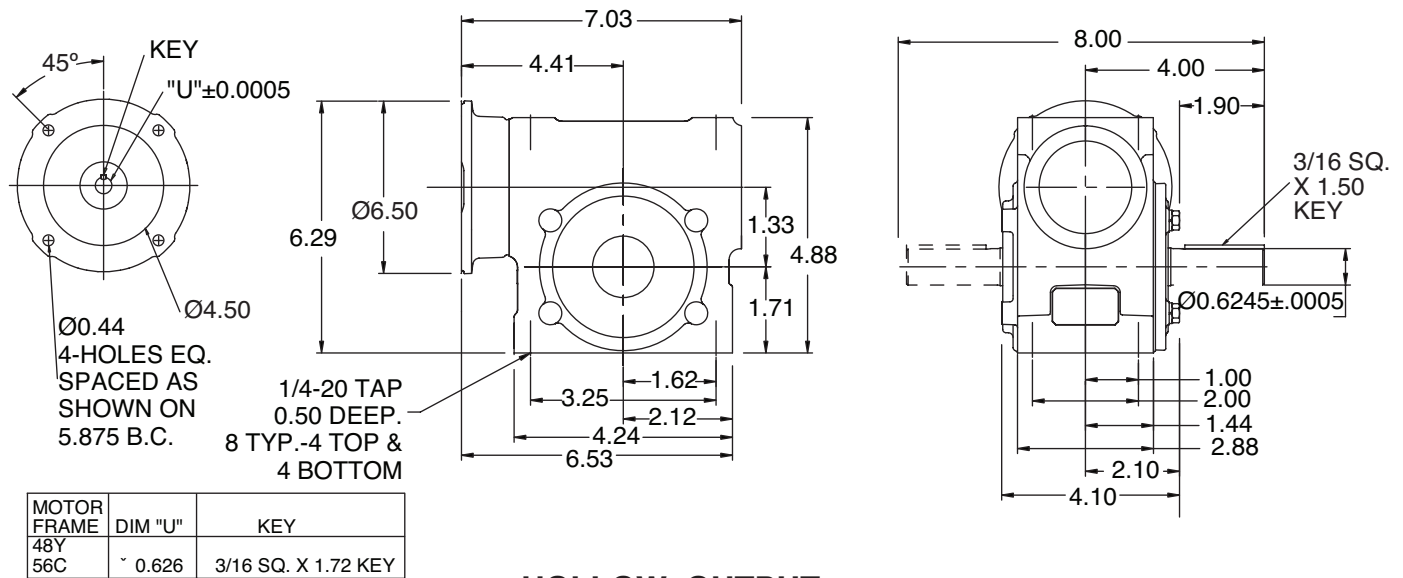
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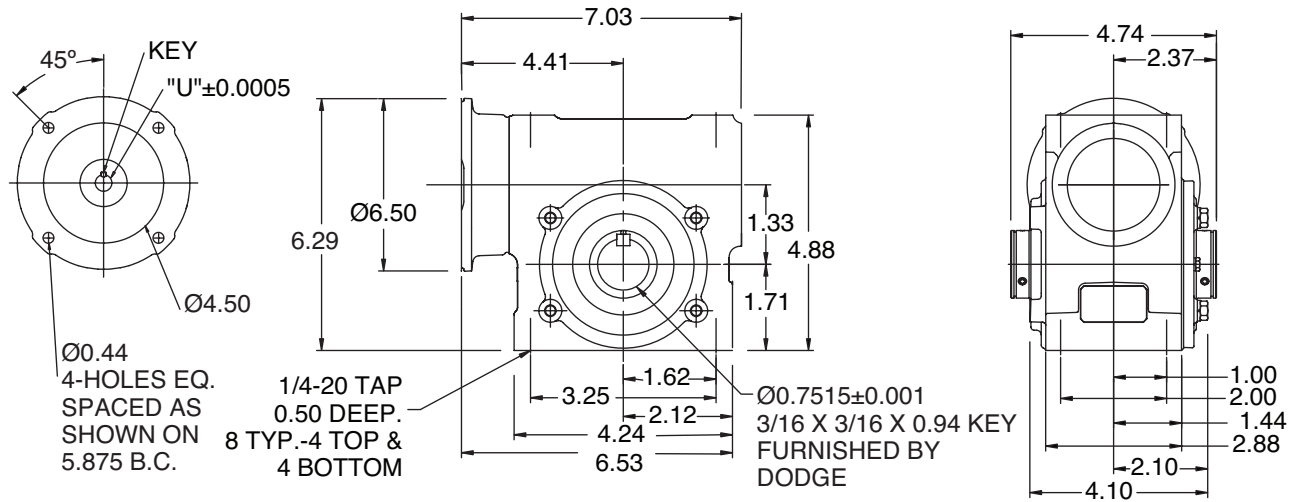
RATINGS/DIMENSIONS

TIGEAR-2 Reducers With Quill Input - Size 13

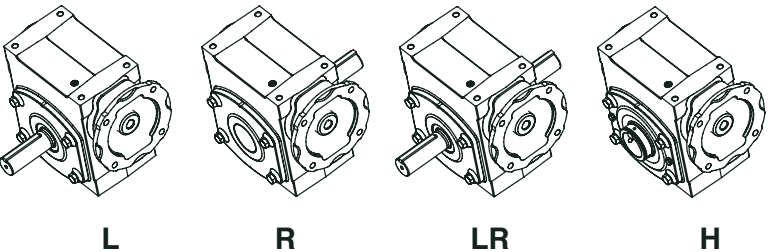
SOLID OUTPUT



HOLLOW OUTPUT



OUTPUT SHAFT CONFIGURATIONS





RATINGS/DIMENSIONS

TIGEAR-2 Reducers With Quill Input - Size 15

Ratio	Output RPM	Rating Data 1750 Input RPM		Part Number 56C	Shaft Position
5	350	Mechanical Input Hp	1.75	15Q05L56	L
		Thermal Input Hp	3.34	15Q05R56	R
		Output Torque (lb in.)	293	15Q05LR56	LR
		Mechanical Output Hp	1.63	15Q05H56	HOLLOW
		Output OHL (lbs.)	710		
7.5	233	Mechanical Input Hp	1.40	15Q07L56	L
		Thermal Input Hp	2.55	15Q07R56	R
		Output Torque (lb in.)	337	15Q07LR56	LR
		Mechanical Output Hp	1.26	15Q07H56	HOLLOW
		Output OHL (lbs.)	710		
10	175	Mechanical Input Hp	1.13	15Q10L56	L
		Thermal Input Hp	2.22	15Q10R56	R
		Output Torque (lb in.)	361	15Q10LR56	LR
		Mechanical Output Hp	1.00	15Q10H56	HOLLOW
		Output OHL (lbs.)	710		
15	117	Mechanical Input Hp	0.86	15Q15L56	L
		Thermal Input Hp	1.58	15Q15R56	R
		Output Torque (lb in.)	392	15Q15LR56	LR
		Mechanical Output Hp	0.73	15Q15H56	HOLLOW
		Output OHL (lbs.)	710		
20	88	Mechanical Input HP	0.70	15Q20L56	L
		Thermal Input Hp	1.26	15Q20R56	R
		Output Torque (lb in.)	407	15Q20LR56	LR
		Mechanical Output Hp	0.56	15Q20H56	HOLLOW
		Output OHL (lbs.)	710		
25	70	Mechanical Input Hp	0.60	15Q25L56	L
		Thermal Input Hp	0.99	15Q25R56	R
		Output Torque (lb in.)	410	15Q25LR56	LR
		Mechanical Output Hp	0.46	15Q25H56	HOLLOW
		Output OHL (lbs.)	710		
30	58	Mechanical Input Hp	0.51	15Q30L56	L
		Thermal Input Hp	0.96	15Q30R56	R
		Output Torque (lb in.)	413	15Q30LR56	LR
		Mechanical Output Hp	0.38	15Q30H56	HOLLOW
		Output OHL (lbs.)	710		
40	44	Mechanical Input Hp	0.41	15Q40L56	L
		Thermal Input Hp	0.80	15Q40R56	R
		Output Torque (lb in.)	417	15Q40LR56	LR
		Mechanical Output Hp	0.29	15Q40H56	HOLLOW
		Output OHL (lbs.)	710		
50	35	Mechanical Input Hp	0.34	15Q50L56	L
		Thermal Input Hp	0.70	15Q50R56	R
		Output Torque (lb in.)	402	15Q50LR56	LR
		Mechanical Output Hp	0.22	15Q50H56	HOLLOW
		Output OHL (lbs.)	710		
60	29	Mechanical Input Hp	0.29	15Q60L56	L
		Thermal Input Hp	0.62	15Q60R56	R
		Output Torque (lb in.)	381	15Q60LR56	LR
		Mechanical Output Hp	0.18	15Q60H56	HOLLOW
		Output OHL (lbs.)	710		

Note: Reducers are shipped without a mounting base. Order bolt-on base kit **15BASE** if required.
Refer to page G4-118 for hollow bore bushing selections.

