



SERIES B

POWER TRANSMISSION
SOLUTIONS

Precision. Motion Control. Technology.



Cone Drive is a world leader in precision motion control technology. We work with our customers every step of the way – from design specs to the final solution – to create highly precise, highly specific products that keep our customers' technology at the forefront of their industry. Cone Drive offers engineering support, unique solutions, and innovative technology across a breadth of markets and products to drive your company forward.



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Serving an entire spectrum of mechanical drive applications from food, energy, mining and metal; to automotive, aerospace and marine propulsion, we are your source for drive solutions.

MODEL HP

Worm gear units with double-enveloping worm gearing.
Available in single, double and triple reductions



SERIES W

Precision right angle servo gearboxes



MODEL HP-A

Universal metric housing featuring double-enveloping gearing & drywell feature



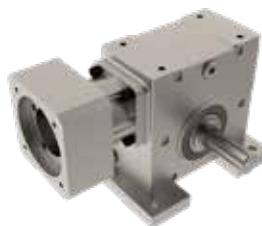
MODEL RG

Moderate precision right angle servo gearboxes



SERIES B

Industrial duty worm gear unit featuring Conex gearing



SERIES S

Value engineered right angle servo gearboxes



SERIES LE / P

In-line helical geared motors & reducers and precision planetary servo gearboxes



HARMONIC

Cone Drive Harmonic Solutions® offer the ultimate in precision motion control technology



STAINLESS

Right angle, IP-69K rated for the food processing market

SLEW DRIVE

High radial, axial and moment loads in a low profile ready-to-install solution

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

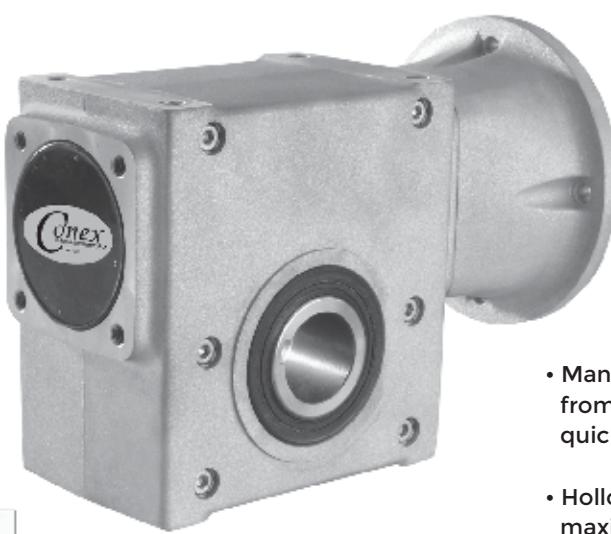
GEARMOTORS & REDUCERS

The Series B right angle gearmotors and reducers provide a highly flexible and compact solution to meet the low to medium power range. With power capabilities up to 20 HP and maximum output torque capacity of 8,000 lb.in. We can provide design flexibility with lasting performance.

The Series B benefits from Cone Drive's extensive history and experience in the design and manufacture of high quality mechanical power transmission solutions. With features like our non-fretting motor connection and the unique **Swift Kit** concept. Series B is the answer for your right angle drive requirements.

- Conex™ inside, new helicoidal gear geometry provides high capacity and high efficiency.

- Motor connection eliminates fretting corrosion and provides easy motor removal.

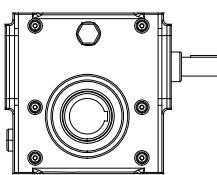


Visit ConeTools.com
configure 3D models and
specification sheets

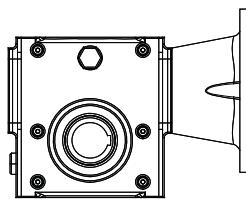
ConeTools.com

- Manufactured and assembled from a family of modular kits for quick delivery.
- Hollow bore standard for maximum flexibility.
- Dimensionally interchangeable with other major manufacturers.

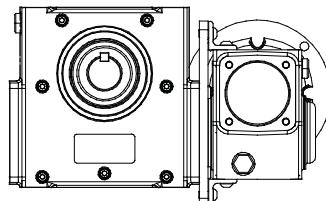
 **Cone Drive**
BY TIMKEN



**Standard Single
Reduction Reducer Unit**



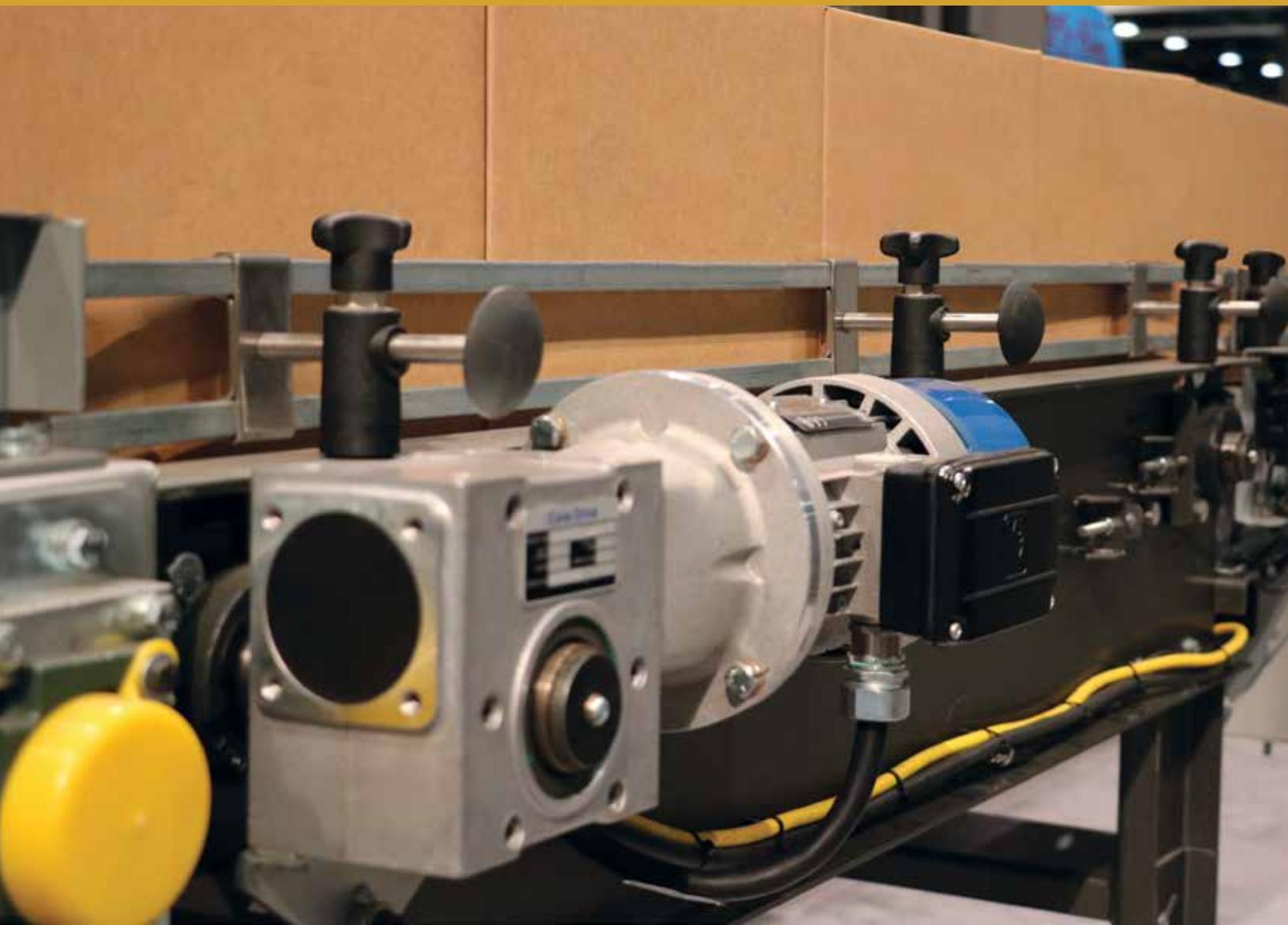
Motor Ready Unit



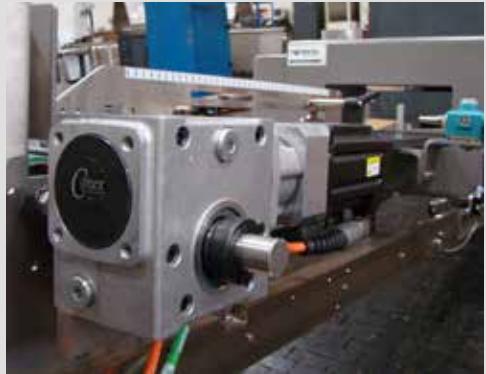
**Motor Ready Double
Reduction Reducer Unit**



SERIES B



PACKAGING | STEEL | PLASTICS & RUBBER | CONVEYER | PULP & PAPER



AN ECONOMIC SOLUTION THAT PACKS A PUNCH.

Cone Drive's Series B reducers provide an economical, flexible, and compact solution to fulfill the low-to-medium power range requirements.

With capabilities up to 20HP and output torque up to 8,000 lb. in.

Series B can provide design flexibility with lasting performance.

Right Angle Drive

Directly interchangeable with most worm reducers, this Right Angle Drive is unlike any other reducer on the market. No other reducer offers the flexibility, performance, and reliability that you have come to expect from Cone Drive.



S P E C I F I C A T I O N S

PRODUCT FEATURES

- Complete motor mounting accessories
- Easy motor removal with fret free motor bushing
- Dimensionally interchangeable with other manufacturers
- Lightweight aluminum construction
- Conex double enveloping gearing

PRODUCT SPECIFICATIONS

- Center Distance:** 1.33" – 3.54"
- Output Torque:** Up to 7,500 lb-in
- Gear Ratios:** Up to 3600:1 in double reduction
- Input Options:** Reducer and NEMA
- Output Options:** Solid or hollow, metric and inch
- Washdown Options:** USDA white epoxy paint, SS fasteners and output shafts



SERIES B

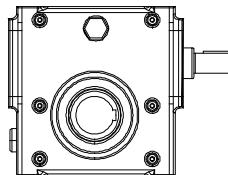
Series B right angle gearmotors and reducers provide a very compact solution to meet the demands of today's industrial drive requirements. Our over 70 years of experience in design and manufacturing has resulted in a range of right angle products offering high load carrying capacity, high efficiency, quiet running and reliability with lasting performance.

Single & Double Reduction Units

Series B is offered in unit sizes 02, 03, 04, 05, 06, 08, 09, 10 and 11 based on a single universal gear case for each size, giving a high degree of common parts and interchangeability. Units can be mounted in all mounting positions and provide a choice of shaft arrangements for either Motor Ready or reducer versions. Motors can be close coupled via a motor connection system offering power coverage up to 20 HP.

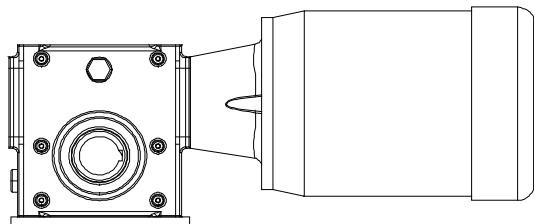
All units are designed with hollow output shaft as standard, solid output shafts can be fitted allowing hand of assembly to be changed without dismantling the unit. Double extended output shafts are also available.

Series B offers a choice of 10 standard ratios from 5/1 to 60/1 in Single Reduction units and 15 standard ratios from 100/1 to 3600/1 in Double Reduction units. All units are lubricated for life to reduce maintenance to a minimum.



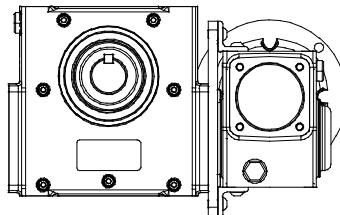
Standard Single Reduction Units

B	0	5	1	1	1	5	-	W	R	A	-	1	-	-
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---



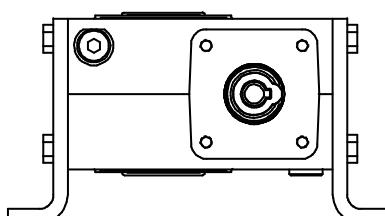
Motor Ready Units with Horizontal Base

B	0	4	1	1	2	0	.	B	A	A	T	1	-	1
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---



Motor Ready Double Reduction Unit

B	0	4	2	1	2	0	.	W	A	A	T	1	1	-
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

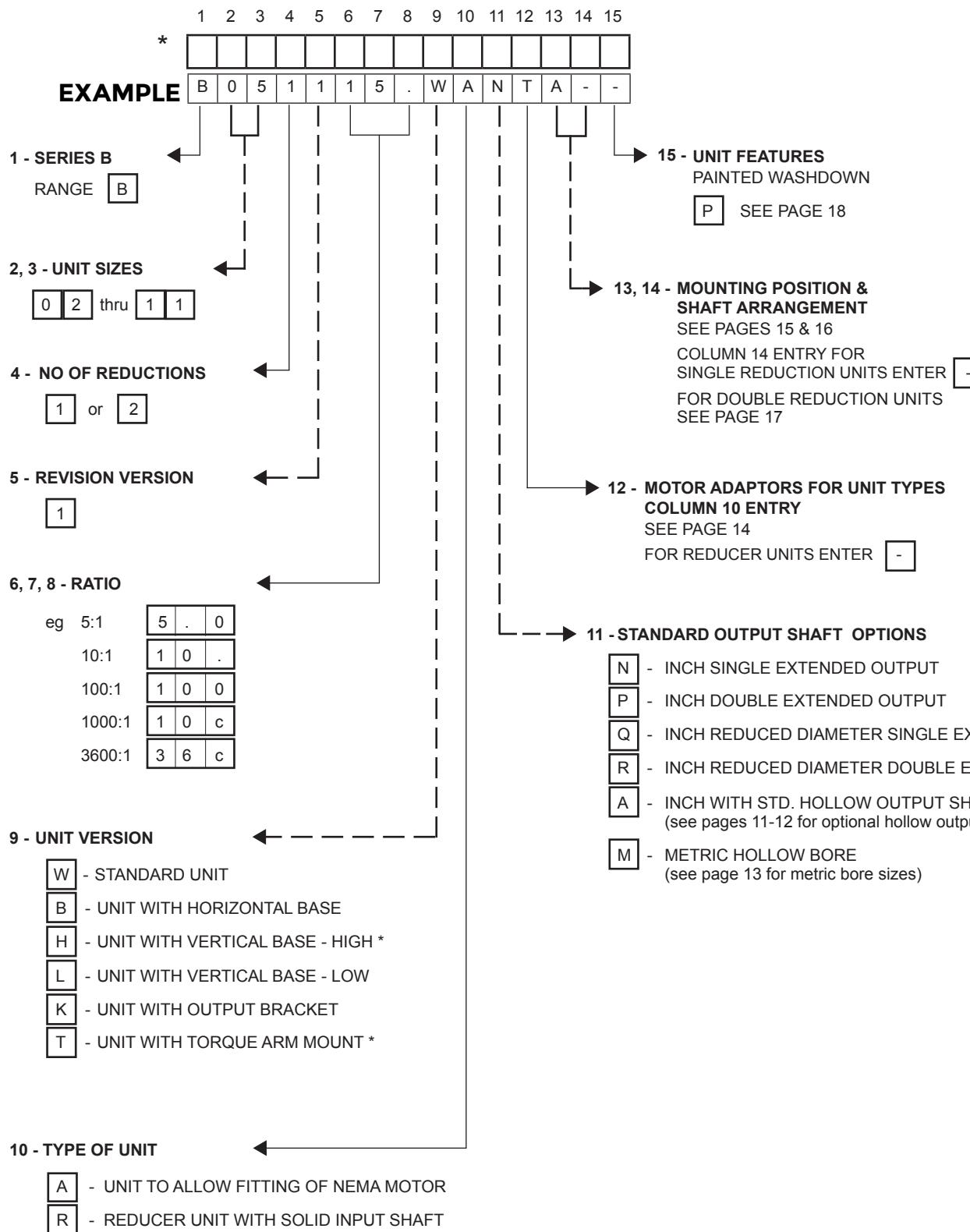


Units with Vertical Base

B	0	8	1	1	3	0	.	L	R	A	-	A	-	-
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

* Typical unit designations.

As improvements in design are being made continually this specification is not to be regarded as binding in detail and drawings and capacities are subject to alteration without notice. Certified drawings will be sent on request.



For IEC Motor applications contact Cone Drive

* Option not stocked; may require additional lead time

15 - UNIT FEATURES
PAINTED WASHDOWN
P SEE PAGE 18

13, 14 - MOUNTING POSITION & SHAFT ARRANGEMENT
SEE PAGES 15 & 16
COLUMN 14 ENTRY FOR SINGLE REDUCTION UNITS ENTER **-**
FOR DOUBLE REDUCTION UNITS SEE PAGE 17

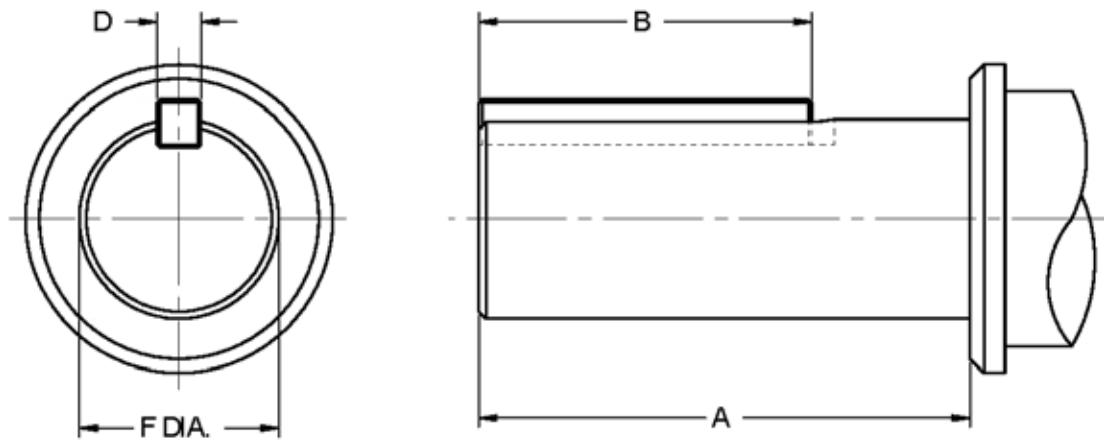
12 - MOTOR ADAPTORS FOR UNIT TYPES
COLUMN 10 ENTRY
SEE PAGE 14
FOR REDUCER UNITS ENTER **-**

11 - STANDARD OUTPUT SHAFT OPTIONS

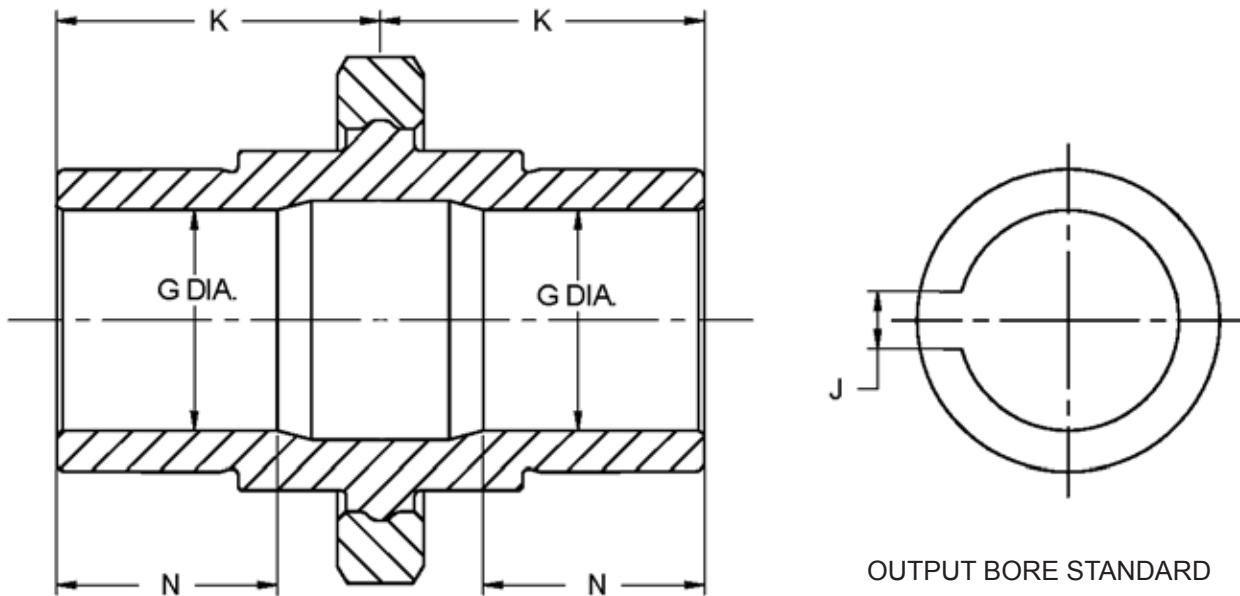
N	- INCH SINGLE EXTENDED OUTPUT
P	- INCH DOUBLE EXTENDED OUTPUT
Q	- INCH REDUCED DIAMETER SINGLE EXT OUTPUT
R	- INCH REDUCED DIAMETER DOUBLE EXT OUTPUT
A	- INCH WITH STD. HOLLOW OUTPUT SHAFT (see pages 11-12 for optional hollow output shaft)
M	- METRIC HOLLOW BORE (see page 13 for metric bore sizes)

**COLUMN 11 ENTRY**

Inch Series Shafts



Unit Size	Type of Output Shaft	Column 11 Entry		A	B	D (Key)	F Dia.
		Single Extended	Double Extended				
B02	Standard Inch (in)	N	P	1.88	1.00	3/16 X 3/16	0.7495 ± 0.0005
	Reduced Dia. (in)	Q	R	1.88	1.00	3/16 X 3/16	0.6245 ± 0.0005
B03	Standard Inch (in)	N	P	1.99	1.13	3/16 X 3/16	0.7495 ± 0.0005
B04	Standard Inch (in)	N	P	1.97	1.25	1/4 X 1/4	0.9995 ± 0.0005
	Reduced Dia. (in)	Q	R	1.97	1.25	3/16 X 3/16	0.8745 ± 0.0005
B05	Standard Inch (in)	N	P	2.39	1.50	1/4 X 1/4	1.1245 ± 0.0005
	Reduced Dia. (in)	Q	R	2.39	1.50	1/4 X 1/4	0.9995 ± 0.0005
B06	Standard Inch (in)	N	P	2.77	1.88	1/4 X 1/4	1.1245 ± 0.0005
B08	Standard Inch (in)	N	P	2.68	1.94	3/8 X 3/8	1.4995 ± 0.0005
	Reduced Dia. (in)	Q	R	2.68	1.94	1/4 X 1/4	1.1245 ± 0.0005
B09	Standard Inch (in)	N	P	3.80	2.00	3/8 X 3/8	1.4995 ± 0.0005
	Reduced Dia. (in)	Q	R	3.80	2.00	1/4 X 1/4	1.2495 ± 0.0005
B10	Standard Inch (in)	N	P	3.83	2.25	3/8 X 3/8	1.4995 ± 0.0005
	Reduced Dia. (in)	Q	R	3.83	2.25	5/16 X 5/16	1.3745 ± 0.0005
B11	Standard Inch (in)	N	P	4.15	2.63	1/2 X 1/2	1.8745 ± 0.0005
	Reduced Dia. (in)	Q	R	4.15	2.63	3/8 X 3/8	1.6245 ± 0.0005

COLUMN 11 ENTRY

OUTPUT BORE STANDARD

Unit Size	Type of Output Bore	Column 11 Entry	G Dia.	J (Keyway)	K	N
B02	Standard Inch (in)	A	1.0005 ± 0.0005	1/4 X 1/8	1.928	1.1
B03	Standard Inch (in)	A	1.0005 ± 0.0005	1/4 X 1/8	2.124	1.1
B04	Standard Inch (in)	A	1.4380 ± 0.0005	3/8 X 3/16	2.146	1.4
B05	Standard Inch (in)	A	1.4380 ± 0.001	3/8 X 3/16	2.106	1.4
B06	Standard Inch (in)	A	1.4385 ± 0.0005	3/8 X 3/16	2.126	1.4
B08	Standard Inch (in)	A	1.9380 ± 0.0005	1/2 X 1/4	2.717	1.9
B09	Standard Inch (in)	A	2.1880 ± 0.0005	1/2 X 1/4	2.717	2.2
B10	Standard Inch (in)	A	2.1880 ± 0.0005	1/2 X 1/4	2.992	2.2
B11	Standard Inch (in)	A	2.9380 ± 0.0005	3/4 X 3/8	3.327	2.9

Optional inch bores available with additional bushing kits. Refer to following page for detail.

