PRECISION ENGINEERED FOR TODAY’S DIESEL ENGINES.

Compact and rugged, Cotta’s engine mounted speed increasers are designed to meet the demands of modern diesel engines. Choose from our standard models or we will design one for your application... either way COTTA will meet the challenge.

- Pumps
- Compressors
- Gen-sets
- Fans
- Vacuum pumps
### COTTA SPEED INCREASES

<table>
<thead>
<tr>
<th>Model</th>
<th>Torque Capacity (Lb. ft.)</th>
<th>Ratio Range</th>
<th>SA/2 Hsg. Size</th>
<th>Approx. Weight (Lbs.)</th>
<th>Output Shaft Dia.</th>
<th>Key Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>AO2053A</td>
<td>650</td>
<td>1 to 4</td>
<td>1</td>
<td>2 3 4</td>
<td>400</td>
<td>2.25</td>
<td>5/8</td>
<td>14.62</td>
<td>5.65</td>
<td>16.12</td>
<td>21.75</td>
<td>5.5</td>
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<tr>
<td>AO2053E</td>
<td>450</td>
<td>1 to 4</td>
<td>1</td>
<td>2 3 4</td>
<td>415</td>
<td>2.25</td>
<td>5/8</td>
<td>14.62</td>
<td>5.65</td>
<td>16.12</td>
<td>21.75</td>
<td>5.5</td>
</tr>
<tr>
<td>SI2A</td>
<td>1450</td>
<td>1.5 to 3.07</td>
<td>0</td>
<td>1 2</td>
<td>750</td>
<td>2.5</td>
<td>5/8</td>
<td>18.5</td>
<td>6.0</td>
<td>22.0</td>
<td>29.0</td>
<td>7.0</td>
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<td>SI2E</td>
<td>1300</td>
<td>1.5 to 3</td>
<td>0</td>
<td>1 2</td>
<td>800</td>
<td>2.5</td>
<td>5/8</td>
<td>18.5</td>
<td>6.0</td>
<td>22.0</td>
<td>29.0</td>
<td>7.0</td>
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<tr>
<td>SI3A</td>
<td>2000</td>
<td>1.39 - 3.04</td>
<td>0</td>
<td>1</td>
<td>1050</td>
<td>2.75</td>
<td>5/8</td>
<td>22.75</td>
<td>6.3</td>
<td>25.0</td>
<td>33.0</td>
<td>8.0</td>
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<tr>
<td>SI3E</td>
<td>1900</td>
<td>1.38 to 3</td>
<td>0</td>
<td>1</td>
<td>1185</td>
<td>2.75</td>
<td>5/8</td>
<td>22.75</td>
<td>6.3</td>
<td>25.0</td>
<td>33.0</td>
<td>8.0</td>
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<tr>
<td>GO1700A</td>
<td>5500</td>
<td>1.42 to 3.0</td>
<td>0</td>
<td>0</td>
<td>1900</td>
<td>2.75</td>
<td>5/8</td>
<td>26.75</td>
<td>7.4</td>
<td>28.25</td>
<td>35.19</td>
<td>10.25</td>
</tr>
<tr>
<td>GO1700E</td>
<td>5500</td>
<td>1.27 to 2.95</td>
<td>0</td>
<td>0</td>
<td>1925</td>
<td>2.75</td>
<td>5/8</td>
<td>26.75</td>
<td>7.4</td>
<td>28.25</td>
<td>35.19</td>
<td>10.25</td>
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<tr>
<td>GO1900A</td>
<td>7900</td>
<td>1.28 to 5</td>
<td>0</td>
<td>0</td>
<td>2100</td>
<td>3.25</td>
<td>3/4</td>
<td>24.5</td>
<td>7.15</td>
<td>38.0</td>
<td>42.0</td>
<td>13.5</td>
</tr>
<tr>
<td>GO1900A</td>
<td>7900</td>
<td>1.28 to 5</td>
<td>0</td>
<td>0</td>
<td>2200</td>
<td>3.25</td>
<td>3/4</td>
<td>24.5</td>
<td>7.15</td>
<td>38.0</td>
<td>42.0</td>
<td>13.5</td>
</tr>
</tbody>
</table>

- All dimensions are in inches.
- Circled bell housings are standard. Chart dimension “A” is based upon this standard. Consult individual spec sheets for optional bell housing dimensions.
- Standard output shaft location for speed increasers is 12 o’clock to the input.
- Cotta speed increasers are designed to be driven clockwise facing the input shaft.
- Refer to individual specification sheets for speed limitations.
- All speed increasers require rear supports. Location of support holes vary. See spec sheet for specific dimensions.
MODEL AO2053A
SPEED INCREASE

Model AO2053A is a heavy duty unit mounted speed increaser having anti-engine rotation. It is available with a variety of input bell housings to fit the different engines. A wide range of ratios are offered. The gears are helical, carburized and are designed per AGMA specifications. The bearings are tapered roller. The case is cast iron.