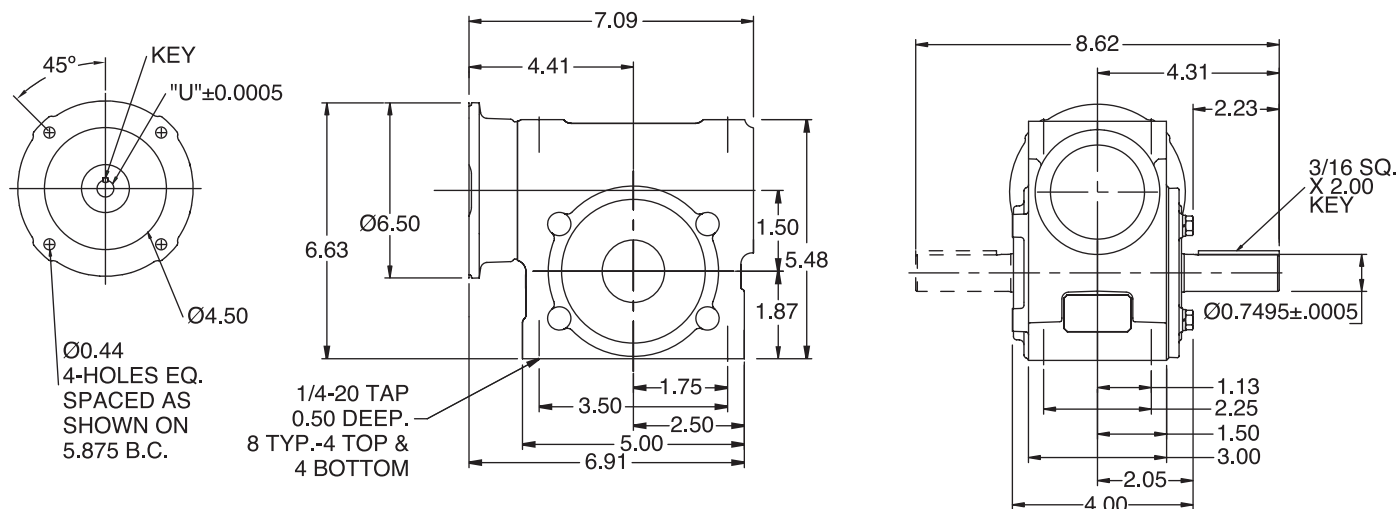
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RATINGS/DIMENSIONS

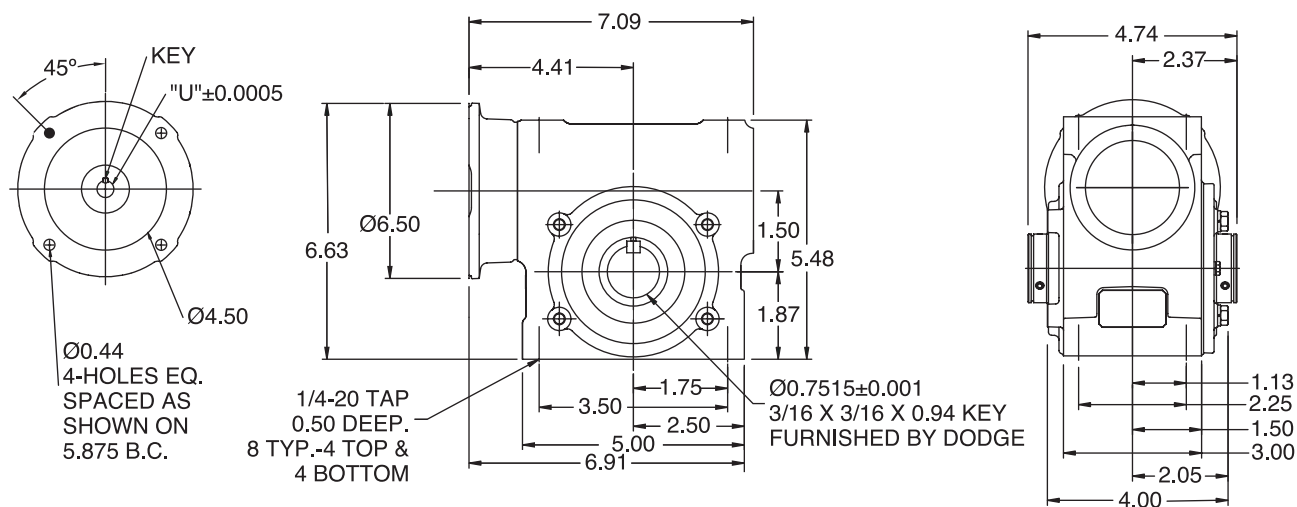
TIGEAR-2 Reducers With Quill Input - Size 15

SOLID OUTPUT

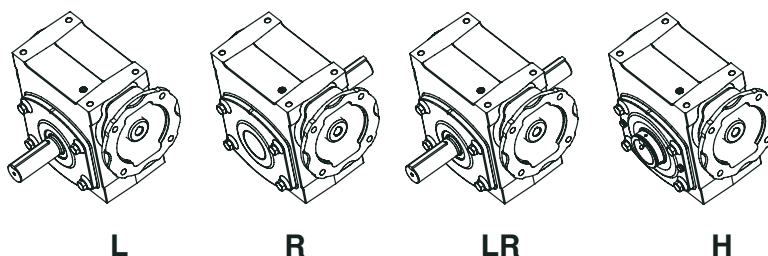


MOTOR FRAME	"U"	KEY
48Y 56C	$\phi 0.626$	3/16 SQ. X 1.72 KEY

HOLLOW OUTPUT



OUTPUT SHAFT CONFIGURATIONS





RATINGS/DIMENSIONS

TIGEAR-2 Reducers With Quill Input - Size 17

Ratio	Output RPM	Rating Data 1750 Input RPM		Part Number		Shaft Position
				56C	140TC	
5	350	Mechanical Input Hp	2.59	17Q05L56	17Q05L14	L
		Thermal Input Hp	3.97	17Q05R56	17Q05R14	R
		Output Torque (lb in.)	430	17Q05LR56	17Q05LR14	LR
		Mechanical Output Hp	2.39	17Q05H56	17Q05H14	HOLLOW
		Output OHL (lbs.)	1050			
7.5	233	Mechanical Input Hp	2.06	17Q07L56	17Q07L14	L
		Thermal Input Hp	3.42	17Q07R56	17Q07R14	R
		Output Torque (lb in.)	500	17Q07LR56	17Q07LR14	LR
		Mechanical Output Hp	1.88	17Q07H56	17Q07H14	HOLLOW
		Output OHL (lbs.)	1190			
10	175	Mechanical Input Hp	1.67	17Q10L56	17Q10L14	L
		Thermal Input Hp	2.76	17Q10R56	17Q10R14	R
		Output Torque (lb in.)	534	17Q10LR56	17Q10LR14	LR
		Mechanical Output Hp	1.48	17Q10H56	17Q10H14	HOLLOW
		Output OHL (lbs.)	1190			
15	117	Mechanical Input Hp	1.27	17Q15L56	17Q15L14	L
		Thermal Input Hp	2.01	17Q15R56	17Q15R14	R
		Output Torque (lb in.)	583	17Q15LR56	17Q15LR14	LR
		Mechanical Output Hp	1.08	17Q15H56	17Q15H14	HOLLOW
		Output OHL (lbs.)	1190			
20	88	Mechanical Input Hp	1.03	17Q20L56	17Q20L14	L
		Thermal Input Hp	1.58	17Q20R56	17Q20R14	R
		Output Torque (lb in.)	602	17Q20LR56	17Q20LR14	LR
		Mechanical Output Hp	0.84	17Q20H56	17Q20H14	HOLLOW
		Output OHL (lbs.)	1190			
25	70	Mechanical Input Hp	0.88	17Q25L56		L
		Thermal Input Hp	1.28	17Q25R56		R
		Output Torque (lb in.)	609	17Q25LR56		LR
		Mechanical Output Hp	0.68	17Q25H56		HOLLOW
		Output OHL (lbs.)	1190			
30	58	Mechanical Input Hp	0.76	17Q30L56		L
		Thermal Input Hp	1.20	17Q30R56		R
		Output Torque (lb in.)	615	17Q30LR56		LR
		Mechanical Output Hp	0.57	17Q30H56		HOLLOW
		Output OHL (lbs.)	1190			
40	44	Mechanical Input Hp	0.60	17Q40L56		L
		Thermal Input Hp	1.09	17Q40R56		R
		Output Torque (lb in.)	627	17Q40LR56		LR
		Mechanical Output Hp	0.43	17Q40H56		HOLLOW
		Output OHL (lbs.)	1190			
50	35	Mechanical Input Hp	0.51	17Q50L56		L
		Thermal Input Hp	0.90	17Q50R56		R
		Output Torque (lb in.)	608	17Q50LR56		LR
		Mechanical Output Hp	0.34	17Q50H56		HOLLOW
		Output OHL (lbs.)	1190			
60	29	Mechanical Input Hp	0.43	17Q60L56		L
		Thermal Input Hp	0.80	17Q60R56		R
		Output Torque (lb in.)	576	17Q60LR56		LR
		Mechanical Output Hp	0.27	17Q60H56		HOLLOW
		Output OHL (lbs.)	1190			

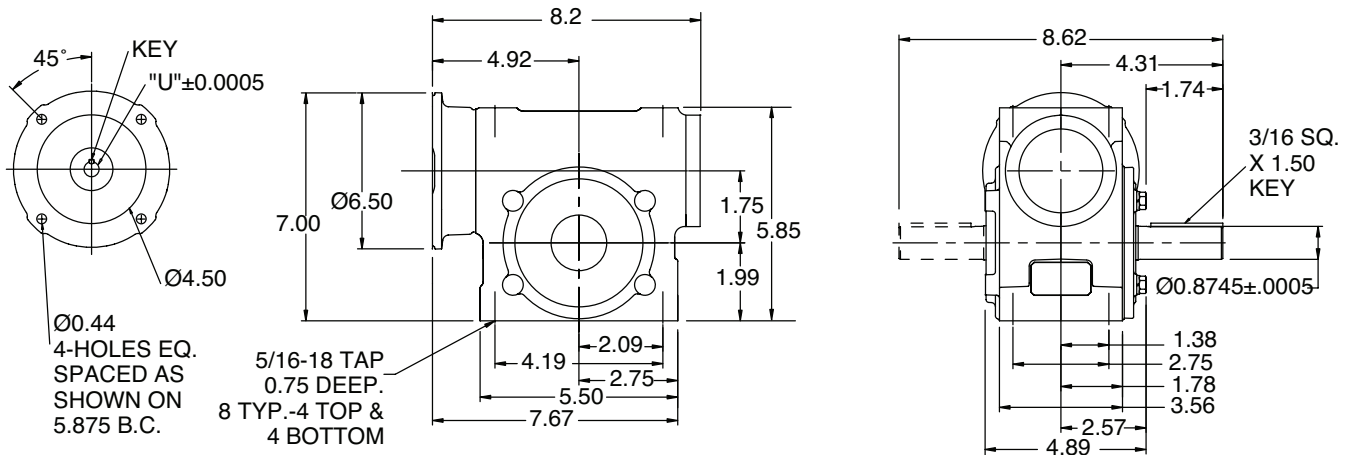
Note: Reducers are shipped without a mounting base. Order bolt-on base kit **17BASE** if required.
 Refer to page G4-118 for hollow bore bushing selections



