

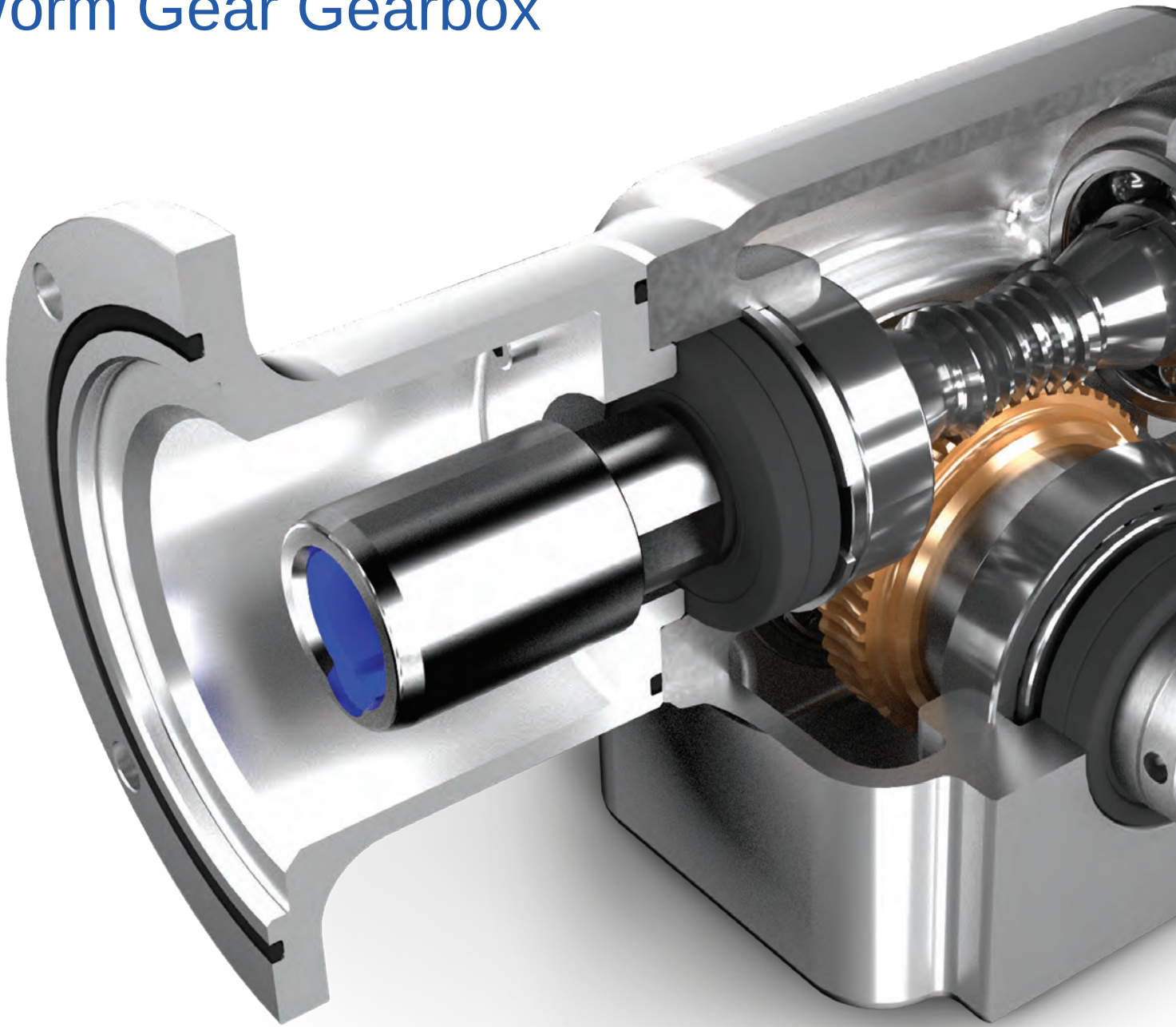
# STAINLESS Steel



Durable and long-lasting double enveloping gearing contained in a smooth and rounded stainless steel housing for easy cleaning.



# Cone Drive's Stainless Steel Worm Gear Gearbox





1

Industry leading 5 year warranty

2

Industry's only tested and rated IP-69K worm gear assembly

3

Cone Drive true double-enveloping worm gearing offering 300% shock load and long durable life

4

Non-fretting motor connection bushing to guarantee motor removal

5

Double input bearings to properly and accurately align the motor to the input. Eliminates input leaks, allows for correct worm and gear mesh for longer gear and bearing life. No limitations with mounting positions

6

Double input and output seals to prevent leaks or contamination in the gearbox

7

Smooth housing to eliminate bacteria growth

8

Manufactured complete in the USA



# WHY STAINLESS STEEL GEARBOXES?

Cone Drive stainless steel gearboxes offer features which cannot be found in today's market. The anti-fretting motor input shaft connection allows for easy removal of the motor. Two bearings on the input shaft ensure proper motor alignment of the motor to the gearbox. This also helps to eliminate leaks and allows the gearbox to be mounted in any position. Smooth rounded surfaces help to eliminate free-standing water and prevent bacteria growth.

## PRODUCT SPECIFICATIONS:

- **Sizes:** 39, 44, 50, 60, 76
- **Ancillary Options:** Output flange, side mount, base mounted feet
- **Motor Adaptation:** NEMA 56c through 180c
- **Input Options:** Solid or hollow output
- **Output Options:** Special bores or ratios available

