







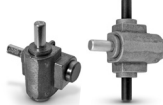



Catalog Series	Material	Ratios	Pages
 S9914F-G...	<b>Right Angle Bevel Gearboxes</b> Stainless Steel Shafts Precision Sealed Ball Bearings	1:1	12-2 thru 12-4
 A 2Z20-..101012	<b>Right Angle Bevel Gear Drives</b> Steel Coniflex Gears Steel Ball Bearings Permanently Lubricated with Lithium-Based Grease	1:1	12-5
 A 2B 7-(S,H)...	<b>Worm Gear Speed Reducers</b> Commercial Quality Right-Hand Ground Steel Worm Gear Sintered Bronze Bearings Ground and Polished Steel Shafts Prelubricated with Grease	3.5:1 thru 60:1	12-6
 A 2Z 4-...	<b>Right Angle Worm Gear Drives</b> Stainless Steel Shafts Sintered Bronze Bearings Steel Worms and Worm Gears	5:1, 10:1 and 20:1	12-7
 S9914Y-G1566-..	<b>Right Angle Bevel Gear Drives</b> Stainless Steel Shafts Sintered Bronze Bearings Brass Bevel Gears	1:1, 2:1 and 3:1	12-7
 <b>DISCONTINUED</b> A 2Z17-E0...	<b>Worm Gear Speed Reducers</b> Precision Quality Right-Hand Hardened Carbon Steel Worms and Phosphor Bronze Worm Wheels Input: Ball Bearings Output: Sintered Bronze Bearings	8:1 thru 60:1	12-8
 <b>DISCONTINUED</b> A 2Z18-E...	<b>Worm Gear Speed Reducers</b> Precision Quality Hardened Carbon Steel Worms and Phosphor Bronze Worm Wheels Input: Ball Bearings Output: Sintered Bronze Bearings	10:1 thru 100:1	12-9
 <b>DISCONTINUED</b> A 2Z19-E...	<b>Worm Gear Speed Reducers</b> High Torque & Precision Quality Hardened Carbon Steel Worms and Phosphor Bronze Worm Wheels Input: Ball Bearings Output: Sintered Bronze Bearings	6:1 thru 90:1	12-10
 A 2Z 1-...	<b>Right Angle and Dual Helical Gear Drives</b> Light-Duty Steel Gears Oilite Bearings	1:1	12-11

- I
- R
- T
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12**
- 13
- 14
- 15
- A

Catalog Series	Material	Ratios	Pages
 <p>A 2Z 2-...</p>	<p><b>Right Angle and Dual Helical Gear Drives</b>                      Heavy-Duty                      Steel Helical Gears                      Steel Ball Bearings</p>	1:1	12-12
 <p>A 2Z 3-2...</p>	<p><b>Right Angle Helical Gear Drives</b>                      Light-Duty                      Panel-Mounted                      Steel Helical Gears                      Oilite Bearings</p>	1:1	12-13
 <p>A 2Z1A-...</p>	<p><b>Miniature Right Angle Helical Gear Drives</b>                      Standard Mount                      Lightweight                      Hardened Steel Gears                      Stainless Steel Bearings</p>	1:1 and 2:1	12-14
 <p>A 2Z11-...</p>	<p><b>Miniature Right Angle Helical Gear Drives</b>                      Base-Mounted                      Lightweight                      Hardened Steel Helical Gears                      Nonmetallic Bearings</p>	1:1 and 2:1	12-15
 <p>A 2Z11-...P</p>	<p><b>Miniature Right Angle Helical Gear Drives</b>                      Panel-Mounted                      Lightweight                      Hardened Steel Helical Gears                      Nonmetallic Bearings</p>	1:1 and 2:1	12-16
 <p>S991MY-...</p>	<p><b>Right Angle Helical Gear Drives Mini-Shaft Drive</b>                      Heavy-Duty Sealed Ball Bearings                      Heat-Treated Steel Gears</p>	1:1	12-17
 <p>S991HY-(A,B)...</p>	<p><b>Right Angle Helical Gear Drives Hollow-Shaft Drive</b>                      Heavy-Duty Sealed Ball Bearings                      Heat-Treated Steel Gears</p>	1:1 and 1.5:1	12-18

1:1 RATIO

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM

**MATERIAL:**

- Housing** - Aluminum, Green Anodized
- Bevel Shafts** - Stainless Steel
- Bearings** - **Input** - Precision Sealed Ball Bearings
- Output** - Precision Sealed Ball Bearings



**LUBRICATION:**

Greased for life

**OPERATING TEMPERATURE:**

-5°F to 175°F

**SPECIFICATIONS:**

- Maximum Input Speed:**  
2000 rpm
- Backlash:** 1°
- Low Backlash:** .5° available

**WEIGHT:**

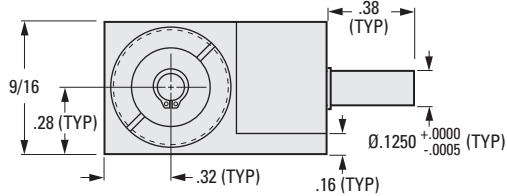
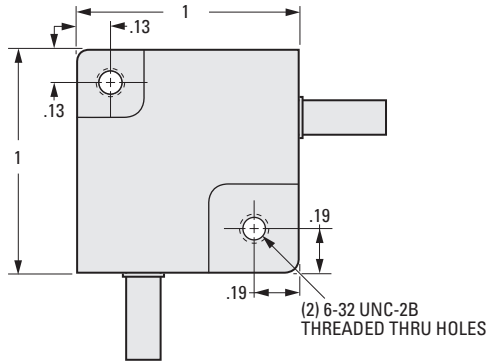
.07 lb.

**INCH COMPONENT**

**Catalog Number**

S9914F-G16
*S9914F-G16R
S9914F-G16H
*S9914F-G16L

\* Low Backlash: .5°



**OPERATING LIFE:** Hours

Torque ozf in.	rpm					
	50	100	200	500	1000	2000
<b>Catalog Number: S9914F-G16 and S9914F-G16R</b>						
2	20000	20000	20000	20000	20000	18000
2.25	20000	20000	17000	6000	2600	1100
2.5	15000	7500	3650	1400	660	310
2.75	8100	4000	1950	740	350	160
3	4500	2200	1100	420	200	90
<b>Catalog Number: S9914F-G16H and S9914F-G16L</b>						
4	20000	20000	20000	20000	20000	11700
4.5	20000	20000	20000	9100	4000	1700
5	20000	9500	4500	1650	790	370
5.5	9500	4700	2300	880	420	190
6	5250	2500	1250	480	230	100
6.5	3100	1500	750	280	130	60
7	1900	940	450	170	80	40

1:1 RATIO

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM

**> MATERIAL:**

- Housing** - Aluminum, Green Anodized
- Bevel Shafts** - Stainless Steel
- Bearings - Input** - Precision Sealed Ball Bearings
- Output** - Precision Sealed Ball Bearings