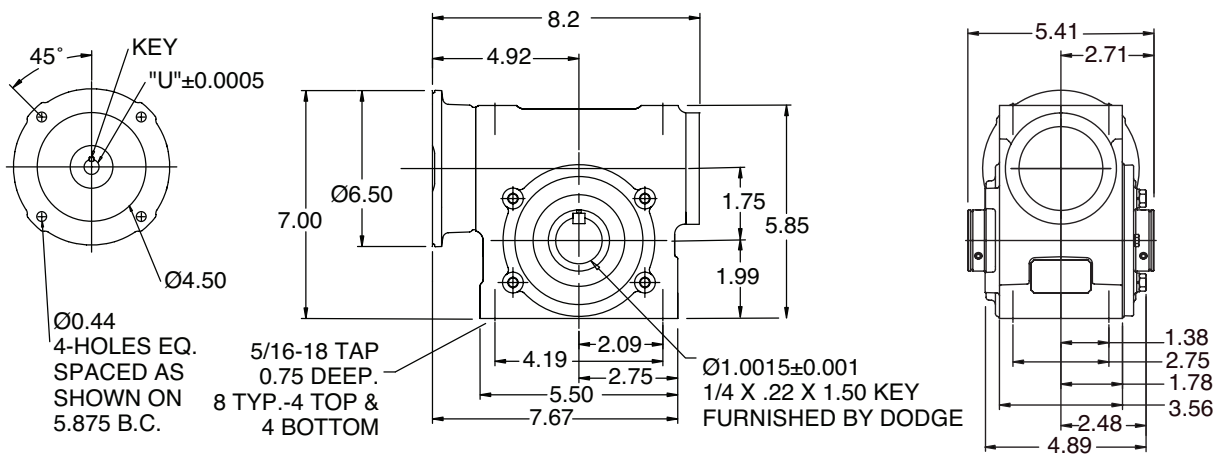
RATINGS/DIMENSIONS

TIGEAR-2 Reducers With Quill Input - Size 17

SOLID OUTPUT

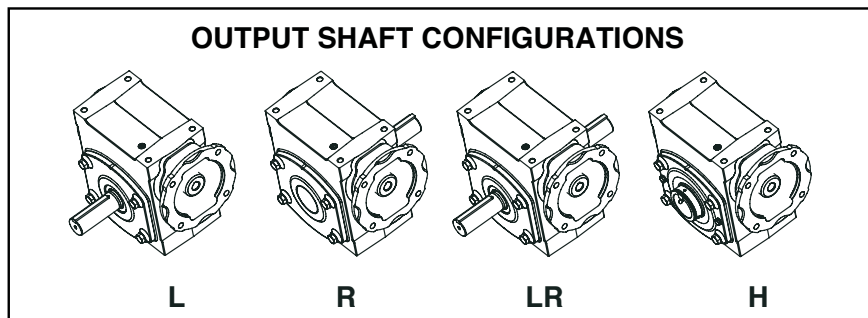


HOLLOW OUTPUT



MOTOR FRAME	"U"	KEY
48Y 56C	.626	3/16 SQ. x 1.50 KEY
140TC 160ATC	.876	3/16 SQ x 1.50 KEY

OUTPUT SHAFT CONFIGURATIONS





RATINGS/DIMENSIONS

TIGEAR-2 Reducers With Quill Input - Size 20

Ratio	Output RPM	Rating Data 1750 Input RPM		Part Number		Shaft Position
				56C	140TC	
4	438	Available Upon Request				
5	350	Mechanical Input Hp	3.47	20Q05L56	20Q05L14	L
		Thermal Input Hp	4.9	20Q05R56	20Q05R14	R
		Output Torque (lb in.)	581	20Q05LR56	20Q05LR14	LR
		Mechanical Output Hp	3.23	20Q05H56	20Q05H14	HOLLOW
		Output OHL (lbs.)	1380	20Q05HA56	20Q05HA14	HOLLOW ALT.
7.5	233	Mechanical Input Hp	2.78	20Q07L56	20Q07L14	L
		Thermal Input Hp	4.15	20Q07R56	20Q07R14	R
		Output Torque (lb in.)	678	20Q07LR56	20Q07LR14	LR
		Mechanical Output Hp	2.54	20Q07H56	20Q07H14	HOLLOW
		Output OHL (lbs.)	1560	20Q07HA56	20Q07HA14	HOLLOW ALT.
10	175	Mechanical Input Hp	2.25	20Q10L56	20Q10L14	L
		Thermal Input Hp	3.25	20Q10R56	20Q10R14	R
		Output Torque (lb in.)	725	20Q10LR56	20Q10LR14	LR
		Mechanical Output Hp	2.01	20Q10H56	20Q10H14	HOLLOW
		Output OHL (lbs.)	1560	20Q10HA56	20Q10HA14	HOLLOW ALT.
12.7	138	Mechanical Input Hp	1.9	20Q12L56	20Q12L14	L
		Thermal Input Hp	2.83	20Q12R56	20Q12R14	R
		Output Torque (lb in.)	770	20Q12LR56	20Q12LR14	LR
		Mechanical Output Hp	1.69	20Q12H56	20Q12H14	HOLLOW
		Output OHL (lbs.)	1560	20Q12HA56	20Q12HA14	HOLLOW ALT.
15	117	Mechanical Input Hp	1.69	20Q15L56	20Q15L14	L
		Thermal Input Hp	2.52	20Q15R56	20Q15R14	R
		Output Torque (lb in.)	790	20Q15LR56	20Q15LR14	LR
		Mechanical Output Hp	1.46	20Q15H56	20Q15H14	HOLLOW
		Output OHL (lbs.)	1560	20Q15HA56	20Q15HA14	HOLLOW ALT.
18	97	Mechanical Input Hp	1.46	20Q18L56	20Q18L14	L
		Thermal Input Hp	2.12	20Q18R56	20Q18R14	R
		Output Torque (lb in.)	795	20Q18LR56	20Q18LR14	LR
		Mechanical Output Hp	1.23	20Q18H56	20Q18H14	HOLLOW
		Output OHL (lbs.)	1560	20Q18HA56	20Q18HA14	HOLLOW ALT.
20	88	Mechanical Input Hp	1.34	20Q20L56	20Q20L14	L
		Thermal Input Hp	1.99	20Q20R56	20Q20R14	R
		Output Torque (lb in.)	796	20Q20LR56	20Q20LR14	LR
		Mechanical Output Hp	1.11	20Q20H56	20Q20H14	HOLLOW
		Output OHL (lbs.)	1560	20Q20HA56	20Q20HA14	HOLLOW ALT.
25	70	Mechanical Input Hp	1.11	20Q25L56	20Q25L14	L
		Thermal Input Hp	1.59	20Q25R56	20Q25R14	R
		Output Torque (lb in.)	788	20Q25LR56	20Q25LR14	LR
		Mechanical Output Hp	0.88	20Q25H56	20Q25H14	HOLLOW
		Output OHL (lbs.)	1560	20Q25HA56	20Q25HA14	HOLLOW ALT.
30	58	Mechanical Input Hp	0.96	20Q30L56		L
		Thermal Input Hp	1.49	20Q30R56		R
		Output Torque (lb in.)	802	20Q30LR56		LR
		Mechanical Output Hp	0.74	20Q30H56		HOLLOW
		Output OHL (lbs.)	1560	20Q30HA56		HOLLOW ALT.
40	44	Mechanical Input Hp	0.76	20Q40L56		L
		Thermal Input Hp	1.29	20Q40R56		R
		Output Torque (lb in.)	801	20Q40LR56		LR
		Mechanical Output Hp	0.56	20Q40H56		HOLLOW
		Output OHL (lbs.)	1560	20Q40HA56		HOLLOW ALT.
50	35	Mechanical Input Hp	0.64	20Q50L56		L
		Thermal Input Hp	1.09	20Q50R56		R
		Output Torque (lb in.)	787	20Q50LR56		LR
		Mechanical Output Hp	0.44	20Q50H56		HOLLOW
		Output OHL (lbs.)	1560	20Q50HA56		HOLLOW ALT.
60	29	Mechanical Input Hp	0.56	20Q60L56		L
		Thermal Input Hp	0.96	20Q60R56		R
		Output Torque (lb in.)	767	20Q60LR56		LR
		Mechanical Output Hp	0.36	20Q60H56		HOLLOW
		Output OHL (lbs.)	1560	20Q60HA56		HOLLOW ALT.

Note: Reducers are shipped without a mounting base. Order bolt-on base kit 20BASE if required.