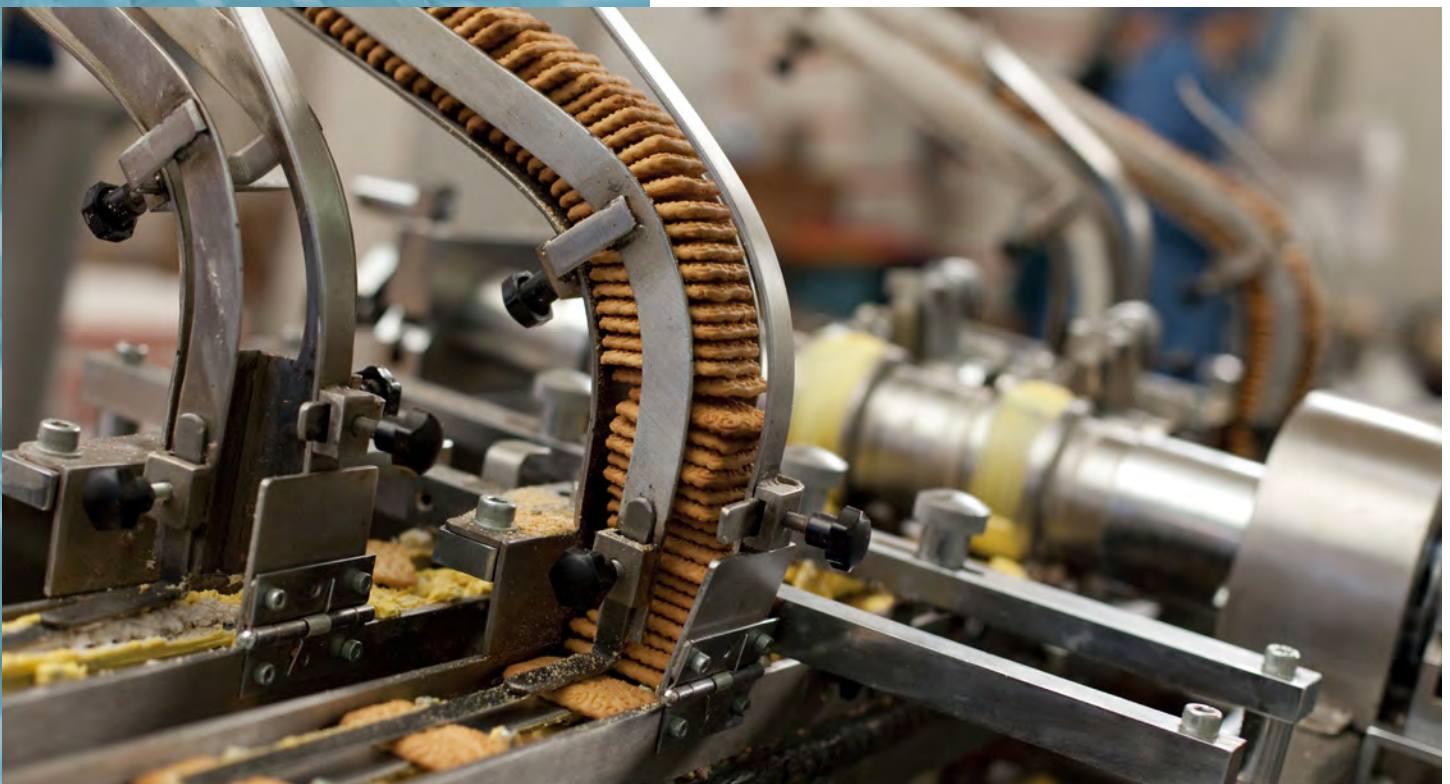
## DESIGNED TO HELP YOU MEET:

### GOVERNMENT REGULATION

- IP 69K designed / tested / proven
- 3A Certification pending
- NSF Certification pending
- EHEDG Certification pending

### IMPROVED UPTIME

- Non-fretting motor bushing for easy motor removal
- Double worm bearing support. Eliminates leaks by relying on worm alignment from the motor
- Double enveloping worm gearing: Multiple teeth in contact promotes longer life





# IP 69K

The Cone Drive stainless steel worm gearbox is the only IP69K independently tested and rated gearbox.



Our stainless steel gearboxes come with an industry leading 5-year warranty.

## Pending Certifications





## MARKETS / INDUSTRIES SERVED



### Food Packaging & Processing

Cone Drive has extensive experience in the Food Packaging & Processing Industry and understands the numerous applications requiring power transmission products. We offer a large range of ready-made product lines suitable for application in a diverse array of industries. These product lines provide flexible configuration options with exceptionally quick availability. The universal designs are also customizable to incorporate features that benefit integration into your system architecture.

#### Food & Beverage Applications

- Rotary Filling
- Separators & Mixers
- Extractors
- Aseptic Filling

### Meat & Poultry

#### Key Applications

- Skinning & De-boning
- Cutting
- Dicing
- Slicing
- Blending & Grinding
- Conveying



## Fruits & Vegetables

### Key Applications

- Sorters, Peelers, Splitters
- Corers, Pitters, De-stemmers
- Slicers & Dicers
- Blanchers & Cookers
- Conveying



## Seafood Processing

### Key Applications

- Heading & Gutting
- Battering, Breading & Frying
- Conveying



## Dairy

### Key Applications

- Pasteurizers & Homogenizers
- Conveying Systems
- Churning



## Pharmaceutical and Chemical

### Key Applications

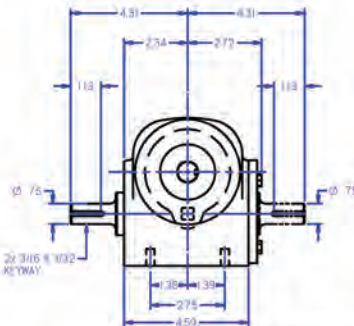
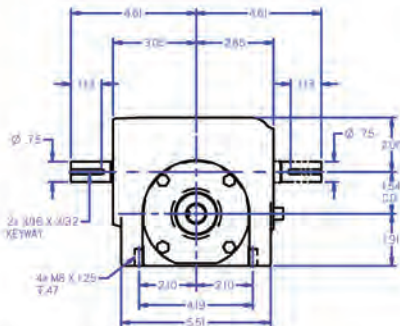
- Dry granulator mixers
- Wet chemical mixers
- Fluid fill stations
- Conveyor systems
- Blister packaging machines
- Cartoning equipment





# GEOMETRIES / SPECIFICATIONS for Size 39

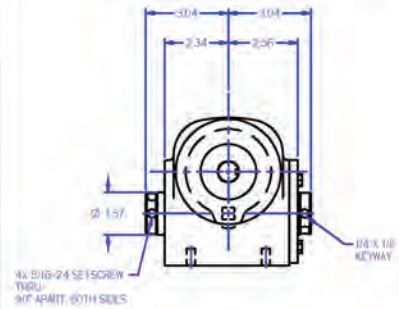
## REDUCER TYPE - LESS MOUNTING FEET



APPROX. SHIPPING WT: 25.8 lbs.