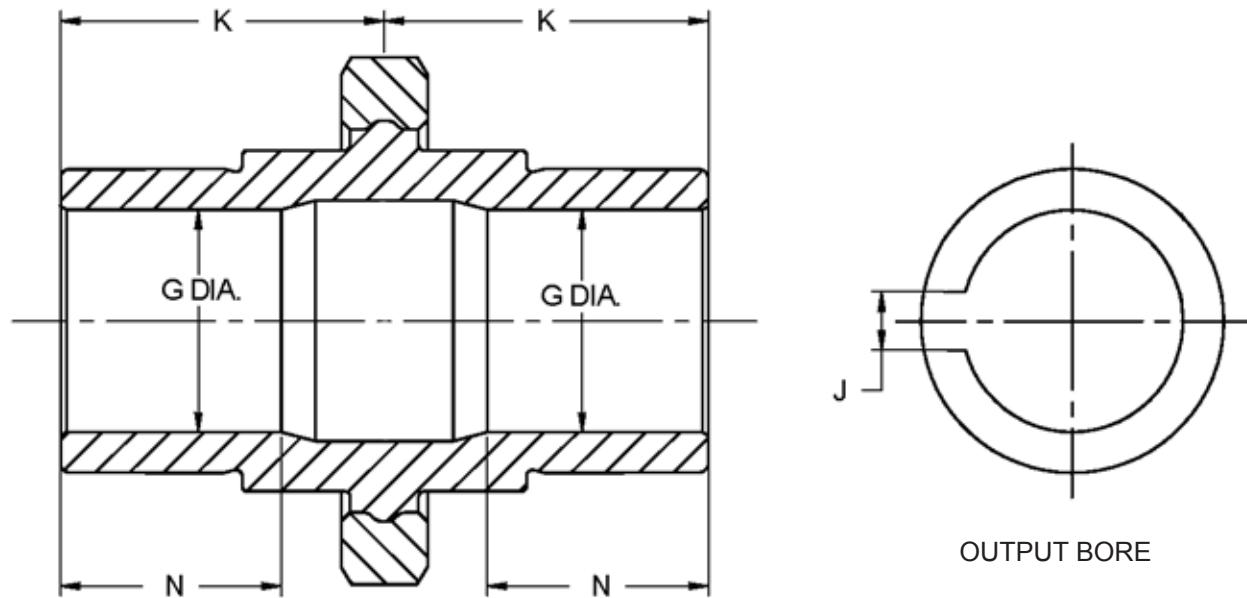


COLUMN 11 ENTRY

Bore Diameter	UNIT SIZE								
	B02	B03	B04	B05	B06	B08	B09	B10	B11
0.6255 ± 0.0005	E	E							
0.8755 ± 0.0005	--	F	E						
1.0005 ± 0.0005	A	A	F	E	E				
1.1255 ± 0.0005			G	F	F	E			
1.1880 ± 0.0005			--	G	G	--			
1.2505 ± 0.0005			J	J	J	--			
1.4385 ± 0.0005			A	A	A	J	E	E	E
1.7505 ± 0.0005						--	F	F	--
1.9380 ± 0.0005						A	G	G	--
2.1880 ± 0.0005							A	A	G
2.4380 ± 0.0005									J
2.9380 ± 0.0005									A

COLUMN 11 ENTRY

Optional Metric Bore



Unit Size	Type of Output Bore	Column 11 Entry	G Dia.	J (Keyway)	K	N
B02	Standard metric (mm)	M	20 + 0.021	6 X 2.8	49.0	29.0
B03	Standard metric (mm)	M	25 + 0.021	8 X 3.3	54.0	29.0
B04	Standard metric (mm)	M	35 + 0.025	10 X 3.3	54.5	36.5
B05	Standard metric (mm)	M	35 + 0.025	10 X 3.3	53.5	36.5
B06	Standard metric (mm)	M	35 + 0.025	10 X 3.3	54.0	36.5
B08	Standard metric (mm)	M	50 + 0.025	14 X 3.8	69.0	49.0
B09	Standard metric (mm)	M	55 + 0.030	16 X 4.3	69.0	55.6
B10	Standard metric (mm)	M	55 + 0.030	16 X 4.3	76.0	55.6
B11	Standard metric (mm)	M	75 + 0.030	20 X 4.9	84.5	74.6

**COLUMN 12 ENTRY**

Nema C Face Motor Adaptor Kits

Single Stage Units

Motor Frame	UNIT SIZE								
	B0211	B0311	B0411	B0511	B0611	B0811	B0911	B1011	B1111
56C	U	T	T	T	T	Q	Q	Q	Q
143TC/145TC	W	V	V	V	V	R	R	R	R
182TC/184TC		X	X	X	X	T	T	T	T
213TC/215TC						V	V	V	V

Double Reduction Units

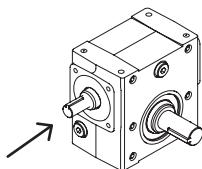
UNIT SIZE						
B0521	B0621	B0821	B0921	B1021	B1121	
U	U	T	T	T	T	
W	W	V	V	V	V	
		X	X	X	X	

COLUMN 13 ENTRY

NOTE #1: "FIRST ANGLE" PROJECTION USED IN VIEWS BELOW

NOTE #2: SINCE SERIES B IS A FULLY SEALED UNIT. THE CONFIGURATIONS SHOWN
MAY BE MOUNTED IN ANY ORIENTATION.

NOTE #3: HAND OF ASSEMBLY VIEWS SHOWN LOOKING INTO HIGH SPEED INPUT SHAFT

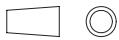


COLUMN 13 ENTRY		Std Unit With Hollow Output Shaft	Std Unit With Solid Output Shaft	Base Mount With Hollow Output Shaft	Base Mount With Solid Output Shaft	Output Bracket With Hollow Shaft	Output Bracket with Single Ext. Solid Shaft	Vertical Base With Hollow Shaft	Vertical Base With Single Ext. Solid Shaft
1	A								
A	B								
B	C								
C	D								
D	E								
2	F								
E									
F									



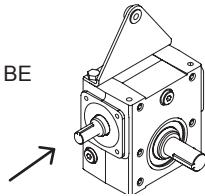
COLUMN 13 ENTRY

NOTE #1: "FIRST ANGLE" PROJECTION USED IN VIEWS BELOW

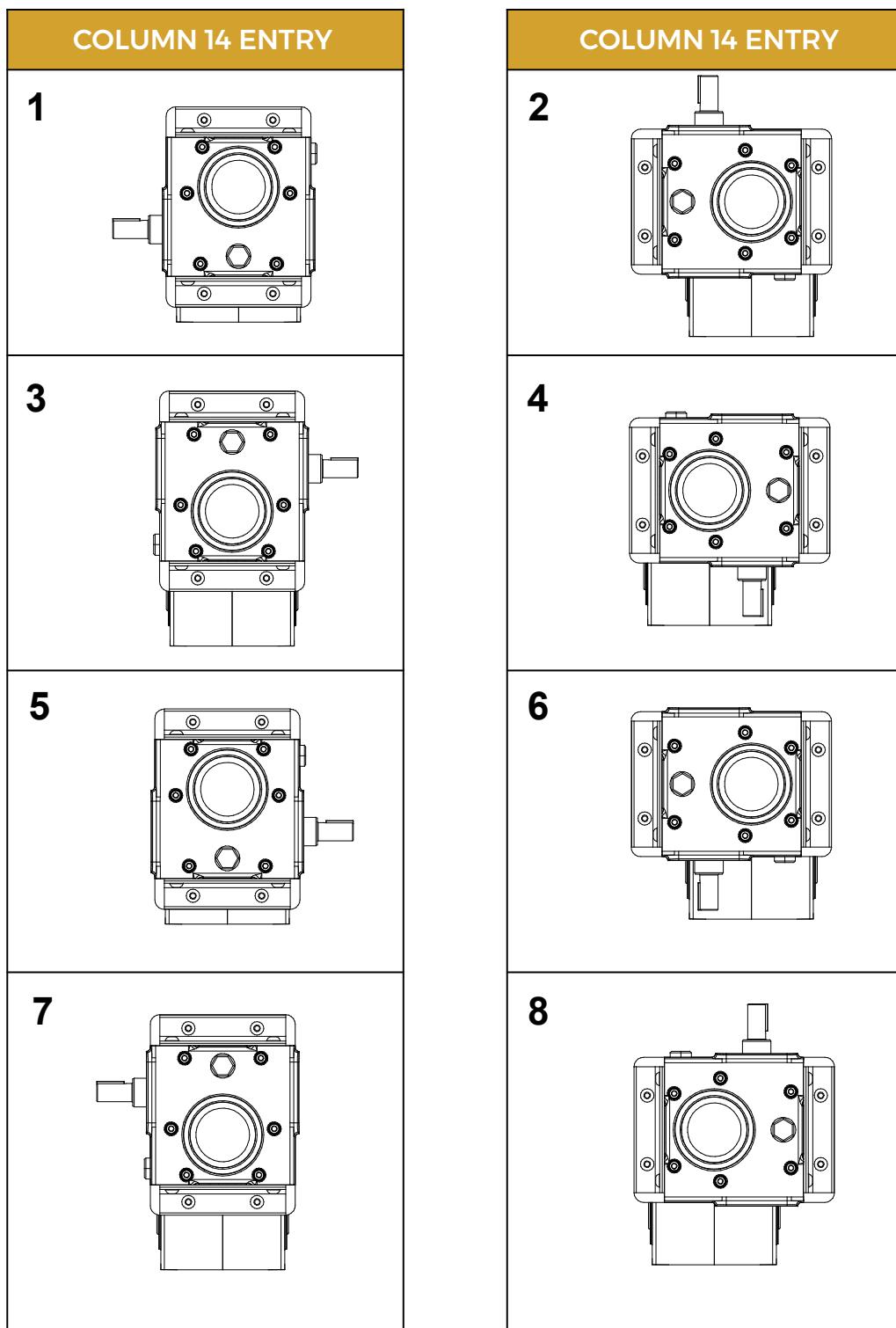


NOTE #2: SINCE SERIES B IS A FULLY SEALED UNIT THE CONFIGURATIONS SHOWN MAY BE MOUNTED IN ANY ORIENTATION.

NOTE #3: HAND OF ASSEMBLY VIEWS SHOWN LOOKING INTO SPEED (INPUT) SHAFT



COLUMN 13 ENTRY	Torque Arm With Hollow Shaft	Torque Arm With Dbl. Ext. Solid Shaft	Torque Arm With Single Ext. Solid Shaft	
J				
K				
L				
M				
N				
P				
Q				
R				

COLUMN 14 ENTRY

PRIMARY UNIT POSITION RELATIVE TO THE SECONDARY UNIT

MOUNTING POSITIONS 4 AND 6 NOT AVAILABLE FOR MOTOR READY UNITS

FOR SINGLE REDUCTION ENTER

**GEAR UNIT FEATURES - COLUMN 15 ENTRY**

Column 15 Entry	Double Extended Input*	Painted Option	Light Washdown Duty Option	Washdown Duty Option	Special Features
-					
G	●				
H	●	●			
P		●			
S				●	
U			●		
Z					●

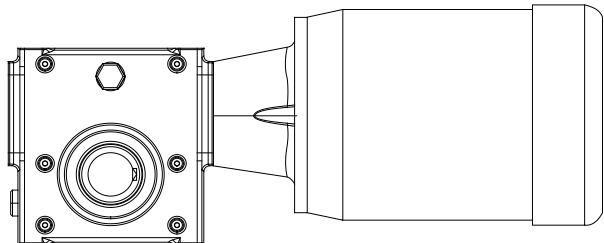
* Solid shaft extension to standard proportions on non drive end of input

SPECIAL UNIT FEATURES - WASHDOWN

Available for all single reduction motor ready reducers, with or without bases.

STANDARD FEATURES

- Vent - free eliminating contamination of reducer
- Smooth flat exterior is easily washable

**PAINTED OPTION - Column 15 Entry H, P**

- USDA approved white epoxy paint

LIGHT WASHDOWN DUTY OPTION - Column 15 Entry U

- Exposed portions of hollow output shaft plated for protection (bore not plated)
- Unused, tapped holes plugged
- Stainless steel fasteners
- Stainless steel solid output shafts
 - Excludes reduced-diameter shaft extension options
 - Also excludes reduced-diameter output bushing options (bushing made from standard steel)
- Not painted

WASHDOWN DUTY OPTION - Column 15 Entry S,

- USDA approved white epoxy paint
- Exposed portions of hollow output shaft plated for protection (bore not plated)
- Unused, tapped holes plugged to simplify washdown
- Stainless steel fasteners

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

Two types of Service Factor must be considered: Mechanical Service Factor Fm and Thermal Service Factor Ft

MECHANICAL RATINGS & SERVICE FACTOR Fm

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

Catalog ratings allow for an 100% overload at starting, braking or momentarily during operation for a total of once per hour for each hour of operation.

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

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

Load characteristics for a wide range of applications are detailed on page 20, which are used in deciding the appropriate Service Factor Fm from Table 1.

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

For units subject to frequent stop/start overloads in excess of 10 times per day, contact our Application Engineers.

For applications where high inertia loads are involved e.g. crane travel drives, slewing motion etc., unit selection should be referred to our Application Engineers.

THERMAL RATINGS & SERVICE FACTORS

The Thermal ratings are a measure of the gear units ability to dissipate heat. If they are exceeded the lubricant may overheat and breakdown, resulting in gear failure.

Catalog thermal limitations are based on the unit operating continuously in an environment with an ambient temperature equal to 68°F. The thermal rating is affected by ambient temperature. To account for these varying conditions, the service factors given in table 2 should be applied to the catalog thermal ratings as follows:

$$P_{therm} = (Pt \times Ft \times \text{efficiency}) / 100$$

Pt = Catalog input power thermal rating (HP)

P_{therm} = Allowable output power thermal rating (HP)

Ft = Service factor for ambient temperature
(see Table 2)

TABLE 1 / Mechanical service factor Fm

Prime Mover	Duration of Service hrs per day	Load Classification-Driven Machine		
		Uniform	Moderate Shock	Heavy Shock
Electric motor, steam turbine or hydraulic motor	Under 3	0.80	1.00	1.50
	3 to 10	1.00	1.25	1.75
	Over 10	1.25	1.50	2.00
Multi-cylinder internal combustion engine	Under 3	1.00	1.25	1.75
	3 to 10	1.25	1.50	2.00
	Over 10	1.50	1.75	2.25
Single cylinder internal combustion engine	Under 3	1.25	1.50	2.00
	3 to 10	1.50	1.75	2.25
	Over 10	1.75	2.00	2.50

TABLE 2 / Thermal service factor Ft

Ambient Temperature °F	-20	0	20	40	60	68	80	100	120
Factor Ft	1.64	1.50	1.36	1.22	1.07	1.00	0.92	0.77	0.63

GENERAL

When selecting units, use actual load required to be transmitted, not rating of prime mover. Wherever possible use required output torque (lb-in). Catalog also gives input power rating (HP), being the power required from prime mover allowing for gear unit efficiency. When units transmit less than rated output torque, required input power may be reduced pro-rata to decide capacity of prime mover.



LOAD CLASSIFICATION BY APPLICATION

TABLE 3

U = Uniform load

M = Moderate shock load

H = Heavy shock load

† = Contact our Application Engineers

Driven Machine	Type of load
Agitators	
pure liquids	U
liquids and solids	M
liquids-variable density	M
Blowers	
centrifugal	U
lobe	M
vane	U
Brewing and distilling	
bottling machinery	M
brew kettles-continuous duty	M
cookers-continuous duty	M
mash tubs-continuous duty	M
scale hopper-frequent starts	M
Can filling machines	M
Cane knives	M
Car dumpers	H
Car pullers	M
Clarifiers	U
Classifiers	M
Clay working machinery	
brick press	H
briquette machine	H
clay working machinery	M
pug mill	M
Compressors	
centrifugal	U
lobe	M
reciprocating	
multi-cylinder	M
single cylinder	H
Conveyors-uniformly loaded or fed	
apron	U
assembly	U
belt	U
bucket	U
chain	U
flight	U
oven	U
screw	U
Conveyors-heavy duty not uniformly fed	
apron	M
assembly	M
belt	M
bucket	M
chain	M
flight	M
live roll	
oven	M
reciprocating	H
screw	M
shaker	H
Cranes	
main hoists	U
bridge travel	
trolley travel	†
Crusher	
ore	H
stone	H
sugar	H
Dredges	
cable reels	M

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

EXAMPLE APPLICATION DETAILS

Absorbed power of driven machine = 0.375 HP
 Output speed of gearbox or Input speed of machine = 30 RPM
 Application = Uniformly loaded belt conveyor

Duration of service (hours per day) = 24 hrs
 Motor speed = 3 phase electric motor, 4 pole, 1750 RPM
 Ambient temperature = 68°F

1 DETERMINE RATIO OF GEARBOX REQUIRED

$$\frac{\text{Motor speed}}{\text{Gearbox output speed}} = \frac{1750}{30} = 58.33$$

Refer to rating tables (pages 61 - 64) for nearest standard ratio = 60:1

3 DETERMINE REQUIRED MECHANICAL OUTPUT TORQUE CAPACITY OF GEARBOX

$$\begin{aligned} \text{Absorbed output torque} &= \frac{\text{Absorbed power} \times 63025}{\text{Gearbox output speed}} \\ 0.375 \times 63025 &= 788 \text{ lb.in} \\ 30 & \end{aligned}$$

$$\begin{aligned} \text{Required mechanical output torque} &= \frac{\text{Absorbed output torque}}{\text{Fm}} \\ 788 \times 1.25 &= 985 \text{ lb.in} \end{aligned}$$

*NOTE: Reducer efficiency not used.
 Generated torque will vary based on efficiency

2 DETERMINE MECHANICAL SERVICE FACTOR (F_m)

Refer to Load Classification by Application, table 3, page 20

Application = Uniformly fed, belt conveyor

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

U = Uniform loading

Refer to mechanical service factor (F_m), table 1, page 19
 Duration of service (hours per day) = 24 hrs

Prime Mover	Duration of Service-hrs per day	Load Classification-drive	
		Uniform	Moderate Shock
Electric motor, steam turbine or hydraulic motor	Under 3	0.80	1.00
	3 to 10	1.00	1.25
	Over 10	1.25	1.50

Therefore mechanical service factor (F_m) = 1.25

4 DETERMINE SIZE OF GEAR BOX REQUIRED

Refer to ratings tables, Input speed = 1750RPM.