Refer to page G4-118 for hollow bore bushing selections

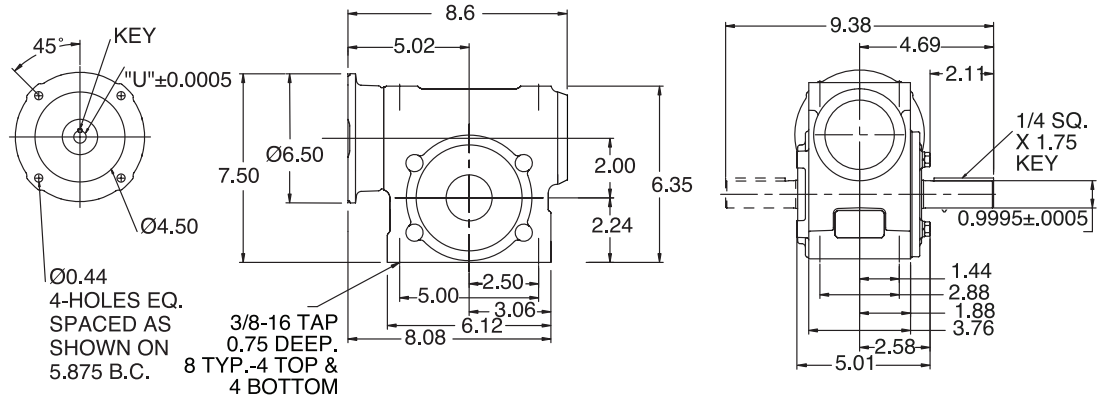
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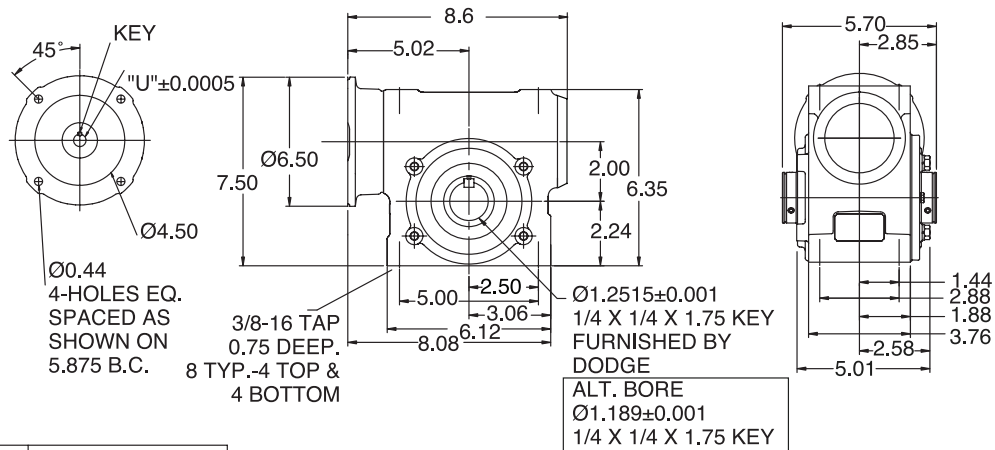
RATINGS/DIMENSIONS

TIGEAR-2 Reducers With Quill Input - Size 20

SOLID OUTPUT

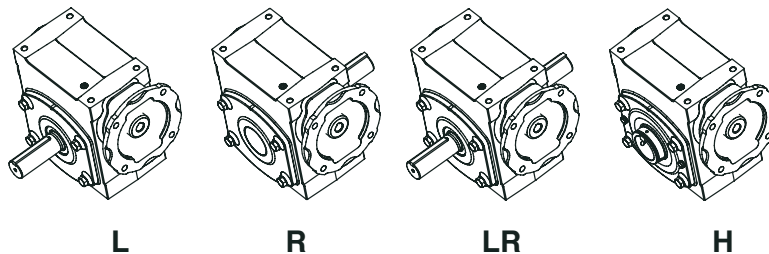


HOLLOW OUTPUT



MOTOR FRAME	"U"	KEY
48Y 56C	.626	3/16 SQ. x 1.50 KEY
140TC 160ATC	.876	3/16 SQ x 1.50 KEY

OUTPUT SHAFT CONFIGURATIONS





RATINGS/DIMENSIONS

TIGEAR-2 Reducers With Quill Input - Size 23

Ratio	Output RPM	Rating Data		Part Number			Shaft Position
		1750 Input RPM		56C	140TC	180TC	
4	438	Available Upon Request					
5	350	Mechanical Input Hp	5.25	23Q05L56	23Q05L14	23Q05L18	L
		Thermal Input Hp	6.61	23Q05R56	23Q05R14	23Q05R18	R
		Output Torque (lb in.)	881	23Q05LR56	23Q05LR14	23Q05LR18	LR
		Mechanical Output Hp	4.89	23Q05H56	23Q05H14	23Q05H18	HOLLOW
		Output OHL (lbs.)	1330	23Q05HA56	23Q05HA14	23Q05HA18	HOLLOW ALT.
7.5	233	Mechanical Input Hp	4.18	23Q07L56	23Q07L14	23Q07L18	L
		Thermal Input Hp	5.64	23Q07R56	23Q07R14	23Q07R18	R
		Output Torque (lb in.)	1026	23Q07LR56	23Q07LR14	23Q07LR18	LR
		Mechanical Output Hp	3.85	23Q07H56	23Q07H14	23Q07H18	HOLLOW
		Output OHL (lbs.)	1520	23Q07HA56	23Q07HA14	23Q07HA18	HOLLOW ALT.
10	175	Mechanical Input Hp	3.42	23Q10L56	23Q10L14	23Q10L18	L
		Thermal Input Hp	4.40	23Q10R56	23Q10R14	23Q10R18	R
		Output Torque (lb in.)	1106	23Q10LR56	23Q10LR14	23Q10LR18	LR
		Mechanical Output Hp	3.07	23Q10H56	23Q10H14	23Q10H18	HOLLOW
		Output OHL (lbs.)	1610	23Q10HA56	23Q10HA14	23Q10HA18	HOLLOW ALT.
12.7	138	Mechanical Input Hp	2.91	23Q12L56	23Q12L14	23Q12L18	L
		Thermal Input Hp	3.78	23Q12R56	23Q12R14	23Q12R18	R
		Output Torque (lb in.)	1170	23Q12LR56	23Q12LR14	23Q12LR18	LR
		Mechanical Output Hp	2.56	23Q12H56	23Q12H14	23Q12H18	HOLLOW
		Output OHL (lbs.)	1610	23Q12HA56	23Q12HA14	23Q12HA18	HOLLOW ALT.
15	117	Mechanical Input Hp	2.57	23Q15L56	23Q15L14		L
		Thermal Input Hp	3.30	23Q15R56	23Q15R14		R
		Output Torque (lb in.)	1199	23Q15LR56	23Q15LR14		LR
		Mechanical Output Hp	2.22	23Q15H56	23Q15H14		HOLLOW
		Output OHL (lbs.)	1610	23Q15HA56	23Q15HA14		HOLLOW ALT.
20	88	Mechanical Input Hp	2.00	23Q20L56	23Q20L14		L
		Thermal Input Hp	2.62	23Q20R56	23Q20R14		R
		Output Torque (lb in.)	1178	23Q20LR56	23Q20LR14		LR
		Mechanical Output Hp	1.64	23Q20H56	23Q20H14		HOLLOW
		Output OHL (lbs.)	1610	23Q20HA56	23Q20HA14		HOLLOW ALT.
25	70	Mechanical Input Hp	1.65	23Q25L56	23Q25L14		L
		Thermal Input Hp	2.16	23Q25R56	23Q25R14		R
		Output Torque (lb in.)	1184	23Q25LR56	23Q25LR14		LR
		Mechanical Output Hp	1.32	23Q25H56	23Q25H14		HOLLOW
		Output OHL (lbs.)	1610	23Q25HA56	23Q25HA14		HOLLOW ALT.
30	58	Mechanical Input Hp	1.42	23Q30L56	23Q30L14		L
		Thermal Input Hp	2.06	23Q30R56	23Q30R14		R
		Output Torque (lb in.)	1201	23Q30LR56	23Q30LR14		LR
		Mechanical Output Hp	1.11	23Q30H56	23Q30H14		HOLLOW
		Output OHL (lbs.)	1610	23Q30HA56	23Q30HA14		HOLLOW ALT.
40	44	Mechanical Input Hp	1.11	23Q40L56	23Q40L14		L
		Thermal Input Hp	1.73	23Q40R56	23Q40R14		R
		Output Torque (lb in.)	1193	23Q40LR56	23Q40LR14		LR
		Mechanical Output Hp	0.83	23Q40H56	23Q40H14		HOLLOW
		Output OHL (lbs.)	1610	23Q40HA56	23Q40HA14		HOLLOW ALT.
50	35	Mechanical Input Hp	0.95	23Q50L56			L
		Thermal Input Hp	1.42	23Q50R56			R
		Output Torque (lb in.)	1182	23Q50LR56			LR
		Mechanical Output Hp	0.66	23Q50H56			HOLLOW
		Output OHL (lbs.)	1610	23Q50HA56			HOLLOW ALT.
60	29	Mechanical Input Hp	0.80	23Q60L56			L
		Thermal Input Hp	1.24	23Q60R56			R
		Output Torque (lb in.)	1111	23Q60LR56			LR
		Mechanical Output Hp	0.51	23Q60H56			HOLLOW
		Output OHL (lbs.)	1610	23Q60HA56			HOLLOW ALT.

Note: Reducers are shipped without a mounting base. Order bolt-on base kit **23BASE** if required.
Refer to page G4-118 for hollow bore bushing selections

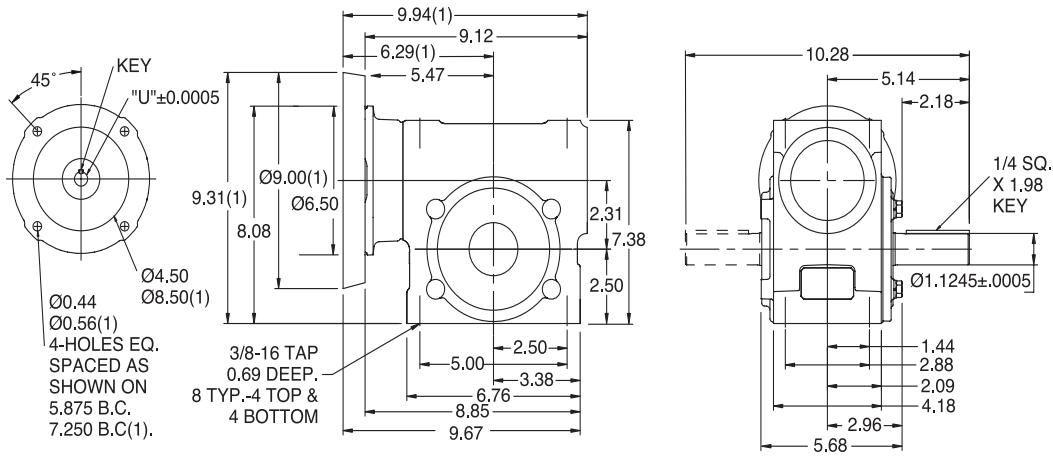
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RATINGS/DIMENSIONS