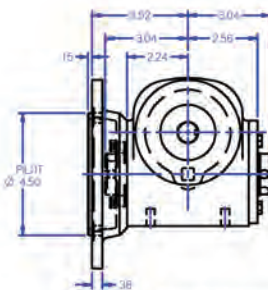
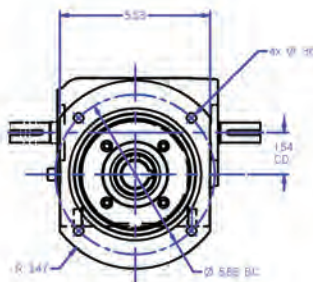
INCH SOLID		METRIC HOLLOW	
SHAFT DIA.	KEYWAY	SHAFT DIA.	KEYWAY
0.750	3/16 X 3/32	.38	6.0 X 3.0

## REDUCER TYPE - HOLLOW OUTPUT



APPROX. SHIPPING WT: 23.4 lbs.

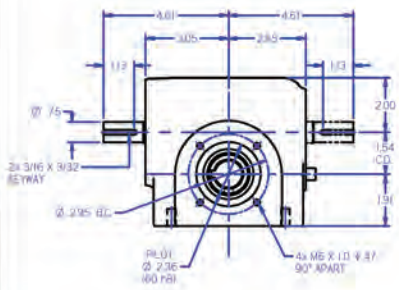
## REDUCER TYPE - FLANGE MOUNT



APPROX. SHIPPING WT: 25.6 lbs.

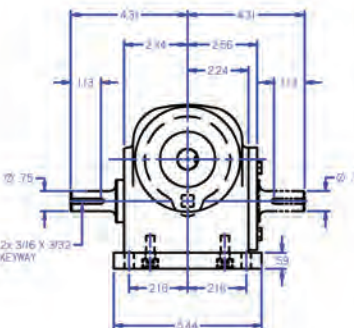
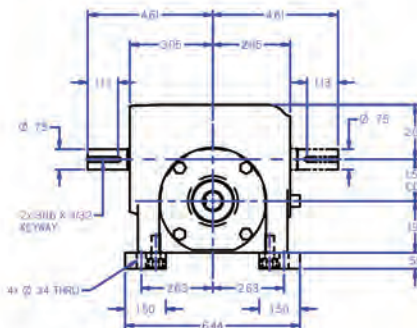
INCH HOLLOW		METRIC HOLLOW	
SHAFT DIA.	KEYWAY	SHAFT DIA.	KEYWAY
0.625	3/16 X 3/32		
0.875	3/16 X 3/32	.49	6.0 X 3.0
1.000	1/4 X 1/8		

## SIDE MOUNT



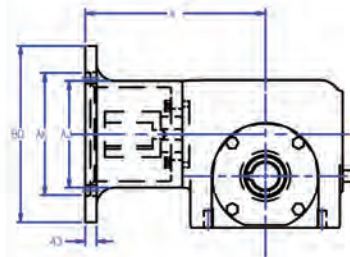
APPROX. SHIPPING WT: 23.1 lbs.

## REDUCER TYPE - FOOT MOUNT



APPROX. SHIPPING WT: 28.2 lbs.

## MOTOR READY



APPROX. SHIPPING WT: 28.0 lbs.

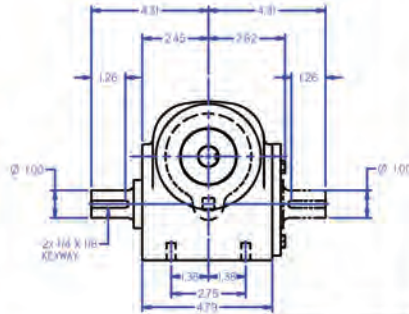
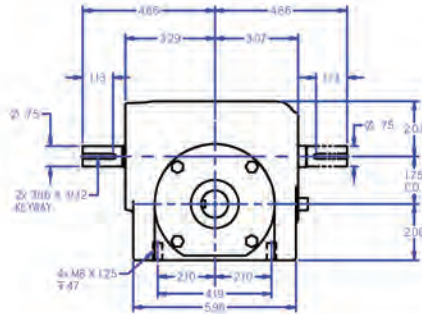
HEMA	A	B0	B8	A1
56C/140TC	6.64	6.50	6.50	5.88
180TC	7.43	9.00	8.50	7.25

ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED OTHERWISE  
STANDARD INCH SHAFTS SHOWN, ALTERNATIVES INCLUDING METRIC ARE OUTLINED IN CORRESPONDING TABLE  
SOLID SHAFT KEYS PROVIDED



# GEOMETRIES / SPECIFICATIONS for Size 44

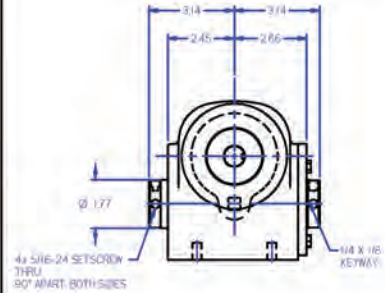
## REDUCER TYPE - LESS MOUNTING FEET



INCH SOLID		METRIC SOLID	
SHAFT DIA.	KEYWAY	SHAFT DIA.	KEYWAY
0.875	3/16 X 3/32	20	5.0 X 3.0
1.000	1/4 X 1/8		

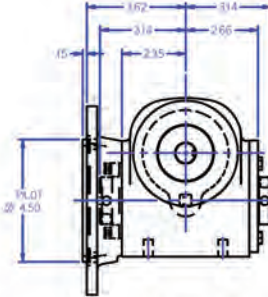
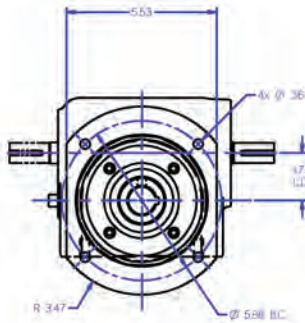
APPROX. SHIPPING WT: 29.8 lbs.

## REDUCER TYPE - HOLLOW OUTPUT



APPROX. SHIPPING WT: 27.9 lbs.