CAPACITY: 650 lb. ft.
MAXIMUM INPUT SPEED: 3000 RPM
MAXIMUM OUTPUT SPEED: 4500 RPM
RATIOS: (STANDARD) 1.55, 2.0, 1.40, 1.80, 2.50, 3.00
BELL HOUSINGS: SAE #1, #2, #3, #4
CLUTCH SIZES: CT10, SP111, SP211, SP114
OUTPUT SHAFT: 2.250 diameter x 5" long, 5/8 x 5/16 keyway. Output shaft located above the input shaft at 12 o’clock.
REAR SUPPORT: 4 Holes 1/2-13 on rear cover for customer support plate
LUBRICATION: Splash
ISO Grade 68, AGMA #2
WEIGHT: 400 lbs

07/31/03
Model AOR2053A is an independently mounted speed increaser. The gears are helical and are carburized to RC58 minimum. The bearings are tapered roller and the case is cast iron.

CAPACITY: 650 lb. ft. (nominal input torque) (See AO2053A capacity curve)

MAXIMUM INPUT SPEED: 3600 RPM

MAXIMUM OUTPUT SPEED: 5000 RPM

DIRECTION OF ROTATION: Output rotation is opposite to input rotation

RATIOS: 1.20, 1.40, 1.55, 1.80, 2.0, 2.50, 3.00

INPUT SHAFT: 2.25" dia. x 5" long with 5/8 x 5/16 keyway

OUTPUT SHAFT: 2.25" dia. x 5" long with 5/8 x 5/16 keyway

CENTER DISTANCE: 5.500"

LUBRICATION: Splash
ISO Grade 46, AGMA #1

MOUNTING: There is a 6.999" dia. pilot and 4 holes 3/4-10 on a 9.000" B.C. on the front of the case for mounting purposes. There are also 4 holes 1/2-13 on the case rear cover that can also be used if required.

WEIGHT: 350 lbs
Model AO2053E is a heavy duty unit mounted speed increaser having engine rotation. It is available with a variety of input bell housings to fit the different engines. A wide range of ratios are offered. The gears are helical, carburized and are designed per AGMA specifications. The bearings are tapered roller. The case is cast iron.

- **CAPACITY:** 450 lb. ft. (nominal input torque)
- **MAXIMUM INPUT SPEED:** 3000 RPM
- **MAXIMUM OUTPUT SPEED:** 4500 RPM
- **RATIOS:**
  - (STANDARD) 1.50, 1.96
  - (SPECIAL) 1.42, 1.67, 2.48, 3.0
- **BELL HOUSINGS:** SAP #1, #2, #3, #4
- **CLUTCH SIZES:** CT10, SP111, SP211, SP114
- **OUTPUT SHAFT:** 2.250 diameter x 5' long, 5/8 x 5/16 keyway. Output shaft located above the input shaft at 12 o'clock.
- **REAR SUPPORT:** 4 Holes 1/2-13 on rear cover for customer support plate
- **LUBRICATION:** Splash
  - ISO Grade 68, AGMA #2
- **WEIGHT:** 415 lbs

07/31/03
MODEL AO2053E
SPEED INCREASER

DIM A
16.5

BELLHSG SAE#
#1

#2, #3, #4
1.4, 1.62

OUTPUT CAN BE ORIENTED AT 6 OR 12 O’CLOCK POSITION

1/2-13 UNC THREAD TYPE (A)
FOR GEARED BOX MOUNTING

5/8 WIDE, 5/16 DEEP KEYWAY

DO NOT USE DIMENSIONS ON THIS DRAWING FOR INSTALLATIONS. USE CERTIFIED PRINT PROVIDED WITH ORDERS.

ALLIED TRANSMISSIONS (S.E.A.) PTE LTD
Model AOR2053E is an independently mounted speed increaser. The gears are helical and are carburized to RC58 minimum. The bearings are tapered roller and the case is cast iron.