RATIO	OUTPUT SPEED	CAPACITY	SIZE OF UNIT								
			B02	B03	B04	B05	B06	B08	B09	B10	B11
60	29	Input Power HP (mech)	0.29	0.38	0.50	0.64	0.98	1.24	1.70	2.05	2.52
		Input Power HP (therm)	0.29	0.38	0.50	0.64	0.98	1.24	1.70	2.05	2.52
		Output Torque lb-in (mech)	272	404	570	782	1300	1700	2430	2990	3740
		Efficiency	43	49	53	57	61	64	66	67	69

Mechanical output torque capacity must be equal or more than required mechanical output torque capacity of gear box. Required mechanical output torque capacity = 985 lb-in. At a 60:1 ratio, nominal output speed 29 an B06 unit has a mechanical output torque capacity of 1300 lb-in. Therefore the unit is acceptable.

5 DETERMINE REQUIRED OUTPUT TORQUE & POWER

(Based on known reducer running efficiency)

Refer to ratings tables to determine gear unit efficiency

RATIO	OUTPUT SPEED	CAPACITY	SIZE OF UNIT								
			B02	B03	B04	B05	B06	B08	B09	B10	B11
60	29	Input Power HP (mech)	0.29	0.38	0.50	0.64	0.98	1.24	1.70	2.05	2.52
		Input Power HP (therm)	0.29	0.38	0.50	0.64	0.98	1.24	1.70	2.05	2.52
		Output Torque lb-in (mech)	272	404	570	782	1300	1700	2430	2990	3740
		Efficiency	43	49	53	57	61	64	66	67	69

Running efficiency of B06 60:1 at 1750 RPM = 61%

$$\text{Output Torque} = \frac{63025 \times \text{Input Power} \times \text{Ratio} \times \text{Efficiency}}{\text{Input RPM}}$$

$$\text{Output Torque} = \frac{63025 \times 0.375 \times 60 \times 0.61}{1750}$$

Output Torque = 494 Lb. in (This is the actual output torque produced with 0.375 Hp input power.)



SELECTION PROCEDURE

If the application requires greater output torque then the input power must be increased, in which case the input power rating of the reducer must be checked.

$$\text{Required motor power} = \frac{\text{Input power}}{\text{Efficiency}} \times 100 = \frac{0.375}{61} \times 100 = 0.615 \text{ HP}$$

Next largest motor is 0.75 Hp (The B0611 60:1 is rated for 0.98 Hp and is acceptable)

6 DETERMINE THERMAL SERVICE FACTOR (Ft)

Refer to page 19

Ambient temperature = 68°F

Ambient temperature °F	-20	0	20	40	60	68
Factor Ft	1.64	1.50	1.36	1.22	1.07	1.0

$$Ft = 1.0$$

7 CHECK THERMAL CAPACITY OF GEARBOX SELECTED

DETERMINE THERMAL INPUT POWER CAPACITY (Pt)

Refer to ratings tables

RATIO	OUTPUT SPEED	CAPACITY	SIZE OF UNIT								
			B0211	B0311	B0411	B0511	B0611	B0811	B0911	B1011	B1111
60	29	Input Power HP (mech)	0.29	0.38	0.50	0.64	0.98	1.24	1.70	2.05	2.52
		Input Power HP (therm)	0.42	0.55	0.81	0.92	1.31	1.79	2.13	2.70	2.88
		Output Torque lb-in (mech)	272	404	570	782	1305	1699	2427	2986	3739
		Efficiency	0.43	0.49	0.53	0.57	0.61	0.64	0.66	0.67	0.69

$$Pt = 1.31 \text{ HP}$$

8 DETERMINE ALLOWABLE OUTPUT POWER THERMAL RATING (Ptherm)

$$\begin{aligned} P_{therm} &= \frac{Pt \times Ft \times \text{efficiency}}{100} \\ &= \frac{0.98 \times 1.0 \times 61}{100} \\ &= 0.60 \text{ HP} \end{aligned}$$

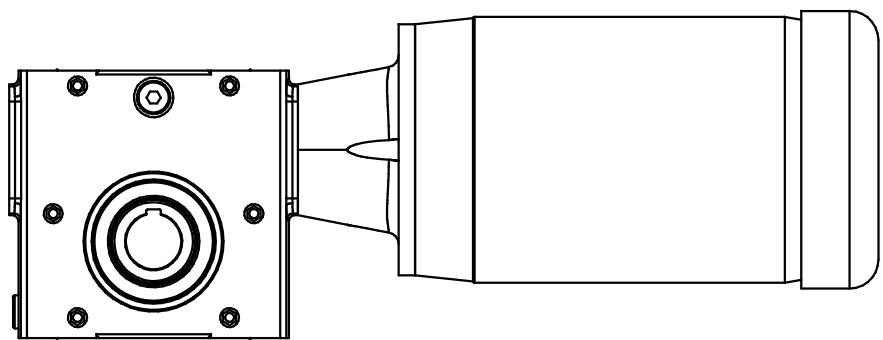
Thermal output power capacity (Ptherm) must be equal or more than absorbed output power to drive machine

Absorbed output power = 0.375 HP Ptherm = 0.60 HP

Therefore unit is acceptable.

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

- a) Inertia of the Driven Machine (Referred to motor speed) >10 Inertia of Gear Unit plus Motor
- b) Ambient temperature is above 120°F



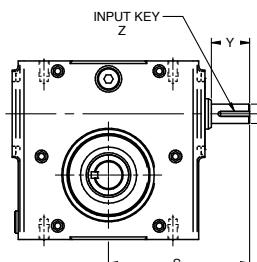
SERIES B

DIMENSIONAL DATA

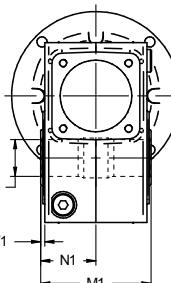
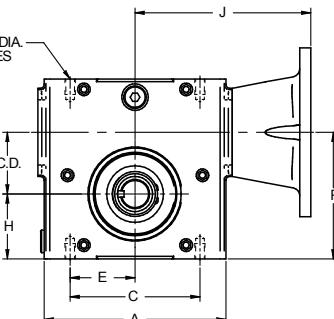
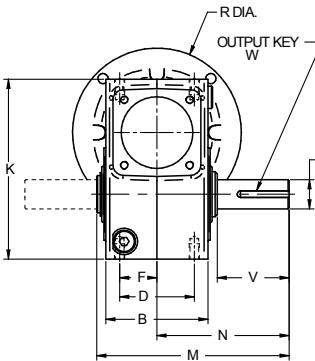


STANDARD UNIT

REDUCER



MOTORIZED

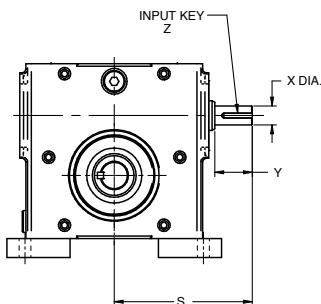


Case Size	C.D.	A	B	C	D	E	F	H	K	M	M1	N	N1	P	T Dia.
B02	1.33	4.33	2.76	3.25	2.00	1.63	1.00	1.72	4.66	6.10	3.85	4.00	1.93	3.05	M8 x 0.47
B03	1.54	5.23	3.94	4.19	2.75	2.10	1.38	1.91	5.35	6.61	4.25	4.31	2.12	3.45	M8 x 0.47
B04	1.75	5.98	3.94	4.19	2.75	2.10	1.38	2.06	5.75	6.65	4.29	4.31	2.15	3.81	M8 x 0.47
B05	1.97	6.00	3.94	5.00	2.88	2.50	1.44	2.28	6.38	7.00	4.21	4.69	2.11	4.25	M10 x 0.59
B06	2.38	7.00	3.94	5.00	2.88	2.50	1.44	2.50	6.93	7.41	4.25	5.09	2.13	4.88	M10 x 0.59
B08	2.62	7.50	5.12	6.38	3.38	3.19	1.69	2.94	7.99	8.58	5.43	5.63	2.72	5.57	M10 x 0.59
B09	3.00	9.00	5.12	7.00	4.00	3.50	2.00	3.25	8.88	9.70	5.43	6.75	2.72	6.25	M12 x 0.71
B10	3.25	9.05	5.67	7.50	4.00	3.75	2.00	3.50	9.38	10.28	5.98	7.06	2.99	6.75	M12 x 0.71
B11	3.54	9.50	5.12	7.50	4.00	3.75	2.00	3.39	9.84	11.34	6.65	7.75	3.33	6.93	M16 x 0.87

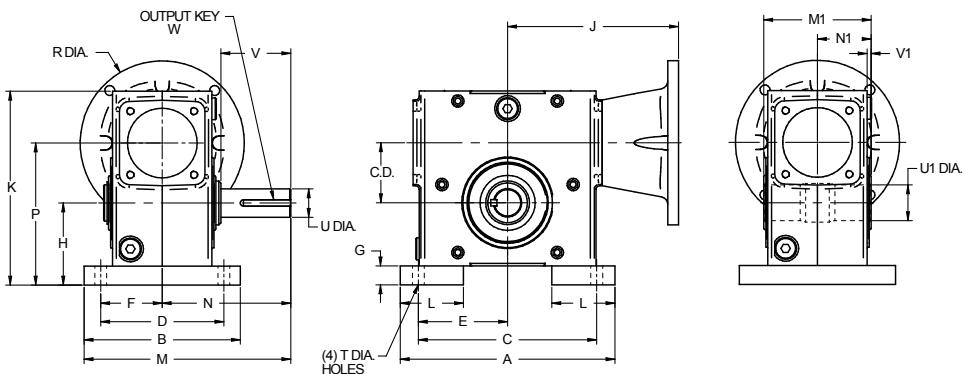
	REDUCER					MOTORIZED							OUTPUT SHAFT							W-KEY	
	INPUT SHAFT		Z-KEY			56C/ 143/145TC		182/184TC		213/215TC		OUTPUT SHAFT			W-KEY						
Case Size	C.D.	X Dia.	Y	SQ.	LC	S	J	R Dia.	J	R Dia.	J	R Dia.	U Dia.	U1 Dia.	V	V1	SQ.	LC	WT (LBS)		
B02	1.33	0.625	1.31	3/16	1.00	4.22	4.74	6.50	NA	NA	NA	NA	0.750	1.000	1.88	0.12	3/16	1.00	9		
B03	1.54	0.750	1.48	3/16	1.13	4.87	5.92	6.50	6.16	9.00	NA	NA	0.750	1.000	1.99	0.08	3/16	1.13	14		
B04	1.75	0.750	1.48	3/16	1.13	5.13	6.18	6.50	6.42	9.00	NA	NA	1.000	1.438	1.97	0.08	1/4	1.25	16		
B05	1.97	0.750	1.48	3/16	1.13	5.20	6.34	6.50	6.58	9.00	NA	NA	1.125	1.438	2.39	0.08	1/4	1.50	18		
B06	2.38	0.750	1.48	3/16	1.13	5.47	6.77	6.50	7.01	9.00	NA	NA	1.125	1.438	2.77	0.08	1/4	1.88	23		
B08	2.62	1.188	2.69	1/4	2.25	7.23	7.24	6.50	7.59	9.00	7.59	9.00	1.500	1.938	2.68	0.08	3/8	1.97	40		
B09	3.00	1.188	2.69	1/4	2.25	7.63	7.64	6.50	7.98	9.00	7.98	9.00	1.500	2.188	3.80	0.08	3/8	2.00	47		
B10	3.25	1.188	2.69	1/4	2.25	7.64	7.72	6.50	8.06	9.00	8.06	9.00	1.500	2.188	3.83	0.08	3/8	2.25	50		
B11	3.54	1.188	2.95	1/4	2.62	8.39	8.15	6.50	8.50	9.00	8.50	9.00	1.875	2.938	4.15	0.10	1/2	2.63	70		

UNIT WITH HORIZONTAL BASE (Over Driven)

REDUCER



MOTORIZED



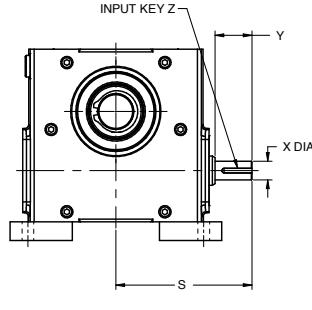
Case Size	C.D.	A	B	C	D	E	F	G	H	K	L	M	M1	N	N1	P	T Dia.
B02	1.33	5.38	4.19	4.380	3.310	2.190	1.655	0.53	2.25	5.19	1.50	6.09	3.85	4.00	1.93	3.58	11/32
B03	1.54	6.44	5.44	5.250	4.312	2.625	2.156	0.59	2.50	5.94	1.50	7.03	4.25	4.31	2.12	4.04	13/32
B04	1.75	7.00	5.69	5.750	4.500	2.875	2.250	0.69	2.75	6.44	2.00	7.16	4.29	4.31	2.15	4.50	13/32
B05	1.97	7.75	5.94	6.380	4.690	3.190	2.345	0.72	3.00	7.10	2.00	7.66	4.21	4.69	2.11	4.97	15/32
B06	2.38	8.50	6.19	7.063	4.875	3.532	2.438	0.75	3.25	7.68	2.50	8.19	4.25	5.09	2.13	5.63	15/32
B08	2.62	9.63	6.66	8.000	5.250	4.000	2.625	0.75	3.69	8.74	2.50	8.96	5.43	5.63	2.72	6.31	17/32
B09	3.00	10.00	7.50	8.440	5.880	4.220	2.940	0.75	4.00	9.63	2.00	10.50	5.43	6.75	2.72	7.00	17/32
B10	3.25	11.19	7.66	9.500	6.125	4.750	3.063	0.88	4.38	10.25	2.50	10.89	5.98	7.06	2.99	7.63	17/32
B11	3.54	11.08	7.71	9.500	6.120	4.750	3.060	1.61	5.00	11.45	2.50	11.61	6.65	7.75	3.33	8.54	9/16

Case Size	REDUCER				MOTORIZED								OUTPUT SHAFT				W-KEY		
	INPUT SHAFT		Z-KEY		56C/ 143/145TC				182/184TC		213/215TC		OUTPUT SHAFT				W-KEY		
Case Size	C.D.	X Dia.	Y	SQ.	LC	S	J	R Dia.	J	R Dia.	J	R Dia.	U Dia.	U1 Dia.	V	V1	SQ.	LC	WT (LBS)
B02	1.33	0.625	1.31	3/16	1.00	4.22	4.74	6.50	NA	NA	NA	NA	0.750	1.000	1.88	0.12	3/16	1.00	10
B03	1.54	0.750	1.48	3/16	1.13	4.87	5.92	6.50	6.16	9.00	NA	NA	0.750	1.000	1.99	0.08	3/16	1.13	15
B04	1.75	0.750	1.48	3/16	1.13	5.13	6.18	6.50	6.42	9.00	NA	NA	1.000	1.438	1.97	0.08	1/4	1.25	18
B05	1.97	0.750	1.48	3/16	1.13	5.20	6.34	6.50	6.58	9.00	NA	NA	1.125	1.438	2.39	0.08	1/4	1.50	20
B06	2.38	0.750	1.48	3/16	1.13	5.47	6.77	6.50	7.01	9.00	NA	NA	1.125	1.438	2.77	0.08	1/4	1.88	25
B08	2.62	1.188	2.69	1/4	2.25	7.23	7.24	6.50	7.59	9.00	7.59	9.00	1.500	1.938	2.68	0.08	3/8	1.97	43
B09	3.00	1.188	2.69	1/4	2.25	7.63	7.64	6.50	7.98	9.00	7.98	9.00	1.500	2.188	3.80	0.08	3/8	2.00	50
B10	3.25	1.188	2.69	1/4	2.25	7.64	7.72	6.50	8.06	9.00	8.06	9.00	1.500	2.188	3.83	0.08	3/8	2.25	54
B11	3.54	1.188	2.95	1/4	2.62	8.39	8.15	6.50	8.50	9.00	8.50	9.00	1.875	2.938	4.15	0.10	1/2	2.63	75

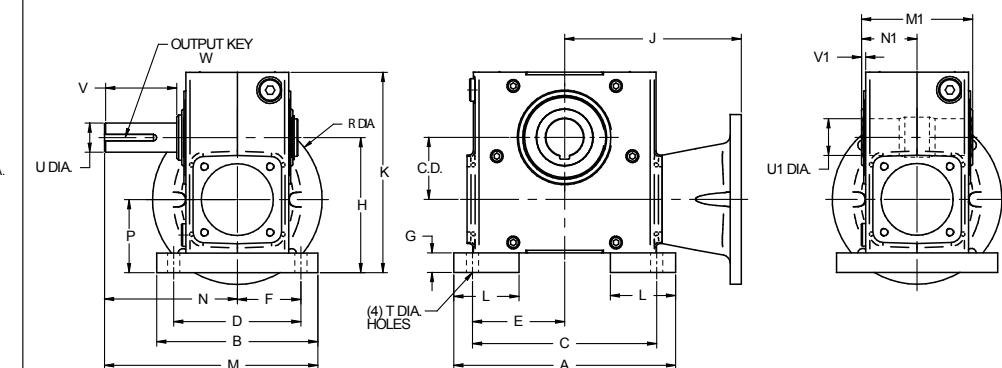


UNIT WITH HORIZONTAL BASE (Under Driven)

REDUCER



MOTORIZED

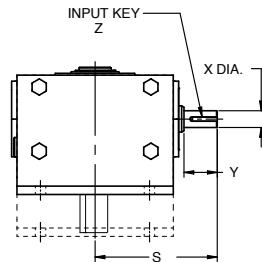


Case Size	C.D.	A	B	C	D	E	F	G	H	K	L	M	M1	N	N1	P	T Dia.
B02	1.33	5.38	4.19	4.380	3.310	2.190	1.655	0.53	3.47	5.19	1.50	6.09	3.85	4.00	1.93	2.14	11/32
B03	1.54	6.44	5.44	5.250	4.312	2.625	2.156	0.59	4.03	5.94	1.50	7.03	4.25	4.31	2.12	2.49	13/32
B04	1.75	7.00	5.69	5.750	4.500	2.875	2.250	0.69	4.38	6.44	2.00	7.16	4.29	4.31	2.15	2.63	13/32
B05	1.97	7.75	5.94	6.380	4.690	3.190	2.345	0.72	4.82	7.10	2.00	7.66	4.21	4.69	2.11	2.85	15/32
B06	2.38	8.50	6.19	7.063	4.875	3.532	2.438	0.75	5.18	7.68	2.50	8.19	4.25	5.09	2.13	2.80	15/32
B08	2.62	9.63	6.66	8.000	5.250	4.000	2.625	0.75	5.80	8.74	2.50	8.96	5.43	5.63	2.72	3.18	17/32
B09	3.00	10.00	7.50	8.440	5.880	4.220	2.940	0.75	6.38	9.63	2.00	10.50	5.43	6.75	2.72	3.38	17/32
B10	3.25	11.19	7.66	9.500	6.125	4.750	3.063	0.88	6.75	10.25	2.50	10.89	5.98	7.06	2.99	3.50	17/32
B11	3.54	11.08	7.71	9.500	6.120	4.750	3.060	1.61	8.07	11.45	2.50	11.61	6.65	7.75	3.33	4.53	9/16

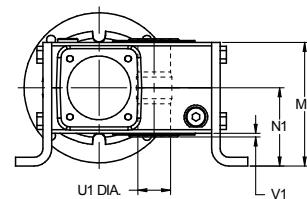
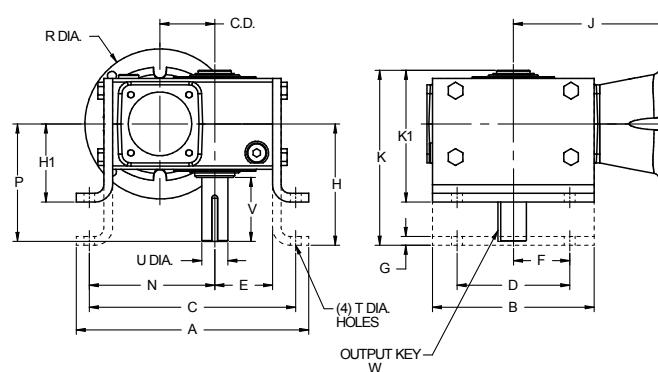
	REDUCER					MOTORIZED													
	INPUT SHAFT		Z-KEY			56C/ 143/145TC		182/184TC		213/215TC		OUTPUT SHAFT				W-KEY			
Case Size	C.D.	X Dia.	Y	SQ.	LG	S	J	R Dia.	J	R Dia.	J	R Dia.	U Dia.	U1 Dia.	V	V1	SQ.	LG	WT (lbs)
B02	1.33	0.625	1.31	3/16	1.00	4.22	4.74	6.50	NA	NA	NA	NA	0.750	1.000	1.88	0.12	3/16	1.00	10
B03	1.54	0.750	1.48	3/16	1.13	4.87	5.92	6.50	6.16	9.00	NA	NA	0.750	1.000	1.99	0.08	3/16	1.13	15
B04	1.75	0.750	1.48	3/16	1.13	5.13	6.18	6.50	6.42	9.00	NA	NA	1.000	1.438	1.97	0.08	1/4	1.25	18
B05	1.97	0.750	1.48	3/16	1.13	5.20	6.34	6.50	6.58	9.00	NA	NA	1.125	1.438	2.39	0.08	1/4	1.50	20
B06	2.38	0.750	1.48	3/16	1.13	5.47	6.77	6.50	7.01	9.00	NA	NA	1.125	1.438	2.77	0.08	1/4	1.88	25
B08	2.62	1.188	2.69	1/4	2.25	7.23	7.24	6.50	7.59	9.00	7.59	9.00	1.500	1.938	2.68	0.08	3/8	1.97	43
B09	3.00	1.188	2.69	1/4	2.25	7.63	7.64	6.50	7.98	9.00	7.98	9.00	1.500	2.188	3.80	0.08	3/8	2.00	50
B10	3.25	1.188	2.69	1/4	2.25	7.64	7.72	6.50	8.06	9.00	8.06	9.00	1.500	2.188	3.83	0.08	3/8	2.25	54
B11	3.54	1.188	2.95	1/4	2.62	8.39	8.15	6.50	8.50	9.00	8.50	9.00	1.875	2.938	4.15	0.10	1/2	2.63	75