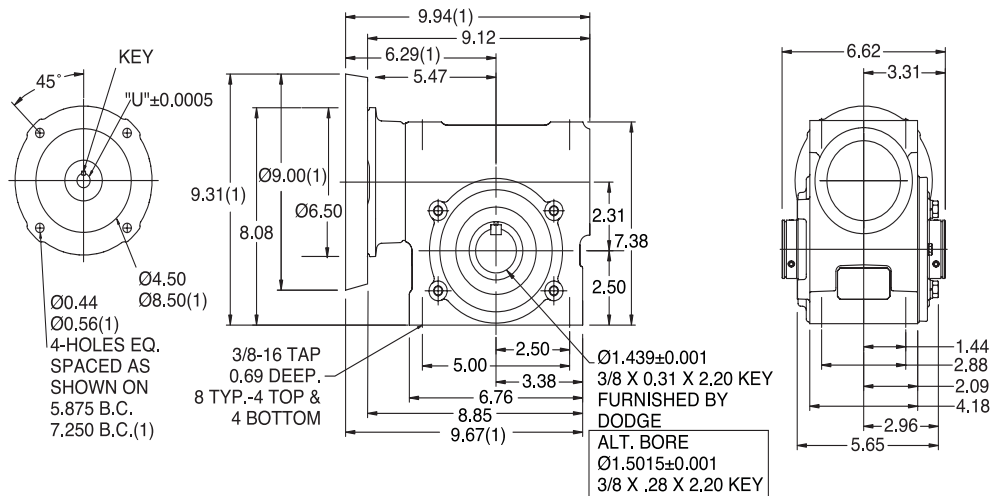
TIGEAR-2 Reducers With Quill Input - Size 23

SOLID OUTPUT



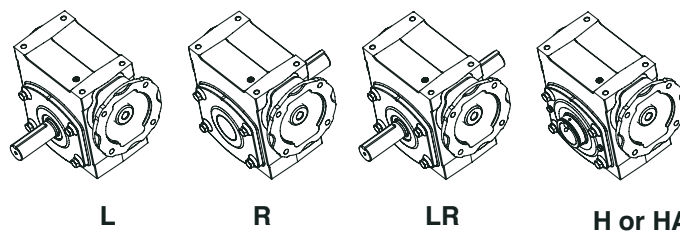
(1) DIMENSIONS APPLY TO
180 FRAME MOTOR ADAPTER

HOLLOW OUTPUT



MOTOR FRAME	"U"	KEY
48Y 56C	.6255	3/16 SQ. x 1.50 KEY
140TC 160ATC	.8755	3/16 SQ x 1.50 KEY
180TC 180ATC	1.1255	1/4 SQ x 2.00 KEY

OUTPUT SHAFT CONFIGURATIONS





RATINGS/DIMENSIONS

TIGEAR-2 Reducers With Quill Input - Size 26

Ratio	Output RPM	Rating Data		Part Number			Shaft Position
		1750 Input RPM		56C	140TC	180TC	
5	350	Mechanical Input Hp	7.37		26Q05L14	26Q05L18	L
		Thermal Input Hp	8.79		26Q05R14	26Q05R18	R
		Output Torque (lb in.)	1247		26Q05LR14	26Q05LR18	LR
		Mechanical Output Hp	6.93		26Q05H14	26Q05H18	HOLLOW
		Output OHL (lbs.)	1330		26Q05HA14	26Q05HA18	HOLLOW ALT.
6.5	269	Available Upon Request					
7.5	233	Mechanical Input Hp	5.92	26Q07L56	26Q07L14	26Q07L18	L
		Thermal Input Hp	6.89	26Q07R56	26Q07R14	26Q07R18	R
		Output Torque (lb in.)	1458	26Q07LR56	26Q07LR14	26Q07LR18	LR
		Mechanical Output Hp	5.47	26Q07H56	26Q07H14	26Q07H18	HOLLOW
		Output OHL (lbs.)	1520	26Q07HA56	26Q07HA14	26Q07HA18	HOLLOW ALT.
10	175	Mechanical Input Hp	4.83	26Q10L56	26Q10L14	26Q10L18	L
		Thermal Input Hp	5.61	26Q10R56	26Q10R14	26Q10R18	R
		Output Torque (lb in.)	1576	26Q10LR56	26Q10LR14	26Q10LR18	LR
		Mechanical Output Hp	4.37	26Q10H56	26Q10H14	26Q10H18	HOLLOW
		Output OHL (lbs.)	1610	26Q10HA56	26Q10HA14	26Q10HA18	HOLLOW ALT.
12.7	138	Mechanical Input Hp	4.08	26Q12L56	26Q12L14	26Q12L18	L
		Thermal Input Hp	4.72	26Q12R56	26Q12R14	26Q12R18	R
		Output Torque (lb in.)	1654	26Q12LR56	26Q12LR14	26Q12LR18	LR
		Mechanical Output Hp	3.63	26Q12H56	26Q12H14	26Q12H18	HOLLOW
		Output OHL (lbs.)	1610	26Q12HA56	26Q12HA14	26Q12HA18	HOLLOW ALT.
15	117	Mechanical Input Hp	3.62	26Q15L56	26Q15L14	26Q15L18	L
		Thermal Input Hp	4.15	26Q15R56	26Q15R14	26Q15R18	R
		Output Torque (lb in.)	1708	26Q15LR56	26Q15LR14	26Q15LR18	LR
		Mechanical Output Hp	3.16	26Q15H56	26Q15H14	26Q15H18	HOLLOW
		Output OHL (lbs.)	1610	26Q15HA56	26Q15HA14	26Q15HA18	HOLLOW ALT.
18	97	Mechanical Input Hp	3.05	26Q18L56	26Q18L14	26Q18L18	L
		Thermal Input Hp	3.73	26Q18R56	26Q18R14	26Q18R18	R
		Output Torque (lb in.)	1708	26Q18LR56	26Q18LR14	26Q18LR18	LR
		Mechanical Output Hp	2.63	26Q18H56	26Q18H14	26Q18H18	HOLLOW
		Output OHL (lbs.)	1610	26Q18HA56	26Q18HA14	26Q18HA18	HOLLOW ALT.
20	88	Mechanical Input Hp	2.71	26Q20L56	26Q20L14		L
		Thermal Input Hp	3.71	26Q20R56	26Q20R14		R
		Output Torque (lb in.)	1673	26Q20LR56	26Q20LR14		LR
		Mechanical Output Hp	2.32	26Q20H56	26Q20H14		HOLLOW
		Output OHL (lbs.)	1610	26Q20HA56	26Q20HA14		HOLLOW ALT.
25	70	Mechanical Input Hp	2.26	26Q25L56	26Q25L14		L
		Thermal Input Hp	3.00	26Q25R56	26Q25R14		R
		Output Torque (lb in.)	1677	26Q25LR56	26Q25LR14		LR
		Mechanical Output Hp	1.86	26Q25H56	26Q25H14		HOLLOW
		Output OHL (lbs.)	1610	26Q25HA56	26Q25HA14		HOLLOW ALT.
30	58	Mechanical Input Hp	2.00	26Q30L56	26Q30L14		L
		Thermal Input Hp	2.79	26Q30R56	26Q30R14		R
		Output Torque (lb in.)	1705	26Q30LR56	26Q30LR14		LR
		Mechanical Output Hp	1.58	26Q30H56	26Q30H14		HOLLOW
		Output OHL (lbs.)	1610	26Q30HA56	26Q30HA14		HOLLOW ALT.
40	44	Mechanical Input Hp	1.55	26Q40L56	26Q40L14		L
		Thermal Input Hp	2.14	26Q40R56	26Q40R14		R
		Output Torque (lb in.)	1685	26Q40LR56	26Q40LR14		LR
		Mechanical Output Hp	1.17	26Q40H56	26Q40H14		HOLLOW
		Output OHL (lbs.)	1610	26Q40HA56	26Q40HA14		HOLLOW ALT.
50	35	Mechanical Input Hp	1.32	26Q50L56	26Q50L14		L
		Thermal Input Hp	1.76	26Q50R56	26Q50R14		R
		Output Torque (lb in.)	1662	26Q50LR56	26Q50LR14		LR
		Mechanical Output Hp	0.92	26Q50H56	26Q50H14		HOLLOW
		Output OHL (lbs.)	1610	26Q50HA56	26Q50HA14		HOLLOW ALT.
60	29	Mechanical Input Hp	1.08	26Q60L56	26Q60L14		L
		Thermal Input Hp	1.57	26Q60R56	26Q60R14		R
		Output Torque (lb in.)	1547	26Q60LR56	26Q60LR14		LR
		Mechanical Output Hp	0.72	26Q60H56	26Q60H14		HOLLOW
		Output OHL (lbs.)	1610	26Q60HA56	26Q60HA14		HOLLOW ALT.
80	22	Available Upon Request					

Note: Reducers are shipped without a mounting base. Order bolt-on base kit **26BASE** if required.
Refer to page G4-118 for hollow bore bushing selections