**CAPACITY:** 650 lb. ft. (nominal input torque) (See AO2053A capacity curve)

**MAXIMUM INPUT SPEED:** 3600 RPM

**MAXIMUM OUTPUT SPEED:** 5000 RPM

**RATIOS:** 0.20, 1.40, 1.55, 1.80, 2.0, 2.50, 3.00

**INPUT SHAFT:** 2.00" dia. x 5" long with 5/8 x 5/16 keyway

**OUTPUT SHAFT:** 2.25" dia. x 5" long with 5/8 x 5/16 keyway

**CENTER DISTANCE:** 5.500"

**LUBRICATION:** Splash
ISO Grade 46, AGMA #1

**MOUNTING:** There is a 6.999" dia. pilot and 4 holes 3/4-10 on a 9.000" B.C. on the front of the case for mounting purposes. There are also 4 holes 1/2-13 on the case rear cover that can also be used if required.

**WEIGHT:** 350 lbs

07/31/03
MODEL SI2A
SPEED INCREASER

Model SI2A is a heavy duty unit mounted speed increaser having anti-engine rotation. It is available with a variety of input housings and clutches or rubber block drives to fit the different engines. A wide range of ratios are offered.

The gears are helical, carburized and precision ground and are per AGMA specifications. The bearings are taper roller.

CAPACITY (nominal input torque): 1450 lb. ft.
MAXIMUM INPUT SPEED: 3000 RPM with SP214 & SP314 clutch
2000 RPM with SP218 clutch
MAXIMUM OUTPUT SPEED: 4500 RPM
RATIOS: 0.66, 1.68, 1.75, 1.97, 2.24, 2.55, 3.07
BELL HOUSINGS: SAF #0, #1, #2
CLUTCHES: SP211, SP214, SP314, SP218
OUTPUT SHAFT: 2.500" diameter with 5/8 x 5/16 keyway
REAR SUPPORT: 4 holes 1/2-13 on rear cover for customers support plate
LUBRICATION: ISO Viscosity Grade 68
Lube pump and filter furnished
COOLING: Heat exchanger is furnished (loose)
WEIGHT: 750 lbs

Note: The output shaft can be located at 6 o'clock (below the input shaft) or at the 12 o'clock (above the input shaft) positions.
PRODUCT SPECIFICATION

MODEL SI2E
SPEED INCREASE

Model SI2E is a heavy duty unit mounted speed increaser having engine rotation. It is available with a variety of input housings to fit the different engines. A wide range of ratios are offered.

The gears are helical, carburized and precision ground and are per AGMA specifications. The bearings are taper roller.

<table>
<thead>
<tr>
<th>CAPACITY (nominal input torque):</th>
<th>1300 lb. ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM INPUT SPEED:</td>
<td>3000 RPM with SP214 &amp; SP314 clutch</td>
</tr>
<tr>
<td></td>
<td>2000 RPM with SP218 clutch</td>
</tr>
<tr>
<td>MAXIMUM OUTPUT SPEED:</td>
<td>4500 RPM</td>
</tr>
<tr>
<td>RATIOS:</td>
<td>1.47, 1.66, 1.74, 1.97, 2.25, 2.46, 2.55, 3.0</td>
</tr>
<tr>
<td>BELL HOUSINGS:</td>
<td>SAE #0, #1, #2</td>
</tr>
<tr>
<td>CLUTCHES:</td>
<td>SP211, SP214, SP314, SP218</td>
</tr>
<tr>
<td>OUTPUT SHAFT:</td>
<td>2.500&quot; diameter with 5/8 x 5/16 keyway</td>
</tr>
<tr>
<td>REAR SUPPORT:</td>
<td>4 holes 1/2-13 on rear cover for customers support plate</td>
</tr>
<tr>
<td>LUBRICATION:</td>
<td>ISO Viscosity Grade 68</td>
</tr>
<tr>
<td></td>
<td>Lube pump and filter furnished</td>
</tr>
<tr>
<td>COOLING:</td>
<td>Heat exchanger is furnished (loose)</td>
</tr>
<tr>
<td>WEIGHT:</td>
<td>800 lbs</td>
</tr>
</tbody>
</table>

Note: The output shaft can be located at 6 o'clock (below the input shaft) or at the 12 o'clock (above the input shaft) positions.
Model Si3A is a heavy duty unit mounted speed increaser having anti-engine rotation. It is available with a variety of input housings and clutches (or rubber block drives or flywheel couplings) to fit the different engines. A wide range of ratios are offered.

The gears are helical, carburized and precision ground and are per AGMA Q-12. The bearings are taper roller throughout. The case is heavy cast iron.