UNIT WITH VERTICAL BASE (High & Low)

REDUCER



MOTORIZED



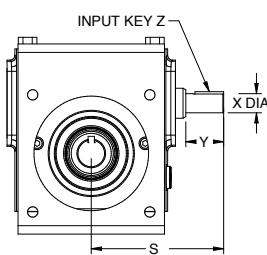
Case Size	C.D.	A	B	C	D	E	F	G	H	H1	K	K1	M1	N	N1	P	T Dia.
B02	1.33	7.09	4.33	6.15	3.25	1.72	1.63	0.25	3.56	2.31	5.66	4.41	3.85	3.69	1.93	4.00	11/32
B03	1.54	8.04	5.23	6.98	4.00	1.91	2.00	0.25	4.38	3.00	6.68	5.30	4.25	4.26	2.12	4.31	13/32
B04	1.75	8.44	5.98	7.38	4.00	2.06	2.00	0.31	4.38	3.00	6.72	5.34	4.29	4.51	2.15	4.31	13/32
B05	1.97	9.50	6.00	8.38	4.88	2.28	2.44	0.38	4.88	3.13	7.19	5.44	4.21	5.10	2.11	4.69	15/32
B06	2.38	10.06	7.00	8.95	4.88	2.50	2.44	0.38	5.25	3.38	7.57	5.70	4.25	5.44	2.13	5.09	15/32
B08	2.62	11.69	7.50	10.13	5.75	2.94	2.88	0.38	5.59	3.63	8.54	6.58	5.43	6.14	2.72	5.63	17/32
B09	3.00	13.25	9.00	11.14	6.00	3.25	3.00	0.38	5.88	3.94	8.83	6.89	5.43	6.76	2.72	6.75	17/32
B10	3.25	13.37	9.05	11.87	6.13	3.50	3.07	0.50	6.25	4.69	9.47	7.91	5.98	7.12	2.99	7.06	17/32
B11	3.54	16.84	9.50	14.88	7.88	3.39	3.94	0.50	7.50	5.00	11.09	8.59	6.65	8.99	3.33	7.75	9/16

	REDUCER					MOTORIZED								OUTPUT SHAFT					W-KEY	
	INPUT SHAFT		Z-KEY			56C/ 143/145TC		182/184TC		213/215TC		OUTPUT SHAFT			W-KEY					
Case Size	C.D.	X Dia.	Y	SQ.	LG	S	J	R Dia.	J	R Dia.	J	R Dia.	U Dia.	U1 Dia.	V	V1	SQ.	LG	WT (lbs)	
B02	1.33	0.625	1.31	3/16	1.00	4.22	4.74	6.50	NA	NA	NA	NA	0.750	1.000	1.88	0.12	3/16	1.00	10	
B03	1.54	0.750	1.48	3/16	1.13	4.87	5.92	6.50	6.16	9.00	NA	NA	0.750	1.000	1.99	0.08	3/16	1.13	15	
B04	1.75	0.750	1.48	3/16	1.13	5.13	6.18	6.50	6.42	9.00	NA	NA	1.000	1.438	1.97	0.08	1/4	1.25	18	
B05	1.97	0.750	1.48	3/16	1.13	5.20	6.34	6.50	6.58	9.00	NA	NA	1.125	1.438	2.39	0.08	1/4	1.50	20	
B06	2.38	0.750	1.48	3/16	1.13	5.47	6.77	6.50	7.01	9.00	NA	NA	1.125	1.438	2.77	0.08	1/4	1.88	25	
B08	2.62	1.188	2.69	1/4	2.25	7.23	7.24	6.50	7.59	9.00	7.59	9.00	1.500	1.938	2.68	0.08	3/8	1.97	44	
B09	3.00	1.188	2.69	1/4	2.25	7.63	7.64	6.50	7.98	9.00	7.98	9.00	1.500	2.188	3.80	0.08	3/8	2.00	51	
B10	3.25	1.188	2.69	1/4	2.25	7.64	7.72	6.50	8.06	9.00	8.06	9.00	1.500	2.188	3.83	0.08	3/8	2.25	55	
B11	3.54	1.188	2.95	1/4	2.62	8.39	8.15	6.50	8.50	9.00	8.50	9.00	1.875	2.938	4.15	0.10	1/2	2.63	76	

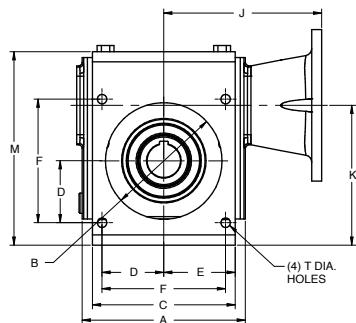
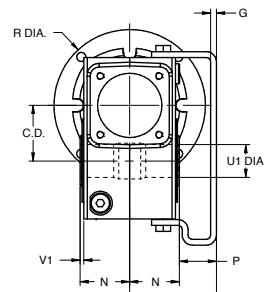
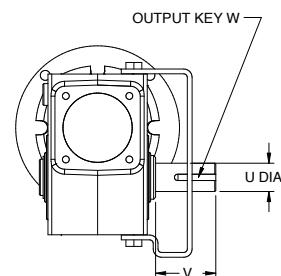


UNIT WITH OUTPUT BRACKET

REDUCER

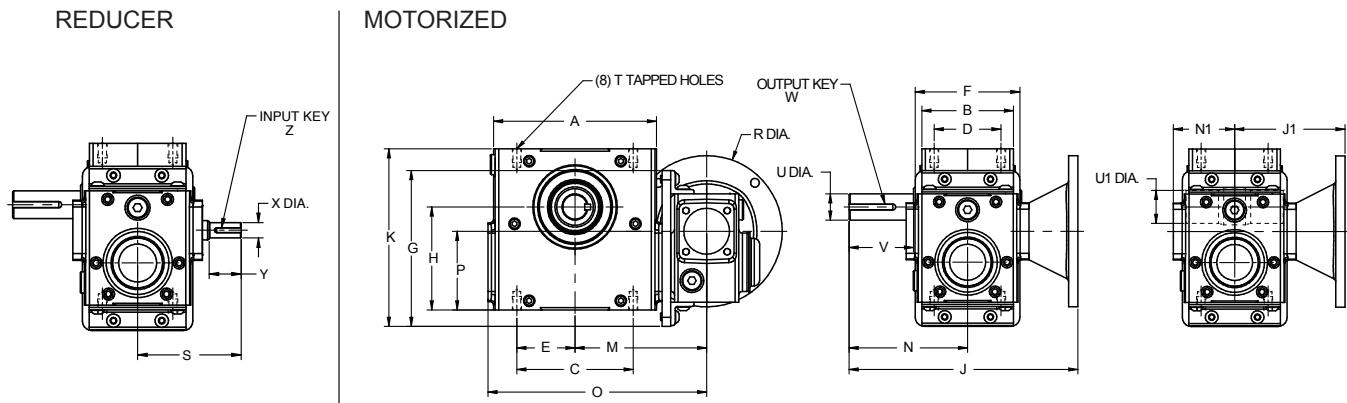


MOTORIZED



Case Size	C.D.	A	B	C	D	E	F	G	H	K	M	N	P	T Dia.
B02	1.33	4.33	3.62	4.25	1.77	2.13	3.54	0.19	3.00	3.75	5.55	1.93	1.07	11/32
B03	1.54	5.23	3.62	4.75	1.77	2.38	3.54	0.19	3.56	4.07	6.16	2.12	1.44	11/32
B04	1.75	5.98	4.06	4.81	2.08	2.41	4.16	0.19	3.50	4.53	6.66	2.15	1.35	11/32
B05	1.97	6.00	4.50	5.75	2.30	2.88	4.60	0.19	3.75	5.15	7.47	2.11	1.64	13/32
B06	2.38	7.00	5.00	6.13	2.65	3.07	5.30	0.25	3.72	6.00	8.30	2.13	1.59	13/32
B08	2.62	7.50	6.00	7.18	2.83	3.59	5.66	0.25	4.06	6.57	9.25	2.72	1.34	13/32
B09	3.00	9.00	7.00	8.50	3.18	4.25	6.36	0.25	4.50	7.14	10.02	2.72	1.78	13/32
B10	3.25	9.05	7.00	8.50	3.54	4.25	7.07	0.25	5.25	8.04	10.91	2.99	2.26	9/16
B11	3.54	9.50	8.56	9.50	3.54	4.75	7.07	0.25	5.25	9.19	12.35	3.33	1.92	9/16

Case Size	C.D.	REDUCER				MOTORIZED						OUTPUT SHAFT						W-KEY	
		INPUT SHAFT		Z-KEY			56C/ 143/145TC		182/184TC		213/215TC		U Dia.		U1 Dia.		V	V1	SQ.
B02	1.33	0.625	1.31	3/16	1.00	4.22	4.74	6.50	NA	NA	NA	NA	0.750	1.000	1.88	0.12	3/16	1.00	9
B03	1.54	0.750	1.48	3/16	1.13	4.87	5.92	6.50	6.16	9.00	NA	NA	0.750	1.000	1.99	0.08	3/16	1.13	14
B04	1.75	0.750	1.48	3/16	1.13	5.13	6.18	6.50	6.42	9.00	NA	NA	1.000	1.438	1.97	0.08	1/4	1.25	16
B05	1.97	0.750	1.48	3/16	1.13	5.20	6.34	6.50	6.58	9.00	NA	NA	1.125	1.438	2.39	0.08	1/4	1.50	18
B06	2.38	0.750	1.48	3/16	1.13	5.47	6.77	6.50	7.01	9.00	NA	NA	1.125	1.438	2.77	0.08	1/4	1.88	23
B08	2.62	1.188	2.69	1/4	2.25	7.23	7.24	6.50	7.59	9.00	7.59	9.00	1.500	1.938	2.68	0.08	3/8	1.97	40
B09	3.00	1.188	2.69	1/4	2.25	7.63	7.64	6.50	7.98	9.00	7.98	9.00	1.500	2.188	3.80	0.08	3/8	2.00	47
B10	3.25	1.188	2.69	1/4	2.25	7.64	7.72	6.50	8.06	9.00	8.06	9.00	1.500	2.188	3.83	0.08	3/8	2.25	50
B11	3.54	1.188	2.95	1/4	2.62	8.39	8.15	6.50	8.50	9.00	8.50	9.00	1.875	2.938	4.15	0.10	1/2	2.63	70

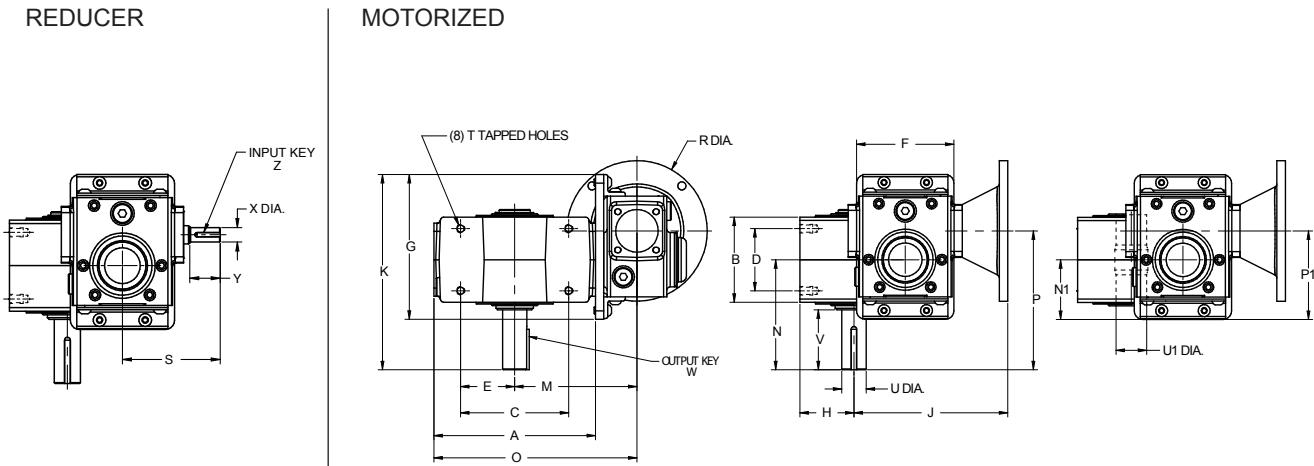
STANDARD DOUBLE REDUCTION UNIT (No Base)

Size	A	B	C	D	E	F	G	H	K	M	N	N1	O	P	T Dia.
B0520	6.00	3.94	5.00	2.88	2.50	4.50	6.69	4.10	7.00	5.28	4.69	2.64	8.58	3.46	M10 x 0.59
B0620	7.00	3.94	5.00	2.88	2.50	4.50	6.69	4.43	7.63	5.71	5.09	2.64	9.45	3.39	M10 x 0.59
B0820	7.50	5.12	6.38	3.38	3.19	5.98	8.27	5.05	8.87	6.79	5.63	3.15	11.00	4.18	M10 x 0.59
B0920	9.00	5.12	7.00	4.00	3.50	5.98	8.27	5.63	9.56	7.19	6.75	3.15	11.79	4.38	M12 x 0.71
B1020	9.05	5.67	7.50	4.00	3.75	5.98	8.82	5.88	10.25	7.22	7.06	3.31	11.91	4.59	M12 x 0.71
B1120	9.50	5.12	7.50	4.00	3.75	5.98	8.82	6.46	10.43	7.66	7.75	3.31	12.78	4.88	M16 x 0.87

	REDUCER					MOTORIZED								OUTPUT SHAFT				W-KEY	
	INPUT SHAFT		Z-KEY			56C/143/145TC				182/184TC									
Case Size	X Dia.	Y	SQ.	LG	S	J	J1	R Dia.	J	J1	R Dia.	U Dia.	U1 Dia.	V	SQ.	LG	WT (LBS)		
B0520	0.625	1.31	3/16	1.00	4.22	9.43	4.74	6.50	NA	NA	NA	1.125	1.438	2.39	1/4	1.50	32		
B0620	0.625	1.31	3/16	1.00	4.22	9.83	4.74	6.50	NA	NA	NA	1.125	1.438	2.77	1/4	1.88	37		
B0820	0.750	1.48	3/16	1.13	5.13	11.81	6.18	6.50	NA	NA	NA	1.500	1.938	2.68	3/8	1.94	65		
B0920	0.750	1.48	3/16	1.13	5.13	12.93	6.18	6.50	NA	NA	NA	1.500	2.188	3.80	3/8	2.00	72		
B1020	0.750	1.48	3/16	1.13	5.20	13.40	6.34	6.50	13.68	6.62	9.00	1.500	2.188	3.83	3/8	2.25	78		
B1120	0.750	1.48	3/16	1.13	5.20	14.09	6.34	6.50	14.37	6.62	9.00	1.875	2.938	4.15	1/2	2.63	98		

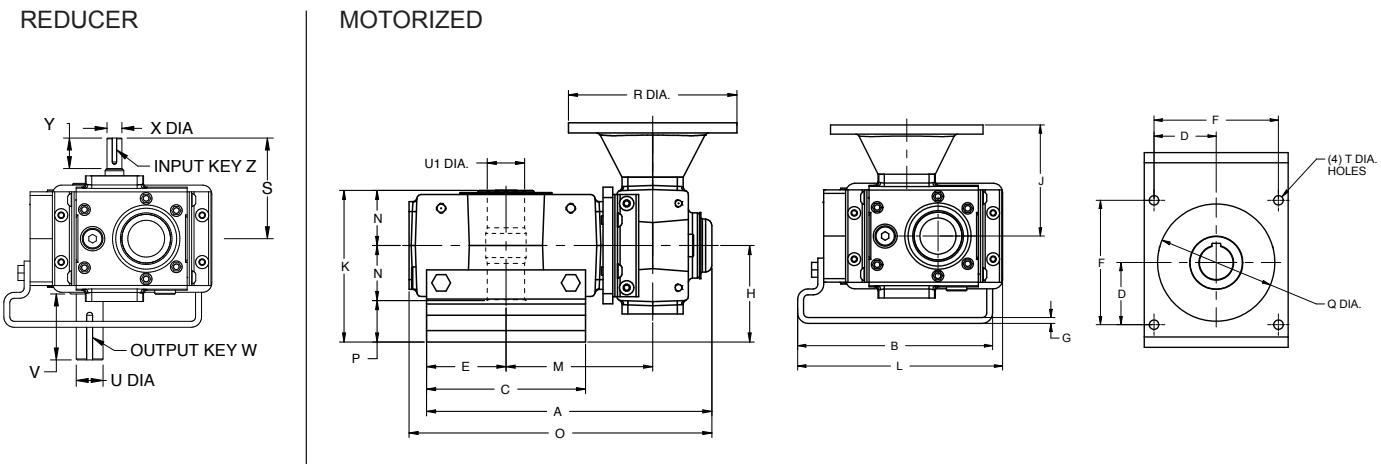


STANDARD DOUBLE REDUCTION UNIT (No Base)



Size	A	B	C	D	E	F	G	H	K	M	N	N1	O	P	P1	T Dia.
B0520	6.61	3.94	5.00	2.88	2.50	4.50	6.69	2.28	8.63	5.28	4.69	2.76	8.58	6.02	4.09	M10x 0.59
B0620	7.48	3.94	5.00	2.88	2.50	4.50	6.69	2.50	9.03	5.71	5.09	2.76	9.45	6.42	4.09	M10x 0.59
B0820	8.43	5.12	6.38	3.38	3.19	5.98	8.27	2.94	10.59	6.79	5.63	3.31	11.00	7.38	5.06	M10x 0.59
B0920	9.21	5.12	7.00	4.00	3.50	5.98	8.27	3.25	11.71	7.19	6.75	3.31	11.79	8.50	5.06	M12 x 0.71
B1020	9.37	5.67	7.50	4.00	3.75	5.98	8.82	3.50	12.37	7.22	7.06	3.50	11.91	9.03	5.47	M12 x 0.71
B1120	10.24	5.12	7.50	4.00	3.75	5.98	8.82	3.39	13.06	7.66	7.75	3.50	12.78	9.72	5.47	M16 x 0.87

	REDUCER					MOTORIZED					OUTPUT SHAFT				W-KEY	
	INPUT SHAFT		Z-KEY			56C/143/145TC		182/184TC		U Dia.		U1 Dia.	V	SQ.	LG	WT (LBS)
Case Size	X Dia.	Y	SQ.	LG	S	J	R Dia.	J	R Dia.	U Dia.	U1 Dia.	V	SQ.	LG	WT (LBS)	
B0520	0.625	1.31	3/16	1.00	6.19	6.71	6.50	NA	NA	1.125	1.438	2.39	1/4	1.50	32	
B0620	0.625	1.31	3/16	1.00	6.60	7.12	6.50	NA	NA	1.125	1.438	2.77	1/4	1.88	37	
B0820	0.750	1.48	3/16	1.13	7.75	8.80	6.50	NA	NA	1.500	1.938	2.68	3/8	1.94	65	
B0920	0.750	1.48	3/16	1.13	8.13	9.18	6.50	NA	NA	1.500	2.188	3.80	3/8	2.00	72	
B1020	0.750	1.48	3/16	1.13	8.45	9.59	6.50	9.87	9.00	1.500	2.188	3.83	3/8	2.25	78	
B1120	0.750	1.48	3/16	1.13	8.74	9.88	6.50	10.16	9.00	1.875	2.938	4.15	1/2	2.63	98	

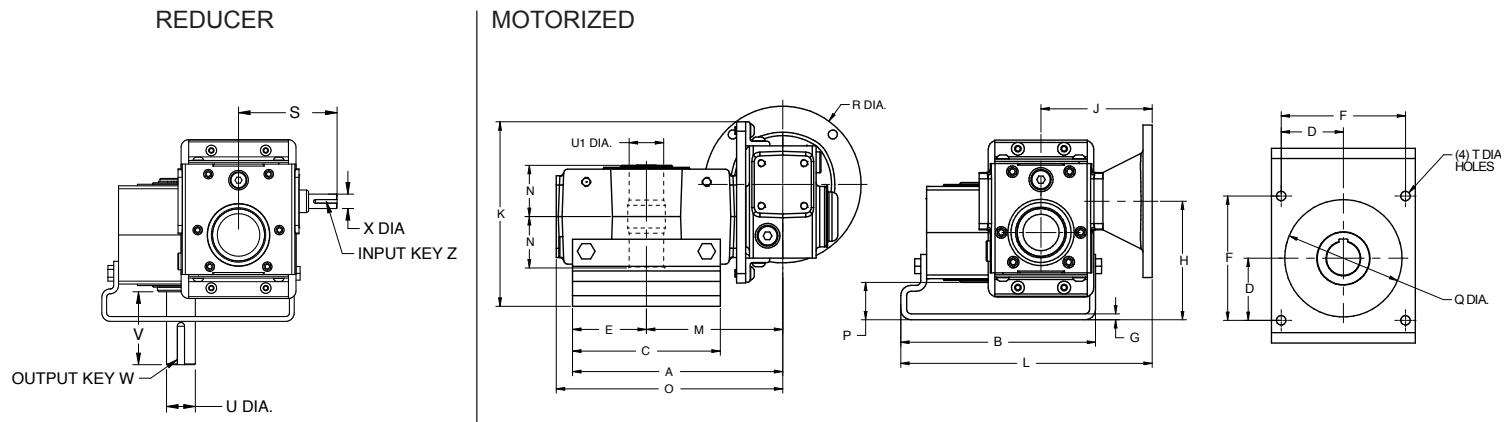
DOUBLE REDUCTION UNIT WITH OUTPUT BRACKET