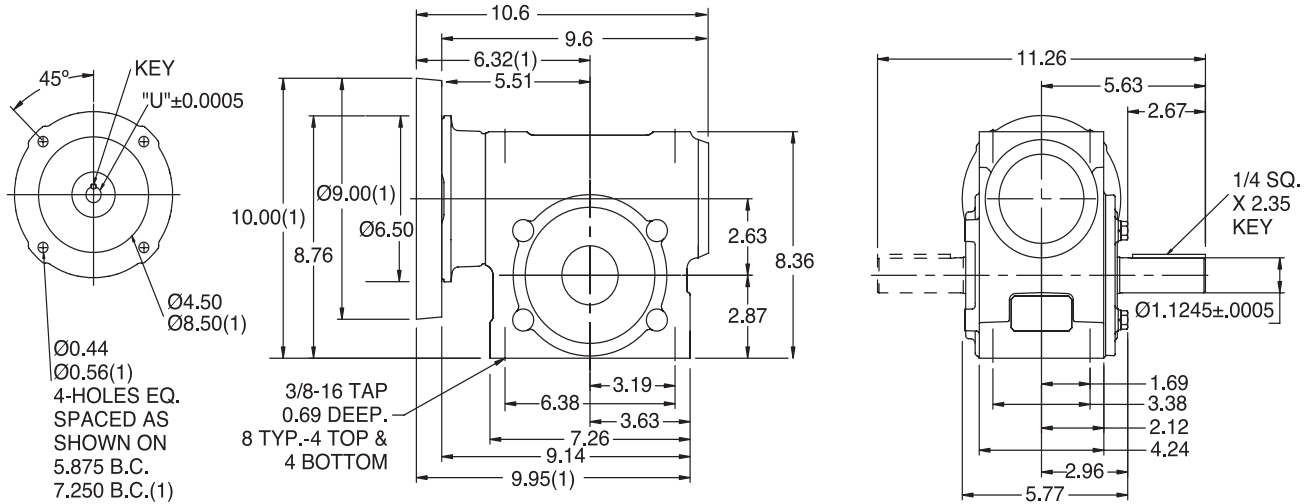
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RATINGS/DIMENSIONS

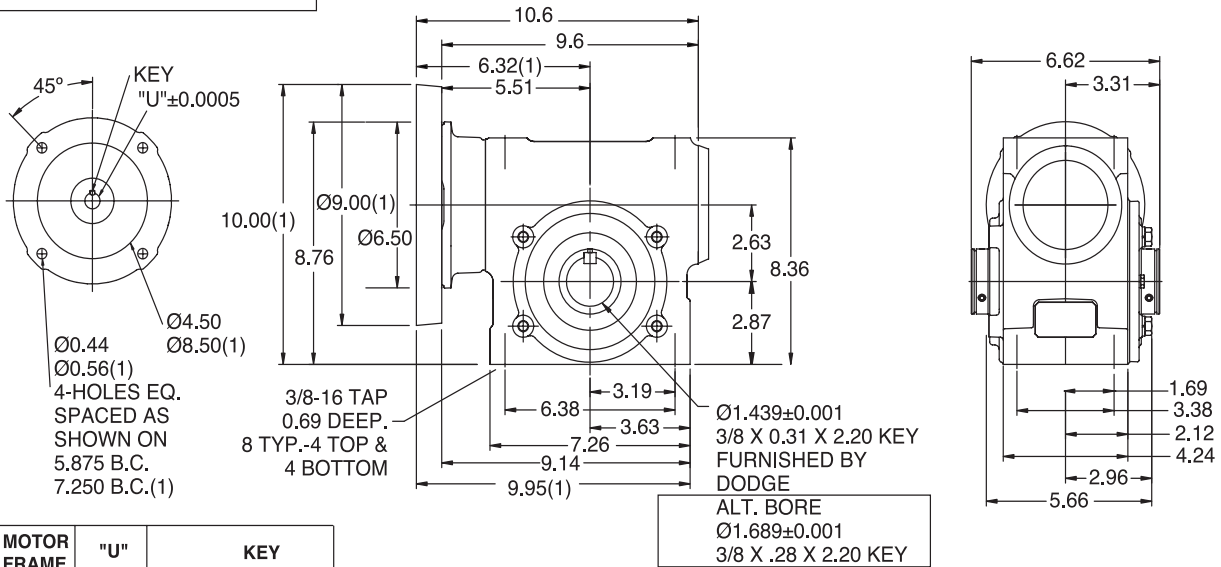
TIGEAR-2 Reducers With Quill Input - Size 26

SOLID OUTPUT



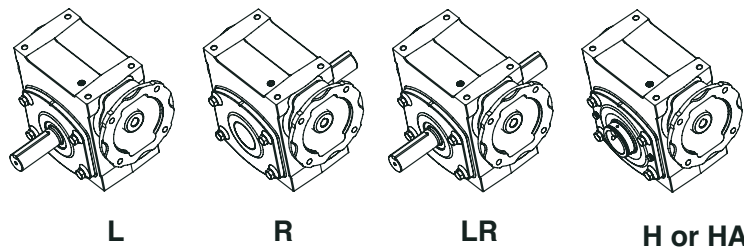
(1) DIMENSIONS APPLY TO 180 FRAME MOTOR ADAPTER

HOLLOW OUTPUT



MOTOR FRAME	"U"	KEY
48Y 56C	.626	3/16 SQ. x 1.50 KEY
140TC 160ATC	.876	3/16 SQ x 1.50 KEY
180TC 180ATC	1.126	1/4 SQ x 2.00 KEY

OUTPUT SHAFT CONFIGURATIONS





RATINGS/DIMENSIONS

TIGEAR-2 Reducers With Quill Input - Size 30

Ratio	Output RPM	Rating Data 1750 Input RPM		Part Number			Shaft Position
				56C	140TC	180TC	
5	350	Mechanical Input Hp	10.84		30Q05L14	30Q05L18	L
		Thermal Input Hp	12.53		30Q05R14	30Q05R18	R
		Output Torque (lb in.)	1849		30Q05LR14	30Q05LR18	LR
		Mechanical Output Hp	10.27		30Q05H14	30Q05H18	HOLLOW
		Output OHL (lbs.)	1330				
6.5	269	Available Upon Request					
7.5	233	Mechanical Input Hp	8.74		30Q07L14	30Q07L18	L
		Thermal Input Hp	9.64		30Q07R14	30Q07R18	R
		Output Torque (lb in.)	2171		30Q07LR14	30Q07LR18	LR
		Mechanical Output Hp	8.15		30Q07H14	30Q07H18	HOLLOW
		Output OHL (lbs.)	1540				
10	175	Mechanical Input Hp	7.11		30Q10L14	30Q10L18	L
		Thermal Input Hp	7.85		30Q10R14	30Q10R18	R
		Output Torque (lb in.)	2347		30Q10LR14	30Q10LR18	LR
		Mechanical Output Hp	6.52		30Q10H14	30Q10H18	HOLLOW
		Output OHL (lbs.)	1720				
15	117	Mechanical Input Hp	5.00		30Q15L14	30Q15L18	L
		Thermal Input Hp	5.72		30Q15R14	30Q15R18	R
		Output Torque (lb in.)	2371		30Q15LR14	30Q15LR18	LR
		Mechanical Output Hp	4.39		30Q15H14	30Q15H18	HOLLOW
		Output OHL (lbs.)	2300				
20	88	Mechanical Input Hp	3.81	30Q20L56	30Q20L14	30Q20L18	L
		Thermal Input Hp	4.52	30Q20R56	30Q20R14	30Q20R18	R
		Output Torque (lb in.)	2345	30Q20LR56	30Q20LR14	30Q20LR18	LR
		Mechanical Output Hp	3.26	30Q20H56	30Q20H14	30Q20H18	HOLLOW
		Output OHL (lbs.)	2300				
25	70	Mechanical Input Hp	3.05	30Q25L56	30Q25L14	30Q25L18	L
		Thermal Input Hp	3.90	30Q25R56	30Q25R14	30Q25R18	R
		Output Torque (lb in.)	2284	30Q25LR56	30Q25LR14	30Q25LR18	LR
		Mechanical Output Hp	2.54	30Q25H56	30Q25H14	30Q25H18	HOLLOW
		Output OHL (lbs.)	2300				
30	58	Mechanical Input Hp	2.75	30Q30L56	30Q30L14		L
		Thermal Input Hp	3.58	30Q30R56	30Q30R14		R
		Output Torque (lb in.)	2417	30Q30LR56	30Q30LR14		LR
		Mechanical Output Hp	2.24	30Q30H56	30Q30H14		HOLLOW
		Output OHL (lbs.)	2300				
40	44	Mechanical Input Hp	2.09	30Q40L56	30Q40L14		L
		Thermal Input Hp	2.87	30Q40R56	30Q40R14		R
		Output Torque (lb in.)	2324	30Q40LR56	30Q40LR14		LR
		Mechanical Output Hp	1.61	30Q40H56	30Q40H14		HOLLOW
		Output OHL (lbs.)	2300				
50	35	Mechanical Input Hp	1.75	30Q50L56	30Q50L14		L
		Thermal Input Hp	2.34	30Q50R56	30Q50R14		R
		Output Torque (lb in.)	2257	30Q50LR56	30Q50LR14		LR
		Mechanical Output Hp	1.25	30Q50H56	30Q50H14		HOLLOW
		Output OHL (lbs.)	2300				
60	29	Mechanical Input Hp	1.50	30Q60L56	30Q60L14		L
		Thermal Input Hp	2.01	30Q60R56	30Q60R14		R
		Output Torque (lb in.)	2138	30Q60LR56	30Q60LR14		LR
		Mechanical Output Hp	0.99	30Q60H56	30Q60H14		HOLLOW
		Output OHL (lbs.)	2300				

Note: Reducers are shipped without a mounting base. Order bolt-on base kit **30BASE** if required.
Refer to page G4-118 for hollow bore bushing selections