CAPACITY (nominal input torque): 2000 lb. ft.
MAXIMUM INPUT SPEED: 3000 RPM
NOTE: with SP218 clutch - 2000 RPM with SP318 clutch - 2350 RPM
MAXIMUM OUTPUT SPEED: 6000 RPM
RATIOS: 1.39, 1.50, 1.66, 2.0, 2.21, 2.44, 3.04
BELL HOUSINGS: SAE #0, #1
CLUTCHES: SP314, SP218, SP318 and 14" and 18" rubber block drives
OUTPUT SHAFT: 2.750" diameter with 5/8 x 5/16 keyway
REAR SUPPORT: 4 holes 5/8-11 on rear cover for customers support plate
LUBRICATION: ISO Viscosity Grade 68 Lube pump and filter furnished
COOLING: Heat exchanger is furnished (loose)
WEIGHT: 1000 lbs

Note: The output shaft can be located at 6 o'clock (below the input shaft) or at the 12 o'clock (above the input shaft) positions.
Model SI3E is a heavy duty unit mounted speed increaser having engine rotation. It is available with a variety of input housings and clutches (or rubber block drives or flywheel couplings) to fit the different engines. A wide range of ratios are offered.

The gears are helical, carburized and precision ground and are per AGMA specifications. The bearings are taper roller throughout. The case is heavy cast iron.

**CAPACITY (nominal input torque):** 1900 lb. ft.

**MAXIMUM INPUT SPEED:**
3000 RPM  
NOTE: with SP218 clutch - 2000 RPM  
with SP318 clutch - 2350 RPM

**MAXIMUM OUTPUT SPEED:** 6000 RPM

**RATIOS:** 1.38, 1.67, 2.03, 2.26, 2.52, 3.00

**BELL HOUSINGS:** SAE #0, #1

**CLUTCHES:** SP314, SP218, SP318 and 14" and 18" rubber block drives

**OUTPUT SHAFT:** 2.750" diameter with 5/8 x 5/16 keyway

**REAR SUPPORT:** 4 holes 5/8-11 on rear cover for customers support plate

**LUBRICATION:** ISO Viscosity Grade 68  
Lube pump and filter furnished

**COOLING:** Heat exchanger is furnished (loose)

**WEIGHT:** 1185 lbs

Note: The output shaft can be located at 6 o’clock (below the input shaft) or at the 12 o’clock (above the input shaft) positions.
Model GO1700A is a heavy duty independently mounted speed increaser having anti-engine rotation. The gears are helical, carburized and precision ground for increased strength and quiet operation. The bearings are tapered roller. The case is stress relieved, fabricated steel.

**CAPACITY:** 5500 ft. lbs.

**MAXIMUM INPUT SPEED:** 2500 RPM

**MAXIMUM OUTPUT SPEED:** 5500 RPM

**RATIOS:** 1.42, 1.67, 1.76, 1.96, 2.20, 2.48, 2.76, 3.0

**INPUT HOUSINGS:** SAE #0, #00

**INPUT CLUTCH:** Overcenter type clutches, rubber block diaphragms or couplings to fit various engines.

**OUTPUT SHAFT:** 2.750" diameter x 6.0" long with 5/8W x 15/16D keyway.

**OUTPUT SHAFT LOCATIONS:**
- 12 o'clock- output is above input
- 6 o'clock- output is below input
- 9 o'clock- output is to left of input

**LUBRICATION REQUIREMENT:** Lube pump furnished for oil spray on bearings and gears.

**COOLING:** Heat exchanger furnished

**ACCESSORIES FURNISHED:** Oil level sight gauge, filter, temperature/pressure switch relief valve

**OPTIONS:** Stub input shaft 4.000" diameter x 6" long
- 1" W x 1/2D

**WEIGHT:** 1900 lbs
Model GO1700E is a heavy duty independently mounted speed increaser having engine rotation. The gears are helical, carburized and precision ground for increased strength and quiet operation. The bearings are tapered roller. The case is stress relieved, fabricated steel.