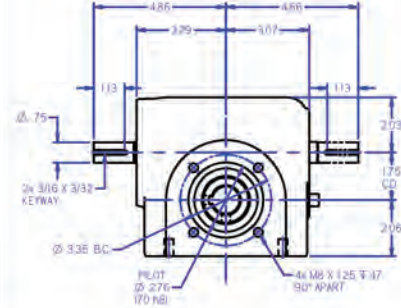
## REDUCER TYPE - FLANGE MOUNT



INCH HOLLOW		METRIC HOLLOW	
SHAFT DIA.	KEYWAY	SHAFT DIA.	KEYWAY
0.875	3/16 X 3/32		
1.000	1/4 X 1/8	20	5.0 X 3.0
1.125	1/4 X 1/8		
1.250	1/4 X 1/8		

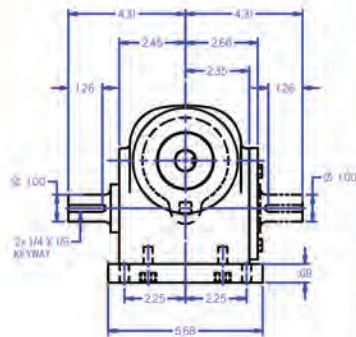
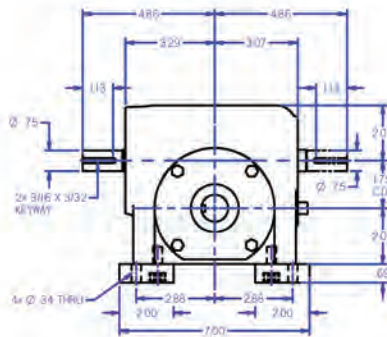
APPROX. SHIPPING WT: 29.3 lbs.

## SIDE MOUNT



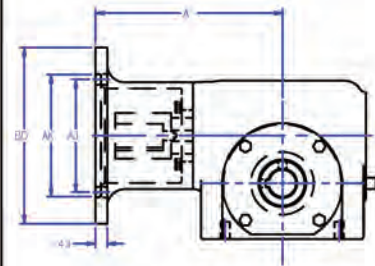
APPROX. SHIPPING WT: 25.3 lbs.

## REDUCER TYPE - FOOT MOUNT



APPROX. SHIPPING WT: 34.0 lbs.

## MOTOR READY



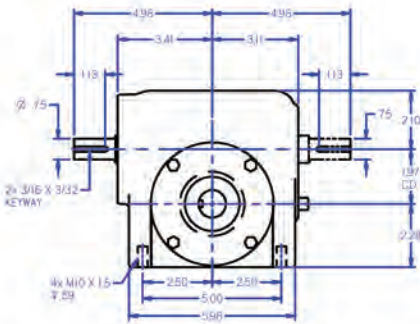
APPROX. SHIPPING WT: 33.2 lbs.

NEMA	A	B	A-C	A1
56C/110TC	6.88	6.50	4.50	5.88
180TC	7.68	9.00	6.50	7.25

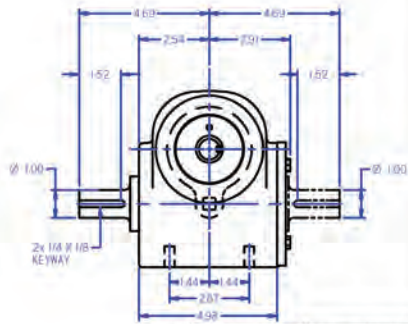
ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED OTHERWISE  
STANDARD INCH SHAFTS SHOWN, ALTERNATIVES INCLUDING METRIC ARE OUTLINED IN CORRESPONDING TABLE  
SOLID SHAFT KEYS PROVIDED

# GEOMETRIES / SPECIFICATIONS for Size 50

## REDUCER TYPE - LESS MOUNTING FEET

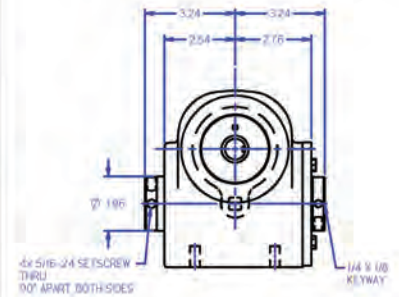


APPROX. SHIPPING WT: 31.6 lbs.



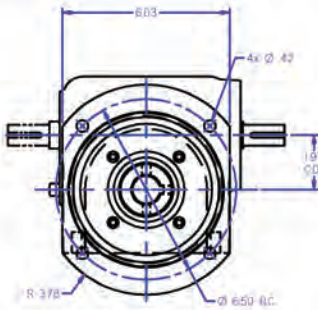
INCH SOLID		METRIC SOLID	
SHAFT DIA.	KEYWAY	SHAFT DIA.	KEYWAY
1.000	1/4 X 1/8	25	8.0 X 4.0
1.125	1/4 X 1/8		

## REDUCER TYPE - HOLLOW OUTPUT

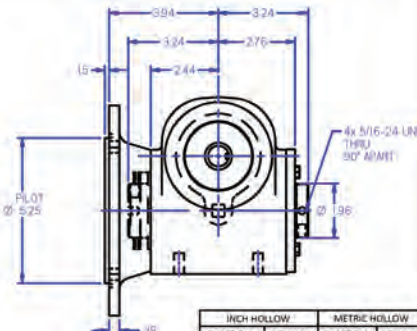


APPROX. SHIPPING WT: 28.7 lbs.

## REDUCER TYPE - FLANGE MOUNT

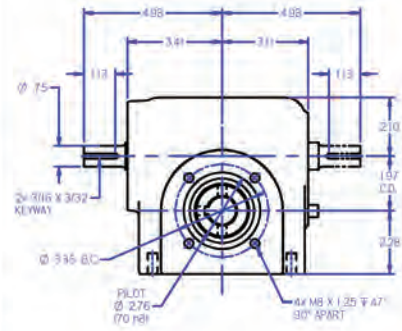


APPROX. SHIPPING WT: 32.8 lbs.