**> LUBRICATION:**

Greased for life

**> OPERATING TEMPERATURE:**

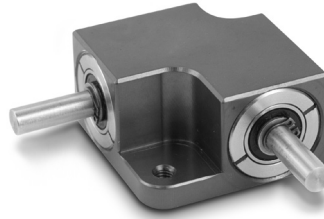
-5°F to +175°F

**> SPECIFICATIONS:**

- Maximum Input Speed:**  
2000 rpm for S9914F-G24 & S9914F-G24H  
3000 rpm for S9914F-G24S & S9914F-G24L
- Backlash:** 1°
- Low Backlash:** .5° available

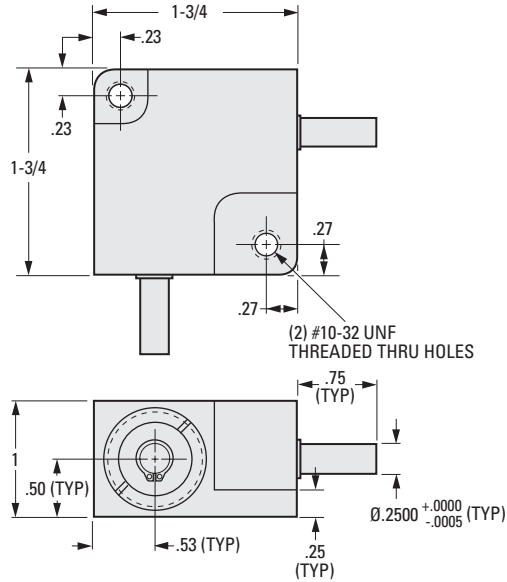
**> WEIGHT:**

.46 lb.



INCH COMPONENT	
Catalog Number	
S9914F-G24	
S9914F-G24H	
S9914F-G24S	
*S9914F-G24L	

\* Low Backlash: .5°



**> OPERATING LIFE (HOURS):**

Torque lbf in.	rpm						
	50	100	200	500	1000	2000	3000
<b>Catalog Number: S9914F-G24</b>							
2	20000	20000	20000	20000	20000	20000	—
2.5	20000	20000	20000	20000	12200	4800	—
3	20000	9400	4300	1550	740	330	—
3.5	6400	3150	1500	570	265	120	—
4	2700	1300	630	230	110	50	—
10	1800	900	450	170	80	35	—
<b>Catalog Number: S9914F-G24H</b>							
6	20000	20000	20000	20000	20000	20000	—
7	20000	20000	20000	20000	20000	16000	—
8	20000	20000	20000	10500	4500	1800	—
9	20000	10000	4600	1650	750	340	—
10	9100	4500	2150	810	480	175	—
11	4900	2400	1200	430	200	90	—
12	2700	1330	650	240	110	50	—
<b>Catalog Number: S9914F-G24S and S9914F-G24L</b>							
15	20000	20000	20000	20000	20000	20000	14300
16	20000	20000	20000	20000	20000	9000	5000
17	20000	20000	20000	20000	8600	3300	1860
18	20000	20000	20000	8200	3400	1320	730
19	20000	20000	10000	3400	1400	550	305

1:1 RATIO

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM

**> MATERIAL:**

- Housing** - Aluminum, Green Anodized
- Bevel Shafts** - Stainless Steel
- Bearings - Input** - Precision Sealed Ball Bearings
- Output** - Precision Sealed Ball Bearings

**> LUBRICATION:**

Greased for life

**> OPERATING TEMPERATURE:**

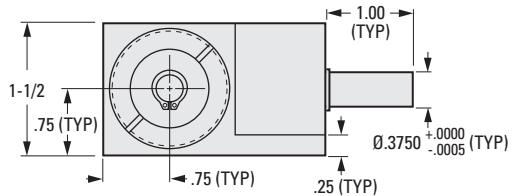
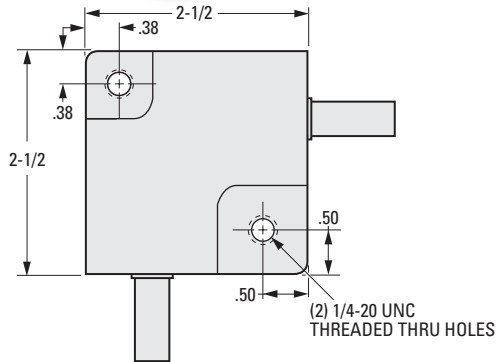
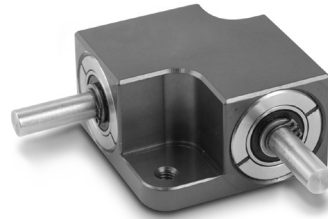
-5°F to 175°F

**> SPECIFICATIONS:**

- Maximum Input Speed:**  
2000 rpm for S9914F-G31 & S9914F-G31H  
3000 rpm for S9914F-G31S & S9914F-G31L
- Backlash:** 1°
- Low Backlash:** .5° available

**> WEIGHT:**

1.35 lb.



INCH COMPONENT	
Catalog Number	
S9914F-G31	
S9914F-G31H	
S9914F-G31S	
*S9914F-G31L	

\* Low Backlash: .5°

**> OPERATING LIFE:** Hours

Torque lbf in.	rpm						
	50	100	200	500	1000	2000	3000
<b>Catalog Number: S9914F-G31</b>							
6	20000	20000	20000	20000	20000	20000	—
6.5	20000	20000	20000	20000	9100	3000	—
7	20000	20000	11400	3500	1300	435	—
7.5	9600	4300	1880	570	210	70	—
8	1750	800	350	105	38	15	—
<b>Catalog Number: S9914F-G31H</b>							
13	20000	20000	20000	20000	20000	20000	—
14	20000	20000	20000	20000	19000	7500	—
15	20000	20000	20000	15000	6200	2450	—
16	20000	20000	15500	5300	2200	850	—
17	20000	12500	5800	1950	825	375	—
18	13800	6750	3100	1200	560	250	—
19	9600	4700	2280	850	395	180	—
20	6900	3300	1620	600	280	125	—
<b>Catalog Number: S9914F-G31S and S9914F-G31L</b>							
25	20000	20000	20000	20000	20000	20000	20000
26	20000	20000	20000	20000	20000	20000	12000
27	20000	20000	20000	20000	20000	12000	6700
28	20000	20000	20000	20000	17600	6800	3700
29	20000	20000	20000	20000	10000	3800	2100
30	20000	20000	20000	14000	5800	2200	1200
31	20000	20000	20000	8200	3300	1250	700
32	20000	20000	15000	4900	2000	760	340