Size	A	B	C	D	E	F	G	H	K	L	M	N	O	P	Q Dia.	T Dia.
B0520	10.46	7.47	5.75	2.30	2.87	4.60	0.19	3.75	5.86	7.90	5.28	2.11	10.89	1.64	4.50	13/32
B0620	11.09	8.30	6.13	2.65	3.07	5.30	0.25	3.72	5.85	8.75	5.71	2.13	11.76	1.59	5.00	13/32
B0820	12.95	9.25	7.18	2.83	3.59	5.66	0.25	4.06	6.78	9.87	6.79	2.72	13.57	1.34	6.00	13/32
B0920	14.00	10.02	8.50	3.18	4.25	6.36	0.25	4.50	7.22	10.44	7.19	2.72	14.35	1.78	7.00	13/32
B1020	14.01	10.91	8.50	3.54	4.25	7.07	0.25	5.25	8.24	11.53	7.22	2.99	14.44	2.26	7.00	9/16
B1120	14.94	12.35	9.50	3.54	4.75	7.07	0.25	5.25	8.58	12.67	7.66	3.33	15.31	1.92	8.56	9/16

	REDUCER					MOTORIZED									
	INPUT SHAFT		Z-KEY			56C/143/145TC		182/184TC		OUTPUT SHAFT			W-KEY		
Case Size	X Dia.	Y	SQ.	LG	S	J	R Dia.	J	R Dia.	U Dia.	U1 Dia.	V	SQ.	LG	WT (LBS)
B0520	0.625	1.31	3/16	1.00	4.22	4.74	6.50	NA	NA	1.125	1.438	2.39	1/4	1.50	32
B0620	0.625	1.31	3/16	1.00	4.22	4.74	6.50	NA	NA	1.125	1.438	2.77	1/4	1.88	37
B0820	0.750	1.48	3/16	1.13	5.13	6.18	6.50	NA	NA	1.500	1.938	2.68	3/8	1.94	65
B0920	0.750	1.48	3/16	1.13	5.13	6.18	6.50	NA	NA	1.500	2.188	3.80	3/8	2.00	72
B1020	0.750	1.48	3/16	1.13	5.20	6.34	6.50	6.62	9.00	1.500	2.188	3.83	3/8	2.25	78
B1120	0.750	1.48	3/16	1.13	5.20	6.34	6.50	6.62	9.00	1.875	2.938	4.15	1/2	2.63	98



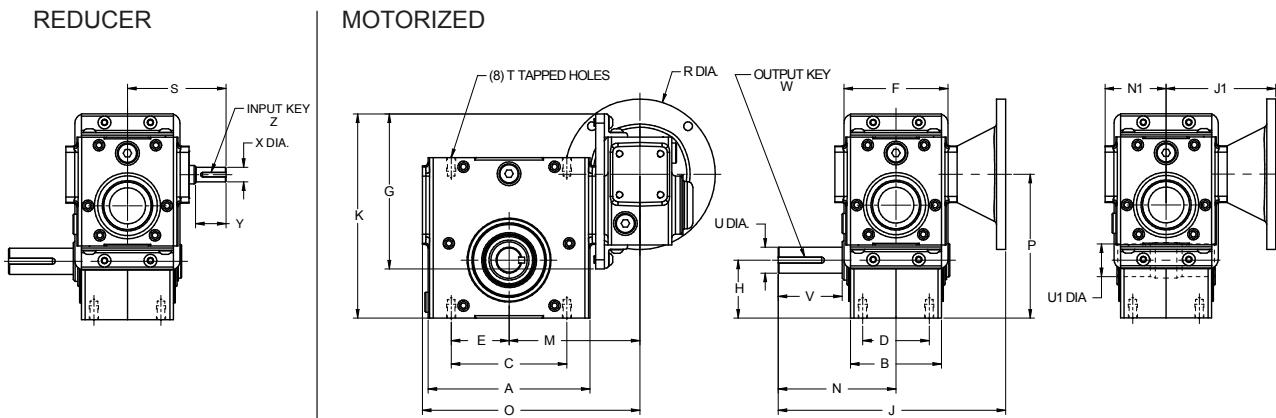
UNIT WITH OUTPUT BRACKET



Size	A	B	C	D	E	F	G	H	K	M	N	O	P	Q Dia.	T Dia.
B0520	8.16	7.47	5.75	2.30	2.88	4.60	0.19	5.08	7.69	5.28	2.11	8.58	1.64	4.50	13/32
B0620	8.59	8.30	5.75	2.65	2.88	5.30	0.25	5.08	7.66	5.71	2.13	9.45	1.59	5.00	13/32
B0820	10.38	9.25	7.18	2.83	3.59	5.66	0.25	5.81	9.02	6.79	2.72	11.00	1.34	6.00	13/32
B0920	11.44	10.02	8.50	3.18	4.25	6.36	0.25	6.25	9.46	7.19	2.72	11.79	1.78	7.00	13/32
B1020	11.48	10.91	8.50	3.54	4.25	7.07	0.25	7.22	10.56	7.22	2.99	11.91	2.26	7.00	9/16
B1120	12.41	12.35	9.50	3.54	4.75	7.07	0.25	7.22	10.56	7.66	3.33	12.78	1.92	8.56	9/16

	REDUCER					MOTORIZED													
	INPUT SHAFT		Z-KEY			56C/143/145TC			182/184TC			OUTPUT SHAFT			W-KEY				
Case Size	X Dia.	Y	SQ.	LG	S	J	L	R Dia.	J	L	R Dia.	U Dia.	U1 Dia.	V	SQ.	LG	WT (LBS)		
B0520	0.625	1.31	3/16	1.00	4.22	4.74	9.88	6.50	NA	NA	NA	1.125	1.438	2.39	1/4	1.50	32		
B0620	0.625	1.31	3/16	1.00	4.22	4.74	10.73	6.50	NA	NA	NA	1.125	1.438	2.77	1/4	1.88	37		
B0820	0.750	1.48	3/16	1.13	5.13	6.18	12.74	6.50	NA	NA	NA	1.500	1.938	2.68	3/8	1.94	65		
B0920	0.750	1.48	3/16	1.13	5.13	6.18	13.31	6.50	NA	NA	NA	1.500	2.188	3.80	3/8	2.00	72		
B1020	0.750	1.48	3/16	1.13	5.20	6.34	14.37	6.50	6.62	14.65	9.00	1.500	2.188	3.83	3/8	2.25	78		
B1120	0.750	1.48	3/16	1.13	5.20	6.34	15.51	6.50	6.62	15.79	9.00	1.875	2.938	4.15	1/2	2.63	98		

STANDARD UNIT (No Base)

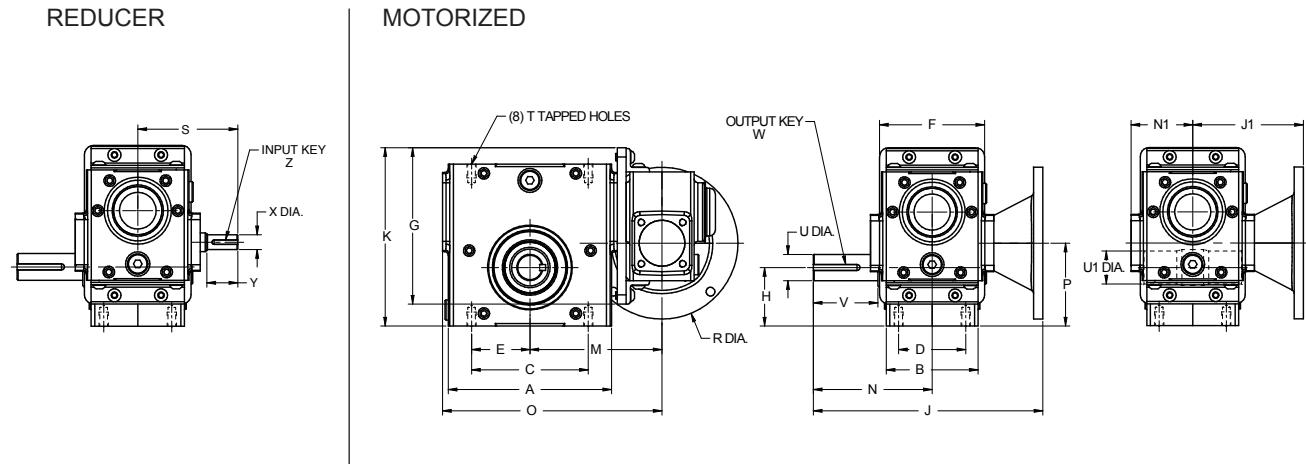


Size	A	B	C	D	E	F	G	H	K	M	N	N1	O	P	T Dia.
B0520	6.00	3.94	5.00	2.88	2.50	4.50	6.69	2.28	8.19	5.28	4.69	2.64	8.58	5.58	M10 x 0.59
B0620	7.00	3.94	5.00	2.88	2.50	4.50	6.69	2.50	8.82	5.71	5.09	2.64	9.45	6.21	M10 x 0.59
B0820	7.50	5.12	6.38	3.38	3.19	5.98	8.27	2.94	10.52	6.79	5.63	3.15	11.00	7.31	M10 x 0.59
B0920	9.00	5.12	7.00	4.00	3.50	5.98	8.27	3.25	11.21	7.19	6.75	3.15	11.79	8.00	M12 x 0.71
B1020	9.05	5.67	7.50	4.00	3.75	5.98	8.82	3.50	12.06	7.22	7.06	3.31	11.91	8.72	M12 x 0.71
B1120	9.50	5.12	7.50	4.00	3.75	5.98	8.82	3.39	12.24	7.66	7.75	3.31	12.78	8.90	M16 x 0.87

	REDUCER					MOTORIZED												
	INPUT SHAFT		Z-KEY			56C/143/145TC				182/184TC				OUTPUT SHAFT		W-KEY		
Case Size	X Dia.	Y	SQ.	LG	S	J	J1	R Dia.	J	J1	R Dia.	U Dia.	U1 Dia.	V	SQ.	LG	WT (LBS)	
B0520	0.625	1.31	3/16	1.00	4.22	4.74	9.88	6.50	NA	NA	NA	1.125	1.438	2.39	1/4	1.50	32	
B0620	0.625	1.31	3/16	1.00	4.22	4.74	10.73	6.50	NA	NA	NA	1.125	1.438	2.77	1/4	1.88	37	
B0820	0.750	1.48	3/16	1.13	5.13	6.18	12.74	6.50	NA	NA	NA	1.500	1.938	2.68	3/8	1.94	65	
B0920	0.750	1.48	3/16	1.13	5.13	6.18	13.31	6.50	NA	NA	NA	1.500	2.188	3.80	3/8	2.00	72	
B1020	0.750	1.48	3/16	1.13	5.20	6.34	14.37	6.50	6.62	14.65	9.00	1.500	2.188	3.83	3/8	2.25	78	
B1120	0.750	1.48	3/16	1.13	5.20	6.34	15.51	6.50	6.62	15.79	9.00	1.875	2.938	4.15	1/2	2.63	98	

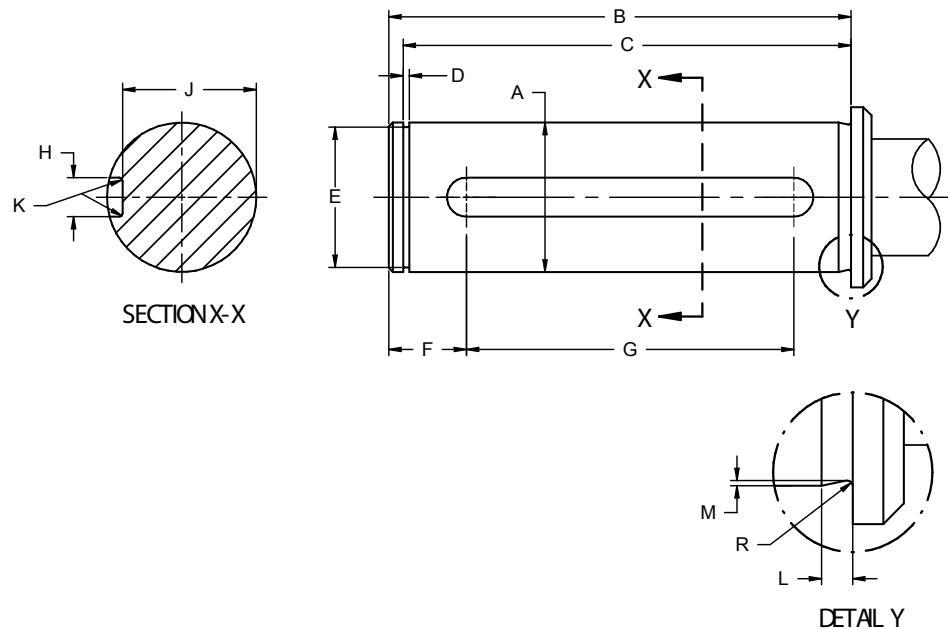


STANDARD UNIT (No Base)



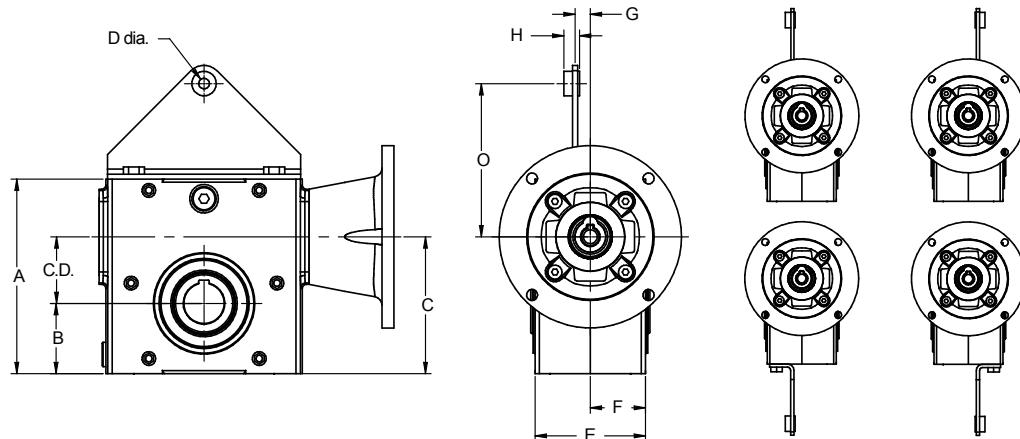
Size	A	B	C	D	E	F	G	H	K	M	N	N1	O	P	T Dia.
B0520	6.00	3.94	5.00	2.88	2.50	4.50	6.69	2.28	7.00	5.28	4.69	2.64	8.58	2.92	M10 x 0.59
B0620	7.00	3.94	5.00	2.88	2.50	4.50	6.69	2.50	7.63	5.71	5.09	2.64	9.45	3.54	M10 x 0.59
B0820	7.50	5.12	6.38	3.38	3.19	5.98	8.27	2.94	8.87	6.79	5.63	3.15	11.00	3.82	M10 x 0.59
B0920	9.00	5.12	7.00	4.00	3.50	5.98	8.27	3.25	9.56	7.19	6.75	3.15	11.79	4.50	M12 x 0.71
B1020	9.05	5.67	7.50	4.00	3.75	5.98	8.82	3.50	10.25	7.22	7.06	3.31	11.91	4.78	M12 x 0.71
B1120	9.50	5.12	7.50	4.00	3.75	5.98	8.82	3.39	10.43	7.66	7.75	3.31	12.78	4.96	M16 x 0.87

	REDUCER					MOTORIZED												
	INPUT SHAFT		Z-KEY			56C/143/145TC				182/184TC				OUTPUT SHAFT		W-KEY		
Case Size	X Dia.	Y	SQ.	LG	S	J	J1	R Dia.	J	J1	R Dia.	U Dia.	U1 Dia.	V	SQ.	LG	WT (LBS)	
B0520	0.625	1.31	3/16	1.00	4.22	9.43	4.74	6.50	NA	NA	NA	1.125	1.438	2.39	1/4	1.50	32	
B0620	0.625	1.31	3/16	1.00	4.22	9.83	4.74	6.50	NA	NA	NA	1.125	1.438	2.77	1/4	1.88	37	
B0820	0.750	1.48	3/16	1.13	5.13	11.81	6.18	6.50	NA	NA	NA	1.500	1.938	2.68	3/8	1.94	65	
B0920	0.750	1.48	3/16	1.13	5.13	12.93	6.18	6.50	NA	NA	NA	1.500	2.188	3.80	3/8	2.00	72	
B1020	0.750	1.48	3/16	1.13	5.20	13.40	6.34	6.50	13.68	6.62	9.00	1.500	2.188	3.83	3/8	2.25	78	
B1120	0.750	1.48	3/16	1.13	5.20	14.09	6.34	6.50	14.37	6.62	9.00	1.875	2.938	4.15	1/2	2.63	98	



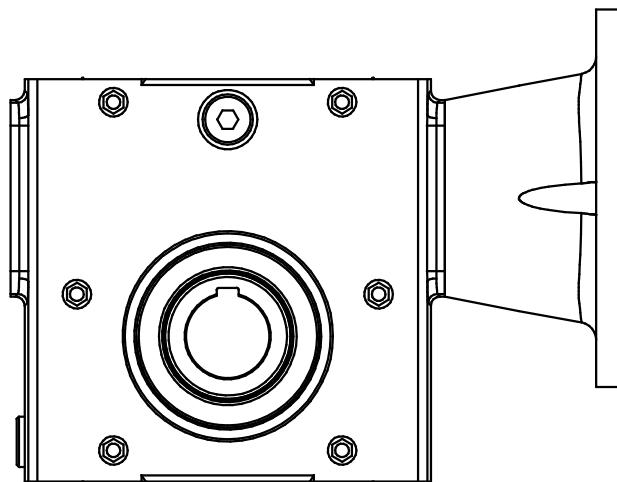
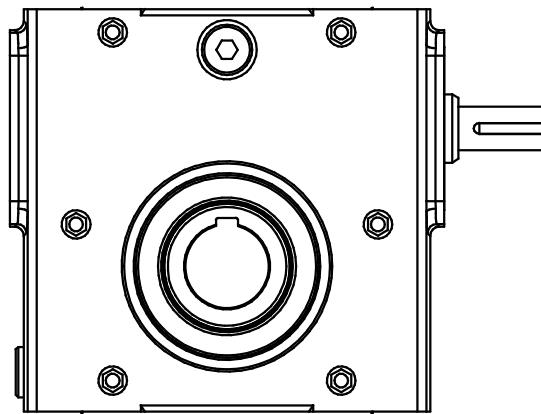
CUSTOMER SHAFT DETAIL

CASE SIZE	A	B	C	D	E	F	G	H	J	K	L	M	R
B02	1.000 0.999	4.03	3.906 3.902	0.049 0.046	0.943 0.937	0.602	3.00	0.252 0.250	0.890 0.884	0.024R	0.12	0.02	0.04
B03	1.000 0.999	4.42	4.299 4.295	0.049 0.046	0.943 0.937	0.800	3.00	0.252 0.250	0.890 0.884	0.024R	0.12	0.02	0.04
B04	1.4375 1.4365	4.49	4.350 4.346	0.060 0.056	1.354 1.346	0.768	3.15	0.377 0.375	1.288 1.282	0.031R	0.12	0.02	0.04
B05	1.4375 1.4365	4.42	4.271 4.267	0.060 0.056	1.354 1.346	0.736	3.15	0.377 0.375	1.288 1.282	0.031R	0.12	0.02	0.04
B06	1.4375 1.4365	4.45	4.311 4.307	0.060 0.056	1.354 1.346	0.748	3.15	0.377 0.375	1.288 1.282	0.031R	0.12	0.02	0.04
B08	1.9375 1.9365	5.67	5.505 5.501	0.072 0.068	1.862 1.852	0.882	4.13	0.502 0.500	1.717 1.711	0.047R	0.12	0.02	0.04
B09	2.1875 2.1865	5.67	5.521 5.517	0.091 0.086	2.038 2.026	0.882	4.13	0.502 0.500	1.971 1.965	0.047R	0.12	0.02	0.04
B10	2.1875 2.1865	6.22	6.072 6.068	0.091 0.086	2.038 2.026	0.975	4.50	0.502 0.500	1.971 1.965	0.047R	0.12	0.02	0.04
B11	2.9375 2.9365	6.92	6.756 6.752	0.108 0.103	2.785 2.773	0.836	5.51	0.752 0.750	2.639 2.633	0.062R	0.12	0.02	0.04



TORQUE ARM DETAILS

CASE SIZE	C.D.	A	B	C	D dia.	E	F	G	H	O
B02	1.33	4.66	1.72	3.05	0.39	2.76	1.38	0.55	0.55	3.82
B03	1.54	5.35	1.91	3.45	0.39	3.94	1.97	0.92	0.55	3.93
B04	1.75	5.75	2.06	3.81	0.39	3.94	1.97	0.82	0.55	3.82
B05	1.97	6.38	2.28	4.25	0.39	3.94	1.97	0.79	0.55	5.76
B06	2.38	6.93	2.50	4.88	0.39	3.94	1.97	0.69	0.55	5.46
B08	2.62	7.99	2.94	5.56	0.79	5.12	2.56	0.92	0.98	7.36
B09	3.00	8.88	3.25	6.25	0.79	5.12	2.56	1.19	0.98	7.25
B10	3.25	9.38	3.50	6.75	0.79	5.67	2.84	1.19	0.98	7.00
B11	3.54	9.84	3.39	6.93	0.98	5.12	2.56	1.07	0.98	9.37