Text

<table>
<thead>
<tr>
<th>CAPACITY:</th>
<th>5500 ft.lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM INPUT SPEED:</td>
<td>2500 RPM</td>
</tr>
<tr>
<td>MAXIMUM OUTPUT SPEED:</td>
<td>5500 RPM</td>
</tr>
<tr>
<td>RATIOS:</td>
<td>1.27, 1.68, 2.0, 2.26, 2.57, 2.75, 2.95</td>
</tr>
<tr>
<td>INPUT HOUSINGS:</td>
<td>SAE #0, #00</td>
</tr>
<tr>
<td>INPUT CLUTCH:</td>
<td>Overcenter type clutches, rubber block drives or couplings to fit various engines.</td>
</tr>
<tr>
<td>OUTPUT SHAFT:</td>
<td>2.750&quot; diameter x 6.0&quot; long with 5/8W x 15/16D keyway.</td>
</tr>
<tr>
<td>OUTPUT SHAFT LOCATIONS:</td>
<td>12 o’clock- output is above input</td>
</tr>
<tr>
<td></td>
<td>6 o’clock- output is below input</td>
</tr>
<tr>
<td></td>
<td>9 o’clock- output is to left of input</td>
</tr>
<tr>
<td>LUBRICATION REQUIREMENT:</td>
<td>Lube pump furnished for oil spray on bearings and gears.</td>
</tr>
<tr>
<td>COOLING:</td>
<td>Heat exchanger furnished</td>
</tr>
<tr>
<td>ACCESSORIES FURNISHED:</td>
<td>Oil level sight gauge, filter, temperature/pressure switch relief valve</td>
</tr>
<tr>
<td>OPTIONS:</td>
<td>Stub input shaft 4.000&quot; diameter x 6&quot; long 1&quot; W x 1/2D</td>
</tr>
<tr>
<td>WEIGHT:</td>
<td>1900 lbs</td>
</tr>
</tbody>
</table>
Model GOR1700A is a heavy duty independently mounted speed increaser having anti-engine rotation. The gears are helical, carburized and precision ground for increased strength and quiet operation. The bearings are tapered roller. The case is stress relieved, fabricated steel.

<table>
<thead>
<tr>
<th>CAPACITY:</th>
<th>INPUT SPEED</th>
<th>HP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1200</td>
<td>1400</td>
</tr>
<tr>
<td></td>
<td>1800</td>
<td>1850</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>2000</td>
</tr>
<tr>
<td></td>
<td>2200</td>
<td>2200</td>
</tr>
<tr>
<td></td>
<td>2500</td>
<td>2350</td>
</tr>
</tbody>
</table>

NOTE: Capacities are in horsepower and are based upon 10,000 hours B-10 bearing life.

MAXIMUM INPUT SPEED: 2500 RPM

MAXIMUM OUTPUT SPEED: 5500 RPM

RATIOS: 1.42, 1.59, 1.67, 1.76, 1.96, 2.20, 2.48, 2.78, 3.0

INPUT SHAFT: 4.000" Dia. x 6.0" long with 1" wide x .50" deep keyway.

OUTPUT SHAFT: 2.750" Dia. x 6.0" long with .625 wide x .31 deep keyway.

OUTPUT SHAFT LOCATIONS: 12 o’clock - output is above input
6 o’clock - output is below input
9 o’clock - output is to left of input when viewed from rear.

LUBRICATION: Lube pump furnished for oil spray on bearings and gears.

COOLING: Heat exchanger furnished

ACCESSORIES FURNISHED: Oil level sight gauge
Filter
Temperature/Pressure switch
Relief Valve

NOTE: Mounting brackets are not furnished as standard equipment. Customer to furnish brackets to suit installation.

07/31/03
MODEL GOR1700E
SPEED INCREASE

Model GOR1700E is a heavy duty independently mounted speed increaser having engine rotation. The gears are helical, carburized and precision ground for increased strength and quiet operation. The bearings are tapered roller. The case is stress relieved, fabricated steel.

**CAPACITY:**

<table>
<thead>
<tr>
<th>INPUT SPEED</th>
<th>HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200</td>
<td>1400</td>
</tr>
<tr>
<td>1800</td>
<td>1850</td>
</tr>
<tr>
<td>2000</td>
<td>2000</td>
</tr>
<tr>
<td>2200</td>
<td>2200</td>
</tr>
<tr>
<td>2500</td>
<td>2350</td>
</tr>
</tbody>
</table>

**NOTE:** Capacities are in horsepower and are based upon 10,000 hours B-10 bearing life.

**MAXIMUM INPUT SPEED:** 2500 RPM

**MAXIMUM OUTPUT SPEED:** 5500 RPM

**RATIOS:**
1.27, 1.59, 1.68, 1.78, 2.0, 2.26, 2.57, 2.75, 2.95, 3.11

**INPUT SHAFT:**
4.000" Dia. x 6.0" long with 1" wide x .50" deep keyway.

**OUTPUT SHAFT:**
2.750" Dia. x 6.0" long with .625 wide x .31 deep keyway.

**OUTPUT SHAFT LOCATIONS:**
12 o'clock - output is above input
6 o'clock - output is below input
9 o'clock - output is to left of input when viewed from rear.