# RIGHT ANGLE BEVEL GEAR DRIVES



1:1 RATIO

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM

INPUT SPEEDS UP TO 3000 rpm

METAL GEARS

BALL BEARINGS

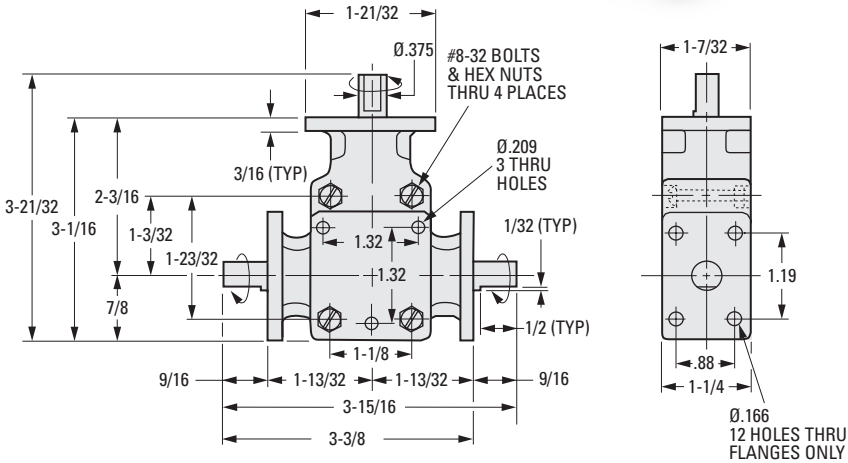


**> MATERIAL:**

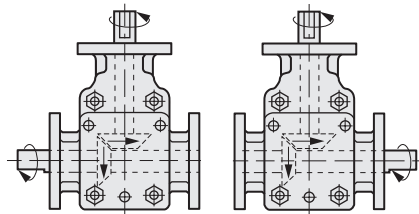
- Housing** - Fiberglass Reinforced Plastic
- Gears** - Steel, Hardened - Coniflex Type
- Shafts** - High-Tensile Steel
- Bearings** - Steel Ball Bearings
- Lubrication** - Permanently lubricated with lithium-based grease.

**> SPECIFICATIONS:**

- Rated at 1/3 hp at 1800 rpm
- Maximum Input Speed:** 3000 rpm



"U" Series



"L" Series

"R" Series

**INCH COMPONENT**

Catalog Number	Shaft Dia. +.000 -.001	Gear Ratio	Approx. Weight oz.
A 2220-UC101012	.375	1:1	12
A 2220-LC101012			
A 2220-RC101012			

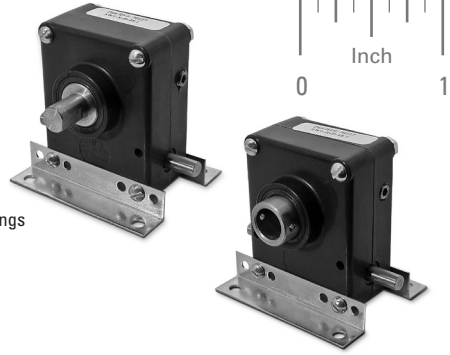


# WORM GEAR SPEED REDUCERS



COMMERCIAL QUALITY  
SINTERED BEARINGS  
MULTIPLE RATIOS  
RATED SPEEDS UP TO 1800 rpm  
BRONZE DRIVEN GEAR

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM



**► MATERIAL:**

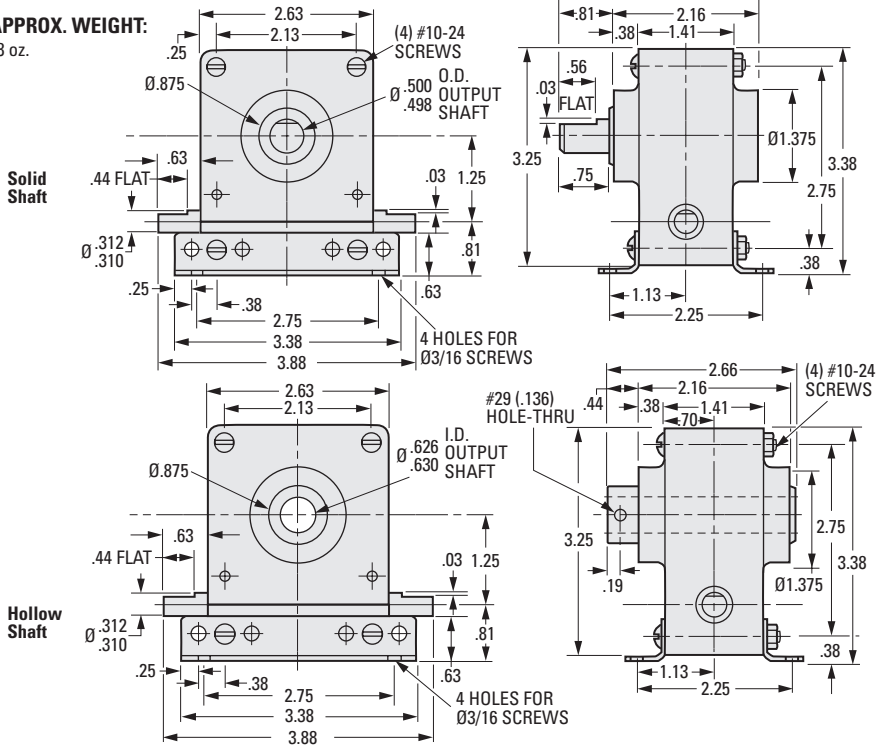
- Case** - Compression-Molded Glass-fill Polyester
- Gears** - Precision-Hobbed Bronze Driven Gear  
Ground Steel Worm - Right-Hand
- Bearings - Input and Output Shafts** - Sintered Bronze Bearings
- Shafts** - Ground & Polished Steel
- Lubrication** - Gears are prelubricated with grease.
- Seals** - Input shafts are sealed to retain lubrication and keep out dirt.

**► DIMENSIONS:**

3-3/8 High x 3-7/8 Wide x 3 Deep

**► APPROX. WEIGHT:**

28 oz.