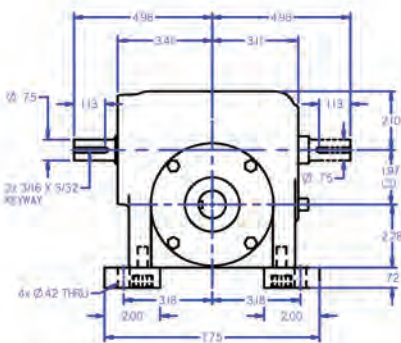
INCH HOLLOW		METRIC HOLLOW	
SHAFT DIA.	KEYWAY	SHAFT DIA.	KEYWAY
1.000	1/4 X 1/8		
1.125	1/4 X 1/8		
1.188	1/4 X 1/8	25	8.0 X 4.0
1.250	1/4 X 1/8		
1.438	1/4 X 1/8		

## SIDE MOUNT

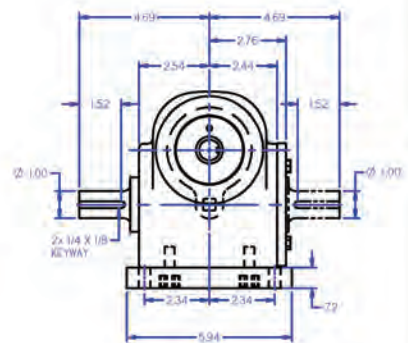


APPROX. SHIPPING WT: 28.4 lbs.

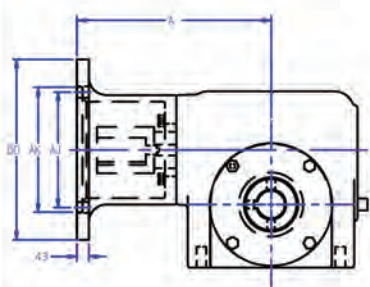
## REDUCER TYPE - FOOT MOUNT



APPROX. SHIPPING WT: 36.2 lbs.



## MOTOR READY



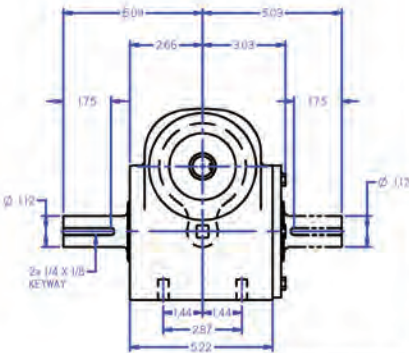
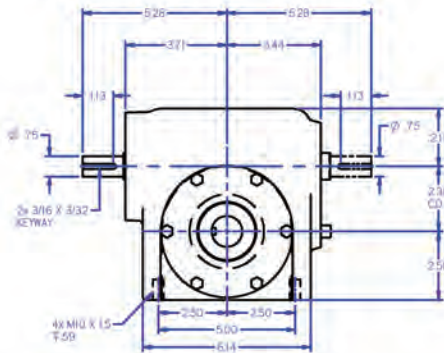
APPROX. SHIPPING WT: 36.1 lbs.

NEMA	A	BD	AK	Au
56C/140TC	6.99	6.50	4.50	5.88
180TC	7.80	9.00	8.50	7.25

ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED OTHERWISE  
STANDARD INCH SHAFTS SHOWN, ALTERNATIVES INCLUDING METRIC ARE OUTLINED IN CORRESPONDING TABLE  
SOLID SHAFT KEYS PROVIDED



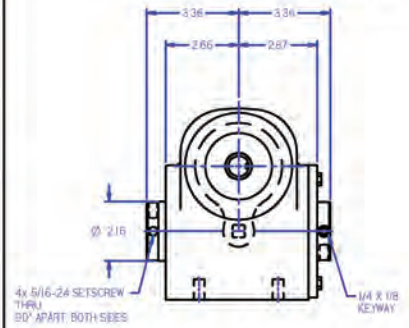
**REDUCER TYPE - LESS MOUNTING FEET**



INCH SOLID		METRIC SOLID	
SHAFT DIA.	KEYWAY	SHAFT DIA.	KEYWAY
1.125	1/4 X 1/8	28	8.0 X 4.0

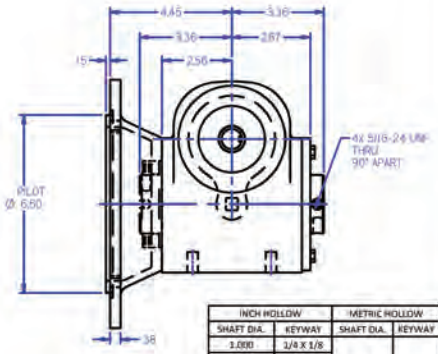
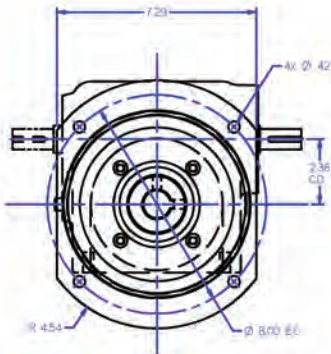
APPROX. SHIPPING WT: 39.9 lbs.

**REDUCER TYPE - HOLLOW OUTPUT**



APPROX. SHIPPING WT: 36.3 lbs.

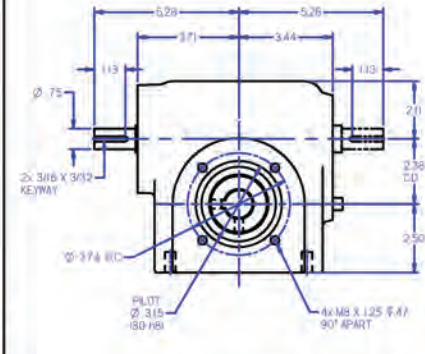
**REDUCER TYPE - FLANGE MOUNT**



INCH HOLLOW		METRIC HOLLOW	
SHAFT DIA.	KEYWAY	SHAFT DIA.	KEYWAY
1.000	1/4 X 1/8	28	8.0 X 4.0
1.125	1/4 X 1/8		
1.188	1/4 X 1/8		
1.250	1/4 X 1/8		
1.438	3/4 X 1/8		

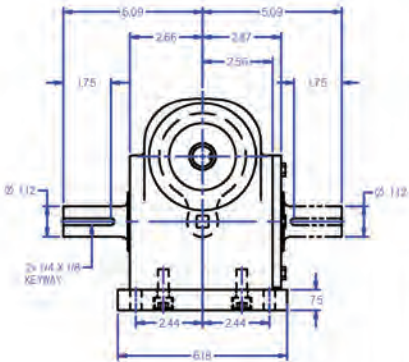
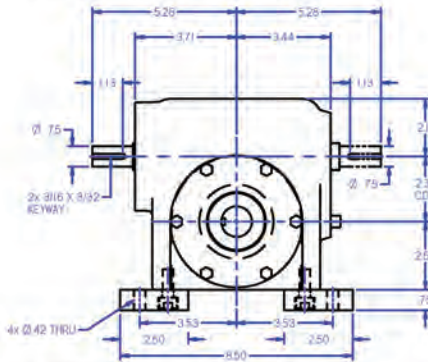
APPROX. SHIPPING WT: 41.4 lbs.