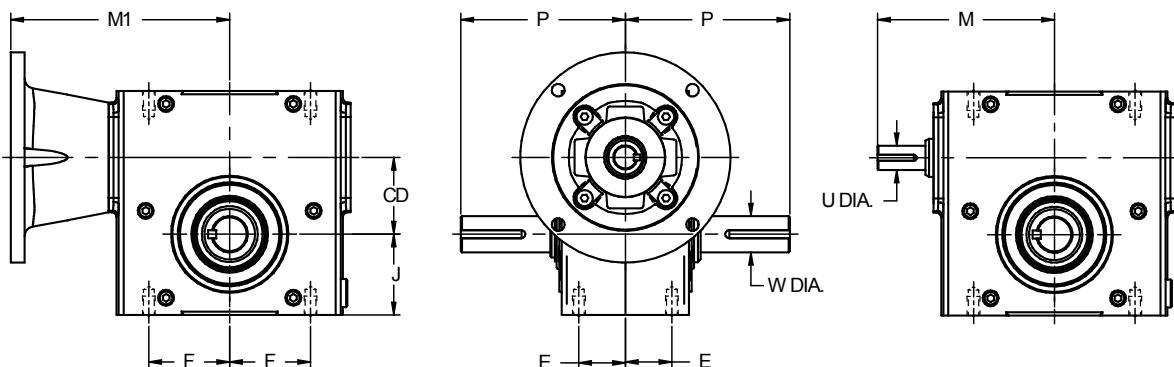


SERIES B

DIMENSIONAL COMPARISON



STANDARD UNITS



Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B021W/B021WM	1.33	1.00	1.63	1.72	4.00	0.625 **	4.22	0.625	4.74
Perfection-Predator	U13/UC13	1.33	1.00	1.63	1.72	4.00	0.625	3.80	0.500	3.38
Boston	F713/713	1.33	1.00	1.63	1.72	4.00	0.625	3.91	0.500	3.94
Grove - Old	BMQ1133/B1133	1.33	1.00	1.63	1.72	3.99	0.625	4.45	0.500	3.46
Grove - New	BMQ213/B213	1.33	1.00	1.63	1.72	4.00	0.625	3.82	0.500	3.46
Grove - OE	13U/13UF	1.33	1.00	1.63	1.72	4.00	0.750	3.82	0.500	3.46
Falk Omni Box	133WBM/133WB	1.33	1.00	1.63	1.72	3.99	0.625	4.45	0.500	3.46
Sterling	133BQ/133BR	1.33	1.00	1.63	1.72	3.99	0.625	4.45	0.500	3.46
Ohio	133MQ/133B	1.33	1.00	1.63	1.72	4.00	0.625	3.69	0.500	3.96
EPT - Raider	133Q/133U	1.33	1.00	1.63	1.72	4.00	0.625	4.03	0.500	3.94
Baldor	F913/S913	1.33	1.00	1.63	1.72	4.00	0.625	3.91	0.500	3.94
Leeson	B613/BMQ613	1.33	1.00	1.63	1.72	4.00	0.625	3.88	0.500	3.42
Alling Lander	13U/13UF	1.33	1.00	1.63	1.72	4.00	0.750	3.82	0.500	3.46

* for 56C frame ** Dimension shown is for the Reduced Diameter Shaft Option

Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B031W/B031WM	1.54	1.38	2.09	1.91	4.31	0.750	4.87	0.750	5.92
Boston	F715/715	1.54	1.38	2.09	1.91	4.31	0.750	4.69	0.625	4.50
Grove - Old	BMQ1154/B1154	1.54	1.38	2.09	1.91	4.31	0.750	4.91	0.625	3.99
Grove - New	BMQ215/B215	1.54	1.38	2.09	1.91	4.31	0.750	4.35	0.625	3.99
EPT - Raider	154Q/154U	1.54	1.38	2.09	1.91	4.31	0.750	4.69	0.625	4.52

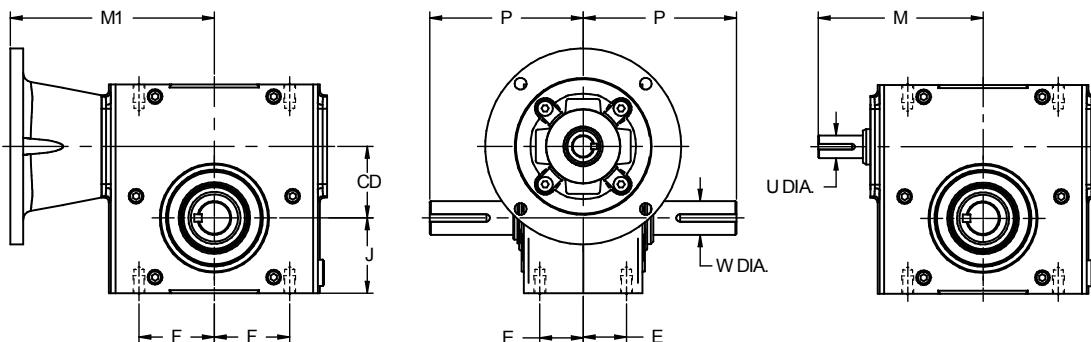
* for a NEMA 56C frame

Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B041W/B041WM	1.75	1.38	2.09	2.06	4.31	0.875 **	5.13	0.750	6.18
Perfection-Predator	U18/UC18	1.75	1.38	2.09	2.06	4.31	0.875	4.75	0.625	4.04
Boston	F718/718	1.75	1.38	2.09	2.06	4.31	0.875	4.88	0.625	4.69
Grove - Old	BMQ1175/B1175	1.75	1.38	2.09	2.06	4.31	0.875	5.08	0.625	4.09
Grove - New	BMQ218/B218	1.75	1.38	2.09	2.06	4.31	0.875	4.45	0.625	4.09
Falk Omni Box	175WBM/175WB	1.75	1.38	2.09	2.06	4.31	0.875	5.08	0.625	4.09
Sterling	175AQ/175AR	1.75	1.38	2.09	2.06	4.31	0.875	5.08	0.625	4.09
Ohio	175MQ/175B	1.75	1.38	2.09	2.06	4.31	0.875	4.75	0.625	4.44
EPT - Raider	175Q/175U	1.75	1.38	2.09	2.06	4.31	0.875	4.68	0.625	4.38
Baldor	F918/S918	1.75	1.38	2.09	2.06	4.31	0.875	4.88	0.625	4.69
Leeson	B618/BMQ618	1.75	1.38	2.09	2.06	4.31	0.875	4.44	0.625	3.99
Dodge/Tigear	Q175/S175	1.75	1.38	2.09	1.99	4.31	0.875	4.75	0.625	4.94

* for 56C / 143 TC frame ** Dimension shown is for the Reduced Diameter Shaft Option

Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B051W/B051WM	1.97	1.44	2.50	2.28	4.69	1.000 **	5.20	0.750	6.34
Perfection-Predator	U218/UC21	2.06	1.44	2.50	2.28	4.69	1.000	5.13	0.625	4.35
Boston	F721/721	2.06	1.44	2.50	2.28	4.69	1.000	5.13	0.625	5.06
Ohio	206MQ/206B	2.06	1.44	2.50	2.28	4.69	1.000	5.16	0.625	4.75
EPT - Raider	206Q/206U	2.06	1.44	2.50	2.28	4.69	1.000	5.06	0.625	4.75
Baldor	F921/S921	2.06	1.44	2.50	2.28	4.69	1.000	4.85	0.625	4.40
Leeson	B621/BMQ621	2.06	1.44	2.50	2.28	4.68	1.000	4.85	0.625	4.40
Dodge/Tigear	Q200/S200	2.06	1.44	2.50	2.24	4.69	1.000	5.12	0.625	5.00

* for 56C/143TC frames ** Dimension shown is for the Reduced Diameter Shaft Option

STANDARD UNITS (Continued)


Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B061W/B061WM	2.38	1.44	2.50	2.50	5.09	1.125	5.47	0.750	6.77
Perfection-Predator	U214/UC24	2.38	1.44	2.50	2.50	5.09	1.125	5.75	0.750	4.75
Boston	F724/724	2.38	1.44	2.50	2.50	5.09	1.125	5.75	0.750	5.25
Grove - Old	BMQ1238/B1238	2.38	1.43	2.50	2.50	5.14	1.125	6.05	0.750	4.63
Grove - New	BMQ224/B224	2.38	1.44	2.50	2.50	5.14	1.125	5.51	0.750	4.63
Falk Omni Box	238WBM/238WB	2.38	1.43	2.50	2.50	5.14	1.125	6.05	0.750	4.63
Sterling	238AQ/238AR	2.38	1.43	2.50	2.50	5.14	1.125	6.05	0.750	4.63
Ohio	238MQ/238B	2.38	1.44	2.50	2.50	5.09	1.125	5.81	0.750	5.25
EPT - Raider	238Q/238U	2.38	1.44	2.50	2.50	5.08	1.125	5.44	0.750	5.06
Baldor	F924/S924	2.38	1.44	2.50	2.50	5.09	1.125	5.51	0.750	4.63
Leeson	B624/BMQ624	2.38	1.44	2.50	2.50	5.09	1.125	5.51	0.750	4.63

* - for 56C / 143 TC frame

Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B081W/B081WM	2.625	1.69	3.19	2.94	5.63	1.125 **	7.23	1.188	7.24
Perfection-Predator	U26/UC26	2.625	1.69	3.19	2.94	5.63	1.125	6.31	0.750	5.48
Boston	F726/726	2.625	1.69	3.19	2.94	5.63	1.125	6.31	0.750	5.75
Grove - Old	BMQ1262/B1262	2.625	1.69	3.19	2.94	5.63	1.250	6.57	0.750	5.19
Grove - New	BMQ226/B226	2.625	1.69	3.19	2.94	5.63	1.250	6.07	0.750	5.19
Falk Omni Box	262WBM/262WB	2.625	1.69	3.19	2.94	5.63	1.250	6.57	0.750	5.19
Sterling	262AQ/262AR	2.625	1.69	3.19	2.94	5.63	1.250	6.57	0.750	5.19
Ohio	262MQ/262B	2.625	1.69	3.19	2.94	5.63	1.125	6.31	0.750	5.62
EPT - Raider	262Q/262U	2.625	1.69	3.19	2.94	5.63	1.125	6.23	0.750	5.69
Baldor	F926/S926	2.625	1.69	3.19	2.94	5.62	1.125	6.31	0.750	5.75
Leeson	B626/BMQ626	2.625	1.69	3.19	2.94	5.63	1.125	6.12	0.750	5.23
Dodge/Tigear	262	2.625	1.69	3.19	2.88	5.63	1.125	6.32	0.750	6.63

* for 56C/143 TC frame ** Dimension shown is for the Reduced Diameter Shaft Option

Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B091W/B091WM	3.00	2.00	3.50	3.25	6.75	1.250 **	7.63	1.188	7.64
Grove - Old	BMQ1300/B1300	3.00	2.00	3.50	3.25	6.75	1.250	7.25	0.875	5.69
Grove - New	BMQ230/B230	3.00	2.00	3.50	3.25	6.75	1.250	6.57	0.875	5.69
Falk Omni Box	300WBM/300WB	3.00	2.00	3.50	3.25	6.75	1.250	7.25	0.875	5.69
Sterling	300AQ/300AR	3.00	2.00	3.50	3.25	6.75	1.250	7.25	0.875	5.69
Ohio	300MQ/300B	3.00	2.00	3.50	3.25	6.75	1.250	7.50	0.875	6.25
EPT - Raider	300Q/300U	3.00	2.00	3.50	3.25	6.75	1.250	7.50	0.875	6.25

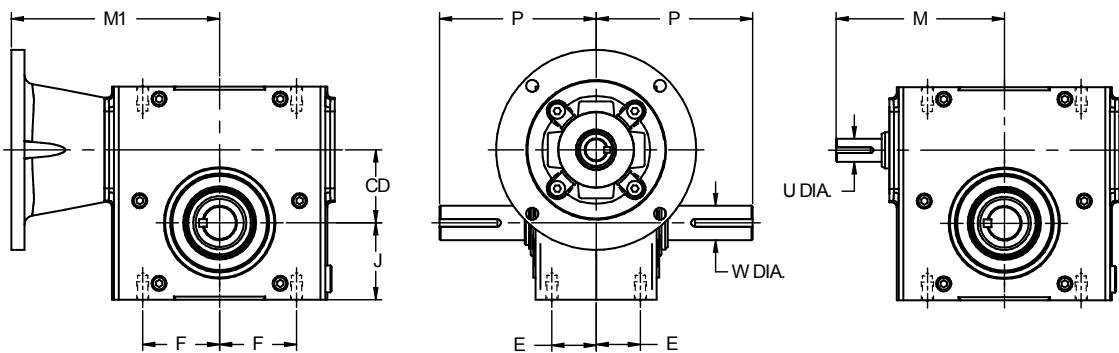
* for 56C/143 TC frame ** Dimension shown is for the Reduced Diameter Shaft Option

Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B101W/B101WM	3.25	2.00	3.75	3.50	7.06	1.375 **	7.64	1.188	7.72
Perfection-Predator	U32/UG32	3.25	2.00	3.75	3.50	7.06	1.375	7.44	0.875	6.22
Boston	F732/732B	3.25	2.00	3.75	3.50	7.06	1.375	7.44	0.875	7.00
Grove - Old	BMQ232/B232	3.25	2.00	3.75	3.50	7.06	1.500	6.76	0.875	6.31
Grove - New	BMQ230/B230	3.25	2.00	3.75	3.50	7.06	1.500	6.76	0.875	5.88
Falk Omni Box	300WBM/300WB	3.25	2.00	3.75	3.50	7.06	1.375	7.06	0.875	6.31
Sterling	300AQ/300AR	3.25	2.00	3.75	3.50	7.06	1.500	6.76	0.875	6.31
EPT - Raider	325Q/325U	3.25	2.00	3.75	3.50	7.06	1.375	7.06	0.875	7.00
Ohio	325MQ/325B	3.25	2.00	3.75	3.50	7.06	1.375	7.19	0.875	6.47
Baldor	F932/S932	3.25	2.00	3.75	3.50	7.06	1.375	7.44	0.875	7.00
Leeson	B632/BMQ632	3.25	2.00	3.75	3.50	7.06	1.375	7.44	0.875	6.56

* for 180 frame **Dimension shown is for the Reduced Diameter Shaft Option



STANDARD UNITS (Continued)



Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B111W/B111WM	3.54	2.00	3.75	3.39	7.75	1.625 **	8.39	1.188	8.50
Dodge/Tigear	350	3.50	2.00	3.75	4.00	7.06	1.500	7.19	0.875	7.41

* for 180 frame

** Dimension shown is for the Reduced Diameter Shaft Option

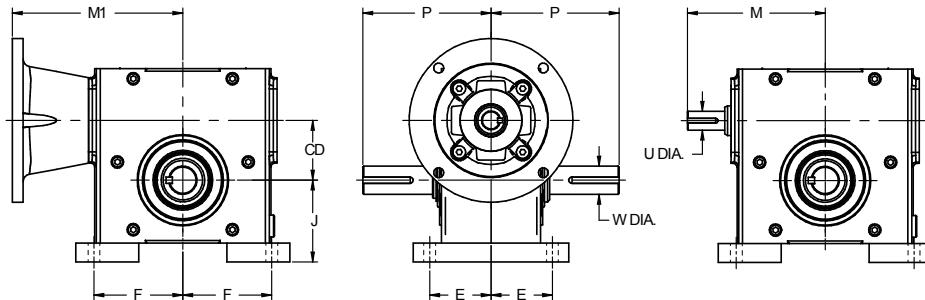
Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B111W/B111WM	3.54	2.00	3.75	3.39	7.75	1.625 **	8.39	1.188	8.50
Perfection-Modular	H38/HG38	3.75	1.50	3.44	3.94	6.69	1.500	7.50	1.000	6.10
Hub City	381/384	3.75	1.50	3.44	3.94	6.69	1.500	7.50	1.000	6.63
Perfection-Predator	U38/UG38	3.75	2.38	4.25	3.88	7.75	1.625	8.38	1.000	6.73
Boston	F738/S738B	3.75	2.38	4.25	3.88	7.75	1.625	8.38	1.000	7.50
EPT-Raider	375U/375Q	3.75	2.38	4.25	3.88	7.75	1.625	7.84	1.000	7.29
EPT Cobra	38U/38Q	3.75	2.38	3.38	4.50	6.81	1.625	7.84	1.000	7.25
Leeson	B638/BMQ638	3.75	2.38	4.25	3.88	7.75	1.625	8.38	1.000	7.06

* for 180 frame

** Dimension shown is for the Reduced Diameter Shaft Option

Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B111W/B111WM	3.54	2.00	3.75	3.39	7.75	1.875	8.39	1.188	8.50
Winsmith	943MDN/943DN	4.25	1.63	3.75	4.38	8.00	2.000	8.19	1.250	6.63
Alling-Lander	42U/42UF	4.25	1.88	3.75	4.50	7.50	1.750	9.57	1.250	7.21
Ohio	B2425/BMC2425	4.25	2.50	4.75	4.44	8.06	1.750	9.56	1.125	7.21
Grove - Old	B242/BMQ242	4.25	2.50	4.25	4.44	8.12	1.875	9.57	1.250	7.21
Grove - New	B242/BMQ242	4.25	2.50	4.25	4.44	8.12	1.875	9.57	1.250	6.45
Falk - Omni Box	425WB/425WBM	4.25	2.50	4.25	4.44	8.12	1.875	9.57	1.250	7.21
Grove - OE	42U/42UF	4.25	1.88	3.75	4.50	7.50	1.750	9.57	1.250	7.21

* for 180 frame

UNITS WITH HORIZONTAL BASE


Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B021B/B021BM	1.33	1.66	2.19	2.25	4.00	0.625 **	4.22	0.625	4.74
Perfection-Predator	U13/UC13	1.33	1.66	2.19	2.25	4.00	0.625	3.80	0.500	3.38
Boston	F713B/713B	1.33	1.66	2.19	2.25	4.00	0.625	3.91	0.500	3.94
Grove - Old	TMQ1133/T1133	1.33	1.66	2.19	2.25	3.99	0.625	4.45	0.500	3.46
Grove - New	TMQ213/T213	1.33	1.66	2.19	2.25	4.00	0.625	3.82	0.500	3.46
Falk Omni Box	133WOMCT/133WO	1.33	1.66	2.19	2.25	3.99	0.625	4.45	0.500	3.46
Sterling	133AQ/133AR	1.33	1.66	2.19	2.25	3.99	0.625	4.45	0.500	3.46
Ohio	133MQ/133B	1.33	1.66	2.19	2.25	4.00	0.625	3.69	0.500	3.96
EPT - Raider	133QT/133UT	1.33	1.66	2.19	2.25	4.00	0.625	4.03	0.500	3.94
Baldor	F913/S913	1.33	1.66	2.19	2.25	4.00	0.625	3.91	0.500	3.94
Leeson	T613/TMQ613	1.33	1.66	2.19	2.25	4.00	0.625	3.82	0.500	3.42
Dodge/Tigear	Q133/S133	1.33	1.66	2.19	2.25	4.00	0.625	3.90	0.625	3.72

* for 56C frame

** Dimension shown is for the Reduced Diameter Shaft Option

Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B031B/B031BM	1.54	2.16	2.63	2.50	4.31	0.750	4.87	0.750	5.92
Boston	F715B/715B	1.54	2.16	2.63	2.50	4.31	0.750	4.69	0.625	4.50
Grove - Old	TMQ1154/T1154	1.54	2.16	2.62	2.50	4.31	0.750	4.91	0.625	3.99
Grove - New	TMQ215/T215	1.54	2.16	2.63	2.50	4.31	0.750	4.35	0.625	3.99
EPT - Raider	154QT/154UT	1.54	2.16	2.63	2.50	4.31	0.750	4.69	0.625	4.52
Dodge/Tigear	Q150/S150	1.50	2.16	2.63	2.49	4.00	0.750	5.62	0.625	4.44
Winsmith	917MDN/917DN	1.75	2.16	2.63	2.50	4.75	1.000	4.75	0.750	4.06

* for a NEMA 56C frame

Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B041B/B041BM	1.75	2.25	2.88	2.75	4.31	0.875 **	5.13	0.750	6.18
Perfection-Predator	U18/UC18	1.75	2.25	2.88	2.75	4.31	0.875	4.75	0.625	4.04
Boston	F718B/718B	1.75	2.25	2.88	2.75	4.31	0.875	4.88	0.625	4.69
Grove - Old	BMQ1175/B1175	1.75	2.25	2.88	2.75	4.31	0.875	5.08	0.625	4.09
Grove - New	TMQ218/T218	1.75	2.25	2.88	2.75	4.31	0.875	4.45	0.625	4.09
Falk Omni Box	175WUM/175WU	1.75	2.25	2.88	2.75	4.31	0.875	5.08	0.625	4.09
Sterling	175AQ/175AR	1.75	2.25	2.88	2.75	4.31	0.875	5.08	0.625	4.09
Ohio	175MQ/175U	1.75	2.25	2.88	2.75	4.31	0.875	4.75	0.625	4.44
EPT - Raider	175QT/175UT	1.75	2.25	2.88	2.75	4.31	0.875	4.68	0.625	4.38
Baldor	F918/S918	1.75	2.25	2.88	2.75	4.31	0.875	4.88	0.625	4.69
Leeson	T618/TMQ618	1.75	2.25	2.88	2.75	4.31	0.875	4.44	0.625	3.99
Dodge/Tigear	Q175/S175	1.75	2.25	2.88	2.75	4.31	0.875	4.75	0.625	4.94