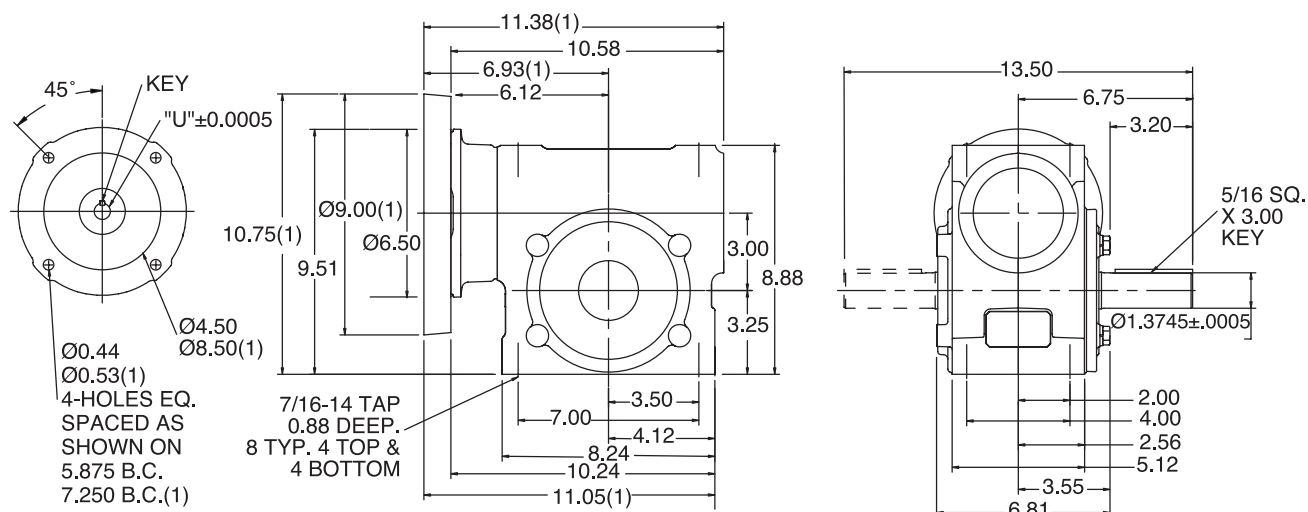
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RATINGS/DIMENSIONS

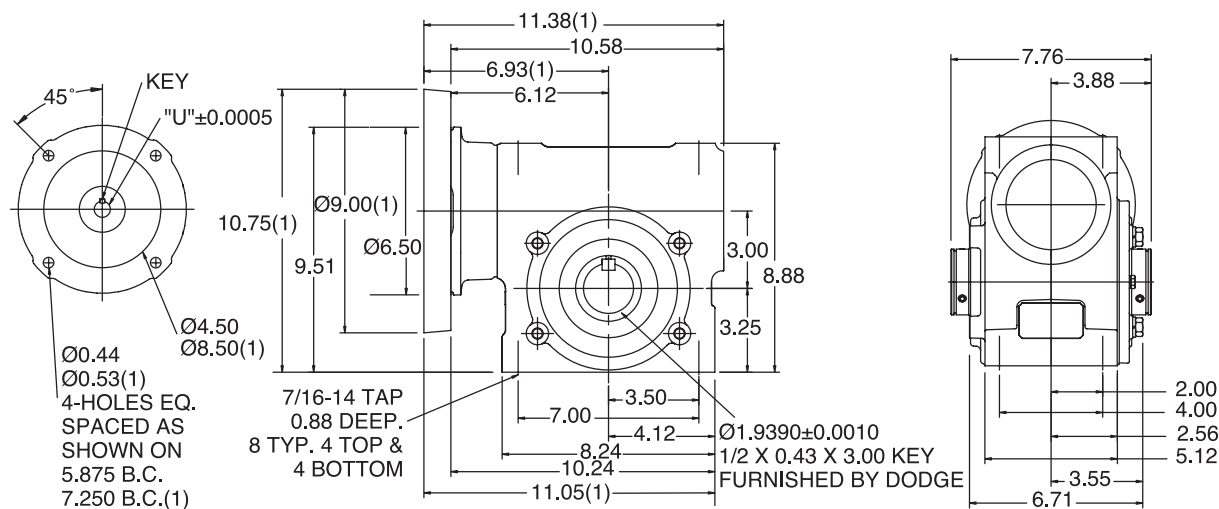
TIGEAR-2 Reducers With Quill Input - Size 30

SOLID OUTPUT



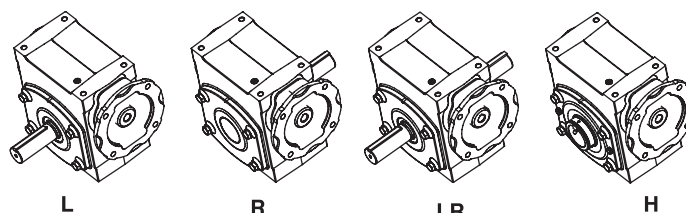
(1) DIMENSIONS APPLY TO
180 FRAME MOTOR ADAPTER

HOLLOW OUTPUT



MOTOR FRAME	"U"	KEY
48Y 56C	.6255	3/16 SQ. x 1.50 KEY
140TC 160ATC	.8755	3/16 SQ. x 1.50 KEY
180TC 180ATC	1.1255	1/4 SQ. x 2.00 KEY

MOUNTING POSITIONS





RATINGS/DIMENSIONS

TIGEAR-2 Reducers With Quill Input - Size 35

Ratio	Output RPM	Rating Data		Part Number				Shaft Position
		1750 Input RPM		56C	140TC	180TC	210TC	
5	350	Mechanical Input Hp	15.18		35Q05L14	35Q05L18	35Q05L21	L
		Thermal Input Hp	15.51		35Q05R14	35Q05R18	35Q05R21	R
		Output Torque (lb in.)	2593		35Q05LR14	35Q05LR18	35Q05LR21	LR
		Mechanical Output Hp	14.40		35Q05H14	35Q05H18	35Q05H21	HOLLOW
		Output OHL (lbs.)	2120					
7.5	233	Mechanical Input Hp	12.24		35Q07L14	35Q07L18	35Q07L21	L
		Thermal Input Hp	12.52		35Q07R14	35Q07R18	35Q07R21	R
		Output Torque (lb in.)	3054		35Q07LR14	35Q07LR18	35Q07LR21	LR
		Mechanical Output Hp	11.46		35Q07H14	35Q07H18	35Q07H21	HOLLOW
		Output OHL (lbs.)	2430					
10	175	Mechanical Input Hp	10.00		35Q10L14	35Q10L18	35Q10L21	L
		Thermal Input Hp	10.63		35Q10R14	35Q10R18	35Q10R21	R
		Output Torque (lb in.)	3310		35Q10LR14	35Q10LR18	35Q10LR21	LR
		Mechanical Output Hp	9.19		35Q10H14	35Q10H18	35Q10H21	HOLLOW
		Output OHL (lbs.)	2700					
12.7	138	Mechanical Input Hp	8.51		35Q12L14	35Q12L18	35Q12L21	L
		Thermal Input Hp	8.75		35Q12R14	35Q12R18	35Q12R21	R
		Output Torque (lb in.)	3530		35Q12LR14	35Q12LR18	35Q12LR21	LR
		Mechanical Output Hp	7.74		35Q12H14	35Q12H18	35Q12H21	HOLLOW
		Output OHL (lbs.)	2760					
15	117	Mechanical Input Hp	7.44		35Q15L14	35Q15L18		L
		Thermal Input Hp	7.56		35Q15R14	35Q15R18		R
		Output Torque (lb in.)	3599		35Q15LR14	35Q15LR18		LR
		Mechanical Output Hp	6.66		35Q15H14	35Q15H18		HOLLOW
		Output OHL (lbs.)	2760					
18	97	Available Upon Request						
20	88	Mechanical Input Hp	5.79		35Q20L14	35Q20L18		L
		Thermal Input Hp	5.97		35Q20R14	35Q20R18		R
		Output Torque (lb in.)	3620		35Q20LR14	35Q20LR18		LR
		Mechanical Output Hp	5.03		35Q20H14	35Q20H18		HOLLOW
		Output OHL (lbs.)	2760					
25	70	Mechanical Input Hp	4.72		35Q25L14	35Q25L18		L
		Thermal Input Hp	5.10		35Q25R14	35Q25R18		R
		Output Torque (lb in.)	3586		35Q25LR14	35Q25LR18		LR
		Mechanical Output Hp	3.98		35Q25H14	35Q25H18		HOLLOW
		Output OHL (lbs.)	2760					
30	58	Mechanical Input Hp	4.15	35Q30L56	35Q30L14	35Q30L18		L
		Thermal Input Hp	4.43	35Q30R56	35Q30R14	35Q30R18		R
		Output Torque (lb in.)	3682	35Q30LR56	35Q30LR14	35Q30LR18		LR
		Mechanical Output Hp	3.41	35Q30H56	35Q30H14	35Q30H18		HOLLOW
		Output OHL (lbs.)	2760					
40	44	Mechanical Input Hp	3.23	35Q40L56	35Q40L14	35Q40L18		L
		Thermal Input Hp	3.54	35Q40R56	35Q40R14	35Q40R18		R
		Output Torque (lb in.)	3622	35Q40LR56	35Q40LR14	35Q40LR18		LR
		Mechanical Output Hp	2.51	35Q40H56	35Q40H14	35Q40H18		HOLLOW
		Output OHL (lbs.)	2760					
50	35	Mechanical Input Hp	2.64	35Q50L56	35Q50L14			L
		Thermal Input Hp	2.94	35Q50R56	35Q50R14			R
		Output Torque (lb in.)	3485	35Q50LR56	35Q50LR14			LR
		Mechanical Output Hp	1.94	35Q50H56	35Q50H14			HOLLOW
		Output OHL (lbs.)	2760					
60	29	Mechanical Input Hp	2.19	35Q60L56	35Q60L14			L
		Thermal Input Hp	2.43	35Q60R56	35Q60R14			R
		Output Torque (lb in.)	3194	35Q60LR56	35Q60LR14			LR
		Mechanical Output Hp	1.48	35Q60H56	35Q60H14			HOLLOW
		Output OHL (lbs.)	2760					

Note: Reducers are shipped without a mounting base. Order bolt-on base kit **35BASE** if required.
Refer to page G4-118 for hollow bore bushing selections