**INCH COMPONENT**

Catalog Number		1800 rpm Input				
Solid Shaft	Hollow Shaft	Ratio	Input hp	Output hp	Output rpm	Output Torque lbf in.
A 2B 7-S035	A 2B 7-H035	3.5:1	.84	.82	514	102
A 2B 7-S100	A 2B 7-H100	10:1	.33	.30	180	102
A 2B 7-S150	A 2B 7-H150	15:1	.27	.24	120	102
A 2B 7-S200	A 2B 7-H200	20:1	.225	.18	90	105
A 2B 7-S300	A 2B 7-H300	30:1	.15	.12	60	120
A 2B 7-S400	A 2B 7-H400	40:1	.10	.08	45	112
A 2B 7-S480	A 2B 7-H480	48:1	.09	.06	38	96
A 2B 7-S600	A 2B 7-H600	60:1	.075	.035	30	75

## RIGHT ANGLE WORM GEAR DRIVES

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM

INPUT SPEEDS UP TO 2000 rpm  
MULTIPLE RATIOS

► **MATERIAL:**

**Housing** - Aluminum Alloy,  
Chromate Conversion Finish

**Shafts** - Stainless Steel

**Bearings** - Sintered Bronze

**Worm Gear** - Steel

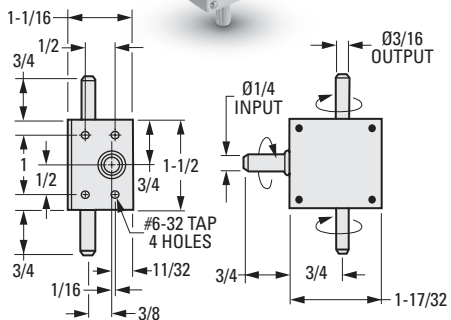
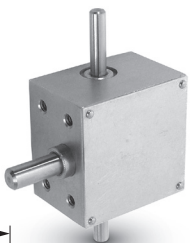
**Worm** - Steel

► **SPECIFICATIONS:**

**Output Torque:** 200 ozf in.

**Maximum Backlash:** 5°

**Maximum Input Speed:** 2000 rpm



**INCH COMPONENT**

Catalog Number	Gear Ratio
A 2Z 4-050	5:1
A 2Z 4-100	10:1
A 2Z 4-200	20:1

## RIGHT ANGLE BEVEL GEAR DRIVES

INPUT SPEEDS UP TO 2000 rpm  
MULTIPLE RATIOS

► **MATERIAL:**

**Housing** - Aluminum Alloy,  
Chromate Conversion Finish

**Shafts** - Stainless Steel

**Bearings** - Sintered Bronze

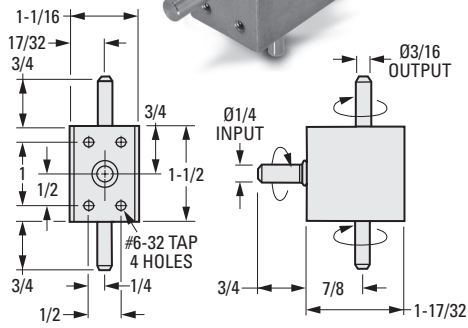
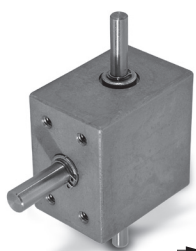
**Bevel Gears** - Brass

► **SPECIFICATIONS:**

**Output Torque:** 200 ozf in.

**Maximum Backlash:** 5°

**Maximum Input Speed:** 2000 rpm



**INCH COMPONENT**

Catalog Number	Gear Ratio
S9914Y-G1566-01	1:1
S9914Y-G1566-02	2:1
S9914Y-G1566-03	3:1

- I
- R
- T
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- A

# WORM GEAR SPEED REDUCERS



PRECISION QUALITY  
 STYLE "E"  
 MULTIPLE RATIOS  
 INPUT SPEEDS UP TO 6000 rpm

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM



**> MATERIAL:**

- Housing** - Aluminum Alloy, Black Anodized
- Shafts - Input (one piece with worm)** - Carbon Steel
- Output** - Mild Steel
- Gears - Right-Hand Worm** - Hardened Carbon Steel with Polished Threads
- Worm Wheel** - Phosphor Bronze
- Bearings - Input** - Ball Bearings
- Output** - Sintered Bronze Bearings

**> LUBRICATION:**

Packed with grease at assembly having temperature range of -25°F to +295°F.

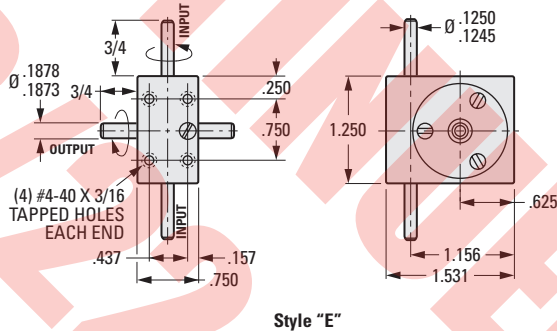
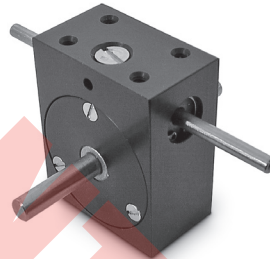
**> SPECIFICATIONS:**

- Max. Input Speed:** 6000 rpm
- Backlash at Output:** 0° 30'
- Torque:**
- Max. starting torque at input shaft:** .07 ozf in.
- Max. cont. output torque @ 1800 rpm:** 4.5 lbf in.

**> WEIGHT:**

2.75 oz.

Other ratios available on special order.



**INCH COMPONENT**

Catalog Number	Ratio to 1
A 2Z17-E0080	8
A 2Z17-E0166	16.67
A 2Z17-E0200	20
A 2Z17-E0500	50
A 2Z17-E0600	60

**NOTE:**

Also available in other styles where special shaft diameters or extensions are required. These speed reducers are available with anti-backlash gears. Input speed, however, is limited to 3000 rpm with a maximum continuous output torque of 1.3 ozf in. Maximum starting torque at input shaft is .85 ozf in.

12-8  
 D820

REVISED:  
 9/6/23

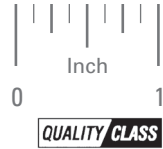
- I
- R
- T
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- A

# WORM GEAR SPEED REDUCERS



PRECISION QUALITY  
 STYLE "E"  
 MULTIPLE RATIOS  
 INPUT SPEEDS UP TO 6000 rpm

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM



**> MATERIAL:**

- Housing** - Aluminum Alloy, Black Anodized
- Shafts - Input** - Carbon Steel
- Output** - Mild Steel
- Gears - Worm** - Hardened Carbon Steel with Polished Right-Hand Threads
- Worm Wheel** - Phosphor Bronze
- Bearings - Input** - Ball Bearings
- Output** - Sintered Bronze Bearings

**> LUBRICATION:**

Packed with grease at assembly having a temperature range of -25°F to +295°F.

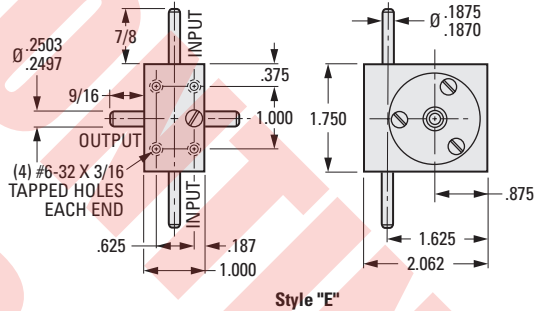
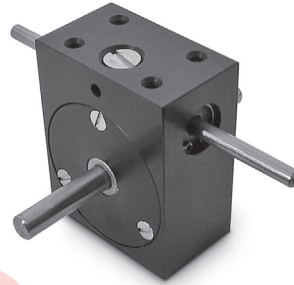
**> SPECIFICATIONS:**

- Max. Input Speed:** 6000 rpm
- Backlash at Output:** 0° 30'
- Torque:**
- Max. starting torque at input shaft:** .14 ozf in.
- Max. cont. output torque @ 1800 rpm:** 13 lbf in.