* for 56C frame

** Dimension shown is for the Reduced Diameter Shaft Option

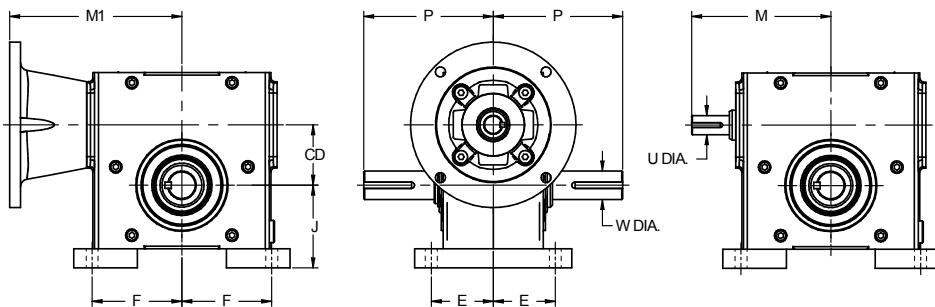
Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B051B/B051BM	1.97	2.34	3.19	3.00	4.69	1.000 **	5.20	0.750	6.34
Perfection-Predator	U21/UC21	2.06	2.34	3.19	3.00	4.69	1.000	5.13	0.625	4.35
Boston	F721B/721B	2.06	2.34	3.19	3.00	4.69	1.000	5.13	0.625	5.06
Grove - Old	TMQ1206/T1206	2.06	2.34	3.19	3.00	4.68	1.000	5.45	0.625	4.46
Grove - New	TMQ220/T220	2.06	2.34	3.19	3.00	4.68	1.000	4.82	0.625	4.46
Falk Omni Box	206WOM/206WO	2.06	2.34	3.19	3.00	4.68	1.000	5.45	0.625	4.46
Sterling	206AQ/206AR	2.06	2.34	3.19	3.00	4.68	1.000	5.45	0.625	4.46
Ohio	206MQ/206B	2.06	2.34	3.19	3.00	4.69	1.000	5.16	0.625	4.75
EPT - Raider	206QT/206UT	2.06	2.34	3.19	3.00	4.69	1.000	5.06	0.625	4.75
Baldor	F921/S921	2.06	2.34	3.19	3.00	4.69	1.000	4.85	0.625	4.40
Leeson	T621/TMQ621	2.06	2.34	3.19	3.00	4.68	1.000	4.85	0.625	4.40
Dodge/Tigear	Q200/S200	2.06	2.34	3.19	3.00	4.69	1.000	5.12	0.625	5.00

* for 56C/143TC frames

** Dimension shown is for the Reduced Diameter Shaft Option



UNITS WITH HORIZONTAL BASE (Continued)



Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B061B/B061BM	2.38	2.44	3.53	3.25	5.09	1.125	5.47	0.750	6.77
Perfection-Predator	U24/UC24	2.38	2.44	3.53	2.50	5.09	1.125	5.75	0.750	4.75
Boston	F724B/724B	2.38	2.44	3.53	3.25	5.09	1.125	5.75	0.750	5.25
Grove - Old	TMQ1238/T1238	2.38	2.44	3.53	3.25	5.14	1.125	6.05	0.750	4.63
Grove - New	TMQ224/T224	2.38	2.44	3.53	3.25	5.14	1.125	5.51	0.750	4.63
Falk Omni Box	238WOM/238WO	2.38	2.44	3.53	3.25	5.14	1.125	6.05	0.750	4.63
Sterling	238AQ/238AR	2.38	2.44	3.53	3.25	5.14	1.125	6.05	0.750	4.63
Ohio	238MQ/238B	2.38	2.44	3.53	3.25	5.09	1.125	5.81	0.750	5.25
EPT - Raider	238Q/238U	2.38	2.44	3.53	3.25	5.08	1.125	5.44	0.750	5.06
Baldor	F924/S924	2.38	2.44	3.53	3.25	5.09	1.125	5.51	0.750	4.63
Leeson	T624/TMQ624	2.38	2.44	3.53	3.25	5.09	1.125	5.51	0.750	4.63

* for 56C/143TC frames

Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B081B/B081BM	2.625	2.63	4.00	3.69	5.63	1.125 **	7.23	1.188	7.24
Perfection-Predator	U26/UC26	2.625	2.63	4.00	3.69	5.63	1.125	6.31	0.750	5.48
Boston	F726B/726B	2.625	2.63	4.00	3.69	5.63	1.125	6.31	0.750	5.75
Grove - Old	TMQ1262/T1262	2.625	2.63	4.00	3.69	5.63	1.250	6.57	0.750	5.19
Grove - New	TMQ226/T226	2.625	2.63	4.00	3.69	5.63	1.250	6.07	0.750	5.19
Falk Omni Box	262WOM/262WO	2.625	2.63	4.00	3.69	5.63	1.250	6.57	0.750	5.19
Sterling	262AQ/262AR	2.625	2.63	4.00	3.69	5.63	1.250	6.57	0.750	5.19
Ohio	262MQ/262B	2.625	2.63	4.00	3.69	5.63	1.125	6.31	0.750	5.62
EPT - Raider	262QT/262UT	2.625	2.63	4.00	3.69	5.63	1.125	6.23	0.750	5.69
Baldor	F926/S926	2.625	2.63	4.00	3.69	5.62	1.125	6.31	0.750	5.75
Leeson	T626/BTQ626	2.625	2.63	4.00	3.69	5.63	1.125	6.11	0.750	5.23
Dodge/Tigear	262	2.625	2.63	4.00	3.69	5.63	1.125	6.32	0.750	6.63

* for 56C/143 TC frame ** Dimension shown is for the Reduced Diameter Shaft Option

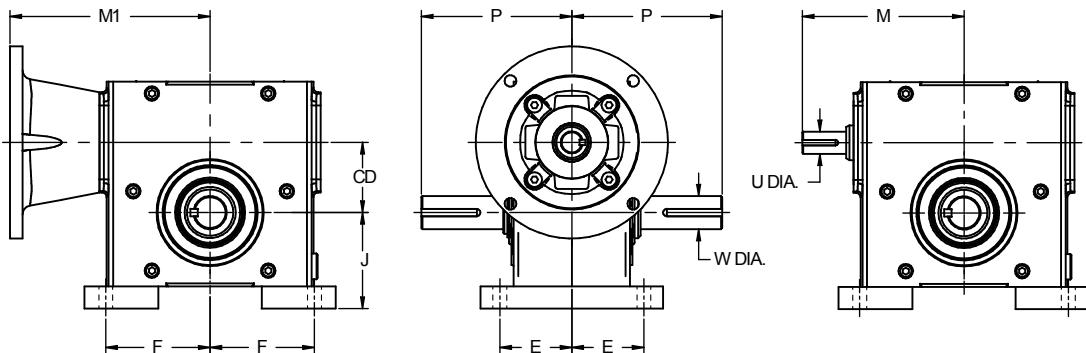
Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B091B/B091BM	3.00	2.94	4.22	4.00	6.75	1.250 **	7.63	1.188	7.64
Grove - Old	TMQ1300/T1300	3.00	2.94	4.22	4.00	6.75	1.250	7.25	0.875	5.69
Grove - New	TMQ230/T230	3.00	2.94	4.22	4.00	6.75	1.250	6.57	0.875	5.69
Falk Omni Box	300WOM/300WO	3.00	2.94	4.22	4.00	6.75	1.250	7.25	0.875	5.69
Sterling	300AQ/300AR	3.00	2.94	4.22	4.00	6.75	1.250	7.25	0.875	5.69
Ohio	300MQ/300B	3.00	2.94	4.22	4.00	6.75	1.250	7.50	0.875	6.25
EPT - Raider	300QT/300UT	3.00	2.94	4.22	4.13	6.75	1.250	7.50	0.875	6.25

* for 56C/143 TC frame ** Dimension shown is for the Reduced Diameter Shaft Option

Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B101B/B101BM	3.25	3.06	4.75	4.38	7.06	1.375 **	7.64	1.188	7.72
Perfection-Modular	H32/HG32	3.25	3.06	4.75	4.38	5.44	1.250	6.88	0.875	5.60
Perfection-Predator	U32/UG32	3.25	3.06	4.75	4.38	7.06	1.375	7.44	0.875	6.22
Boston	F732/732B	3.25	3.06	4.75	4.38	7.06	1.375	7.44	0.875	7.00
Grove - Old	TMQ232/T232	3.25	3.06	4.75	4.38	7.06	1.500	6.76	0.875	6.31
Grove - New	TMQ230/T230	3.25	3.06	4.75	4.38	7.06	1.500	6.76	0.875	5.88
Falk Omni Box	300WOM/300WO	3.25	3.06	4.75	4.38	7.06	1.500	6.76	0.875	6.31
Sterling	300AQ/300AR	3.25	3.06	4.75	4.38	7.06	1.500	6.76	0.875	6.31
Baldor	F932/S932	3.25	3.06	4.75	4.38	7.06	1.375	7.44	0.875	7.00
Leeson	T623/TMQ632	3.25	3.06	4.75	4.38	7.06	1.375	7.44	0.875	6.56
EPT - Raider	325UT/325U	3.25	3.06	4.75	4.38	7.06	1.375	7.06	0.875	7.00
Ohio	325MQ/325U	3.25	3.06	4.75	4.38	7.06	1.375	7.19	0.875	6.47
Winsmith	930MDN/930DN	3.00	3.06	4.75	4.38	5.88	1.375	7.00	1.000	5.56

* for 180 frame

** Dimension shown is for the Reduced Diameter Shaft Option

UNITS WITH HORIZONTAL BASE (Continued)

Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B111B/B111BM	3.54	3.06	4.75	5.00	7.75	1.625 **	8.39	1.188	8.50
Dodge/Tigear	350	3.50	3.06	4.75	5.00	7.06	1.500	7.19	0.875	7.41

* for 180 frame

** Dimension shown is for the Reduced Diameter Shaft Option

Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B111B/B111BM	3.54	3.06	4.75	5.00	7.75	1.625 **	8.39	1.188	8.50
Perfection-Modular	H38/HG38	3.75	3.50	5.19	4.81	6.69	1.500	7.50	1.000	6.10
Hub City	381/384	3.75	2.53	3.94	4.77	6.69	1.500	7.50	1.000	6.63
Perfection-Predator	U38/UG38	3.75	3.50	5.19	4.81	7.75	1.625	8.38	1.000	6.73
Boston	F738B/738B	3.75	3.50	5.19	4.81	7.75	1.625	8.38	1.000	7.50
EPT-Raider	375U/375Q	3.75	3.50	5.19	4.81	7.75	1.625	7.84	1.000	7.29
EPT Cobra	38U/38Q	3.75	2.38	3.38	4.50	6.81	1.625	7.84	1.000	7.25
Winsmith	935MDN/935/DN	3.50	3.50	5.19	4.81	7.00	1.750	7.38	1.000	5.81
Leeson	T638/TMQ638	3.75	3.50	5.19	4.81	7.75	1.625	8.38	1.000	7.06

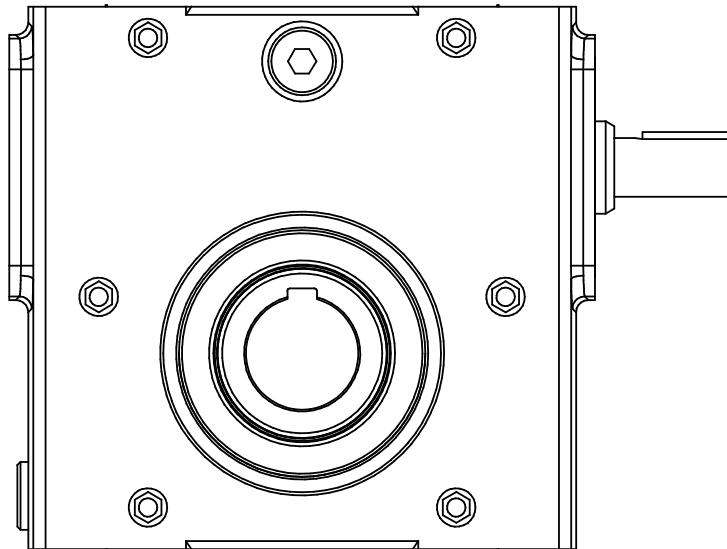
* for 180 frame

** Dimension shown is for the Reduced Diameter Shaft Option

Manufacturer	Unit	CD	E	F	J	P	W Dia.	M	U Dia.	M1*
Series B	B111B/B111BM	3.54	3.06	4.75	5.00	7.75	1.875	8.39	1.188	8.50
Winsmith	943MDN/943DN	4.25	2.88	4.88	5.00	8.00	2.000	8.19	1.250	6.63
Alling-Lander	42Z/42ZF	4.25	2.88	4.88	5.00	7.50	1.750	9.57	1.250	7.21
Ohio	UMQ2425U2425	4.25	3.75	6.13	5.44	8.06	1.750	9.56	1.125	7.21
Grove - Old	T242/TMQ242	4.25	3.81	5.56	5.44	8.12	1.875	9.57	1.250	7.21
Grove - New	T242/TMQ242	4.25	3.81	5.56	5.44	8.12	1.875	9.57	1.250	6.45
Falk - Omni Box	425WB/425WBM	4.25	3.81	5.56	5.44	8.12	1.875	9.57	1.250	7.21
Grove - OE	42Z/42ZF	4.25	2.88	4.88	5.00	7.50	1.750	9.57	1.250	7.21

* for 180 frame





SERIES B

RATINGS

 Cone Drive
BY TIMKEN



SINGLE REDUCTION - RATINGS AT 1750 RPM INPUT

RATIO	OUTPUT SPEED RPM	CAPACITY	SIZE OF UNIT								
			B02	B03	B04	B05	B06	B08	B09	B10	B11
5	350	Input Power, HP (mech)	1.76	2.51	3.45	4.62	7.47	9.62	13.6	16.6	20.6
		Input Power, HP (therm)	1.76	2.51	3.45	4.62	7.47	9.62	12.7	16.4	17.6
		Output Torque, lb-in (mech)	275	401	559	757	1240	1610	2280	2800	3500
		Efficiency, %	87	89	90	91	92	93	93	94	94
7.5	233	Input Power, HP (mech)	1.30	1.85	2.54	3.39	5.45	6.97	9.76	11.9	14.7
		Input Power, HP (therm)	1.30	1.85	2.54	3.39	5.45	6.97	9.76	11.9	14.2
		Output Torque, lb-in (mech)	296	433	603	818	1340	1720	2430	2970	3700
		Efficiency, %	84	86	88	89	91	92	92	93	93
10	175	Input Power, HP (mech)	1.05	1.47	1.84	2.63	4.17	4.98	6.99	8.93	11.0
		Input Power, HP (therm)	1.05	1.47	1.84	2.63	4.17	4.98	6.99	8.93	11.0
		Output Torque, lb-in (mech)	308	446	570	830	1340	1620	2290	2950	3660
		Efficiency, %	82	84	86	88	89	90	91	92	92
15	117	Input Power, HP (mech)	0.79	1.11	1.51	2.02	3.26	4.13	5.79	7.18	8.93
		Input Power, HP (therm)	0.79	1.11	1.51	2.02	3.26	4.13	5.79	7.18	8.93
		Output Torque, lb-in (mech)	325	479	674	919	1520	1950	2770	3460	4330
		Efficiency, %	76	80	82	84	87	88	89	89	90
20	88	Input Power, HP (mech)	0.62	0.88	1.20	1.60	2.59	3.34	4.70	5.74	7.15
		Input Power, HP (therm)	0.62	0.88	1.20	1.60	2.59	3.34	4.70	5.74	7.00
		Output Torque, lb-in (mech)	319	476	675	927	1550	2030	2900	3570	4480
		Efficiency, %	71	75	78	80	83	84	86	86	87
25	70	Input Power, HP (mech)	0.56	0.79	1.08	1.44	2.32	2.72	3.81	4.65	5.76
		Input Power, HP (therm)	0.56	0.79	1.08	1.44	2.32	2.72	3.81	4.65	5.71
		Output Torque, lb-in (mech)	340	510	726	1000	1680	1990	2840	3490	4370
		Efficiency, %	67	72	75	77	80	81	83	83	84
30	58	Input Power, HP (mech)	0.49	0.67	0.90	1.20	1.91	2.45	3.43	4.18	5.20
		Input Power, HP (therm)	0.49	0.67	0.90	1.20	1.91	2.45	3.43	4.18	5.20
		Output Torque, lb-in (mech)	332	494	700	961	1610	2100	3010	3700	4640
		Efficiency, %	63	68	72	74	78	79	81	82	83
40	44	Input Power, HP (mech)	0.38	0.51	0.68	0.89	1.41	1.79	2.49	3.03	3.75
		Input Power, HP (therm)	0.38	0.51	0.68	0.89	1.41	1.79	2.49	3.03	3.75
		Output Torque, lb-in (mech)	298	444	630	866	1450	1890	2710	3340	4180
		Efficiency, %	55	60	64	67	72	73	75	76	77
50	35	Input Power, HP (mech)	0.33	0.44	0.58	0.75	1.16	1.46	2.01	2.43	2.99
		Input Power, HP (therm)	0.33	0.44	0.58	0.75	1.16	1.46	2.01	2.43	2.99
		Output Torque, lb-in (mech)	291	434	610	832	1380	1790	2550	3140	3920
		Efficiency, %	49	54	58	62	66	68	70	72	73
60	29	Input Power, HP (mech)	0.29	0.38	0.50	0.64	0.98	1.24	1.70	2.05	2.52
		Input Power, HP (therm)	0.29	0.38	0.50	0.64	0.98	1.24	1.70	2.05	2.52
		Output Torque, lb-in (mech)	272	404	570	782	1300	1700	2430	2990	3740
		Efficiency, %	43	49	53	57	61	64	66	67	69

NOTE: Thermal rating for units driven by fan cooled motor
Ratings assumes units are fitted with standard output shafts

DOUBLE REDUCTION - RATINGS AT 1750 RPM INPUT

RATIO:	OUTPUT SPEED RPM	CAPACITY	SIZE OF UNIT					
			B0520	B0620	B0820	B0920	B1020	B1120
100	18	Input Power HP (mech)	0.59	0.98	1.23	1.73	2.10	2.61
		Output Torque lb-in (mech)	1430	2400	3130	4490	5540	6960
		Full Load Efficiency, %	67	68	71	72	73	74
150	12	Input Power, HP (mech.)	0.46	0.75	0.93	1.32	1.59	1.98
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	62	64	67	68	70	71
200	8.8	Input Power, HP (mech.)	0.36	0.60	0.73	1.03	1.24	1.54
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	59	61	65	66	67	68
300	5.8	Input Power, HP (mech.)	0.27	0.44	0.53	0.74	0.89	1.11
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	54	55	60	61	62	63
400	4.4	Input Power, HP (mech.)	0.22	0.36	0.43	0.60	0.72	0.89
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	49	50	55	56	58	59
500	3.5	Input Power HP (mech)	0.18	0.30	0.35	0.50	0.59	0.74
		Output Torque lb-in (mech)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	46	48	53	54	56	57
600	2.9	Input Power, HP (mech.)	0.17	0.28	0.32	0.45	0.53	0.66
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	43	44	49	50	52	53
800	2.2	Input Power, HP (mech.)	0.15	0.24	0.27	0.38	0.45	0.55
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	37	37	44	44	47	47
1000	1.8	Input Power, HP (mech.)	0.13	0.22	0.24	0.34	0.39	0.49
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	32	33	39	40	42	43
1200	1.5	Input Power, HP (mech.)	0.13	0.21	0.22	0.31	0.36	0.45
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	29	29	35	36	38	39
1500	1.2	Input Power, HP (mech.)	0.08	0.13	0.15	0.21	0.25	0.30
		Output Torque, lb-in (mech.)	1240	2070	2700	3860	4760	5970
		Full Load Efficiency, %	28	29	33	34	36	36
1800	1.0	Input Power, HP (mech.)	0.08	0.12	0.14	0.19	0.23	0.28
		Output Torque, lb-in (mech.)	1240	2070	2700	3860	4760	5970
		Full Load Efficiency, %	25	26	30	31	33	33
2400	0.7	Input Power, HP (mech.)	0.07	0.11	0.12	0.17	0.19	0.24
		Output Torque, lb-in (mech.)	1240	2070	2700	3860	4760	5970
		Full Load Efficiency, %	21	22	26	27	29	29
3000	0.6	Input Power, HP (mech.)	0.06	0.10	0.11	0.15	0.17	0.21
		Output Torque, lb-in (mech.)	1240	2070	2700	3860	4760	5970
		Full Load Efficiency, %	19	19	23	24	26	26
3600	0.5	Input Power, HP (mech.)	0.06	0.09	0.10	0.14	0.16	0.20
		Output Torque, lb-in (mech.)	1240	2070	2700	3860	4760	5970
		Full Load Efficiency, %	16	17	21	21	23	23