**SIDE MOUNT**



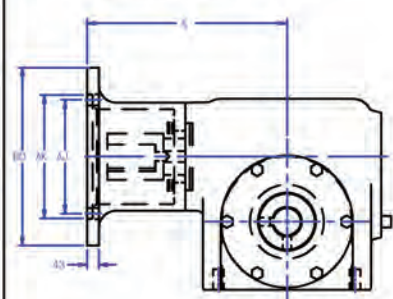
APPROX. SHIPPING WT: 35.9 lbs.

**REDUCER TYPE - FOOT MOUNT**



APPROX. SHIPPING WT: 45.7 lbs.

**MOTOR READY**



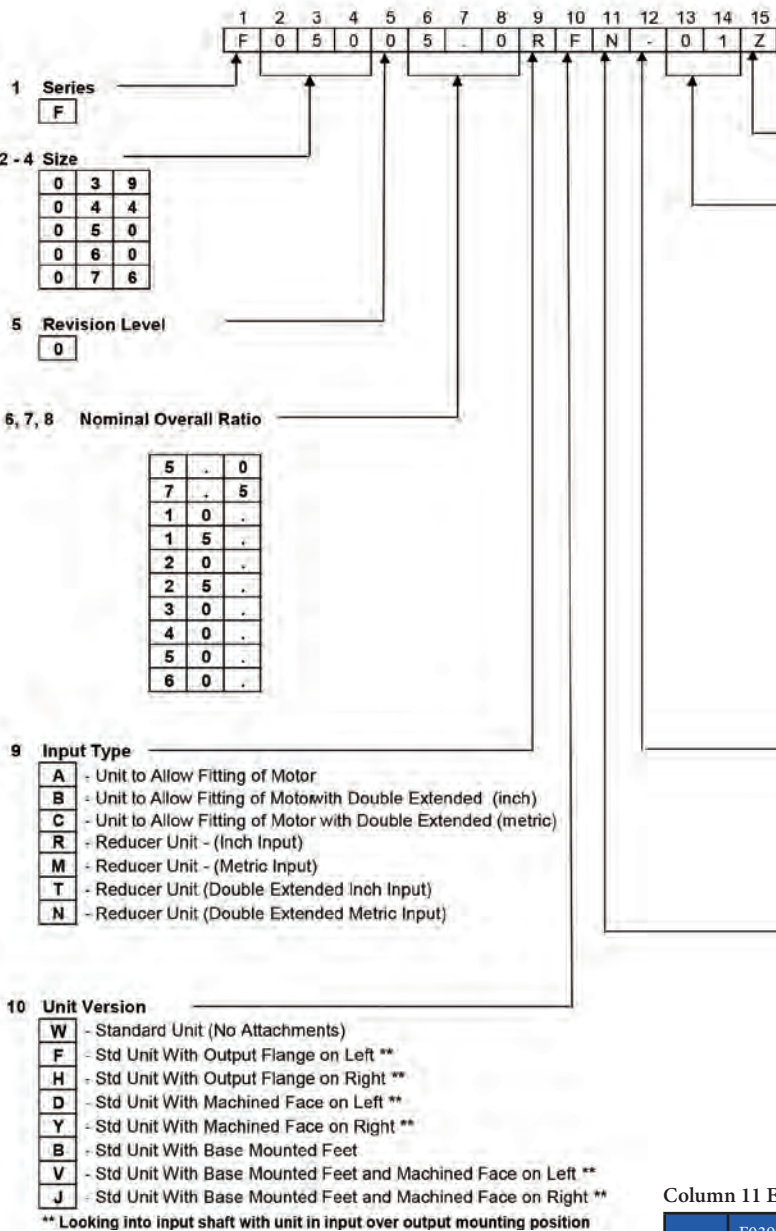
APPROX. SHIPPING WT: 45.6 lbs.

NEMA	A	BD	AK	AJ
56/140TC	7.29	8.50	4.50	5.88
180TC	8.10	9.00	8.50	7.25

ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED OTHERWISE  
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SOLID SHAFT KEYS PROVIDED

# STAINLESS STEEL 15-DIGIT CODE

## STAINLESS STEEL 15-DIGIT CODE



15 Special Options  
\*\* Contact Cone Drive for available options.

13 - 14 Assembly Position \*\*  
Single Extended Input with:  
(input over output viewed from driven input - motorized end of housing)

0	1
0	2
0	3

0 1 - Single extended solid output - left  
0 2 - Single extended solid output - right  
0 3 - Hollow or double ext. solid output

Double Extended Input with:

0	4
0	5
0	6

0 4 - Single extended solid output - left  
0 5 - Single extended solid output - right  
0 6 - Hollow or double ext. solid output  
(input over output viewed from driven input - motorized end of housing)

\*\* For options 03 and 06, output carrier installed on right  
if unit version (Column 10) = W or B  
\*\* If unit has output flange and single extended solid output shaft, flange & output shaft must be on same side.  
examples: (column 11 = N, Q, or C)  
1) column 10 = F; columns 13-14 = 01 or 04  
2) column 10 = H; columns 13-14 = 02 or 05

12 Motor Frame Size\*\*

- - Reducer Unit
- T - NEMA 56C Motor Flange
- V - NEMA 143/145TC Motor Flange
- X - NEMA 182/184TC Motor Flange