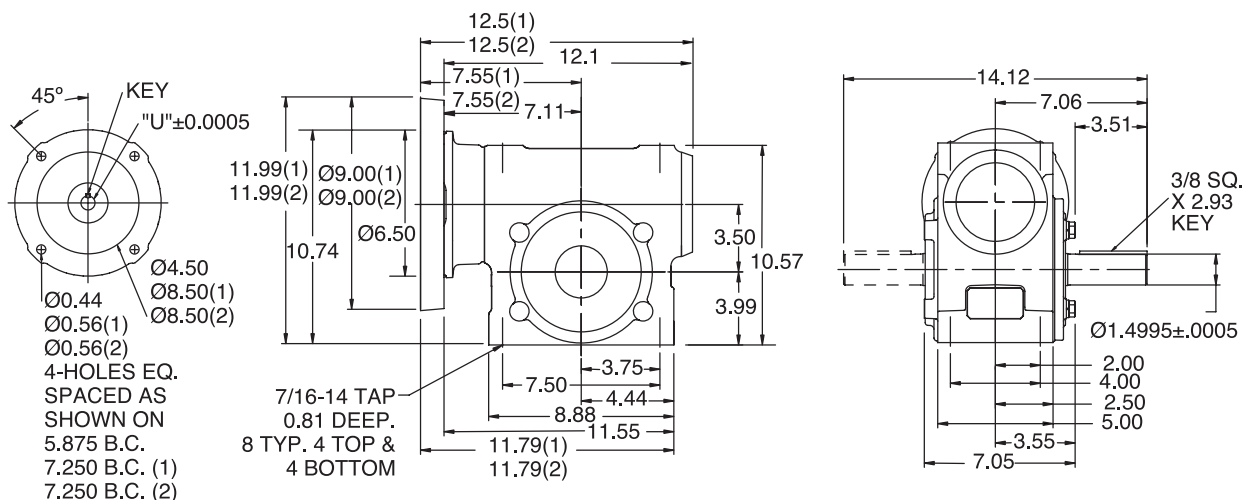
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RATINGS/DIMENSIONS

TIGEAR-2 Reducers With Quill Input - Size 35

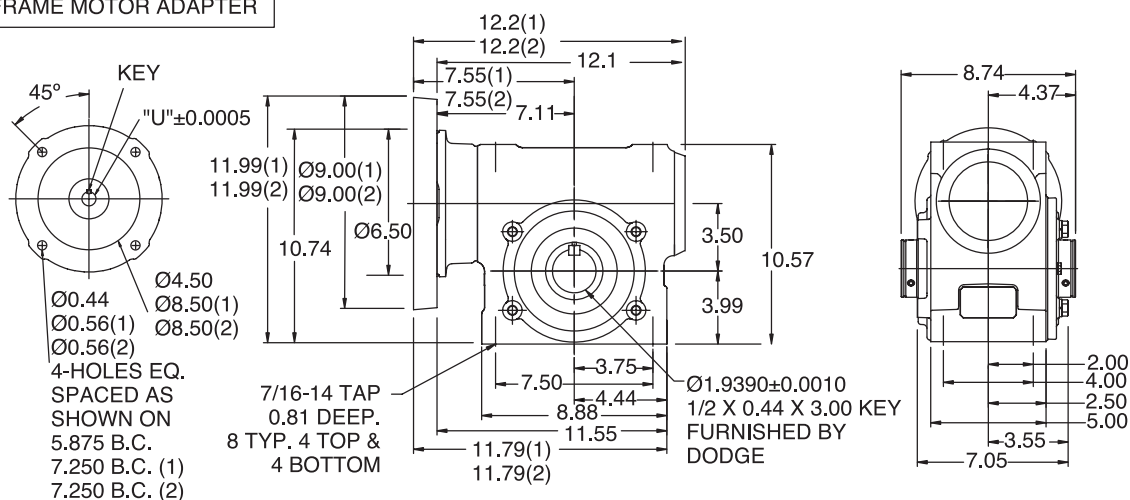
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(1) DIMENSIONS APPLY TO
180 FRAME MOTOR ADAPTER

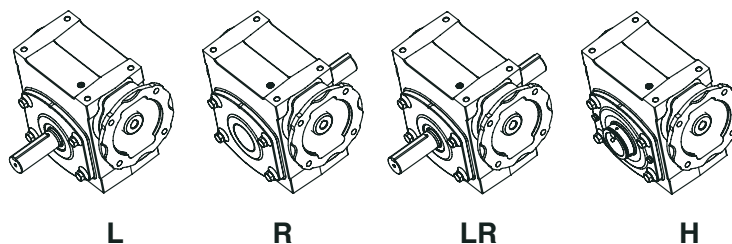
(2) DIMENSIONS APPLY TO
210 FRAME MOTOR ADAPTER

HOLLOW OUTPUT



MOTOR FRAME	DIM "U"	KEY
48Y 56C	Ø0.626	3/16 SQ. X 2.43 KEY
140TC 160ATC	Ø0.876	3/16 SQ X 2.43 KEY
180TC 180ATC	Ø1.126	1/4 SQ. X 2.36 KEY
210TC 210ATC	Ø1.376	5/16 SQ X 2.57 KEY

OUTPUT SHAFT CONFIGURATIONS



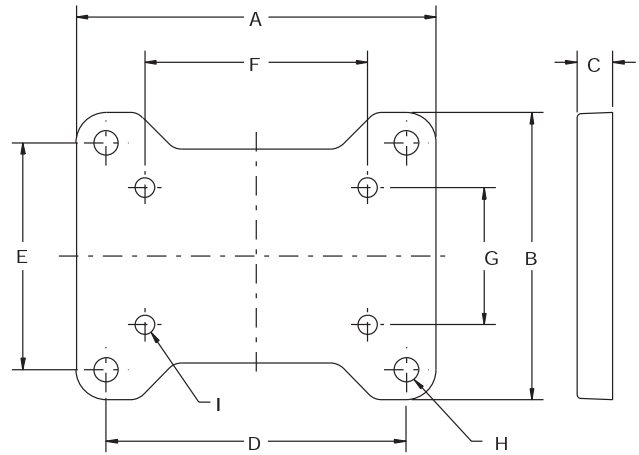
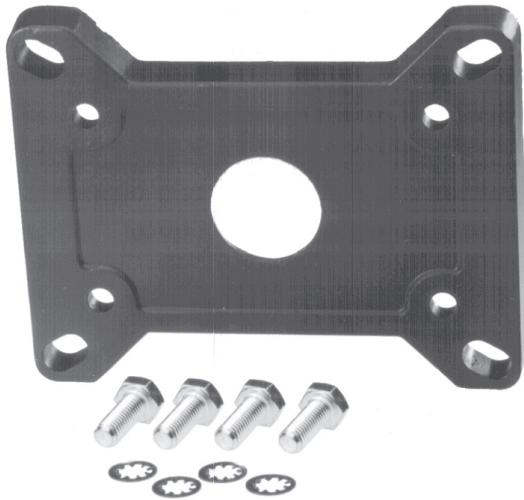
ACCESSORIES

TIGEAR-2 Bolt-On Base Kit

All TIGEAR-2 reducers include top and bottom drilled and tapped mounting holes but do not include base. Each kit below includes the base and required mounting hardware.

Reducer Size	Standard Kit Number	Standard Spacer Kit Number (1)	E-Z KLEEN Kit Number	Stainless Steel ULTRA KLEEN Kit
13	13BASE	Not Required	13ZBASE	N/A
15	15BASE	Not Required	15ZBASE	N/A
17	17BASE	Not Required	17ZBASE	17SBASE
20	20BASE	Not Required	20ZBASE	N/A
21	N/A	N/A	N/A	21SBASE
23 (1)	23BASE	2326SPACER	23ZBASE	23SBASE
26 (1)	26BASE	2326SPACER	26ZBASE	26SBASE
30 (1)	30BASE	3035SPACER	30ZBASE	30SBASE
35 (1)	35BASE	3035SPACER	35ZBASE	35SBASE
40 (1)	40BASE	40SPACER	N/A	N/A
47	47BASE	Not Required	N/A	N/A

NOTE: (1) If base is to be mounted on top of reducer, space kit listed above will also be required to allow clearance of base and motor adapter housing. Currently not available with E-Z KLEEN coating or stainless steel material.



Size	A	B	C	D	E	F	G	H	I
13	5.25	4.19	0.52	4.38	3.31	3.25	2.00	0.34	0.28
15	6.13	5.19	0.61	5.25	4.31	3.50	2.25	0.44	0.28
17	6.94	5.56	0.74 (3)	5.88 (3)	4.50	4.19	2.75	0.41	0.34
20	7.26	5.66	0.74 (3)	6.20 (3)	4.60	5.00	2.88	0.50	0.41
21	7.70	6.00	0.70	6.38	4.69	5.00	2.88	0.47	0.41
23	8.32	6.14	0.75	7.06	4.88	5.00	2.88	0.47	0.41
26	9.25	6.50	0.79/0.72 (2)	8.00	5.25	6.38	3.38	0.56	0.41
30	9.68	7.12	0.75	8.44	5.88	7.00	4.00	0.53	0.49
35	10.75	7.38	1.00	9.50	6.13	7.50	4.00	0.58	0.47
40	12.62	9.13	1.00	11.12	7.63	8.50	5.00	0.66	0.66
47	16.00	10.26	1.13	14.12	8.38	11.00	5.81	0.78	0.66

NOTE: (2) C dimension for 26BASE and 26ZBASE is 0.79. C dimension for 26SBASE is 0.72

NOTE: (3) Sizes 17 and 20 have slotted mounting holes. Size 17 slotted horizontally ± 0.06 . Size 20 slotted 30 degree from horizontal ± 0.12 (see photo above left).

ACCESSORIES

TIGEAR-2 Riser Block Kits

Riser blocks allow clearance over the motor eliminating the need to invert the reducer (worn under) when the application calls for a “ceiling” mount such as under a conveyor or other equipment. Riser blocks permit the reducer to be mounted in the most desirable position keeping the high speed shaft seal above the oil level. Experience shows that this position results in increased seal life and durability. Each kit includes the riser block and required mounting hardware.

Reducer Size	Standard Kit Number	E-Z KLEEN Kit Number	A	B
13	13RISER	13ZRISER	1.66	5.36
15	15RISER	15ZRISER	1.38	5.61
17	17RISER	17ZRISER	1.38	5.99
20	20RISER	20ZRISER	1.38	6.24
23	23RISER	23ZRISER	2.25	7.88
26	26RISER	26ZRISER	1.91	8.21
30	30RISER	30ZRISER	2.25	8.63
35	35RISER	35ZRISER	1.69	9.27
40	40RISER	N/A	2.75	10.83
47	47RISER	N/A	2.00	11.57