**> WEIGHT:**

7.0 oz.

Other ratios available on special order.



**INCH COMPONENT**

Catalog Number	Ratio to 1
A 2Z18-E0100	10
A 2Z18-E0200	20
A 2Z18-E0250	25
A 2Z18-E0300	30
A 2Z18-E0360	36
A 2Z18-E0400	40
A 2Z18-E0420	42
A 2Z18-E0900	90
A 2Z18-E1000	100

**NOTE:**

Also available in other styles where special shaft diameters or extensions are required. These speed reducers are available with anti-backlash gears. Input speed however is limited to 3000 rpm with a maximum continuous output torque of 1.5 lbf in. Maximum starting torque at input shaft is 3.19 ozf in.

- I
- R
- T
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- A

12-9  
D820

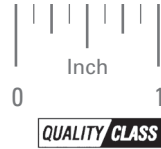
REVISED:  
9/6/23

# WORM GEAR SPEED REDUCERS



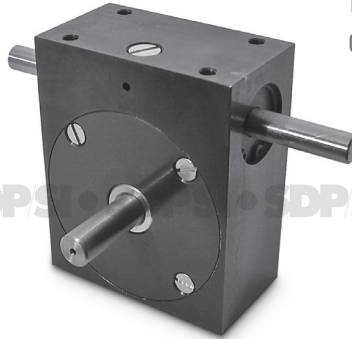
PRECISION QUALITY  
 STYLE "E"  
 MULTIPLE RATIOS  
 INPUT SPEEDS UP TO 6000 rpm

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM



**> MATERIAL:**

- Housing** - Aluminum Alloy, Black Anodized
- Shafts - Input** - Carbon Steel
- Output** - Mild Steel
- Gears - Worm** - Hardened Carbon Steel with Polished Right-Hand Threads
- Worm Wheel** - Phosphor Bronze
- Bearings - Input** - Ball Bearings
- Output** - Sintered Bronze Bearings



**> LUBRICATION:**

Packed with grease at assembly having a temperature range of -25°F to +295°F.

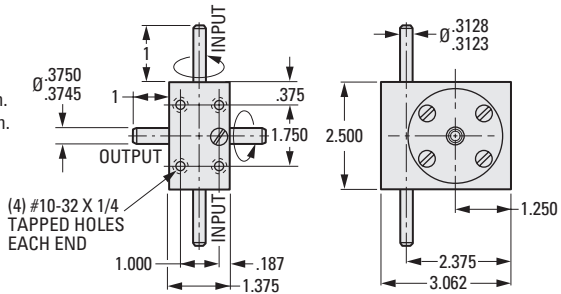
**> SPECIFICATIONS:**

- Max. Input Speed:** 6000 rpm
- Backlash at Output:** 0° 30'
- Torque:**
- Max. starting torque at input shaft:** 1.12 ozf in.
- Max. cont. output torque @ 1800 rpm:** 39 lbf in.

**> WEIGHT:**

21 oz.

Other ratios available on special order.



Style "E"

**INCH COMPONENT**

Catalog Number	Ratio to 1
A 2Z19-E0060	6
A 2Z19-E0100	10
A 2Z19-E0150	15
A 2Z19-E0200	20
A 2Z19-E0300	30
A 2Z19-E0400	40
A 2Z19-E0600	60

**NOTE:**

Also available in other styles where special shaft diameters or extensions are required. These speed reducers are available with anti-backlash gears. Input speed, however, is limited to 3000 rpm with a maximum continuous output torque of 2.6 lbf in. Maximum starting torque at input shaft is 15.8 ozf in.

- I
- R
- T
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- A

# RIGHT ANGLE AND DUAL HELICAL GEAR DRIVES

# SDP/SI

1:1 RATIO  
 RATED SPEEDS UP TO 600 rpm  
 LIGHT-DUTY

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM



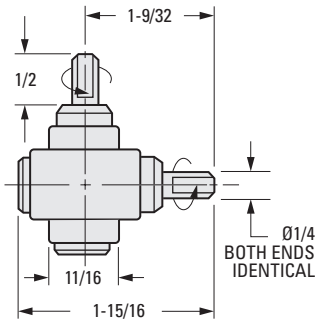
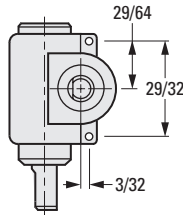
**> MATERIAL:**

- Housing and Base** - Aluminum Alloy
- Gears** - Steel
- Shafts** - Steel
- Bearings** - Oilite

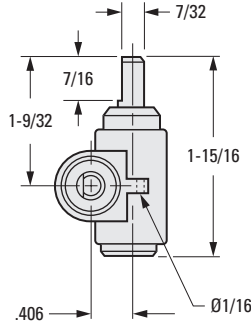
**> SPECIFICATIONS:**

**Backlash:** 6° Nominal

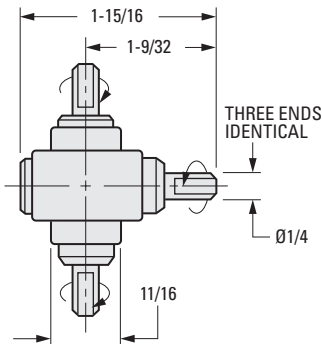
Any shaft can be used as input.



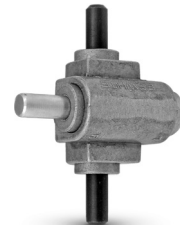
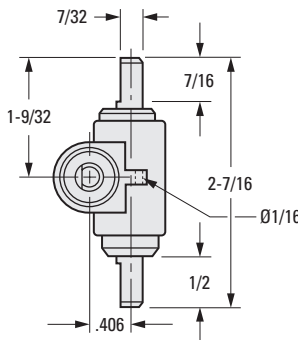
**A 2Z 1-2SR08**



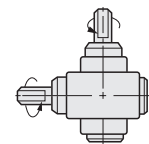
**Right Angle Drive**



**A 2Z 1-3SR08**



**Dual Drive**



**A 2Z 1-2RR08**

**INCH COMPONENT**

Catalog Number	Shaft Extension	Shaft Dia.	Gear Ratio	Torque Capacity lbf in.			Approx. Weight oz.
				Ultimate Static	Manual	Dynamic	
<b>Right Angle Drives</b>							
A 2Z 1-2SR08	Right	1/4	1:1	25	20	3	3-1/2
A 2Z 1-2RR08	Left						
<b>Dual Drives</b>							
A 2Z 1-3SR08	Right	1/4	1:1	25	20	3	3-1/2