**LUBRICATION:**
Lube pump furnished for oil spray on bearings and gears.

**COOLING:**
Heat exchanger furnished

**ACCESSORIES FURNISHED:**
Oil level sight gauge
Filter
Temperature/Pressure switch
Relief Valve

**NOTE:** Mounting brackets are not furnished as standard equipment. Customer to furnish brackets to suit installation.

07/31/03
**PRODUCT SPECIFICATION**

**MODEL GO1901A**
**SPEED INCREASER**

Model GO1901A is a heavy duty speed increaser with anti-engine rotation. The gears are helical, carburized to RC 59-61 and are precision ground to AGMA class Q-12 for increased strength and quiet operation. The bearings are tapered roller. The case is stress relieved, fabricated steel.

This model is available with a SAE bell housing and clutch (or rubber block drive or coupling) for unit mounting to an engine. It can also be furnished with a stub input shaft for independent mounting.

<table>
<thead>
<tr>
<th><strong>CAPACITY:</strong></th>
<th>7900 ft. lbs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAXIMUM INPUT SPEED:</strong></td>
<td>2500 RPM</td>
</tr>
<tr>
<td><strong>MAXIMUM OUTPUT SPEED:</strong></td>
<td>4800 RPM</td>
</tr>
<tr>
<td><strong>RATIOS:</strong></td>
<td>1.28, 1.54, 1.97, 2.54, 2.967, 3.52, 4.0, 4.24, 5.0</td>
</tr>
<tr>
<td><strong>INPUT HOUSINGS:</strong></td>
<td>SAE #0, #00</td>
</tr>
<tr>
<td><strong>INPUT CLUTCHES:</strong></td>
<td>Over center type clutches, rubber block drives or couplings to fit various engine fly-wheels.</td>
</tr>
<tr>
<td><strong>OUTPUT SHAFT:</strong></td>
<td>3.25&quot; diameter x 6.0&quot; long with .75 x .375 keyway</td>
</tr>
<tr>
<td><strong>OUTPUT SHAFT LOCATION:</strong></td>
<td>12 o’clock - output is above the input shaft when viewed from rear</td>
</tr>
<tr>
<td><strong>LUBRICATION:</strong></td>
<td>Lube pump is furnished for oil spray on bearings and gear. Sump is in case.</td>
</tr>
<tr>
<td><strong>COOLING:</strong></td>
<td>Heat exchanger is furnished</td>
</tr>
<tr>
<td><strong>ACCESSORIES FURNISHED:</strong></td>
<td>Oil level sight gauge, filter, temperature/pressure switch, relief valve</td>
</tr>
<tr>
<td><strong>OPTIONS:</strong></td>
<td>Stub input shaft 4.500&quot; diameter x 6&quot; long with a 1&quot; wide x 1/2&quot; deep keyway when independently mounted</td>
</tr>
<tr>
<td><strong>WEIGHT:</strong></td>
<td>2100 lbs</td>
</tr>
</tbody>
</table>
MODEL GO1901E
SPEED INCREASE

Model GO1901E is a heavy duty speed increaser with engine rotation. The gears are helical, carburized to RC 59-61 and are precision ground to AGMA class Q-12 for increased strength and quiet operation. The bearings are tapered roller. The case is stress relieved, fabricated steel.

This model is available with a SAE bell housing and clutch (or rubber block drive or coupling) for unit mounting to an engine. It can also be furnished with a stub input shaft for independent mounting.