\*\* Custom motor adaptation available upon request

11 Output Shaft \*\*

- N - Inch Single Extension
- P - Inch Double Extension
- \* - Inch Hollow Shaft (\* See chart for available sizes)
- Q - Inch Reduced Diameter Sgl. Ext. (sizes 44, 50, & 76 only)
- R - Inch Reduced Diameter Dbl. Ext. (sizes 44, 50, & 76 only)
- C - Metric Single Extension
- D - Metric Double Extension
- H - Metric Hollow Shaft

Column 11 Entry - Inch Hollow Bore Sizes

	F039	F044	F050	F060	F076
0.625	E				
0.875	F	E			
1.000	A	F	E	E	
1.125		G	F	F	
1.188		--	G	G	
1.250		A	J	J	
1.438			A	A	E
1.750					F
1.938					G
2.188					A

Column 11 Entry - Metric Hollow Bore Sizes

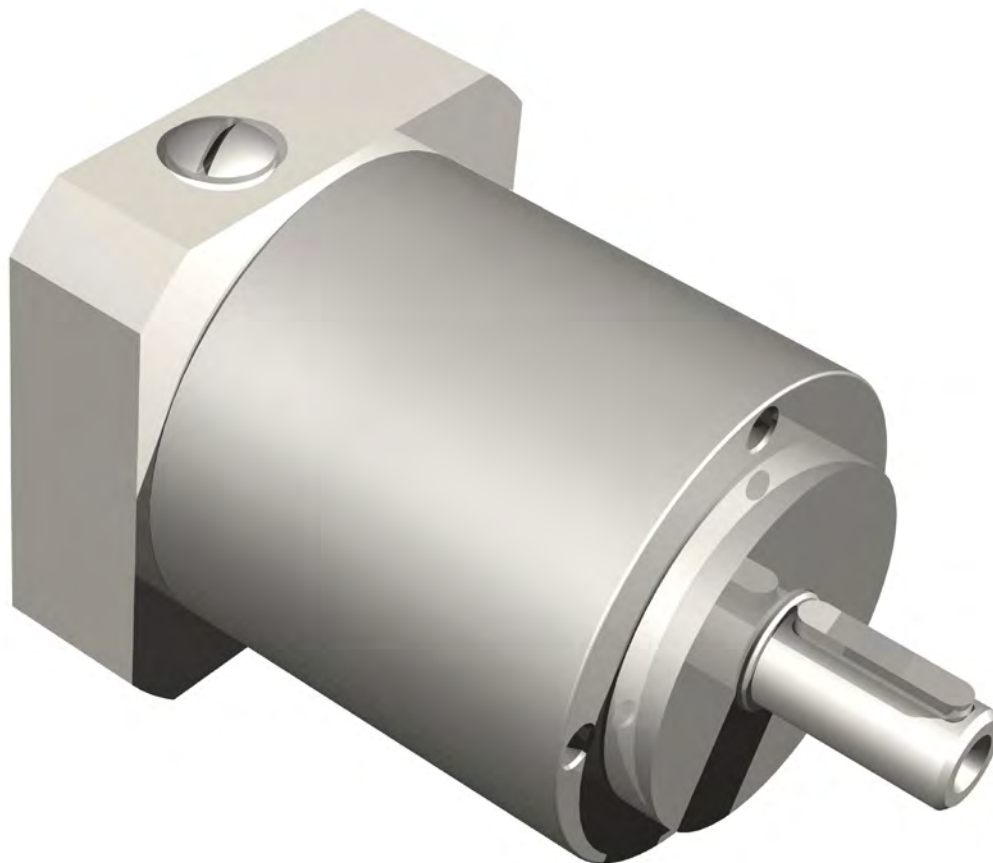
	F039	F044	F050	F060	F076
19	M				
20		M			
25			M		
28				M	
35					M

\*3D model configurator available at  
<http://conetools.com/Stainless/Content/Pages/DirectEntry.aspx>





# Cone Drive **Stainless Steel** Planetary Gearhead



- 300 Series stainless steel construction
- IP 66 rating
- Viton® seals
- Dimensional drop in for most planetary manufacturers
- Frame sizes 70 / 90 / 120



## Cone Drive's **STAINLESS STEEL REDUCERS**

are designed for sterile manufacturing environments. The smooth housings allow for easy cleaning and bacteria free surfaces.

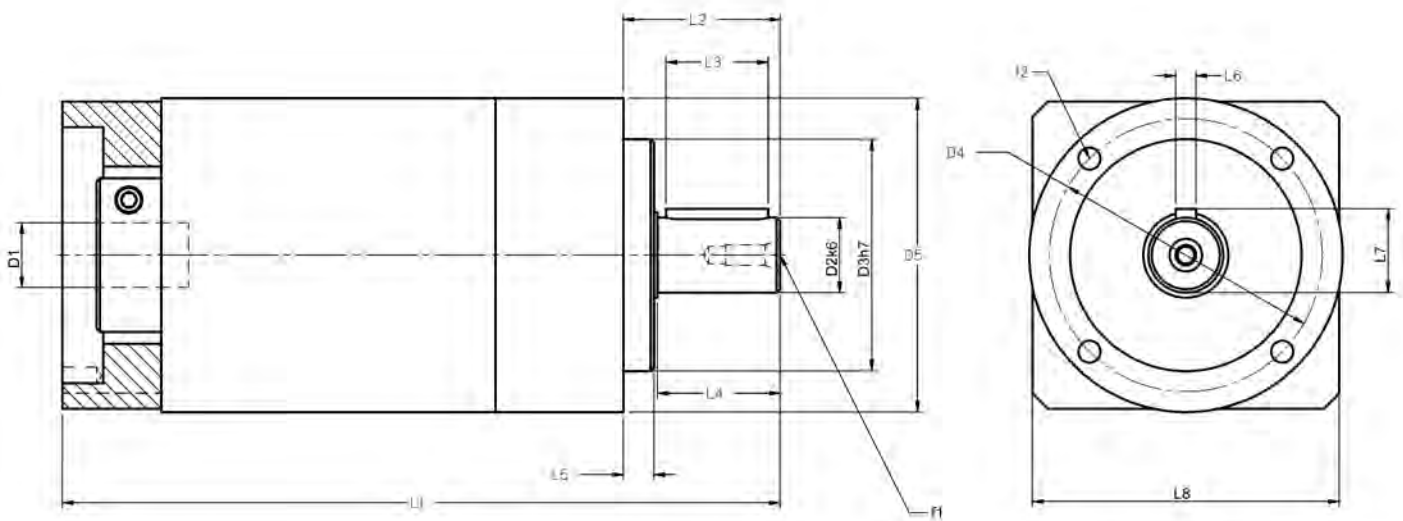
Both the **WORM** and **PLANETARY** reducers are designed to be compliant with government regulations and sanitary standards: FSMA / 3-A / HACCP / EHEDG