- I
- R
- T
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- A

1:1 RATIO  
 RATED SPEEDS UP TO 1725 rpm  
 BALL BEARING  
 HEAVY-DUTY

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM



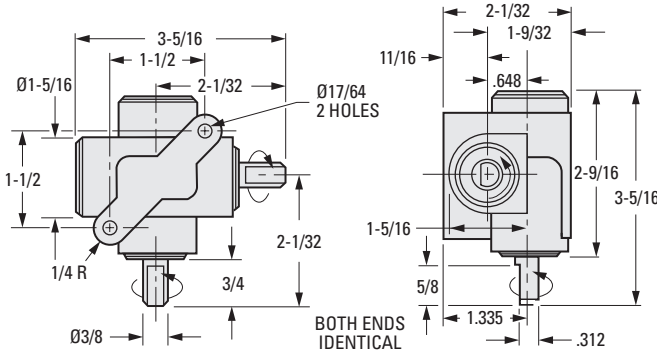
**MATERIAL:**

- Housing - Aluminum Alloy
- Gears - Alloy Steel, Helical
- Shafts - Steel
- Bearings - Steel Ball

**SPECIFICATION:**

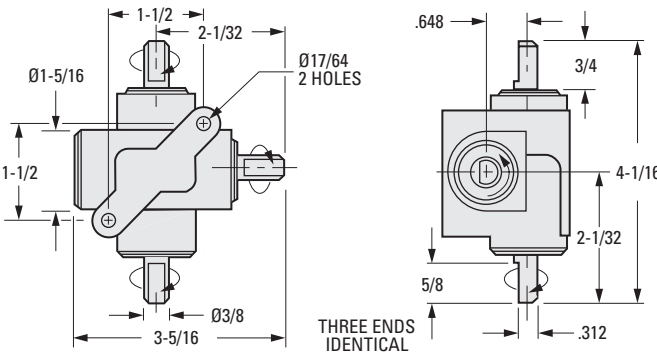
Backlash: 3° Nominal

Any shaft can be used as input.



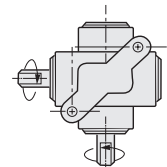
Right Angle Drive

A 2Z 2-2RR12



Dual Drive

A 2Z 2-3SR12



A 2Z 2-2SR12

**INCH COMPONENT**

Catalog Number	Shaft Extension	Shaft Dia.	Gear Ratio	Torque Capacity lbf in.			Approx. Weight lb.
				Ultimate Static	Manual	Dynamic	
<b>Right Angle Drives</b>							
A 2Z 2-2SR12	Left	3/8	1:1	150	75	15	1.2
A 2Z 2-2RR12	Right						
<b>Dual Drives</b>							
A 2Z 2-3SR12	Left or Right	3/8	1:1	150	75	15	1.3

# RIGHT ANGLE HELICAL GEAR DRIVES



1:1 RATIO  
 RATED SPEEDS UP TO 600 rpm  
 PANEL-MOUNTED  
 LIGHT-DUTY

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM

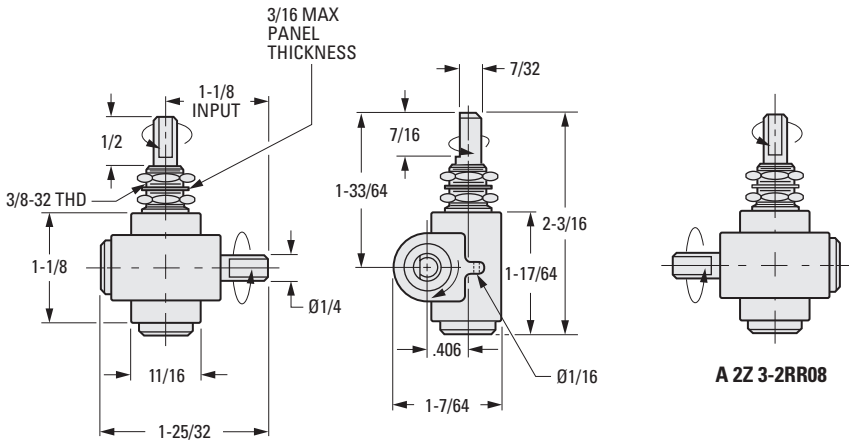
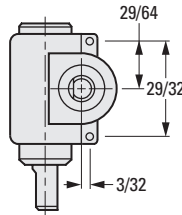
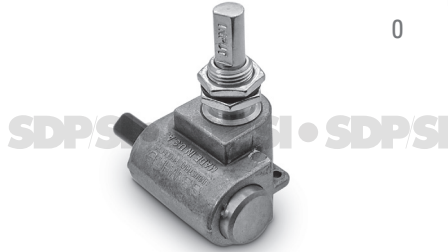


**> MATERIAL:**

- Housing** - Aluminum Alloy
- Gears** - Steel, Helical
- Shafts** - Steel
- Bearings** - Oilite

**> SPECIFICATION:**

**Backlash:** 6° Nominal



**INCH COMPONENT**

Catalog Number	Shaft Extension	Shaft Dia.	Gear Ratio	Torque Capacity lbf in.			Approx. Weight oz.
				Ultimate Static	Manual	Dynamic	
A 2Z 3-2SR08	Right	1/4	1:1	25	20	3	3-1/2
A 2Z 3-2RR08	Left						



# MINIATURE RIGHT ANGLE HELICAL GEAR DRIVES

# SDPSI

STANDARD-MOUNT  
 LIGHTWEIGHT  
 NOT FOR USE AS A SPEED INCREASER

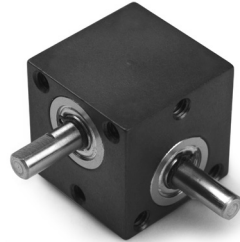
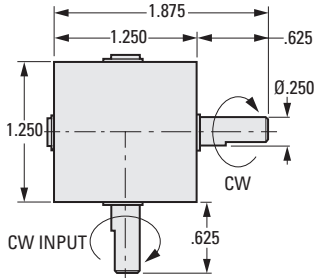
PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM



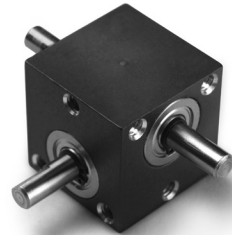
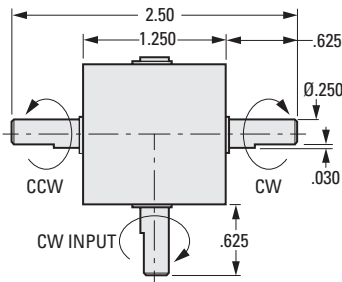
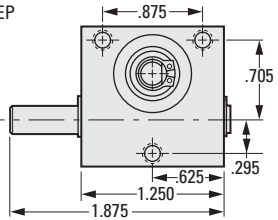
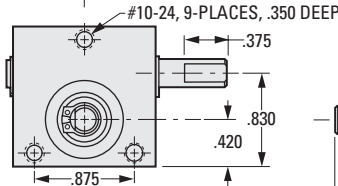
**MATERIAL:**