<table>
<thead>
<tr>
<th>CAPACITY:</th>
<th>7900 ft. lbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM INPUT SPEED:</td>
<td>2500 RPM</td>
</tr>
<tr>
<td>MAXIMUM OUTPUT SPEED:</td>
<td>4800 RPM</td>
</tr>
<tr>
<td>RATIOS:</td>
<td>1.27, 1.54, 1.76, 1.95, 2.43, 3.10, 3.54, 7.08, 4.52, 5.05</td>
</tr>
<tr>
<td>INPUT HOUSINGS:</td>
<td>SAE #0, #00</td>
</tr>
<tr>
<td>INPUT CLUTCHES:</td>
<td>Over center type clutches, rubber block drives or couplings to fit various engine flywheels.</td>
</tr>
<tr>
<td>OUTPUT SHAFT:</td>
<td>3.25&quot; diameter x 6.0&quot; long with .75 x .375 keyway</td>
</tr>
<tr>
<td>OUTPUT SHAFT LOCATION:</td>
<td>12 o'clock - output is above the input shaft when viewed from rear</td>
</tr>
<tr>
<td>LUBRICATION:</td>
<td>Lube pump is furnished for oil spray on bearings and gear. Sump is in case.</td>
</tr>
<tr>
<td>COOLING:</td>
<td>Heat exchanger is furnished</td>
</tr>
<tr>
<td>ACCESSORIES FURNISHED:</td>
<td>Oil level sight gauge, filter, temperature/pressure switch, relief valve</td>
</tr>
<tr>
<td>OPTIONS:</td>
<td>Stub input shaft 4.500&quot; diameter x 6&quot; long with a 1&quot; wide x 1/2&quot; deep keyway when independently mounted</td>
</tr>
<tr>
<td>WEIGHT:</td>
<td>2100 lbs</td>
</tr>
</tbody>
</table>

07/31/03
MODEL GO1945A
SPEED INCREASE

Model GO1945A is a heavy duty speed increaser having anti-engine rotation. The gears are helical, carburized to Rc 59-61 and are precision ground to AGMA class Q-12 for increased strength and quiet operation. The bearings are tapered roller. The case is stress relieved, fabricated steel.

This model is available with a SAE bell housing and clutch (or rubber block drive or coupling) for unit mounting to an engine. It can also be furnished with a stub input shaft for independent mounting.

CAPACITY: 7900 ft. lbs.
MAXIMUM INPUT SPEED: 2500 RPM
MAXIMUM OUTPUT SPEED: 4800 RPM
RATIOS: 3.52, 4.24, 5.0
INPUT HOUSINGS: SAE #0, #00
INPUT CLUTCHES: Overcenter type clutches, rubber block drives or couplings to fit various engine flywheels
OUTPUT SHAFT: 3.25" diameter x 6.0" long with .75 x .375 keyway
OUTPUT SHAFT LOCATION: 9 o’clock - output is to left of input when viewed from rear
LUBRICATION REQUIREMENT: Lube pump is furnished for oil spray on bearings and gear. Sump is in case.
COOLING: Heat exchanger furnished
ACCESSORIES FURNISHED: Oil level sight gauge, filter, temperature/pressure switch, relief valve
OPTIONS: Stub input shaft 4.500" diameter x 6" long with a 1" wide x 1/2" deep keyway when independently mounted
WEIGHT: 2450 lbs

07/31/03
Model GO1945E is a heavy duty speed increaser having engine rotation. The gears are helical, carburized to Rc 59-61 and are precision ground to AGMA class Q-12 for increased strength and quiet operation. The bearings are tapered roller. The case is stress relieved, fabricated steel.

This model is available with a SAE bell housing and clutch (or rubber block drive or coupling) for unit mounting to an engine. It can also be furnished with a stub input shaft for independent mounting.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CAPACITY:</strong></td>
<td>7900 ft. lbs.</td>
</tr>
<tr>
<td><strong>MAXIMUM INPUT SPEED:</strong></td>
<td>2500 RPM</td>
</tr>
<tr>
<td><strong>MAXIMUM OUTPUT SPEED:</strong></td>
<td>4800 RPM</td>
</tr>
<tr>
<td><strong>RATIOS:</strong></td>
<td>1.28, 1.54, 1.75, 1.97, 2.54, 2.97</td>
</tr>
<tr>
<td><strong>INPUT HOUSINGS:</strong></td>
<td>SAE #0, #00</td>
</tr>
<tr>
<td><strong>INPUT CLUTCHES:</strong></td>
<td>Overcenter type clutches, rubber block</td>
</tr>
<tr>
<td></td>
<td>drives or couplings to fit various engine</td>
</tr>
<tr>
<td></td>
<td>flywheels</td>
</tr>
<tr>
<td><strong>OUTPUT SHAFT:</strong></td>
<td>3.25&quot; diameter x 6.0&quot; long with .75 x .375</td>
</tr>
<tr>
<td></td>
<td>keyway</td>
</tr>
<tr>
<td><strong>OUTPUT SHAFT LOCATION:</strong></td>
<td>9 o’clock - output is to left of input</td>
</tr>
<tr>
<td></td>
<td>when viewed from rear</td>
</tr>
<tr>
<td><strong>LUBRICATION REQUIREMENT:</strong></td>
<td>Lube pump is furnished for oil spray on</td>
</tr>
<tr>
<td></td>
<td>bearings and gear. Sump is in case.</td>
</tr>
<tr>
<td><strong>COOLING:</strong></td>
<td>Heat exchanger furnished</td>
</tr>
<tr>
<td><strong>ACCESSORIES FURNISHED:</strong></td>
<td>Oil level sight gauge, filter,</td>
</tr>
<tr>
<td></td>
<td>temperature/pressure switch, relief valve</td>
</tr>
<tr>
<td><strong>OPTIONS:</strong></td>
<td>Stub input shaft 4.500&quot; diameter x 6&quot;</td>
</tr>
<tr>
<td></td>
<td>long with a 1&quot; wide x 1/2&quot; deep keyway</td>
</tr>
<tr>
<td></td>
<td>when independently mounted</td>
</tr>
<tr>
<td><strong>WEIGHT:</strong></td>
<td>2450 lbs</td>
</tr>
</tbody>
</table>
Model SIR2A is an independently mounted speed increaser that is available in a variety of ratios. Model SIR2A has two gears resulting in output rotation opposite input. The gears are helical, carburized, and are precision ground. The bearings are taper roller and the case is cast iron.