RATIOS	GEAR STAGES		Output Torque by Gearhead Size					
			70		90		120	
			T2N	TMAX	T2N	TMAX	T2N	TMAX
3	1	lb. in.	177	319	354	620	885	1593
		Nm.	20	36	40	70	100	180
4	1	lb. in.	230	389	478	885	1062	1770
		Nm.	26	44	54	100	120	200
5	1	lb. in.	230	389	478	885	1062	1770
		Nm.	26	44	54	100	120	200
7	1	lb. in.	230	389	478	885	1062	1770
		Nm.	26	44	54	100	120	200
10	1	lb. in.	142	212	354	664	929	1593
		Nm.	16	24	40	75	105	180
12	2	lb. in.	319	398	708	885	1505	1903
		Nm.	36	45	80	100	170	215
16	2	lb. in.	372	460	885	1106	1859	2257
		Nm.	42	52	100	125	210	255
20	2	lb. in.	372	460	885	1106	1859	2257
		Nm.	42	52	100	125	210	255
25	2	lb. in.	372	460	885	1106	1859	2257
		Nm.	42	52	100	125	210	255
35	2	lb. in.	372	460	885	1106	1859	2257
		Nm.	42	52	100	125	210	255
40	2	lb. in.	372	460	885	1106	1859	2257
		Nm.	42	52	100	125	210	255
50	2	lb. in.	372	460	885	1106	1859	2257
		Nm.	42	52	100	125	210	255
70	2	lb. in.	372	460	885	1106	1859	2257
		Nm.	42	52	100	125	210	255
100	2	lb. in.	142	212	354	664	929	1593
		Nm.	16	24	40	75	105	180

INERTIA (at the input)	RATIO	GEAR STAGES		SIZE		
				70	90	120
	3	1	kgcm <sup>2</sup>	0.45	1.37	6.54
			lb-in <sup>2</sup>	0.154	0.468	1.640
	4		kgcm <sup>2</sup>	0.38	1.14	4.8
			lb-in <sup>2</sup>	0.130	0.390	1.640
	5		kgcm <sup>2</sup>	0.36	1.05	4.05
			lb-in <sup>2</sup>	0.123	0.359	1.384
	7		kgcm <sup>2</sup>	0.35	0.97	3.4
			lb-in <sup>2</sup>	0.120	0.331	1.162
	10		kgcm <sup>2</sup>	0.34	0.93	3.10
			lb-in <sup>2</sup>	0.116	0.319	1.059
	12		kgcm <sup>2</sup>	0.38	1.14	4.8
			lb-in <sup>2</sup>	0.130	0.390	1.640
16	kgcm <sup>2</sup>	0.38	1.14	4.8		
	lb-in <sup>2</sup>	0.130	0.390	1.640		
20	kgcm <sup>2</sup>	0.36	1.05	4.05		
	lb-in <sup>2</sup>	0.123	0.359	1.384		
25	kgcm <sup>2</sup>	0.36	1.05	4.05		
	lb-in <sup>2</sup>	0.123	0.359	1.384		
35	kgcm <sup>2</sup>	0.35	0.97	3.4		
	lb-in <sup>2</sup>	0.120	0.331	1.162		
40	kgcm <sup>2</sup>	0.34	0.93	3.10		
	lb-in <sup>2</sup>	0.116	0.319	1.059		
50	kgcm <sup>2</sup>	0.34	0.93	3.10		
	lb-in <sup>2</sup>	0.116	0.319	1.059		
70	kgcm <sup>2</sup>	0.34	0.93	3.10		
	lb-in <sup>2</sup>	0.116	0.319	1.059		
100	kgcm <sup>2</sup>	0.34	0.93	3.10		
	lb-in <sup>2</sup>	0.116	0.319	1.059		

	GEAR STAGES		SIZE		
			70	90	120
Emergency Stop			2 x T2N		
Degree of Protection			IP66		
Backlash	1	arc-mins	< 10	< 10	< 8
	2	arc-mins	< 14	< 14	< 12
Allowable Radial Load <sup>1</sup>		lbs.	204	337	674
		N	910	1500	3000
Allowable Axial Load <sup>1</sup>		lbs.	112	225	337
		N	500	1000	1500
Efficiency	1	%	94		
	2	%	92		
Lifetime		Hours	30,000		
Weight	1	lbs.	4.4	8.6	19.4
		kg.	2.0	3.9	8.8
	2	lbs.	5.1	10.3	24.0
		kg.	2.3	4.7	10.9

# Planetary information - Series LS Dimensions



LS Series		UNIT PRICE					
		70		90		120	
		mm	inch	mm	inch	mm	inch
D1 max standard	motor shaft diameter	14	0.551	19	0.748	24	0.945
D1 max standard	motor shaft diameter	16	0.63	24	0.945	32	1.26
D2 k6	output shaft diameter	16	0.63	22	0.866	32	1.26
D3 h7	pilot diameter	52	2.047	68	2.677	90	3.543
D4	bolt circle diameter	62	2.441	80	3.15	108	4.252
D5	housing diameter	70	2.756	92	3.622	122	4.803
f1	shaft thread	M5 x 12		M6 x 16		M10 x 22	
f2	mounting hole	M6 x 12		M6 x 14		M8 x 18	
L1 1-stage	gearhead length	131	5.157	174	6.85	232	9.134
L1 2-stage		153	6.024	207	8.15	271	10.669
L2	shaft length	36	1.417	46	1.811	70	2.756
L3	key length	25	0.984	30	1.181	50	1.969
L4	useable shaft length	28	1.102	36	1.417	58	2.283
L5	pilot height	7	0.276	9	0.354	11	0.433
L6	key width	5	0.197	6	0.236	8	0.315
L7	key height	18	0.709	24.6	0.969	34.8	1.37









# Other Motion Tech Products



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