- Housing** - Aluminum, Anodized
- Gears** - Hardened Steel
- Shafts** - Steel
- Bearings** - Stainless Steel

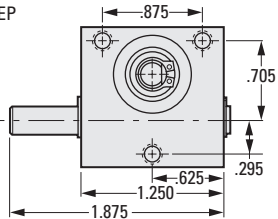
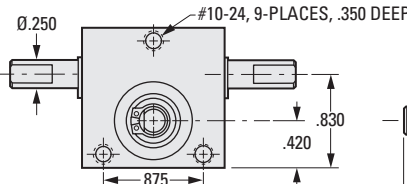
Special options on shaft, material and ratios available on special order.



**Fig. 1**  
 Single Output Shaft



**Fig. 2**  
 Double Output Shaft



**NEW**

**INCH COMPONENT**

Catalog Number	Fig. No.	Ratio	Max. rpm	Max. Continuous hp
A 2Z1A-S11	1	1:1	1800	1/8
A 2Z1A-S21		2:1		
A 2Z1A-D11	2	1:1		
A 2Z1A-D21		2:1		

# MINIATURE RIGHT ANGLE HELICAL GEAR DRIVES



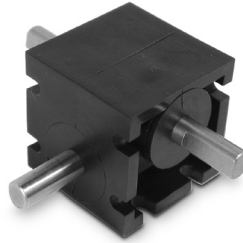
BASE-MOUNTED  
LIGHTWEIGHT  
NOT FOR USE AS A SPEED INCREASER

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM

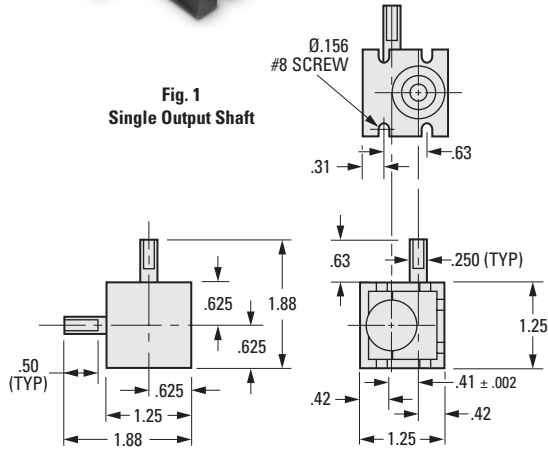
**> MATERIAL:**

- Housing** - Fiberglass Reinforced Nylon
- Gears** - Hardened Steel, Helical
- Shafts** - Steel
- Bearings** - Nonmetallic

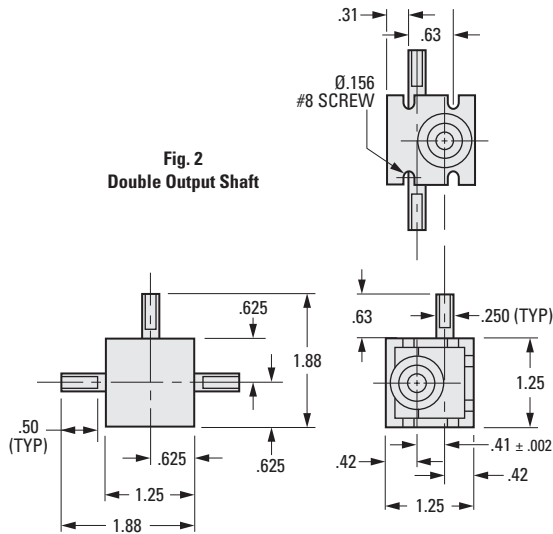
Special options on shaft, material and ratios available on special order.



**Fig. 1**  
Single Output Shaft



**Fig. 2**  
Double Output Shaft



**INCH COMPONENT**

Catalog Number	Fig. No.	Ratio	Max. rpm	Max. Continuous hp
A 2Z11-211	1	1:1	1800	1/8
A 2Z11-221		2:1		
A 2Z11-311	2	1:1		
A 2Z11-321		2:1		

**NOTE:** Flats are .03 deep.



# MINIATURE RIGHT ANGLE HELICAL GEAR DRIVES

# SDPSI

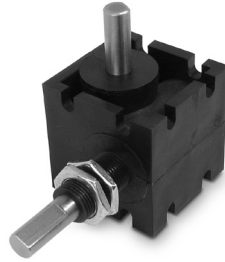
PANEL-MOUNTED  
 LIGHTWEIGHT  
 NOT FOR USE AS A SPEED INCREASER

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM

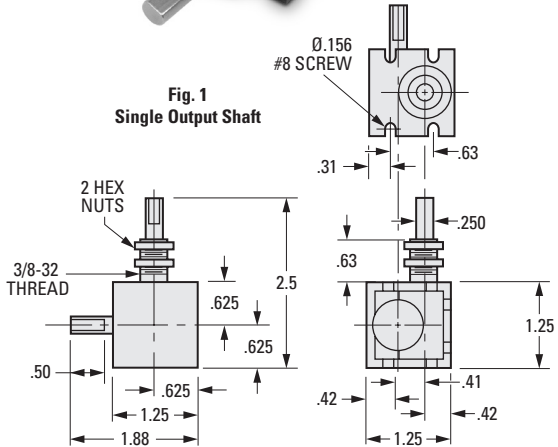
**MATERIAL:**

- Housing** - Fiberglass Reinforced Nylon
- Gears** - Hardened Steel Helical
- Shafts** - Steel
- Bearings** - Nonmetallic

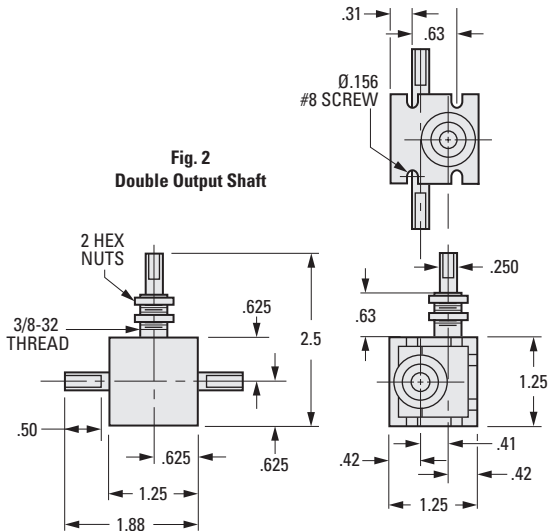
Special options on shaft, material and ratios available on special order.