CAPACITY (nominal input torque): 1450 lb. ft.  
(See S12A capacity curve)

MAXIMUM INPUT SPEED: 3600 RPM
MAXIMUM OUTPUT SPEED: 4800 RPM
RATIOS: 0.20, 1.50, 1.68, 1.75, 1.97, 2.24, 2.55
INPUT SHAFT: 3.000" diameter by 7" long with 7/8 x 7/16 keyway
OUTPUT SHAFT: 2.50" diameter by 5.25" long with 5/8 x 5/16 keyway
CENTER DISTANCE: 7.000"
LUBRICATION: ISO Viscosity Grade 68, AGMA #2  
Lube pump and filter are furnished
COOLING: A lube type heat exchanger is furnished (shipped loose). If cooling water is not available a radiator can be furnished (contact Cotta for additional information)
MOUNTING: There is a pilot and 4 drilled and tapped holes on the front of the case for mounting purposes.  
Mounting bracket is not furnished and is to be fabricated to suit application.
WEIGHT: 725 lbs
MODEL SIR2A
SPEED INCREASE

OUTPUT SHAFT SHOWN AT 12 O’CLOCK
(ABOVE THE INPUT SHAFT).
ALSO AVAILABLE WITH OUTPUT SHAFT
LOCATIONS AT 3, 6 OR 9 O’CLOCK
POSITIONS.

7/8 WIDE X 7/16 DEEP
KEYWAY

9.000
FOR SUPPORT
PLATE

3.500

6.50

9.25

6.50

9.75

3/4-10 THREAD - 1.0 DEEP
(4) HOLES ON OPPOSITE SIDE
ON A 12.50 DIA BC
FOR SUPPORT PLATE MOUNTING

1/2 - 13 MTG HOLES

DO NOT USE DIMENSIONS ON THIS DRAWING FOR
INSTALLATIONS. USE CERTIFIED PRINT PROVIDED
WITH ORDERS

CUSTOMER TO FURNISH
MOUNTING BRACKETS TO SUIT
Model SIR3A is a heavy duty independently mounted speed increaser having anti-engine rotation. It is available with a variety of ratios. The gears are helical, carburized and precision ground and are per AGMA Q-12. The bearings are taper roller throughout. The case is heavy cast iron.

CAPACITY (nominal input torque): 2000 lb. ft.  
(See SIR3A capacity curve)

MAXIMUM INPUT SPEED: 3000 RPM

MAXIMUM OUTPUT SPEED: 6000 RPM

RATIOS: 1.21, 1.39, 1.50, 1.66, 2.0, 2.21, 2.44, 3.04

INPUT SHAFT: 4.25" diameter with 1 x 1.2 kw. x 8.5 long

OUTPUT SHAFT: 2.75" diameter with 5/8 x 5/16 keyway

CENTER DISTANCE: 8.000"

REAR SUPPORT: 4 holes 5/8-11 on rear cover for customers support plate

LUBRICATION: ISO Viscosity Grade 68, 31 quarts  
Lube pump and filter are furnished

COOLING: Heat exchanger is furnished (loose)

MOUNTING: There is a pilot and 4 drilled and tapped holes on the front of the case for mounting.

WEIGHT: 900 lbs