NOTE: Ratings assumes units are fitted with standard output shafts



SINGLE REDUCTION - RATINGS AT 1150 RPM INPUT

RATIO:	OUTPUT SPEED RPM	CAPACITY	SIZE OF UNIT								
			B02	B03	B04	B05	B06	B08	B09	B10	B11
5	230	Input Power, HP (mech)	1.33	1.91	2.63	3.53	5.73	7.39	10.4	12.8	15.9
		Input Power, HP (therm)	1.33	1.91	2.63	3.53	5.73	7.39	10.4	12.8	15.9
		Output Torque, lb-in (mech)	320	468	652	883	1450	1880	2670	3280	4090
		Efficiency, %	88	89	90	91	92	93	93	94	94
7.5	153	Input Power, HP (mech)	0.97	1.39	1.91	2.57	4.14	5.30	7.43	9.05	11.2
		Input Power, HP (therm)	0.97	1.39	1.91	2.57	4.14	5.30	7.43	9.05	11.2
		Output Torque, lb-in (mech)	341	499	696	944	1540	1990	2810	3440	4280
		Efficiency, %	85	87	88	89	91	91	92	92	93
10	115	Input Power, HP (mech)	0.78	0.98	1.20	1.84	2.79	3.27	4.60	6.76	8.37
		Input Power, HP (therm)	0.78	0.98	1.20	1.84	2.79	3.27	4.60	6.76	8.37
		Output Torque, lb-in (mech)	353	455	571	883	1370	1620	2290	3380	4200
		Efficiency, %	83	85	87	88	89	90	91	91	92
15	77	Input Power, HP (mech)	0.58	0.82	1.01	1.51	2.32	2.72	3.82	5.41	6.73
		Input Power, HP (therm)	0.58	0.82	1.01	1.51	2.32	2.72	3.82	5.41	6.73
		Output Torque, lb-in (mech)	369	543	684	1040	1650	1950	2760	3940	4940
		Efficiency, %	78	81	83	84	86	87	88	89	89
20	58	Input Power, HP (mech)	0.46	0.65	0.89	1.20	1.94	2.50	3.53	4.32	5.38
		Input Power, HP (therm)	0.46	0.65	0.89	1.20	1.94	2.50	3.53	4.32	5.38
		Output Torque, lb-in (mech)	360	538	763	1050	1760	2290	3290	4050	5080
		Efficiency, %	72	76	78	80	83	84	85	86	86
25	46	Input Power, HP (mech)	0.41	0.58	0.80	1.07	1.74	2.04	2.86	3.49	4.33
		Input Power, HP (therm)	0.41	0.58	0.80	1.07	1.74	2.04	2.86	3.49	4.33
		Output Torque, lb-in (mech)	383	574	818	1130	1900	2240	3200	3940	4940
		Efficiency, %	68	72	75	77	80	80	82	82	83
30	38	Input Power, HP (mech)	0.35	0.49	0.67	0.89	1.43	1.78	2.49	3.14	3.90
		Input Power, HP (therm)	0.35	0.49	0.67	0.89	1.43	1.78	2.49	3.14	3.90
		Output Torque, lb-in (mech)	373	555	786	1080	1810	2300	3270	4170	5230
		Efficiency, %	65	69	72	74	77	78	80	81	82
40	29	Input Power, HP (mech)	0.27	0.37	0.50	0.66	1.05	1.34	1.87	2.27	2.82
		Input Power, HP (therm)	0.27	0.37	0.50	0.66	1.05	1.34	1.87	2.27	2.82
		Output Torque, lb-in (mech)	333	497	705	969	1630	2120	3040	3740	4700
		Efficiency, %	56	61	64	67	71	72	74	75	76
50	23	Input Power, HP (mech)	0.24	0.32	0.42	0.55	0.86	1.09	1.51	1.83	2.25
		Input Power, HP (therm)	0.24	0.32	0.42	0.55	0.86	1.09	1.51	1.83	2.25
		Output Torque, lb-in (mech)	325	484	681	930	1540	2010	2860	3510	4390
		Efficiency, %	50	55	58	61	65	67	69	70	71
60	19	Input Power, HP (mech)	0.21	0.28	0.36	0.47	0.73	0.92	1.27	1.54	1.90
		Input Power, HP (therm)	0.21	0.28	0.36	0.47	0.73	0.92	1.27	1.54	1.90
		Output Torque, lb-in (mech)	303	450	636	872	1460	1900	2710	3340	4180
		Efficiency, %	45	50	53	56	60	62	65	66	67

NOTE: Thermal rating for units driven by fan cooled motor
 Ratings assumes units are fitted with standard output shafts

DOUBLE REDUCTION - RATINGS AT 1150 RPM INPUT

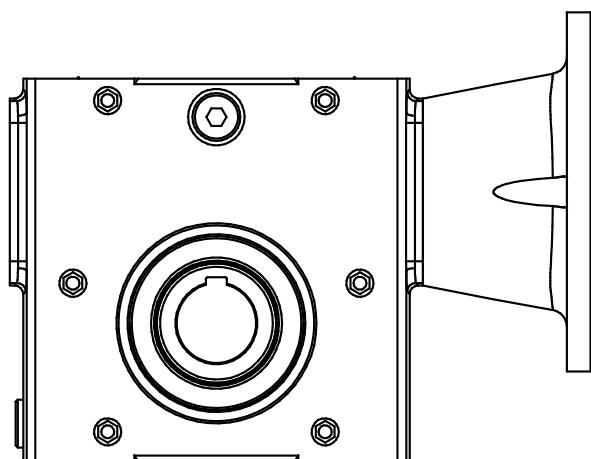
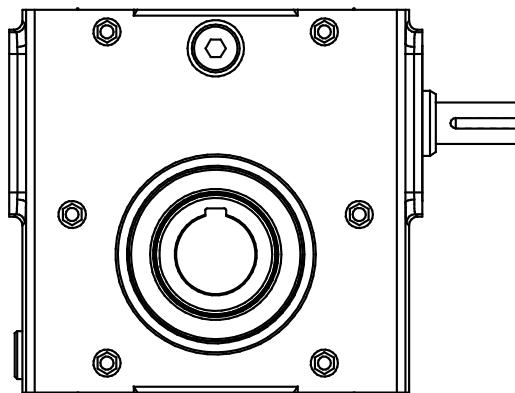
RATIO:	OUTPUT SPEED RPM	CAPACITY	SIZE OF UNIT					
			B0520	B0620	B0820	B0920	B1020	B1120
100	12	Input Power HP (mech)	0.43	0.71	0.89	1.26	1.53	1.91
		Output Torque lb-in (mech)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	65	67	69	70	72	72
150	7.7	Input Power, HP (mech.)	0.31	0.51	0.63	0.89	1.08	1.34
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	61	62	66	66	68	68
200	5.8	Input Power, HP (mech.)	0.24	0.40	0.49	0.70	0.84	1.05
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	58	59	63	64	65	66
300	3.8	Input Power, HP (mech.)	0.18	0.29	0.36	0.51	0.61	0.76
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	53	54	58	59	60	61
400	2.9	Input Power, HP (mech.)	0.15	0.24	0.29	0.41	0.49	0.61
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	48	49	53	54	56	56
500	2.3	Input Power HP (mech)	0.12	0.20	0.24	0.34	0.41	0.51
		Output Torque lb-in (mech)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	46	47	51	52	54	54
600	1.9	Input Power, HP (mech.)	0.11	0.18	0.22	0.31	0.36	0.46
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	42	43	48	48	50	50
800	1.4	Input Power, HP (mech.)	0.10	0.16	0.18	0.26	0.31	0.38
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	36	37	42	43	45	45
1000	1.2	Input Power, HP (mech.)	0.09	0.14	0.16	0.23	0.27	0.34
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	32	33	38	39	41	41
1200	1.0	Input Power, HP (mech.)	0.08	0.14	0.15	0.21	0.25	0.31
		Output Torque, lb-in (mech.)	1550	2600	3390	4870	6000	7540
		Full Load Efficiency, %	28	29	34	35	37	37
1500	0.8	Input Power, HP (mech.)	0.06	0.09	0.11	0.15	0.18	0.22
		Output Torque, lb-in (mech.)	1240	2070	2700	3860	4760	5970
		Full Load Efficiency, %	27	28	31	32	33	33
1800	0.6	Input Power, HP (mech.)	0.05	0.08	0.10	0.14	0.16	0.20
		Output Torque, lb-in (mech.)	1240	2070	2700	3860	4760	5970
		Full Load Efficiency, %	24	25	28	29	30	30
2400	0.5	Input Power, HP (mech.)	0.05	0.07	0.08	0.12	0.14	0.17
		Output Torque, lb-in (mech.)	1240	2070	2700	3860	4760	5970
		Full Load Efficiency, %	21	21	25	25	27	27
3000	0.4	Input Power, HP (mech.)	0.04	0.07	0.07	0.10	0.12	0.15
		Output Torque, lb-in (mech.)	1240	2070	2700	3860	4760	5970
		Full Load Efficiency, %	18	19	22	22	24	24
3600	0.3	Input Power, HP (mech.)	0.04	0.06	0.07	0.10	0.11	0.14
		Output Torque, lb-in (mech.)	1240	2070	2700	3860	4760	5970
		Full Load Efficiency, %	16	16	20	20	22	22

NOTE: Ratings assumes units are fitted with standard output shafts



50 | SERIES B

Sales: 1-888-994-2663 | Sales Fax: 1-888-907-2663 | Traverse City, MI 49684



SERIES B

KIT SELECTION

	B02	B03	B04
RATIO	INCH BORE	INCH BORE	INCH BORE
5:1	B02-05-A	B03-05-A	B04-05-A
7.5:1	B02-07-A	B03-07-A	B04-07-A
10:1	B02-10-A	B03-10-A	B04-10-A
15:1	B02-15-A	B03-15-A	B04-15-A
20:1	B02-20-A	B03-20-A	B04-20-A
25:1	B02-25-A	B03-25-A	B04-25-A
30:1	B02-30-A	B03-30-A	B04-30-A
40:1	B02-40-A	B03-40-A	B04-40-A
50:1	B02-50-A	B03-50-A	B04-50-A
60:1	B02-60-A	B03-60-A	B04-60-A

	B05	B06	B08
RATIO	INCH BORE	INCH BORE	INCH BORE
5:1	B05-05-A	B06-05-A	B08-05-A
7.5:1	B05-07-A	B06-07-A	B08-07-A
10:1	B05-10-A	B06-10-A	B08-10-A
15:1	B05-15-A	B06-15-A	B08-15-A
20:1	B05-20-A	B06-20-A	B08-20-A
25:1	B05-25-A	B06-25-A	B08-25-A
30:1	B05-30-A	B06-30-A	B08-30-A
40:1	B05-40-A	B06-40-A	B08-40-A
50:1	B05-50-A	B06-50-A	B08-50-A
60:1	B05-60-A	B06-60-A	B08-60-A

	B09	B10	B11
RATIO	INCH BORE	INCH BORE	INCH BORE
5:1	B09-05-A	B10-05-A	B11-05-A
7.5:1	B09-07-A	B10-07-A	B11-07-A
10:1	B09-10-A	B10-10-A	B11-10-A
15:1	B09-15-A	B10-15-A	B11-15-A
20:1	B09-20-A	B10-20-A	B11-20-A
25:1	B09-25-A	B10-25-A	B11-25-A
30:1	B09-30-A	B10-30-A	B11-30-A
40:1	B09-40-A	B10-40-A	B11-40-A
50:1	B09-50-A	B10-50-A	B11-50-A
60:1	B09-60-A	B10-60-A	B11-60-A

NEMA C FACE MOTOR ADAPTOR KITS

Single Stage Units

MOTOR FRAME	UNIT SIZE									
	B0211	B0311	B0411	B0511	B0611	B0811	B0911	B1011	B1111	
56C	C	T	T	T	T	Q	Q	R	V	
143TC/145TC	W	V	V	V	V	R	R	R	V	
182TC/184TC	X	X	X	X	T	T	T	T	X	
213TC/215TC					V	V	V	V		
Kit Number	B02	<input type="checkbox"/>	B03/04	<input type="checkbox"/>	B03/04	<input type="checkbox"/>	B05	<input type="checkbox"/>	B06	<input type="checkbox"/>

Double Reduction Units

UNIT SIZE						
B02	B0521	B0621	B0821	B0921	B1011	B1121
W	W	V	V	V	V	V
		X	X	X	X	X

INPUT SHAFT KITS

UNIT SIZE	INPUT SHAFT TYPE
	INCH
B02	B0210-X
B03	B03/0610-X
B04	B03/0610-X
B05	B03/0610-X
B06	B03/0610-X
B08	B08/1010-X
B09	B08/1010-X
B10	B08/1010-X
B11	B1110-X

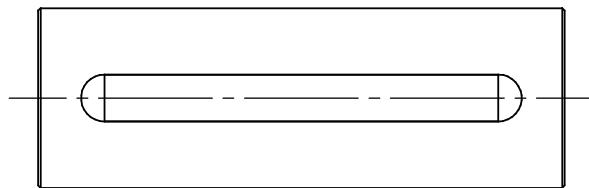
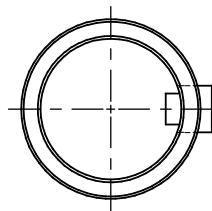
SOLID OUTPUT SHAFT KITS

UNIT SIZE	INCH SINGLE EXTENDED	INCH DOUBLE EXTENDED
B02	B02-0N	B02-0P
B03	B03-0N	B03-0P
B04	B04-0N	B04-0P
B05	B05-0N	B05-0P
B06	B06-0N	B06-0P
B08	B08-0N	B08-0P
B09	B09-0N	B09-0P
B10	B10-0N	B10-0P
B11	B11-0N	B11-0P

UNIT SIZE	REDUCED DIAMETER OUTPUT SHAFT KITS	
	INCH SINGLE EXTENDED	INCH DOUBLE EXTENDED
B02	B02-0Q	B02-0R
B04	B04-0Q	B04-0R
B05	B05-0Q	B05-0R
B08	B08-0Q	B08-0R
B09	B09-0Q	B09-0R
B10	B10-0Q	B10-0R
B11	B11-0Q	B11-0R

BOLT ON BASE KITS

UNIT SIZE	STANDARD BASE KITS		
	HORIZONTAL BASE	VERTICAL BASE (HIGH)	VERTICAL BASE (LOW)
B02	B02-BE	B02-HE	B02-LE
B03	B03-BE	B03-HE	B03-LE
B04	B04-BE	B04-HE	B04-LE
B05	B05-BE	B05-HE	B05-LE
B06	B06-BE	B06-HE	B06-LE
B08	B08-BE	B08-HE	B08-LE
B09	B09-BE	B09-HE	B09-LE
B10	B10-BE	B10-HE	B10-LE
B11	B11-BE	B11-HE	B11-LE

SHAFT MOUNT BUSHING KITS**Inch Series**

UNIT SIZE	SHAFT DIAMETER (in)	SHAFT KEYSEAT (in)	KIT NUMBER
B02	5/8	3/16 x 1/16 x 3	B02-EB
B03	5/8	3/16 x 1/16 x 3	B03-EB
	7/8	3/16 x 1/16 x 3	B03-FB
B04	7/8	3/16 x 1/16 x 3.16	B04-EB
	1	1/4 x 3/32 x 3.15	B04-FB
	1-1/8	1/4 x 3/32 x 3.15	B04-GB
	1-1/4	1/4 x 3/32 x 3.15	B04-JB
B05	1	1/4 x 3/32 x 3.15	B05-EB
	1-1/8	1/4 x 3/32 x 3.15	B05-FB
	1-3/16	1/4 x 3/32 x 3.15	B05-GB
	1-1/4	1/4 x 3/32 x 3.15	B05-JB
B06	1	1/4 x 3/32 x 3.15	B06-EB
	1-1/8	1/4 x 3/32 x 3.15	B06-FB
	1-3/16	1/4 x 3/32 x 3.15	B06-GB
	1-1/4	1/4 x 3/32 x 3.15	B06-JB
B08	1-1/8	1/4 x 3/32 x 4.10	B08-EB
	1-7/16	3/8 x 1/8 x 4.10	B08-JB
B09	1-7/16	3/8 x 1/8 x 4.10	B09-EB
	1-3/4	3/8 x 1/8 x 4.10	B09-FB
	1-15/16	1/2 x 3/16 x 4.10	B09-GB
B10	1-7/16	3/8 x 1/8 x 4.50	B10-EB
	1-3/4	3/8 x 1/8 x 4.50	B10-FB
	1-15/16	1/2 x 3/16 x 4.50	B10-GB
B11	1-7/16	3/8 x 1/8 x 5.50	B11-EB
	2-3/16	1/2 x 3/16 x 5.50	B11-GB
	2-7/16	5/8 x 7/32 x 5.50	B11-JB

**OUTPUT BRACKET & TORQUE ARM MOUNT KITS**

UNIT SIZE	KIT NUMBERS	
	STANDARD OUTPUT BRACKET	STANDARD TORQUE ARM MOUNT
B02	B0210-BK	B0210-TA
B03	B0310-BK	B0310-TA
B04	B0410-BK	B0410-TA
B05	B0510-BK	B0510-TA
B06	B0610-BK	B0610-TA
B08	B0810-BK	B0810-TA
B09	B0910-BK	B0910-TA
B10	B1010-BK	B1010-TA
B11	B1110-BK	B1110-TA

DOUBLE REDUCTION UNIT SIZE BREAKDOWN

SIZE	B0521	B0621	B0821	B0921	B1021	B1121
PRIMARY	B0211	B0211	B041	B0411	B0511	B0511
SECONDARY	B0511	B0611	B0811	B0911	B1011	B1111

DOUBLE REDUCTION RATIO BREAKDOWN - TYPICAL FOR EACH SIZE

OVERALL DOUBLE REDUCTION RATIO	PRIMARY RATIO	SECONDARY RATIO
100	5	20
150	7.5	20
200	10	20
300	15	20
400	20	20
500	25	20
600	30	20
800	40	20
1000	50	20
1200	60	20
1500	25	60
1800	30	60
2400	40	60
3000	50	60
3600	60	60

DOUBLE REDUCTION UNIT MOUNTING / CONNECTING KIT

UNIT SIZE	KIT NUMBER
B0521	B02-05CON-A
B0621	B02-06CON-A
B0821	B04-09CON-A
B0921	B04-09CON-A
B1021	B05-11CON-A
B1121	B05-11CON-A

IMPORTANT

PRODUCT SAFETY INFORMATION

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

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

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

- 1) Fire/Explosion
 - (a) Oil mists and vapor are generated within gear units. It is therefore dangerous to use naked lights in the proximity of gearbox openings, due to the risk of fire or explosion.
 - (b) In the event of fire or serious overheating (over (over 570 °F (300 °C)), certain materials (rubber, plastics, etc.) may decompose and produce fumes. Care should be taken to avoid exposure to the fumes, and the remains of burned or overheated plastic/rubber materials should be handled with rubber gloves.
- 2) Guards - Rotating shafts and couplings must be guarded to eliminate the possibility of physical contact or entanglement of clothing. It should be of rigid construction and firmly secured.
- 3) Noise - High speed gearboxes and gearbox driven machinery may produce noise levels which are damaging to the hearing with prolonged exposure. Ear defenders should be provided for personnel in these circumstances. Reference should be made to state and federal regulations for reducing exposure of employed persons to noise.
- 4) Lifting - Where provided (on larger units) only the lifting points or eyebolts must be used for lifting operations (see maintenance manual or general arrangement drawing for lifting point positions). Failure to use the lifting points provided may result in personal injury and/or damage to the product or surrounding equipment. Keep clear of raised equipment.
- 5) Lubricants and Lubrication
 - (a) Prolonged contact with lubricants can be detrimental to the skin. The manufacturer's instruction must be followed when handling lubricants.
 - (b) The lubrication status of the equipment must be checked before commissioning. Read and carry out all instructions on the lubricant plate and in the installation and maintenance literature. Heed all warning tags. Failure to do so could result in mechanical damage and in extreme cases risk of injury to personnel.
- 6) Electrical Equipment - Observe hazard warnings on electrical equipment and isolate power before working on the gearbox or associated equipment, in order to prevent the machinery being started.
- 7) Installation, Maintenance and Storage
 - (a) In the event that equipment is to be held in storage, for a period exceeding 6 months, prior to installation or commissioning, we must be consulted regarding special preservation requirements. Unless otherwise agreed, equipment must be stored in a building protected from extremes of temperature and humidity to prevent deterioration.
The rotating components (gears and shafts) must be turned a few revolutions once a month (to prevent bearings brinelling).
 - (b) External gearbox components may be supplied with preservative materials applied, in the form of a "waxed" tape overwrap or wax film preservative. Gloves should be worn when removing these materials. The former can be removed manually, the latter using white spirit as a solvent.
Preservatives applied to the internal parts of the gear units do not require removal prior to operation.
 - (c) Installation must be performed in accordance with the manufacturer's instructions and be undertaken by suitably qualified personnel.
 - (d) Before working on a gearbox or associated equipment, ensure that the load has been removed from the system to eliminate the possibility of any movement of the machinery and isolate power supply. Where necessary, provide mechanical means to ensure the machinery cannot move or rotate. Ensure removal of such devices after work is complete.
 - (e) Ensure the proper maintenance of gearboxes in operation. Use only the correct tools and our approved spare parts for repair and maintenance. Consult the Maintenance Manual before dismantling or performing maintenance work.
- 8) Hot Surfaces and Lubricants
 - (a) During operation, gear units may become sufficiently hot to cause skin burns. Care must be taken to avoid accidental contact.
 - (b) After extended running the lubricant in gear units and lubrication systems may reach temperatures sufficient to cause burns. Allow equipment to cool before servicing or performing adjustments.
- 9) Selection and Design
 - (a) Where gear units provide a backstop facility, ensure that back-up systems are provided if failure of the backstop device would endanger personnel or result in damage.
 - (b) The driving and driven equipment must be correctly selected to ensure that the complete machinery installation will perform satisfactorily, avoiding system critical speeds, system torsional vibration, etc.
 - (c) The equipment must not be operated in an environment or at speeds, powers, torques or with external loads beyond those for which it was designed.
 - (d) As improvements in design are being made continually the contents of this catalog are not to be regarded as binding in detail, and drawings and capacities are subject to alterations without notice.

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

Any further information or clarification required may be obtained by contacting our Application Engineers.





GLOBAL LOCATIONS

NORTH AMERICA | EUROPE | ASIA