**Fig. 1  
 Single Output Shaft**



**Fig. 2  
 Double Output Shaft**



**INCH COMPONENT**

Catalog Number	Fig. No.	Ratio	Max. rpm	Max. Continuous hp
A 2Z11-211P	1	1:1	1800	1/8
A 2Z11-221P		2:1		
A 2Z11-311P	2	1:1		
A 2Z11-321P		2:1		

1:1 RATIO  
 HEAVY-DUTY SEALED BALL BEARINGS  
 RIGHT- OR LEFT-HAND ROTATION  
 RATED SPEEDS UP TO 1800 RPM  
 O-RING SEALED GEAR CASE  
 KEYS INCLUDED  
 SIMPLY ADD KEYED SHAFTING

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM

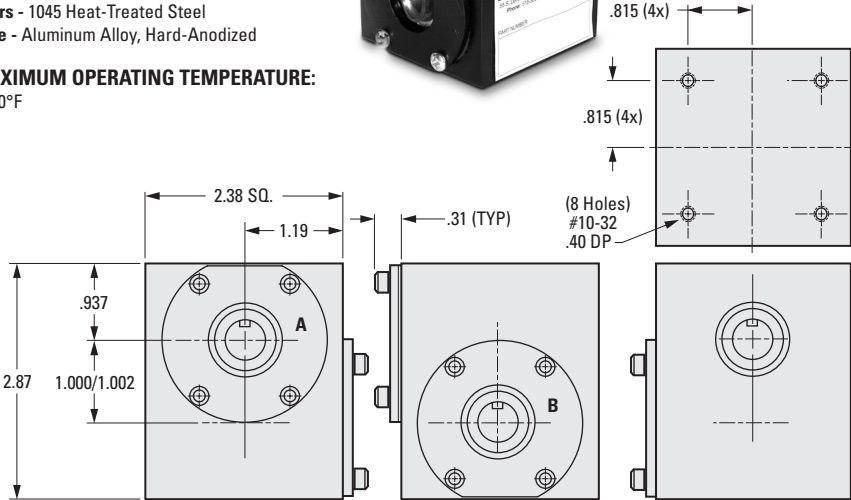


**► MATERIAL:**

- Shafts** - 1144 Steel, Hollow Bore
- Gears** - 1045 Heat-Treated Steel
- Case** - Aluminum Alloy, Hard-Anodized

**► MAXIMUM OPERATING TEMPERATURE:**

+200°F



**► EASY SIZING FOR 1:1 and 3:2 RATIO DRIVES\***

**As a Gear Reducer:**

$$1:1 \text{ Ratio Input Torque, lbf in.} = \frac{\text{Output Torque}}{.60}$$

$$3:2 \text{ Ratio Input Torque, lbf in.} = \frac{\text{Output Torque}}{.78}$$

**As a Speed Increaser:**

$$3:2 \text{ Ratio Input Torque, lbf in.} = \frac{\text{Output Torque}}{.35}$$

\*These equations are supplied as a guide.

It is suggested that each application be prototyped and tested.

rpm	Output Torque lbf in.
33	59
50	51
100	41
150	36
200	32
300	28
400	21
500	19
600	18
1000	15
1200	14
1800	12

**INCH COMPONENT**

Catalog Number	Type	Shaft Rotation		Hollow "A" Bore Size	Hollow "B" Bore Size
		"A"	"B"		
<b>1:1 Ratio</b>					
S991MY-5050LH	LH	CCW	CCW	1/2	1/2
S991MY-5050RH	RH	CCW	CW		
S991MY-5062LH	LH	CCW	CCW	1/2	5/8
S991MY-5062RH	RH	CCW	CW		
S991MY-6262LH	LH	CCW	CCW	5/8	5/8
S991MY-6262RH	RH	CCW	CW		



1:1 OR 1.5:1 RATIOS  
 HEAVY-DUTY SEALED BALL BEARINGS  
 RIGHT- OR LEFT-HAND ROTATION  
 RATED SPEEDS UP TO 1200 rpm

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM



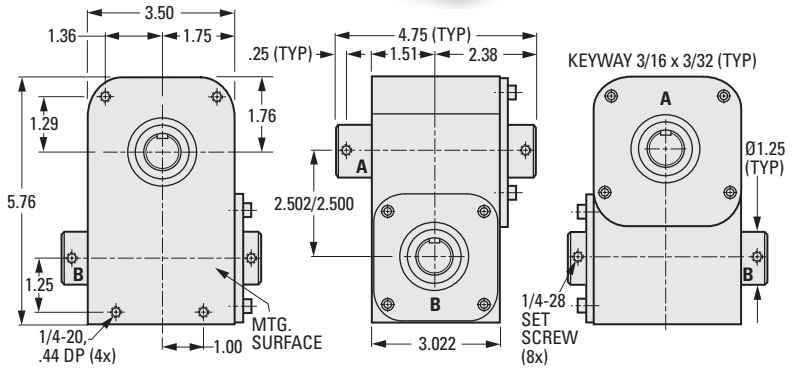
**› MATERIAL:**

- Shafts** - 1144 Steel, Hollow Bore
- Gears** - 4140 Heat-Treated Steel
- Case** - Aluminum Alloy, Hard-Anodized

**› MAXIMUM OPERATING TEMPERATURE:**

+200°F

See page 12-17 for sizing equations.



**› FEATURES:**

- Sealed gear case.
- Built-in keyway.
- Keys included.
- Simply add keyed shafting.

**› 1:1 RATIO**

rpm	Output Torque lbf in.
33	236
50	205
100	163
200	130
300	113
400	80
500	73
1000	59
1200	56

**› 1.5:1 RATIO Theoretical Output Torque, lbf in.**

Gear Reducer		Speed Increaser	
Input rpm	Output Torque	Output rpm	Output Torque
33	246	33	110
50	213	50	96
100	170	100	76
200	135	200	61
300	118	300	53
400	83	400	37
500	76	500	34
1000	61	1000	27
1200	59	1200	26

**INCH COMPONENT**

Catalog Number	Type	Shaft Rotation		Hollow "A" Bore Size	Hollow "B" Bore Size
		"A"	"B"		
S991HY-A6262LH	LH	CW	CCW	5/8	5/8
S991HY-A6262RH	RH	CW	CW		
S991HY-A6275LH	LH	CW	CCW		
S991HY-A6275RH	RH	CW	CW	3/4	3/4
S991HY-A7575LH	LH	CW	CCW		
S991HY-A7575RH	RH	CW	CW		
S991HY-B6262LH	LH	CW	CCW	5/8	5/8
S991HY-B6262RH	RH	CW	CW		
S991HY-B6275LH	LH	CW	CCW		
S991HY-B6275RH	RH	CW	CW	3/4	3/4
S991HY-B7575LH	LH	CW	CCW		
S991HY-B7575RH	RH	CW	CW		